





**Prepared for:**
Moretele Local Municipality

**Contact person:**
Rachel Moepya

**Tel:** 012 716 1300
**Email:** raymoepya@gmail.com

# MORETELE LOCAL MUNICIPALITY
# INTEGRATED WASTE MANAGEMENT PLAN

## FIRST DRAFT IWMP

DRAFT REPORT
REVISION 00

**DECEMBER 2024**



**Prepared by:**
Delta Built Environment Consultants (Pty) Ltd

**Contact person:**
Paul Jacobs

**Tel:** (012) 368 1850
**Fax:** (012) 348 4738
**Email:** paul.jacobs@deltabec.com

DELTA
built environment consultants

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| **CONSULTANT:** | Delta Built Environment Consultants (Pty) Ltd<br>P.O. Box 35703<br>Menlo Park<br>0102 | | |
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| **PREPARED BY:** | Francois Venter | Environmental Scientist | |
| **REVIEWED BY:** | Paul Jacobs | HoD: Waste Management | |
| **APPROVED BY:** | Stanford Acres | Group Manager: Advisory Services | |
| **DISTRIBUTION LIST:** | **COMPANY** | **NAME & SURNAME** | |
| | Department of Forestry, Fisheries & the Environment | Hlayisani Ntsanwisi | |
| | | Kelebogile Rapoo | |
| | Moretele Local Municipality | Rachel Moepya | |
| | Bojanala Platinum District Municipality | Roselyn Mkhondo | |

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# EXECUTIVE SUMMARY

The Department of Forestry Fisheries and the Environment (DFFE) appointed Delta Built Environment Consultants (Delta BEC) to develop an Integrated Waste Management Plan (IWMP) for the Moretele Local Municipality (MLM).

The primary objective of developing an IWMP for the MLM is to ensure that waste management practices in the MLM comply with the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) as amended and all other relevant legislation.

The purpose of this report is to analyse and quantify all aspects related to current waste management services and practices carried out by the MLM with the view of using this information as a basis for future planning. It includes an evaluation of relevant waste management legislation, policies and strategies, a description of the population and development profiles of the Municipality, an assessment of the quantities and types of waste that is generated in the Municipality, a description of waste management services provided by the Municipality in terms of minimisation, recycling and recovery, collection, transport, transfer (where required), treatment and disposal of waste and a description of private waste management activities undertaken in the Municipality's area of jurisdiction.

The IWMP to be developed for the MLM will be developed in line with all the relevant legislation, plans and policies (including amendments) listed below, forming the legal framework to which the IWMP must be aligned.

- The South African Constitution (Act No. 108 of 1996)
- The National Environmental Management Act as amended (Act No. 107 of 1998, as amended)
- The National Environmental Management: Waste Act as amended (Act No. 59 of 2008, as amended)
- The Hazardous Substances Act (Act No. 15 of 1973)
- The Municipal Systems Act (Act No. 32 of 2000)
- The National Waste Management Strategy (2020)
- Bojanala Platinum District Integrated Waste Management Plan
- North West Provincial Integrated Waste Management Plan (2016)
- National Domestic Waste Collection Standards, (2011)
- National Waste Information Regulations (2012)
- National Norms and Standards for Disposal of Waste to Landfill (GNR 636, August 2013)
- National Norms and Standards for the Storage of Waste (2013)
- National Standards for the Extraction and Flaring of Waste Disposal Landfill Gas, (2013)
- National Waste Classification and Management System regulations (GNR 634, August 2013)
- National Norms and Standards for The Remediation of Contaminated Land and Soil Quality (2014)
- National norms and standards for organic waste composting (2020)
- National Health Act 61 of 2003 as amended.

## DEMOGRAPHICS

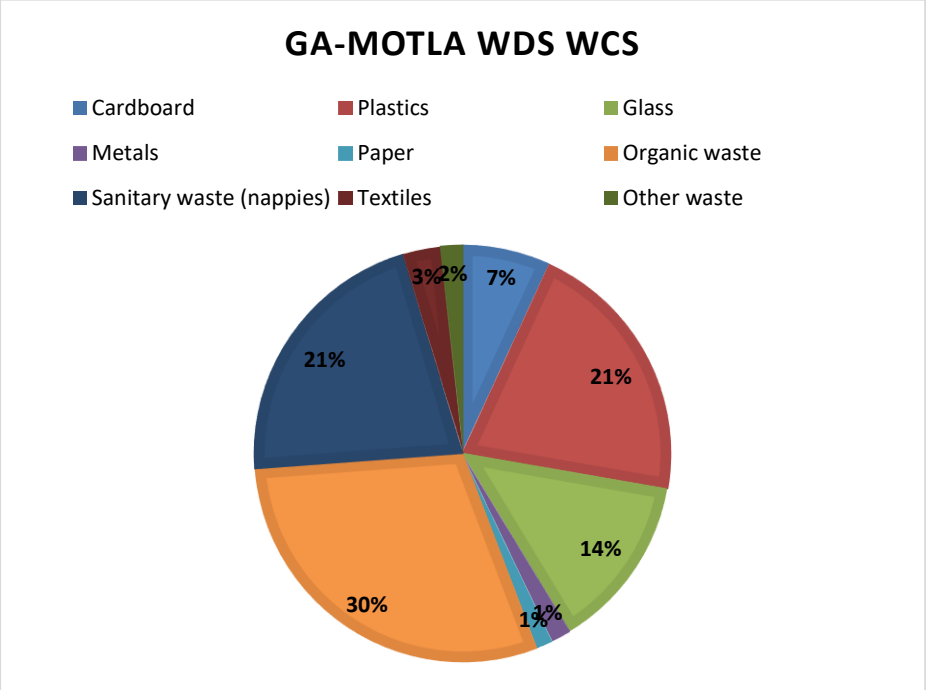
Statistics from the latest report by Statistics South Africa (2022) indicate that the population of MLM surged from 188 533 in 2011 to 219 120 in 2022. Around 91.6% of MLM residents inhabit formal housing across 76 villages, while the remaining 8.4% live in traditional, informal, or other types of dwellings. The largest segment of the population, constituting 62.8%, falls within the 15 to 64 age range. Meanwhile, 28.7% are under 15 years old, and 8.5% are aged 65 or above.

## WASTE TYPES

A total of two waste characterisation studies (WCS) were conducted within the MLM for the development of an IWMP. The first (October 2023) WCS was conducted by Delta BEC, and the second WCS (June 2024) was conducted through a collaboration of the MLM and the DFFE.

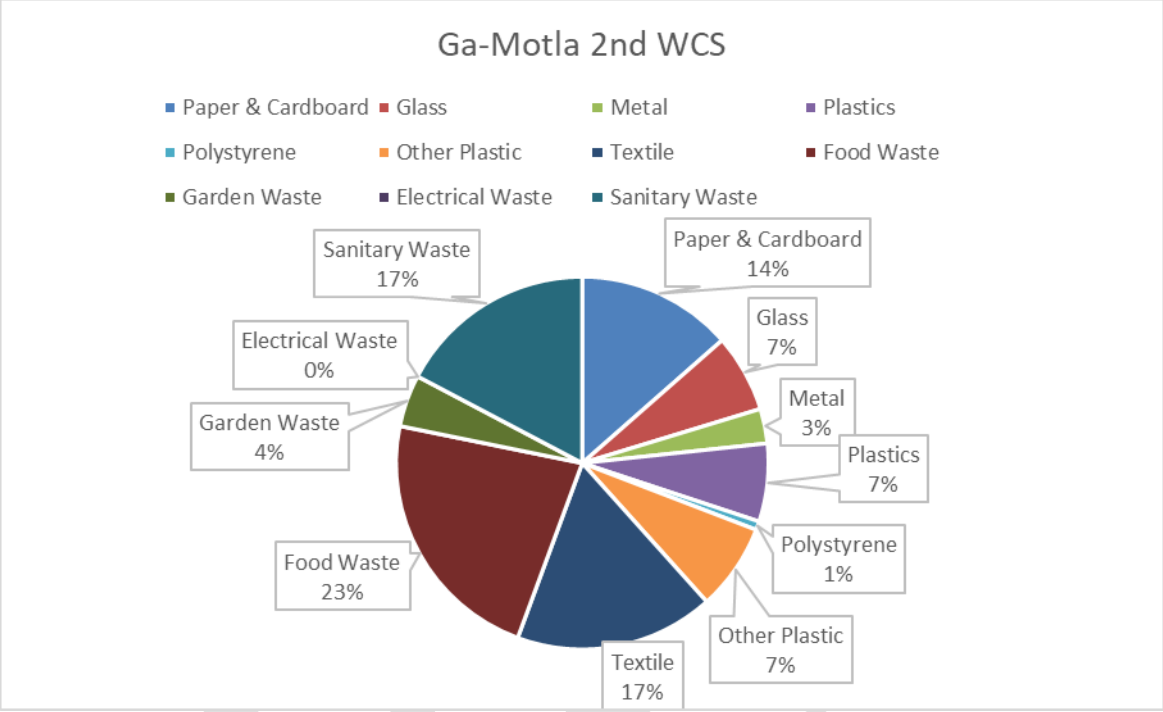
## First WCS

A WCS was conducted on 20 October 2023 (Spring) to identify the type of waste generated within the Municipality. The WCS took place at the unlicensed Ga-Motla Waste Disposal Site. Due to cost-, time- and resource constraints, the WCS for MLM was only conducted on one day and only on the waste disposed of on that day. To get more accurate data, the MLM should conduct the WCS over the four seasons of the year since waste generation is affected greatly by seasonal variation; therefore, ideally, waste analysis should be carried out at three-month intervals. The waste categorisation study for MLM will be added as a future project to be implemented by the MLM. The results of the WCS are presented in the chart below. From the WCS, it was concluded that Ga-Motla Waste Disposal Site, 30% of the waste disposed at the Ga-Motla Waste Disposal Site consist of organic waste, 44% of recyclables and 25% non-recyclable waste (i.e., nappies and other).



**Second WCS**

A WCS was conducted on 24 June 2024 (Winter season) to identify the type of waste generated within the Municipality. The WCS took place at the unlicenced Ga-Motla Waste Disposal Site. From the WCS, it was concluded that Ga-Motla Waste Disposal Site, 26% of the waste disposed at the Ga-Motla Waste Disposal Site consist of organic waste, 38% of recyclables and 36% non-recyclable waste (i.e., sanitary waste, E-waste and textiles).




**RECYCLING, TREATMENT AND DISPOSAL**

Formal and informal recycling occurs within the MLM. Due to insufficient recycling initiatives, waste materials are transported out of the MLM to neighbouring areas of the City of Tshwane to be sold to companies trading in these areas. Informal recyclers are found next to roads, collecting and selling materials to by-passers and formal businesses within the MLM. Companies located within the City of Tshwane collect waste materials from informal recyclers when the informal recyclers have sufficient quantities of waste available for collection. No treatment of waste takes place in MLM.

The MLM has one unlicensed site named the Ga-Motla Waste Disposal Site. The MLM applied for rectification of the Ga-Motla Waste Disposal Site in terms of Section 24G(1)(b) of the NEMA and Section 20(b) of the National Environmental Management: Waste Act 59 of 2008; however, this application was refused by the North West Rural, Environment and Agricultural Development Department in March 2020. The Municipality was instructed to immediately cease the unlawful activity upon receipt of the refused Section 24G decisions and submit a Waste Management License application to decommission the Ga-Motla Waste Disposal Site. To this date, waste disposal activities at the site are ongoing and have not ceased.

There are two closed private Waste Disposal Sites, namely Bosplaas East and Bosplaas West, in the MLM. Both these facilities have been closed and are not operational. Bosplaas East

waste disposal site is located on Farm Boschplaats 91 JR within MLM. The site is closed in terms of the Compliance Notice dated 24 February 2015. The coordinates of the site are 25o 20'32.29" S and 28o 15'29.02"E. Bosplaas West waste disposal site is located on Farm Boschplaats 91 JR within MLM. During the ground truthing phase, the locations could not be verified, and limited information is available pertaining to the closed sites, including operational life, types of waste accepted, classification, closure and rehabilitation.

The Municipality has 31 skip bins placed throughout the Municipality, which are serviced by two service providers on a weekly basis. The skip bins are placed in numerous locations throughout the Municipality, with the goal being to prevent illegal dumping. During the ground truthing, waste was burnt inside of the skip bins. According to the Municipality officials, the burning of waste inside the skip bins is due to impatience with the weekly clearance of the skip waste.

**WASTE COLLECTION**

Waste Collection, transportation, and disposal in the MLM is outsourced to 20 different private service providers appointed by the MLM as of 01 May 2024. Reportedly, this is because the MLM does not have an adequate municipal waste fleet available to service the municipal jurisdictional area. Waste is disposed of at the unlicenced Ga-Motla WDF. The MLM is in the process of developing a licenced WDF.

**RESOURCES**

To guarantee there is continuous communication regarding the Waste Act's implementation between all three spheres of government, it is crucial that municipalities designate a WMO. WMO is essential to the creation of its IWMP and for ensuring compliance. The Waste Act, Chapter 3, Section 10(3), mandates that WMOs be officially designated in writing by each municipality authorised to carry out waste management services.

Currently, one person is designated as the (2024) Environmental Officer for the MLM; this person also performs the work for the MLM as the WMO. Interns have been appointed to assist the Environmental Officer through the Department of Cooperative Governance and Traditional Affairs and National Skills Fund. The MLM lacks sufficient resources to manage the waste in MLM properly.

**BUDGET**

The table below illustrates the waste management budget for the MLM as extracted from the 2023/2024 Service Delivery and Budget Implementation Plan.

| DESCRIPTION | ANNUAL BUDGET (2024) |
|---|---|
| Collection | R28 246 206.00 |
| Education and Awareness | R50 000.00 |
| Regulatory Compliance, EIAs & Licence | R2 500 000.00 |
| **Total** | R30 796 206.00 |

## DESIRED END STATE

Based on the situational analysis, the following gaps and needs were identified for the municipality. Delta BEC evaluated several aspects of the waste management system, including waste diversion, collection, transfer, treatment, and disposal. The assessment highlights areas for enhancement and proposes alternative strategies to improve efficiency in each of these waste management aspects. The goals proposed are in line with the IDP for the MLM, the Provincial IWMP, the District IWMP and the National Waste Management Strategy (NWMS) of 2020 guidelines and three strategic pillars. The goals outlined are as follows:

- Goal 1: Waste minimisation, re-use and recovery
- Goal 2: Institutional and planning matters
- Goal 3: Minimum Service Standards and Cost Recovery
- Goal 4: Waste Management Infrastructure
- Goal 5: Education and Awareness
- Goal 6: Monitoring compliance, enforcement, and remediation.

Each goal has multiple objectives, each with a set of actions and targets to be completed in the immediate too long term where applicable. These objectives serve as milestones in achieving the respective goal.

The purpose of this report is to discern, assess and recommend the preferred alternatives for the MLM to implement in realising the goals and targets as outlined in the desired end state report. It outlines the preferred alternatives for attaining the established goals and targets, highlighting the consequences of failing to implement the alternatives.

Gaps within the waste management of the municipality were identified, and the respective needs to fill these gaps were formulated according to the information contained in the situational analysis. Strategic goals were identified with their respective objectives to act as milestones to achieve them; these were incorporated and aligned with the relevant documentation like the Integrated Waste Management Plan, the Integrated Development Plan and the respective legislation.

A review of the goals and targets of the MLM leads to the identification, from best practice, of alternatives to implement to achieve the goals and targets set out in the desired end state. The goals to be achieved as part of the desired end state are in line with the 2022-2027 IDP for the MLM, the Bojanala Platinum District Municipality (BPDM), the North-West provincial IWMP and the 2020 National Waste Management Strategy (NWMS) and its three strategic pillars.

### Implementation Instruments

Delta BEC will identify the partnerships, legislative instruments, and economic instruments to be implemented within the MLM to achieve the goals and targets set out in the IWMP. Partnerships will be identified to provide services and facilities during the validity period of the IWMP. The following partnerships will be identified and reflected on:

- Public-public partnerships

- Public-private partnerships
- NGO/Community Based Organisations

**Reporting on Implementation, Monitoring and Review**

As per the requirements of the NEM:WA (2008), annual performance reports must be prepared under Section 46 of the Municipal Systems Act and include details about the implementation of the municipal IWMP. Annual performance reports must be compiled by the designated Waste Management Officer (WMO) of the MLM, summarising the progress towards meeting the set goals, objectives and targets. As this IWMP forms part of the Integrated Development Plan required in terms of Chapter 5 of the Municipal Systems Act, this IWMP must be comprehensively reviewed after five years.

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# LIST OF ABBREVIATIONS

| | |
|---|---|
| BPDM | Bojanala Platinum District Municipality |
| CBO | Community Based Organisations |
| C&D | Construction and Demolition |
| CoT | City of Tshwane |
| DEA | Department of Environmental Affairs |
| Delta BEC | Delta Built Environment Consultants |
| DEDECT | Department of Economic Development, Environment, Conservation and Tourism |
| DFFE | Department of Forestry Fisheries & the Environment |
| DSI | Department of Science and Innovation |
| EPR | Extended Producer Responsibility |
| EPSASA | Expanded Polystyrene Association of Southern Africa |
| EPWP | Extended Public Works Programme |
| HCRW | Health Care Risk Waste |
| IDP | Integrated Development Plan |
| IWMP | Integrated Waste Management Plan |
| LED & P | Local Economic Development and Planning |
| MEC | Member of the Executive Council |
| MIG | Municipal Infrastructure Grant |
| MLM | Moretele Local Municipality |
| MRF | Material Recovery Facility |
| NEMA | National Environmental Management Act (Act No. 107 of 1998) |
| NEMWA | National Environmental Management Waste Act (Act No. 59 of 2008) |
| NGO | Non-Governmental Organization |
| NHA | National Health Act |
| NWA | National Water Act |
| NWMS | National Waste Management Strategy, Norms and Standards |

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| PETCO | Polyethylene Terephthalate Recycling Company |
| PIWMP | Provincial Integrated Waste Management Plan |
| POLYCO | The Polyolefin Responsibility Organisation |
| POPs | Persistent Organic Pollutants |
| PP | Public Participation |
| PPP | Public Private Partnership |
| PRO | Producer Responsibility Organisation |
| SALGA | South African Local Government Association |
| SAPPI | South African Pulp and Paper Industries |
| SAVA | South African Vinyl Association |
| SAWIS | South African Waste Information System |
| SEP | Socio-Economic Profile |
| SMMEs | Small, Medium and Micro Enterprises |
| Stats SA | Statistics South Africa |
| TGRC | The Glass Recycling Company |
| TS | Transfer Station |
| WCS | Waste Characterisation Study |
| WDF | Waste Disposal Facility |
| WDS | Waste Disposal Site |
| WMO | Waste Management Officer |
| WWTW | Wastewater Treatment Works |

# GLOSSARY OF TERMS

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| **Building rubble** | Means waste produced during the construction, alteration, repair or demolition of any structure, and includes rubble, earth, rock and wood displaced during such a construction, alteration, repair or demolition. |
| **Circular Economy** | Means a regenerative system in which resource inputs and waste emissions, and energy leakage are minimised by slowing, closing, and narrowing energy and material loops which can be achieved through long-lasting design, maintenance, repair, re-use, remanufacturing, refurbishing and recycling and which is in contrast to a linear economy which is a 'take, make, dispose' model of production. |
| **Constitution** | Means the Constitution of the Republic of South Africa, 1996. |
| **Collection** | Means the act of collecting domestic waste at the place of waste generation or storage by an approved service provider or the municipality. |
| **Disposal** | Means the burial, deposit, discharge, abandoning, dumping, placing or release of any waste into or onto, any land |
| **Domestic Waste** | Means waste, excluding hazardous waste, that emanates from premises that are wholly or mainly for residential, educational, health care, sport or recreational purposes. Domestic waste can be classified into recyclable and reusable, compostable and also non-recyclable or non-usable waste; Domestic waste for the purposes of the standards does not include commercial and industrial waste, building rubble and 'hard' or non-compostable garden waste. |
| **Environment** | Means the surroundings within which humans exist and that are made up of- (i) the land, water and atmosphere of the earth; (ii) micro-organisms, plant and animal life; (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being. |
| **Extended Producer Responsibility (EPR)** | A producers responsibility for their product is extended to the post-consumer stage of a products life cycle. |
| **Extended Producer Responsibility Scheme** | A system that puts into effect obligations under which producers take accountability in implementing extended producer responsibility. |
| **Extended Producer Responsibility Measures** | Means measures that extend a person's financial or physical responsibility for a product to the post-consumer stage of the product, and includes (i) waste minimisation programmes; (ii) financial arrangements for any fund that has been established to promote the reduction, re-use, recycling and recovery of waste; (iii) awareness programmes to inform the public of the impacts of waste emanating from the product on health and |

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| | the environment; and (iv) any other measures to reduce the potential impact on the product on health and the environment. |
| **E-waste** | Informal name for electronic products nearing the end of their life. Includes televisions, VCRs, radios, stereos, printers etc. Many of these products can be re-used, refurbished or recycled. |
| **General Waste** | Waste that does not pose and immediate hazard ot threat to health or to the environment and includes domestic waste, building and demolition waste, business waste, inert waste or any waste classified as non-hazardous in terms of the regulations made under section 69 of the NEM:WA, and includes non-hazardous substances, materials or objects within business, domestic waste, inert, building and demolition wastes as outlined in Schedule 3, Category B of the NEM:WA. |
| **Hazardous waste** | Means any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment. |
| **Household** | Means a collection of individuals staying on a distinctive property and/or premises regardless of their relationships to one another. |
| **Integrated Waste Management Plan** | means a plan prepared in terms of section 12 of the NEM:WA. |
| **Inert Waste** | Means waste that –<br>Does not undergo any significant physical, chemical or biological transformation after disposal;<br>Does not burn, react physically or chemically biodegrade or otherwise adversely affect any other matter or environment with which it may come into contact, and<br>Does not impact negatively on the environment, because of its pollutant content and because the toxicity of its leachate is insignificant; and which include the categories of waste as outlined in Schedule 3 of the NEM:WA. |
| **Leachate** | Means water that has percolated through and/or been generated by decomposition of organic waste material. |
| **MEC** | Means the Member of the Executive Council of a province who is responsible for waste management in the province. |
| **Minimization** | When used in relation to waste, means the avoidance of the amount and toxicity of waste that is generated and, in the event where waste is generated, the reduction of the amount and toxicity of waste that is disposed of. |

