



Mopani District Municipality

Integrated Waste Management Plan (IWMP)

June 2023



Prepared by: Mamadi and Company SA (Pty) Ltd




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REPORT STATUS	DRAFT		FINAL	
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EXECUTIVE SUMMARY

Mopani District Municipality (MDM) is one of the Five district municipalities within Limpopo Province. The district municipality consists of five Local Municipalities (LMs) namely: Greater Tzaneen LM, Greater Giyani LM, Greater Letaba LM, Maruleng LM and Ba-Phalaborwa LM. According to Stats SA 2011, the district Municipality has a total population of 1 092 07. The main economic sectors include mining, trade, community services finance, transport and agriculture. Core functions of waste management lie with LMs, however; the district municipality's primary responsibility is to offer technical support to LMs as well as assist with regional planning and coordination of waste management activities, hence the district is developing of the plan.

National Environmental Management: Waste Act 2008 (Act No. 59 of 2008) (NEM: WA), requires that all spheres of government responsible for waste management develop Integrated Waste Management Plan (IWMP) and must submit the plan to the Member of Executive Council (MEC) for endorsement. The endorsed plan must be incorporate into relevant municipal plans such the (Integrated Development Plans (IDP). To fulfil this requirement, MDM has appointed Mamadi and Company (Pty) Ltd (Mamadi) to assist in developing the IWMP. The plan will help the district in improving the current waste management practices which mainly focuses on waste collection and disposal to a more improved waste management practice which promotes green economy and sustainable development. The overall objective of an IWMP is to ensure that there is integration and optimisation of general waste, in order to maximize efficiency and minimise the associated environmental impacts while simultaneously improving the quality of life of the people within the district.

The IWMP is developed in line Department of Environment, Forestry and Fisheries (DEFF) guidelines for the development of IWMPs. The IWMP is also aligned the National Waste Management Strategy (NWMS) as well as the Provincial IWMP. The development of an IWMP included a situation analysis which covered legislative framework, demographics as well as the current waste management systems such as waste collection, recycling, waste disposal. Information was gathered by reviewing existing waste management documents, ground truthing as well as by conducting interviews. Situation analysis informed the gaps and needs assessment, and the desired end state. A consultative process was followed throughout the development of the plan and stakeholders were provided with an opportunity to comment at on the plan. Stakeholder engagements were undertaken in all LMs. Eight goals together their objectives and targets have been set to assist the district close the gaps that were identified during situational analysis. The plan will be due for review after five years, however; the district has to annually report on the implementation of the plan.

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ABBREVIATIONS

Abbreviation Description	
BA	Basic Assessment
CA	Competent Authority
CBD	Central Business District
CBO	Community Based Organisation
CSSD	Central Sterile Services Department
CMIP	Consolidated Municipal Infrastructure Programme
DBSA	Development Bank of South Africa
DEA	Department of Environmental Affairs
DFFE	Department of Forestry Fisheries and the Environment
DIWMP	District Integrated Waste Management Plan
DM	District Municipality
DWAF	Department of Water Affairs & Forestry
DWCS	Domestic Waste Collections Standards
ECA	Environment Conservation Act
EHP	Environmental Health Practitioners
EIA	Environmental Impact Assessment
EMI	Environmental Management Inspector
EPWP	Extended Public Works Programme
FBRR	Free Basic Refuse Removal
HCRW	Health Care Risk Waste
I & APs	Interested and Affected Parties
IDP	Integrated Development Plan

Abbreviation Description	
IWMP	Integrated Waste Management Plan
LEDET	Limpopo Department of Economic Development, Environment and Tourism
LM	Local Municipality
MDM	Mopani District Municipality
MEC	Member of Executive Council
MIG	Municipal Infrastructure Grant
MIWMP	Municipal Integrated Waste Management Plan
MSA	Municipal Structures Act (Act 117 of 1998)
MSIP	Municipal Systems Improvement Programme
NDWCS	National Domestic Waste Collections Standards
NEM: AQA	National Environmental Management Air Quality Act (Act 39 of 2004)
NEM: WA	National Environmental Management Act (Act 59 of 2008)
NEMA	National Environmental Management Act (Act No 107 of 1998)
NGO	Non-Government Organisation
NWA	National Water Act (Act No 36 of 1998)
NWMS	National Waste Management Strategy
PIWMP	Limpopo Provincial Integrated Waste Management Plan
PPE	Personnel Protective Equipment
PSC	Project Steering Committee
RSA	Republic of South Africa
SA SoER	South African State of Environment Report
SAWIC	South African Waste Information Centre
SAWIS	South African Information System

Abbreviation Description	
SEMA	Specific Environmental Management Act
WML	Waste Management License
WMO	Waste Management Officer

DEFINITIONS

Word	Definition
Building and Demolition Waste	Means waste, excluding hazardous waste, produced during the construction, alteration, repair, or demolition of any structure, and includes rubble, earth, rock and wood displaced during that construction, alteration, repair or demolition.
Business Waste	Means waste that emanates from premises that are used wholly or mainly for commercial, retail, wholesale, entertainment, or government administration purposes.
By-laws	Regulations made by a local authority.
Circular Economy	Circular Economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible.
Commence	Means the start of any physical activity, including site preparation or any other activity on the site in furtherance of a waste management activity but does not include any activity required for investigation or feasibility study purposes as long as such investigation or feasibility study does not constitute a waste management activity.
Competent Authority	The Competent Authority (CA) is defined in terms of section 1 of NEMA as the organ of state charged by this Act with evaluating the environmental impact of that activity and, where appropriate, with granting or refusing an environmental authorisation in respect of that activity. As such the CA is the body or entity that fulfils the administrative function of registering, considering, and approving (where applicable) all documentation related to the assessment.
Contaminate	In relation to Part 8 of Chapter 4, means the presence in or under any land, site, buildings or structures of a substance or micro-organism above the concentration that is normally present in or under that land, which substance or micro-organism directly or indirectly affects or may affect the quality of soil or the environment adversely.
Desired End State	Entails identifying priorities and goals that a municipality wishes to attain with regards to waste management.
Disposal	Means the burial, deposit, discharge, abandoning, dumping, placing or release of any waste into, or onto, any land.

Word	Definition
Domestic Waste	Means waste, excluding hazardous waste, that emanates from premises that are used wholly or mainly for residential, educational, health care, sport or recreation purposes.
Environment	The surroundings in which humans exist and includes the land, water and atmosphere. In addition, it includes the interrelationships, combinations, properties and conditions of all organisms that exist within the surroundings.
Environment Conservation Act	Means the Environment Conservation Act, 1989 (Act No. 73 of 1989).
Environmental Authorisation	Authorisation by a competent authority of a listed activity or specified activity, in terms of this NEMA, and includes a similar authorisation contemplated in a. Specific Environmental Management Act (SEMA).
Environmental Impact Assessment	Environmental Impact Assessment in planning law, in some circumstances where a development is likely to have significant effects on the environment, a necessary examination of environmental issues before planning can be granted.
Fleet	A number of vehicles or aircraft operating together or under the same ownership.
General Waste	Means waste that does not pose an immediate hazard or threat to health or to the environment, and includes— (a) domestic waste; (b) building and demolition waste; (c) business waste; and (d) inert waste.
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.
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;
Impacts	Effects on natural and human systems.
Industrial symbiosis.	Is a free facilitation service that promotes the exchange of residual resources of one company with another company that can make use of it.

Word	Definition
Industry	Includes commercial activities, commercial agricultural activities, mining activities and the operation of power stations.
Infrastructure:	The basic equipment, utilities, productive enterprises, installations and services essential for the development, operation and growth of an organisation, city or nation.
Integrated Waste Management Plan	Is a statutory requirement of the NEM: WA that has been promulgated and came into effect on 1 July 2009, with the goal to transform the current methodology of waste management, i.e. collection and disposal, to a sustainable practice focusing on waste avoidance and environmental sustainability. The IWMP is a critical sector plan to form part of the Integrated Development Plan.
Interested and Affected Parties	Interested and Affected Party for the purposes of Chapter 5 of the NEMA and in relation to the assessment of the environmental impact of a listed activity or related activity, means an interested and affected party contemplated in Section 24(4)(a)(v) of the NEMA and which includes – a) any person, group of persons or organisation interested in or affected by such operation or activity; and b) any organ of state that may have jurisdiction over any aspect of the operation or activity.
Landfill site	This 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.
Leachate	Leachate is the liquid that drains or 'leaches' from a landfill. It varies widely in composition regarding the age of the landfill and the type of waste that it contains. It usually contains both dissolved and suspended material.
Limpopo Department of Economic Development Environment and Tourism	Means the Provincial Department or component responsible for Environmental Management.
Mamadi & Company (Pty) Ltd (Mamadi)	Mamadi and Company SA Pty (Ltd) is a diversified company comprising of multiple operating divisions that provide cutting edge services and products within the various industries. This is the company that has been appointed by Mopani District Municipality to develop an IWMP.

Word	Definition
MEC	Means the Member of the Executive Council of a province who is responsible for waste management in the province.
minimisation	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.
Minimisation	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.
Mitigation	A human intervention to reduce the sources or enhance the sinks of greenhouse gases.
Municipal Systems Act	Means the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000).
Municipality	Means a municipality established in terms of the Local Government: Municipal Structures Act, 1998 (Act No. 117 of 1998).
National Environmental Management Act	Means the National Environmental Management Act, 1998 (Act No. 107 of 1998).
National Environmental Management Waste Act	Is the primary legislation that governs waste management in South Africa.
National Waste Management Strategy	The National Waste Management Strategy (NWMS) is a legislative requirement of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), the “Waste Act”. The purpose of the NWMS is to achieve the objects of the Waste Act. Organs of state and affected persons are obliged to give effect to the NWMS.
Partnerships	An association of two or more people as partners.
Projection	Is a potential future evolution of a quantity or set of quantities, often computed with the aid of a model.
Recovery	Means the controlled extraction of a material or the retrieval of energy from waste to produce a product.

Word	Definition
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.
Recycling	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 articles from the waste stream again for a similar or different purpose without changing the form or properties of the articles.
Risk	The potential of consequences where something of value is at stake and where the outcome is uncertain, recognising the diversity of values. Risk is often represented as a probability of occurrence of hazardous events or trends multiplied by the impacts if these events or trends occur. Risk results from the interaction of vulnerability, exposure, and hazard. In this context, the term <i>risk</i> is used primarily to refer to the risks of climate change impacts.
Stakeholder	A person or an organisation that has a legitimate interest in a project or entity or would be affected by a particular action or policy.
Status Quo	The existing state of affairs, especially regarding social or political issues.
Storage	Means the accumulation of waste in a manner that does not constitute treatment or disposal of that waste.
Treatment	Means any method, technique or process that is designed to— (a) change the physical, biological or chemical character or composition of a waste; or (b) remove, separate, concentrate or recover a hazardous or toxic component of a waste; or (c) 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 substance, whether or not that substance can be reduced, re-used, recycled and recovered— (a) that is surplus, unwanted, rejected, discarded, abandoned or disposed of; (b) which the generator has no further use of for the purposes of production;

Word	Definition
	<p>(c) that must be treated or disposed of; or</p> <p>(d) that is identified as a waste by the Minister by notice in the <i>Gazette</i>, and includes waste generated by the mining, medical or other sector, but—</p> <p>(i) a by-product is not considered waste; and</p> <p>(ii) any portion of waste, once re-used, recycled and recovered, ceases to be Waste.</p>
Waste Disposal Facility	This 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 Activity	<p>Means any activity listed in Schedule 1 or published by notice in the <i>Gazette</i> under section 19, and includes—</p> <p>(a) the importation and exportation of waste;</p> <p>(b) the generation of waste, including the undertaking of any activity or process that is likely to result in the generation of waste;</p> <p>(c) the accumulation and storage of waste;</p> <p>(d) the collection and handling of waste;</p> <p>(e) the reduction, re-use, recycling and recovery of waste;</p> <p>(f) the trading in waste;</p> <p>(g) the transportation of waste;</p> <p>(h) the transfer of waste;</p> <p>(i) the treatment of waste; and</p> <p>(j) the disposal of waste.</p>
Waste Management License	This is a license that is issued by a competent authority which authorises an individual/organisation to commence, undertake or conduct a waste management activity under the waste listed activities.
Waste Management Officer	An individual appointed by a local municipality to coordinate waste management within that municipality. This individual performs a regulatory function overseeing adherence to national norms and standards and achieving the objectives of the Waste Act.
Waste Management Officer	An individual appointed by a local municipality to coordinate waste management within that municipality. This individual performs a regulatory function overseeing adherence to national norms and standards and achieving the objectives of the Waste Act.
Waste Management Services	Means waste collection, treatment, recycling and disposal services.

Word	Definition
Waste Minimisation Programme	This means a programme that is intended to promote the reduced generation and disposal of waste.
Waste Transfer Facility or Station	Means a facility that is used to accumulate and temporarily store waste before it is transported to a recycling, treatment or waste disposal facility.
Waste Treatment Facility	Means any site that is used to accumulate waste for the purpose of storage, recovery, treatment, reprocessing, recycling or sorting of that waste.

1 INTRODUCTION

The Mopani District Municipality (MDM) is situated in the North-eastern part of the Limpopo Province. The district covers a total area of 2 001 100 ha (20 011 km²). MDM consists of five Local Municipalities (LMs) namely: Greater Tzaneen LM, Greater Giyani LM, Greater Letaba LM, Maruleng LM and Ba-Phalaborwa LM. The main economic sectors are mining, trade, community services finance, transport and agriculture. According to Stats SA 2011, the district Municipality has a total population of 1 092 07 with 16 urban areas (towns and townships), 354 villages (rural settlements) and a total of 129 Wards.

In terms of the National Environmental Management: Waste Act 2008 (Act No. 59 of 2008) (NEM: WA), all spheres of government responsible for waste management are expected to develop Integrated Waste Management Plan (IWMP). Municipalities must submit their IWMP to the Member of Executive Council (MEC) for endorsement, the endorsed IWMP must be incorporated into relevant plans. The IWMP is a statutory requirement of the NEM: WA that has been promulgated and came into effect on 1 July 2009. Its goal is to transform the current methodology of waste management, i.e. collection and disposal, to a sustainable practice focusing on waste avoidance and environmental sustainability.

The MDM has the primary responsibility in offering technical support to local municipalities as well as assisting with regional planning and coordination of waste management activities within the district. As a result, MDM has appointed Mamadi and Company SA (Mamadi) to develop MDM's IWMP. The overall objective of an IWMP is to ensure that there is integration and optimisation of general waste, in order to maximize efficiency and minimise the associated environmental impacts while simultaneously improving the quality of life of the people within the district.

The District Municipality (DM) must promote and ensure the implementation of the National Waste Management Strategy (NWMS) as well as the National Norms and Standards, hence the District's Integrated Waste Management Plan (DIWMP) goals must be aligned with the NWMS and Provincial Integrated Waste Management Plan (PIWMP) goals.

This report constitutes the IWMP report for MDM and has been developed in line with the Department of Forestry, Fisheries and the Environment (DFFE) [previously Department of Environmental Affairs' (DEA)] Guidelines for the Development of IWMPs (DEA, 2009).

2 LEGISLATIVE REQUIREMENTS

This section provides a comprehensive list of applicable National and Provincial legislations, policies, and Guidelines concerning management of solid waste within the Municipalities.

An understanding of the applicable legal framework is essential when evaluating options for the management of waste. The latest versions of legislation captured here, and their respective amendments can be downloaded from the webpage of the South African Waste Information Centre (SAWIC: <http://sawic.environment.gov.za/?menu=13>)

The following legal requirements and obligations have bearing on the management of waste within MDM.

Table 2-1: Applicable National Legal Requirements and Obligations

2.1 The Constitution of the Republic of South Africa (Act No. 108 of 1996)

The Constitution of the Republic of South Africa (Act 108 of 1996) is the supreme law of the country and provides the legal foundation for every law developed. Section 24 of the Constitution states that everyone has a right to an environment that is not harmful to their health or well-being and to have the environment protected, for the benefit of present and future generations, through reasonable legislation development and implementation and other measures that prevent pollution and ecological degradation, promote conservation and secure ecologically sustainable development. As such, fundamental right in the Constitution must be taken into consideration during waste management planning.

Constitution provides the legal basis for allocating powers to different spheres of government and is thus relevant to the institutional regulation of integrated pollution and waste management.

The Table 2-2 below provides a summary of duties relevant to the District and Local Municipalities in terms of the Constitution.

Table 2-2: Summary of waste management related powers allocated in terms of the Constitution.

Constitution Competency: The Division in Section 84(1) and (2) of the Municipal Structures Act			
Schedule 5B	Description of Services	District Municipality – Section 84(1)	Local Municipality – Section 84(2)
Cleansing	Provision of service to clean and maintain public streets and public places and the regulation and control thereof	No powers	Full powers in the area of jurisdiction
Refuse removal, refuse dumps and solid waste disposal	Establishment, operation, management, control and regulation of a system for the removal refuse Establishment, operation, management, control and regulation of refuse dumps and solid waste disposal sites	Solid waste disposal sites, insofar as it relates to – (i) the determination of a waste disposal strategy (ii) the regulation of waste disposal (iii) 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	Remaining powers in the area of jurisdiction, including the establishment, operation, management, control and regulation of refuse dumps and of solid waste disposal sites that serve the area of local municipality

Waste management service delivery is a local government function in terms of schedule 5B of the Constitution of Republic of South Africa (Act No.108 of 1996). Furthermore, Section 152 (1) of the Constitution states that one of the responsibilities of local government is to ensure that the provision of services to communities is done in a sustainable manner.

2.2 The National Environmental Management Act (Act 107 of 1998)

The National Environmental Management Act (Act No.107 of 1998) (NEMA) as amended is the framework Act dealing with environmental management in South Africa. It imposes a duty of care on every person who causes environmental degradation to put measures in place to stop, reduce or rectify the pollution as it occurs. The environmental impact assessments that are required for the establishment and management of waste facilities are conducted under this legislation. The national environmental management principles in Section 2 of the Act provide for the sound management of the environment, which includes waste aspects such as the polluter pays, duty of care, proximity, and regionalization and cradle to grave principles. Section 24 of the Act makes provision for the application and enforcement of waste management licenses. The duty

of care and the remediation of environmental damage are addressed in Section 28 of the Act. The principles enunciated in the NEMA need to inform waste management decision making and practices.

A key aspect of NEMA is that it provides a set of environmental management principles including Precautionary, Polluter pays and Prevention and duty of care as well as the Waste Management Hierarchy (Figure 2-1) that apply throughout the Republic to the actions of all organs of state that may significantly affect the environment. In addition, Section 28 of NEMA, affectionately known as the “duty of care” provision, requires persons which are defined in the section to take reasonable measures to combat pollution or degradation of the environment.

The Rio Declaration on Environment and Development (1992) defined the Precautionary Principle as “Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”

² *The polluter pays principle states that “whoever is responsible for damage to the environment should bear the costs associated with it.” It is entrenched in Principle 16 of the Rio Declaration on Environment and Development (1992).*

³ *The Prevention and duty of care principle holds the that environmental protection must be undertaken, first and foremost, in the form of preventive measure* Failure to do so may result in the expropriation of whatever rights in land may be necessary to carry out any rehabilitation or remedial work.

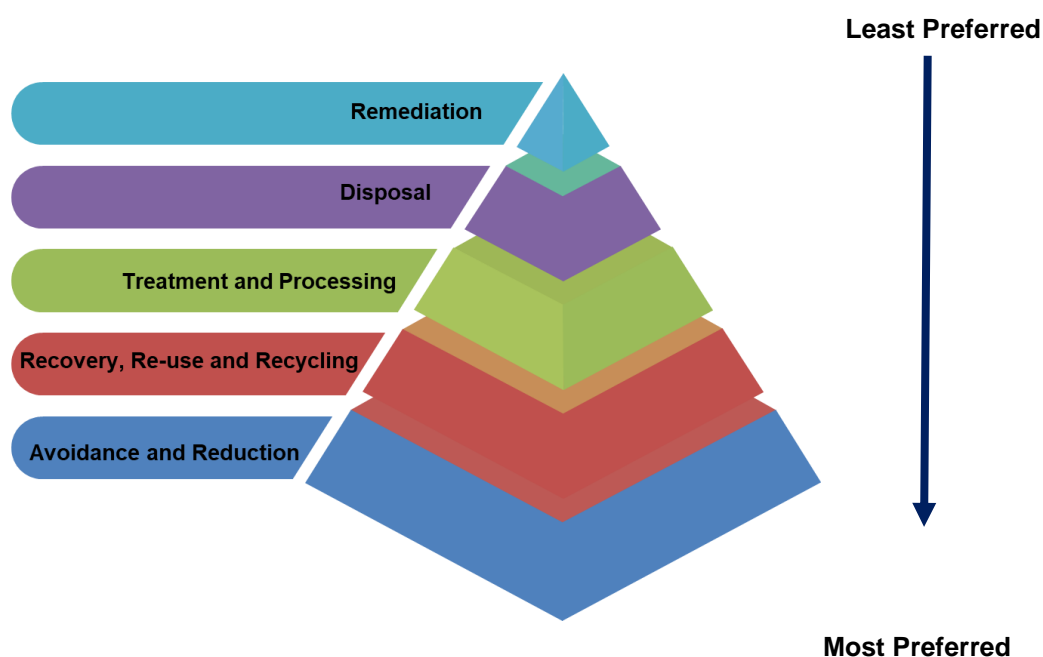


Figure 2-1: Waste Management Hierarchy

2.3 National Environmental Management: Waste Act (Act No. 59 of 2008)

The National Environmental Management Act: Waste Act (Act 59 of 2008) (NEM: WA) as amended regulates waste management in order to protect health and the environment by providing reasonable

measures for the prevention of pollution and ecological degradation, and for securing ecologically sustainable development. This is aimed to provide for institutional arrangements and planning matters; to provide for national norms and standards for regulating the management of waste by all spheres of government; to provide for specific waste management measures; to provide for the licensing and control of waste activities; to provide for the remediation of contaminated land; to provide for the national waste information system; to provide for compliance and enforcement; and to provide for matters connected therewith.

Section 11 of the NEM: WA, as amended, requires provincial departments, responsible for waste management to prepare integrated waste management plans. Section 12 of the Act elaborates on the contents of waste management plans, while Section 13 provides the requirements for the implementation and reporting of IWMPs. The municipal responsibilities as defined by the NEW: WA are summarised in the Table 2-3 below.

