

LEKWA LOCAL MUNICIPALITY



2022-2027

**INTEGRATED
WASTE
MANAGEMENT
PLAN**

FOREWORD

The purpose of this Integrated Waste Management Plan (IWMP) is to ensure the provision of efficient and effective waste management services within Lekwa Local Municipality. Also, the way these services are provided must, among others, be in line with all National, Provincial and District waste management policies, plans and strategies. The plan is focused on waste minimisation, the diversion of waste from landfill sites towards the beneficial use of waste, thereby contributing towards the waste economy and overall, environmentally sound management of all waste streams.

The IWMP for the municipality has been developed in line with the National Regulatory Framework pertinent to environmentally sound management of waste and other relevant legislations. The process followed to compile the IWMP consisted of two phases; the first consisted of a Situation Analysis and the determination of the Desired End State for waste management within the municipal jurisdiction. The second phase consists of identifying, evaluating, and selecting alternative methods/approaches for achieving the desired end state.

This IWMP has been developed in-house with the support of the National Department of Forestry, Fisheries and Environment, Department of Agriculture, Rural Development, Land and Environmental Affairs and the Gert Sibande District Municipality.

INTEGRATED WASTE MANAGEMENT PLAN (IWMP)

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1.INTRODUCTION

The development of an Integrated Waste Management Plan (IWMP) is a requirement for certain organs of state in terms of Section 11 of the National Environmental Management: Waste Act, 2008 (Act. 59 of 2008) (NEMWA) for government to plan and manage waste properly. The compilation of this IWMP will be done in line with the “Guideline for the Development of Integrated Waste Management Plans (IWMPs) (DEA, 2012) and in accordance with Section 12 of NEMWA. The IWMP for the Gert Sibande District Municipality, which inter alia includes the Lekwa Local Municipality (hereinafter referred to as “the Municipality”), was reviewed and developed in terms of the NEMWA.

The process followed to compile the IWMP consisted of two phases, the first consisting of a “Situation Analysis” and the determination of the “Desired End State” for waste management within the Municipal Jurisdiction, the second phase consisting of identifying, evaluating, and selecting alternative methods/approaches for achieving the desired end state.

This report, the IWMP, is a concise report including the information collated in the two phases mentioned above and provides the Municipality with a plan on how to manage and improve the waste management service within the municipal area. The Municipality will be responsible for the implementation of the IWMP and the evaluating and reviewing of the plan to ensure that the respective objectives are being met.

2. LEGISLATIVE REQUIREMENTS

The Constitution of the Republic of South Africa (Act 108 of 1996), which sets out the environmental mandate, as well the different roles and responsibilities of the different spheres of government.

The National Environmental Management Act (NEMA), Act 107 of 1998, is a framework legislation that covers the broad environmental management principles which form the basis for all other subsidiaries' environmental legislation.

The National Environmental Management: Waste Act (NEMWA), Act 59 of 2008 is a subsidiary act of the NEMA, which regulates the management of all waste within South Africa as well as defines the different roles and responsibilities of the different spheres of government while implementing this mandate.

The National Health Act, (Act 61 of 2003) includes waste management as one of the functions of an Environmental Health Practitioner in terms of its explanation of “municipal health services”.

The Municipal Structures Act (Act 117 of 1998) delineates the powers and functions of different categories of municipalities. In terms of this Act, district municipalities have powers and functions relating to the integrated, sustainable and equitable social and economic development of the district. This role should be performed by ensuring integrated development planning for the district as a whole, building the capacity of local municipalities to perform their functions, exercising local municipal powers where capacity is lacking, and promoting the equitable distribution of resources between the local municipalities in its area. The Act further reiterates the functions of local municipalities as contained in the Constitution excluding the ones referred to as district functions. This includes the provision of waste collection and disposal services and cleansing.

The Municipal Systems Act (Act 32 of 2000) defines the alternative approaches that may be employed in delivering municipal services and the processes to be followed when such alternatives are considered. The need for integrated planning and performance monitoring of both external and internal mechanisms of service delivery are emphasized in the Systems Act. The Act further mandates communities to be encouraged to participate in strategic decision making relating to service delivery.

Other legislation having relevance to waste management include the following:

- National Environmental Management: Air Quality Act (Act 39 of 2004)
- National Water Act (Act 36 of 1998)
- Occupational Health and Safety Act (Act 85 of 1993)
- Hazardous Substances Act (Act 15 of 1973)
- Minerals and Petroleum Resources Development Act (Act 28 of 2002)
- Disaster Management Act, 57 of 2002
- Development Facilitation Act (Act 67 of 1995)
- Municipal Finance Management Act (MFMA), 56 of 2003
- Strategic Framework for Sustainable Development in South Africa, 2006

3. DEFINING THE GEOGRAPHICAL AREA

3.1 INTRODUCTION

Lekwa Local Municipality is one of seven local municipalities within the Gert Sibande District Municipality in Mpumalanga Province. It covers a total area of 4585km² and is rural in character. Lekwa Local Municipality lies in the extensive open plains of the highveld region, characterized by tall grass and transversed by the Vaal River, which flows in a western direction. The municipality is named after the Vaal River, commonly known as Lekwa (The Sesotho name for Vaal River). It is located in the southwest of the district's respective immediate entrances to KwaZulu Natal, Gauteng and Free State provinces.

The Municipality is predominantly inhabited by Nguni-speaking people, namely Zulu, Siswati, Ndebele, Xhosa and other race groups such as Sotho. The Municipality consists of Standerton, which serves as an urban node, whilst Morgenzon which is 45km North East of Standerton which serves as a satellite node. The following local municipalities landlock it, Pixley Ka Seme and Msukaligwa on the east, Dipaleseng on the west and Govan Mbeki on the north.

3.2 POPULATION

The number of formal, traditional and informal dwellings in the municipality is 23495, 1049 and 12790 respectively. The total population is 123419 people with 37334 households which amount to a household size of 3.3 persons per household according to census 2016 data. The average population growth rate between 2011 and 2016 is 1.06%. The Municipality has no further information on the household distribution per town or area.