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| **Municipality** | Means a municipality established din terms of the Local Government Municipal Structures Act, 1998 (Act No. 117 of 1998). |
| **Pollution** | Means any change in the environment caused by substances; radioactive or other waves; or noise, odour, dust or heat emitted from any activity, including the storage or treatment of waste or substances, construction and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition, resilience and productivity of natural or managed ecosystems, or on materials useful to people, or will have such an effect in the future. |
| **Producer Responsibility Organisation (PRO)** | A non-profit organisation established by producers or any person operating in any o the industrial sectors covered in the Notices published in terms of the NEM:WA to support implementation of their extended producer responsibility scheme and may represent either individual or collective producers. |
| **Public Participation Process** | Means a process by which potential interested and affected parties are given opportunity to comment on, or raise issues relevant to the IWMP. |
| **Receptacle** | The container designated solely for the purpose of temporary storage of household waste at the household, either provided by the municipality or the household, until such time of collection by the service provider/municipality. |
| **Recovery** | Means the controlled extraction or retrieval of any substance, material or object from waste. |
| **Recycle** | Means a process where waste is reclaimed for further use, which process involves the separation of waste from a waste stream for further use and the processing of that separated material as a product or raw material. |
| **Re-use** | Means to utilise the whole, a portion of or a specific part of any substance, material or object from the waste stream for a similar or different purpose without changing the form or properties of such substance, material or object. |
| **Rural area** | Any area that is not classified as urban, rural areas re subdivided into tribal areas and commercial farms. |
| **Service provider** | Means the providers of the domestic waste collection service, be it the municipality, external entity or community that is contracted by the municipality to render a municipal service. |
| **Sorting** | Means the manual or automated separation of waste materials according to type, class, state of contamination or usability for a particular purpose. |

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| **Storage** | Means the accumulation of waste in a manner that does not constitute treatment or disposal of waste |
| **Treatment** | Means any method, technique or process that is designed to, change the physical, biological or chemical character or composition of a waste; or remove, separate, concentrate or recover a hazardous or toxic component of a waste; or destroy or reduce the toxicity of a waste in order to minimise the impact of the waste on the environment prior to further use or disposal. |
| **Waste** | Means any (i) substance, material or object that is unwanted, rejected, abandoned, discarded o disposed of, or that is intended or required to be discarded or disposed of, by the holder of that substance, material or object, whether or not such substance, material or object can be re-used, recycled or recovered and includes all wastes as defined in Schedule 3 of the NEM:WA; or (ii) any other substance, material or object that is not included in Schedule 3 that may be defined as a waste by the minister. |
| **Waste Disposal Facility** | Means any site or premise used for the accumulation of waste with the purpose of disposing of that waste at that site or on that premise. |
| **Waste Management Control Officer** | |
| **Waste Management Facility** | Means a commercial place, infrastructure or containment of any kind including associated structures or infrastructure where there is sorting, shredding, grinding, crushing, screening, chipping or baling of general waste. |
| **Waste Management licence** | |
| **Waste Management Officer** | Means a waste management officer designated in terms of section 10 of the NEM:WA. |
| **Waste Minimisation Programme** | Means a programme that is intended to promote the reduced generation and disposal of waste |
| **Waste Picker** | Someone who collects re-usable and recyclable materials from residential and commercial waste bins, landfill sites and open spaces in order to revalue them and generate an income. |

# 1 INTRODUCTION

## 1.1 BACKGROUND

The Constitution of the Republic of South Africa in 1996 (Act 108 of 1996), Chapter 2, asserts the right of individuals to an environment that does not pose a threat to their health or well-being. It further emphasises the protection of the environment through reasonable legislative measures to prevent pollution and ecological degradation.

According to the National Environmental Management Waste Act, Act No. 59 of 2008 (NEMWA), amended under section 11(4), each Municipality is obligated to submit its Integrated Waste Management Plan (IWMP) to the Provincial Member of the Executive Council (MEC) for endorsement. The plan must receive approval from the Municipal Council, and subsequently, it should be incorporated into the Integrated Development Plan (IDP) of the Municipality.

The primary goal of the IWMP is to align its objectives, methodologies, and goals with both the Provincial IWMP (2016) and the 2020 National Waste Management Strategy. This alignment ensures a coordinated and unified approach to waste management across different levels of governance.

The Department of Forestry, Fisheries, and the Environment (DFFE) acts as the official sponsor for the development of the Integrated Waste Management Plan for MLM. Recognising the necessity for an IWMP for MLM, the DFFE appointed Delta Built Environment Consultants (Delta BEC) to develop the inaugural IWMP for the Municipality.

## 1.2 PURPOSE OF REPORT

The purpose of this report is to analyse and quantify all aspects related to current waste management services and practices carried out by the MLM with the view of using this information as a basis for future planning. It includes an evaluation of relevant waste management legislation, policies and strategies, a description of the population and development profiles of the Municipality, an assessment of the quantities and types of waste that is generated in the Municipality, a description of waste management services provided by the Municipality in terms of minimisation, recycling and recovery, collection, transport, transfer (where required), treatment and disposal of waste and a description of private waste management activities undertaken in the Municipality's area of jurisdiction.

## 1.3 STRUCTURE OF THIS REPORT

This report comprises the following sections. The Situational Analysis section is aligned with the IWMP guideline (2020) issued by the DFFE:

- Section 2: Approach
- Section 3: Relevant Legislation
- Section 4: Situational Analysis
  - Geographical Area
  - Demographic profile
  - Waste Quantities and Types
  - Waste Generation Per Capita
  - Future Waste Generation Rates and Quantities
  - Waste Recycling, Treatment and Disposal
  - Waste Collection Services
  - Medical Waste Practices
  - Mainstreaming Key Principles of the NWMS
  - Waste Picker Integration
  - Circular Economy
  - Financing of Waste Management
- Section 5: Gaps and Needs Analysis
- Section 6: Identification, evaluation and selection of alternatives
- Section 7: Implementation Instruments
- Section 8: Reporting on implementation, monitoring and review
- Section 9: Conclusion
- Section 10: References

# 2 APPROACH

A phased approach was used to generate the situational analysis report.

A qualitative (WCS and ground truthing) and quantitative (desktop study) research approach was used to gather and source information for the Status Quo phase of the IWMP development. A Qualitative research approach was used via a review of various documents to gather information. A quantitative approach was used to conduct the waste characterisation study to quantify and make estimates on future waste generation rates.

Site visits to various facilities were conducted during the status quo investigation phase of the project. The site visits were conducted on the 28 September 2023 and 11 December 2023 in the MLM. During the site visits, information was gathered to finalise the situational analysis report.

A Waste Characterisation Study (WCS) was conducted in the MLM on 20 October 2023, spring season, at the Ga-Motla Waste Disposal Site. A second WCS was conducted on 24 June 2024, the Winter season, by the MLM & the DFFE. The limitations encountered in terms of the WCS are outlined in Section 4.3.2.3 of this report.

The Situational Analysis report contains the following as per the Revised Municipal Integrated Waste Management Planning Guidelines provided by the DFFE (2020):

- Geographical Area
- Demographic profile
- Waste Quantities and Types
- Waste Generation Per Capita
- Future Waste Generation Rates and Quantities
- Waste Recycling, Treatment and Disposal
- Waste Collection Services
- Medical Waste Practices
- Mainstreaming Key Principles of the NWMS
- Waste Picker Integration
- Circular Economy
- Financing of Waste Management.

It is assumed that the information given verbally during the site visits and the documented information provided subsequently are accurate.

Gaps within the waste management of the municipality were identified, and respective needs to fill these gaps were formulated according to the information contained in the situational analysis.

Strategic goals were identified, with their respective objectives to act as milestones to achieve these goals and incorporated and aligned with the relevant documentation like the IWMP and IDP with the respective legislation.

# 3 LEGISLATIVE FRAMEWORK

This section details the roles and responsibilities in terms of waste management at the National, Provincial, District and Municipal levels that inform and assist integrated waste management.

## 3.1 ROLES AND RESPONSIBILITIES

### 3.1.1 NATIONAL GOVERNMENT

The National government is tasked with the establishment of a national waste management strategy, including norms, standards and targets. The national norms and standards may cover all aspects of the waste value chain, from planning to service delivery.

### 3.1.2 PROVINCIAL GOVERNMENT

The Provincial governments are tasked with the implementation of the National Environment Management: Waste Act (NEM:WA) as amended, Waste Management Regulation and the National Waste Management Strategy, Norms and Standards (NWMS). The Constitution requires the Provincial Government to monitor and provide support to municipalities in the province and to see to the implementation of waste-related regulations and strategies.

### 3.1.3 DISTRICT MUNICIPALITIES

The Municipal Structures Act (Act No. 117 of 1998) assigns a function of waste disposal to district municipalities. Not all district municipalities are fulfilling this role. However, when the need arises for a regional site, the district can perform this role.

### 3.1.4 LOCAL GOVERNMENT

The NEM:WA (Act 59 of 2008), as amended, requires local authorities to implement mechanisms for the provision of waste collection services, including collection, storage and disposal. Local authorities are also required to facilitate recycling and waste diversion from Waste Disposal Sites and manage waste information appropriately.

## 3.2 STRATEGIC LINKAGES IN TERMS OF WASTE MANAGEMENT ON INTERNATIONAL, NATIONAL, PROVINCIAL AND LOCAL LEVEL

### 3.2.1 NATIONAL ACTS, REGULATIONS AND STRATEGIES

#### 3.2.1.1 The South African Constitution (Act No. 108 of 1996)

Section 24 of the Bill of Rights of the Constitution of South Africa clearly states that everyone has the right to:

a) An environment that is not harmful to their health or well-being.
b) Should have the environment protected for the benefit of present and future generations through reasonable legislative and other measures that:
    i) Prevents pollution and ecological degradation.
    ii) Promote conservation.
    iii) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

The Constitution places an emphasis on the need to have the environment protected for the benefit of present and future generations through reasonable legislative and other measures, e.g. IWMPs. It is within this provision that IWMPs must strive or come up with measures to uphold the rights of all citizens within the jurisdiction of the municipality and should enhance and promote environmental protection from any form of degradation as enshrined by the South African Constitution.

#### 3.2.1.2 The National Environmental Management Act (Act No. 107 of 1998) as amended

NEMA is the cornerstone of all environmental legislation in South Africa. The purpose of NEMA is to uphold the provisions of Section 24 of the Bill of Rights (the Constitution of the Republic of South Africa). It aims to promote and uphold the rights of South African citizens to live in an environment that is not harmful to their health or well-being. NEMA places sustainable development at the centre of every development process that has the potential to have an impact on social, economic and environmental matters, whereby it requires the integration of social, economic and environmental factors in the planning, implementation and evaluation of decisions to ensure that development serves present and future generations.

#### 3.2.1.3 The Hazardous Substances Act (Act No. 15 of 1973)

This act and its regulations provide for the control of substances which may cause injury or ill-health to or death of human beings due to their toxic, corrosive, irritant, strongly sensitising or flammable nature, the division of such substances or products into groups in relation to the degree of danger, to provide for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification and disposal of such substances and products.

#### 3.2.1.4 The National Environmental Management: Waste Act (Act No. 59 of 2008)

The first waste-specific legislation published in South Africa was the National Environmental Management: Waste Act (NEM:WA) as amended. It provided the mechanism to regulate the waste value chain, aiming to minimise adverse effects on human health and the environment. The Department of Forestry, Fisheries and the Environment (DFFE) is the regulatory body for the licensing of Hazardous Waste Facilities, according to NEM:WA's Chapter 5 and is the responsibility of the province. In addition, the management of hazardous waste is included in the concurrent legislative competence of both the National and Provincial

Governments assigned by the South African Constitution with respect to environment and pollution control.

#### 3.2.1.5 The National Environmental Management: Waste Amendment Act, 2014 (Act No. 26 of 2014)

On 02 June 2014, an amendment of Section 1 of the NEM:WA, as amended by the National Environmental Management: Waste Amendment Act (NEM:WA), was enacted whereby Schedule 3: Defined Wastes was inserted. The purpose of Schedule 3 is to define all types of waste and categorise them to assist with the identification of waste. This schedule is divided into Category A: Hazardous Waste and Category B: General Waste. Schedule 3, Category A defines Hazardous Waste as follows:

*''Hazardous waste' means any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment and includes hazardous substances, materials or objects within business waste, residue deposits and residue stockpiles.'*

#### 3.2.1.6 The National Water Act ( Act 36 of 1998)

The National Water Act, Act 360 of 1998 (NWA), regulates pollution's effects on surface and groundwater. Polluters are required by the Act to take reasonable steps to limit the quantity of pollutants that contaminate water sources. Licences for the usage of water are also covered. These are required, among other things, for users that release water-containing waste into a water resource. To the degree that it pertains to waste management, the IWMP will consider the NWA's requirements.

#### 3.2.1.7 The Municipal Systems Act (Act No. 32 of 2000)

This Act provides for an appropriate division of functions and powers between categories of municipalities, which include solid waste disposal sites, in so far as it relates to:

a) The determination of waste disposal strategy.
b) The regulation of waste disposal.
c) The establishment, operation and control of waste disposal sites, bulk waste transfer facilities and waste disposal facilities for more than one local municipality in the district.

#### 3.2.1.8 The National Waste Management Strategy (NWMS 2020)

Gazetted by DFFE in 2020, the NWMS aims at giving effect to the objects of the Waste Act. Municipalities are required to align their IWMPs to the NWMS targets where possible to contribute to the attainment of the goals and targets set in the NWMS.

#### 3.2.1.9 National Norms and Standards for Waste Classification and Management Regulations (GNR 634, August 2013)

These regulations support and implement the provisions of the NEM:WA and, amongst others, establish a procedure and mechanism for listing waste management activities that do not require a Waste Management Licence. It also states that waste must be classified according to the South African National Standard Globally Harmonized System of Classification and Labelling of Chemicals (SANS 10234:2008). SANS 10234:2008 is a standard that classifies waste according to the physical and health hazards specific substances could potentially pose (including hazards to the aquatic environment).

GNR. 634 also talks about the requirements for disposal, record keeping and reclassification. For example, it states that:

*'Waste must be classified within 180 days of generation and should be re-used, recycled, recovered, treated and/or disposed of within 18 months of generation.'*

#### 3.2.1.10 National Norms and Standards for Disposal of Waste to Landfill (GNR 636, August 2013)

These regulations support and implement the provisions of the NEM:WA and, amongst others, establish a procedure and mechanism for the disposal of waste to Waste Disposal Facilities that do not require a Waste Management Licence. It also states the classification of Waste Disposal Facilities and their containment barriers required for the different classes of waste that are disposed of. These regulations also state the waste acceptance criteria for disposal to Waste Disposal Facilities and give descriptions of the types of waste and at what class of Waste Disposal Facility the waste can be disposed of.

#### 3.2.1.11 National Domestic Waste Collection Standards (GNR 21 of 2011)

This legislation provides comprehensive guidelines for efficient and safe waste collection at the household level. It outlines protocols for waste segregation, collection methods, and appropriate handling practices, aiming to promote sustainability and reduce environmental impact.

#### 3.2.1.12 National Waste Information Regulations (GNR 625 of 2012)

These regulations are designed to facilitate the collection, management, and dissemination of crucial waste-related data. They establish frameworks for the systematic gathering and reporting of information essential for effective waste planning, policy development, and monitoring of waste management practices.

#### 3.2.1.13 National Norms and Standards for the Storage of Waste (GNR 926 of 2013)

Focused on safe waste management practices, these norms and standards set guidelines for proper storage methods. They define requirements for the safe

containment, labelling, and handling of various types of waste, ensuring compliance with safety and environmental protocols.

#### 3.2.1.14 National Standards for the Extraction and Flaring of Landfill Gas (GNR 924 of 2013)

This legislation concentrates on mitigating environmental hazards associated with Waste Disposal Sites. It establishes regulations and procedures for the extraction and controlled burning (flaring) of Waste Disposal Site gas to minimise its impact on the environment, including reducing greenhouse gas emissions.

#### 3.2.1.15 National Norms and Standards for the remediation of contaminated land and soil quality (2014)

This regulatory framework is designed to manage and restore polluted or contaminated land areas while safeguarding soil quality. This legislation outlines detailed guidelines for the identification, assessment, and remediation of contaminated sites, offering methodologies to assess the nature and extent of contamination, gauge associated risks, and establish effective clean-up strategies. Simultaneously, it sets standards for maintaining soil health, encompassing criteria for vital soil attributes like fertility, structure, pH levels, and contamination thresholds. By emphasising stringent protocols and remediation practices, this legislation ensures the protection of human health, ecosystems, and environmental resources, aiming for the effective management and restoration of contaminated land and the maintenance of soil quality throughout South Africa.

#### 3.2.1.16 National Norms and Standards for Organic Waste Composting (GN 561 of 2020)

Addressing organic waste management, these standards set guidelines for safe and effective composting practices. They establish parameters for the composting process, including input materials, processing methods, and quality criteria for the resulting compost, promoting sustainable organic waste recycling.

#### 3.2.1.17 National Norms and Standards for the Sorting, Shredding, Grinding, Crushing, Screening, Chipping and Bailing of general Waste (GN 1093 of 2017)

The norms and standards were developed to reduce the licencing requirements for low impact waste management activities. All facilities that engage in activities that sort, crush, grind, screen and bale general waste are required to adhere to the norms and standards. All facilities that engage in the above-mentioned activities must register with the relevant provincial authority. Facilities that exceed 1000 square metres in operational area are required to comply with the norms and standards.

#### 3.2.1.18 North West Provincial IWMP

The North West Provincial IWMP (2016) serves as a guideline for District and Local Municipalities to satisfy the need for a coherent plan to address the waste management shortfall within the province and to encourage the improvement of the waste management system in all applicable areas. The North West Provincial

IWMP (2016), together with District and Local IWMPs, serve as a tool to analyse and optimise the current waste management systems within the North West Province.

#### 3.2.1.19 National Health Act 61 of 2003 as amended

The National Health Act 61 of 2003 (NHA) of South Africa aims to ensure a structured and effective healthcare system. It addresses various aspects of public health, including the management of waste in healthcare settings. Specifically, when it comes to waste, the NHA incorporates provisions related to the management, disposal, and handling of healthcare waste, which is vital for safeguarding public health and the environment.

**Healthcare Waste Classification:**

The Act requires the proper classification of healthcare waste to distinguish between different types, including infectious, hazardous, and general waste. This classification ensures the correct disposal methods are applied.

**Responsibility for Waste Management:**

The Act holds healthcare establishments (hospitals, clinics, and other health facilities) responsible for managing and disposing of waste in a manner that is safe for both human health and the environment.

**Safe Handling and Disposal:**

Healthcare facilities are mandated to implement procedures for the safe handling, storage, transportation, and disposal of healthcare waste. This includes segregating waste at the point of generation and following protocols for treating hazardous and infectious materials.

**Environmental and Health Protection:**

The Act emphasizes that healthcare waste must not negatively impact the environment or public health. Waste must be treated (for example, via incineration or autoclaving) to minimize any harmful effects before disposal.

**Regulation of Hazardous Substances:**

It regulates the use and disposal of hazardous substances, including medical waste, chemicals, and pharmaceuticals, that could pose a risk if mishandled.

**Collaboration with the Department of Environmental Affairs:**

The NHA works in alignment with the Waste Act (Act No. 59 of 2008) and other environmental regulations to ensure healthcare waste management is compliant with national waste management frameworks.

**Penalties for Non-Compliance:**

Failure to comply with waste management regulations can lead to penalties for healthcare providers. The NHA ensures enforcement through inspections and regulatory actions.

Overall, the National Health Act 61 of 2003 underscores the need for stringent healthcare waste management systems to protect public health and the environment from potential hazards associated with medical and healthcare waste.

### 3.2.2 LOCAL LEGISLATION

#### 3.2.2.1 Draft Moretele Local Municipality By-Laws, 2023

Draft waste management by-laws for the MLM have been under the public participation and consultation process in accordance with the NEM:WA since March 2023, as reported by the MLM Waste Management Officer (WMO). Public participation and consultation commenced with the opportunity given to community members to provide comments and inputs. The 30-day public participation and consultation process for the MLM community members concluded in April 2023. Due to the role the four traditional leaders (Dikgosi) fulfil in the MLM, the public participation and consultation process was extended to the traditional leaders and their respective communities. Reportedly, due to scheduling issues with the traditional leaders, the public participation and consultation process has not been concluded and is currently ongoing; the expected date for conclusion is July 2024.

On completion of the public participation and consultation process, the waste management by-laws of the MLM must undergo council approval. When the by-laws are approved and endorsed by the council, the waste management by-laws for the MLM will be promulgated.

### 3.2.3 WASTE MANAGEMENT OFFICER DESIGNATION

To guarantee that there is continuous communication regarding the Waste Act's implementation between all three spheres of government, it is crucial that municipalities designate a WMO. WMOs are essential to the creation of the municipality's IWMP and for ensuring compliance with regulatory bodies. The Waste Act, Chapter 3, Section 10(3), mandates that WMOs be officially designated in writing by the National Department, Provinces, and Municipalities.

### 3.2.4 INTERNATIONAL TREATIES

The following list of international treaties will be considered:

- Basel Convention
- Rotterdam Convention
- Stockholm Convention.

#### 3.2.4.1 The Basel Convention

The Basel Convention (1989) is a global agreement which seeks to address the transboundary movement of hazardous waste. It also aims to ensure that strict controls are in place when any transboundary movement and disposal of hazardous waste does occur and ensures that it is undertaken in an environmentally sound and responsible manner.