Table 2-3: Summary of municipal waste management responsibilities as defined in the NEMWA: Act No. 59 of 2008

Relevant Section	Municipal Responsibilities
Chapter 2 Waste service standards	National Waste Management Strategy, Norms and Standards
(9)	<p>(1) <i>A municipality must exercise its executive authority to deliver waste management services, including waste removal, waste storage and waste disposal services, in a manner that does not conflict with Section 7 or 8 of this Act.</i></p> <p>(2) <i>Each municipality must exercise its executive authority and perform its duty in relation to waste services, including waste collection, waste storage and waste disposal services, by –</i></p> <ul style="list-style-type: none"> <i>a) adhering to all national and provincial norms and standards;</i> <i>b) integrating its waste management plans with its integrated development plans;</i> <i>c) ensuring access for all to such services;</i> <i>d) providing such services at an affordable price, in line with its tariff policy referred to in Chapter 8 of the Municipal Systems Act;</i> <i>e) ensuring sustainable services through effective and efficient management;</i> <i>f) Keeping separate financial statements, including a balance sheet of the services provided.</i> <p>(3) <i>In exercising its executive authority contemplated in subsection (1), a municipality may furthermore, amongst other things, set—</i></p> <ul style="list-style-type: none"> <i>a) local standards for the separation, compacting and storage of solid waste that is collected as part of the municipal service or that is disposed of at a municipal waste disposal facility;</i> <i>b) local standards for the management of solid waste that is disposed of by the</i>

	<p>municipality or at a waste disposal facility owned by the municipality, including requirements in respect of the avoidance and minimisation of the generation of waste and the re-use, recycling and recovery of solid waste;</p> <p>c) local standards in respect of the directing of solid waste that is collected as part of the municipal service or that is disposed of by the municipality or at a municipal waste disposal facility to specific waste treatment and disposal facilities; and</p> <p>d) Local standards in respect of the control of litter.</p> <p>(5) (a) Whenever a municipality intends passing a by-law so as to give effect to subsection (1), it must follow a consultative process provided for in Chapter 4 of the Municipal Systems Act. (b) Paragraph (a) need not be complied with if the by-law is amended in a non-substantive manner.</p>
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Chapter 3 Institutional and Planning Matters

Designation of waste management officers

(10)	<p>(3) 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 waste management officer from its administration to be responsible for co-ordinating matters pertaining to waste management in that municipality.</p>
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Certain organs of state to prepare integrated waste management plans

(11)	<p>(4) (a) Each municipality must—</p> <p style="padding-left: 40px;">(23) Submit its integrated waste management plan to the MEC for approval and (ii) include the approved integrated waste management plan in its integrated development plan contemplated in Chapter 5 of the Municipal Systems Act.</p> <p>(7) (b) A municipality must, before finalising its integrated waste management plan, follow the consultative process contemplated in Section 29 of the Municipal Systems Act, either as a separate process or as part of the consultative process relating to its integrated development plan contemplated in that section.</p>
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Chapter 4 Waste Management Measures

Waste collection services

(23)	<p>(2) Every municipality must, subject to this Act, and as far as is reasonably possible, provide containers or receptacles for the collection of recyclable waste that are accessible to the public.</p>
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2.4 National Environmental Management: Waste Amendment Act (Act No. 26 of 2014)

2.4.1 List of Waste Management Activities that have or are likely to have, a Detrimental Effect on the Environment (GN 921 of 2013)

The listed waste activities under Sections 19 and 20 of Chapter 4 of NEM:WA are published in Government Notice 921 of 2013 as Category A; activities requiring a Basic Assessment (BA) process (applicable to

general waste), Category B; activities requiring a Scoping and Environmental Impact Assessment (EIA) process (applicable to hazardous waste) set out in Section 24(5) of NEMA (Act No. 107 of 1998), as part of the waste management license application contemplated in Section 45 read with Section 20(b) of the Act. The main activities in terms of Categories A and B for which a waste license may be required, fall within the following broad categories:

- Storage of waste;
- Recycling or recovery of waste;
- Treatment of waste;
- Disposal of waste; and
- Construction, expansion or decommissioning of waste facilities.

Commencement of Category C activities requires compliance with relevance standards as determined by the Minister and they include:

- Norms and standards for storage of waste, 2013; or
- Standards for extraction, flaring or recovery of landfill gas, 2013; or
- Standards for scraping or recovery of motor vehicles, 2013.

2.4.2 Regulations Regarding the Exclusion of Waste or a Portion of a Waste Stream from the Definition of Waste (GN R 715 of 2018)

The purpose of these regulations are as follows:

- Prescribe the manner in which a person or a category of persons may apply to the Minister for exclusion of a waste stream or a portion of waste for beneficial use from the definition of waste;
- Exclude permitted uses of a waste stream or a portion of waste from the definition of waste; and
- Promote diversion of waste from landfill disposal to its beneficial use.

2.5 The National Water Act, Act 36 of 1998 (NWA)

The National Water Act (Act No. 36 of 1998) (NWA) contains a number of provisions that impact on waste management, including the disposing of waste in a manner, which detrimentally impacts on a water resource and the discharge of waste into a water resource. The Act allows the Minister to make regulations for:

- Prescribing waste standards, which specify the quantity, quality and temperature of waste that may be discharged or deposited into or allowed to enter a water resource; and
- Prescribe the outcome or effect, which must be achieved through management practices for the treatment of waste before it is discharged or deposited into or allowed to enter a water resource.

This Act requires that waste discharged or deposited into or allowed to enter a water resource be monitored and analysed according to prescribed mechanisms.

The National Environmental Management: Air Quality Act 39 of 2004

The National Environmental Management: Air Quality Act 39 of 2004 (NEM:AQA) as amended reforms the law regulating air quality in order to protect the environment by providing measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development; provides for national norms and standards regulating air quality monitoring, management and control of all spheres of government; for specific air quality measures; and for matters incidental thereto. This Act is furthermore relevant to the management of waste as it may impact on air quality and ultimately contribute to the mitigation of climate change.

2.7 The National Health Act (Act 61 of 2003)

The National Health Act (Act No. 63 of 2003) provides measures for the promotion of health and Section 20 of the Act sets out the duties and powers of local authorities. It provides that every local government is obliged to take measures to maintain its district in a clean and hygienic condition and to prevent the occurrence of any nuisance, unhygienic or offensive condition or any other condition, which could be of danger to the health of any person. A “nuisance” includes any accumulation of refuse or other matter that is offensive or is injurious or dangerous to health. The local government is obliged to abate the nuisance or remedy the condition and to prevent the pollution of any water intended for the use of the inhabitants of its district. The National Environmental Health Norms and Standards [Government Gazette No. 39561 (2003)] clearly outlines monitoring standards for the delivery of quality Environmental Health Services, as well as acceptable standards for the control of environmental conditions constituting a danger to health. In terms of the proposed Norms and Standards, registration is required for carrying out a scheduled trade, including waste incineration, waste (including medical waste) disposal sites and waste collecting, sorting, treating or processing sites.

The Act also assigns the municipality the responsibility of facilitating the provision of indoor and outdoor environmental pollution control services, managing pharmaceutical and medical waste and disposal of all deceased in the community.

2.8 Hazardous Substances Act, Act 15 of 1973

This legislation aims to address substances that are deemed hazardous, in order to regulate and prohibit the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances. In terms of waste management, Section 29 of the Hazardous Substances Act stipulates that the Minister has the designated authority to authorise, regulate or prohibit the dumping of hazardous substances. Industries that generate hazardous waste must produce an industrial waste management plan. The industries such as small-scale mines and other industries within the district are expected to comply with this Act and the By-laws must incorporate this in their systems.

2.9 The Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (Act 36 of 1947)

The Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (Act 36 of 1947) The Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, Act 36 of 1947 regulates the importation, sale, acquisition, disposal or use of fertilizers, farm feeds, agricultural remedies and stock remedies This Act has relevance to compost where it is intended for use as a fertilizer and digestate from anaerobic digestion plants intended as fertilizers. It also regulates the disposal of farm feeds and fertilizers.

2.10 The Occupational Health and Safety Act (Act 85 of 1993)

The Occupational Health and Safety Act, Act 85 of 1993 contains provisions that protect waste workers from harm during the waste management process. There are regulations protecting workers and the public from exposure to asbestos, hazardous chemicals and lead. The Occupational Health and Safety Act and its regulations are of importance to the management of the health and safety of workers responsible for the handling of waste. This Act could also be applicable to waste harvesters, if they are allowed by a municipality to reclaim waste.

2.11 The White Paper on Integrated Pollution and Waste Management for South Africa (1999)

The White Paper on Integrated Pollution and Waste Management for South Africa (1999) represents formal government policy regarding integrated pollution and waste management.

2.12 Waste Tyre Regulation GNR 149 of 2009

Waste Tyre Regulation regulates the management of waste tyres by providing for the regulatory mechanisms.

2.13 The National Waste Management Strategy GNR 42879 of 2019

The National Waste Management Strategy (NWMS,2019) is a legislative requirement of NEM: WA. The purpose of the NWMS is to give effect in achieving the objectives outlined in the NEM: WA. The 2019 NWMS is a revision and update of the 2011 NWMS. Organs of state and affected persons are obliged to give effect to the NWMS. The 2019 NWMS is structured around central implementation themes that are described in terms of strategic objectives and actions:

- Theme 1: Waste Minimisation
- Theme 2: Effective and Sustainable Waste Services
- Theme 3: Waste Awareness and Compliance

The NWMS overall aim is to reduce the generation and environmental impacts associated with poor waste management. It presents a plan on how to achieve the desired goals outlined in the document which will ultimately promote a cleaner, healthier environment within South Africa.

2.14 The National Policy for the provision of Basic Refuse Removal services to indigent households (GN 413 of 2011)

The National Policy on Free Basic Refuse Removal (FBRR) aims to address the need for free basic refuse removal among impoverished households. Many municipalities experience number of challenges with respect to delivering an effective and sustainable waste service to all households. Some of the problems currently experienced by municipalities in terms of waste management are insufficient budget allocation, lack of equipment, skilled staff and poor access to service areas.

There are three objectives of the National Policy on FBRR. The first, being to establish a framework for the development, identification and management of indigent households that can be enrolled for the FBRR service within the municipality. The second is to set broad principles, resulting in the adoption of By-laws for the implementation and enforcement of tariff policies that will support the FBRR service within the concerned municipalities. The last of these principals is to educate and raise awareness within municipalities regarding proper handling of domestic waste for FBRR as well as for the need to minimise waste and promote recycling.

The main criteria for determining recipients that require FBRR services is to be registered on a municipality's indigent register. Other criteria that can be used in the absence of being registered on a municipality's indigent register include level of income, residence status, special considerations, value of property as well as any other criteria as determined by the specific municipality.

The required finance to implement such a service can be attained via internal sources (i.e. revenues from local tariffs and other taxes levied), and external sources (i.e. from the national fiscus).

The National FBRR Policy also states that upon implementation of the FBRR service, there should also be efficient monitoring by the LM. Section 12 stipulates that the municipality must prepare an implementation plan for the FBRR services, and must contain aspects such as monitoring, targets and evaluation. In order to meet the aims and objectives of the FBRR, the district is required to align its policies to relevant legislation, indigent policies and financial management systems, while being mindful of the need to ensure that there is uniformity when dealing with various cases of the indigent households. LMs have a number of registered indigents that receive free waste collection services, and this is discussed in Section 4.4.3 of this report.

2.15 The National Domestic Waste Collection Standards (GNR 21 of 2011)

This notice aims to standardize waste service delivery to ensure that this service be available to all while

complying with current health and safety legislations as well as minimally changing those waste collection processes that function effectively and efficiently. The National Domestic Waste Collections Standards (NDWCS) also specifies that recyclables which are not collected at households should be deposited at drop-off centres which must be easily accessible to households. These drop-off centres must promote recycling, ensure user friendliness and also collection must be done at regular intervals so that it does not cause a nuisance.

The NDWCS defines that there should be mechanisms in place to ensure that there be transparent communication between different stakeholders. This document stipulates that the service provider must create awareness amongst households about waste collection services offered, source separation, composting and the consequences of illegal dumping. This notice also outlines the role of the Waste Management Officer regarding waste awareness and the handling of complaints are prescribed.

2.16 The National Norms and Standards for the Remediation of Contaminated Land and Soil Quality in the Republic of South Africa (GN 467 of 2013)

The purpose of the norms and standards is to provide for a uniform, national approach relating to the remediation of contaminated land.

2.17 The National Waste Information Regulation (GNR 625 of 2012)

This notice illustrates the regulations for the collections of data and information to fulfil the objectives of the National Waste Information System (SAWIS) set out in Section 61 of the NEM: WA. The list of activities requiring registration and reporting on the SAWIS includes general waste disposal facilities that receive more than 150 tons of waste per day, recycling and treatment facilities, hazardous waste being exported or imported as well as energy recovery facilities. All municipal facilities within the district are reporting on SAWIS.

2.18 The Waste Classification and Management Regulations (GNR 634 of 2013)

The purpose of this Regulation is to regulate the classification and management of waste in manner which supports and implements the provisions of NEM: WA; to establish a mechanism and procedure for the listing of waste management activities that do not require a Waste Management License; to prescribe requirements for the disposal of waste to a landfill; to prescribe general duties of waste generators, transporters and managers.

2.19 The National Norms and Standards for the Assessment of Waste for Landfill Disposal (GNR 635 of 2013)

The National Norms and Standards for the Assessment of Waste for Landfill Disposal prescribes the

requirements for the assessment of waste prior to its disposal to landfill in terms of Regulation 8(1)(a) of the regulations. It is the responsibility of the LMs to ensure compliance with the waste quality prior to its disposal at landfill.

2.20 The National Norms and Standards for the Scrapping or Recovery of Motor Vehicles GNR 925 of 2013

The National Norms and Standards for the Scrapping or Recovery of Motor Vehicles aim at controlling the scrapping or recovery of motor vehicles at a facility with an operational area in excess of 500 m² in order to prevent or minimize potentially negative impacts on the biophysical and socio-economic environment.

2.21 The National Norms and Standards for the Extraction, Flaring and Recovery of Landfill GNR 924 of 2013

The National Norms and Standards for the Extraction, Flaring and Recovery of Landfill GNR aim at controlling the extraction, flaring or recovery of landfill gas at facilities which were initiated, constructed or upgraded after the coming into operation of these standards, in order to prevent or minimize potentially negative impacts on the bio-physical and socio-economic environments.

2.22 The National Norms and Standards for Disposal of Waste to landfill GNR 636 of 2013

These Norms and Standards determine the requirements for the disposal of waste to landfills as contemplated in regulation Section 8(1) (b) and (c) of the Waste Classification and Management Regulations. Chapter 2 outlines and illustrates Landfill Classification and Containment Barrier Design. Waste assessed in terms of the Norms and Standards for Assessment of Waste for Landfill Disposal in terms of Section 7(1) of the Act must be disposed to a licensed landfill as shown in Table 2.4 below:

Table 2-4: Landfill disposal requirements as per waste type

Waste Type	Landfill Disposal Requirements
Type 0	Disposal to landfill not allowed
Type 1	Disposal at Class A landfill or H:h/H:H landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Edition, Dept. of Water Affairs and Forestry, 1998)
Type 2	Disposal at Class B landfill or G: L: B+ landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Edition, Dept. of Water Affairs and Forestry, 1998)
Type 3	Disposal at Class C landfill or G: L: B+ landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Edition, Dept. of Water Affairs and Forestry, 1998)

Type 4

Disposal at Class D landfill or G: L: B landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Edition, Dept. of Water Affairs and Forestry, 1998)

The waste listed in Section 2(a) of Annexure 1 to the Regulations must be disposed Table 2-5 below

Table 2-5: Landfill disposal requirements for listed waste types as per section 2(a)

Listed Waste	Landfill Disposal Requirements
Domestic waste; business waste not containing hazardous waste of hazardous chemicals; non-infectious animal carcasses; garden waste.	Disposal at Class B landfill or G: L: B+ landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Edition, Dept. of Water Affairs and Forestry, 1998)
Post-consumer packaging; waste tyres.	Disposal at Class C landfill or G: L: B+ landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Edition, Dept. of Water Affairs and Forestry, 1998)
Building and demolition waste not containing hazardous waste or hazardous chemicals; Excavated earth material not containing hazardous waste or hazardous chemicals.	Disposal at Class D landfill or G: L: B landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Edition, Dept. of Water Affairs and Forestry, 1998)

The following waste included in Section 2(b) of Annexure 1 to the Regulations must be disposed as shown in Table 2-6 below, unless assessed in terms of the Norms and Standards for Assessment of Water for Landfill Disposal set in terms of Section 7(1) of the Act and disposed of in terms of Section 4(1) of these Norms and Standards,

Table 2-6: Landfill disposal requirements for listed waste types as per section 2(b)

Listed Waste	Landfill Disposal Requirements
Asbestos waste; Expired, spoilt or unusable hazardous products; PCBs; General waste, excluding domestic waste, which contains hazardous waste or hazardous chemicals; Mixed, hazardous chemical wastes from analytical labs and labs from academic institutions in containers less than 100 litres.	Disposal at Class A landfill or H:h/H:H landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Edition, Dept. of Water Affairs and Forestry, 1998)

The waste that has been classified in terms of the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste (2nd Edition, Dept. of Water Affairs and Forestry, 1998) prior to the Regulations coming into operation, may be accepted and disposed of as set out below in Table 2-7 for a period not exceeding 3 years after the date of coming into operations of the Regulations:

Table 2-7: Landfill disposal requirements for categorized hazardous waste ratings

Waste Landfill	Disposal Requirements
Hazardous Waste – Hazard Rating 1 or 2	Disposal at Class A landfill or H:h/H:H landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Edition, Dept. of Water Affairs and Forestry, 1998)
Hazardous Waste – Hazard Rating 3 or 4	Disposal at Class A landfill or H:h/H:H landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Edition, Dept. of Water Affairs and Forestry, 1998)
Hazardous Waste – Delisted	Disposal at Class B landfill or G: L: B+ landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Edition, Dept. of Water Affairs and Forestry, 1998)
General Waste	Disposal at Class B landfill or G:S/M/L: B/B+ landfill as specified in the Minimum Requirements for Waste Disposal by Landfill (2nd Edition, Dept. of Water Affairs and Forestry, 1998)

The notice also lists prohibitions and restrictions on the disposal of waste to landfill which comes into effect after the timeframes indicated for each waste and activities from the date of Regulations coming into operation. It is the responsibility of the Province and Municipalities to ensure that all its landfill sites are designed and operated as per the requirements of these Norms and Standards. It is therefore important to separate and classify waste in order to avoid disposing of waste that not suitable for a particular landfill site as indicated in the Tables above.

2.23 The National Norms and Standards for the Storage of Waste GNR 926 of 2013

The purpose of these norms and standards is to provide a uniform national approach to the management of waste facilities and to ensure that best practice in the management of waste storage facilities is achieved. This document also outlines to provide the minimum standards for the design and operation of new and existing waste storage facilities.

Part 1 of this document outlines the requirements for registration, what factors to consider when selecting a location and finally the requirements for the construction and design of the proposed waste storage facility.

Part 2 of these norms and standards outlines the requirement for the management of waste storage facilities. Aspects such as access control, notices/signage, waste storage containers and minimum requirements for above and underground waste storage facilities are outlined in this section. This is applicable to facilities such as the landfill sites.

2.24 The National Norms and Standards for Organic Waste Composting (draft) GN 68 of 2014

The National Norms and Standards for Organic Waste Composting (draft) aim at controlling the composting of organic waste at a facility that falls within the threshold of these norms and standards in order to prevent or minimize potentially negative impacts on the bio-physical and socio-economic environment.

2.25 National Norms and Standards for the Sorting, Shredding, Grinding, Crushing, Screening or Bailing of General Waste (GNR 1093 of 2017)

The purpose of these Norms and Standards is to provide a uniform national approach relating to the management of waste facilities that sort, shred, grind, crush, screen, chip or bale general waste, with an operational area that is 1000m² and more. Waste facilities with less than 1000m² are to comply with Section 4(4) of the Norms and Standards only, which requires that the facility must be registered with the Competent Authority and comply with the principles of the duty of care as contained in Section 28 of the NEMA.

The Norms and Standards require that the LMs ensure-

- All new waste facilities must be registered 90 days prior to any construction taking place;
- Existing waste facilities must register within 90 days of the publishing of the Norms and Standards (i.e. on or before 09 January 2018);
- Those waste facilities that are already registered do not need to re-register but must comply with the Norms and Standards from 11 October 2017; and
- A waste facility that is less than 1000m² must, inter alia, register in terms of the Norms and Standards.

2.26 Municipal Solid Waste Tariff Strategy (2012)

The Municipal Solid Waste Tariff Strategy (2012) provides guidelines to assist municipalities in improving the financial sustainability of waste services within their jurisdiction. The strategy covers areas such as:

- Scope of services and service levels;
- Financial and subsidy framework;
- Revenue streams and tariff approaches;
- Costing of services;
- Principles of municipal solid waste tariff setting; and
- Municipal solid waste tariff options (e.g. flat rate vs waste generated)
- Implementation

The purpose of the Municipal Solid Waste Tariff Strategy is to provide a framework and guidance for municipalities in setting solid waste tariffs that align with the intentions of the NWMS. The NWMS recognizes

the importance of full cost accounting as the foundation of financial sustainability, which is critical in the delivery of effective and efficient waste services and in the promotion of waste minimization, reuse, recycling and recovery. Full cost accounting considers all operational and capital expenditure pertaining to solid waste services. The introduction of cost-recovery tariffs enables municipalities to fund the “maintenance, renewal and expansion of solid waste infrastructure” (NWMS, 2011). The under-pricing of waste services sends inappropriate signals to households and waste generators and discourages waste minimisation. Inadequacies in municipal solid waste tariff setting have been raised by National Treasury (National Treasury, 2011). The strategy aims to reflect the principles that need to be adhered to in solid waste tariff setting and provides guidance in achieving the correct balance between appropriate subsidization and full cost recovery.

2.27 Municipal Systems Act (Act No. 32 of 2000)

Section 25 of the MSA, requires each municipal council to within a prescribed period after the start of its election term, adopt a single, inclusive and strategic IDP, for the development of the municipality. In relation to waste management, the IDP is required to include sectorial environmental plans which would be an IWMP for waste management. In their IDP's municipalities are required to ensure proper resources allocation to achieve the targets set in the respective plans. Section 13 of the Act provides for the publication of relevant By-laws by the municipal council in the Provincial Gazette and where feasible in a local newspaper or in any other practical way to bring the contents of the By-law to the attention of the local community.

2.28 Municipal Waste Management By-Laws

The objective of the By-laws are to: (a) give effect to the right contained in Section 24 of the Constitution by regulating waste management within the area of the municipality's jurisdiction; (b) provide, in conjunction with any other applicable law, an effective legal and administrative framework, within which the Municipality can manage and regulate waste management activities; (c) ensure that waste is avoided, or where it cannot be altogether avoided, minimised, re-used, recycled, recovered, and disposed of in an environmentally sound manner; (d) promote and ensure an effective delivery of waste services and provide effective monitoring and, (e) enforcement of waste management within the Local Municipality.

All LMs should develop a waste management By-law. The By-laws need to take into consideration the management of medical and hazardous waste and address waste management holistically. It is important that once the By-laws are gazetted, a copy is immediately sent to Limpopo Department of Economic Development, Environment and Tourism (LEDET).

3 INTEGRATED WASTE MANAGEMENT PLANNING PROCESS

The primary objective of IWMP is to integrate and optimise waste management planning in order to maximise efficiency and minimise the associated environmental impacts and financial costs, and to improve the quality of life for all South Africans. The diagram below (Figure 3-1) summarises the integrated waste management planning process that has been adopted for this process.