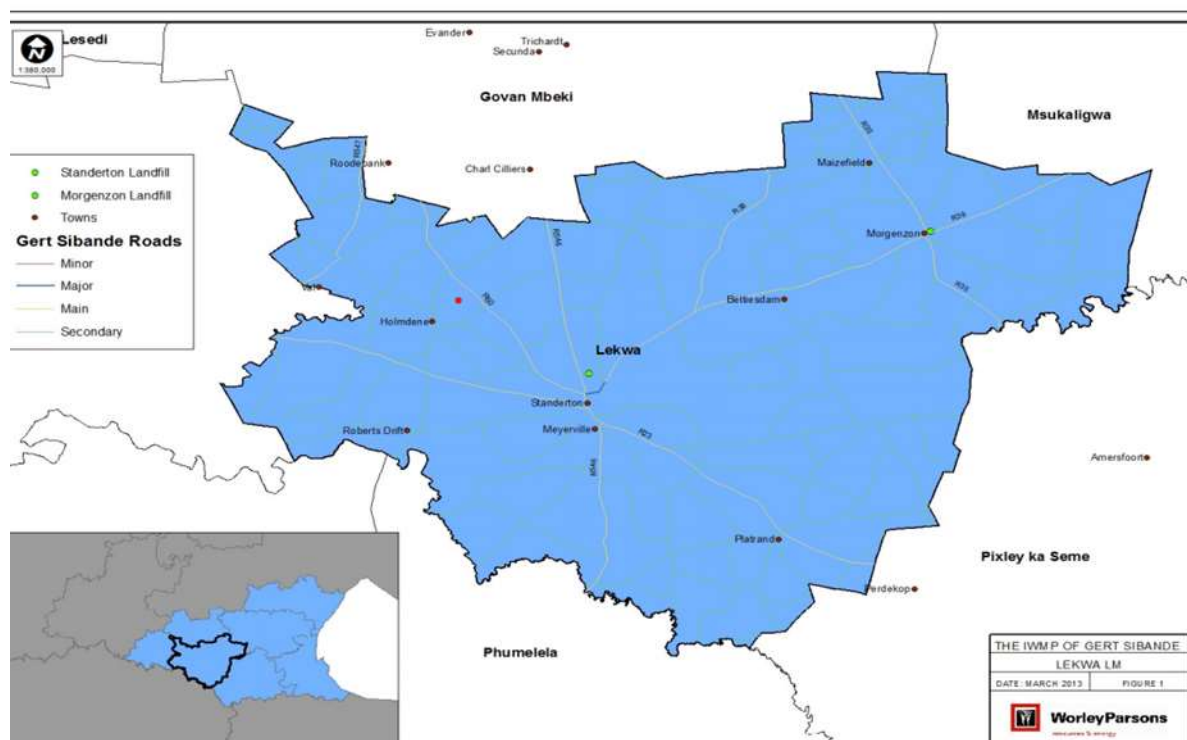


Figure 1: Locality Map of the Lekwa Municipality

3.3 SITUATION ANALYSIS

3.3.1 POPULATION AND DEVELOPMENT PROFILE

Table 1 and Figure 2 below illustrate the Gender, Age, Employment and Education distribution of the population within the municipality (Census 2016)

Growth estimates	
Municipality Population (as per Census 2016):	123419
Estimated Population Growth (%) as per Census 2016:	1.06
Estimated current population as of 2021 (year is a parameter):	130824
Demographic profile	
Age:	
Youth	75430
Middle age	31187
Old age	9046

Gender:	
Male	57647
Female	58014
Education:	
Primary	30421
Secondary	50331
Tertiary	8314
Employment:	
Employed	34118
Unemployed	53373

It can be seen from table 1 that a small percentage of the population has tertiary qualification whereas a large number has primary level education. Education levels are directly linked to employment and income levels as well as the community's awareness of good waste disposal practices.

The municipality has a relatively high unemployment rate. This will have an effect on waste generation as well as waste disposal as a service delivery. A higher unemployment rate relates to less rates and taxes received by the municipality therefore the municipality will have less resources available for an effective waste collection service. As a result, it often increases the amount of informal recyclers at the waste disposal site.

The distribution of the population by social economic status is illustrated in Figure 2 below.

Population distribution graphs:

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Figure 2: Distribution of gender, age, education and employment

3.3.2 DWELLING TYPES

As can be seen from the household distribution (Table 2 & Figure 3), the municipality has a relatively large portion of households that are formal. This makes refuse collection service much more accessible which could relate to a more sufficient waste collection and then would reduce the prevalence of illegal dumping thus leads to a cleaner environment.

Table 2: Dwelling Types

Dwelling Types in Lekwa Local Municipality	
House or brick/concrete block structure on a separate stand or yard or on a farm:	20830
Traditional dwelling/hut/structure made of traditional materials:	1049
Flat or apartment in a block of flats:	583
Cluster house in complex:	50
Townhouse (semi-detached house in a complex):	350
Semi-detached house:	719
House/flat/room in backyard:	556
Informal dwelling (shack in backyard):	3540
Informal dwelling (shack not in backyard e.g. in an informal/squatter settlement or on a farm:	9250
Room/flat let on a property or larger dwelling/servants quarters/granny flat:	179
Caravan/tent:	24
Other:	204

Graph 22

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Figure 3: Dwelling type distribution

3.4 DETERMINING CURRENT WASTE GENERATION AND ESTIMATING FUTURE WASTE GENERATION RATES AND QUANTITIES

The Municipality had a population of 123419 in 2016. With an estimated average population growth rate of 1.06% as per Census 2016, the current population figure is estimated at 130824 with a total waste generation figure of 33420.1 tons per annum. The figures are shown in Table 4 below

With the assumption that the future population growth rates and growth estimates remained constant for the next 10 years and the per capita waste generation rates also remained constant then results would be as follows:

3.4.1 DOMESTIC WASTE GENERATION

Table 3: Domestic Waste generation

Current waste generation and estimated future waste generation	
Current domestic waste generation rates	33420.1
Future domestic waste generation rates (in 10 years)	334201

The above results show that if the current population and waste generation trend remains constant in the next 10 years the municipality will produce a total of 334201 tons of waste.

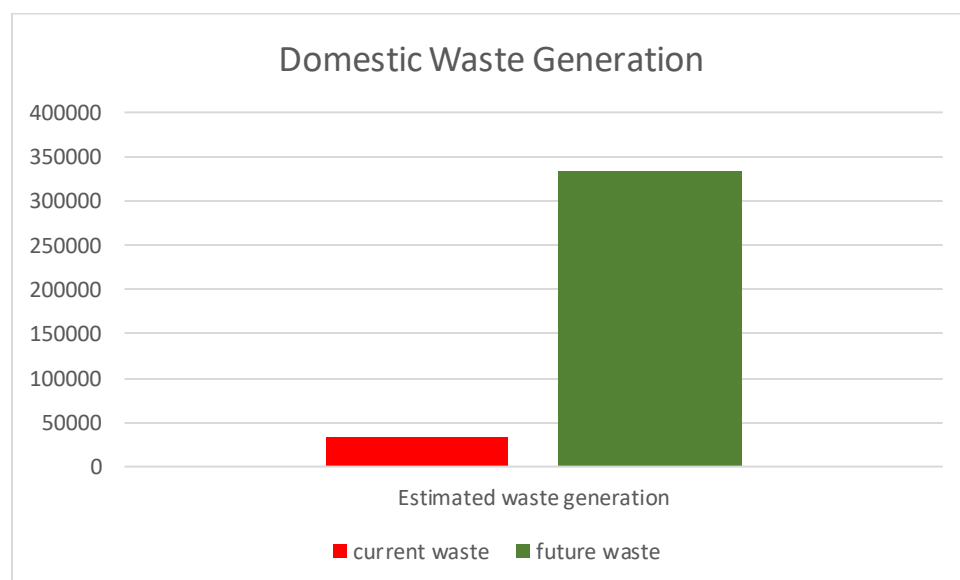


Figure 4: Future Waste Generation Estimates

The above figure (Figure 4) and table 3 did not take into account any possible recycling, reduction or reuse initiative the Municipality is planning to put into place in the next 10 years which could reduce the final disposal to waste disposal volume. With the implementation of the National Waste Management Strategy,