The Basel Convention, held on 22 March 1989, came into effect in May 1992 after ratification by the prerequisite number of countries. South Africa ratified the Convention in 1994, with the Department of Environmental Affairs (DEA) being the focal point for the Convention. Whilst South Africa subsequently acceded to this Convention, no legislation was passed at the time to give effect to it. The second Basel Convention, held on 8 October 2005, set standards for the control of transboundary movements of hazardous wastes and their disposal, setting out the categorisation of hazardous wastes and the policies for their disposal between member countries. South Africa accedes to this Convention and implements its provisions.

The main objective of the Basel Convention is to protect human health and the environment against the adverse effects of hazardous wastes. The Convention specifically aims to reduce hazardous waste generation, promote environmentally sound management of hazardous wastes, restrict transboundary movements of hazardous wastes and provide a regulatory system which applies to cases where transboundary movement of hazardous waste is permissible (United Nations Environment Programme, 2020).

#### 3.2.4.2 The Rotterdam Convention

The Rotterdam Convention promotes and enforces transparency in the importation of hazardous chemicals, and whilst it explicitly excludes waste, its implementation may lead to bans on listed chemicals. Some of these chemicals may occur in stockpiles of obsolete chemicals, such as pesticides, which have been identified as a major waste management challenge. Extended producer responsibility schemes will be used to manage obsolete chemicals effectively (United Nations Environment Programme, 2020).

#### 3.2.4.3 The Stockholm Convention

In 1995, the United Nations Environment Programme called for global action to be taken on persistent organic pollutants (POPs), which pose a threat to both health and the environment. As a result, the negotiations for the Stockholm Convention on POPs were initiated and culminated in May 2001, with the Convention enforced in May 2004. South Africa accedes to this Convention, whereby member countries have agreed to phase out POPs and prevent their import or export. It imposes restrictions on the handling of all intentionally produced POPs. Parties to the Convention are also required to undertake the following responsibilities (United Nations Environment Programme, 2020):

- Develop and implement appropriate strategies to identify stockpiles, products and articles in se that contain or are contaminated with POPs;
- Manage stockpiles and wastes in an environmentally sound manner;
- Dispose of waste in a way that destroys or irreversibly transforms POP content;
- Prohibit recycling, recovery, reclamation, direct re-use or alternative use of POPs; and

Endeavour to develop strategies to identify contaminated sites and perform eventual remediation in an environmentally sound manner.

# 4 SITUATIONAL ANALYSIS

The objectives of the situational analysis were to analyse and quantify all aspects related to the current waste management services and practices carried out by the MLM with the view of using this information as a basis for future planning.

## 4.1 GEOGRAPHICAL AREA

The MLM is situated within the BPDM in the North West Province and is categorised as a Category B municipality. The BPDM comprises five (5) local municipalities, of which the MLM is the smallest within the district, making up only 8% of its geographical area. The municipality is located in an area called Moretele, which is situated 60 km north of the City of Tshwane. The municipality is boarded to the Northeast by Thabazimbi Local Municipality, to the North by Bela-Bela Local Municipality, to the South by City of Tshwane and to the West by Madibeng Local Municipality. It is located strategically joining the four (4) provinces of North West, Gauteng, Mpumalanga, and Limpopo. The MLM comprises 76 villages and various plots. The majority of the villages are ruled by four traditional leaders (Dikgosi) who are recognised by the law and represent their respective communities in the council.

The name Moretele is derived from the Setswana name for the river that runs through the area (Noka ya Moretele). The MLM covers an area of approximately 1 498 km². The majority of the population resides in Mathibestad and Makapanstad. Mathibestad is the seat of the MLM. The primary development corridor connects all the settlements listed below. Numerous businesses and community facilities are also located within the node. The primary node of the municipality consists of the following settlements: Danhouse, Sespond, Ramaphosa, Dertig, Mathibestad, Mathibestad RDP and Makapanstad.

According to the latest publication by Statistics South Africa (2022), the MLM's population grew from 188 535 in 2011 to 219 120 in 2022. 91.6% of the population of the MLM reside in formal dwellings within the respective 76 villages. The remaining 8.4% of the population reside in either traditional, informal, or other dwellings. The majority of the population within the MLM are between the ages of 15 to 64, making up 62.8% of the population. 28.7% of the population are under the age of 15, and the remaining 8.5% of the population are over the age of 65.

The spatial development framework of the municipality is shaped by the rich agricultural history characterising large pieces of land in the area. It is against this backdrop that agriculture has become a focal point in all economic development prospects for the municipality constituency. The municipality has vast tracts of land which can be used to harness economic development opportunities. It is believed that livestock farming is the main type of farming activity that is carried out in the local municipality. The tourism sector in the MLM is not well established (IDP, 2023). The weakness for the local economy is that there are no industries to boost the economy and create jobs to cushion poverty.

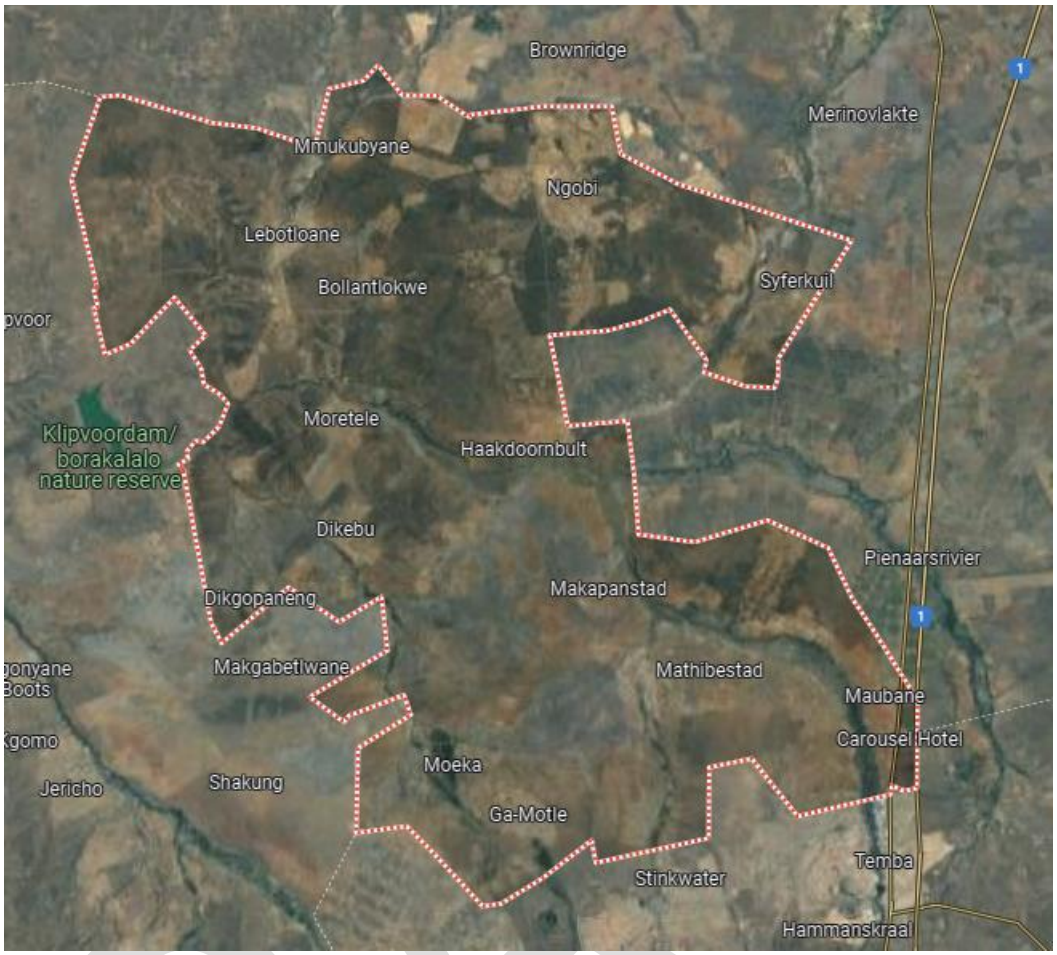



**Figure 4-1: Overview of the MLM**

The MLM comprises 26 wards, with each ward comprising of respective villages. The population of these villages are mostly indigent. Table 4-1 below indicates the wards within the MLM and the villages making up the respective wards.

**Table 4-1: MLM Municipal Wards**

| WARD | VILLAGES |
|---|---|
| **1** | Ruigtesloot, De Grens, Phedile, Little Trust, Tlholoe & Bollantlokwe. |
| **2** | Olverton, Voyenteen, Swaartboom, Tlounane & Utsane. |
| **3** | Syferkuil, RDP & Walman. |
| **4** | Lebotlwane, Slaagboom & Mmukubyane. |
| **5** | Sutelong, Jonathan, Dikgopaneng, Flynkzydrift & Ga-habedi. |
| **6** | Ngobi, Dipetlelwane, Transactie, Selepe & Jumbo. |
| **7** | Lebalangwe, Mmakgabetlwane, Rabosula, Kalkbank Trust, Noroki, Swartdam & Mmotong. |
| **8** | Mmakaunyane. |
| **9** | Motla. |
| **10** | Dikebu, Moema, Mocheko, Lekgolo, Tladistad & Matlhwaela. |
| **11** | Mogogelo. |
| **12** | Mathibestad, Marcus View & Papatso View. |

| WARD | VILLAGES |
|---|---|
| **13** | Bosplaas East, Carousel View (Mathibestad RDP) & Mogogelo. |
| **14** | Ramaphosa & Bosplaas. |
| **15** | Greenside. |
| **16** | Hani View, Dihibidung & Danhouse. |
| **17** | One & Ten, Opperman, Thulwe, Potoane, Prieska & Makapanstad. |
| **18** | Lefatlheng. |
| **19** | Mathibestad. |
| **20** | Makapanstad. |
| **21** | Kgomo Kgomo, Kontant, Moratele & Makapanstad. |
| **22** | Lefatlheng, Dertig, Danhouse, Sespond. |
| **23** | Mmakaunyane, Skierlik, Kromkuil & Motla. |
| **24** | Mathibestad. |
| **25** | Moeka, Vuma, Mzimdala 1&2. Prutchard Power, Msholosi, Union Buildings. |
| **26** | Ratjiepane & Mogogelo. |

## 4.2 DEMOGRAPHIC PROFILE

### 4.2.1 POPULATION PROFILE

According to the statistics released by Statistics SA as part of the 2022 Census, the total population of the MLM is 219 120. According to the IDP (2023), the MLM has a relatively large rural population, with the majority of the population residing in *traditional* areas. According to Stats SA 2022, the MLM is comprised of 60 058 households with an average household size of 3.6.

In the MLM, 91.6% of the population lives in formal housing, while 0.5% reside in traditional dwellings, and 7.5% are in informal housing. According to the 2022 Census data, the remaining 0.4% of the population resides in what is categorised as other types of dwellings.

The Stats SA 2022 data was used to calculate the annual growth rate for the MLM population from 2022-2030. The annual growth rate for the MLM was determined to be 1.47%. The average annual growth rate was used to extrapolate the total population for 2022-2030 in Table 4-2 below.

$$GR = \frac{(Vpresent - Vpast)}{Vpast} x \frac{100}{N}$$

**Equation 4-1: Formula to calculate population growth rate**

- GR- Growth rate
- Vpresent – Current population
- Vpast- Previous population
- N- Number of years

**Table 4-2: Future population estimate of MLM (2022-2030)**

| YEAR | TOTAL POPULATION |
|---|---|
| **2022** | 219 120 |
| **2023** | 222 352 |
| **2024** | 225 631 |
| **2025** | 228 959 |
| **2026** | 232 336 |
| **2027** | 235 763 |
| **2028** | 239 240 |
| **2029** | 242 768 |
| **2030** | 246 349 |

Table 4-3 illustrates the population distribution per racial classification of the MLM (Stats SA, 2022).

**Table 4-3: Population distribution of MLM per race**

| RACE | TOTAL (2022) | PERCENTAGE (%) |
|---|---|---|
| **African** | 217 925 | 99.5% |
| **Coloured** | 556 | 0.3% |
| **White** | 330 | 0.2% |
| **Indian/Asian** | 91 | 0.0% |
| **Other** | 208 | 0.1% |

### 4.2.2 SOCIO-ECONOMIC GROUPS AND INCOME DISTRIBUTION

#### 4.2.2.1 Age Distribution

Table 4-4 illustrates the population distribution of the MLM as per the Census 2022 (Stats SA, 2022). From the table below, it is evident that the population group 25-44 comprise the majority of the population, representing 29.2% of the population. The second largest population group per age category ages 0-14, with 28.7%, followed by the third largest population group 45-64, with 16.9%. The smallest population category per age group is for those aged 65 and older, comprising 8.5% of the MLM total population.

**Table 4-4: Population distribution per age category**

| POPULATION CATEGORY | TOTAL (2022) | PERCENTAGE (2022) |
|---|---|---|
| **Population 0-14** | 62 952 | 28.7% |
| **Population 15-24** | 36 560 | 16.7% |
| **Population 25-44** | 63 996 | 29.2% |
| **Population 45-64** | 36 999 | 16.9% |
| **Population 65+** | 18 614 | 8.5% |

#### 4.2.2.2 Income Distribution

According to the IDP (2023) of the MLM, 20% of the economically active persons have no income, and 23.9% of the economically active persons earn in the category of R9 601 – R19 600. 21.8% of economically active persons earn between R19 601 – R38 200. The graph below shows the average household income distribution as extracted from the MLM IDP 2023.

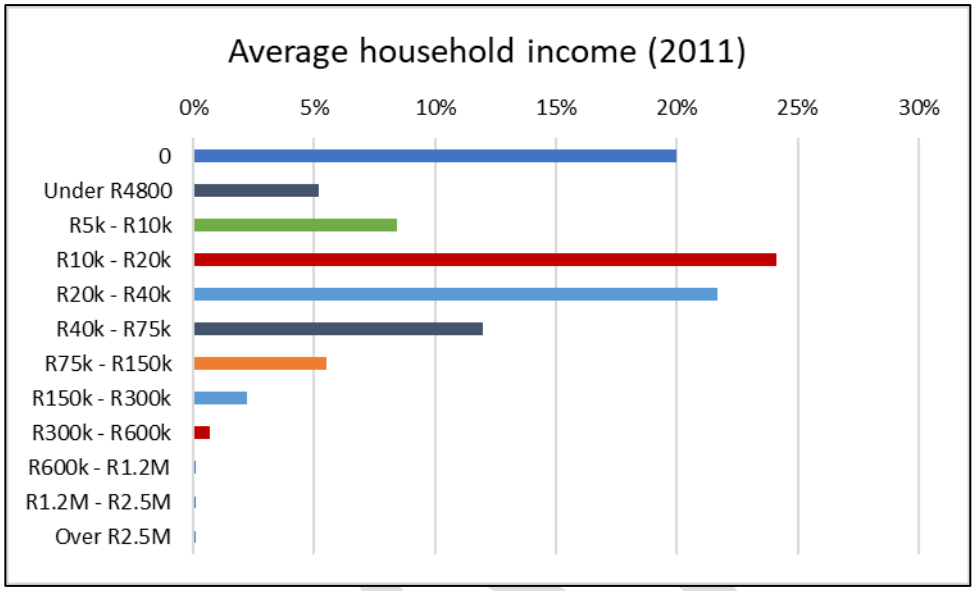



**Figure 4-2: Average household income distribution (IDP 2023)**

#### 4.2.2.3 Household Size

According to Census 2022 data (Stats SA, 2022), the MLM had a total of 52 744 households in 2011 and a total of 60 058 households in 2022. Using the data from Stats SA, the annual growth rate for the households in MLM was determined by using Equation 4-2.

$$GR = \frac{(Vpresent\ - Vpast)}{Vpast}\ x\ \frac{100}{N}$$

**Equation 4-2: Formula to calculate household growth rate**

Table 4-5 displays a projection of the annual growth in the number of households from 2022 to 2030 by using the average annual growth rate of 1.26%.

**Table 4-5: Household estimate (2022-2030)**

| YEAR | NUMBER OF HOUSEHOLDS |
|---|---|
| **2022** | 60 058 |
| **2023** | 60 815 |
| **2024** | 61 582 |
| **2025** | 62 358 |
| **2026** | 63 144 |

| YEAR | NUMBER OF HOUSEHOLDS |
|---|---|
| **2027** | 63 940 |
| **2028** | 64 746 |
| **2029** | 65 562 |
| **2030** | 66 389 |

### 4.2.3 EMPLOYMENT STATUS AND EDUCATION LEVELS

#### 4.2.3.1 Employment Status

The diagram below illustrates the number of employed as extracted from the IDP 2023.

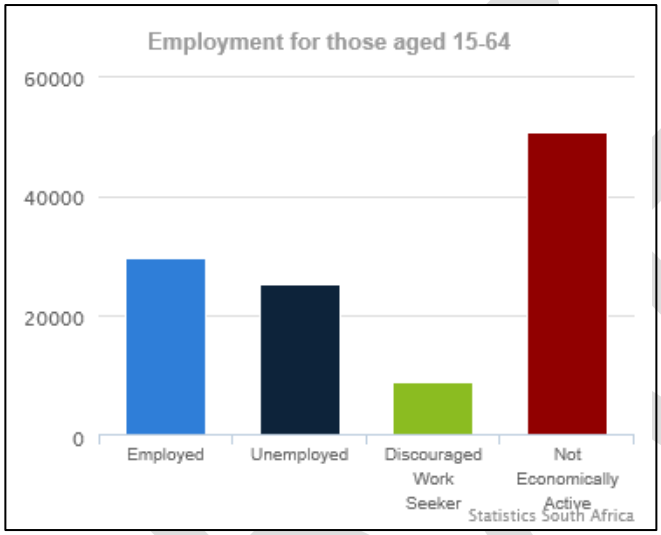



**Figure 4-3: Employment data as per MLM IDP (2023)**

#### 4.2.3.2 Education Levels

Table 4-6 illustrates the education levels and the amount of people belonging to a specific educational group as per Census 2022 (Stats SA, 2022).

**Table 4-6: Education level of the MLM**

| LEVEL OF EDUCATION | TOTAL | PERCENTAGE (%) |
|---|---|---|
| **No schooling** | 8 747 | 6.9% |
| **Some Primary** | 12 848 | 10.1% |
| **Completed Primary** | 5 216 | 4.1% |
| **Some Secondary** | 43 572 | 34.4% |
| **Grade 12/Std 10** | 50 063 | 39.5% |
| **Higher Education** | 5 577 | 4.4% |
| **Other** | 742 | 0.6% |

### 4.2.4 ECONOMIC DEVELOPMENT

According to the IDP (2023), the Local Economic Development and Planning consider the following high-impact projects for the 2023-2024 financial year.

- Lodging of application for closure and rehabilitation of Ga-Motla dumping site.
- Application for new Waste Disposal Facility near Makapanstad
- Formalisation of areas
- Demarcation of waste management facilities

### 4.2.5 DEVELOPMENT PROFILES

#### 4.2.5.1 Access to Housing

The number of households per dwelling type of the MLM as per the Census 2022 (Stats SA, 2022) is illustrated in Table 4-7 below. According to the IDP (2023) of the MLM, the municipality has a largely rural population, with an estimated 88% of the total population in the MLM located in traditional areas.

**Table 4-7: Access to housing in MLM**

| DWELLING TYPE | NUMBER OF HOUSEHOLDS |
|---|---|
| **Formal** | 55 040 |
| **Informal** | 4 495 |
| **Traditional** | 276 |
| **Other** | 247 |

#### 4.2.5.2 Access to Basic Waste Removal Services

Table 4-8 below indicates the levels of waste services provided by the MLM according to the Census 2022 (Stats SA, 2022).

**Table 4-8: Waste removal services in MLM**

| HOUSEHOLD BY REFUSE DISPOSAL | NUMBER OF HOUSEHOLDS |
|---|---|
| **Weekly removal** | 20 307 |
| **Removed less than weekly** | 1 142 |
| **Communal refuse dump** | 485 |
| **Communal container/central collection point** | 6 991 |
| **Own refuse dump** | 27 523 |
| **No rubbish disposal** | 2 976 |
| **Other** | 635 |

#### 4.2.5.3 Free Basic Services

According to the MLM, the total number of indigent households registered as of 2024 was 25 913. This entails that 43.14% of the households in the MLM receive free basic services from the MLM.

## 4.3 WASTE QUANTITIES AND TYPES

The table below illustrates the typical types of waste generated in the local municipality.