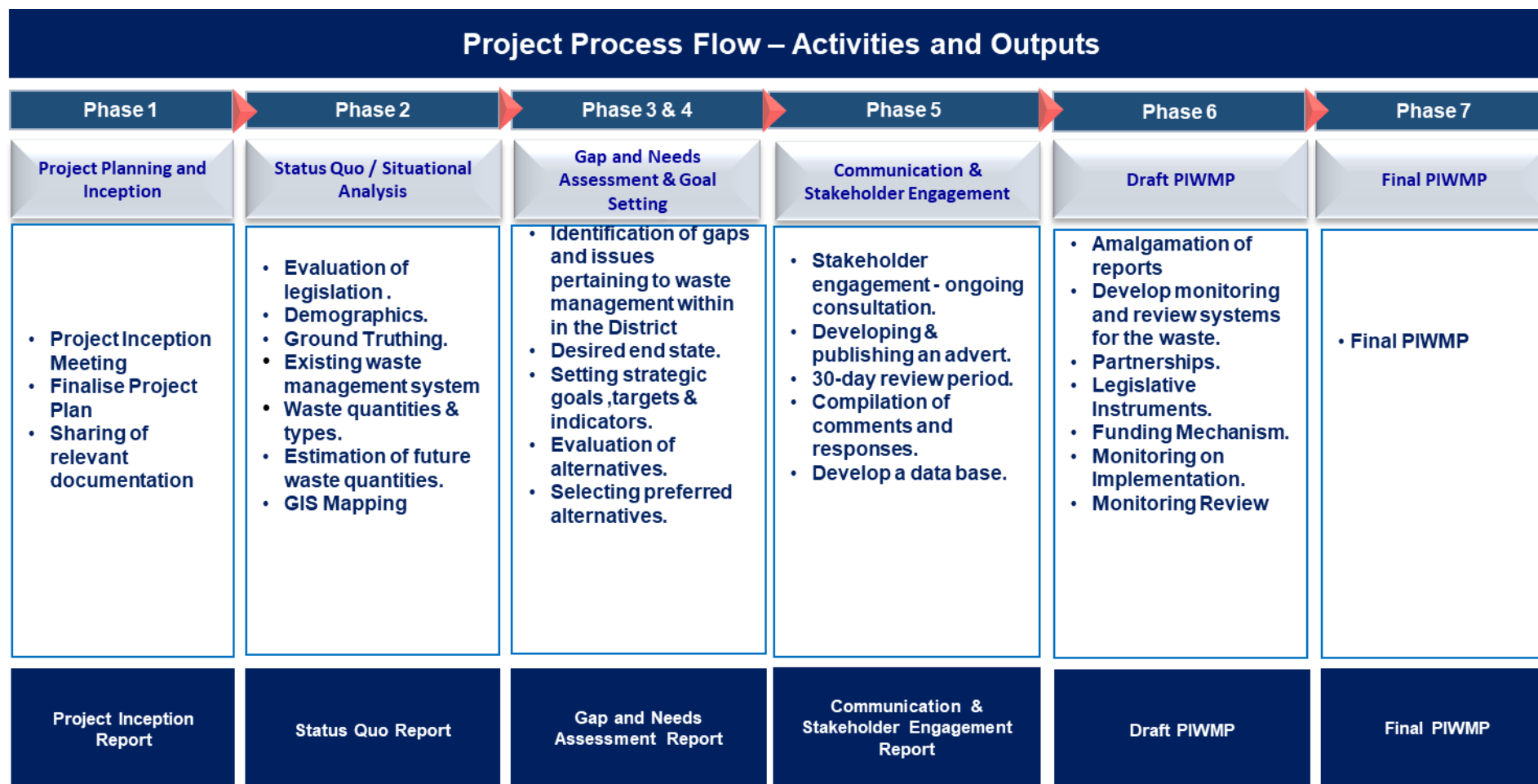


Figure 3-1: Integrated Waste Management Planning process

4 WASTE SITUATION ASSESSMENT

The development of an IWMP includes a situation analysis which entails a description of the population and development profiles of the district which the plan relates, an assessment of waste quantities and types of waste generated within the district, a description of the services that are provided or that are available for the collection, minimisation, re-use, recycling, and recovery, treatment and disposal of waste and lastly the number of persons in the district not receiving waste collection services. Moreover, the situation analysis is also completed in terms of institutional, financial, political, legal and physical conditions which must also be translated into the desired end state.

The situation analysis considered the current status with regards to the delivery of waste services, number of residents, demographic profile and socio-economic composition. It also includes the amount and type of waste that is being generated, recycled, recovered, treated and disposed. Information on resources i.e. financial and human capital, including equipment, are also indicated under this section.

4.1 Situational Analysis Methodology

The information for compiling of the status quo study was collected from the following sources:

- Municipal Integrated Development Plans;
- Municipal Landfill Site Licenses;
- Municipal Waste Management By-laws;
- Municipal Indigent Registers;
- **Interviews** with key stakeholders e.g. (Recyclers waste reclaimers) and municipal officials;
- Limpopo IWMP 2020;
- Municipal IWMPs;
- Limpopo Province Recyclers Data Base 2018;
- Limpopo SAWIS Waste Report 2021;
- Status Quo Report of Sewage Facilities in Limpopo 2021;
- Mopani Environmental Sector IDP Analysis Assessment Framework (2021-2026);
- **Site visits**; landfill sites, transfer stations, recycling facilities and illegal dumps, and
- Stats SA (2001 and 2011).

4.2 Geographical Area

This section describes the location and demographics of MDM with the aim to provide a comprehensive background.

4.2.1.1 Locality

MDM is a Category C municipality, situated in the North-eastern part of the Limpopo Province. The district covers a total area of 2 001 100 ha (20 011 km²). It is bordered in the east by Mozambique, in the north, by Vhembe District Municipality through Thulamela LM & Makhado LM, in the south, by Mpumalanga province through Ehlanzeni District Municipality (Bushbuckridge LM, Thaba-Chweu LM and Greater Tubatse LM) and, to the west, by Capricorn District Municipality (Molemole LM, Polokwane LM & Lepelle-Nkumpi LM), in the south-west, by Sekhukhune District Municipality (Fetakgomo LM).

MDM consists of five Local Municipalities (LMs) namely: Greater Tzaneen LM, Greater Giyani LM, Greater Letaba LM, Maruleng LM and Ba-Phalaborwa LM (refer to Figure 4-1). The main economic sectors are mining, trade, community services finance, transport and agriculture. According to census 2011, the district Municipality has a total population of 1 092 07 with 16 urban areas (towns and townships), 354 villages (rural settlements) and a total of 129 Wards. MDM has a total of 296 320 households. According to Mopani District Municipality reviewed Integrated Development Plan 2022- 2026, 55 300 households (18,7%) have access to refuse removal, both in urban and rural areas, while 241 020 households (81,3%) has no access to refuse removal, this includes rural and farm areas.

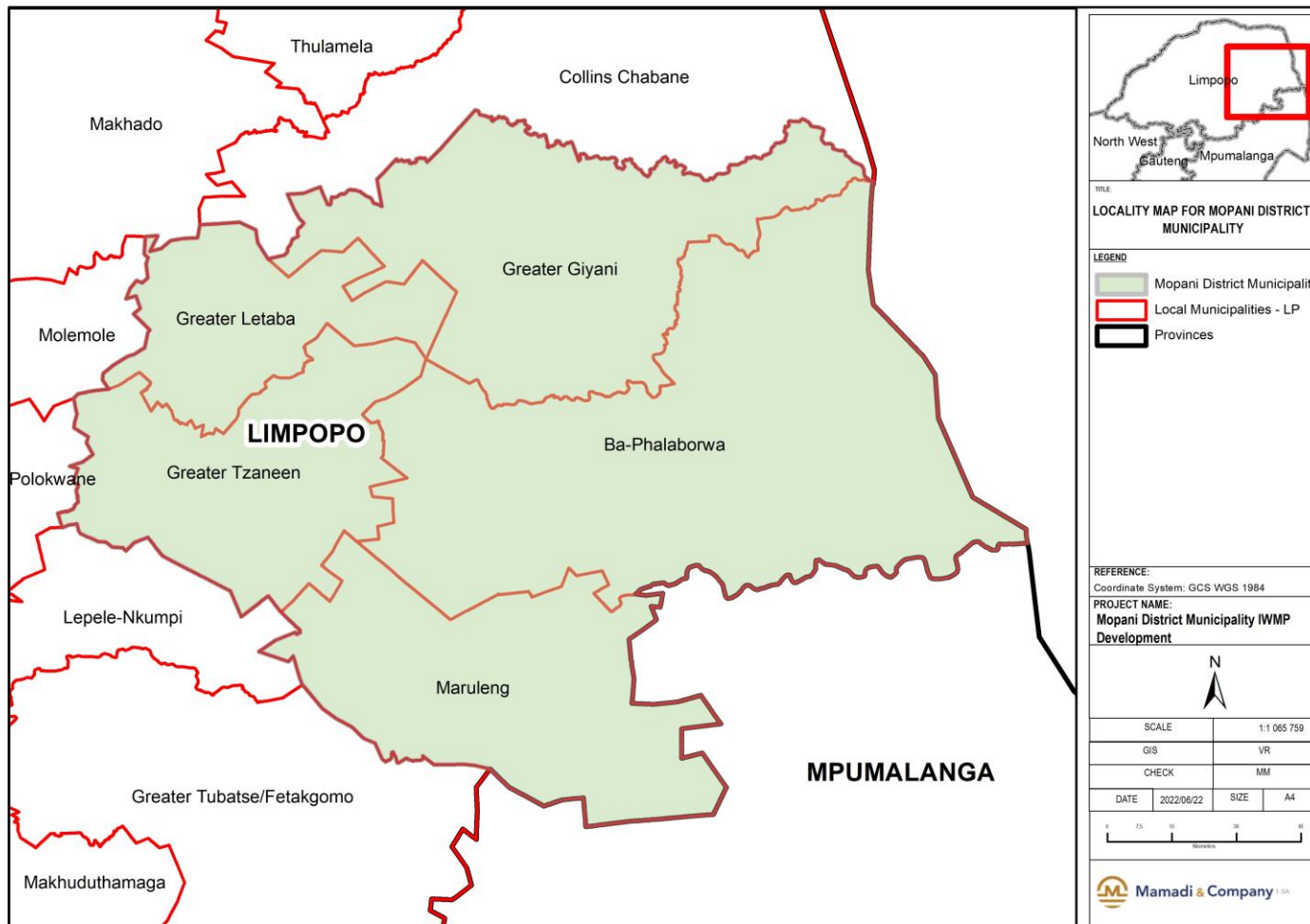


Figure 4-1: Locality Map of MDM Municipality

Table 4-1: Overview of LMs

Ba-Phalaborwa Local Municipality

The Ba-Phalaborwa LM is a Category B municipality. The LM covers an area of 7 489km². It is the largest of five municipalities in MDM. The municipality is predominantly rural with 19 wards. The main towns are Phalaborwa, Namakgale, Lulekani, Gravelotte and Baphaborwa. The main economic sectors are mining, agriculture, manufacturing and tourism. According to Stats 2011, the total population is 150 637 and the total households is 41 115 with an average of 3,6. The LM MDB code is LIM334.

The LM is situated in the north-eastern part of Mopani, just less than 1km from the Kruger National Park border. It serves as a central gateway to the Greater Limpopo Transfrontier Park through the Giryondo Border. It is an entry and exit point to the Mozambican side of the Xai-Xai beaches. The area has vast tourism and manufacturing investment opportunities. Key Mining operations in Ba-Phalaborwa LM include Palabora mining Copper, Foskor (Pty) Ltd Phalaborwa mining Phosphate rock and Stibium Mopani mining.

Greater Giyani Local Municipality

The Greater Giyani LM is a Category B municipality. The LM covers an area of 4 171,6 km². The municipality is predominantly rural with 31 wards. The main town is Giyani. The main economic sectors are mining, agriculture, tourism retail and transport. According to Stats 2011, the total population is 244 217. The LM's total households is 63 548 with an average of 3,8 household size. However; according to Community Survey 2016, the total population is 256, 127 with a total number of 70,537 households. The LM MDB code is LIM331.

Greater Letaba Local Municipality

The Greater Letaba LM is a Category B municipality. The LM covers an area of 1 891 km². It is the smallest of five municipalities in the district. The municipality is predominantly rural with 30 wards. The main town is Modjadjiskloof. The main economic sectors are general government services, wholesale and retail trade, catering and accommodation transport and communication, finance and business services, agriculture, forestry and fishing, manufacturing, community, social and personal services, electricity and water. According to Stats 2011, the total population is 212 701. The LM's total households is 58 261 with the average of 3,6 household size. The LM MDB code is LIM332.

Greater Tzaneen Local Municipality

The Greater Tzaneen LM is a Category B municipality. The LM covers an area of 3 242,6 km². The municipality is predominantly rural with 35 wards. The main towns are Tzaneen, Nkowankowa, Lenyenye, Letsitele and Haenertsburg. The main economic sectors are community services, finance, trade, agriculture, manufacturing. According to Stats 2011, the total population is 390 095. The LM's total households is 108 926 with an average of 3,5 household size. The LM MDB code is LIM333.

Maruleng Local Municipality

The Maruleng LM is a Category B municipality. The LM covers an area of 3 244,3 km². The municipality is predominantly rural with 14 wards. The main town is Hoedspruit. The main economic sector is Agriculture. According to Stats 2011, the total population is 94 857, which is the smallest population within the district. The LM's total households is 24,470 with an average of 3,7 household size. The LM MDB code is LIM335.

4.3 Demographics and Population Growth

This section highlights the socio-economic aspects such as population, education, employment, and income in all LM. According to the Department of Environmental Affairs (DEA) IWMP Guidelines (2009), demographic data is required to calculate projections of current and future waste quantities. Furthermore, this information is required to:

- Assess the required resources to provide effective waste management services and infrastructure;
- Ensure that previously un-serviced areas, such as informal settlements (i.e. high density areas, usually on the periphery of urban areas that are characterised by structures such as “shacks”) and rural (low density areas usually a greater distance from urban areas and also referred to as “villages”) or sparsely populated areas are considered;
- Evaluate the potential for financial recovery; and
- Form the basis for projected waste volumes and types.

Understanding the demographic profile of MDM will provide a clear indication of the socio-economic factors that influence waste generation, in particular population (which gives direct indication of waste generation values), education (which may have a bearing on awareness and waste management education), employment and income (which indicates access to waste management services). Aspects within demographics also allow for analysis of factors that may influence attitudes and behaviours relating to waste management. Importantly, socio-economic factors emphasise the level of user affordability, which serves as a key aspect to be considered for appropriate budgeting and costing. This also shows which LMs may require more support and financial assistance.

4.3.1 Baseline population

According to Stats SA (2011) the total population of MDM is 1 092 507. Majority of the population resides in Greater Tzaneen LM with 390 095 people, followed by Greater Giyani LM with 244

217, Greater Letaba with 212 701, Ba-Phalaborwa LM with 150 637 and lastly Maruleng LM with 94 857 as illustrated in the Figure 4-2 below (Stats SA, 2011).

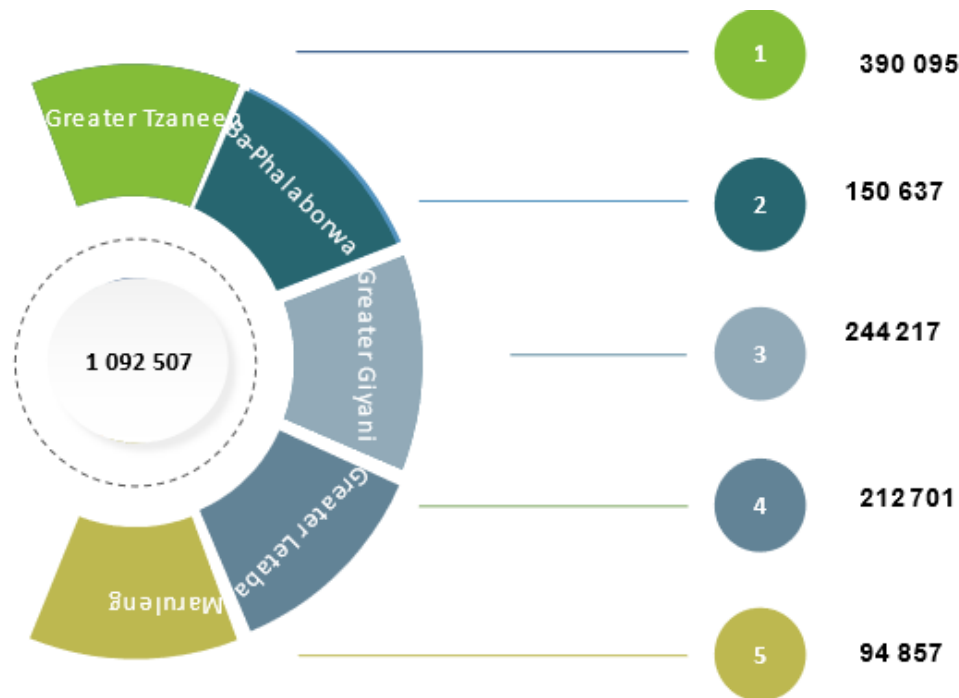


Figure 4-2: Total Population of MDM (Stats SA, 2011)

4.3.2 Future Population

The growth rate for each LM is listed below:

- Ba-Phalaborwa LM-1,36%
- Greater Giyani LM-0,14%
- Greater Tzaneen LM-0,38%
- Greater Letaba LM- -0,29%
- Maruleng LM- 0,05%

Therefore, the average growth rate for MDM is 0,4%. If the current population of MDM grows at a constant rate of 0,4% per decade (Statistics SA, 2011), over a five-year period, the population of this municipality is estimated to be 1 329 202 persons as per the calculation below:

$$\text{Pop}_{\text{future}} = \text{Pop}_{\text{present}} (1+i)^n$$

$$\text{Pop}_{\text{future}} = 1\,092\,507 ((1+(0,04)))^5$$

$$=1\,092\,507 (1.21)$$

$$=1\ 329\ 202$$

Calculation Index:

Pop _{future} -	Future Population
Pop _{present} -	Present Population as per (Stats SA, 2011)
i -	Growth rate as per Stats SA, 2011
n -	No of years

The equation below was used to calculate future population for the years 2023, 2033 and 2043 (up to 30 years) for MDM in Table 4-2 below.

Table 4-2: MDM Population Growth Projections

District Municipality	Census (2011)	Estimated (2021)	Estimated (2031)	Estimated (2041)
Ba-Phalaborwa LM	150 637	158 029	164 465	171 163
Greater Giyani LM	244 217	256 201	266 635	277 495
Greater Tzaneen LM	390 095	409 237	425 904	443 250
Greater Letaba LM	212 701	223 138	232 226	241 684
Maruleng LM	94 857	99 512	103 565	107 782
Total MDM Population	1 092 507	1 146 116,545	1 192 795,275	1 241 375,124

With a population estimate of 1 241 375,124 people in 2043, it is evident that an additional 148 868 will be generating waste. This population growth will ultimately result in an increase in the number of households within MDM requiring waste management services as projected in Table 4-3 below.

Table 4-3: LM's number of households projections in MDM (Stats SA, 2001/2011)

							2011	2021	2031	2041
MDM	LMs	Census 2001 Statistics	Census 2011 Statistics	The HH increased in 10yrs by	In 1-year HH increased by	In 5-years the population will be	HH In 10 years	HH in 20 years	HH in 30 years	HH in 40 years
	Greater Giyani LM	53 050	63 548	10 498	1 050	58 299	63 548	66 666	69 381	72 207
	Greater Letaba LM	49 451	58 261	8 810	881	53 856	58 261	61 120	63 609	66 200
	Greater Tzaneen LM	85 993	108 926	22 933	2 293	97 459	108 926	114 271	118 925	123 769
	Ba-Phalaborwa LM	31 046	41 115	10 069	1 007	36 080	41 115	43 133	44 889	46 717
	Maruleng LM	19 668	24 470	4 802	480	22 069	24 470	25 671	26 716	27 804
	TOTAL	239 208	296 320	57 112	5 711	267 764	296 320	310 860	32 3521	336 697

Note: Baseline year used for estimates is 2001

Table 4-4:LM's number of households projections in MDMs (Stats SA, 2001/2011)

District Municipality	Census (2001)	Census (2011)	Estimated 2021	Estimated 2031	Estimated 2041
Ba-Phalaborwa LM	53 050	63 548	66 666	69 381	72 207
Greater Giyani LM	49 451	58 261	61 120	63 609	66 200
Greater Tzaneen LM	85 993	108 926	114 271	118 925	123 769
Greater Letaba LM	31 046	41 115	43 133	44 889	46 717
Maruleng LM	19 668	24 470	25 671	26 716	27 804
Total MDM Households	239 208	296 320	310 860	323 521	336 697

Table 4-4 above shows that with an increase in the number of households, there will be a greater demand for waste management services. It is crucial that LMs and MDM consider such growth estimates in their planning for advanced and improved provision of waste management services in the future. It is evident that Greater Tzaneen LM currently has and will still have the highest number of households within MDM.

Education levels, employment status and income levels are presented below for MDM and LMs

4.3.3 Education Levels

The MDM's educational status is presented in Figure 4-3 below.

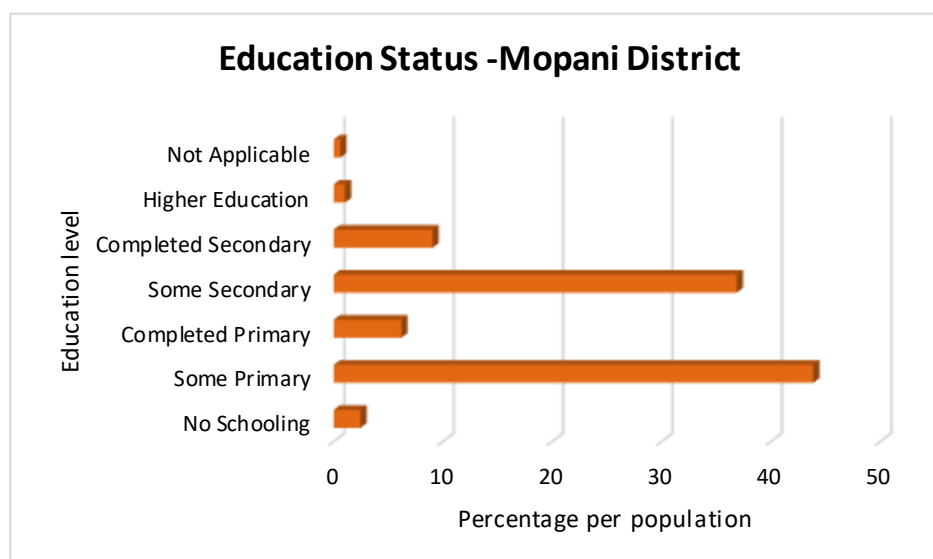


Figure 4-3: MDM Educational Status (Stats SA, 2011)

Figure 4-3 above shows that most of the district's inhabitants had some primary, followed by those who completed secondary education. There is lack of tertiary education in the district as well as lack of adequately educated individuals that are well informed about waste management and its impact on the environment. Low levels of education could result in poor level of waste management, particularly in terms of illegal dumping. Tables 4-5 provide details data on education levels of LMs in the district.

4.3.4 Employment Status

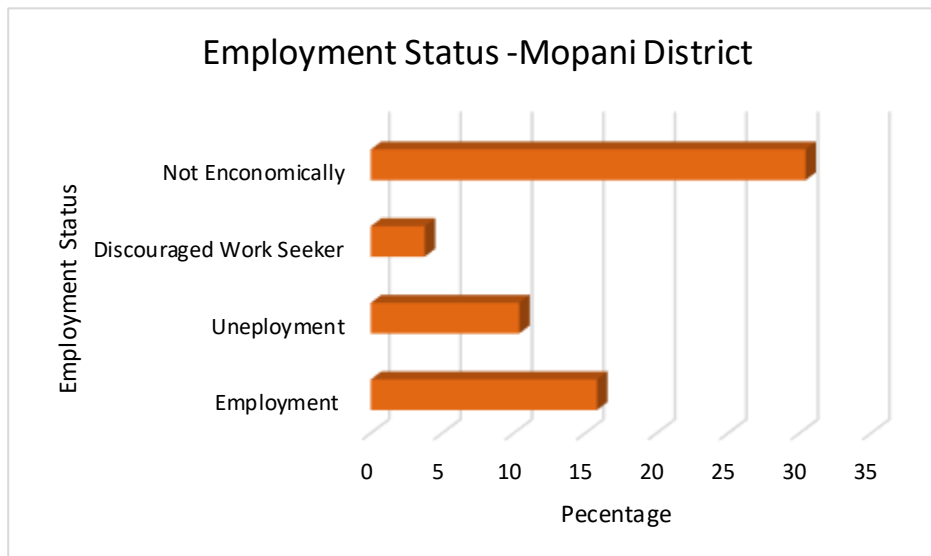


Figure 4-4: Employment Status in MDM (Stats SA, 2011)

Almost 30% of the district population is not economically active. 10% is unemployed and 3% is discouraged work seekers. Only 15% of the population is employed. Tables 4-5 details the employment status of people per local municipality.