2020 as well as the improved intensity in waste minimisation initiatives such as separation at source and waste diversion, training and awareness raising, the Local Municipality foresees a decreased outlook trend in waste disposal volume in the municipality.

3.5 WASTE TYPES AND QUANTITIES

A Municipality must determine the quantities and the types of waste generated in its area of jurisdiction. This involves establishing the current quantities of waste generated, recycled, treated and disposed of. Waste quantities are usually measured by mass (kilograms or tons).

This information was collected from the following sources:

- Waste transporters
- Waste disposal facilities
- South African Waste Information System

3.5.1 WASTE TYPES

Annexure 1 of the Waste Classification and Management Regulations (Government Notice 36784), 2013 lists different types of waste that fall within the General Waste Category, this includes the following:

- Domestic Waste;
- Business waste not containing hazardous waste or hazardous chemicals;
- Non-infectious animal carcasses;
- Garden Waste;
- Waste packaging;
- Building and demolition waste not containing hazardous waste or hazardous chemicals; and excavated earth material not containing hazardous waste or hazardous chemicals.

Based on information obtained from waste disposal sites records (as reflected on SAWIS) and waste manifest documents from waste transporters, the waste stream generated within the Lekwa Local Municipality consists mainly of:

General Waste

General waste which is also referred to as domestic waste is generated by households and businesses as major sources. This waste is collected, transported and disposed at the local landfill sites.

Garden Waste

Garden waste is generated by households and businesses as major sources. This waste is collected, transported and disposed at the local landfill sites. Limited volumes of garden refuse are collected with the general household waste where services are rendered. Residents mostly make use of privatised garden services who dispose the garden refuse at the local waste disposal sites in the Municipality. The amount of garden refuse calculated using the volume estimation method from the 1st January 2020 until the 31st December 2020 is 2 111.9 tons while the amount of construction and demolition waste for the same period was 10 468.5 tons. The Municipality will as the recycling initiative engage the Department of Environment, Forestry and Fisheries to train upcoming entrepreneurs on composting.

Construction and Demolition Waste

Construction and demolition waste is generated by households and businesses as major sources. This waste is collected, transported and disposed at the local landfill sites.

Hazardous Waste

The Municipality provides services for the collection of general/light industrial and commercial general waste (non-hazardous wastes). The Municipality does not collect hazardous industrial or mining waste. The possibility of hazardous industrial or mining waste disposal on the municipal waste disposal sites is, therefore, minimal hazardous waste generated mainly by medical facilities such as veterinary services, clinics, hospitals, old age homes, pharmacies and households. The municipality does not manage this type of waste, but the municipality oversees with respect to the monitoring of the generation and safe disposal of the waste.

It must be noted that all major industries must perform their own Industrial Waste Management Planning terms of Section 28 of NEMWA. Industrial waste is regarded as hazardous until proven not to be and is prohibited for disposal on general waste disposal sites. With regard to this IWMP, the Municipality ensures that no hazardous waste is disposed of on the municipal waste disposal sites. The responsibility of the Municipality is to ensure with proper access control and record-keeping that mining waste is not disposed of on the municipal waste disposal sites.

Health Care Risk Waste

Health Care Risk waste is generated mainly by medical facilities such as veterinary services, clinics, hospitals, old age homes, pharmacies, and households. The municipality does not manage this type of waste, but it oversees the monitoring of the generation and safe disposal of the waste.

The municipality's responsibility is to ensure that no HCRW is disposed of on the municipal landfill sites.

3.5.2 WASTE QUANTITIES

Waste generation at source is rarely quantifiable due to inherent complexities and difficulties in recording the waste which a population generates.

Waste generation quantities can be calculated using the following two methods

- Weighbridge - Using a weighbridge a Municipality must record the amounts of waste entering its waste disposal facility, by weighing the vehicles at the point of entry and again on the way out. The difference in the mass of the vehicle between the 'in' and 'out' provides the mass of the waste.
- Without a weighbridge - Municipalities can estimate the amount of waste generated by using a volume density based estimation. This requires accurate records.

The municipality does not currently have weighbridge in the waste disposal sites methods to determine the waste generation rates for the area. A volume density based estimate is therefore used as an alternative method to estimate the waste generation figures for the. The figures are then reported in the South African Waste Information System on a monthly basis. This method is also recommended by the National Department of Environmental Affairs (DFFE).

The municipality is currently using the volume density based estimation method for Standerton landfill site which is the site registered with SAWIC (South African Waste Information Centre). In future with resources permitting the Municipality intends to use the weighbridge method which calculates the waste generated by weighing the vehicles at the point of entry and again on the way out. The difference in the mass of the vehicle between the 'in' and 'out' provides the mass of the waste.

The table below indicate the amount of waste generated and disposed of at Standerton landfill site, the volumes were calculated using the volume based density estimation method for the year 2021

Table 4: Waste Quantities at Standerton Landfill Site

Standerton Landfill Site		
Waste type/streams	Waste disposed per annum (tons)	Total percentages
General waste	33420.1	93.3%
Garden waste	1105.3	3.09 %
Construction and demolition waste	1291	3.60 %
Other	0	0 %
Total	35 816.4	100

4. WASTE RECYCLING, TREATMENT AND DISPOSAL

4.1 STATUS QUO OF WASTE DISPOSAL FACILITIES

Standerton Waste disposal sites The Standerton waste disposal sites is licensed in terms of Section 20 (b) of the National Environmental Management: Waste Act, (Act 59 of 2008). The site is operated by the municipality. The site is operated by following the cell method, but is not operated according to license conditions. Cover material is not readily available and no regular covering of waste is occurring as required in the license issued for the site.