**Table 4-9: Types of waste generated in the MLM**

| CATEGORIES | DESCRIPTION | MANAGEMENT |
|---|---|---|
| **General waste** | Domestic general waste:<br>Disposable materials generated by households. This waste usually contains recyclable materials and non-recyclables. Non-recyclables were referred to as the fraction of waste disposed of after household separation. This includes the following:<br>• Food waste<br>• Food-tainted items (such as used paper plates or boxes, paper towels, or paper napkins)<br>• Ceramics and kitchenware<br>• Household Medicine boxes<br>• Paper and cardboard<br>• Polystyrene<br>• Metals (tins & cans)<br>• Cleaning chemical containers<br>• Plastic toys or sporting goods equipment<br>• Ash, etc. | The collection, transportation and disposal of general waste is undertaken by the MLM through the appointment of private waste service providers. |
| | Business general waste:<br>Business general waste includes all waste produced by supermarkets and businesses that is non-hazardous. This waste usually contains high quantities of recyclable materials, such as cardboard and plastic packaging. | The management of general waste is undertaken by the municipality through private waste service providers. |

| CATEGORIES | DESCRIPTION | MANAGEMENT |
|---|---|---|
| **Organic waste** | Garden refuse and food waste. | The management of organic waste, including agricultural waste, is managed by private entities; no public composting facilities are located within the MLM. Households dispose of organic waste or use it as feed for livestock. |
| **Construction and demolition (C&D) waste** | Concrete, mortar, bricks, wood, insulation materials, gypsum, etc., generated from construction and demolition sites. | No formal municipal service is provided for the disposal of construction and demolition waste. The management of this waste stream is managed by private entities within the municipality. |
| **Health care risk waste (HCRW)** | Discarded blood and human tissue, sharps, infectious materials, expired pharmaceuticals, etc. | Health Care Risk Waste (HCRW) generated by healthcare facilities is managed by private entities as appointed by the respective healthcare facilities. Disposal of HCRW is not undertaken in the MLM. |
| **Hazardous waste** | Used mineral oils, solvent residues, paint and resin waste, organic chemical residues, putrescible waste (slaughterhouse), batteries, sewage sludge and used agricultural chemicals. | Private entities are responsible for the management of hazardous waste within the MLM. The MLM does not offer hazardous waste management services. |
| **Other waste types** | This includes agriculture, industrial, abattoirs and tyre waste. | Private entities are responsible for the management of these waste types within the MLM. |

According to the Revised Municipal Integrated Waste Management Planning Guidelines developed by the DFFE, there are three options for determining the waste quantities and types generated in a municipality. The three options are as follows:

**Option 1: Weighbridge data**

A municipality can use a weighbridge to collect and record the types and quantities of waste entering its waste disposal facility. This information is also required for reporting on the South African Waste Information System (SAWIS). 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. A weigh-bridge operator is required to correctly identify the types of waste disposed of. The data is captured using weighbridge software programmed with spreadsheet software such as Microsoft Excel or a customised weighbridge software that can simultaneously provide billing information based on the type of waste and the size of the vehicle.

**Option 2: Making use of the vehicle capacity and the waste densities template**

Making use of the vehicle capacity and the waste densities template (a volume density estimation system) in instances where a municipality does not have a weighbridge, it can make use of templates developed by the DFFE. These provide guidance on how waste quantities can be estimated for the different waste streams.

**Option 3: Sampling or conducting a waste analysis.**

Waste stream analysis or a waste audit can be conducted by selecting a representative sample of an area which should at least comprise 30% of the total sample area. In residential areas, these could be households from different Wards to ensure inclusivity and representation. Once that is known, the participating households can then be provided with a receptacle. This could be different coloured plastic bags such as a black bag for mixed waste and a clear bag for recyclables. The participating households could also be provided with instructions/training on the objectives of the study, what is required of them and how the audit will be carried out. As an example, this could entail explaining to them the different types of commonly found domestic waste streams, i.e. glass, plastic, paper, cardboard, cans, garden waste, etc. The participating residents can then be advised to separate their recyclable waste from non-recyclable/mixed waste if the objective is also to measure the number of recyclables generated in that area. Once collected, this should be weighed separately to gauge the mass of both recyclable waste and non-recyclables. A hand-held scale can be utilised for this purpose wherein the assessors will, on the waste collection days or once a week, depending on the agreed terms for the study, individually weigh the waste to determine the amount of both recyclables generated in that particular area and the weight of non-recyclables.

After obtaining the figures from the participating households/Wards, one is then able to extrapolate or estimate the amount of waste that is generated in that particular municipality. This can be done by adding the amounts of recyclables generated in all the areas and then determining the average recyclables generated and by adding up mixed waste to determine their average. The recyclables could even be added up according to the various waste streams, i.e. paper, glass, tin, cardboard, etc.

The MLM has no weighbridge present at the Ga-Motla Waste Disposal Site to determine the quantities of waste being disposed of at the waste site. There is also no gate controller sheet at the facility entrance to record the waste entering the facility. Consequently, the MLM does not have any record of waste tonnages being disposed of at their current waste disposal sites.

To determine the waste quantities and types generated, option 3 of the IWMP guideline will be followed, which includes a WCS.

The section below details the methodology used to conduct the WCS.

### 4.3.1 WASTE SAMPLING – FIRST WCS

#### 4.3.1.1 Overview

Two waste characterisation studies were conducted at the Ga-Motla WDF. The first was on 20 October 2023 (spring), and the second was on 24 June 2024 (winter) to identify the types of waste generated within the municipality. The WCS took place at the unlicenced Ga-Motla Waste Disposal Site. The WCS conducted reflects the generation rates during the spring and winter periods.

#### 4.3.1.2 Data collection

In consultation with the DFFE, it was decided that the WCS would focus on utilising waste being disposed of at the waste disposal site (i.e. waste from collection truck). This decision was driven by the understanding that, given the demographics of the municipality, distributing bags would likely result in low participation rates.

##### *4.3.1.2.1 Identification of waste categories*

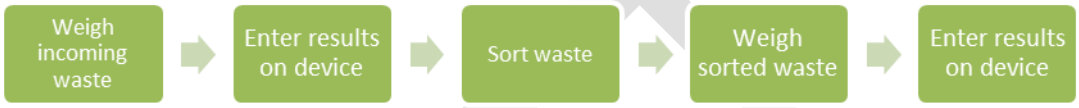
The waste was sorted into ten (10) major waste categories for sampling. The ten (10) major waste characterisation categories include the following:

- Paper
- Cardboard
- Glass
- Metal
- Plastic
- Textiles
- Organic waste (such as food waste and garden refuse)

- Hazardous waste (such as batteries, light bulbs, medical waste, and cleaning products)
- Sanitary waste (such as nappies, sanitary pads, etc.)
- Other waste (such as single-use plastics and polystyrene).

#### *4.3.1.2.2 Waste sorting activities*

Upon arrival at the Ga-Motla Waste Disposal Site, seven (7) informal waste pickers were asked to participate in the WCS study, and a meeting was held to explain the process and the goal of the WCS. The waste sorters were trained to adopt the following methodology:




The images below provide an illustration of the WCS activities conducted.

**Figure 4-4: On-site meeting with informal waste pickers**

**Figure 4-5: Truck disposing waste on WDF**

**Figure 4-6: Example of waste disposed on WDF**

**Figure 4-7: Waste sorting activities**

**Figure 4-8: Example of piles of sorted glass, metals, plastics, and cardboard**

**Figure 4-9: Example of sorted nappies. During the WCS, a large number of nappies were observed.**

**Figure 4-10: Example of weighing plastics after sorted**

#### 4.3.1.3 Data analysis

The target was to sort a sample of 1 000 kg on the day of the WCS; however, the actual amount of waste sorted was 811 kg. This is due to various limitations listed in Section 4.3.2.3. The graph below shows the targeted vs. actual waste sorted on the day of the WCS.


**Figure 4-11: Targeted vs actual waste sorted**

The table below shows the waste categories identified within the sample and their respective mass measurements. The cumulative mass of the sorted waste material equated to 730.4 kilograms, indicating a 10% loss from the original 811 kilograms of the sample. This can be due to sorting being done on the ground, the sample

containing mud or other ground particulates, loss of material not being sorted, or human error in weighing the data.

From the WCS data, it was observed that major waste categories are organic waste (which included food waste) (30%), sanitary waste (mostly nappies) (22%) and plastics (21%).

**Table 4-10: MLM waste categories**

| WASTE CATEGORY | MASS (KG) | PERCENTAGE OF WASTE STREAM |
|---|---|---|
| **Cardboard** | 50.0 | 7% |
| **Plastics** | 152.6 | 21% |
| **Glass** | 99.3 | 14% |
| **Metals** | 11.4 | 2% |
| **Paper** | 9.4 | 1% |
| **Organic waste** | 216.4 | 30% |
| **Sanitary waste (nappies)** | 157.4 | 22% |
| **Textiles** | 21.4 | 3% |
| **Other waste** | 12.4 | 2% |
| **TOTAL** | **730.4** | **100%** |

The diagram below shows the fractions of waste categories. The total recyclable fraction (i.e., Cardboard, paper, plastics, metals, and glass) of the waste amounted to 44%.

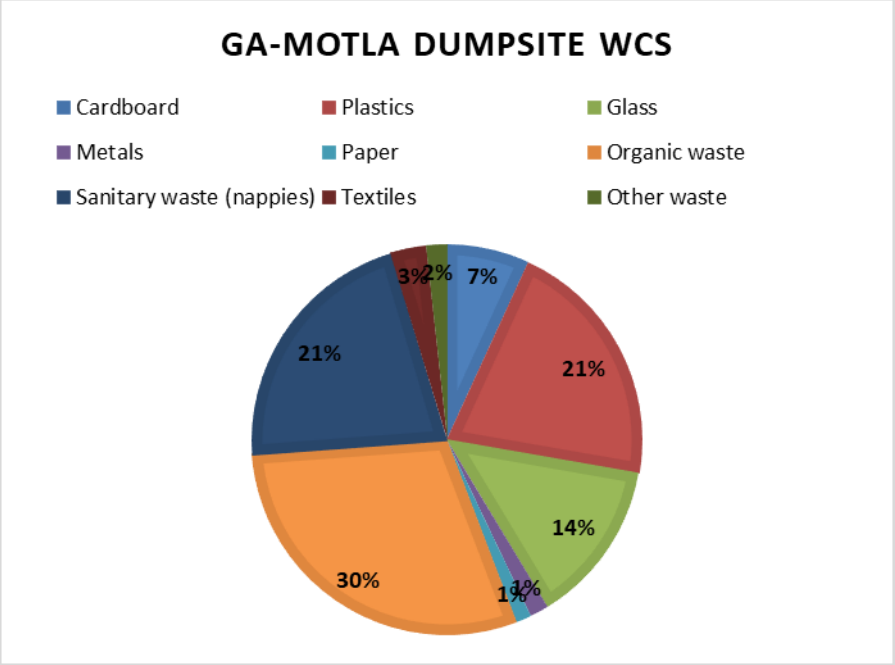



**Figure 4-12: Ga-Motla dumpsite first WCS pie chart results**

## 4.3.2 WASTE SAMPLING – SECOND WCS

### 4.3.2.1 Overview

A WCS was conducted on 24 June 2024 to identify the type of waste generated within the municipality. The WCS took place at the unlicenced Ga-Motla Waste Disposal Site. The WCS was undertaken in collaboration between the DFFE, The BPDM & the MLM. Fifteen (15) EPWP workers (Phepafatsa Moretele) assisted with the sorting activities. The WCS conducted reflects the waste generation rates during the winter period.

### 4.3.2.2 Data collection

The DFFE, the BPDM & the MLM conducted a second WCS for the MLM as part of the IWMP development. It was decided that the WCS would focus on utilising waste being disposed of at the waste disposal site (i.e. waste from collection truck).

#### *4.3.2.2.1 Identification of waste categories*

The waste was sorted into eleven (11) major waste categories for sampling. The eleven (11) major waste characterisation categories include the following:

- Paper & Cardboard
- Glass
- Metal
- Plastics
- Polystyrene
- Other plastic
- Textile
- Food waste
- Garden waste
- Electrical waste
- Sanitary waste.

#### *4.3.2.2.2 Waste sorting activities*

Upon arrival at the Ga-Motla Waste Disposal Site, fifteen (15) EPWP workers (Phepafatsa Moretele) participated in the WCS. A waste disposal truck disposed of a sample of 35 bags at the preferred sorting location, whereupon the EPWP workers sorted the waste, placing the sorted waste in black refuse bags to be weighed. The black refuse bags were weighed, and the quantities were recorded.

The images below provide an illustration of the WCS activities conducted.

Figure 4-13: Incoming waste vehicle tipping WCS sample

Figure 4-14: Waste sorting activities

Figure 4-15: Sorted waste in black refuse bags

Figure 4-16: EPWP workers assisting with WCS

#### *4.3.2.2.3 Data Analysis*

Table 4-11 shows the waste categories identified within the sample and their respective mass measurements. The sorted waste materials equated to 134 kg.

From the WCS data, it was observed that the major categories are food waste (22%), sanitary waste (17%), textiles (17%) and paper and cardboard (13%).

**Table 4-11: Second WCS analysis**

| WASTE CATEGORY | MASS (KG) | PERCENTAGE OF WASTE STREAM |
|---|---|---|
| **Paper & Cardboard** | 18 | 13 |
| **Glass** | 9 | 7 |
| **Metal** | 4 | 3 |
| **Plastics** | 9 | 7 |
| **Polystyrene** | 1 | 1 |
| **Other Plastic** | 10 | 7 |
| **Textile** | 23 | 17 |
| **Food Waste** | 30 | 22 |
| **Garden Waste** | 6 | 4 |
| **Electrical Waste** | 0 | 2 |

| WASTE CATEGORY | MASS (KG) | PERCENTAGE OF WASTE STREAM |
|---|---|---|
| **Sanitary Waste** | 23 | 17 |
| **TOTAL** | **134** | **100** |

The diagram below shows the fractions of waste categories. The total recyclable fraction (i.e., cardboard, paper, plastics, metals, and glass) of the waste amounted to 38%.

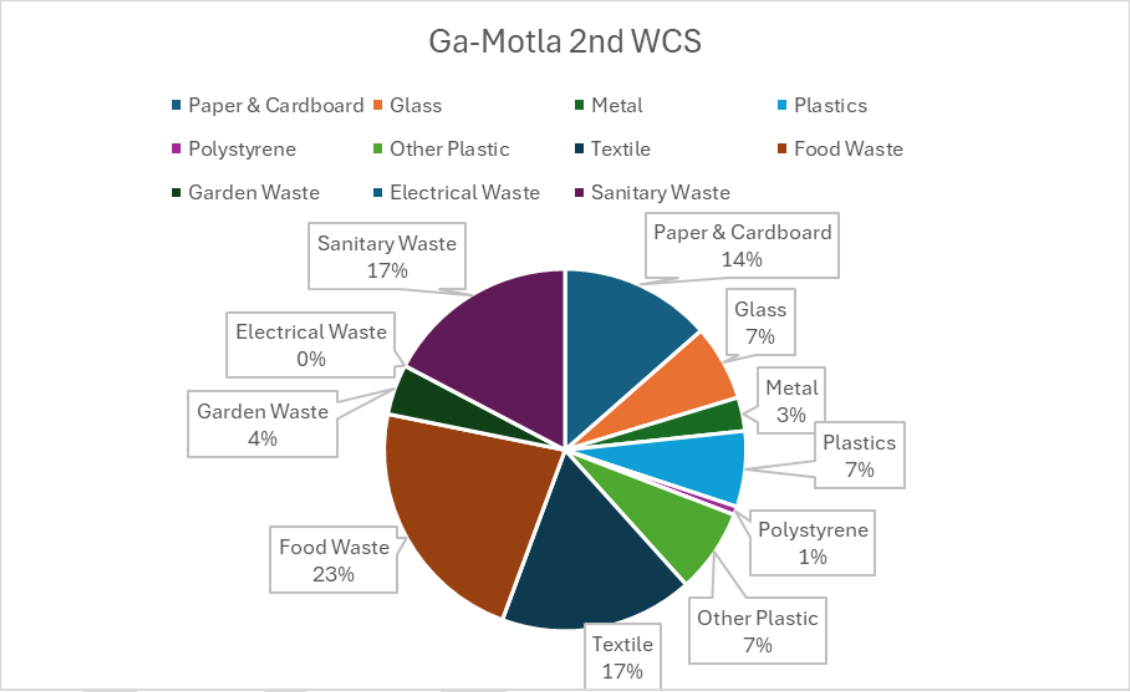



**Figure 4-17: Ga-Motla dumpsite second WCS pie chart results**

#### 4.3.2.3 Limitations

Due to cost, time and resource constraints, the WCS for MLM was only conducted over a two-day period and only on the waste disposed of on those days. To get more accurate data, the MLM should conduct the WCS over the four seasons, not just two seasons, of the year since waste generation is affected greatly by seasonal variation; therefore, ideally, waste analysis should be carried out at three-month intervals.

### 4.3.3 Determining Current Domestic Waste Generation Per Capita

Waste generation per income category in 2023 was then calculated using the percentage of the population per income group. Waste generation rates per person per year $(r)$, according to the Guidelines for the development of Integrated Waste Management Plans (IWMPs), assumed to be for domestic waste only (Department of Environmental Affairs, 2006):

- Low income = 149.65 kg/person/year = 0.14 tonnes/person/year
- Middle income = 270.1 kg/person/year = 0.27 tonnes/person/year
- High income = 470.85 kg/person/year = 0.47 tonnes/person/year

The contribution of each income group was calculated as follows:

$$Waste\ generation_i = p\ x\ r$$

$$where\ i = income\ group$$

$$p = percentage\ of\ population\ in\ income\ group$$

$$r = waste\ generation\ rates\ per\ person\ per\ year.$$

The estimated (2020) domestic waste generation per income group[1] is shown in Table 4-12 below.

**Table 4-12: Estimated current (2023) annual domestic waste generation rate per income group in tonnes**

| INCOME GROUP | PERCENTAGE OF POPULATION PER INCOME GROUP (STAS SA 2011) | POPULATION PER INCOME GROUP | WASTE GENERATION/PERSON - YEAR | ESTIMATED WASTE GENERATED IN 2023 (T/ANNUM) |
|---|---|---|---|---|
| **Low income (R0 - R20K)** | 58% | 128 964 | 0.15 | 19 345 |
| **Middle income (R20K-R300K)** | 41% | 91 164 | 0.27 | 24 614 |
| **High income (R300K- Over R2.5m)** | 1% | 2 224 | 0.47 | 1 045 |
| Total | **100%** | **222 352** | | **45 004** |

### 4.3.4 ESTIMATE FUTURE WASTE GENERATION RATES AND QUANTITIES

The future waste generation was calculated based on the 2022 Stats SA population data. The assumption was made that the population growth rate of 1.47% (as calculated in 4.2.1) will remain unchanged. The future waste generation for 2023 – 2030 is illustrated in Table 4-13.

**Table 4-13: Future waste generation for MLM**

| YEAR | POPULATION | TOTAL ESTIMATED WASTE GENERATION (T/ANNUM) |
|---|---|---|
| 2023 | 222 352 | 45 004 |
| 2024 | 225 631 | 45 666 |
| 2025 | 228 959 | 46 337 |
| 2026 | 232 336 | 47 018 |
| 2027 | 235 763 | 47 709 |
| 2028 | 239 240 | 48 411 |

[1] Note: The 2011 Stats SA (as extracted from the IDP 2023) data for household income distribution was used due to the unavailability of updated information.

| YEAR | POPULATION | TOTAL ESTIMATED WASTE GENERATION (T/ANNUM) |
|---|---|---|
| 2029 | 242 768 | 49 122 |
| 2030 | 246 349 | 49 844 |

## 4.4 WASTE RECYCLING, TREATMENT AND DISPOSAL

### 4.4.1 WASTE RECYCLING AND MINIMISATION

Both formal and informal recycling occurs within the MLM. Due to a lack of recycling initiatives, waste materials are transported out of the MLM to neighbouring areas of the City of Tshwane to be sold to companies trading in these areas.

#### 4.4.1.1 Mathibestad Buy-Back Centre

The table below provides information on the Mathibestad Buy-back Centre, which was funded by the DFFE. The site is currently non-operational due to vandalisation.

**Table 4-14: Mathibestad Buy-back centre**

| DESCRIPTION | STATUS QUO |
|---|---|
| **Type of facility** | Recycling and Buy-back centre |
| **Name of facility** | Mathibestad Buy-Back Centre |
| **Location of facility** | 25°16'44.9"S<br>28°09'03.1"E |
| **Registration number** | NWP/WMPF/BP4/2019/07 |
| **Operations** | The Mathibestad Buy-Back Centre was funded by the DFFE, built in 2015, and started operating in 2016. Equipment at the facility has been either stolen or vandalised. The facility was operational for one year. The facility subsequently closed and has not been operational since. |
| **Waste quantities** | Not available for the facility due to the status of the facility being closed. |
|  <br>**Figure 4-18: Structure at the Mathibestad buy-back centre** |  <br>**Figure 4-19: View from Inside the Mathibestad buy-back centre** |

#### 4.4.1.2 Mojamojoni Recycling and Buy-back Centre

The table below provides information on a formal recycling initiative identified in the MLM.

**Table 4-15: Mojamojoni Recycling and Buy-back Centre**

| DESCRIPTION | STATUS QUO |
|---|---|
| **Type of facility** | Recycling and Buy-back centre |
| **Name of facility** | Mojamojoni Recycling and Buy-back Centre |
| **Location of facility** | 25°18'08.9"S<br>28°14'29.2"E |
| **Registration number** | Not registered |
| **Vehicle used for collection** | Owners' private vehicle (bakkie) is used to collect waste. At the time of the site visit, the vehicle was not used as it was undergoing repairs. Collection of waste is negatively influenced and depends on drop-off from members of the public. |
| **Operations** | Bailed waste is reportedly transported and sold to a private company in Rosslyn. Glass bottles are reportedly transported and sold to a company in Rosslyn; subsequently, the set company sells glass to Consol Glass. |
| **Waste Type** | General waste – recyclable materials (paper, cardboard, plastic, glass, cans, steel). |
| **Waste quantities** | 5 – 10 tonnes per month. |

**Figure 4-20: Bailed waste ready for collection**

**Figure 4-21: Filled skip ready for collection**

**Figure 4-22: Overview of storage area**

**Figure 4-23: Recyclable scrap materials at facility**

**Figure 4-24: Glass crusher facility**

**Figure 4-25: Overview of bailer/operational area**

**Figure 4-26: Overview of operational area**

**Figure 4-27: Inert waste storage area**

**Figure 4-28: Facility entrance overview**

### 4.4.1.3 Rudzani Scrapyard and Recycling

The table below illustrates information on scrap metal recycling in MLM.