Table 4-5: Employment status of LMs within MDM (Stats SA, 2011)

MDM						
	Ba-Phalaborwa	Greater Giyani	Greater Tzaneen	Greater Letaba	Maruleng	District Average
Employment Status	%	%	%	%	%	%
Employed	22,54	10,43	18,84	13,09	13,09	15,60
Unemployed	13,46	9,25	10,9	8,84	8,84	10,26
Discouraged Work Seeker	2,71	4,44	3,44	3,71	3,71	3,60
Not Economically Active	24,49	33,3	29,26	32,94	32,94	30,59

MDM has an average of 30,59% of people that are not economically active with most residing in Greater Giyani LM. Ba-Phalaborwa has the most employed people (22,54%) compared to Greater Letaba and Maruleng, both with 13,09% people employed. Ba-Phalaborwa also has the highest amount of people that are unemployed (13,46). Greater Giyani also has the most discouraged work seekers in MDM.

4.3.5 MDM Income Status

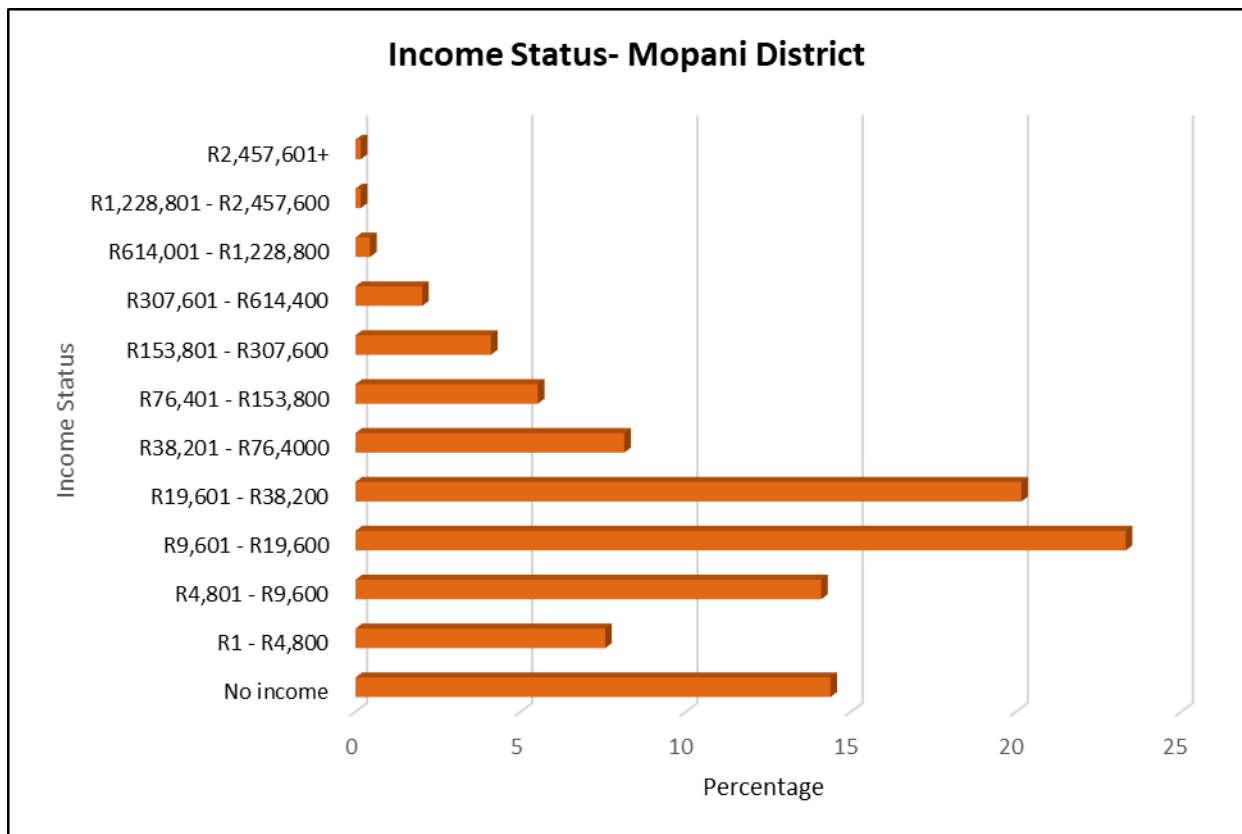


Figure 4-5: MDM Income Status (Stats SA, 2011)

Most (24%) of MDM's residents earn between R9 601 - R19 600. This is followed by 20% which earns R19 601 - R38 200 and then 14% which earns no income. Tables 4-6 below indicate similar trends with most of their populations earning within these three income groups.

Table 4-6: Income status of LMs within MDM (Stats SA, 2011)

MDM						
	Ba- Phalaborwa	Greater Giyani	Greater Tzaneen	Greater Letaba	Maruleng	District Average
Income	%	%	%	%	%	%
No income	12,5	15,7	13,4	14,4	15,9	14,38
R1 - R4,800	5,5	9,6	7	8,5	7,2	7,56
R4,801 - R9,600	10,7	17,1	11,9	15,9	14,9	14,1
R9,601 - R19,600	18,7	21,8	25	26	25,1	23,32
R19,601 - R38,200	18,9	18,7	22	21	20,2	20,16
R38,201 - R76,4000	11,9	7,2	8,8	6,5	6,3	8,14
R76,401 - R153,800	10	4,3	5	3,7	4,6	5,52
R153,801 - R307,600	7,1	3,3	3,9	2,4	3,8	4,1
R307,601 - R614,400	3,7	1,6	2,1	1,1	1,6	2,02
R614,001 - R1,228,800	0,8	0,3	0,5	0,2	0,4	0,44
R1,228,801 - R2,457,600	0,2	0,1	0,2	0,1	0,2	0,16
R2,457,601+	0,2	0,1	0,2	0,1	0,2	0,16

4.4 Waste Management Systems

Existing waste management systems within the MDM have been explored in order to highlight gaps and challenges within the district.

4.4.1 Waste Generation

Waste generated in MDM can generally be categorised as follows:

- **General domestic and commercial waste:** This consists of paper, plastic, metal, glass, putrescible /food waste, garden refuse and building rubble.
- **Medical waste:** This includes health care risk waste such as sharps.
- **Hazardous waste:** Includes waste such as motor oils, sewage sludge, electronic waste and waste from funeral parlours.
- **Mining Waste –** This includes ash, slag, miscellaneous dumps.

4.4.2 Sub-categories of waste generated in MDM

Figure 4-6 below shows the main waste subgroups generated in LMs, thus constituting waste streams within MDM.



Figure 4-6: Sub-categories of waste generated in MDM

Problematic waste streams in MDM includes but not limited to diapers, tyres, skip bins that are damaged underneath particularly in Greater Tzaneen LM.

4.4.2.1 General waste composition

Waste characterisation conducted for the following LMs, Tzaneen LM, Ba-Phalaborwa LM and Greater Letaba LM were used to determine the values of waste composition within MDM as highlighted Figure 4-7 below.

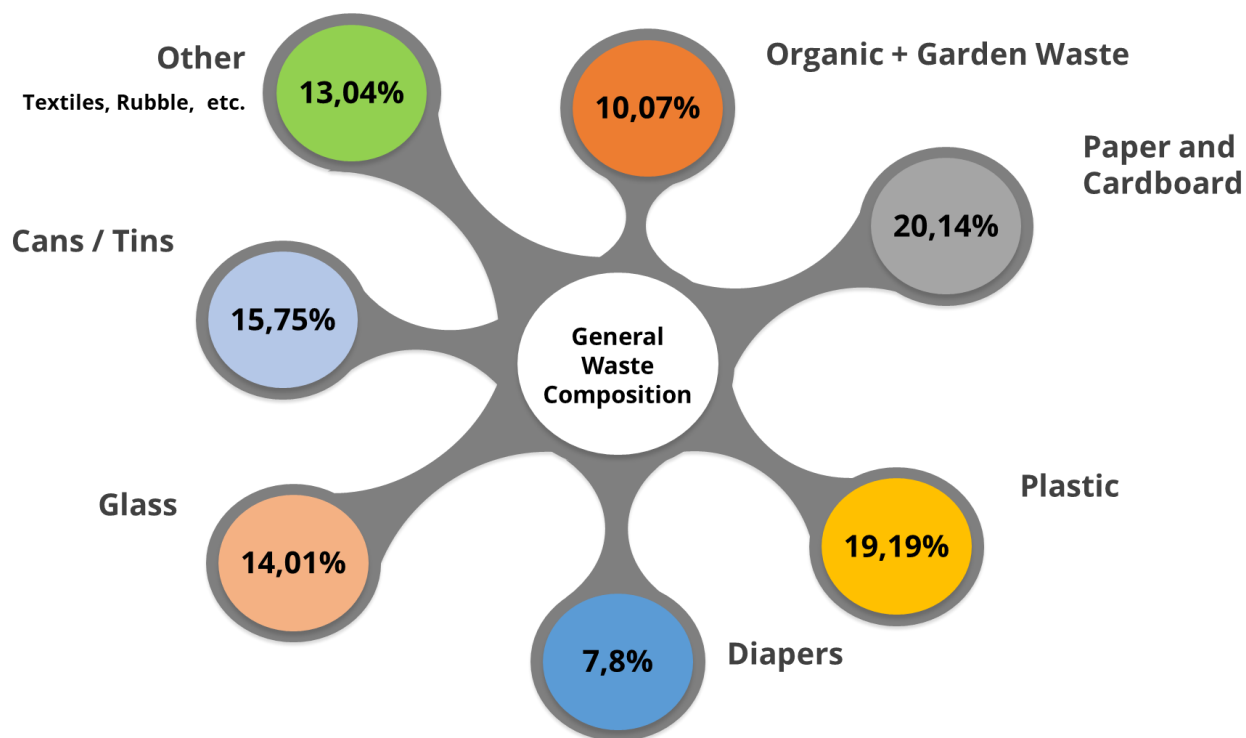


Figure 4-7 Waste generation Composition

4.4.3 Waste Collection

Waste collection includes areas that receive waste collection services and areas that do not receive waste services as well as registered indigent households. Waste collection occurs in all LMs within MDM, however; not all areas are receiving waste collection, particularly rural areas. The Table 4-7 below details areas receiving basic waste collection services, including indigent households.

Table 4-7: Status of waste collection in MDM (Municipal IWMPs, IDPs & Stats SA 2011)

LMs	Total Number of Households	Serviced Households	Un-serviced Households	Number of Indigent Households	Number of Un-serviced Indigent Households
Greater Giyani LM	70 537	6 036	64 501	22 845	0
Greater Letaba LM	67 067	2 696	64 371	3000	2000
Greater Tzaneen LM	122 776	56 523	66 253	14 049	0
Ba-Phalaborwa LM	49 100	22 941	26159	500	0
Maruleng LM	24 470	20 020	4 450	3700	3700

Note: The total number of households is based on Stats SA 2011 whereas the Number of Serviced households is based on the current waste collection data

Waste collection is done in all towns within the district, however rural waste collection system is still a challenge in most LMs. Ba-Phalaborwa LM has waste collection system done in Mashimale & Makhushane villages house to house on weekly basis. Greater Tzaneen LM has developed a comprehensive rural waste minimization programme whereby schools in the rural areas have been identified as drop off centres and communities collect their waste and drop them in the nearby schools. Greater Giyani has no rural waste collection system in place; however, the LM has come up with an initiative to have drop off centres where the community drop their nappies and they are then collected by the LM. Letaba LM has a drop off area in Modjadjiskloof for general and gardens waste. Maruleng Local Municipality rural waste collection is done through skip bins on weekly basis in Ga Mameetja, Bochemelo, Butswana, Worcester, Makgaung, Madeira, Sofaya, Moshate, Lorraine, Calais, Enable turkey 1-4, Metz Bismark, Oaks, Finale, Willows, and Santeng. Though LMs have initiatives for rural waste collection in place, much effort is still needed for waste collection to be extended to rural areas.

4.4.3.1 Waste Management Fleet

To achieve effective waste management collection, it is necessary that LMs are equipped with sufficient and efficient waste management fleet to carry out waste collection and waste disposal. Table 4-8 below details the fleet that is currently available to render waste management services in the LMs of MDM.

Table 4-8: Waste Management Fleet in MDM

LMs	Different vehicles available for waste management	Age	Average breakdowns per months (days per month)
MDM			
Giyani LM	4 Compactor Trucks	2011 * 2, 2012& 2014	Frequent Breakdown, Not in Good Condition.
	2 Skip Trucks	2011 & 2015	Frequent Breakdown, Not in Good Condition.
	Half Truck	2014	Minor Problems
Greater Letaba LM	3 Compactor Trucks	2006, 2017 & 2018	Operational
	2 X Skip Trucks	2015 & 2021	Operational
	1x Tipper Truck	2009	Operational
Greater Tzaneen LM	7 Compactor Trucks	2020 *6 & 2019	5 Compactor Trucks not Operational
	2 X 4-Ton Trucks	2013	1 * 4-Ton Trucks not Operational
	1 X Skip Loader	2010	Operational
	5 X Light Delivery Vehicles	2010	Operational
Phalaborwa	5 Compactor Trucks	1999, 2022, 2018, 2008 & 2018	4 Operational & One is Still New
	4 Toyota LDV bakkie	2011	All operational
	1 Skip Truck	2022	Working

LMS	Different vehicles available for waste management	Age	Average breakdowns per months (days per month)
	2 Skip carrying tractor	2019 & year unknown	One operational
Maruleng LM	Compactor truck	12 years	Once in six months
	Compactor Truck	New and still to be delivered	None

4.4.4 Waste recycling, treatment and disposal

4.4.4.1 Status of Waste Disposal Facilities

Waste disposal includes number of waste disposal facilities, and their status. MDM has four operational landfill sites namely Tzaneen landfill site located in Greater Tzaneen LM, Phalaborwa landfill site located in Ba-Phalaborwa LM, London landfill site located at Maruleng LM, Giyani landfill site located in Greater Giyani LM. Giyani landfill site and Phalaborwa landfill site have been issued with closure permit; however, they are both still operational because the new Giyani landfill site is not yet ready for operation while the new landfill site for Ba-Phalaborwa has not yet been constructed. Tzaneen landfill site is the only disposal facility that operate according to the Minimum Requirements for Waste Disposal by Landfill (DWAF, 1998).

Closure license has been issued for Modjadjiskloof landfill site, the site has already been rehabilitated and turned into a transfer station. As a result, Greater Letaba LM is currently disposing all waste collected within the LM at Tzaneen landfill site at a cost. MDM further has three new licensed landfills at various stages of development namely; new Giyani landfill which is completed not yet operational, Maphalle landfill site and new Phalaborwa landfill both have already been fenced.

4.4.4.1.1 Waste Management Facilities

Major waste infrastructures in MDM are in the form of transfer stations, buy-back centres & waste disposal sites. MDM has 9 disposal facilities, both private and municipal landfill sites that have waste disposal licenses. Two of the landfill sites are privately owned, namely Hoedspruit and Foskor general waste type both located in Ba-Phalaborwa LM. MDM has total of about seven transfer stations which four are based in Greater Tzaneen and three in Greater Letaba LM. Greater Giyani, Greater Letaba and Maruleng LMs have non-operational buy-back centres which if completed could be used to divert waste from landfill and to recover the waste material for the waste economy. The inadequacy of waste management infrastructure and inadequate budgeting are limiting factors for the sound management of landfill sites in MDM. Table 4-9 below details disposal facilities within MDM.

Table 4-9: Disposal Facilities within MDM

DM	LMs	Name of Landfills	Landfills License Number	Class	Date Issued	Life Span estimates	Transfer Station
Mopani	Ba-Phalaborwa	1. Phalaborwa Landfill Site	Licensed for closure as a	Class B	Unknown	Licensed for closure	None
		2. Ba-Phalaborwa Landfill Site	Still new	Class B	Still new	Still new	
		3. Hoedspruit	16/2/7/B600/D88/Z1/P419	G:C: B	2001-9-03	Unknown	N/A
		4. Foskor General Waste Type	16/2/7/B700/C16/Z1/P276	G:S: B	1997-10-08	Unknown	N/A
	Greater Giyani	5. Greater Giyani Landfill Site	12/4/10-B/10/M3	G:M: B	2012-08-25	Still new	None
		6. Giyani Waste Disposal Facility	12/4/10/8-A/14/M1/A1	G:M: B	31/05/2018	Licensed for closure	
	Greater Letaba	7. Maphalle Landfill Site	2/4/10-B/10/M2	G:S: B	2010-08-25	To be construction	Old Landfill site Kgapane Senwamokgope
	Greater Tzaneen	8. Tzaneen Waste Disposal Site	16/2/7/B800/D2/Z23/1/P501	G:M: B	2004-11-11	17 years	Lenyenye Hanertzburg, Letsitele Nkowa Nkowa
	Maruleng	9. Maruleng Waste Disposal Site	12/4/10-B/10/M1	G:S: B	2010-04-29	Unknown	None

4.4.4.2 Status of Landfill Sites

The NEM: WA creates a comprehensive legal framework for waste management, its provisions will be meaningless without measures to monitor and, where necessary enforce compliance. As part of compliance, government spheres i.e. LMs have to monitor issues of compliance in their disposal facilities by conducting both internal audits and external audits as per conditions of their Waste Management Licenses (WMLs). Landfill site audit reports are used to assess the level of compliance of the facilities in terms of their WML conditions. Audit reports highlight areas of non-compliance, partial compliance, and full compliance.

The department of Limpopo Economic Development, Environment and Tourism (LEDET) and the Department of Water and Sanitation (DWS) as the competent authorities reserves the right to audit or inspect disposal facilities to check whether the sites are complying with conditions of Waste Management Licenses (WMLs) and minimum requirements of disposal. LMs can be issued with non-compliance letters if they are not complying.

According to WML conditions, internal audits must be conducted quarterly while external audits must be conducted annually, and audit reports to complied showing audit findings after each audit. Most of the LMs are not conducting both internal and external audits as per their WML conditions, however; Tzaneen LM and Ba-Phalaborwa LM have been conducting internal audits. To provide a broad overview of the level of compliance at municipal waste management facilities, site visit to the landfill sites was conducted to all operational landfill sites. Table 4-10 below gives an overview of common non-compliances at waste municipal landfill site.

Table 4-10: Broad overview of compliance at operational municipal waste management facilities

Infrastructure	No Ablution Facilities –(Ba-Phalaborwa, Greater Giyani & London) No Weighbridges –(Ba-Phalaborwa, Greater Giyani & London is Non Functional)
Traffic Control	No signage for speed limits (Ba-Phalaborwa, Greater Giyani & London)
Health & Safety	Waste reclaimers partially wearing protective clothing (All LMs)
Waste Deposition	No waste compaction (greater Giyani)
Monitoring	Ba-Phalaborwa, Greater Giyani & London is Non Functional)
Access Control	Greater Giyani has no gate
Closure and Rehabilitation	Landfill licenced for closure still operational –(Ba-Phalaborwa & Greater Giyani)

Table 4-11 below details the status of landfill sites within MDM.

Table 4-11: Status of landfill sites within MDM

LMs	Disposal Site	Licensed/Not Licensed	Access Control	Fencing	Landfill Manager/Supervisor	Weighbridge	Recycling on Site	Recording of Vehicles	Registration and Reporting on SAWIS	Hazardous/Special Waste
Greater Tzaneen LM	Tzaneen Landfill Site	Licensed as a GMB-	Access controller available	Well fenced with electrical fence	Yes	Yes	Yes	Yes	Yes	Used Oil, Fluorescent tubes and E-waste Storage
Ba-Phalaborwa LM	Phalaborwa Landfill Site	Licensed for closure as a Class B	Access controller available	Well fenced	yes	None	Yes	Yes	Yes	No
	Ba-Phalaborwa Landfill Site	Licensed as a Class B	Gate stolen	Well fenced	Not yet operational	N/A	N/A	N/A	N/A	N/A
Maruleng LM	London Landfill Site	Licensed as a GSB-	Access controller available	Well fenced	Yes	Yes, but not functional	Yes	Yes	Yes	Tyres
Greater Giyani LM	Giyani Waste Disposal Facility	Licensed for closure as a Class B	None	Stolen	None	None	Yes	Yes	Yes	No
	Greater Giyani Landfill Site	Licensed as a GMB-	Access controller available	Well fenced	Not yet operational	Yes	N/A	N/A	N/A	N/A
Greater Letaba LM	Maphalle Landfill Site	Licensed as a GSB-	Access controller available	Well fenced	Not yet operational	N/A	N/A	N/A	N/A	N/A

4.4.5 General Waste Disposal

Waste management hierarchy encourages the disposal of waste at the landfill site to be the last option. The current status of waste disposal in MDM reflects that majority of general waste is disposed at the municipal landfill sites or illegally dumped in areas where there is minimal or no waste collection. Majority of households that are disposing their own waste are mostly in rural areas where waste collection services are not rendered. Own waste disposal in rural areas is mostly in the form of burning and burying of waste. Management and maintenance of municipal waste disposal facilities is one of the biggest challenges in most local municipalities, mostly due to lack of human resources and lack of funds. As a result, most of waste disposal facilities do not meet the Minimum Requirements for Waste Disposal by Landfill (DWAF, 1998). However, best landfill management and maintenance practices were observed in Greater Tzaneen LM at Tzaneen Landfill site.

Illegal dumping is one of the major challenges in MDM, illegal dumping occurs in all LMs, however there are initiatives that are supported by DFFE to clean all identified illegal dumps. Though there are initiatives in place to eradicate the illegal dumps, most of the illegal dumps keep re-surfacing. This may be due to the perception people have towards waste management and also due to lack of enforcement. Some of the illegal dumps occur in areas where there are signages indicating that illegal dumping is prohibited. Enforcement of waste By-laws can play a significant role in addressing these illegal dumps.

4.4.6 Hazardous Waste Disposal

MDM has no hazardous waste disposal site, hazardous waste and Health Care Risk Waste (HCRW) is not disposed within the district. At government level; health care facilities such as hospitals and clinics, their HCRW is collected by Buhle Waste (Pty) Ltd and is disposed at Holfontein Hazardous Waste Landfill Site in Gauteng Province. Mediclinic Tzaneen Hospital has a private contractor (Averda) responsible for managing hazardous waste, during the public meeting, it was indicated that there are pharmaceutical glass bottles, Central Sterile Services Department (CCSD) blue paper which has the potential of being recycled, however there is no company that is currently recycling pharmaceutical glass bottles and papers, and this can be an opportunity for Industrial Symbiosis.

Most Municipalities do not have a data base of hazardous waste generators hence they are not aware how hazardous waste is disposed. However Greater Tzaneen LM has initiated a good practise in terms of ensuring appropriate disposal of HCRW within their municipality. During the interview, it was mentioned that the municipality has then appointed Buhle Waste (Pty) Ltd to collect HCRW from all private health care facilities within the municipality. The municipality then developed a database of HCRW generators, and they are billed by the LM for their HCRW collection.