The uncontrolled reclaiming of waste on the waste disposal sites is interfering with the operational activities and should be formalized. There is regular burning of waste taking place which is done mainly by the informal reclaimers on site. The site operations should be upgraded to comply with the license conditions and/or Minimum Requirements for Waste Disposal by Waste disposal sites document, published by DWAF in 1998.

The main access route to the Standerton waste disposal sites is the Walter Sisulu Drive and the R 546 and the waste disposal sites is approximately 7 km from the centroid of Standerton Town.



Figure 5: Position of Standerton Landfill Site

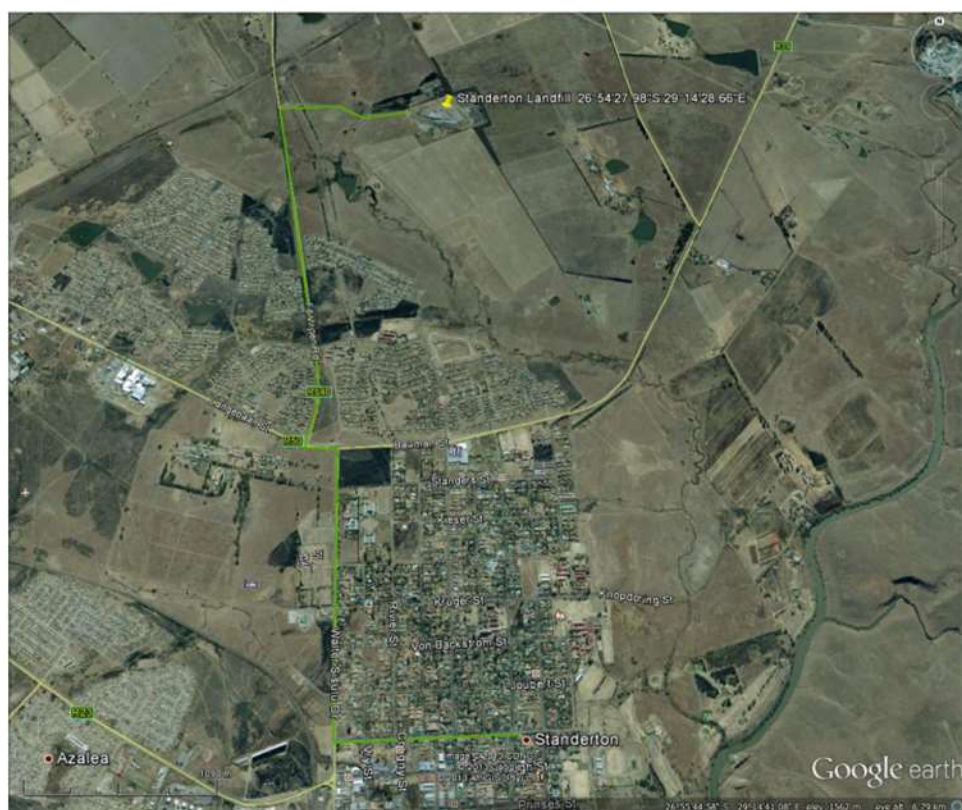


Figure 6: Transport Route to Standerton Landfill Site

The Municipality is required to ensure that waste is properly managed and disposed of according to waste license conditions. It is also important that municipalities must establish the size of their waste disposal facilities; the anticipated lifespan and/ or available airspace, types and quantities of waste disposed, and should take note of whether these are operated in a sound and environmentally acceptable manner.

The waste disposal site is licenced in terms of Section 45 of NEMWA AS AMENDED. The waste disposal is not operated in accordance with an operational plan neither in accordance with the licensed conditions for the waste disposal site. Waste is disposed of and covered once per week. No formal method of operation is being followed. The site is not fenced, thus access control needs to be improved and incoming waste should be recorded. Dust, odours, vectors and windblown litter are therefore prevalent. Informal recycling takes place on site that poses a hazard for the recyclers. The operations need to be upgraded to comply with the Minimum Requirements for Waste Disposal by Waste disposal requirements document published by DWAF in 1998, the Disposal by Waste disposal regulations in terms of NEMWA AS AMENDED and standard waste disposal practices.

Table 5: THE STATUS OF THE STANDERTON WASTE DISPOSAL SITE

Position of site:	7 km North from the Standerton town Centre (Co-ordinates: 26°54'28.03S 29°14'27.20E)
License:	Yes
Year issued:	2008
Classification of site:	Class G: S: B -
Type of Operation (end – tip, trench, cell):	Cell method
Estimated size of site:	19 Ha
Estimated remaining life of site:	10 years
Separation of fresh and contaminated water:	No
Groundwater monitoring:	No

Estimated Volumes per day, week or month:	20 000 t/annum
Is cover material available?:	No, covering does not occur as required
Is the drainage sufficient	No
Is there access control?	No
Does the site have a sufficient buffer zone?	Yes
Type of equipment utilized on site:	Waste disposal sites compactor, FEL
Operating hours:	Officially: 8:00 – 17:00 daily
Site facilities, i.e. ablutions, guard house:	None
Evidence of waste being burnt on site:	Yes
Estimating cost for closure:	R 39 902 000
Savings plan for closure:	There is currently no savings plan in place for the closure of the site.

Table 6: THE STATUS OF THE MORGENZON WASTE DISPOSAL SITE

Position of site:	PORTION 3 OF THE FARM MORGENZON
License:	CLOSURE LICENSE
Year issued:	2016
Estimating cost for closure:	R 10 000 000

The Morgenzon landfill site is situated on the farm Morgenzon 466 IS, approximately 237m northeast of the town Morgenzon, on route to Ermelo on the R39. The Morgenzon landfill site is responsible for accommodating the solid waste of Morgenzon and Sivukile, which is a township in Morgenzon. The total population of Morgenzon and Sivukile accumulates to 8969 in 2022.

The Morgenzon landfill reached full capacity 3 years earlier than anticipated because no compaction was done on-site. As a result, there was no sufficient airspace to dispose of waste, and this led to waste no

longer being disposed onto the landfill but on the outside, which led to the detriment of the environment. The Morgenzon Landfill then had to be closed.

The closure license was issued by the Department of Environmental Affairs on 2016-09-28, and the municipality will commence with the rehabilitation process in the 2023/2024 financial year. Due to the closure of the site, waste is transported from Morgenzon to Standerton which is about 45 km daily.