**Table 4-16: Rudzani scrapyard and recycling**

| DESCRIPTION | STATUS QUO |
|---|---|
| **Type of facility** | Recycling and Buy-back centre |
| **Name of facility** | Rudzani Scrapyard and Recycling |
| **Location of facility** | 25°21'26.3"S<br>28°04'23.0"E |
| **License number** | Not registered |
| **Municipal assistance** | Owner of the facility to apply for funding from the MLM to assist in expanding operations. |
| **Operations** | Informal waste pickers sell waste to the facility. On an as-needed basis, the owner of the facility collects waste from businesses in the area. Recyclable materials are collected, transported and sold to businesses in the City of Tshwane. As reported by the facility owner, on occasion, beer bottles are sold to tavern owners. |
| **Waste Types** | General waste – recyclable materials (paper, cardboard, plastic, glass, cans, steel). |
| **Waste Quantities** | 5 – 10 tonnes per month. |

**Figure 4-29: Scale used for buy-back activities**

**Figure 4-30: Skip for collection of recyclable materials**


**Figure 4-31: 9m³ skip used for recyclable materials**

**Figure 4-32: Skip bins used for collection and storage of glass bottles**


**Figure 4-33: Recyclable cardboard stored at facility**

**Figure 4-34: Storage area at facility for recyclable materials**

#### 4.4.1.4 Informal Recycling

Informal recyclers are located within the MLM, collecting and selling materials to by-passers and formal businesses. Companies located within the City of Tshwane collect waste materials from informal recyclers when the informal recyclers have sufficient quantities of waste available for collection. Waste pickers fulfil a role in informal recycling by selling waste collected in the MLM to these informal recyclers for reselling to recycling companies in the CoT. The table below illustrates an example of an informal recycler within the MLM.

**Table 4-17: Informal recycler in MLM**

| DESCRIPTION | STATUS QUO |
|---|---|
| **Type of facility** | Informal Recycler / Buy-back |
| **Location of facility** | 25°20'04.2"S<br>28°03'19.2"E |
| **Registration number** | Not registered |

**Figure 4-35: General waste comprising plastics and bottles**

**Figure 4-36: Rubber and metals collected and stored**

**Figure 4-37: Overview of waste materials collected and stored**

### 4.4.2 TREATMENT AND DISPOSAL

The MLM has one unlicensed site named the Ga-Motla Waste Disposal Site. The MLM applied for rectification of the Ga-Motla Waste Disposal Site in terms of Section 24G(1)(b) of the NEMA and Section 20(b) of the National Environmental Management: Waste Act 59 of 2008; however, this application was refused by the North West Rural, Environment and Agricultural Development Department in March 2020. The Municipality was instructed to cease the unlawful activity immediately upon receipt of the refused Section 24G decisions and submit a Waste Management License application to decommission the Ga-Motla Waste Disposal Site. To this date, waste disposal activities at the site are ongoing, and the department has not received an application for decommissioning of the unlawfully commenced Ga-Motla Waste Disposal Site.


**Figure 4-38: Ga-Motla Waste Disposal Site footprint**

Table 4-18 provides an overview of the current (2023) situation at the Ga-Motla waste disposal site as was perceived during the ground truthing.

**Table 4-18: Ga-Motla Waste Disposal Site description**

| DESCRIPTION | STATUS QUO |
|---|---|
| **Name of Waste Disposal Site** | Ga-Motla Waste Disposal Site |
| **Waste Disposal Site classification** | None (the site is unlicensed) |
| **License number** | Not licensed |
| **Location of Waste Disposal Site** | Portion 2 of the farm Kromkuil 99 JR, North West |
| **Coordinates of the Waste Disposal Site** | 25°21'40.8"S 28°05'37.5"E (Entrance as per Google Earth) |
| **Licence/Permit number** | None *(note: S24G application refused in 2020)* |
| **Permit Holder** | N/A |
| **Waste categories and average disposal rate (tonnes/month)** | General Waste Disposal records not available for the site. |
| **Remaining airspace (m³) - base date of Waste Disposal Site survey** | No calculations have been done at the site. |
| **Equipment available on site** | None. |
| **Access control, signage and collection of disposal tariffs** | No signage present at the site. The site boundary has not been fenced off. Insufficient access control measures on place, as no access gates are present to prevent unauthorised access. No collection of disposal tariffs on site. |
| **Sources of cover material** | Cover material is not used on site - waste is burned. |
| **Clean Stormwater and contaminated run-off management systems** | No formal management of stormwater and contaminated run-off. |
| **Gas and leachate management** | No formal gas and leachate management. Groundwater contamination occurs due to leachate. |
| **Control of nuisances (e.g. burning of waste, litter odours, vermin, and dust)** | No control of nuisances at the site. Burning of waste evident on site. No dust suppression measures implemented.<br>Odours persist due to no formal management of waste. |
| **Salvaging activities** | Informal reclamation of waste occurs at the site. Waste sorted by informal waste pickers on site is sold to and collected by private companies from the City of Tshwane. |
| **Waste Reclamation** | Waste reclamation activities are undertaken by informal waste reclaimers at the facility. |

| DESCRIPTION | STATUS QUO |
|---|---|
| **Rehabilitation** | No rehabilitation has commenced on site. The site has been issued a section 31L in accordance with the National Environmental Management Act due to non-compliance at the site.<br>A service provider has been appointed to conduct the application for the closure and rehabilitation of the facility; the process is ongoing as of 2024. |
| **Final Cover** | Sufficient cover and vegetative material for final closure are not available at the waste disposal site. |

**Figure 4-39: Overview of facility from access road**

**Figure 4-40: Overview of facility with presence of illegal burning of waste**

**Figure 4-41: Uncovered waste**

**Figure 4-42: Historic trenches and erosion on site**

**Figure 4-43: Uncovered waste on site**

**Figure 4-44: Burned and sanitary waste**

**Figure 4-45: Ponding of water and informal housing on site**

**Figure 4-46: Illegal burning of waste**

**Figure 4-47: Vegetation growth and scattered waste**

**Figure 4-48: Ponding of water on site**

**Figure 4-49: Ponding of water and waste dumped next to access road**

**Figure 4-50: Uncovered mixed waste**

Figure 4-51: Informal reclamation of waste on site

Figure 4-52: Overview of scattered waste with animals present on site

#### 4.4.2.1 Private Waste Disposal Sites

Reportedly two closed privately owned Waste Disposal Sites are located within the MLM, namely Bosplaas East and Bosplaas West. Reportedly both facilities have seized operations. It must be noted that during the ground truthing process these facilities could not be located, the coordinates for these facilities were provided by the North West Department of Economic Development, Environment, Conservation and Tourism (DEDECT). According to the Department Bosplaas East waste disposal site is located on Farm Boschplaats 91 JR within MLM. The site is closed in terms of the Compliance Notice dated 24 February 2015. Bosplaas West waste disposal site is located on Farm Boschplaats 91 JR within MLM.

During the ground truthing phase of the status quo, the facilities could not formally be identified due to access control issues experienced and no signage indicating the location of the facility. Due to the unconfirmed location during the ground truthing phase, photographs were not taken of the sites. A desktop study was conducted to identify the location of the closed facilities, as reflected in Table 4-19. The table below provides the coordinates of the closed WDFs.

**Table 4-19: Private WDF in MLM**

| FACILITY NAME | COORDINATES |
|---|---|
| **Bosplaas East** | 25 ° 20’32.29” S<br>28 ° 15’29.02”E. |
| **Bosplaas West** | 25° 20’37.38” S<br>28° 15’06.27”E |

#### 4.4.2.2 Waste Burrow Pits

The construction of roads and other infrastructure is seen as the root cause for burrow pits within the MLM. Another cause of burrow pits is uncontrolled sand mining. As reported during the ground truthing by the MLM representative and environmental officer, the burrow pits listed in the table below are used for illegal dumping.

**Table 4-20: Burrow pits used for illegal dumping**

| NO. | LOCATION | DESCRIPTION |
|---|---|---|
| **1.** | Bosplaas<br>25°18'54.3"S<br>28°16'41.3"E | The burrow pit is used for illegal dumping of waste by community members. Burrow pits are reportedly cleaned on a quarterly basis by the MLM and a service provider. After completion of the clean-up, waste is disposed of at the unlicenced Ga-Motla WDF. |
| **2.** | Makapanstad<br>25°13'43.4"S<br>28°06'51.4"E | The burrow pit is used for illegal dumping of waste by community members. Burrow pits are reportedly cleaned on a quarterly basis by the MLM and a service provider. After completion of the clean-up, waste is disposed of at the unlicenced Ga-Motla WDF. |
| **3.** | Syferkuil<br>25°18'51.6"S<br>28°16'19.8"E | The burrow pit is used for illegal dumping of waste by community members. Burrow pits are reportedly cleaned on a quarterly basis by the MLM and a service provider. After completion of the clean-up, waste is disposed of at the unlicenced Ga-Motla WDF. |

As reported during the ground truthing by the MLM representative and environmental officer, the following burrow pits in Table 4-21 are present but not used for illegal dumping as these pits are reportedly filled with water. The location of the below burrow pits could not be confirmed during the ground truthing. The list below was obtained from the MLM database.

**Table 4-21: List of burrow pits in MLM**

| NO. | LOCATION |
|---|---|
| **1.** | Mathibestad RDP -<br>25°17'40.5"S 28°09'41.6"E |
| **2.** | Mathibestad (Machedi Section) |
| **3.** | Mathibestad (Riverside) |
| **4.** | Tladistad –<br>25°12'02"S 28°02'23"E |
| **5.** | Selepe |
| **6.** | Ratjiepan |
| **7.** | Mmotla |
| **8.** | Carousel View |
| **9.** | Mmakaunyana |
| **10.** | Norokie |
| **11.** | Mogogela |
| **12.** | Maubane |
| **13.** | Dertig |
| **14.** | Kgomo-Kgomo |
| **15.** | Dikebu |
| **16.** | Lefatlheng-<br>25°16'39"S 28°12'04"E |

## 4.4.3 OTHER WASTE TYPES

### 4.4.3.1 Health Care Risk Waste

Two medical clinics were visited during the ground truthing to determine the status quo of medical waste management in the MLM. Local municipalities are not mandated by law to provide specific medical waste services. Medical waste management falls under the responsibility of healthcare facilities or specialised waste management companies. These entities typically oversee the collection, disposal, and treatment of medical waste generated within their facilities.

During the time of the ground truthing, it became clear that there was a significant absence of adequate medical waste education and awareness in the MLM.

However, municipalities do have a broader responsibility to ensure public health and safety within their jurisdiction. This may involve enacting regulations or guidelines regarding the proper disposal and handling of medical waste to prevent potential health hazards or environmental contamination. While municipalities might not directly provide services or services, they may establish protocols, collaborate with specialised waste management services, or regulate the proper disposal of medical waste within their locality.

#### *4.4.3.1.1 Kutlwano Health Centre*

The table below provides information on the Kutlwano Health Centre.

**Table 4-22: Kutlwano Health Centre information**

| DESCRIPTION | STATUS QUO |
|---|---|
| **Type of facility** | Medical Centre |
| **Location of facility** | 25°14'17.0"S<br>28°07'11.8"E |
| **Waste Collection and Transportation** | Waste is collected by a private service provider (Olela-Med) appointed by the facility to render hazardous waste collection and transportation on behalf of the facility. Medical waste is not treated within the MLM; the waste is reportedly treated in Gauteng. Hazardous waste receptacles used can be seen in Figure 4-53 & Figure 4-54 below. |


**Figure 4-53: Receptacles used for medical sharps**

**Figure 4-54: Medical waste receptacles used at facility**

**Figure 4-55: Overview and signage board of facility**

#### *4.4.3.1.2 Seaparankwe Clinic*

The table below provides information on the Seaparankwe Clinic.

**Table 4-23: Seaparankwe Clinic information**

| DESCRIPTION | STATUS QUO |
|---|---|
| **Type of facility** | Medical Clinic |
| **Location of facility** | 25°13'50.2"S<br>28°07'32.0"E |
| **Waste Collection and Transportation** | Hazardous waste is collected by a private service provider (Tshenolo Waste) appointed by the facility to render hazardous waste collection and transportation on behalf of the facility. Medical waste is not treated within the MLM. The waste is reportedly treated in Gauteng. Hazardous waste receptacles used can be seen in Figure 4-58 & Figure 4-59 below. General waste is collected by a private service provider appointed by the MLM. |

Figure 4-56: Overview of Seaparankwe Clinic

Figure 4-57: Waste information posters inside facility


Figure 4-58: Hazardous waste receptacles


Figure 4-59: Medical sharps receptacle


Figure 4-60: Hazardous and general waste receptacles

Figure 4-61: General waste receptacle

### 4.4.3.2 Schools

Lepono Primary School in Mathibestad was visited to assess the quality of waste management services provided by MLM. The table below provides information on the waste management at the Lepono Primary School.

**Table 4-24: Lepono Primary School information**

| DESCRIPTION | STATUS QUO |
|---|---|
| **Type of facility** | School |
| **Location of facility** | 25°15'46.9"S<br>28°09'21.3"E |
| **Municipal service delivery** | None |

| DESCRIPTION | STATUS QUO |
|---|---|
| **Waste collection and transportation** | Waste is not collected by the MLM or by private service providers.<br>White paper is collected by a private recycling company.<br>Plastic bottles and metals are collected by an informal recycler.<br>A feeding scheme is present at the school; all excess food waste is collected for piggeries in the surrounding community.<br>Any excess waste is burned at the facility. |

**Figure 4-62: 240L Wheelie bin used as receptacle**

**Figure 4-63: Receptacle used at school**

**Figure 4-64: Overview of area where waste is burned**

**Figure 4-65: Food waste storage receptacle**

**Figure 4-66: Food waste in receptacle**

#### 4.4.3.3 Supermarkets

The USave supermarket in Makapanstad was visited to determine the status quo of waste management at supermarkets.

**Table 4-25: USave supermarket in Makapanstad**

| DESCRIPTION | STATUS QUO |
|---|---|
| **Type of facility** | Supermarket |
| **Location of facility** | 25°14'02.7"S<br>28°06'48.5"E |
| **Municipal service delivery** | A private service provider, as appointed by the MLM, collects waste from the premises on a weekly basis. |
| **General Waste Management** | Reportedly, packaging waste (plastics & boxes) is transported to the Shoprite distribution centre in Pretoria for recycling. Expired food from the facility is sent to farmers and piggeries in the immediate community. Disposal slips/certificates are issued for food waste, indicating that it is unsafe for human consumption.<br>Expired products from suppliers are transported back to them for safe disposal. |


**Figure 4-67: Overview of Usave Makapanstad**

**Figure 4-68: Recyclable material to be transported to Pretoria**

**Figure 4-69: General waste receptacle inside store**

## 4.5 STATUS OF WASTE COLLECTION SERVICES

### 4.5.1 WASTE RECEPTACLES

Multiple skip bins were noted during the ground truthing conducted in the MLM. The skip bins are the property of the MLM and are serviced on a weekly basis by service providers. The skip bins are placed in numerous locations throughout the municipality, with the goal reportedly being to prevent illegal dumping. All locations of the placed skip bins in the MLM could not be confirmed. During the ground truthing, waste was observed to be burnt inside the skip bins. Reportedly, impatience with the weekly clearance of the skip bins is the reason for burning the waste.

Figure 4-70 illustrates the skip bin locations toward the South of MLM that were visited during the ground truthing. During the visit, it was observed that illegal dumping occurs around the skip bins.

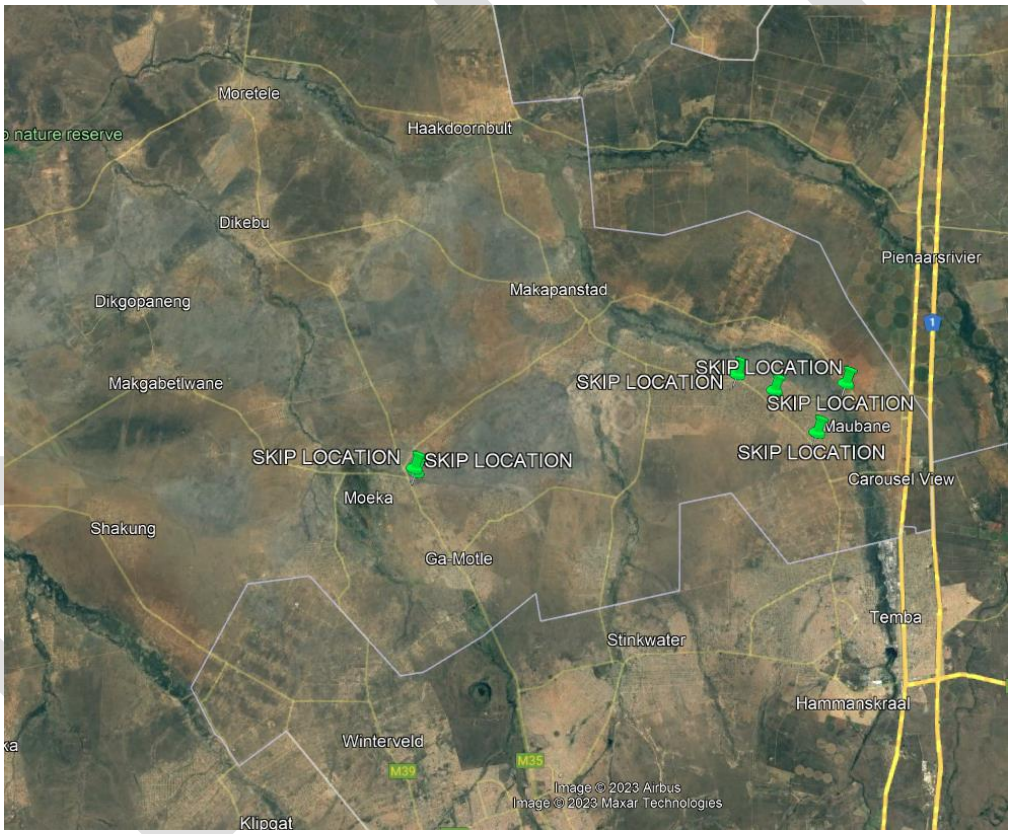



**Figure 4-70: Skip locations towards the South of MLM**

The images below provide an overview of the condition of the skip bins located toward the South of MLM. There are currently 31 skip bins used within MLM.

**Figure 4-71: Skip bins conditions with visible illegal dumping around the skip bins**

### 4.5.1.1 Waste Collection, Transportation and Disposal

There are 60 058 households within MLM, and only 33.8% of the households are serviced once a week by the Municipality. The table below shows the refuse disposal statistics from Stats SA 2022 Census for MLM.

**Table 4-26 Refuse disposal percentages**

| CATEGORY | FREQUENCY | PERCENTAGE |
|---|---|---|
| **Removed by local authority at least once a week** | 20 307 | 33.8% |
| **Removed by local authority less often** | 1 142 | 1.9% |
| **Communal refuse dump** | 485 | 0.8% |
| **Communal container/central collection point** | 6 991 | 11.6% |
| **Own refuse dump** | 27 523 | 45.8% |
| **No Rubbish Disposal** | 2 976 | 5.0% |
| **Other** | 635 | 1.1% |

Waste Collection, transportation, and disposal in the MLM is outsourced to 18 different private service providers appointed by the MLM as of 30 April 2024. Reportedly, this is due to the fact that the MLM does not have an adequate municipal waste fleet available to service the municipal jurisdictional area. The MLM waste collection, transportation and disposal is conducted by the following companies:

- Always Good Trading Enterprise CC
- Chamasega Construction
- David and Tshepi Trading Enterprise
- KWK Trading
- David Manamela Waste Removals
- Dertig Trading and Projects
- Direlanang Construction and Projects
- Gebza's Transport and Projects
- Gosiame Tlotliso Micheala (Pty) Ltd
- Katlinkie Business Solutions
- LLk Trading & Projects
- MLO Group
- Sthakganelo Holdings (Pty) Ltd
- Tesane Trading and Projects (Pty) Ltd
- Legend At Work and Construction Projects
- Kgololosego T. Trading and Projects
- Botho Bothle Trading & Projects
- Medirelo Trading and Projects.

The table below provides a breakdown of the companies and the respective areas serviced within the MLM. Rural areas of the MLM not included in the table below are not serviced by the service providers appointed by the MLM; no waste collection, minimisation initiatives, disposal, recovery, or treatment occurs in these un-serviced areas. It is recommended that the MLM apply for specialised waste management vehicles to provide services within all un-serviced rural areas in the MLM.