At Tzaneen landfill site, the LM allows the community to bring their hazardous e.g. used oil, electronics, light bulbs to the landfill site, the waste is then stored in marked tanks then collected by recyclers. Greater Letaba also have a good initiative whereby the LMs has partnered with recycling companies such as Oilkol for collection of used oil from the municipal workshop, Waste Bureau for collecting tyres and Usizo Suppliers for collecting cartridges for recycling purposes. Though municipalities are not responsible for managing hazardous waste, it is important for LMs to know how hazardous waste produced within their jurisdiction is managed in order to ensure proper disposal of hazardous waste.

4.4.7 Sanitation

This section provides the current status of wastewater treatment facilities within the MDM. Most of these facilities are owned and maintained by government spheres. i.e. the MDM or the LMs. There are about 16 (Sixteen) wastewater treatment facilities within the DM, of which are 7 (Seven) are owned by the DM and 8 (Eight) by the LMs. Table 4-12 details Wastewater Treatment facilities based on 2021 status Quo Sewage facilities in Limpopo Report). Maintenance of these facilities is one of the biggest changes due to limited funds.

Table 4-12: Status of Wastewater Treatment Facilities within MDM

MOPANI DISTRICT MUNICIPALITY				
Greater Tzaneen LM				
Name of a Facility	Ownership	Local Municipality	Status	Action Required
1. Lenyenye Oxidation Ponds	Greater Tzaneen LM	Greater Tzaneen LM	<ul style="list-style-type: none"> • No License • No Operational Plan • Inadequate equipment • Effluent analysis not done 	<ul style="list-style-type: none"> • Application for License • Operational Plan • Clearance of vegetation • Ablution facilities • Effluent analysis
2. Nkowankowa Sewage Works	Greater Tzaneen LM	Greater Tzaneen LM	<ul style="list-style-type: none"> • No License • No Operational Plan • Inadequate equipment • Effluent analysis not done 	<ul style="list-style-type: none"> • Application for License • Operational Plan • Clearance of vegetation • Ablution facilities • Effluent analysis
3. Dr CN Phatudi Hospital Sewage Works	Greater Tzaneen LM	Greater Tzaneen LM	<ul style="list-style-type: none"> • No License • No Operational Plan • Inadequate equipment • Effluent analysis not done 	<ul style="list-style-type: none"> • Application for License • Operational Plan • Clearance of vegetation • Ablution facilities • Effluent analysis
4. Tzaneen Sewage Works	Greater Tzaneen LM	Greater Tzaneen LM	<ul style="list-style-type: none"> • No Waste Management License • Operational Plan not 	<ul style="list-style-type: none"> • Application for Waste Management License • Development of

			<ul style="list-style-type: none"> available Adequate equipment Personnel available Effluent analysis not available 	<ul style="list-style-type: none"> Operational Plan Appointment of effluent analysis conductor
Ba-Phalaborwa LM				
5. Gravelotte Oxidation Ponds	Baphalaborwa LM	Baphalaborwa LM	<ul style="list-style-type: none"> No License Operational Plan not available Inadequate equipment Personnel inadequate Effluent analysis not done 	<ul style="list-style-type: none"> Application for License Operational Plan Clearance of vegetation Ablution facilities Effluent analysis Adequate personnel
6. Lulekani Sewage Works	Baphalaborwa LM	Baphalaborwa LM	<ul style="list-style-type: none"> No License No Operational Plan Adequate equipment No Operator Effluent analysis not done 	<ul style="list-style-type: none"> Application for License Operational Plan Operator Effluent analysis
7. Namakgale Sewage Works	Baphalaborwa LM	Baphalaborwa LM	<ul style="list-style-type: none"> No License No Operational Plan Personnel available Effluent analysis done 	<ul style="list-style-type: none"> Application for License Operational Plan
8. Phalaborwa Sewage works	Baphalaborwa LM	Baphalaborwa LM	<ul style="list-style-type: none"> No License No Operational Plan Inadequate equipment Effluent analysis not available 	<ul style="list-style-type: none"> Application for License Operational Plan Clearance of vegetation Ablution facilities Effluent analysis
Greater Letaba Municipality				
9. Duiwelskloof Hospital Sewage Works	Mopani District Municipality	Greater Letaba Municipality	<ul style="list-style-type: none"> No License No Operational 	<ul style="list-style-type: none"> Application for License Operational Plan

			<ul style="list-style-type: none"> • Inadequate equipment • No ablution facilities • Effluent analysis not done 	<ul style="list-style-type: none"> • Clearance of vegetation • Ablution facilities • Effluent analysis
10. Modjadjiskloof Oxidation Ponds	Mopani District Municipality	Greater Letaba Municipality	<ul style="list-style-type: none"> • No License • Operational Plan available • Inadequate equipment • Personnel inadequate • Effluent analysis not done 	<ul style="list-style-type: none"> • Application for License • Clearance of vegetation • Ablution facilities • Effluent analysis • Personnel
11. Senwamokgope Oxidation Ponds	Mopani District Municipality	Greater Letaba Municipality	<ul style="list-style-type: none"> • No License • No Operational Plan • Inadequate equipment • Effluent not discharged due to flow rate 	<ul style="list-style-type: none"> • Application for License • Operational Plan • Equipment
12. Kgapane Sewage Works	Mopani District Municipality	Greater Letaba Municipality	<ul style="list-style-type: none"> • No License • No Operational Plan • Effluent analysis not done 	<ul style="list-style-type: none"> • Application for License • Operational Plan • Clearance of vegetation • Ablution facilities • Effluent analysis
Maruleng LM				
13. Drakensig Sewage Works	Mopani District Municipality public work	Maruleng LM	<ul style="list-style-type: none"> • No License • No Operational Plan • Inadequate equipment • No ablution facilities • Effluent analysis not done 	<ul style="list-style-type: none"> • Application for License • Operational Plan • Clearance of vegetation • Ablution facilities • Effluent analysis • Equipment
14. Leboeng Sewage Works	Mopani District Municipality	Maruleng LM	<ul style="list-style-type: none"> • No License • No Operational Plan 	<ul style="list-style-type: none"> • Application for License • Operational Plan

			<ul style="list-style-type: none"> • Inadequate equipment • No ablution facilities 	<ul style="list-style-type: none"> • Clearance of vegetation • Ablution facilities • Equipment
15. Hoedspruit Fruit Processors Wastewater Treatment Plant	Mopani District Municipality	Maruleng LM	<ul style="list-style-type: none"> • No License • No Operational Plan • Inadequate equipment • Effluent analysed – not compliant 	<ul style="list-style-type: none"> • Application for License • Operational Plan • Clearance of vegetation • Ablution facilities • Compliance to standards • Equipment
Greater Giyani LM				
16. Giyani Sewage Works	Greater Giyani LM	Greater Giyani LM	<ul style="list-style-type: none"> • No License • No Operational Plan • Adequate equipment • Effluent analysis not done 	<ul style="list-style-type: none"> • Application for License • Operational Plan • Effluent analysis

4.4.8 Waste recycling

This section entails the identification of existing recycling initiatives, their registration status and also indicate the type of recyclable materials in each company, refer to Annexure A for a detailed data base of recyclers. Recycling in MDM is for various waste streams such as glass bottles, paper, plastic, scrap metal and composting just to mention a few.

4.4.8.1 Status of waste recycling

Recycling is practiced in all LMs and mostly dominated in Greater Tzaneen and Ba-Phalaborwa as well as Giyani. Recycling initiatives in MDM are mostly privately owned. There is one cooperative (Bolonoto Secondary Cooperative) in Ba-Phalaborwa LM. Bolonoto Secondary Cooperative is owned by group of women, they have five harbours in different villages (Ga-Selwane, Makhusane, Mashishimale, Matjetje, and Maseke). Ba-Phalaborwa LM has partnered with Foskor mine, and the mine support 15 members of Bonoloto Secondary Cooperative recycling by giving them a stipend.

Reclaimers also plays an important role in reclaiming recyclable materials from the landfill site, and all LMs have reclaimers at their landfill sites. These reclaimers are registered by the LMs in order to keep records of reclaimers working at the landfill site. LMs offer them support though is limited e.g. protective clothing. Greater Tzaneen LM has built partnerships with recycling facilities such as Protonka. Protonka is located adjacent to the landfill site and is working closely with reclaimers, the company collects majority of the recyclables from the landfill site and the surrounding towns, then provides the LM with volumes of recyclable materials.

MDM has established an environmental management forum where environmental issues are discussed, and recycling initiatives are part of this forum. The forum also assists in sharing information such a grant from DFFE that supports recycling initiatives. MDM as well as its LMs have to strengthen the relationships with recycling initiatives as they play an important role in the Circular Economy. During interviews with recycling companies, it was discovered that there several companies that the LMs are not aware of, as a result volumes of recyclable materials within MDM are not accounted for. Most LMs indicated that they are getting volumes of recyclables materials from recycling companies, however; they were unable provide the information on volumes of recycled materials within their respective LMs. In the forum LMs were also encouraged to assist recyclers to acquire land where they can operate.

There are two composting facilities that are privately owned in Greater Tzaneen, with one based at the landfill site, composting organic waste and garden waste at no cost to the LM while the other composting is using cow dung for making compost. Table 4-13 below shows the recycling initiatives that were identified by LMs and the LEDET, as well as their registration status.

Table 4-13: Waste recycling companies and their Status

LMs	Recycling Companies	Registration Status	Operations Status	Recyclable Materials
Greater Tzaneen LM	Protonka Recycling	Registered	Operational	Boxes, glass, papers, aluminium can & bottles
	Zinto Waste Recycling	Registered	Operational	Plastic, polyproline bags, E-waste, broken chairs, cardboard, PET, cans
	MGK Box	Unknown	No longer operational, the owner has retired.	Boxes, glass, papers, can & bottles
	Vors-Cor Recycling	Unknown	operational	Scrap metal
	Tzaneen Recycling Craft	Registered	Unknown	Unknown
	Moraks Recycling previously known as Mothlapedi Trading	Registered	Operational	Plastic, Box, Can & White Paper.
	Finito recycling	Registered	Unknown	Unknown
Greater Giyani LM	Green Holistic Waste Recycling	Not yet registered (application forms provided)	Unknown	Unknown
	JN Recycling	Registered	Operational	Boxes, glass, papers, metals, can & bottles
	Pfuna Scrap	Registered	Operational	Scarp

LMS	Recycling Companies	Registration Status	Operations Status	Recyclable Materials
	MuGwenah Waste	Not Registered	Operational	Cans, Bottles, Cardboard, Plastic, PET, White Paper
	Hard Times Never Kill Recycling Project	Unknown	Unknown	Papers, Bottles, Cardbox, Scrap Metals, Cans
	Makhuva Scrap Metals	Unknown	Unknown	Scrap metals
	Phapadi Scrap Metals	Unknown	Unknown	Ferrous, Papers and Bottles
Greater Letaba LM	Maphalle	Unknown	Operational	Bottles
	Jamela	Unknown	Operational	Bottles
	Tsanakalo Recycling	Unknown	Operational	Unknown
	Lesampho Pty Ltd	Registered	Not yet operational	N/A
	Reaitirela Cleaning Project	Unknown	Operational	Bottles, Plastic, Cardboards and Tins
	Itsoseng Cleaning and General project	Unknown	Operational	Bottles, Plastic, Cardboards, Tins and Scrap metals
	ZZ2 Waste Recycling Project	Unknown	Operational	Bottles, Plastic, Cardboards, Papers, Cans and Scrap metals.

LMs	Recycling Companies	Registration Status	Operations Status	Recyclable Materials
Ba-Phalaborwa LM	Thinavhuu Recycling	Registered	Operational	Cans, Bottles, Card box, Plastic, White Paper
	Bollanoto Secondary Cooperative	Not yet registered (application forms provided)	Operational	Cans, Bottles, Card box, Plastic, White Paper
	Phala Recycling	Not yet registered	Operational	Ferrous & Non-Ferrous Scrap, Glass, Cans
	Zinompilo CC Recycling	Not yet registered	Unknown	Unknown
	Big Five Scrap Metals	Registered	Operational	Ferrous and Non-Ferrous Metals
	NN Metals Recycling Company	Registered	Operational	Ferrous and Non- Ferrous metals
	Municipal garden refuse composting project	Registered	Operational	Garden refuse
Maruleng LM	Makhale Projects Waste	Application has been Lodged & acknowledgement.	Unknown	Unknown
	Molpat Trading and Projects	Registered	Unknown	Unknown

Figure 4-8 and Figure 4-9 below highlight key issues faced by recycling initiatives and reclaimers.

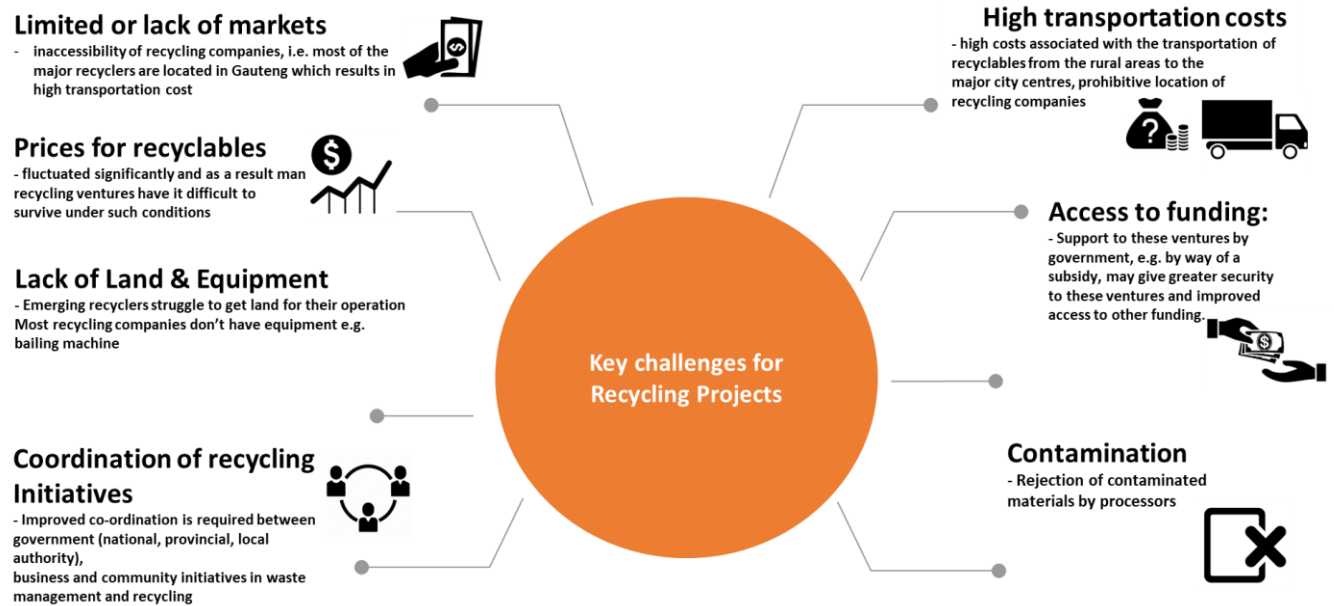


Figure 4-8: Challenges faced by recycling Companies in LMs



Figure 4-9: Main challenges faced by reclaimers in MDM

4.4.9 Waste reporting and information gathering

SAWIS is a national waste information system established in terms of Section 60 of NEM: WA to capture monthly and annual tonnages of waste generated, recycled and disposed of in South Africa. The system is primarily used by government and various waste handling, storage, recycling and recovery, treatment and disposal facilities / industries. Gathering waste related data underpins the advancement and enrichment of integrated waste management in South Africa through the availability, distribution and use of reliable waste information. The purposes of the National Waste Information Regulations (GNR 625 of 2012) are illustrated in Figure 4-10 below.

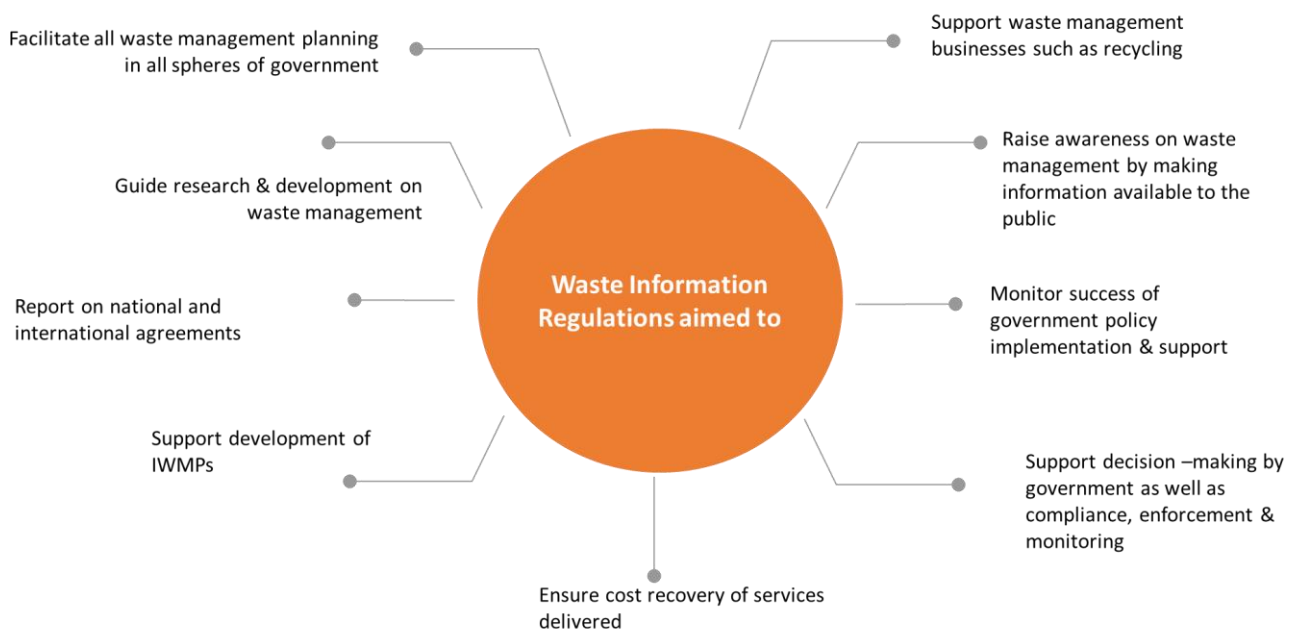


Figure 4-10: The objectives of the National Waste Information Regulations

MDM currently has four operational facilities reporting on the SAWIS. Table 4-14 below, details MDM waste disposal facilities that are registered and reporting on the SAWIS as well as disposal volumes from SAWIC (2019-2021).

Table 4-14: Landfill site SAWIS reporting status quo in MDM

LMs	Disposal Site	Reporting to SAWS	Recording of Vehicles	Disposed volumes per Annually		
				2019	2020	2021
Greater Tzaneen LM	Tzaneen Landfill Site	Yes	Yes	632 48,96	61 332,1	7 755.5
Ba-Phalaborwa LM	Phalaborwa Landfill Site	Yes	Yes	11 83,96	283 86,46	46 834
Maruleng LM	London Landfill Site	Yes	Yes	5 184	5 184	4 480
Greater Giyani LM	Giyani Landfill Site	Yes	Yes	11 509,1	11 198,5	5 335
Mopani Total	All	Yes	Yes	811 26,02	106 101,06	64 404,7

Figure 4-11 below shows the disposal volumes from 2019-2021. Majority of waste disposed at the landfill site is found in Tzaneen LM, the high disposal volumes can be linked to the fact the Tzaneen LM has the highest population within MDM, and Greater Letaba is disposing all its waste in Tzaneen LM. The high disposal volumes will put more pressure on Tzaneen landfill site and shorten its life span. The least disposal volumes are found in Maruleng LM which has with the smallest population as compared to all LMs.

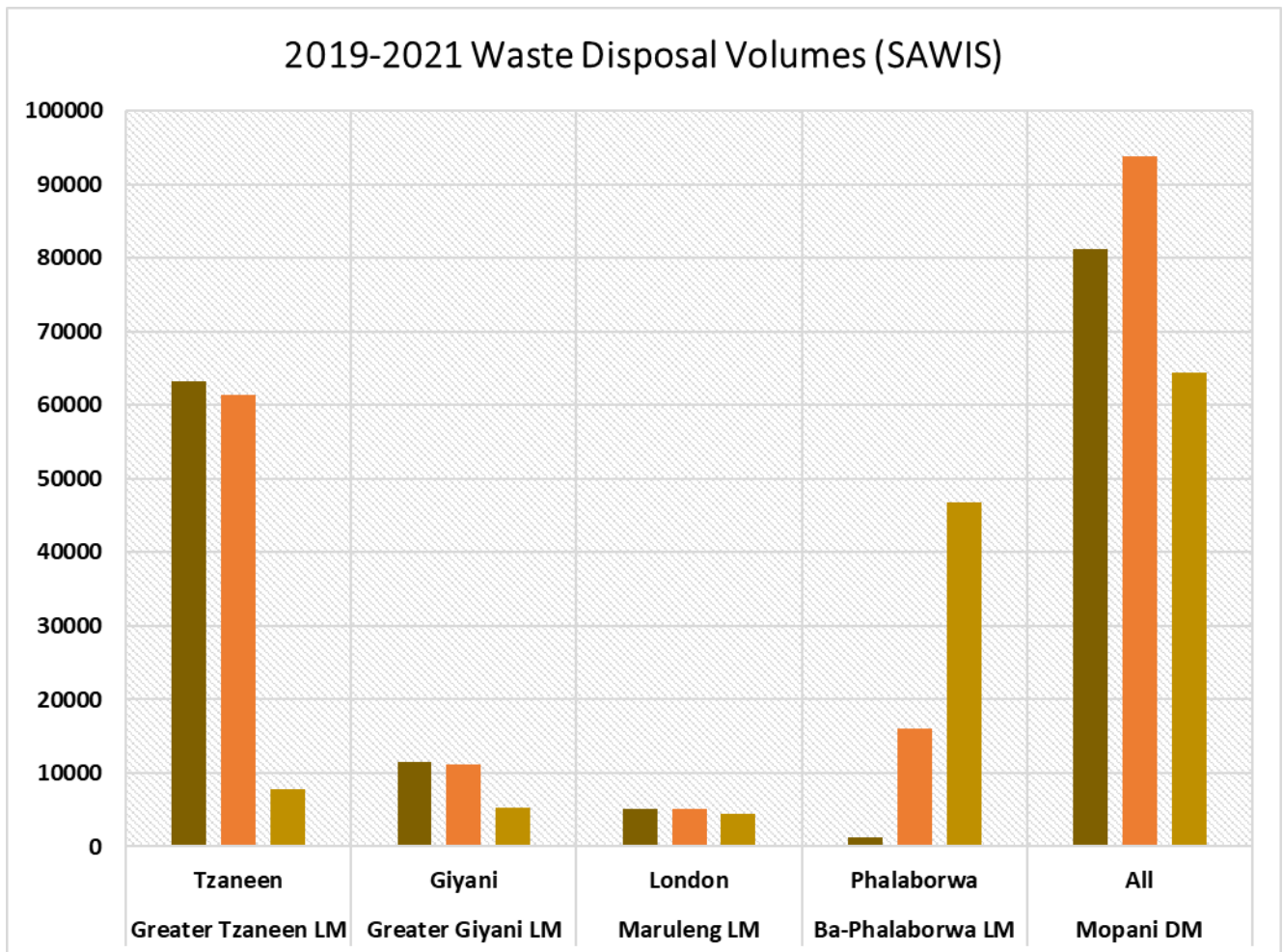


Figure 4-11: Waste Disposal Volumes 2019-2011 (SAWIS)

4.4.10 Determining current domestic waste generation per capita

The DEA IWMP Guidelines (2009) suggests various techniques that can be adopted for estimating waste generation rates and characteristics. These include:

- Modelling techniques – generally an inexpensive technique based on generic data but only provides a general idea of the waste volumes and types;
- Physical sampling techniques – A more accurate method but a more time-consuming and expensive exercise; and
- Direct measurement techniques – even more costly than physical sampling.