5. COLLECTION SERVICES

5.1 HOUSEHOLD DISTRIBUTION

As can be seen from the household distribution, the Lekwa Local Municipality has a relatively large portion of households that are informal. To offer a refuse collection service to these households are often problematic due to the accessibility to the households, the high density of the households per area and the lack of revenue generation in the form of rates for refuse collection

5.2 SERVICE AREA AND REFUSE COLLECTION

The Lekwa Municipal Area incorporates the towns of Standerton and Morgenzon as well as the township areas of Sakhile and Sivukile. No other settlements were identified in the Municipal area that would have to be included for service delivery. Currently, some form of a waste collection service is rendered to all developed and proclaimed areas of the Municipality. All the waste management for the municipality is coordinated from Standerton Sakhile municipal offices. There are currently 15 wards in the municipal area. The two town of Standerton and Morgenzon utilize the waste disposal sites Standerton and Morgenzon respectively for their waste disposal requirements

5.3 NATIONAL DOMESTIC WASTE COLLECTION STANDARDS

Table 7: Lekwa Local Municipality Waste Collection Data, 2016

Item	Total number
Households	37334
Serviced households	30518
Unserviced households	6816
Indigent households	1647
Unserviced indigent households	0
Service Level A: On-site appropriate and regularly supervised disposal	0
Service Level B: Community transfer to central collection point:	0

Service Level C: Organised transfer to central collection points and/or kerbside collection:	30518
Service Level D: Mixture of Service Level B and Service Level C:	0
Total Serviced households as per the National Domestic Waste Collection Standards:	30518

Source Stats SA, 2016

Currently out of the total of 37334 households only 30518 households receive waste collection services within the Municipality. That means 30 % of the households does not receive any waste removal service and it is due to the large number of rural areas without waste removal services within the municipality. As stated before, the refuse collection service is rendered by the Cleansing Division which forms part of the Community Services Department of the Municipality. Waste collection is done regularly throughout each of the wards.

6. FINANCING OF WASTE MANAGEMENT

The Municipal Systems Act, Act no. 32 of 2000 (Chapter 8, ss73-86A) requires that municipalities must ensure proper budgeting in order that they are able to deliver on their Constitutional mandate with regards to the provision of waste services.

Table 8 and figure 7 illustrate the annual budget/expenditure for waste management in the municipality.

6.1 BUDGET/EXPENDITURE: INCOME AND EXPENDITURE

Table 8: Annual Budget/Expenditure: Income and expenditure

Item	Amount
Collection	
Maintenance	R 600 000
Fuel	R 1 500 000
Subtotal	R 2 100 000
Governance	
Staff (remuneration)	R 10 549 900
Subtotal	R 10 549 900
Disposal	
Disposal sites	R 1 500 000
Subtotal	R 1 500 000
Total	R 133 499 00

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Figure 7: Annual budget and Expenditure

In order for a Municipality to successfully implement its IWMP, it is important to establish the current available resources in terms of finance; human resources, technical skills to deliver on the Municipality's mandate and to implement the goals and targets contained in the plan i.e. development of by-laws and lastly, funding for operational and maintenance costs for equipment for the effective delivery of waste services and establishment of waste disposal facilities.

6.2 REVENUE SOURCES

Table 9: Revenue Sources

Source	Amount
Funding sources	R 0
MIG Funding	R 2 640 000
Equitable share funding	R 0
Revenue from waste disposal fees	R 0
Total	R 2 640 000

Further, financial management/budgeting is key as it will assist in identifying future resource needs, if there is an increase in the number of households requiring waste collection services what additional resources will be required to deliver the service. Table 9 above indicates revenue sources used to fund waste management services within the municipality.

6.3 MUNICIPAL WASTE MANAGEMENT FLEET STATUS QUO

Table 10: Waste Management Vehicles in Lekwa Local Municipality

REGISTRATION	TYPE OF VEHICLE	CONDITION		
		GOOD	FAIR	POOR
JZD 822 MP	Dumper Truck		✓	
JSX 731 MP	Compactor Truck		✓	
JSX 708 MP	Compactor Truck		✓	
JSX 722 MP	Compactor Truck		✓	
KFJ 847 MP	Compactor Truck		✓	
KFJ 806 MP	Compactor Truck		✓	
JMP 237 MP	Compactor Truck		✓	
JVK 610 MP	Front end loader		✓	
KCN 905 MP	Landfill site compactor		✓	
KRB 311 MP	Compactor Truck		✓	
KWP			✓	

The Municipality still has a few waste management vehicles but is in a severe shortage of equipment for both collection and waste disposal operation. The Municipality is responsible for the maintenance of their own vehicles. Based on the above assessment of the vehicle fleet, the Municipality should compile a vehicle replacement plan to ensure that future planning for the replacement of the vehicles is done at the appropriate time.

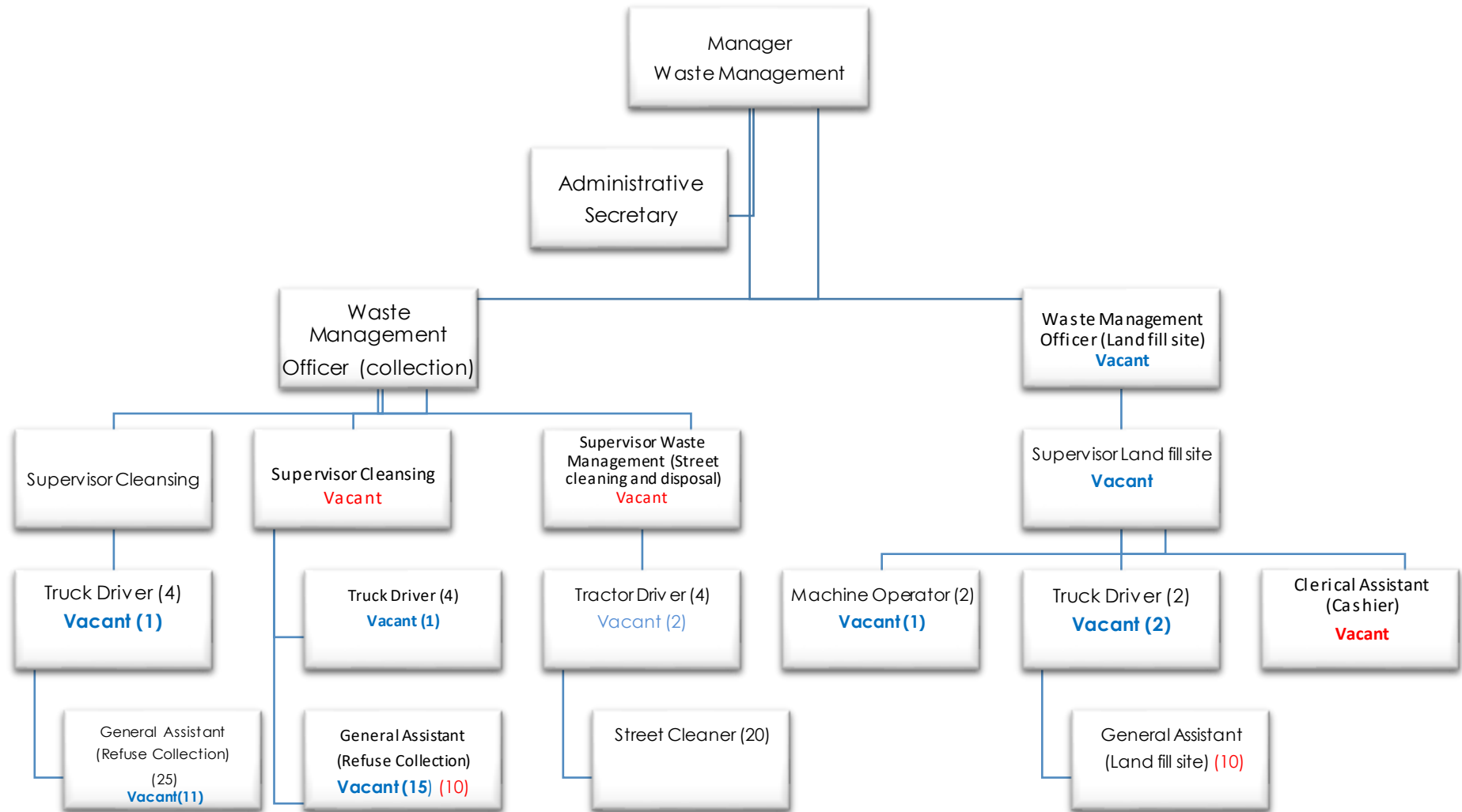
6.4 ORGANISATIONAL AND INSTITUTIONAL MATTERS