**Table 4-27: MLM Waste collection schedule**

| COMPANY | COLLECTION DAY | AREA SERVICED |
|---|---|---|
| **Always Good Trading Enterprise CC** | Monday | Tladistad |
| | Tuesday | Dikebu, Moema and Clean dumps |
| | Wednesday | Mocheko |
| | Thursday | Mmatlhwaela |
| | Friday | Clean dumps |

| COMPANY | COLLECTION DAY | AREA SERVICED |
|---|---|---|
| **Chamasoga Construction** | Monday To Friday | Flynkzyndrift, Dikebu, Lekgolo, Sutelong, Mmatlhwaela, and Moretele.<br>(Monday, Tuesday, Thursday, and Friday; cover one village, and on Wednesday, cover two villages). |
| **David and Tshepi Trading Enterprise** | Monday | Ngobi & Jumbo |
| | Tuesday | Swartboom |
| | Wednesday | Slaagboom |
| | Thursday | Selepe |
| | Friday | Dipetolwane |
| **KWK Trading** | Monday | Mathibestad (Lefatlheng & Ramogoga) |
| | Tuesday | Dertig |
| | Wednesday | Danhouse |
| | Thursday | Ramaphosa, Sespond |
| | Friday | Bosplaas West |
| **David Manamela Waste Removals** | Monday | Makapanstad (Phomolong, Greenside, Mmaudu, Sefikantswe, Matebeleng, Maseding) |
| | Tuesday | Makapanstad (Motlhaneng, Maropeng, Phake, Beria, Boiketlo, Sechabeng) |
| | Wednesday | Makapanstad (Moretele, Koitant, Radipanana) |
| | Thursday | Kgomo-Kgomo (Bodulong and Pitsa ga e Lowe) |
| | Friday | Kgomo-Kgomo (Street Cleaning) |
| **Dertig Trading and Projects** | Monday | Mathibestad 24 and Government institutions |
| | Tuesday | Mathibestad RDP 12 and Businesses |
| | Wednesday | Mathibestad 24, Businesses, and Schools |
| | Thursday | Mathibestad 12, and street cleaning |
| | Friday | Mathibestad 24 and street cleaning |
| **Direlanang Construction and Projects** | Monday | Vuma |
| | Tuesday | Moeka 1,2 & 3 and Msholozi |
| | Wednesday | Savanna and Sondela |

| COMPANY | COLLECTION DAY | AREA SERVICED |
|---|---|---|
| | Thursday | Skampaneng and Pruchard |
| | Friday | Lossmycherry and Clinton |
| **Gebza's Transport and Projects** | Monday | Ward 09 (Mohohelo) |
| | Tuesday | Ward 26 (Ratsiepane) |
| | Wednesday | Ward 11 (Motla) |
| | Thursday | N/A |
| | Friday | N/A |
| **Gosiame Tlotliso Michaela (PTY) LTD** | Monday | Flynkzyndrift |
| | Tuesday | Lekgolo |
| | Wednesday | Sutelong |
| | Thursday | Moretele |
| | Friday | Mmatlhwela |
| **Katlinkie Business Solutions** | Monday | Ga –habedi and Jonathan |
| | Tuesday | Litter Picking |
| | Wednesday | Makgabetlwane, Kalkbank and Dikgopaneng |
| | Thursday | Litter Picking |
| | Friday | Rantlapane and Rabosula |
| **LLK Trading and Projects** | Monday | Diegrens and Rugtesloot |
| | Tuesday | Bollantlokwe and Mmukubyane |
| | Wednesday | Tlholwe, Phedile and Little Trust |
| | Thursday | Lebotlwane |
| | Friday | Litter Picking |
| **MLO Group** | Monday | Mmakaunyana N01 and Mmakaunyana N02 |
| | Tuesday | Skrilek, Six Road and Tshwene's Farm |
| | Wednesday | Kromkuil |
| | Thursday | Skrilek, Six Road and Kromkuil Main Roads |
| | Friday | Mmakaunyana N01 and Mmakaunyana N02 |
| **Sthakganelo Holdings (PTY) LTD** | Monday | RDP |
| | Tuesday | Syferskuil |
| | Wednesday | Walman West |
| | Thursday | Walmang |

| COMPANY | COLLECTION DAY | AREA SERVICED |
|---|---|---|
| | Friday | Illegal Dumping |
| **Tesane Trading and Projects PTY LTD** | Monday | Ward 2 |
| | Tuesday | Ward 2 |
| | Wednesday | Ward 2 |
| | Thursday | N/A |
| | Friday | N/A |
| **Legend At Work and Construction Projects** | Monday | Swartdam & Motong |
| | Tuesday | Rabusula & Halalaneng |
| | Wednesday | Norokie |
| | Thursday | Boikhutso |
| | Friday | Lebalangwe |
| **Kgololosego T. Trading and Projects** | Monday | Litter Picking, Collection from schools, businesses, clinics, and other government institutions |
| | Tuesday | Litter Picking |
| | Wednesday | Dihibidung, One&Ten, Opperman, Thulwe, Prieska and Potoane |
| | Thursday | Litter Picking |
| | Friday | Maubane (Greenside), Mangweng and Snake Park |
| **Batho Botlhe Trading & Projects** | Monday | Phedile, Ruigtesloot, Little Trust, and Degrans |
| | Tuesday | Tlounane, Swartboom, Utsane, Voyenteen 2, Walman, Walman West, RDP, Cyferskuil, Ngobi, Jumbo, Transactie, Selepe and Dipetlelwane |
| | Wednesday | Little Trust, Degrans, Tlholwe, Mmukubyane, Bollantlokwe, Lebotloane, Seutelong, Dikebu, Tladistad, Moema, Mocheko, and Dikebu |
| | Thursday | Swartdam, Mmotong Noroki, Rabosula, Helalaneng, Boikhutso, Lebalangwe, Mmakaunyana and Mmotla |
| | Friday | Mogogelo, Moeka 1,2, & 3, Vuma, Ratjiepane V, Savanna,<br>Msholozi 1 & 2, Sondela, Kromkuil and Ratjiepane |

| COMPANY | COLLECTION DAY | AREA SERVICED |
|---|---|---|
| **Chamasega Construction** | Monday To Friday | 6 Villages |
| **Dertig Trading & Projects** | Monday To Friday | Mogogelo 11, Mathibestad 12, Couresel view 13, Danhouse 14, Maubane 15, Mathibestad Lefatlheng 18, Mathibestad Ramogoga 19, Mathibestad 24, Bosplaas 22, Mmakaunyane 23, Moeka 25, and Ratjiepane 26 |
| **Medirelo Trading and Projects** | Monday | Phedile, Ruigtesloot, Little Trust, and Degrans |
| | Tuesday | Tlounane, Swartboom, Utsane, Voyenteen, Walman, Walman West, RDP, Cyferskuil, Ngobi, Jumbo, Transactie, Selepe and Dipetlelwane, |
| | Wednesday | Little Trust, Degrans, Tlholwe, Mmukubyane, Bollantlokwe, Lebotloane, Seutelong, Dikebu, Tladistad, Moema, Mocheko, Dikebu, |
| | Thursday | Swartdam, Mmotong Noroki, Rabosula, Helalaneng, Boikhutso, Lebalangwe, Mmakaunyana, and Mmotla |
| | Friday | Mogogelo, Moeka 1,2 & 3, Vuma, Ratjiepane V, Savanna, Msholozi 1 & 2, Sondela, Kromkuil & Ratjiepane |

The table below indicates the waste management clusters of the MLM. The villages, wards clusters and companies responsible for servicing the areas are illustrated in Table 4-28.

**Table 4-28: Waste Management Clusters**

| NO | VILLAGES | WARDS | CLUSTERS | RESPONSIBLE COMPANY |
|---|---|---|---|---|
| **1.** | Waste collection in Phedile, Ruigtesloot, Little Trust, Degrens, Tlholwe, Mmukubyane, Bolantlokwe and Lebotloane | 1 & 4 | A | LLK Trading Projects |
| **2.** | Waste collection in Olverton, Tlounane, Swartboom, Utsane, and Voyenteen | 2 | B | Tesene Trading & Projects |

| NO | VILLAGES | WARDS | CLUSTERS | RESPONSIBLE COMPANY |
|---|---|---|---|---|
| **3.** | Waste collection in Potoane, Prieska, Thulwe, Opperman, One & Ten, Dihibidung, and Maubane | 15, 16 & 17 | C | Kgololoswgo T Trading & Projects |
| **4.** | Waste collection in Mathibestad (Lefatlheng, Ramogoga), Dertig, Danhouse, Ramaphosa, and Sespond | 14,18, & 19 | D | KWK Training & Projects |
| **5.** | Waste collection in Dikgopaneng, Kalkbank, Makgabetlwane, Rabosula, Rantlapane, Jonathan and Ga-habedi | 7&5 | E | Katlinkie Business Solutions |
| **6.** | Waste collection in Moeka 1,2 &3, Vuma, Savannah, Msholozi Sondela and Mmotla | 23 & 25 | F | Direlanang Construction and Projects |
| **7.** | Waste collection in Kgomo-Kgomo, Kontant, Moratele and Makapanstad | 20 & 21 | G | David Manamela Waste Removals |
| **8.** | Waste collection in Mathibestad & Mathibestad RDP | 12 & 24 | H | Dertig Trading & Projects |
| **9.** | Waste collection in Flynkzyndrift, Dikebu, Lekgolo, Sutelong, Mmatlhwaela and Moretele | 5 &10 | I | Chamasega Construction |
| **10.** | Waste collection in Swartboom, Slagboom, Ngobi, Jumbo, Transactie, Selepe and Dipetlelwane | 2 & 6 | J | David & Tshepi Trading Enterprise |
| **11.** | Waste collection in Mmakaunyane phase 1 & 2, Kromkuil, Tshwene's Farm and Skirlik | 8 | K | MLO Group |
| **12.** | Waste collection in Swartdam, Mmotong Noroki, Rabosula, Helalaneng, Boikhutso, Lebalangwe, and Lebalangwe | 7 | L | Legend At Work and Construction Projects |
| **13.** | Waste collection in Carousel View, Bosplaas East, Bosplaas West, Haiview and Dubai | 13 & 22 | M | Gosiame Tlotliso Michaela |
| **14.** | Waste collection in Tladistad, Mmatlhwaela, Norokie, Dikebu, and Mocheko | 10 | N | Always Good Trading Enterprise CC |
| **15.** | Moeka, Mogogelo and Ratjiepan | 9, 11 & 26 | O | Gebza's Transport and Projects |

| NO | VILLAGES | WARDS | CLUSTERS | RESPONSIBLE COMPANY |
|---|---|---|---|---|
| **16.** | Walman & Walman West, RDP & Cyferskuil. | 3 | P | Sthakganelo Holdings (Pty) Ltd |
| **17.** | Cleaning of illegal dumps | 8, 9, 10, 11, 25 and 26 | A | Batho Botlhe Trading & Projects |
| **18.** | Cleaning of illegal dumps | 19, 20, 21, 22, 23 and 24 | B | Chamasega Construction |
| **19.** | Cleaning of illegal dumps | 1, 2, 3, 4, 5, 6, and 7 | C | Medirelo Trading |
| **20.** | Cleaning of illegal dumps | 12,13, 14, 15, 16, 17, and 18 | D | Dertig Trading & Projects |

The table below indicates the service delivery within MLM regarding waste collection as obtained from Statistics South Africa during the 2022 Census.

**Table 4-29 Waste collection service delivery**

| NAME | FREQUENCY | % |
|---|---|---|
| **Removed by local authority at least once a week** | 20 307 | 33.8% |
| **Removed by local authority less often** | 1 142 | 1.9% |
| **Communal refuse dump** | 485 | 0.8% |
| **Communal container/central collection point** | 6 991 | 11.6% |
| **Own refuse dump** | 27 523 | 45.8% |
| **No Rubbish Disposal** | 2 976 | 5.0% |
| **Other** | 635 | 1.1% |

#### 4.5.1.2 Illegal Dumping and Littering

Illegal dumping and littering were noted to be a regular occurrence within the MLM. The table below illustrates some of the identified illegal dumping hotspots in the MLM as perceived during the ground truthing conducted on 28 September and 11 December 2023. *Dertig Trading and Projects* and Medirelo Trading was appointed by the MLM on 9 May 2023 for the cleaning of illegal dumping hotspots. Reportedly, illegal dumping is cleared on a monthly basis. To better prevent illegal dumping in the future, potential sources of illegal dumping need to be investigated along with service delivery enquiries regarding waste collection in the affected areas.

**Table 4-30: Identified illegal dumping hotspots**

| NO. | ILLEGAL DUMPING SITE COORDINATES | DESCRIPTION |
|---|---|---|
| **1.** | 25°19'13.2"S<br>28°03'03.8"E | Illegal dumping occurs next to the wastewater treatment plant in Ga-Motle. Burning of waste occurs at the location of illegal dumping. The MLM was not aware of this location. |
|   **Figure 4-72: Illegal dumping next to Moeka WWTW** | | |
| **2.** | 25°22'51.6"S<br>28°05'14.7"E | Reportedly, transboundary illegal dumping from the City of Tshwane is the cause of this illegal dumping hotspot next to Kromkuil. The previous clean-up conducted at the location was conducted by the MLM, EPWP workers and community members of neighbouring areas. Nappy waste was perceived as a major source of illegal dumping. |
|   **Figure 4-73: Illegal dumping next to M35 (Ga-Motla)** | | |
| **3.** | 25°13'13.8"S<br>27°59'03.5"E | Clean-up of illegal dumping by the appointed service provider occurs on a monthly basis. Burning of waste occurs at the location of illegal dumping at Motsheko. |
|   **Figure 4-74: Illegal dumping and burning of waste near Motsheko** | | |

| NO. | ILLEGAL DUMPING SITE COORDINATES | DESCRIPTION |
|---|---|---|
| **4.** | 25°17'30.9"S<br>28°16'06.3"E | Widespread illegal dumping and littering occurs at the location next to Bosplaas Road in Maubane. Clean-up of illegal dumping by the appointed service provider occurs on a monthly basis. |


**Figure 4-75: Illegal dumping & littering next to Bosplaas Rd in Maubane**

| | | |
|---|---|---|
| **5.** | 25°16'58.4"S<br>28°14'30.3"E | Clean-up of illegal dumping by the appointed service provider occurs on a monthly basis. Burning of waste occurs at the location of illegal dumping at Sespond. |


**Figure 4-76: Illegal dumping and littering next to Mpehbatho Rd in Sespond**


**Figure 4-77: Dumping and littering next to Mpehbatho Rd**

| | | |
|---|---|---|
| **6.** | 25°16'52.6"S<br>28°04'51.5"E | Between Swartdam & Kolofane. |

| NO. | ILLEGAL DUMPING SITE COORDINATES | DESCRIPTION |
|---|---|---|
| |   | |
| | **Figure 4-78: Illegal dumping and burning of waste** | |
| **7.** | 25°18'44.9"S<br>28°16'16.3"E | The illegal dumping at the location has been recently discovered by the MLM. Planning to clean up the illegal dumping was reportedly underway at the time of the ground truthing (11 December 2023) in Carousel View. |
| |     | |
| | **Figure 4-79: Illegal dumping and littering next to Sarah Rd** | |
| **8.** | 25°13'43.7"S<br>28°06'51.1"E | Illegal dumping occurs at the location and in the surrounding area of a burrow pit in Makapanstad. Quarterly clean-up of illegal dumping occurs at the location by the appointed service provider. |
| |   | |
| | **Figure 4-80: Illegal dumping and littering adjacent to burrow pit in Makapanstad** | |

### 4.5.2 SAWIS REPORTING

Waste disposal facilities that receive more than 150 tonnes of waste per day are required to report on SAWIS as per section 69 of the NEM:WA. Due to the unavailability of a weighbridge at the Ga-Motla Waste Disposal Site, no quantification of waste disposed at the site is recorded. There is also no formal or informal method of estimating the waste being disposed of at the Ga-Motla Waste Disposal Site. Therefore, no data on waste disposal is available to be reported on the SAWIS system. The MLM is not registered on SAWS and, therefore, does not currently report on the SAWIS.

### 4.5.3 INDIGENT HOUSEHOLDS

According to the MLM, the total number of indigent households registered as of 2024 was 25 913. This entails that 43.14% of the households in the MLM receive free basic services from the MLM.

### 4.5.4 FLEET VEHICLES

The MLM does not own any waste collection vehicles as all services are outsourced to the 18 service providers who respectively have their own waste collection and disposal vehicles. Moreover, MLM has contracted two (2) private contractors who are responsible for the maintenance of skip bins, and two (2) more private contractors have been appointed to clean illegal dumping hotspots throughout MLM jurisdiction. A list of the types of vehicles owned and operated by each service provider could not be obtained. The MLM does not have any plant or fleet vehicles that can clear illegal dumps or effectively manage waste disposal site operations.

### 4.5.5 MUNICIPAL WASTE ORGANOGRAM

The waste management services of the MLM fall under the Local Economic Development and Planning (LED & P) unit of the MLM. The Director of the LED and Planning heads the waste management services of the MLM. Appointed under the Director LED & Planning is the Manager: Local Economic Development and Planning. The position for the Manager: Environment and Waste is frozen in the MLM. According to the organogram under the Manager: Environment and Waste, a WMO and an Environmental Officer are appointed, and the position of the Air Quality and Waste Disposal Site officers is frozen. Two interns have been appointed through the Department of Cooperative Governance and Traditional Affairs to assist the Environmental officer in fulfilling the required duties in the MLM. No operators have been appointed for the MLM. Extended Public Works Programme (EPWP) workers are utilised by the MLM on an as-needed basis for various waste-related programmes. These include street cleaning, litter picking, etc. The EPWP workers are contract workers and are not formally appointed by the MLM. The organogram (Figure 4-81) illustrates the municipal waste organogram for the MLM.

The WMO and the environmental officer for the MLM work in collaboration under the Director LED & Planning to ensure enforcement and contractual agreements

are in place for the rendering of waste management services in the MLM. Two interns have been appointed to serve under the environmental officer of the MLM through the Department of Cooperative Governance and Traditional Affairs to assist with waste management.

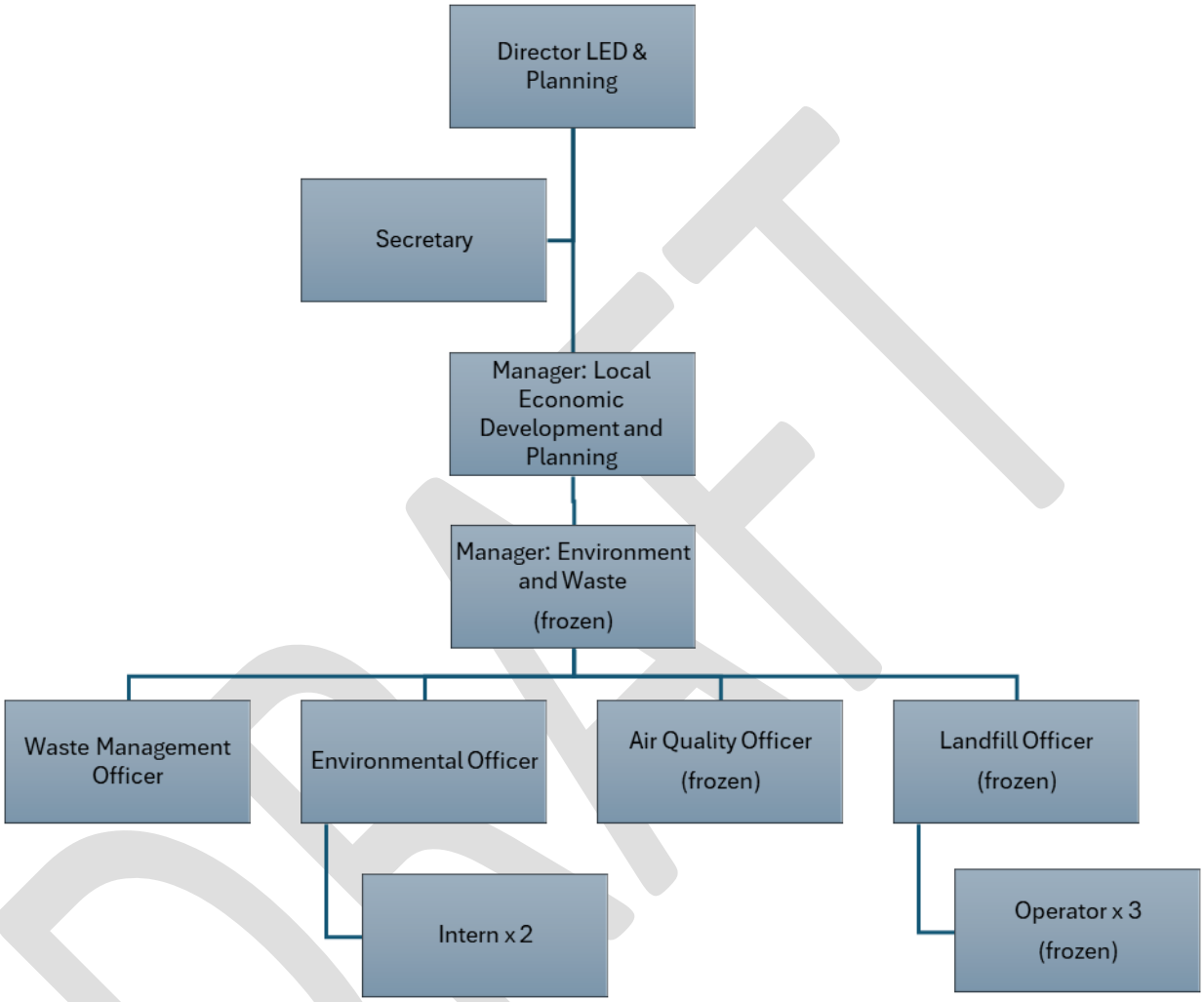



**Figure 4-81: Organogram for the MLM**

### 4.5.5.1 Waste Management Officer

To guarantee that there is continuous communication regarding the Waste Act's implementation between all three spheres of government, it is crucial that municipalities designate a WMO. WMO is essential to the creation of its IWMP and for ensuring compliance with all relevant legislation. The Waste Act (2008), Chapter 3, Section 10(3), mandates that each municipality authorised to carry out waste management services by the Municipal Structures Act, 1998 (Act No. 117 of 1998) must designate in writing a WMO from its administration to be responsible for coordinating matters pertaining to waste management in the municipality. Section 10(4) mandates a power delegated or a duty assigned to a WMO by virtue of subsection (1), (2) or (3) may be sub-delegated or further assigned by that to

another official in the service of the same administration, subject to such limitations or conditions as may be determined by the Minister, MEC or municipality, respectively. Section 10(5), WMOs must coordinate their activities with other waste management activities in the manner set out in the national waste management strategy established in terms of section 6 or determined by the Minister by notice in the Gazette. The WMO of the MLM was designated in 2019. The environmental officer assists the WMO with tasks and activities related to waste management in the MLM.

## 4.6 MAINSTREAMING KEY PRINCIPLES OF THE NWMS

### 4.6.1 MINIMISATION AND PREVENTION

The BPDM, through donations by PETCO, will pilot a waste separation at source programme at schools in the MLM, starting in January 2024. However, the project was only started in March 2024. MLM will collaborate with BPDM and all relevant stakeholders in performing separation at source in all (66) primary schools within the jurisdiction of MLM. Whereby schools will be educated on the importance of recycling, and wheelie bins will be provided to the schools involved.

In addition to the above, the figures below illustrate notice boards erected in the MLM prohibiting illegal dumping of waste.



**Figure 4-82: Notice board prohibiting illegal dumping**

### 4.6.2 WASTE CLEAN-UP CAMPAIGNS

The following clean-up campaigns were conducted in the past by the Local Economic Development and Planning Directorate of the MLM in 2023.