For the purposes of the MDM's IWMP, a modelling approach was adopted to estimate waste generation. State of the Environment Report for all income categories. The South African State of Environment Report (SA SoER, 2006) estimated that each individual person generates about 0.7 kg of waste each day. This is further broken down according to income category as follows:

- Low income=0.41kg/person/day
- Middle income=0.74kg/person/day,
- High income=1.29 kg/person/day

The referenced waste generation averages for different income levels were applied to income categories sourced from Census 2011 data. An average density of 330kg/m³ of compacted wastes was used. Figures 4-12 shows district specific demographic information used to calculate future waste generation by the year 2023, which is presented in Tables 4-15 for MDM.

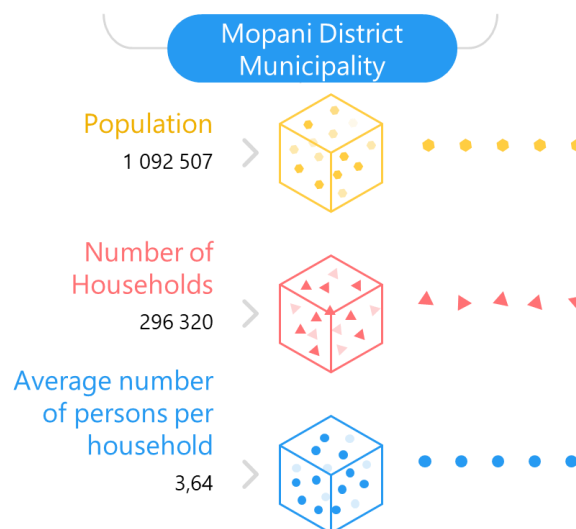


Figure 4-12: Demographics for MDM (Stats SA, 2011).

Table 4-15 Summarises waste generation for MDM.

Table 4-15: 2022 Estimated Waste Quantities for MDM (Stats SA, 2011)

Monthly Household income		%	People	Households	All persons by income group	Income group	SA SoER (kg/capita/day)	Daily Mass (kg/day)	Waste density (kg/m³)	Volume (m³/day)
(Rands)										
No income		14	172813	47476	717689,88	LOW	0,41	294252,85	330,00	891,68
1,00	4 800	8	96141	26412						
4801,00	9600,00	14	168486	46287						
9601,00	19600,00	23	280250	76992						
19601,00	38200,00	20	242274	66559	406434,56	MIDDLE	0,74	300761,57	330,00	911,40
38201,00	76400,00	8	97823	26874						
76401,00	153800,00	6	66337	18224						
153801,00	307600,00	4	49272	13536	82680,95	HIGHER	1,29	106658,43	330,00	323,21
307601,00	614400,00	2	24276	6669						
614001,00	1228800,00	0	5288	1453						
1228801,00	2457600,00	0	1923	528						
2457601,00		0	1923	528						
						Total kg per day		701672,85		2126,28
						Total kg per year		256110589,15		776092,69
						Total tons per year		256110,59		

Based on the analysis above in Table 4-14 it is conservatively estimated that the domestic waste in MDM is in the order of about **256 110,59** tons of domestic waste per year.

4.4.11 Estimating Future Waste Generation Rates and Quantities

Estimating future waste trends using information collected on the domestic waste generation rates for each socio-economic category/type i.e. the population, population distribution, and commercial and industrial waste generation rates. With a growth rate of 0,04 (Stats SA, 2011) per year, the population is expected to increase over the next five (5) years. It is envisaged that the most probable driver of waste generation will be future developments and the change in the socio-economic profile of MDM's population. The main change to the profile of waste collection in MDM will be the expansion of the urban centres as a result of rural to urban migration and the development of these urban areas. This could manifest itself in the following manner:

- Business development across the MDM;
- Mining activities,
- Urbanisation,
- Industries,
- Tourist attractions, and
- Agricultural activities.

Contrastingly, there may be an increase in rural populations too owing to the growth of mines, agricultural activities and tourism in remote areas. Mines do not only employ large amounts of people, but associated industries attract many people looking for employment. Estimation of future waste generation in MDM for the next 10, 20 and 30 are presented in Table 4-16, Table 4- 17 and Table 4-18.

Table 4-16: Estimation of future waste volumes (in 10 years) produced per capita in MDM

Type of settlement	Base population (2011)	Future estimates	Population	Current domestic waste generation rates per capita	Future domestic waste generation rates per capita (in 10 years)
Low Income	717 689,88	752 907.07		12 438,40	$752\,907.07 \times 12438,40 \text{ kg/person/year} =$ $9\,364\,658\,136.66 \text{ kg/person/year}$ Then convert to tons: $9\,364\,658\,136.66 \text{ kg} / 1000 =$ 9 364 658.13 Metric tons
Middle Income	406 434,56	426 378.38		14 834,68	$426\,378.38 \times 14834,68$ $\text{kg/person/year} =$ $6\,325\,186\,826.21 \text{ kg/person/year}$ Then convert to tons: $6\,325\,186\,826.21 \text{ kg} / 1000 =$ 6 325 186. 82 kg Metric tons
High Income	82 680,95	86 738.12		4 763,54	$86738.12 \times 4763,54$ $\text{kg/person/year} =$ $413\,180\,504.14 \text{ kg/person/year}$ Then convert to tons: $413\,180\,504.14 \text{ kg} / 1000 =$ 413 180.504 Metric tons

Table 4-17: Estimation of future waste volumes (in 30 years) produced per capita in MDM

Type of settlement	Base population (2011)	Future Population estimates	Current domestic waste generation rates per capita	Future domestic waste generation rates per capita (in 30 years)
Low Income	717689,88	783571.27	12438,40	$783571.27 \times 12438,40 \text{ kg/person/year} = 9\,746\,371\,019.00 \text{ kg/person/year}$ Then convert to tons: $9\,746\,371\,019.00 \text{ kg} / 1000 =$ 9 746 371.01 Metric tons
Middle Income	406434,56	4436443.46	14834,68	$4436443.46 \times 14834,68 \text{ kg/person/year} = 65\,813\,219\,067.19 \text{ kg/person/year}$ Then convert to tons: $65\,813\,219\,067.19 \text{ kg} / 1000 =$ 65 813 219.06 Metric tons
High Income	82680,95	90270.76	4763,54	$82680,95 \times 90270.76 \text{ kg/person/year} = 7\,463\,672\,194.02 \text{ kg/person/year}$ Then convert to tons: $7\,463\,672\,194.02 \text{ kg} / 1000 =$ 7.463 672.19 Metric tons

Table 4-18: Estimation of future waste volumes (in 30 years) produced per capita in MDM

Type of settlement	Base population (2011)	Future Population estimates	Current domestic waste generation rates per capita	Future domestic waste generation rates per capita (in 10 years)
Low Income	717 689,88	815 484 35	12 438,40	$815\,484\,35 \times 12\,438,40 \text{ kg/person/year} = 10\,143\,320\,539.40 \text{ kg/person/year}$ Then convert to tons: $10\,143\,320\,539.40 / 1000 =$ 101 433 205.39 Metric tons
Middle Income	406 434,56	461 816.49	14834,68	$461\,816.49 \times 14\,834,68 \text{ kg/person/year} = 6\,850\,899\,847.87 \text{ kg/person/year}$ Then convert to tons: $6\,850\,899\,847.87 \text{ kg} / 1000 =$ 6 850 899.84 Metric tons
High Income	82680,95	93947.29	4763,54	$93\,947.29 \times 4\,763,54 \text{ kg/person/year} = 447\,521\,685.04 \text{ kg/person/year}$ Then convert to tons: $447\,521\,685.04 \text{ kg} / 1000 =$ 4471 .68 Metric tons

Table 4-16, Table 4- 17 and Table 4-18 above are on future waste volumes are based on the following assumptions:

- Assuming that the population growth rates will remain constant for the next 30 years;
- Assuming that the per capita waste generation rates would be according to the 2006 State of the Environment Report for all income categories:
 - ✓ Low income=0.41kg/person/day
 - ✓ Middle income=0.74kg/person/day,
 - ✓ High income=1.29 kg/person/day
- Assuming that the waste generation rates would be according to the 2006 State of Environment figures in 30 years' time.

4.4.12 Organisational and Institutional Matters

The LMs have dedicated section under Community Services that implements waste management services, refer to Table 4-19 below. In terms of Section 10(1-3) of NEM: WA, any organ of state that is authorised to carry out waste management services, must designate in writing a Waste Management Officer (WMO) to coordinate waste management at each level of government, this is to ensure that there is a dedicated authority in each sphere of government that is responsible for implementing the policy and regulations of the NEM: WA.

The duties and responsibilities that NEM: WA and the NWMS assign to each sphere of government define the roles and powers of their WMOs. Four LMs (Greater Tzaneen LM, Greater Letaba LM, Maruleng LM and Greater Giyani LM) have designated WMO and Ba-Phalaborwa LM have not designated WMO. It is important that the appointed WMO performs regulatory function and should be allocated functional divisions separate from service-delivery functions where possible. This is particularly important for overseeing adherence to national norms and standards, which is essential to achieving the objectives of NEM: WA. It is necessary that Ba-Phalaborwa LM have designated WMO.

The private sector's involvement in waste management within municipalities is mostly for landfill site maintenance, where municipalities appoint service providers to operate and manage their landfill sites due to lack of appropriate equipment, skills and qualified personnel. Greater Tzaneen LM, Ba-Phalaborwa LM and Maruleng LM have service providers that is responsible for landfill site maintenance. It has been observed that only landfill sites that are managed and maintained by the private sector are the ones that are better maintained within MDM as compared to the ones that are maintained by the LMs.

NEM: WA, as amended under Section 11 (1-5), requires the spheres of government departments responsible for waste management to prepare IWMPs and must submit their IWMPs to the MEC for approval. The endorsed IWMP must then be incorporated in the municipal IDP. LMs are required to ensure proper resources allocation to achieve the targets set in the respective plans. Most municipalities have not finalised their IWMP, and as such IWMP have not been submitted for endorsement and are not incorporated in the IDPs, however; there is limited planning and resource allocation for waste management within municipal IDPs. Greater Letaba is the only LM that has an endorsed IWMP within the district.

Section 13 (3) of NEM: WA requires Municipalities to prepare and submit their annual performance reports on IWMPs, and report must be submitted to the MEC for approval. LMs annual performance reports must be prepared in terms of section 46 of the MSA. The annual

performance reports describe the successes and challenges regarding implementation of the IWMP. Municipalities are encouraged to prepare and submit their annual performance reports.

Municipal waste management By-laws are important and enabling laws to ensure the functionality of waste management system at local level. With respect to By-laws within the district only Greater Giyani LM and Greater Tzaneen LM have finalised and gazetted their By-laws. Environmental Management Inspectors (EMIs) play an important role in enforcing waste management By-laws.

EMIs are officials designated to carry out environmental compliance and enforcement functions in terms of the NEM: WA, and other relevant national, provincial, local legislations and By-laws. The EMIs are tasked with ensuring that all environmental legislation is complied with and properly enforced where contraventions are detected. Greater Tzaneen LM and Ba-Phalaborwa LM have not trained, designated and/or appointed EMIs. Lack of EMIs prohibits enforcement of By-laws, hence illegal dumping and littering is one of the most common problems in MDM.

Table 4-19: Organizational and Institutional matters

Municipality	Department Responsible for Waste Management	Status of IWMP	By-laws Status/Waste Policy	Waste Tariffs	Private Sector Involvement in waste Management	Designation of WMO	Staff Training & Development
MDM	Community Services	Currently been Developed	Draft	N/A	N/A	Not Designated	EMI
Greater Tzaneen LM	Community Services	Draft to be reviewed internally using DFFE online system	Gazetted Refuse Removal, Refuse Dumps & Solid Waste Disposal By-law (2019)	Yes	Landfill Maintenance, Recycling & Composting	Designated	None
Ba-Phalaborwa LM	Community Services	Draft (developed 2022 internally using DFFE online system)	Draft Waste management By-laws & Draft Waste Management Policy	Yes	Landfill Maintenance & Recycling	Not Designated	None
Greater Giyani LM	Community Services	Draft (developed 2011) will be reviewed internally with assistance of DFFE.	Gazetted Solid Waste Management By-laws	Yes	Recycling	Designated	EMI
Maruleng LM	Community Services	Draft (developed 2014, currently being reviewed internally)	Waste Management By-laws	Yes	Landfill Maintenance & Recycling	Designated	EMI

Municipality	Department Responsible for Waste Management	Status of IWMP	By-laws Status/Waste Policy	Waste Tariffs	Private Sector Involvement in waste Management	Designation of WMO	Staff Training & Development
		using DFFE online system)	developed, not yet gazetted.				
Letaba LM	Community Services	Developed 2022 internally, approved by Council & endorsed by MEC.	Draft waste management By-laws	Yes	Recycling	Designated	EMI

Continuous training and succession planning are crucial to maintain a competent and capable pool of employees as the municipality needs to be structured and restructured to ensure that positions are not left vacant and are filled with productive personnel. To ensure continued service and effective skills transfer, a need analysis should be conducted in order to ensure that the correct functions are put in place to fulfil NEM: WA's requirements. Successful implementation of IWMPs is dependent on the availability of qualified personnel.

Based on information received from LMs, the staff that is available is not sufficient for the implementation of waste management functions. It is necessary to ensure that the organograms of municipalities are responsive to the IWMP as far as waste management sections are concerned. Effective implementation of the waste functions with the MDM depends on the availability of sufficient staff within the waste sector, refer to the Figure 4-13 below. The organogram below did not take into consideration the size of the municipality but the necessary personnel that play an effective role in waste management, therefore depending on the size of the LMs, municipalities will determine the number of personnel needed according to their specific needs.

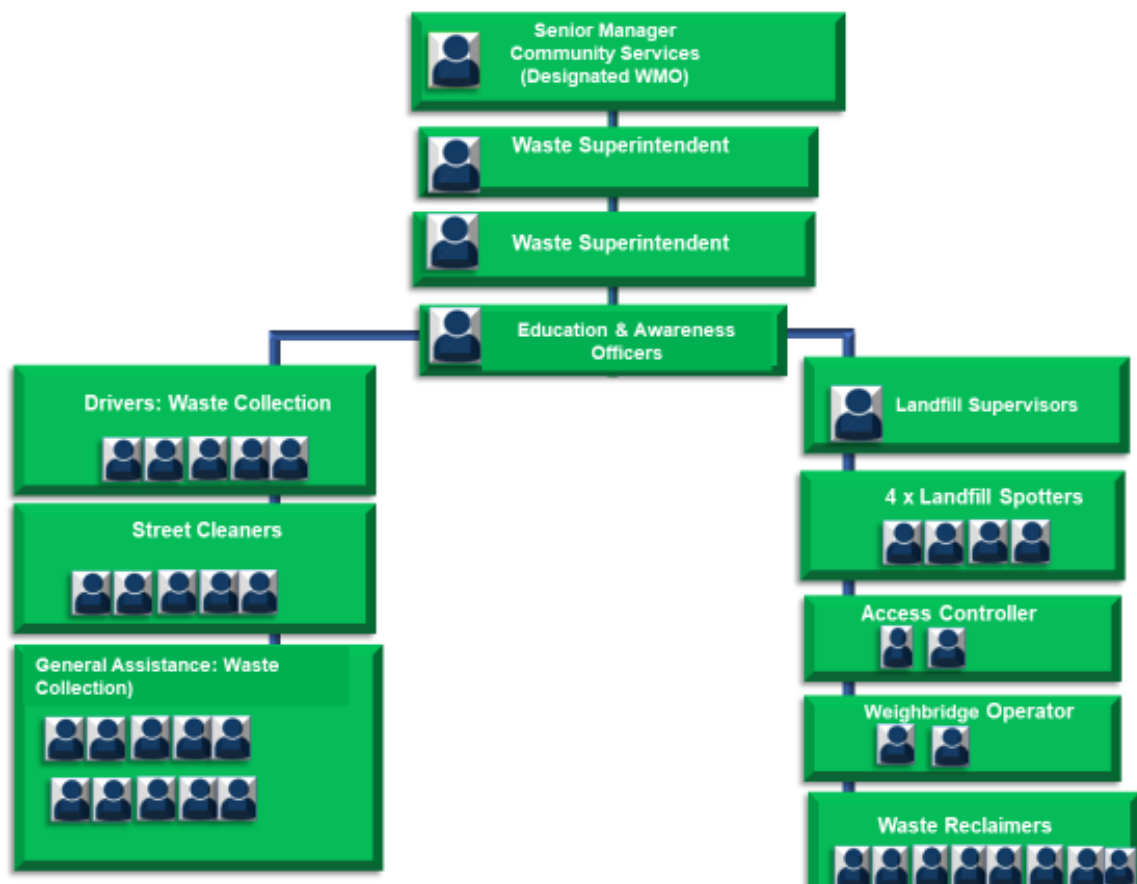


Figure 4-13 : Proposed Waste Management Organizational Structure for LMs within MDM

5 GAPS AND NEEDS ASSESSMENT

The aim of the gap analysis is to identify gaps, needs and opportunities arising from the current waste management practices within the district. Identifying the waste management priorities and goals that MDM wants to achieve includes the following:

- Identifying key waste management gaps;
- Developing strategic goals for the IWMP;
- Developing an implementation plan; and
- Identifying the different alternatives that can be employed to achieve the desired end state it should indicate the different approaches to achieve the targets.

5.1 DESIRED END STATE

The desired end state entails identifying waste management priorities and goals that the MDM wish to attain. This will assist the district in its strategic planning and prioritisation efforts to ensure that the LMs receive the help and support they need to achieve their intended end state. Information from the status quo was used to develop strategic goals with the aim of addressing the gaps and needs of the communities within the district and respond to NEM: WA objectives. In general, waste management gaps or challenges are common to most LMs. Summary of key waste management issues is highlighted Table 5-1 below.

Table 5-1 Summary of Main Waste Management Issues in the MDM

Themes	Current Issues & Observations
1. Integrated Waste Management planning & Implementation	<ul style="list-style-type: none"> • IWMPs are not finalised, not approved by council & not endorsed by MEC and some updated. <ul style="list-style-type: none"> ✓ Ba-Phalaborwa LM- The Draft was prepared internally in 2022 using the online system of the DFFE. ✓ Greater Giyani LM- outdated developed in 2011, to be updated via the appointment of the consultant by the DFFE. ✓ Greater Letaba LM – Final IWMP developed in 2022 internally using the DFFE online system & Approved council and endorsed by the MEC. ✓ Greater Tzaneen LM- Draft, the update was prepared internally using DFFE web-portal. ✓ Maruleng LM- outdated developed in 2014, however the IWMP is currently being reviewed internally using the DFFE online system. • IWMPs are not incorporated in the IDPs. • No designated WMO <ul style="list-style-type: none"> ✓ Only Ba-Phalaborwa LM has not designated a WMO. ✓ Maruleng WMO designation letter has been sent to the province.
2. Institutional Framework	<ul style="list-style-type: none"> • Organisational structures that are not conducive to efficient waste management. <ul style="list-style-type: none"> ✓ There are vacant positions under waste management units in LMs and there is no budget allocated for vacant posts. ✓ Greater Letaba and MDM has not appointed WMO to carry waste management functions. ✓ Limited finances and resources some of the officials not having basic resources such as laptops, phones etc. ✓ Skills and capacity within LMs are only focussed on operational issues e.g. waste collection and

Themes	Current Issues & Observations
	waste disposal, not strategic aspects of waste management.
3. Regulatory framework	<p>Municipalities have a legal obligation to comply to with legislations and government policy that governs waste management in South Africa.</p> <ul style="list-style-type: none"> Waste Management By-laws are either in draft or not gazetted, and this hinders enforcement as they By-laws are not legally binding. <ul style="list-style-type: none"> ✓ Ba-Phalaborwa LM- Draft Waste Management By-laws & Draft Waste Management policy (Both are not dated). ✓ Greater Letaba LM - Draft Waste Management By-laws. ✓ Maruleng LM- Waste Management by laws have not been gazetted. Lack of regulatory enforcement capacity due to staff shortages at LM level. <p>Landfill Audit Reports</p> <ul style="list-style-type: none"> ✓ Annual external audits and quarterly internal audits are not conducted. ✓ Greater Tzaneen LM conducts internal landfill site audit. ✓ Maruleng conducts external audit report. ✓ Ba-Phalaborwa LM currently identified relevant stakeholders for internal landfill site audit of which the first meeting will start around October 2022. <p>EMIs</p> <ul style="list-style-type: none"> ✓ No training and designation of EMIs for Ba- Phalaborwa LM. Two officials are delegated to attend

Themes	Current Issues & Observations
	<p>the EMI course in October 2022.</p> <ul style="list-style-type: none"> ✓ Few waste management officials are trained as EMI for Maruleng LM, Greater Giyani, Greater, Greater Letaba. LM & Ba-Phalaborwa LM. ✓ Tzaneen LM no longer have EMI trained, all trained EMIs have been moved to MDM. • LMs are not drafting and submitting their annual IWMP performance reports.
<p>4. Waste minimization, reuse and recycling</p>	<ul style="list-style-type: none"> • Few formal recyclers within the district, however there are few recycles/reclaimers who are collecting recyclable material in all Local Municipalities. • Greater Giyani, Greater Letaba and Maruleng LMs have non-operational Buy-Back Centres which could be used to divert waste from landfill and to recover the waste material for the waste economy. • LMs rely only on privately owned recycling initiatives, not much effort is given to waste minimization, reuse and recycling. • There is minimal separation at source which take place at shops in some LMs. • There is a great deal of recyclable materials that goes to landfill sites (e.g. glass, cardboard, paper, plastic, metal etc.), as such there is limited recycling, considering the amount of recyclable material at the landfill sites. • Informal "reclaimers" at landfills often work without personal protective equipment (PPE). This exposes them to health and safety problems. • Reclaimers have challenges with regard to waste transportation, as recyclables are only recycled in Gauteng. • There are challenges regarding acquiring of land for new developing reclaimers.

Themes	Current Issues & Observations
	<ul style="list-style-type: none"> • Heavy reliance on waste disposal, only a small percentage of waste is being diverted from landfill. • Few effective partnerships with the private sector. <ul style="list-style-type: none"> ✓ Ba-Phalaborwa LM has partnered with Foskor mine and the mine has sponsored fence of the new landfill site, Foskor mine gives stipend 15 members of Bolonoto Secondary Cooperative and 16 from community who are assisting in cleaning the town & the mine has the LM in securing skip truck and 30 skips. ✓ Letaba LM has partnered with Protonka for recycling papers, boxes, cans, plastics and submit to monthly statistics on the quantities recycled, Usizo for collecting E-waste and Oilkol for collecting used oil, Waste Bureau for used tyres. ✓ Greater Tzaneen has partnered with Protonka for recycling papers, boxes, cans, plastics and submit to monthly statistics on the quantities recycled, Composting company based at the landfill site for composting garden & organic waste. ✓ Giyani LM has partnered with recycling company to get volumes of recyclables materials. • A large portion of commercial waste consists of packaging material that is recyclable but is sent to landfills instead of being recycled.
5. Capacity and Awareness	<ul style="list-style-type: none"> • Limited waste management awareness conducted within LMs. • Limited skilled personnel on waste related issues. • Public understanding of ethical and sustainable waste management practices is low. • Few partnerships with educational facilities such as schools.
6. Municipal waste services	<ul style="list-style-type: none"> • Waste collection services are not rendered in other areas falling within LMs jurisdiction particularly rural areas. • LMs have initiative in place that are used to maximize waste collection in areas that are not receiving

Themes	Current Issues & Observations
	<p>waste collection.</p> <ul style="list-style-type: none"> ✓ Greater Tzaneen LM has numerous drop offs in schools as a way of extending waste collection services in rural. ✓ Greater Letaba LM has a transfer station and placed skip bins in strategic places and do regular illegal dumps clean ups. ✓ Ba-Phalaborwa LM has received donation of compactor truck and TLB from DFFE; skip truck and 30x skip bins which are addressing and maximizing waste collection services in rural and also clearing the illegal dumps. There is a Mayoral Basisa Sweswi clean-up campaign launched by the mayor which concentrates in providing waste collection services in rural. ✓ Greater Giyani LM has piloted waste collection services in rural in three villages, namely; Ngove, Siyandhani and Xikukwani villages. <ul style="list-style-type: none"> • Inadequate municipal infrastructure e.g. landfill sites don't have proper structures like weighbridges, ablution facilities etc. and some are licensed for closure but still operational e.g. Phalaborwa landfill site. • Inadequate waste management fleet, some of the available fleets are old with frequency breakdown due to lack of maintenance. • Most skip bins are damaged. • Legislative compliance of waste management facilities require improvement. • Inadequate budget allocation for waste management services in the municipalities. • Cost recovery from waste management services is a problem. • Lack of operational weighbridges for quantifying waste resulting in imprecise reporting. • Illegal dumping is predominant, even in areas receiving waste collection.