Waste Management is a section in the Department of Community Services and Safety. The MMC of Community Services and Safety exercises policy and executive leadership responsibility over the department as part of the Mayoral Committee collective. The administrative head of the department is the Executive Manager Community Services and Safety who is responsible for policy implementation and strategy in the department. The Manager: Waste Management is responsible for the development and implementation of the integrated waste management plan. Lekwa local municipality discharge service delivery to the communities through its administrative units which are key in service delivery.

An important consideration in the analysis of the organisational structure is the designation of a waste management officer in Lekwa local Municipality. The NEMWA stipulates the need for the designation of Waste Management Officers (WMOs) at all tiers of government which will be responsible for coordinating waste management in their various spheres of government. The activities carried out by the WMO must be aligned with the National Waste Management Strategy established in terms of section 6 of the said act. A municipality has to address the specific requirements of the NEM WA and integrate these into the institutional arrangements. The role of Waste Management Officer is played by the Manager Waste Management as the leader and the manager of the section assisted by one Waste Officer. The Waste Officer is responsible for the general operations of the Waste Management service in the administrative division.

Figure 8 below is the organogram for the waste management division.

FIGURE 8: Waste Management Organogram



7. DESIRED END STATE

Seven focus areas have been identified for the compilation of the IWMP for the Local Municipality. Based on the Gaps and Needs identified in the previous section, a Desired End State has been identified for each of the focus areas.

It is important to align the Desired End State in accordance with the National Waste Management Strategy, 2020. The official hierarchy adopted in the Government waste management hierarchy, in order of preference, is as follows:

- Waste avoidance
- Waste minimisation
- Waste re-use
- Waste recycling
- Waste treatment
- Waste disposal

It is important that there should be a target date by which these municipal strategic priorities are to be attained within the five years from the date the IWMP has been approved. The following timeframes are suggested for the strategic priorities:

- Immediate: 1 year
- Short-term: 2 to 3 years
- Medium term: 3 to 5 years
- Long term: 5 to 10 years

Goal 1: By 2027, the institution aims to promote waste minimisation (re-use, recycling and recovery) of waste in order to comply with the National Waste Management Strategy in the various areas within its jurisdiction.

IMMEDIATE GOALS	SHORT TERM GOALS	MEDIUM TERM GOALS	LONG TERM GOALS
Formalise and encourage recycling activities	Establish, promote and encourage recycling activities	Develop a database of recyclers in the municipality	Develop a municipal training manual for the waste recyclers
Establish, promote and encourage waste minimisation projects	Initiate office recycling project within the municipality	Initiate community recycling project within the municipality	Ensure that office and community recycling projects are effective

Goal 2: By 2027, the institution aims to monitor that there is effective and efficient delivery of waste services so as to conform with the National Waste Management Strategy in the various areas within its jurisdiction.

IMMEDIATE GOALS	SHORT TERM GOALS	MEDIUM TERM GOAL	LONG TERM GOALS
Extend access to waste services and maintain current service delivery to all areas within the municipality	Monitor the effectiveness and efficiency of access to waste services within the Municipality	Implement waste collection services to new developments.	Implement waste collection services to new developments.
Identify and compile a map or schedule of serviced and un-serviced areas within the municipality.	Identify various service points for the serviced and un-serviced areas.	Extend services to un-serviced areas.	Update and manage the schedule to ensure all areas are receiving collection services.
Identify indigents that are not receiving waste collection services.	Extend free basic waste removal services to indigents.	Continue to identify indigents and extend free basic waste removal services.	Continue to identify indigents and extend free basic waste removal services.

Goal 3: The institution aims to ensure that sound budgeting and financial management of waste services is done annually in order to comply with the Municipal Finance Management Act and the Municipal Systems Act within its area of jurisdiction.			
IMMEDIATE GOALS	SHORT TERM GOALS	MEDIUM TERM GOAL	LONG TERM GOALS
Develop detailed organogram of waste management personnel in terms of the NEMWA AS AMENDED requirements.	Fill vacant positions and establish positions required for proper waste management.	Update organogram and appoint staff in vacant positions.	Update organogram and appoint staff in vacant positions.
Ensure sound budgeting for waste management programmes	Identify shortages in the budget and identify possible funding sources for these shortages and amend budget accordingly. Implement revised budget.	Identify shortages in the budget and identify possible funding sources for these shortages and amend budget accordingly. Implement revised budget.	Identify shortages in the budget and identify possible funding sources for these shortages and amend budget accordingly. Implement revised budget.
Review tariffs for waste collection and disposal and identify shortcomings	Implement tariff model (as developed by DEFF).	Implement tariff model and amend as required.	Implement tariff model and amend as required.

Goal 4: Monitor the municipality's safe and proper disposal of waste in line with the license conditions and the Waste Act.

IMMEDIATE GOALS	SHORT TERM GOALS	MEDIUM TERM GOAL	LONG TERM GOALS
Monitor that all landfill sites comply with the license conditions	Operate the waste disposal sites according to the permit/license conditions. Identify shortcomings with regards to the operational requirements.	Resolve the identified operational shortcomings. Continue operation according to permit/license conditions.	Audit and monitor waste disposal site operations

Goal 5: Annually the institution aims to ensure that the communities are aware of the impact of waste on their health, well-being and the environment within its area of jurisdiction.