**Table 4-31: Location and images of clean-up campaigns within the MLM**

| LOCATION AND IMAGES OF CLEAN-UP CAMPAIGNS |
|---|
| **Lefatlheng Ward 18 Clean-up campaign (28 April 2023)** |




**Figure 4-83: Lefatlheng clean-up**

**Maubane Railway line - Ward 16 (1 February 2023)**



**Figure 4-84: Maubane Railway line clean-up**

**Maubane Ward 15**

| LOCATION AND IMAGES OF CLEAN-UP CAMPAIGNS | |
|---|---|
| |  |
| | **Figure 4-85: Maubane Ward 15 clean-up** |
| **Makapanstad – Ward 20 (16 August 2023)** |  |
|  |  |
| **Figure 4-86: Makapanstad clean-up** | |

### 4.6.3 ENVIRONMENTALLY SOUND SOCIO-ECONOMIC GROWTH AND DEVELOPMENT

According to the IWMP development guideline document, it is imperative for a municipality to identify and recognise initiatives that are currently in place to guarantee sustainable socio-economic development. This includes the identification of waste management employment opportunities within the municipality and efforts to assist locally owned small businesses and entrepreneurs like waste pickers and cooperatives.

Due to financial constraints, the MLM does not have the capacity to fund and assist local small businesses and entrepreneurs. The potential exists as informal waste pickers and informal recyclers were noted within the municipality. If funding is acquired, the potential exists for the refurbishment of the Mathibestad buy-back

centre, which can assist local small businesses and entrepreneurs within the municipality.

## 4.7 WASTE PICKER INTEGRATION

Waste Picker Integration entails, according to the Waste Picker Integration Guideline for South Africa (DFFE, 2020), creating a formally planned recycling system that values and improves the present role of waste pickers, builds on the strengths of their existing system for collecting and revaluing materials, and includes waste pickers as key partners in its design, implementation, evaluation and revision. Waste picker integration requires changes in a number of spheres and includes the integration of waste pickers' work, as well as the political, economic, social, legal and environmental integration of waste pickers according to the Waste Picker Integration Guideline for South Africa (DFFE, 2020).

Since the 2011 NWMS, in an effort to increase the number of recyclables collected and to strengthen and transform the recycling value chain, the policy approach has changed from focusing on formalising individual waste pickers through formal employment to a more systemic approach known as waste picker integration, which incorporates waste pickers and their informal collection system in official programs.

Waste pickers play an integral role in the diversion of waste from waste disposal sites as they provide valuable inputs to the recycling industry.

Informal waste pickers were noted in the MLM. These waste pickers reportedly collect waste from waste receptacles, illegal dumping hotspots and the Ga-Motla WDF to sell back to informal/formal recycling centres in the MLM. Due to the presence of illegal dumping in the MLM, the potential exists for waste pickers to be integrated into the waste management activities of the MLM. Currently, no formal integration of waste pickers has occurred by the MLM.

## 4.8 CIRCULAR ECONOMY

No circular economy initiatives have been initiated by the MLM. Circular economy initiatives will be elaborated on in the Gaps and Needs phase of the IWMP development. Examples of circular economy initiatives to be included in the next phase are:

- Composting and organic waste management programs
- Extended Producer Responsibility programs
- Circular Procurement Policies
- Repair and re-use centres
- Green infrastructure development
- Collaboration with informal waste pickers
- Local circular economy hubs, etc.

## 4.9 FINANCING OF WASTE MANAGEMENT

The table below illustrates the waste management budget for the MLM as extracted from the 2023/2024 Service Delivery and Budget Implementation Plan.

**Table 4-32: MLM Waste management budget**

| DESCRIPTION | ANNUAL BUDGET (2024) |
|---|---|
| Waste Collection | R28 246 206.00 |
| Education and Awareness Programmes | R50 000.00 |
| Regulatory Compliance, EIA's & Licence's | R2 500 000.00 |
| **Total** | **R30 796 206.00** |

# 5 GAPS AND NEEDS ANALYSIS

This section deals with the identification and analysis of gaps and needs within the MLM that are used to develop strategic goals, targets, and indicators for the immediate, short, medium, and long term.

## 5.1 GAPS AND NEEDS IDENTIFIED

Based on the findings of the status quo investigation, several gaps and needs have been identified. Gaps and needs related to waste management in the MLM have been categorised in terms of each of the following waste management activities:

- Waste service delivery
- Waste minimisation, recycling, and re-use initiatives
- Organic waste management
- Hazardous waste management
- Waste management facilities
- Waste management collection fleet, plant, and equipment
- Waste management information
- Waste education and public awareness
- Human and financial resource management
- Strategic planning.

### 5.1.1 WASTE SERVICE DELIVERY

Table 5-1 provides the gaps identified in the waste management services with the resulting needs.

**Table 5-1: Waste service delivery gaps and needs identified**

| GAP IDENTIFIED | RESULTING NEED |
|---|---|
| **The exact number of households not receiving waste collection services is unknown. According to the IDP of the MLM, 21% of households within the MLM manage their own refuse removal.** | Determine and increase the level of service provision. Update households serviced, un-serviced households, indigent register, etc., quarterly to improve the accuracy of data. |
| **Outlying and rural areas making use of open burning of waste or own refuse dumps** | The MLM needs to investigate the disposal methods and determine the feasibility of providing creative collection services in the rural areas. |
| **Illegal dumping** | MLM to implement clean-up campaigns in identified areas (dumping prone areas).<br>MLM to strategically place skip bins in areas prone to illegal dumping. |
| **Not all households in the MLM receive refuse collection services** | Extend refuse collection services to all un-serviced households. |

### 5.1.2 WASTE MINIMISATION, RECYCLING AND RE-USE INITIATIVES

Table 5-2 provides the gaps identified in terms of waste minimisation, recycling, and re-use with the resulting needs.

**Table 5-2: Waste minimisation, recycling and re-use initiatives gaps and needs identified**

| GAP IDENTIFIED | RESULTING NEED |
|---|---|
| **No separation at source for households and businesses** | Implement initiatives/programmes for separation at source at households and businesses. |
| **Lack of minimisation and diversion of C&D waste** | Create a minimisation and diversion plan for C&D waste. |
| **Lack of formal recycling initiatives within MLM** | Support a formal recycling collaboration between MLM and PROs to increase recycling rates and promote formal recycling. |
| **Mathibestad Buy Back Centre not in use** | Implement buy-back policies or incentives at buy-back centres and material recovery facilities to reduce waste to waste disposal site.<br>Resuscitation of the Mathibestad buy back centre. |
| **No waste picker integration** | Integrate waste pickers into the municipal waste management systems. |

### 5.1.3 ORGANIC WASTE MANAGEMENT

Table 5-3 provides the gaps identified in terms of organic waste management with the resulting needs.

**Table 5-3: Organic waste management gaps and needs identified**

| GAP IDENTIFIED | RESULTING NEED |
|---|---|
| **No management of household organic waste** | Management of household organic waste |
| **No composting facilities** | Source funding for the establishment of composting facilities |

### 5.1.4 HAZARDOUS WASTE MANAGEMENT

Although local municipalities are not legally responsible for the management and safe disposal of hazardous waste[2] generated by major businesses and industries within their area of jurisdiction, they do need to ensure that no hazardous waste is disposed of on municipal waste disposal sites that are not licensed, developed, and operated to the required standards for disposal and hazardous waste. Table 5-4 provides the gaps identified in terms of hazardous waste management with the associated needs.

[2] In terms of the duty-of-care principle as required in NEMWA, generators of hazardous waste are responsible for the legally compliant management, treatment and disposal of such hazardous waste generated.

**Table 5-4: Hazardous waste gaps and needs identified**

| GAP IDENTIFIED | RESULTING NEED |
|---|---|
| **Lack of hazardous waste awareness** | Raise awareness regarding environmentally sound management of household hazardous waste. |

### 5.1.5 WASTE MANAGEMENT FACILITIES

Table 5-5 provides the gaps identified in terms of the waste management facilities with the resulting needs.

**Table 5-5: Waste management facilities gaps and needs identified**

| GAP IDENTIFIED | RESULTING NEED |
|---|---|
| **No licence for the closure and rehabilitation of Ga-Motla Waste Disposal Site** | Apply for a closure licence of the Ga-Motla Waste Disposal Site and undertake rehabilitation. |
| **No Licenced Waste Disposal Facility** | Licencing and development of a new Waste Disposal Facility |

### 5.1.6 WASTE MANAGEMENT COLLECTION FLEET, PLANT AND EQUIPMENT

Table 5-6 provides the gaps identified in terms of the waste management collection fleet, plant, and equipment with the resulting needs.

**Table 5-6: Waste management collection fleet and equipment gaps and needs identified**

| GAP IDENTIFIED | RESULTING NEED |
|---|---|
| **All waste collection is outsourced to service providers** | Funding to be acquired to procure specialized waste collection vehicles. |

### 5.1.7 WASTE MANAGEMENT INFORMATION

To plan for waste management services effectively, it is essential to have information on the quantities and types of waste generated. Table 5-7 provides the gaps identified in terms of the availability of waste management information with the resulting needs.

**Table 5-7: Waste management information gaps and needs identified**

| GAP IDENTIFIED | RESULTING NEED |
|---|---|
| **No information on waste quantities generated and diverted** | Establish baseline information via a waste calculator sheet utilised at the Ga-Motla Waste Disposal Site. |
| **Lack of waste generator information** | Ensure that waste generators are identified and registered in terms of waste information regulation. |

### 5.1.8 WASTE EDUCATION AND PUBLIC AWARENESS

Table 5-8 provides the gaps identified in terms of the waste education and initiatives with the resulting needs.

**Table 5-8: Waste education and initiatives gaps and needs**

| GAP IDENTIFIED | RESULTING NEED |
|---|---|
| **Lack of adequate waste awareness initiatives** | Increase waste awareness initiatives. |
| **Lack of waste awareness information on municipal social media platforms** | Basic information on waste minimisation could be provided on social media platforms for easy access. |
| **Lack of waste management training and awareness programs for municipal officials and councillors** | Implement formal waste management training for municipal officials and councillors. |

### 5.1.9 STAFF AND FINANCIAL RESOURCE MANAGEMENT

Table 5-9 provides the gaps identified in terms of the staff and financial resource management with the associated need to effectively address the gap.

**Table 5-9: Staff and financial management gaps and needs identified**

| GAP IDENTIFIED | RESULTING NEED |
|---|---|
| **Vacancies in the staff structure, no environmental structure.** | Review staff structure and requirements.<br>To establish the environmental structure and appoint suitable staff. |
| **Limited budget for waste management projects** | The municipality must ensure that there is sufficient provision in the operational budget for upcoming projects. |

### 5.1.10 STRATEGIC PLANNING

Future planning is essential in ensuring that a waste management service can meet the changing requirements of a municipality and comply with changing legislation and best practice guidelines. Table 5-10 provides the gaps identified in terms of future waste management planning with the associated need to address the gap effectively.

**Table 5-10: Future planning gaps and needs identified**

| GAP IDENTIFIED | RESULTING NEED |
|---|---|
| **Review of IWMPs at required five-year intervals** | Ensure for review and update the IWMP at required five-year intervals. |
| **No alignment of the IDP with IWMP** | Align the IWMP with the municipal IDP |

## 5.2 SETTING STRATEGIC OBJECTIVES, TARGETS, AND INDICATORS

The goals and objectives of an IWMP are used to address potential shortcomings or necessary improvements identified during the gaps and needs analysis. Goals are short and long-term aspirations for waste management, while objectives are more focused, measurable targets which, if implemented correctly, will allow the municipality to reach the identified goals. It is important to note that steps should be taken to ensure that law enforcers oversee that the objectives for each goal are achieved and maintained.

Strategic goals can be divided into:

- Objectives
- Targets
- Indicators

The goals for the MLM will be aligned with the 2022-2027 IDP for the MLM, the BPDM IWMP, the North West IWMP and the 2020 National Waste Management Strategy (NWMS) and its three strategic pillars.

### 5.2.1 GOALS IDENTIFIED FOR MLM

Section 24 (1) and (2) of the Local Government: Municipal Systems Act (No: 32 of 2000) stipulates that:

- (1) The planning undertaken by a municipality must be aligned with and complement the development plans and strategies of other affected municipalities and other organs of state to give effect to the principles of cooperative government contained in section 41 of the Constitution.
- (2) Municipalities must participate in national and provincial development programmes as required in Section 153 (b) of the Constitution. “Regulation 2(1)(d) further stipulates that “(1) A municipality integrated development must at least identify – (d) all known projects, plans and programmes to be implemented within the municipality by any organ of state”.

In line with the above legislation and the 2020 NWMS, the three strategic pillars and the gaps identified the following goals for the MLM were formulated:

- Goal 1: Waste minimisation, re-use and recovery
- Goal 2: Institutional and planning matters
- Goal 3: Minimum Service Standards and Cost Recovery
- Goal 4: Waste Management Infrastructure
- Goal 5: Awareness and Education
- Goal 6: Monitoring compliance, enforcement, and remediation
- Goal 7: Waste Management Information

The table below comprises the alignment of the identified MLM goals with the Provincial IWMP (PIWMP) and the BPDM IWMP.

**Table 5-11: Alignment of the MLM Goals with the PIWMP and the BPDM IWMP**

| MORETELE LOCAL MUNICIPALITY IWMP PROPOSED OBJECTIVES | BOJANALA PLATINUM DISTRICT MUNICIPALITY IWMP | NORTH WEST PROVINCIAL INTEGRATED WASTE MANAGEMENT PLAN GOALS (2016) |
|---|---|---|
| **Goal 1: Waste minimisation, re-use and recovery** | | |
| Objective 1: Implement separation at source at schools to improve diversion rates of recyclable materials | Establish and monitor a pilot residential separation. | Goal 3: Minimisation, re-use, recycling and recovery of waste. |
| Objective 2: Increase re-use, recovery, and recycling of waste to ultimately reduce the disposal of waste-to-waste disposal sites. | Monitor recycling programmes | |
| Objective 3: Integrate waste pickers in the municipality | | |
| Objective 4: Create a minimisation and diversion plan for C&D waste. | | |
| **Goal 2: Institutional and planning matters** | | |
| Objective 1: Review municipal waste organogram. | Awareness – raise awareness regarding waste management to 50% in the district. | Goal 1: Institutional and planning matters |
| Objective 2: Ensure sufficient institutional capacity for both human and financial resources to address integrated waste management planning. | | |
| Objective 3: Improve waste management record keeping. | | Goal 5: Waste information system |
| **Goal 3: Minimum Service Standards and Cost Recovery** | | |
| Objective 1: Establish minimum service standard to improve waste collection. | Waste management enforcement. | Goal 8: Monitoring compliance, enforcement and remediation |
| Objective 2: Cost recovery of waste management services. | | |
| **Goal 4: Waste Management Infrastructure** | | |
| Objective 1: Improve solid waste disposal infrastructure. | Capacity building | Goal 7: Education and awareness |

| MORETELE LOCAL MUNICIPALITY IWMP PROPOSED OBJECTIVES | BOJANALA PLATINUM DISTRICT MUNICIPALITY IWMP | NORTH WEST PROVINCIAL INTEGRATED WASTE MANAGEMENT PLAN GOALS (2016) |
|---|---|---|
| **Goal 5: Education and Awareness** | | |
| Objective 1: Ensure improvement in information dissemination for effective management of the waste management function | Awareness – raise awareness regarding waste management to 50% in the district. | Goal 1: Institutional and planning matters |
| Objective 2: Build capacity within Waste Management Department | | |
| Objective 3: Appoint public awareness task force to implement waste awareness programmes | Waste management enforcement. Awareness – raise awareness regarding waste management to 50% in the district. | Goal 7: Education and awareness |
| Objective 4: Waste management training courses for municipal staff members | Capacity building – waste management training courses with IWMSA & training on SAWIS. | |
| **Goal 6: Monitoring compliance, enforcement, and remediation** | | |
| Objective 1: Ensure all waste management activities comply with NEM: WA and other relevant regulations | Waste management enforcement. | Goal 8: Monitoring compliance, enforcement and remediation |
| Objective 2: Enforce MLM by-laws & the NEMWA | | |
| **Waste Management information** | | |
| Objective 1: Waste Management information | | |

### 5.2.2 OBJECTIVES, TARGETS & INDICATORS

The objectives, targets and indicators identified in the tables below have been informed and aligned with the NWMS (2020), the IWMP guideline document, the PIWMP and the Bojanala Platinum District IWMP.

#### Goal 1: Waste Minimisation, Re-Use and Recovery

**Table 5-12: Goal 1 objective, targets & indicators**

| OBJECTIVES | TARGETS | INDICATORS |
|---|---|---|
| **Objective 1: Implement separation at source at schools to improve diversion rates of recyclable materials** | Implement separation at source at 100 schools. | Number of schools participating in separation at source programmes. |
| **Objective 2: Increase re-use, recovery, and recycling of waste to ultimately reduce the disposal of waste-to-waste disposal site** | Resuscitation of the Mathibestad buy-back centre | Recycled waste tonnages within local municipality. |
| | Record keeping of waste tonnages recycled. | Operation of buy-back centre |
| | Initiating recycling forums. | Number of recycling forums |
| **Objective 3: Integrate waste pickers in the municipality** | Identify and register 50 waste pickers. | Number of waste pickers integrated into municipal waste management system. |
| **Objective 4: Create a minimisation and diversion plan for C&D waste** | Develop a C&D waste minimisation and diversion plan by 2027. | C&D waste minimisation and diversion plan developed. |

#### Goal 2: Institutional And Planning Matters

**Table 5-13: Goal 2 objectives, targets & indicators**

| OBJECTIVES | TARGETS | INDICATORS |
|---|---|---|
| **Review municipal waste organogram** | Develop a municipal waste management organogram;<br>Ensure sufficient budget available to advertise and fill critical vacancies. | Number of qualified staff appointed in critical vacancies in waste management. |

| OBJECTIVES | TARGETS | INDICATORS |
|---|---|---|
| **Ensure sufficient institutional capacity for both human and financial resources to address integrated waste management planning** | Ensure sufficient budget available for waste management projects. | Budget for waste management projects available. |
| **Development of municipal waste by-laws** | Gazette municipal waste by-laws | Promulgation of municipal by-laws |

## Goal 3: Establish Minimum Service Standards And Cost Recovery

**Table 5-14: Goal 3 objectives, targets & indicators**

| OBJECTIVES | TARGETS | INDICATORS |
|---|---|---|
| **Establish minimum service standard to improve waste collection** | Improve waste collection services from 33.8% (StatsSA, 2022) to 70% of households. | Percentage of households receiving waste collection services. |
| **Cost recovery of waste management services** | Develop waste collection tariffs for businesses and households. | Number of businesses and households waste collection tariff payments received. |

## Goal 4: Waste Management Infrastructure

**Table 5-15: Goal 4 objectives, targets & indicators**

| OBJECTIVES | TARGETS | INDICATORS |
|---|---|---|
| **Improve solid waste management infrastructure through identification of facilities that need to be closed & rehabilitated** | Decommissioning and rehabilitation of the Ga-Motla disposal site | Ga-Motla disposal site decommissioned and rehabilitated |
| **Licencing and development of a new Waste Disposal Facility** | Finalise environmental studies and apply for a waste management licence for the new Makapanstad WDF | Environmental studies finalised and waste management licence for Makapanstad WDF issued. |
| | Construction of the Makapanstad WDF | Makapanstad WDF construction commenced. |

### Goal 5: Awareness and Education

**Table 5-16: Goal 5 objectives, targets & indicators**

| OBJECTIVES | TARGETS | INDICATORS |
|---|---|---|
| **Increased waste awareness initiatives** | Conduct one monthly clean-up campaign. | Number of clean-up campaigns conducted. |
| | Conduct waste awareness workshops four times per year. | Number of waste awareness workshops conducted. |
| **Waste management training courses for municipal officials** | Undertake waste management training courses once per year for municipal officials. | Number of waste management training courses attended. |
| **Sharing of information with the public on waste minimisation via municipal platforms and social media platforms** | Waste information shared with members of public. | Number of people engaged via the municipal website and social media platforms. |

### Goal 6: Monitoring compliance, enforcement, and remediation

**Table 5-17: Goal 6 objectives, targets & indicators**

| OBJECTIVES | TARGETS | INDICATORS |
|---|---|---|
| **Ensure all waste management activities comply with NEM:WA and other relevant regulations** | All waste management facilities to comply with authorisation conditions. | Number of compliance audits conducted. |
| **Enforce MLM by-laws** | Collaboration with local law enforcement to assist with enforcement of by-laws. | Number of enforcement actions taken. |

### Goal 7: Waste Management information

**Table 5-18: Goal 7 objectives, targets & indicators**

| OBJECTIVES | TARGETS | INDICATORS |
|---|---|---|
| | Record keeping of waste disposal tonnages. | Records of tonnages disposed of. |

| | | |
|---|---|---|
| **Develop waste management information database** | Reporting of monthly tonnages by formal and informal recyclers. | Records of tonnages by formal and informal recyclers. |

# 6 IDENTIFICATION, EVALUATION AND SELECTION OF ALTERNATIVES

Table 6-1 identifies and evaluates different alternatives (approaches) that can be employed by the Municipality to achieve the strategic targets of the desired end state. Furthermore, the implications of a lack of action on the strategic targets are also discussed.