Themes	Current Issues & Observations
7. Health Care Risk Waste and Hazardous waste	<ul style="list-style-type: none"> Monitoring hazardous waste disposal generated from private sectors as surgeries, funeral parlours, mechanics is conducted by Environmental Health Practitioners (EHPs).

6 THE NATIONAL WASTE MANAGEMENT STRATEGY (NWMS) GOALS

The National Waste Management Strategy (NWMS) 2011 was established to achieve the NEM: WA objectives. NWMS 2011 was based on eight goals, each with one or more associated targets, however in 2018 the NWMS was revised and updated to focus on three overarching goals that are intended to articulate the core objectives of the NEM: WA. The NWMS 2019 provide a simpler conceptual structure based on three main implementation themes framed as overarching goals informed by global emerging trends in waste management. The associated targets have been replaced with a set of strategic objectives for each goal, which will be monitored in terms of performance indicators.

6.1 2011 NWMS goals in transition as outlined in the reviewed and updated NWMS 2019

Although the 2019 NWMS has adopted the three overarching goals as the thematic focus for implementation, the strategic imperatives informing the 2011 NWMS goals have not been abandoned. The mapping of the 2011 goals to thematic goals in the 2019 NWMS is described Table 6-1 below.

Table 6-1 2011 NWMS goals in transition as outlined in the reviewed and updated NWMS 2019

2011 NWMS goals in transition as outlined in the reviewed and updated NWMS 2019

2011 Goal 1: Promote waste minimisation, re-use, recycling, and recovery of waste services

This is largely addressed under the thematic goal on waste minimisation (Goal 1) in the 2019 NWMS, which has been revised and updated to address waste as a component, including measures such as extended producer responsibility and industrial symbiosis.

2011 Goal 2: Ensure the effective and efficient delivery of waste services

The 2019 NWMS includes a goal on service delivery that builds on progress made in terms of the 2011 targets. Separation at source, which is dealt with under Goal 1 in the 2011 Strategy, is addressed as a service delivery issue in the revised strategy, while licencing of landfills is addressed as an issue of compliance.

2011 Goal 3: Grow the contribution of the waste sector to the green economy

The goal is now viewed as being an inherent outcome of sound waste management practices and the 2011 goal has been embedded throughout the strategy, with the environmental and socio-economic impact of the activities for each objective being unpacked at high level.

2011 Goal 4: Ensure that people are aware of the impact of waste on their health, well being

In the 2019 NWMS this goal is addressed as an aspect of improving levels of compliance with the Waste Act (Goal 3), with a focus on addressing the issues of littering and illegal dumping. This reflects the fact that while progress has been made in relation to the 2011 targets for running awareness programmes in

2011 NWMS goals in transition as outlined in the reviewed and updated NWMS 2019

schools and municipalities, littering and illegal dumping remain serious challenges.

2011 Goal 6: Achieve Integrated waste management planning

In the 2019 NWMS, the 2011 targets for integrated waste management planning and reporting to SAWIS are addressed as an aspect of service delivery (Goal 2) in terms of strategic objectives relating to planning and reporting. The importance of provincial IWMPs and provincial oversight and reporting on local IWMPs is emphasised, as well as the need to improve the quality of waste sector information.

2011 Goal 7: Provide measures to remediate contaminated lands

The primary administrative 2011 targets associated with this goal have largely been met through effective implementation of the contaminated land measures in the Waste Act. Consequently, further progress is treated as a matter of achieving awareness and compliance the 2019 NWMS.

2011 Goal 8: Established effective compliance with and enforcement of the Waste Act

In the revised strategy, the objective of the Waste Act that the 2011 goal is intended to give effect to are primarily addressed in Goal 3, which links compliance and enforcement with awareness,

6.2 Roles and Responsibilities of local government as per the NWMS 2019

District and Local Municipalities are critical in the implementation of NWMS goals as they are responsible for the planning and delivery of waste collection, disposal services and infrastructure. District municipalities are primarily responsible for providing technical support to local municipalities and assisting with regional planning and coordination. Waste collection and disposal to landfill is typically undertaken by local municipalities. As part of the implementation of the NWMS, local government needs to shift the focus of waste collection services to incorporate separation at source to promote diversion of waste from landfills through reuse, recycling and recovery. Addressing waste management issues that are specific to the economic, social, and environmental profile of the district is key to ensure effective waste management.

6.3 2019 NMWS THREE OVERARCHING THEMES, GOALS AND STRATEGIC OBJECTIVES

The 2019 NWMS is focused on three overarching themes, which are intended to articulate the core objectives of the NEM: WA. The Themes include (i) Waste Minimisation, (ii) Effective and Sustainable Waste Services and (iii) Awareness and Compliance. Each theme has a corresponding goal and associated strategic objectives with reference to NEMWA as indicated in Table 6-2 below.

Table 6-2: 2019 NWMS Themes, Goals and Strategic Objectives

Theme 1: Waste minimisation	
Goal 1	Prevent waste, and where waste cannot be prevented, divert 50% of waste from landfill within 5 years; 65% within 10 years; and at least 80% of waste within 15 years through reuse, recycling, and recovery and alternative waste treatment.
Strategic Objectives	<p>Waste Prevention:</p> <ul style="list-style-type: none"> • Prevent waste through cleaner production, industrial symbiosis, and extended producer responsibility • Prevent food waste by working with agricultural producers, retailers, the hospitality sector and consumers. <p>Waste as a Resource:</p> <ul style="list-style-type: none"> • Divert organic waste from landfill through composting and the recovery of energy • Divert construction and demolition waste from landfill through beneficiation • Increase recycling and recovery rates • Increase technical capacity and innovation for the beneficiation of waste
NEWMA	<ul style="list-style-type: none"> • Minimising the consumption of natural resources; • Avoiding and minimising the generation of waste; • Reducing, re- using, recycling, and recovering waste; • Treating and safely disposing of waste as a last resort; • Preventing pollution and ecological degradation; • Securing ecologically sustainable development while promoting justifiable economic and social development;
Theme 2: Effective and Sustainable Waste Services	
Goal 2	All South Africans live in clean communities with waste services that are well managed and financially sustainable
Strategic Objectives	<p>Waste Collection:</p> <ul style="list-style-type: none"> • Implementation of the DEA separation at source policy to promote reuse, recycling, and recovery of waste

	<ul style="list-style-type: none"> • Safe and environmentally sustainable disposal of hazardous household wastes. <p>Integrated Waste Management Planning:</p> <ul style="list-style-type: none"> • Provinces provide effective regional guidance and oversight in the development and implementation of metro, district and local municipality IWMPs within the context of overarching PIWMPs • All local authorities to include provisions for recycling drop- off /buyback /storage centres in their IWMPs by 2020
NEWMA	<ul style="list-style-type: none"> • Promoting and ensuring the effective delivery of waste services; • Achieving integrated waste management reporting and planning;
Theme 3: Awareness and Compliance	
Goal 3	South Africans are aware of waste and a culture of compliance with waste management norms and standards exists, resulting in zero tolerance of pollution, litter, and illegal dumping.
Strategic Objectives	<ul style="list-style-type: none"> • Reduction of littering and illegal dumping due to attitudinal shifts and greater public awareness of the environmental damage caused by waste; • Enhanced capacity to enforce the Waste Act and International Agreements on waste and pollution; • Municipal landfill sites and waste management facilities comply with licensing standards; • All local authorities to include provisions for recycling drop- off /buyback /storage centres in their IWMPs by 2020.
NEWMA	<ul style="list-style-type: none"> • To ensure that people are aware of the impact of waste on their health, well -being and the environment; • To provide for compliance with the measures set out in paragraph (a) • Generally, to give effect to section 24 of the Constitution in order to secure an environment that is not harmful to health and well -being

7 ALIGNMENT WITH LIMPOPO PROVINCIAL INTEGRATED WASTE MANAGEMENT PLAN (PIWMP)

Limpopo Province developed a PIWMP in 2019. This plan sets objectives to satisfy the needs for a reasonable plan to address waste management shortcomings. The Table 7-1 below has been prepared to present the key goals of the PIWMP and how they are aligned with the district IWMP goals to satisfy the listed goals.

Table 7-1 Alignment of PIWMP with district IWMP

PIWMP Goals	Mopani IWMP Goals
Goal 1: Expansion of Waste Services and Cost Recovery	Goal 5
Goal 2: Establishment of Licensed and Well-Managed Waste	Goal 6
Goal 3: Encourage Waste Minimization Initiatives and Promoting Recycling Initiatives	Goal 4
Goal 4: Hazardous Waste Management	Goal 8
Goal 5: Strengthening Institutional Capacity for Waste Management	Goal 2
Goal 6: By-Law Development and Strengthening Enforcement Capacity	Goal 3
Goal 7: Education and Awareness on Waste Issues	Goal 2
Goal 8: Facilitate and guide Regionalization	-
Goal 9: Risk Assessment, Monitoring and Evaluation	Goal 2
Goal 10: Research and Development into Emerging Issues	-

8 SETTING STRATEGIC GOALS, TARGETS, INDICATORS AND INSTRUMENTS FOR IMPLEMENTATION

The achievement of the district's strategic goals and targets within the allotted timeframes from the date the IWMP is approved must have a quantifiable target date and precise timeframe. The targets date for each strategic goal can also be allocated to the following three broad timeframes as follows:

- Immediate term Targets (Attainable within 0 to 1 year)
- Short term Targets (Attainable within 1 to 3 years)
- Medium Term Targets (Attainable within 4 to 7 years)
- Long Term Targets (longer than 7 years)

The strategic goals that must be accomplished are listed in Table 8-1 below. The strategic goals are informed by waste management issues and observations identified during the status quo analysis. The waste management hierarchy serves as a guide for the established strategic goals, which are based on waste legislation and policies. To assess the achievement of accomplishing a goal, key performance indicators are also included for the relevant goals. The instruments to be utilized are given, and the sphere of government responsible for implementation are identified and listed, given the fact that responsibilities pertaining to waste management differ throughout government structures. Lastly, an estimated budget is provided to allow to for appropriate financial planning.

Table 8-1: Setting Strategic Goals, Targets, Indicators, and Instruments for Implementation

GOAL 1: ACHIEVE INTEGRATED WASTE MANAGEMENT PLANNING						
Objectives	Target	Key Performance Indicator	Responsible Department	Timeframes	Resources/ Cost Estimates	
Ensure effective planning and implementation for integrated waste management	Finalise & endorse all municipal IWMPs.	Approved IWMP by the Municipal Council. Endorsement Letter from the MEC.	LM, DM & Province.	0-1 year	Human Resources.	
	Integrate IWMPs in municipal IDPs.	Number of IWMPs integrated in Municipal the IDPs.	LM & DM.	0-3 years	Human Resources.	
	Implementation of IWMPs by all municipalities.	IWMP Implementation reports.	LM, District & Province	0-1 year	Human Resources.	
	Review all Municipal IWMPs.	Number of Reviewed and IWMPs.	LM, DM & Province	4-7 years	Human Resources.	
	Designate WMOs	Number of municipalities with designated WMOs	LM & DM.	0-1 year	Human Resources	
	Support the development plans to roll out waste collection to the areas not receiving waste collection.	Increased number of households receiving waste collection.	LM & DM.	0-1 year	Human Resources.	

GOAL 2: STRENGTHEN INSTITUTIONAL CAPACITY & CREATE AWARENESS FOR WASTE MANAGEMENT						
Objectives	Target	Key Performance Indicator	Responsible Department	Timeframes	Resources/ Estimates	Cost
Increase capacity on waste Management.	Appoint WMO for implementation of the DIWMP	Appointment letter.	DM.	1-3 years	R500 000 per annum	
	Increase number of waste management personnel in LM	Appointed waste management personnel.	LM & DM.	1-3 years	The budget for personnel is dependent on the post level and number of positions.	
Promote awareness & education on integrated waste management.	Develop a waste management education awareness strategy for the district.	Education & Awareness strategy.	LM, DM & Province.	1-3 years	Human Resource	
	Support LM education and awareness programmes.	Number of education & awareness programmes attended.	LM, District & Province.	0-1 years	Human Resource	
	Collaborations with education and training institutions.	Partnerships with schools.	LM, District & Province.	0-1 years	Human Resource	

GOAL 3: IMPROVE COMPLIANCE WITH REGULATORY FRAMEWORK

Objectives	Target	Key Performance Indicator	Responsible Department	Timeframes	Resources/ Cost Estimates
Strengthen compliance & monitoring enforcement	Finalise and gazette waste management By-laws.	Number of gazetted waste management By-laws.	LM, DM & Province	0-1 years	Human Resource
	Enforcement of waste management of By-laws.	Non- compliance notices issued.	LM & DM	1-3 years	Human Resource
	Provide EMI Training.	Number of EMIs trained & endorsed.	LM, DM & National.	1-3 years	R10 000 per person
	Conduct quarterly internal landfill sites audit. Conduct annual external landfill sites audit.	Quarterly & annual external landfill sites audit reports developed.	LM & DM.	0-1 years	Human Resources R50 000 per Audit
	Draft annual IWMP performance reports.	Annual IWMP performance reports developed & submitted.	LM & DM.	0-1 years	Human Resources

GOAL 4: PROMOTE WASTE MINIMISATION, RECYCLING, RE-USE & RECOVERY

Objectives	Target	Key Performance Indicator	Responsible Department	Timeframes	Resources/ Estimates	Cost
Reduce waste disposal at landfill sites by promoting waste diversion through re-use, recycling & recovery.	Reduce landfill waste disposal by at least 50%.	Recycled tonnages within LM. Tonnages of waste disposed at landfill site	LM & DM	4-7 years	Human Resource	
	Support formalisation of at least five recycling initiatives & support existing recycling initiatives.	Number of formalised recycling initiatives & support given to recycling initiatives.	LM, DM & Province	1-3 year	Human Resource	
	Support organic waste composting initiatives.	Number of partnerships with organic waste composting initiatives	LM, DM & Province	0-1 year	Human Resource	
	Divert waste disposal of tyres from landfill by partnering waste tyre recyclers.	Partnership developed with waste tyre recyclers.	LM & DM.	0-1 year	Human Resource	
	Initiate collaboration of LM for knowledge and skills transfer regarding hazardous waste recycling e.g., used oil, tyres, fluorescent tubes &	Collaboration of LM.	LM & DM.	0-1 year	Human Resource	

GOAL 4: PROMOTE WASTE MINIMISATION, RECYCLING, RE-USE & RECOVERY

Objectives	Target	Key Performance Indicator	Responsible Department	Timeframes	Resources/ Cost Estimates
	electronic waste.				
	Support waste reclaimers at the landfill sites with the necessary PPE and training.	Support given to waste reclaimers.	LM & DM.	1-3 years	R 12 000 per year, as per the identified needs.
	Form partnerships with all recyclers within the district.	Partnerships formed & volume of recycled materials.	LM & DM.	0-1 year	Human Resource
Assess feasibility for industrial symbiosis implementation.	Undertake feasibility study for implementation of industrial symbiosis.	Feasibility report and implementation plan.	LM & DM.	1-3 years	Human Resource
Initiate programmes for separation of waste at source	Initiate at least five programmes for the separation of waste at source at each local municipality	Number of separations at source programmes initiated e.g., separation packaging materials at shops.	LM, DM & Province	1-3 years	Human Resource

GOAL 5: EXPAND WASTE MANAGEMENT SERVICES						
Objectives	Target	Key Performance Indicator	Responsible Department	Timeframes	Resources/ Estimates	Cost
Increase waste collection services	Increased number of households receiving waste collection	Number of new areas receiving waste collection.	LM & DM	1-3 years	Resources (Human & Financial)	
	Have Drop off centres in areas where there are no waste collection services.	Number of drop off centres created	LM & DM	1-3 years	Resources (Human & Financial)	
Increased number of waste management fleet and develop fleet maintenance plan	Support LMs in acquiring waste management fleet from the province. Support LM to have develop fleet maintenance plan. Encourage proper maintenance of waste management fleet.	Number of functional waste management fleet. Effective maintenance plan.	LM & DM	1-3 years	Human Resources	
Reduce illegal dumps	Conduct cleaning campaigns and awareness	Number of cleaning campaigns and awareness conducted as well as reduced illegal dumps.	LM, DM & Province.	0-1 years	R50 000	

GOAL 5: EXPAND WASTE MANAGEMENT SERVICES

Objectives	Target	Key Performance Indicator	Responsible Department	Timeframes	Resources/ Cost Estimates
	Provide skip bins in areas where illegal dumps are major.	Increased number of skip bins provided.	LM & DM.	1-3 years	R20 000 per skip bin

GOAL 6: IMPROVE MANAGEMENT OF DISPOSAL FACILITIES						
Objectives	Target	Key Performance Indicator	Responsible Department	Timeframes	Resources/ Estimates	Cost
Support sound management of landfill sites and waste management facilities to comply with licensing standards.	Conduct workshops on landfill sites operations and facility management. Form partnerships and encourage skills transfer with well performing LMs.	Number of workshops conducted & partnerships developed.	LM & DM	0-1 year	Human Resource	
	Support LMs to secure funding for new landfill sites development. Close & rehabilitate landfill sites that have been issued with closure certificate.	Newly developed landfill sites. Closed and rehabilitated landfill sites.	LM & DM	4-7 year	Resources (Human & Financial)	
	Encourage landfill sites monitoring and auditing.	Landfill sites monitoring and audit reports	LM & DM	0-1 year	Human Resource	
GOAL 7: WASTE INFORMATION REPORTING						
Objectives	Target	Key Performance Indicator	Responsible Department	Timeframes	Resources/ Estimates	Cost
Improve waste information reporting.	Ensure that both private & local government landfill sites within the district are	Number of registered landfill sites & quarterly SAWIS reports.	LM & DM	0-1 year	Human Resource	

	registered and reporting on South African Waste Information System (SAWIS).				
GOAL 8: HAZARDOUS WASTE MANAGEMENT					
Objectives	Target	Key Performance Indicator	Responsible Department	Timeframes	Resources/ Cost Estimates
Identify hazardous waste producers & collectors in the district.	Develop a data base of hazardous waste producers such as funeral parlours, mechanics, filling stations, mines etc. Develop partnerships with hazardous waste collectors to ensure safe disposal.	Hazardous waste producers & collectors data base. Waste disposal certificates.	LM & DM	0-1 year	Human Resource
Identify Health Care Risk Waste (HCRW) producers & collectors in the district.	Develop a data base of HCRW producers & collectors. Develop partnerships with HCRW waste collectors to ensure safe disposal.	HCRW producers & collectors data base. Waste disposal certificate.	LM & DM	0-1 year	Human Resource

9 COMMUNICATION AND STAKEHOLDER ENGAGEMENT

Sections 11(1&4) read with Sections 73 of the NEM: WA as amended was followed for stakeholder consultation and the Public Participation Process (PPP). The purpose of this section is to outline the stakeholder approach, the stakeholders involved, and the consultative process is followed. Throughout the IWMP's development, there was continual stakeholder interaction. Two "groups" of stakeholders are involved in the process: a smaller, more specialized Project Steering Committee (PSC) made up of the Mamadi technical team, the district project management team, LEDET, DFFE, and local municipalities; as well as a wider, more diverse group of stakeholders (The general public). The process places a lot of emphasis on the direct and beneficial participation of stakeholders in reviewing and providing input on the IWMP.

A detailed stakeholder engagement is attached as an Annexure B, explaining the process used to make sure that the public and stakeholders were informed about the project and given an opportunity to comment of the report. The report will go into detail on the strategy used for stakeholder engagement. The report then goes into greater detail about raising awareness among stakeholders and consulting with them (e.g., by placing newspaper ads, holding public meetings, disseminating information to the general public, and developing a project database, communicating with I&APs, and making the draft IWMP report available). Last but not least, the report will include a comments and response trail that lists the stakeholder comments and replies provided by Mamadi.

10 IMPLEMENTATION INSTRUMENTS

10.1 PARTNERSHIPS

The development of partnerships has been identified as an important mechanism for providing the required support for the implementation of the IWMP. The costs and needs of a sustainable waste management system are very high and therefore require contribution and participation from its various stakeholders. A wide range of partnerships that can be formed including Public-Public, Public-Private and Public-Community partnerships.

10.1.1 Public-Public Partnerships

This is a partnership between two public sector institutions or organisations where neither partner seeks profit from the partnership. A typical example of such a partnership could be, the DM and LMs can partner with educational institutional to create awareness in order to build a future generation that sees the significance of having an environment that sustainable. An existing partnership within MDM is where DFFE is supporting the LMs in developing their IWMPs internally using an online system

10.1.2 Public-Private Partnerships

This is a partnership between a public-sector and a private company. Typically, this involves private capital financing government projects. An example of such a partnership can be where the district intends to build a regional landfill site and partners with a private company e.g. mine for funding. The land typically belongs to the public entity with the project sponsored by the private entity but ultimately becoming state property. An example of existing public-partnership is where Ba-Phalaborwa LM was sponsored by the Foskor mine for fencing the new landfill site.

10.1.3 Public-Community Partnerships

This is partnership between a public-sector and community (Non-Government Organisation (NGO)/Community Based Organisation (CBO)). A typical example is when the LM partners with a CBO recycling initiative and offer them support. An example of existing public-community partnerships is whereby Greater Tzaneen has partnered with the community to dispose their garden waste at the landfill site at no cost.

10.2 Legislative Instruments: Development and Enforcement of By-law

It is crucial that waste management By-laws as supporting legal framework are finalised and gazetted to support the implementation IWMPs. Municipalities have the power to develop By-laws, which augment national and provincial regulatory requirements. Municipalities also need

to enforce these waste management By-laws either through municipal mechanisms such as EMIIs or other delegated authority within Municipalities.

10.3 Funding Mechanisms

The successful implementation of the IWMP depends on the availability of sufficient funding to carry out the plan. Funding will be required for the following:

- various proposed programmes such as training and awareness;
- operational funding such as increasing waste management staff and expanding waste collection services; and
- Capital funding such as constructing new landfill sites and increase waste management fleet.