IMMEDIATE GOALS	SHORT TERM GOALS	MEDIUM TERM GOAL	LONG TERM GOALS
Create awareness of waste management issues	Develop education and awareness programmes	Implementation of education and awareness campaigns	Roll out the school competition programme and monitor the schools to ensure maximum participation.
Clean up illegal dumping areas.	Continue cleaning up illegal dumping areas.	Continue cleaning up illegal dumping areas.	Continue cleaning up illegal dumping areas.
Update the by-laws to address the NEMWA AS AMENDED requirements.	Draft and promulgate by-laws.	Proper enforcement of by-laws.	Proper enforcement of by-laws and amend if necessary.

Goal 6: The institution aims to establish efficient and effective compliance mechanism of enforcement in line with the Waste Act, IWMPs, waste by-laws and policies on a continuous basis

IMMEDIATE GOALS	SHORT TERM GOALS	MEDIUM TERM GOAL	LONG TERM GOALS
The institution aims to ensure that legislative tools are developed and or reviewed to deliver on the objects of the Waste Act and other applicable legislation.	Keep proper records of waste quantities and types received at the waste management facilities. Regularly report data to SAWIC (South African Waste Information Centre)	Use records for proper planning and decision making. Regularly report data to SAWIC (South African Waste Information Centre)	Ensure that the future planning is effectively carried out. Regularly report data to SAWIC (South African Waste Information Centre)
The institution aims to ensure develop a spatial mapping	Develop an environmental pollution hotspots spatial mapping for illegal dumping spots and ongoing mapping of landfill sites	Implement spatial mapping system.	Implement and monitor spatial mapping system.

8. IMPLEMENTATION PLAN

Goal 1: By 2027, the institution aims to promote waste minimisation (re-use, recycling and recovery) of waste in order to comply with the National Waste Management Strategy in the various areas within its jurisdiction.

Strategic Objectives	Activities	Indicators	Timeframe in years					(Implementation mechanisms) Resource		
			Y1	Y2	Y3	Y4	Y5	Human Resource (HR)	Equipment (EQP)	Finance (HR+EQP)
Encourage waste minimisation projects	Support waste minimisation projects	Number of waste minimisation projects supported	√	√	√	√	√	Internal and external stakeholders	None	R500 000
Formalise recycling activities	Develop and update database for waste recyclers	Developed and ongoing update of the waste recyclers database	√	√	√	√	√	External & internal stakeholders	None	
	Provide capacity building for the waste recyclers	Capacity building provided	√	√	√	√	√	External & internal stakeholders	W	R200 000
	Initiate office recycling project.	Promote waste minimisation, re-use, recycling and recovery of waste	√	√	√	√	√	Existing staff	Colour coded receptacles	R500 000

Goal 2: By 2027, the institution aims to monitor that there is effective and efficient delivery of waste services so as to conform with the National Waste Management Strategy in the various areas within its jurisdiction.

Strategic Objectives	Activities	Indicators	Timeframe in years					(Implementation mechanisms) Resources		
			Y1	Y2	Y3	Y4	Y5	Human Resource(HR)	Equipment(EQP)	Finance(HR+EQP)
Extend access to waste services and maintain current service delivery to all areas within the municipality	<ul style="list-style-type: none"> Extend waste collection services to informal settlements/Unserviced areas 	No of new household with waste collection		√	√	√	√	Additional staff	Compact or trucks	R4 000 000
	<ul style="list-style-type: none"> Review and update the waste collection schedule 	An updated waste collection schedule	√	√	√	√	√	Existing staff	None	None
	<ul style="list-style-type: none"> Maintain current waste management equipment and fleet. 	Maintained waste management equipment	√	√	√	√	√	Existing staff	None	R5 Million

Goal 3: The institution aims to ensure that sound budgeting and financial management of waste services is done annually in order to comply with the Municipal Finance Management Act and the Municipal Systems Act within its area of jurisdiction.

Strategic Objectives	Activities	Indicators	Timeframe in years					(Implementation mechanisms) Resources		
			Y1	Y2	Y3	Y4	Y5	Human Resource s(HR)	Equipment (EQP)	Finance(H R+EQP)
Ensure full-cost accounting for waste at municipal level	• Analyses of waste services budget	Analysed waste services budget	√	√	√	√	√	Existing staff	None	None
	• Budget accordingly for waste services		√	√	√	√	√	Existing staff	None	None
Set and implement tariffs for waste collection and disposal	• Review and implement tariffs for waste collection and disposal	Reviewed and implementation of tariffs for waste collection and disposal	√	√	√	√	√	Existing staff	None	none
Fill vacant position and create positions required to effectively render waste management services.	• Update organogram and appoint staff in vacant/new positions	Updated organogram	√	√	√			Existing staff	None	R1.0M

Goal 4: Monitor the municipality's safe and proper disposal of waste in line with the license conditions and the Waste Act.

Strategic Objectives	Activities	Indicators	Timeframe in years					(Implementation mechanisms) Resources		
			Y1	Y2	Y3	Y4	Y5	Human Resource(HR)	Equipment(EQP)	Finance(HR+EQP)
Site not operated according to the minimum requirements/ license conditions.	Ensure safe and proper disposal of waste in line with the license conditions.	Conduct landfill site audits.	√	√	√	√	√	Service provider	None	Outsourced (R1 000 000)
	Develop and review a landfill operation & maintenance plan.	Provide training for personnel to improve and upgrade operations at the sites	√	√	√	√	√	Service provider	None	R100 000

Goal 5: Annually the institution aims to ensure that the communities are aware of the impact of waste on their health, well-being and the environment within its area of jurisdiction.

STRATEGIC Objectives	Activities	Indicators	Timeframe in years					(Implementations Mechanisms) Resources		
			Y1	Y2	Y3	Y4	Y5	Human Resources (HR)	Equipment (EQP)	Finance(HR+EQP)
Create awareness of waste management issues	• Develop an education and awareness programme	Education and awareness programmes	√	√	√	√	√	Internal and External Stakeholders	None	R300 000
	• Implementation of education and awareness campaigns	Education and awareness campaigns implemented	√	√	√	√	√	Internal and External Stakeholders	None	R100 000

	<ul style="list-style-type: none"> Roll out the school competition programme and monitor the schools to ensure maximum participation 	School competition programme rolled out.	√	√	√	√	√	Internal and External Stakeholders	None	R50 000
	<ul style="list-style-type: none"> Participate in waste intergovernmental meetings, trainings, and workshops 	Participation in waste intergovernmental meetings, trainings, and workshops	√	√	√	√	√	Existing staff	None	None

Goal 6: The institution aims to establish efficient and effective compliance mechanism of enforcement in line with the Waste Act, IWMPs, waste by-laws and policies on a continuous basis