**Table 6-1:Preferred alternatives for the MLM**

| OBJECTIVE | TARGETS | INDICATOR | PREFERRED ALTERNATIVE |
|---|---|---|---|
| **Goal 1: Waste Minimisation, Re-Use and Recovery** | | | |
| **Objective 1: Implement separation at source at schools to improve diversion rates of recyclable materials** | Implement separation at source at 100 schools | Number of schools participating in separation at source programmes | Implement separation at source at municipal offices and building |
| **Objective 2: Increase re-use, recovery, and recycling of waste to ultimately reduce the disposal of waste-to-waste disposal site** | Resuscitation of the Mathibestad buy-back centre | Operation of buy-back centre | Secure funding for the development of a new buy-back centre |
| | Record keeping of waste tonnages recycled | Recycled waste tonnages within local municipality | Develop a system for accurate record keeping assisting with waste management record keeping. |
| | Initiating recycling forums | Number of recycling forums | Partner with local businesses and organisations to establish recycling forums |
| **Objective 3: Integrate waste pickers in the municipality** | Identify and register 50 waste pickers | Number of waste pickers integrated into municipal waste management system | Conduct municipal wide ground truthing to identify all waste pickers and informal recyclers in the MLM and register identified waste pickers on a formal municipal record register |

| OBJECTIVE | TARGETS | INDICATOR | PREFERRED ALTERNATIVE |
|---|---|---|---|
| **Objective 4: Create a minimisation and diversion plan for C&D waste** | Develop a C&D waste minimisation and diversion plan by 2027 | C&D waste minimisation and diversion plan developed | Initiate awareness programmes focussing on C&D waste to educate the public on the benefits of re-using C&D waste |
| **Goal 2: Institutional And Planning Matters** | | | |
| **Review municipal waste organogram** | Develop a municipal waste management organogram and ensure sufficient budget is available to advertise and fill critical vacancies | Number of qualified staff appointed in critical vacancies in waste management | N/A |
| **Ensure sufficient institutional capacity for both human and financial resources to address integrated waste management planning** | Ensure sufficient budget is available for waste management projects | Budget for waste management projects available | Apply for funding to assist with future waste management related projects |
| **Goal 3: Establish Minimum Service Standards and Cost Recovery** | | | |
| **Establish minimum service standard to improve waste collection** | Improve waste collection services from 33.8% to 70% of households | Percentage of households receiving waste collection services | Apply for funding to procure municipal waste fleet to reduce reliability on external service providers for waste management collection services |
| **Cost recovery of waste management services** | Develop waste collection tariffs for businesses and households | Number of businesses and households waste collection tariff payments received | Implement a buy-a-bag system to recover costs from business. The bags are to be collected by service providers whenever doing collection rounds. |
| **Goal 4: Waste Management Infrastructure** | | | |

| OBJECTIVE | TARGETS | INDICATOR | PREFERRED ALTERNATIVE |
|---|---|---|---|
| **Improve solid waste management infrastructure through identification of facilities that need to be closed & rehabilitated** | Decommissioning and rehabilitation of the Ga-Motla disposal site | Ga-Motla disposal site decommissioned and rehabilitated | N/A |
| **Licencing and development of a new Waste Disposal Facility** | Finalise environmental studies and apply for a waste management licence for the new Makapanstad WDF | Environmental studies finalised, and waste management licence for Makapanstad WDF issued | N/A |
| | Construction of the Makapanstad WDF | Makapanstad WDF construction commenced | Finalise environmental studies for the development of the new Makapanstad WDF |
| **Goal 5: Awareness and Education** | | | |
| **Increased waste awareness initiatives** | Conduct one monthly clean-up campaign | Number of clean-up campaigns conducted | Partner with local schools to conduct clean-up campaigns in the area surrounding the schools |
| | Conduct waste awareness workshops four times per year for members of the public | Number of waste awareness workshops conducted for members of the public | N/A |
| **Waste management training courses for municipal officials** | Undertake waste management training courses twice per year for municipal officials | Number of waste management training courses attended | Conduct waste management best practice workshops for municipal officials twice per year |
| **Sharing of information with the public on waste minimisation via municipal platforms and social media platforms.** | Waste information shared with members of the public | Number of people engaged via the municipal website and social media platforms | Distribute waste management awareness information/posters via social media to different municipal wards via ward councillors |
| **Goal 6: Compliance, Enforcement and remediation** | | | |

| OBJECTIVE | TARGETS | INDICATOR | PREFERRED ALTERNATIVE |
|---|---|---|---|
| **Ensure all waste management activities comply with NEM:WA and other relevant regulations** | All waste management facilities to comply with authorisation conditions | Number of compliance audits conducted | Conduct internal audits/inspections at all waste management facilities to ensure no environmental degradation occurs |
| **Enforce MLM by-laws** | Collaboration with local law enforcement to assist with enforcement of by-laws | Number of enforcement actions taken | Appoint personnel to enforce municipal waste by-laws, i.e. environmental inspectors/officers |
| **Goal 7: Waste Management information** | | | |
| **Develop waste management information database** | Record keeping of waste disposal tonnages | Records of tonnages disposed of | Conduct training for personnel responsible for record keeping purposes |
| | Reporting of monthly tonnages by formal and informal recyclers | Records of tonnages reported by formal and informal recyclers | N/A |

# 7 IMPLEMENTATION INSTRUMENTS

Following the identification of gaps and needs based on the status quo of waste management and the establishment of goals, objectives and targets with the identification of the preferred alternatives for the MLM. Measures on how to implement the identified alternatives must be established for the MLM.

Implementation instruments refer to the practical tools and methods used to carry out and achieve the strategic goals and targets outlined in the preferred alternatives section of the IWMP. These tools include partnerships with relevant stakeholders and organisations, the creation of legislative frameworks, the development of economic strategies, and the establishment of financial plans. Each instrument is essential in transforming the IWMP from a conceptual framework into real-world actions. Collaboration with stakeholders ensures these instruments are customised to the unique needs and circumstances of the municipality, promoting efficient and sustainable waste management practices. The following implementation instruments are to be used as part of the implementation process of the IWMP in the MLM:

- Partnerships
- Legislative Instruments
- Funding Mechanisms
- Implementation Plan.

## 7.1 PARTNERSHIPS

The formation of partnerships as a strategy for delivering the services and infrastructure needed for Integrated Waste Management should be explored during IWMP development. Establishing partnerships is acknowledged as a key strategy for providing essential services and facilities required for Integrated Waste Management Planning. The costs and demands of maintaining a sustainable municipal waste management system are substantial, making it necessary for various stakeholders to support and promote effective waste management practices amongst community members. To achieve the goals and objectives set out, various partnerships must be considered, this includes:

- Public-public partnerships
- Public-private partnerships
- Community Based Organisations (CBOs)/Non-Governmental Organisations (NGOs).

### 7.1.1 PUBLIC-PUBLIC PARTNERSHIPS

Public-public partnerships entail collaborations between different public entities, such as government agencies, local, district or provincial authorities, or public institutions. Regarding the management of waste, this type of partnership entails cooperation between various public entities at different levels, including local,

district, provincial and national, to address waste-related challenges and activities collectively. The goal of Public-Public Partnerships is to combine resources, knowledge, and expertise to improve the efficiency and effectiveness of waste management efforts. These partnerships often lead to the creation of comprehensive, coordinated strategies for waste reduction, recycling, and disposal, ensuring a unified response to community needs and environmental issues. Support and collaboration can be achieved through existing relationships with public enterprises, including:

- North West Department of Economic Development, Environment, Conservation and Tourism – compliance with environmental legislation and EIA regulations, licencing of waste management facilities and activities.
- Department of Water and Sanitation – compliance with regulations and legislation related to water use activities, including waste-water treatment facilities, water courses and catchment management areas.
- Department of Forestry, Fisheries and the Environment – assist with funding where the province and district cannot provide inputs. Implementation of Extended Public Works Programme (EPWP) for waste related activities.
- Environmental Inspectors - enforcement and compliance of municipal waste by-laws.
- South African Police Service – enforcement and compliance of municipal waste by-laws.
- National Prosecuting Authority – Prosecuting offenders of environmental legislation regarding pollution, littering and illegal dumping.

### 7.1.2 PUBLIC-PRIVATE PARTNERSHIPS (PPP)

A Public-Private Partnership (PPP) involves cooperation between a public-sector entity and a private company/organisation. Under this arrangement, the private entity takes on financial risks linked to the project, including capital expenses, facility design, construction, and operational costs. The public entity usually maintains ownership of the land, while the private sector funds and oversees the development of fixed assets, which eventually become public property. This partnership facilitates shared responsibilities and resources, combining the strengths of both sectors to ensure the project's success.

Entering into partnerships with the private sector (small community based SMMEs & PROs) is essential for the successful execution of waste minimisation, re-use and recycling initiatives. A handful of businesses in the MLM participate in recycling or recovering different waste streams.

The following initiatives can be implemented for public-private partnerships:

- PRO and EPR Schemes- Producer Responsibility Organisations (PROs) and Extended Producer Responsibility (EPR) schemes are essential in assisting the public sector with waste management by transferring the responsibility from municipalities to producers and manufacturers. These programs help reduce the financial and operational pressures on the public sector by

making producers accountable. By fostering sustainable practices, investing in infrastructure, and promoting waste reduction, these initiatives play a crucial role in improving waste management efficiency. Examples of PROs that can participate include:

  - PET Recycling Company (PETCO)
  - The Glass Recycling Company (TGRC)
  - South African Vinyl Association (SAVA)
  - Ardach Glass Packaging- Africa (formerly known as Consol Glass)
  - SAPPI (South African Pulp and Paper Industries)
  - POLYCO (The Polyolefin Responsibility Organisation)
  - Expanded Polystyrene Association of Southern Africa (EPSASA)
- Local SMMEs require increased empowerment to ensure the establishment and maintenance of effective (recycling) systems.
- Different recycling organisations also exist and include:
  - The National Recycling Forum
  - Glass Recycling Association of South Africa
  - Paper Recycling Association of South Africa
  - National Oil Recycling Association of South Africa
  - The Rose Foundation.

### 7.1.3 COMMUNITY BASED ORGANISATIONS (CBOS)/NON-GOVERNMENTAL ORGANISATIONS (NGOS)

This collaboration entails active participation from community members who receive the service, working together with the public entity that delivers the service. A typical example of waste management is the engagement of community-based contractors in recycling initiatives, which may involve tasks like collecting recyclables that have been sorted at the source. There are potential opportunities for collaboration on community-based waste management programs with the following organisations:

- South African Local Government Association (SALGA):
- SALGA provide support across multiple disciplines, including the waste management sector. The MLM can engage with SALGA to partake in and derive benefits from their extensive programs.
- Institute for Waste Management of Southern Africa:
- The MLM can collaborate with IWMSA by participating in various training programs. By joining IWMSA interest groups like Collection and Transport, Waste Disposal Site and Waste Treatment, and Waste Minimization and Recycling, MLM can stay updated on industry developments and actively contribute to progress in the field.

## 7.2 LEGISLATIVE INSTRUMENTS: DEVELOPMENT AND ENFORCEMENT OF BY-LAWS

The development and implementation of IWMPs depend on the establishment of suitable municipal legislation. Municipalities have the power to enact by-laws that

support national and provincial regulations. Enforcing these by-laws is crucial and can be achieved through municipal mechanisms, such as Waste Management Control Officers, Environmental Officers, Peace Officers, or other designated authorities within the municipality, including local law enforcement agencies and ward councillors. It is recommended that the MLM continuously enforce and review the municipal by-laws to address the following challenges experienced with waste management:

- Illegal dumping and littering
- Burning of waste
- Provision of waste receptacles
- Waste disposal tariffs
- Management of industrial & health care risk waste
- Waste collection and transportation.

## 7.3 FUNDING MECHANISMS

A key prerequisite for the effective implementation of IWMPs is securing adequate funding to support the plan. Funding will be needed for various purposes, including building municipal capacity, developing and enforcing by-laws, creating and executing the IWMP, covering the development, operation, and maintenance costs of waste management facilities, and designing and commissioning new waste management facilities.

The MLM can obtain funding from various sources, such as Equitable Share Funding, grant allocations, revenue generated from rates and tariffs, and income from fines. For one-time projects, possible funding sources include the Municipal Infrastructure Grant (MIG) for infrastructure-related initiatives, as well as donor funding to support specific aspects of waste service delivery.

To ensure sustainable revenue sources, the MLM must conduct a full cost accounting to accurately determine the expenses involved in delivering waste management services. This will enable the MLM to set tariffs that reflect the true cost of providing these services and generate accurate revenue.

Taking into consideration the gaps and needs analysis, funding will be required for the following activities:

- Waste minimisation, recycling and re-use initiatives
- Waste management facilities
- Waste education and public awareness
- Waste management training of municipal officials and councillors
- Strategic planning.

## 7.4 IMPLEMENTATION PLAN

The implementation plan in the table below addresses the seven goals of the MLM IWMP; each goal outlines the following:

- Objective
- Target
- Indicators
- Responsible department
- Timeframe
- Financial resources required.

**Table 7-1: Implementation Plan**

| OBJECTIVE | TARGETS | INDICATOR | RESPONSIBLE DEPARTMENT | TIMEFRAME | BUDGET |
|---|---|---|---|---|---|
| **Goal 1: Waste Minimisation, Re-Use and Recovery** | | | | | |
| **Objective 1: Implement separation at source at schools to improve diversion rates of recyclable materials** | Implement separation at source at 100 schools | Number of schools participating in separation at source programmes | MLM- Environment & Waste Department<br>Bojanala District Municipality | Year 2 | R5 000 per school |
| **Objective 2: Increase re-use, recovery, and recycling of waste to ultimately reduce the disposal of waste-to-waste disposal site** | Resuscitation of the Mathibestad buy-back centre | Operation of buy-back centre | MLM- Environment & Waste Department<br>Bojanala District Municipality;<br>PROs | Year 3 | R2 000 000 |
| | Record keeping of waste tonnages recycled | Recycled waste tonnages within local municipality | MLM - Environment & Waste Department | 1 year | Nil; to be undertaken internally. |

| OBJECTIVE | TARGETS | INDICATOR | RESPONSIBLE DEPARTMENT | TIMEFRAME | BUDGET |
|---|---|---|---|---|---|
| | Initiate two (2) recycling forums. | Number of recycling forums initiated | MLM- Environment & Waste Department<br>Bojanala District Municipality;<br>Local Government Support - DFFE | Year 1 - year 5 | R100 000 per forum |
| **Objective 3: Integrate waste pickers in the municipality** | Identify and register 50 waste pickers | Number of waste pickers integrated into municipal waste management system | MLM- Environment & Waste Department | Year 2 | R100 000 |
| **Objective 4: Create a minimisation and diversion plan for C&D waste** | Develop a C&D waste minimisation and diversion plan by 2027 | C&D waste minimisation and diversion plan developed | MLM- Environment & Waste Department | Year 5 | Nil; to be undertaken internally |
| **Goal 2: Institutional And Planning Matters** | | | | | |
| **Review municipal waste organogram** | Develop a municipal waste management organogram | Number of qualified staff appointed in critical vacancies in waste management | MLM- Human Resources Department | Year 1 | R5 000 |
| | Ensure sufficient budget available to advertise and fill critical vacancies in | | | | Nil; to be undertaken internally |
| **Ensure sufficient institutional capacity for both human and financial resources to address integrated waste management planning** | Ensure sufficient budget available for waste management projects | Budget for waste management projects available | MLM- Human Resources Department;<br>MLM- Finance Department | Year 5 | Nil; to be undertaken internally |
| **Goal 3: Establish Minimum Service Standards and Cost Recovery** | | | | | |
| **Establish minimum service standard to improve waste collection** | Improve waste collection services to 70% of households | Percentage of households receiving waste collection services | MLM- Environment & Waste Department | Year 3 | R20 000 000 |

| OBJECTIVE | TARGETS | INDICATOR | RESPONSIBLE DEPARTMENT | TIMEFRAME | BUDGET |
|---|---|---|---|---|---|
| **Cost recovery of waste management services** | Develop waste collection tariffs for businesses and households | Number of businesses and households waste collection tariff payments received | MLM- Environment & Waste Department; MLM- Finance Department | Year 5 | Nil; to be undertaken internally |
| **Goal 4: Waste Management Infrastructure** | | | | | |
| **Improve solid waste management infrastructure through identification of facilities that need to be closed & rehabilitated** | Decommissioning and rehabilitation of the Ga-Motla disposal site | Ga-Motla disposal site decommissioned and rehabilitated | MLM- Environment & Waste Department | Year 3 | R20 000 000 |
| **Licencing and development of a new Waste Disposal Facility;** | Finalise environmental studies and apply for a waste management licence for the new Makapanstad WDF | Environmental studies finalised and waste management licence for Makapanstad WDF issued | MLM- Environment & Waste Department; North West Department of Economic Development, Environment, Conservation and Tourism | Year 3 | R20 000 000 |
| | Construction of the Makapanstad WDF | Makapanstad WDF construction commenced | | Year 5 | |
| **Goal 5: Awareness and Education** | | | | | |
| **Increased waste awareness initiatives** | Conduct one clean-up campaign per month | Number of clean-up campaigns conducted | MLM- Environment & Waste Department | Monthly (1-5 years) | R5 000 per clean-up campaign |
| | Conduct quarterly waste awareness workshops (four times per year). | Number of waste awareness workshops conducted | | Quarterly (1-5 years) | R10 000 per workshop |
| **Waste management training courses for municipal officials** | Undertake waste management training courses annually for municipal officials. | Number of waste management training courses attended | MLM- Human Resources Department | Annually (1-5 years) | R5 000 per person per annum. |

| OBJECTIVE | TARGETS | INDICATOR | RESPONSIBLE DEPARTMENT | TIMEFRAME | BUDGET |
|---|---|---|---|---|---|
| **Sharing of information with the public on waste minimisation via municipal platforms and social media platforms.** | Waste information shared with members of public | Number of people engaged via the municipal website and social media platforms | MLM - Marketing/ Public Relations Department | Year 3 | Nil; to be undertaken internally |
| **Goal 6: Compliance, Enforcement and remediation** | | | | | |
| **Ensure all waste management activities comply with NEM:WA and other relevant regulations** | All waste management facilities to comply with authorisation conditions | Number of compliance audits conducted | MLM- Environment & Waste Department | Year 3 | R15 000 per compliance audit |
| **Enforce MLM by-laws** | Collaboration with local law enforcement to assist with enforcement of by-laws | Number of enforcement actions taken | MLM- Local Law Enforcement | Year 3 | Nil; to be undertaken internally |
| **Goal 7: Waste Management information** | | | | | |
| **Develop waste management information database** | Record keeping of waste disposal tonnages | Records of tonnages disposed of | MLM- Environment & Waste Department | Year 3 | Nil; to be undertaken internally |
| | Reporting of monthly tonnages by formal and informal recyclers | Records of tonnages by formal and informal recyclers | | Year 3 | Nil; to be undertaken internally |

# 8 REPORTING ON IMPLEMENTATION, MONITORING AND REVIEW

## 8.1 REPORTING

According to Section 13 (3) of the Waste Act, annual performance reports prepared under Section 46 of the Municipal Systems Act must include details about the implementation of the municipal IWMP, covering the information specified in paragraphs (a) to (j) of subsection (2) as it pertains to the municipality's performance. Section 13 also specifically requires that progress reports must consider implementation of the IWMP, including:

- 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;
- in the case of a province, the extent to which municipalities comply with the plan
- in the event of any non-compliance with the plan, the reasons for such noncompliance
- any other requirements as may be prescribed by the Minister.

## 8.2 MONITORING AND REVIEW

The designated WMO is responsible for preparing the performance reports on the implementation of the IWMP on an annual basis.

The Annual Performance Report must summarise the municipality's progress towards meeting the goals, targets and objectives outlined in the Implementation Plan of the IWMP. More specifically, the Report should comprise of the following:

**Strategic issues:** The MLM's performance and progress in meeting the short, medium and long-term goals, objectives and targets;

**Financial issues:** Reporting on budget forecasting, obtaining sufficient budgets and budgeting constraints with respect to both existing waste management operations and the implementation of this IWMP;

**IWMP amendments:** Amendments to the IWMP necessitated by the outcomes of feasibility studies, financial constraints, etc.

**Communication:** Keeping councillors, key stakeholders and the residents informed on the progress in meeting the IWMP.

## 8.3 REVISION OF THE IWMP

As this IWMP forms part of the Integrated Development Plan required in terms of Chapter 5 of the Municipal Systems Act, this IWMP must be comprehensively reviewed after five years. Therefore, the next comprehensive revision of the IWMP should occur in 2029.

The comprehensive review will update the status quo, evaluate overall progress against the goals, objectives and targets outlined in this IWMP, review gaps and needs and reformulate the goals and objectives as required to continue to improve waste management services in the MLM.

# 9 CONCLUSION

This report serves to analyse and quantify all aspects related to the current waste management services and practices carried out by and in the MLM with the view of using this information as a basis for future planning. It includes an evaluation of the national, provincial and local waste management policies and strategies, a description of the population and development profiles of the Municipality, an assessment of the quantities and types of waste that is generated in the Municipality, a description of waste management services provided by the Municipality in terms of minimisation, recycling and recovery, collection, transport, transfer (where required), treatment and disposal of waste and a description of private waste management activities undertaken in the MLM's jurisdiction. The identified gaps and needs for the Municipality are discussed, and respective overarching goals were formulated that address the needs identified.

The goals provide a guideline for the Municipality to improve their waste minimisation, deliver more effective and sustainable waste services, become more legally compliant, enforce waste management legislation and increase waste awareness within the MLM. This phase of the IWMP development comprised the identification, selection, and evaluation of the preferred alternatives to be implemented in the MLM to achieve the goals and targets of the Desired End State phase of the IWMP.

Alternative measures were identified to be adopted and implemented by the MLM to improve their current waste management activities. The selected objectives will enable the MLM to align with the municipal IDP and the goals of the 2020 National Waste Management Strategy and ultimately contribute to a more effective and sustainable waste management system within the Municipality. The implementation instruments identified partnerships, legislative instruments and fiscal instruments which must be utilised to achieve the set goals of the IWMP. The implementation plan details how the set targets of the MLM will be achieved, highlighting the resources required to achieve the targets within the set timeframe for the MLM. According to Section 13 (3) of the Waste Act, annual performance reports prepared under Section 46 of the Municipal Systems Act must include details about the implementation of the municipal IWMP, covering the information specified in paragraphs (a) to (j) of subsection (2) as it pertains to the Municipality's performance.

A comprehensive review will be required every five (5) years to update the status quo and evaluate overall progress against the goals, objectives and targets outlined in this IWMP to continue to improve waste management services in the MLM.

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