Strategic Objectives	Activities	Indicators	Timeframe in years					(Implementation mechanisms) Resources		
			Y1	Y2	Y3	Y4	Y5	Human Resource(HR)	Equipment(EQP)	Finance(HR+EQP)
Effective Waste information Record keeping	Improve data quality reporting for Standerton landfill site on SAWIC	Data completeness and correctness on SAWIC maintained.			√			Existing staff	Weighbridge	R500 000
Waste Management workshops/forums	Participate in waste intergovernmental meetings trainings and workshops		√	√	√	√	√	Existing staff	None	None

	Training of peace officers.			√				Service provider	None	R500 000
	Establish Lekwa Local Municipality Waste management and environmental Forum.			√	√	√	√	Internal and External stakeholders	None	R250 000

9. COMMUNICATION AND STAKEHOLDER PARTICIPATION

9.1. CONSULTATION PROCESS SUMMARY

The IWMP will be submitted as the draft for council to take note and authorise that public participation process be undertaken. Due to the lockdown conditions the document will be placed at strategic places and it shall be sent to interested and affected parties for their comments or inputs. For final approval, the document will be taken back to council with inputs from the public consultation process and finally to the MEC responsible for the Environmental Sector for endorsement.

Stakeholder	Issues raised/ Concerns	Municipality's response	General comments
DARDLEA-Deputy Director: Pollution & Waste Management	Information on the following matters not included: Economic status, education, collection tariffs, number of indigent households within the municipality	The municipality reviewed the document and included all the information raised	The document was completed and sent to all communities of Lekwa local municipality for comments
DARDLEA-WMO	No issues	None	None

GSDM-Environmental Department	No issues raised	None	None
Community of Lekwa LM	No issues raised	The IWMP was sent to district for comments and feedback given was very positive	The support from GSDM is highly appreciated
Young Nature Minders Recyclers	No issues raised	None	None
Seriti Institute	No issues raised	None	None

10. IMPLEMENTATION INSTRUMENTS

10.1. PARTNERSHIPS

Lekwa Local Municipality has developed partnerships with interested and affected parties in the Waste Management Sector, these partnerships are aimed at ensuring that work performed by everyone in the Waste Sector is coordinated to achieve the goals of the IWMP and the National Waste Management Strategy. The partnerships will be done through Public-public partnerships, Public private partnerships and NGO/ CBO's (Community Based Organizations).

11. LEGISLATIVE INSTRUMENTS: DEVELOPMENT AND ENFORCEMENT OF BY-LAWS

11.1 MUNICIPAL BY-LAWS PERTAINING TO WASTE

The Municipality has drafted waste management by-laws that are approved by Council, but not yet promulgated by COGTA. The by-laws relevant to waste management services covers all aspects of waste management including aspects such as collection and removal of business and domestic refuse, industrial and

trade refuse, garden, special domestic and bulky refuse, builders refuse, special industrial, hazardous, medical and infectious refuse, the solid waste disposal site management, littering, offences and penalties.

Room for improvement does exist to promote recycling and waste minimisation and not to only force requirements down on those who indeed practise recycling and/or other waste minimisation initiatives. Greater emphasis should be put on recycling at source.

In assessing the National Environmental Management: Waste Act, it was evident that clear responsibilities are assigned to each sphere of government in relation to waste management activities. Local Government is responsible for the provision of waste management services, which includes waste removal, waste storage and waste disposal services, as per Schedule 5b of the Constitution.

They must also submit an integrated waste management plan to the MEC for approval. The IWMP needs to be integrated into municipal integrated development plans (IDP), and the municipal annual performance report shall include information on the implementation of the IWMP.

11.2 ENFORCEMENT OF BY-LAWS

Enforcement of by-laws is currently a challenge, the municipality intend appointing by-law enforcement officers who will enforce all council by-laws include the waste management by-laws.

12. FUNDING/RESOURCES AND FINANCES

The Municipality will source funding for the proposed goals and targets. The funding mechanisms used could be from internal sources (operational budgets) or outside sources like government departments, private sector, and international funders/donors.

Possible donor sources for the Municipality are as follows:

- Municipal Infrastructure grant (MIG)

- Department of Environmental Affairs, Forestry and Fisheries (DEFF) - Various programmes and partnerships
- Department of Public Works (DPW) – Extended Public Works Programme (EPWP) for labour intensive construction methods.
- Department of Trade and Industry (DTI) – Various Programmes and Schemes
- Industrial Development Corporation (IDC) – Green Energy Fund
- World Bank
- United Nations Development Programme
- Any other Interested and Affected Party

13. REPORTING ON MONITORING AND REVIEW

Evaluation will be conducted so as to identify changes / developments, outcomes, challenges, areas that were omitted in the plan. This exercise will be a joint operation between relevant stakeholders from all spheres of the government.

13.1 PERFORMANCE REPORTING

Section 13(3) of the Waste Act requires that annual performance reports prepared in terms of Section 46 of the Municipal Systems Act must contain information on the implementation of this IWMP. Pertinent information should include:

- The extent to which the plan has been implemented during the period;
- The waste management initiatives that have been undertaken during the reporting period;
- The delivery of waste management services and measures taken to secure the efficient delivery of waste management services, if applicable;
- The level of compliance with the plan and any applicable waste management standards;
- The measures taken to secure compliance with waste management standards;
- The waste management monitoring activities;
- The actual budget expended on implementing the plan;
- The measures that have been taken to make any necessary amendments to the plan;
- Any other requirements as may be prescribed by the Minister.

- Annual performance report on the implantation of the IWMP will be included in the annual report of the Municipality. The goals of the IWMP will be included as Key performance indicators in the Service Delivery and Budget Implementation Plan of the municipality.

13.2 MONITORING

Monitoring of the implementation program is essential as it allows the responsible authority to ensure that the proposed plan is implemented within designated timeframes. The milestones derived in the IWMP will assist the municipality in measuring progress on the goals outlined.

The auditing processes used by council will be used to ensure continuous monitoring on the performance in implementation of the IWMP.

13.3 REVIEW

The IWMP should be viewed as a living document and it is recommended that the Targets and Objectives be reviewed and updated annually based on both progress and constraints encountered, as part of the preparation of the Annual Performance Report. As this IWMP forms part of the Integrated Development Plan required in terms of Chapter 5 of the Municipal Systems Act, this IWMP will be comprehensively reviewed after 5 years, thus the next comprehensive revision of the IWMP should occur in 2026. The comprehensive review will update the status quo, evaluate overall progress against the Goals and Objectives in this IWMP, review gaps and needs and reformulate Goals and Objectives as required to continue to improve waste management services in the Lekwa Municipality area.