10.3.1 Funding Instruments

Financing of waste management services requires accurate costing and budget for the required services. The IWMP has to be incorporated into IDP in order for funds to be made available for successful waste management services. Tariffs have the potential to fully cover the costs of providing the services, but often households are not paying for the services they are being billed for. Some of the interventions that can be implemented include undertaking a full cost accounting exercise for waste management services, implementing recycling programmes to reduce disposal costs as well as incentivising recycling initiatives and waste minimisation by introducing pay-as-you throw principles to lower collection charges. The following two strategy documents should be consulted by Municipalities when reviewing and revising its tariff structure.

- National Pricing Strategy for Waste Management Charges (2016)
- Municipal Solid Waste Tariff Strategy (2012)

The implementation of the IWMP will require capital and operational costs which can be funded through potential avenues listed in the Table 10-1 below:

Table 10-1 Funding Options

Capital Funding	Operational Funding
Own Funding	Tariffs
Municipal Infrastructure Grant (MIG)	Rates
Consolidated Municipal Infrastructure Programme (CMIP)	Equitable Share

Municipal Systems Improvement Programme (MSIP)	Donor Funding
Extended Public Works Programme (EPWP)	Carbon Credits
Donor Funding	Product Revenue
Financial Institution e.g. Development Bank of South Africa (DBSA)	-
Public-Private Partnerships	-
Provincial And National Government Allocations	-

Implementing taxes is another source of funding that may help achieve some of the objectives of the IWMP. Taxes have the potential to support or discourage particular waste management attitudes and behaviours. For instance, certain taxes may promote recycling while discouraging the production of certain products or the usage of certain materials in the production processes. The implications and restrictions of some of these tax types are detailed in Table 10.2 below.

Table 10-2: Other related waste tax types

Tax Type	Implications	Limitations
Product taxes	<ul style="list-style-type: none"> Discourage the consumption/production of certain products; Could take the form of advanced disposal fees and raise revenue to finance reuse, recycling, recovery and product disposal. 	<ul style="list-style-type: none"> Can contribute to the proliferation of tax instruments and complicated funding mechanisms; Can be difficult to target the source of externality.
Deposit-refund systems	<ul style="list-style-type: none"> Encourage certain products to be returned to relevant points 	<ul style="list-style-type: none"> Can only be applied to certain products. Administrative and compliance costs can be high; Not intended to raise revenue.
Disposal taxes	<ul style="list-style-type: none"> Encourage a reduction in overall waste levels; Could discourage certain waste streams; Could be used to penalise certain forms of waste disposal over others; and Could be used to encourage upgrading of waste disposal facilities. 	<ul style="list-style-type: none"> May run counter to other waste management objectives. May lead to perverse incentives and Tax avoidance (especially in the context of hazardous waste). Could increase illegal disposal
Differential User Charges	<ul style="list-style-type: none"> Encourage reduced 	<ul style="list-style-type: none"> Exclusively a local

Tax Type	Implications	Limitations
	<p>generation of waste.</p> <ul style="list-style-type: none"> Encourage greater separation of waste at source. 	<p>government competence and only loosely associated to wider environmental fiscal reform objectives;</p> <ul style="list-style-type: none"> May be difficult to implement in low-income households.

Source: Modified from the Sustainability Institute (2007)

10.4 Financial Management

A financial plan should be developed for IWMP implementation, and this should be based on the various targets of the plan which need to be implemented and financed. As a result, it's crucial to identify the project's components and suitable models or alternatives for implementation can be reviewed and, later, funding sources can be established. The terms and conditions of this financing can be confirmed, and a pro-forma analysis can be conducted in order to quantify the economic impact of the project.

10.4.1 User Guide for DEA Solid Waste Tariff

Municipal Solid Waste Tariff Strategy was developed by the DEA in 2012. The purpose of the Tariff Strategy is to provide a framework and guidance for municipalities in setting solid waste tariffs that align with the intentions of the NWMS. The NWMS recognises the importance of full cost accounting as the foundation of financial sustainability, which is critical in the delivery of effective and efficient waste services and in the promotion of waste minimisation, reuse, recycling and recovery. Municipalities can access the tariff strategy, guidelines, step-by-step guide and the excel based spreadsheet through the DEFF website.

<http://sawic.environment.gov.za>

10.5 Implementation Plan

Table 5-1 under the Gaps and Needs Analysis section provides a detailed analysis of the eight-priority waste related issues within the district together with objectives, targets, indicators, implementation instruments, responsible department and budgets (although it is believed that a properly capacitated WMO could address most of the issues without having to outsource to external service providers or consultants.

10.5.1 Waste Management Officer

Success in the implementation of the IWMP will hinge significantly on the district having formally appointed a competent, well capacitated and appropriately qualified WMO. As indicated earlier in this report, in terms of the NEM: WA, it is mandatory for spheres of government responsible waste management to appoint a WMO. The WMO will be responsible to oversee the implementation of the DIWMP.

Table 10:3 below summarises the proposed implementation plan.

Table 10-3 :Summary of the Implementation Plan

GOAL 1: ACHIEVE INTEGRATED WASTE MANAGEMENT PLANNING			
Objectives	Target	Key Performance Indicator	Timeframes
Ensure effective planning and implementation for integrated waste management	Finalise & endorse all municipal IWMPs.	Approved IWMP by the Municipal Council. Endorsement Letter from the MEC.	0-1 year
	Integrate IWMPs in municipal IDPs.	Number of IWMPs integrated in Municipal the IDPs.	0-3 years
	Implementation of IWMPs by all municipalities.	IWMP Implementation reports.	0-1 year
	Review all Municipal IWMPs.	Number of Reviewed and IWMPs.	4-7 years
	Designate WMOs	Number of municipalities with designated WMOs	0-1 year
	Support the development plans to roll out waste collection to the areas not receiving waste collection.	Increased number of households receiving waste collection.	0-1 year

GOAL 2: STRENGTHEN INSTITUTIONAL CAPACITY & CREATE AWARENESS FOR WASTE MANAGEMENT			
Objectives	Target	Key Performance Indicator	Timeframes
Increase capacity on waste Management.	Appoint WMO for implementation of the DIWMP	Appointment letter.	1-3 years
	Increase number of waste management personnel in LM	Appointed waste management personnel.	1-3 years
Promote awareness & education on integrated waste management.	Develop a waste management education awareness strategy for the district.	Education & Awareness strategy.	1-3 years
	Support LM education and awareness programmes.	Number of education & awareness programmes attended.	0-1 years
	Collaborations with education and training institutions.	Partnerships with schools.	0-1 years
GOAL 3: IMPROVE COMPLIANCE WITH REGULATORY FRAMEWORK			
Strengthen compliance & monitoring enforcement	Finalise and gazette waste management By-laws.	Number of gazetted waste management By-laws.	0-1 years
	Enforcement of waste management of By-laws.	Non- compliance notices issued.	1-3 years
	Provide EMI Training.	Number of EMIs trained & endorsed.	1-3 years

	Conduct quarterly internal landfill sites audit. Conduct annual external landfill sites audit.	Quarterly & annual external landfill sites audit reports developed.	0-1 years
	Draft annual IWMP performance reports.	Annual IWMP performance reports developed & submitted.	0-1 years
GOAL 4: PROMOTE WASTE MINIMISATION, RECYCLING, RE-USE & RECOVERY			
Objectives	Target	Key Performance Indicator	Timeframes
Reduce waste disposal at landfill sites by promoting waste diversion through re-use, recycling & recovery.	Reduce landfill waste disposal by at least 50%.	Recycled tonnages within LM. Tonnages of waste disposed at landfill site	4-7 years
	Support formalisation of at least five recycling initiatives & support existing recycling initiatives.	Number of formalised recycling initiatives & support given to recycling initiatives.	1-3 year
	Support organic waste composting initiatives.	Number of partnerships with organic waste composting initiatives	year
	Divert waste disposal of tyres from landfill by partnering waste tyre recyclers.	Partnership developed with waste tyre recyclers.	0-1 year
	Initiate collaboration of LM for knowledge and skills transfer regarding hazardous waste recycling e.g., used oil, tyres, fluorescent tubes & electronic waste.	Collaboration of LM.	0-1 year

	Support waste reclaimers at the landfill sites.	Support given to waste reclaimers.	1-3 years
	Form partnerships with all recyclers within the district.	Partnerships formed & volume of recycled materials.	0-1 year
Assess feasibility for industrial symbiosis implementation.	Undertake feasibility study for implementation of industrial symbiosis.	Feasibility report and implementation plan.	1-3 years
Initiate programmes for separation of waste at source	Initiate at least five programmes for the separation of waste at source at each local municipality	Number of separations at source programmes initiated e.g., separation packaging materials at shops.	1-3 years

GOAL 5: EXPAND WASTE MANAGEMENT SERVICES			
Objectives	Target	Key Performance Indicator	Timeframes
Increase waste collection services	Increased number of households receiving waste collection	Number of new areas receiving waste collection.	1-3 years
	Have Drop off centres in areas where there are no waste collection services.	Number of drop off centres created	1-3 years
Increased number of waste management fleet and develop fleet maintenance plan	Support LMs in acquiring waste management fleet from the province. Support LM to have develop fleet maintenance plan. Encourage proper maintenance of waste management fleet.	Number of functional waste management fleet. Effective maintenance plan.	1-3 years
Reduce illegal dumps	Conduct cleaning campaigns and awareness	Number of cleaning campaigns and awareness conducted as well as reduced illegal dumps.	0-1 years
	Provide skip bins in areas where illegal dumps are major.	Increased number of skip bins provided.	1-3 years

GOAL 6: IMPROVE MANAGEMENT OF DISPOSAL FACILITIES			
Objectives	Target	Key Performance Indicator	Timeframes
Support sound management of landfill sites and waste management facilities to comply with licensing standards.	Conduct workshops on landfill sites operations and facility management. Form partnerships and encourage skills transfer with well performing LMs.	Number of workshops conducted & partnerships developed.	0-1 year
	Support LMs to secure funding for new landfill sites development. Close & rehabilitate landfill sites that have been issued with closure certificate.	Newly developed landfill sites. Closed and rehabilitated landfill sites.	4-7 year
	Encourage landfill sites monitoring and auditing.	Landfill sites monitoring and audit reports	0-1 year
GOAL 7: WASTE INFORMATION REPORTING			
Objectives	Target	Key Performance Indicator	Timeframes
Improve waste information reporting.	Ensure that both private & local government landfill sites within the district are registered and reporting on South African Waste Information System (SAWIS).	Number of registered landfill sites & quarterly SAWIS reports.	0-1 year
GOAL 8: HAZARDOUS WASTE MANAGEMENT			
Objectives	Target	Key Performance Indicator	Timeframes

Identify hazardous waste producers & collectors in the district.	Develop a data base of hazardous waste producers such as funeral parlours, mechanics, filling stations, mines etc. Develop partnerships with hazardous waste collectors to ensure safe disposal.	Hazardous waste producers & collectors data base. Waste disposal certificates.	0-1 year
Identify Health Care Risk Waste (HCRW) producers & collectors in the district.	Develop a data base of HCRW producers & collectors. Develop partnerships with HCRW waste collectors to ensure safe disposal.	HCRW producers & collectors data base. Waste disposal certificate.	0-1 year

11 REPORTING ON IMPLEMENTATION, MONITORING AND REVIEW

Monitoring the implementation plan allows the responsible authority to ensure that the proposed plan is implemented within the envisioned timeframes. Monitoring and reporting play a critical role in ensuring that development of the IWMP does not become fruitless exercise, to ensure that the IWMP goals are prioritised, and resources are made available to achieve IWMP goals. Section 13(3) of the NEM: WA requires that annual performance reports be prepared in terms of Section 46 of the MSA. Annual performance reports must contain information on the implementation of the IWMP, including:

- The extent to which the IWMP 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 undertaken to secure the efficient delivery of waste management services;
- 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; and
- The measures taken to make necessary amendments to the plan.

11.1 IWMP Review

The IWMP is a living document which has to be reviewed on an on-going basis. An IWMP is intrinsically linked to the relevant IDP. An IWMP is ideally reviewed every 5 years. An annual update is however encouraged to ensure that the IWMP remains relevant and effective. This will also facilitate the updating of the IWMP in view of the targets set in the IWMP. The next review of the IWMP will be in 2028.

12 RECOMMENDATION ON THE IMPLEMENTATION OF THIS IWMP FROM LEDET

The following should be considered during the implementation of the contents of your IWMP:

- Should there be any erection of municipal waste infrastructure such as storage of waste within the municipal facilities, recycling facilities, etc., the construction and development of such must be carried out under supervision of registered professional engineers and must be in accordance with the approved civil engineering designs. In addition to the above, the following must be taken cognizance of:
 - Waste can be hazardous or dangerous to the environment if poorly managed or stored inappropriately. To minimize environmental impacts, municipalities are encouraged to have emergency preparedness plan that should include but not limited to hazard identification, prevention measures, emergency planning, emergency response, remedial actions, etc.
 - All containers containing waste, skip bins, piping, valves, tanks etc. must be inspected for any potential leaks, structural integrity, and any sign of deterioration, and;
 - If environmental pollution is suspected or occurring from the facility, an investigation must be initiated into the cause of the problem and remedial action must be taken.
- Training must be provided continuously to all employees working with waste and to all contract workers that might be exposed to the waste. The training must amongst at others include the following:
 - Precautionary measures that need to be take;
 - Procedures that the employees must apply to their particular type of work;
 - Procedures for dealing with waste spillages and incidents; and
 - The risk of the hazardous substance to their health which they are likely to be exposed to.
- Section 16 of the National Environmental Management: Waste Act,2008 (Act 59 and all its subsections must continuously be complied with. This should include but not limited to taking all reasonable measures to manage waste in a manner that is does not endanger the environment and cause nuisance through odour and preventing waste from being used for any unauthorized purpose.

- Methods must be developed to minimize airborne emissions, such as un-surfaced roads, un-grassed or un-paved areas, speed reducing measures such as speed limits, speed humps etc. which may give rise to dust and posing a threat to human health and the environment.

13 CONCLUSION

The IWMP describes the goals, objectives and targets necessary to improve waste management practices within the MDM. The plan considers the fact that waste management practices vary across the district in accordance with the difference in the waste generation profile. The plan has been developed to assist the district implement the objectives of the NWMS by shifting focus from current waste management practices, which is mainly waste collection and disposal to an integrated waste management system that places more focus on cleaner production, recycling, minimisation, separation at source, re-use and sound landfill management practices.

The status quo section provides an overview of the current waste management practises within the district which mainly focuses on waste collection and waste disposal with recycling which is saturated in Greater Tzaneen LM, Greater Giyani LM and Ba-Phalaborwa LM. The eight goals were then developed to close the identified gaps and achieve desired end state of the district. The successful implementation of the IWMP will require sufficient human resources and the capital necessary to implement an integrated waste management system. Challenges to implement the IWMP are acknowledged, however, with the necessary support from the community, LMs, province, national as well as establishing partnerships will ensure the successful implementation of the plan.

14 REFERENCES

- Ba-Phalaborwa Municipality 2022/23-2027. Integrated Development Plan
- Department of Economic Development, Environment and Tourism, 2020 – 2025, Integrated Waste Management Plan Implementation Report.
- Department of Environmental Affairs Integrated Waste Management Plan Guidelines (2009).
- Department of Environmental Affairs, 2011. National Domestic Waste Collection Standards (GG No. 33935 GN. No. 21). Pretoria: Government Printers.
- Department of Environmental Affairs, 2011. National Waste Management Strategy. Pretoria: Government Printers.
- Department of Environmental Affairs, 2019. National Waste Management Strategy. Pretoria: Government Printers.
- Department of Environmental Affairs, 2019. The South African Waste Information Centre, <http://sawic.environment.gov.za>.
- Department of Water Affairs and Forestry, 1998. Minimum Requirements for Waste Disposal by Landfill.
- Greater Giyani Municipality 2022/23. Integrated Development Plan
- Greater Letaba Municipality 2022. Integrated Waste Management Plan
- Greater Letaba Municipality 2022-2026. Reviewed Integrated Development Plan
- Greater Tzaneen Municipality, 2019. Integrated Development Plan
- Limpopo Province Recyclers Data Base 2018;
- Limpopo SAWIS Waste Report 2021;
- Maruleng Municipality 2022/23. Integrated Development Plan
- Mopani Environmental Sector IDP Analysis Assessment Framework (2021-2026);
- Republic of South Africa, 1996. The Constitution of the Republic of South Africa (Act No. 108 of 1996). Cape Town: Government Printers.
- Republic of South Africa, 1998. National Water Act, No. 36 of 1998.
- Republic of South Africa, 2000. Local Government: Municipal Systems Act (Act No. 32 of 2000). Cape Town: Government Printers.
- Republic of South Africa, 2008. National Environmental Management Act: Waste Act (Act No. 59 of 2008). Cape Town: Government Printers.
- Republic of South Africa, 2012. Government Gazette No. 35583 No. 625 National Waste Information Regulations.
- Republic of South Africa, 2013 Government Gazette No. 36784 No. 635 National Norms and Standards for the Assessment of Waste for Landfill Disposal.

Republic of South Africa, 2013 Government Gazette No. 36784 No. 636 National Norms and Standards for the Assessment of Waste for Landfill Disposal.

Republic of South Africa. 1998, Government Gazette No 19519 Volume 401, National Environmental Management Act (Act 107 of 1998). 27 November 1998 No 1540.

Republic of South Africa. 2004, Government Gazette No 26595 Volume 469, National Health Act (Act 61 of 2003). 23 July 2004 No 869.

Status Quo Report of Sewage Facilities in Limpopo 2021;

ANNEXURE A: RECYCLERS DATABASE

ANNEXURE A: RECYCLERS DATABASE

LMs	Recycling Companies	Registration Status	Operations Status	Recyclable Materials	Contact Details	Address
Greater Tzaneen LM	Protonka Recycling	Registered	Operational	Boxes, glass, papers, aluminium can & bottles	Email: protonka.recycling@yahoo.com Cell: 067 986 3360	Based at Tzaneen Landfill site
	Zinto Waste Recycling	Registered	Operational	Plastic, polyproline bags, E-waste, broken chairs, cardboard, PET, cans	Contact Person: Moses Rekhoto (Director) Cell: 079 030 4371 Email: Zintowastemanagement@gmail.com	279 leda industrial nkowa2 location, Tzaneen
	MGK Box	Unknown	No longer operational, the owner has retired.	Boxes, glass, papers, can & bottles	Contact Person: Mr Marius Koekemoer Cell: 083 628 6080 Email: m.koek@nashuaisp.co.za	Doesn't exist anymore
	Vors-Cor Recycling	Unknown	operational	Scrap metal	Contact Person: Cordelia Vorster Email: admin@forscor.co.za Cell: 079 872 0854	23 Koedoe St, Tzaneen, 0850
	Tzaneen Recycling Craft	Registered	Unknown	Unknown	Unknown	305 Stand No 0804, Letsitele Tzaneen
	Moraks Recycling previously known as Mothlapedi Trading	Registered	Operational	Plastic, Box, Can & White Paper.	Contact Details: Johannes Sedutla Cell: 072 812 1480 Email: d.jaysedutla@gmail.com	Tikyline (Ramalemane Village)

LMS	Recycling Companies	Registration Status	Operations Status	Recyclable Materials	Contact Details	Address
	Finito recycling	Registered	Unknown	Unknown	Cell: 072 387 0537	Unknown
Greater Giyani LM	Green Holistic Waste Recycling	Not yet registered (application forms provided)	Unknown	Unknown	Cell: 065 564 9801	Unknown
	JN Recycling	Registered	Operational	Boxes, glass, papers, metals, can & bottles	Contact Details: Nicholas Jack Sheseni Cell: 073 365 7828 Cell: 083 633 7744	Khefo Road
	Pfuna Scrap	Registered	Operational	Scrap	Contact Details: Nkuna Rose Cell: 083 5960 459	Industrial site Giyani
	MuGwenah Waste	Not Registered	Operational	Cans, Bottles, Cardboard, Plastic, PET, White Paper	Contact Details: Talani Makhubele Cell: 071 146 7055 Email: tmakhubele@gmail.gov.za	C59 Industrial site Giyani
	Hard Times Never Kill Recycling Project	Unknown	Unknown	Papers, Bottles, Cardbox, Scrap Metals, Cans	Contact Person: Mrs. Grace Khosa Cell: 076 213 0566	Giyani
	Makhuva Scrap Metals	Unknown	Unknown	Scrap metals	Contact Person: Mr Benjamin Shabangu Cell: 078 986 5975	PO Box 1926 Thembisa 1926
	Phapadi Scrap Metals	Unknown	Unknown	Ferrous, Papers and Bottles	Contact Person: Cell: 082 924 0655	Giyani

LMS	Recycling Companies	Registration Status	Operations Status	Recyclable Materials	Contact Details	Address
Greater Letaba LM	Maphalle	Unknown	Operational	Bottles	Unknown	Maphalle
	Jamela	Unknown	Operational	Bottles	Unknown	Jamela
	Tsanakalo Recycling	Unknown	Operational	Unknown	Unknown	Unknown
	Lesampho Pty Ltd	Registered	Not yet operational	N/A	Cell: 078 520 7649	
	Reaitirela Cleaning Project	Unknown	Operational	Bottles, Plastic, Cardboards and Tins	Contact Details: Mrs S Raseropo Cell: 071 241 6340	P O Box 5118, Molototsi, 0827
	Itsoseng Cleaning and General project	Unknown	Operational	Bottles, Plastic, Cardboards, Tins and Scrap metals	Contact Details: Mr TD Raseshu Cell: 084 533 8064	P O Box 455, Modjadjiskloof
	ZZ2 Waste Recycling Project	Unknown	Operational	Bottles, Plastic, Cardboards, Papers, Cans and Scrap metals.	Contact Details: Mr Nico Venter Cell: 083 629 4874 Tel: 015 395 2040 Email: venternico@zz2.biz	PO Box 19 Mooketsi 0825
Ba-Phalaborwa LM	Thinavhuuo Recycling	Registered	Operational	Cans, Bottles, Card box, Plastic, White Paper	Contact Person: Willie Ramoshaba (Chairman) Cell: 079 993 1442	Unknown

LMS	Recycling Companies	Registration Status	Operations Status	Recyclable Materials	Contact Details	Address
	Bollanoto Secondary Cooperative	Not yet registered (application forms provided)	Operational	Cans, Bottles, Card box, Plastic, White Paper	Contact Person: Elizabeth Malats (Director Selwani Harbour) Cell:077 3721 794 Contact Person: Lydia Mpenyani (Director Majeje Harbour) Cell:079 635 7729	
	Phala Recycling	Not yet registered	Operational	Ferrous & Non-Ferrous Scrap, Glass, Cans	Contact Details: Modern Cell: 082 441 1101 Tel: 015 7813710 Email: Phalarec@nix.co.za	6th Avenue, Heavy Industrial Area, Phalaborwa
	Zinompilo CC Recycling	Not yet registered	Unknown	Unknown	Unknown	Unknown
	Big Five Scrap Metals	Registered	Operational	Ferrous and Non-Ferrous Metals	Contact Details: Cell: 076 876 5823 Email: gerhard.heymana@yahoo.com	Von wieligh 20, Phalaborwa, 1390
	NN Metals Recycling Company	Registered	Operational	Ferrous and Non-Ferrous metals	Contact Details: Mr S Snyman Cell: 082 803 0992 Tel: 015 781 1640 Email: nnmetalspala@lantic.net	1st Avenue, Ext x5, Phalaborwa
	Municipal garden refuse composting project	Registered	Operational	Garden refuse	Contact Details: Mr Van Rooyen Cell: 083 626 7266 Tel: 015 780 6300 Email: venternico@zz2.biz	PO Box 19 Mooketsi 0825

LMs	Recycling Companies	Registration Status	Operations Status	Recyclable Materials	Contact Details	Address
Maruleng LM	Makhale Projects Waste	Application has been Lodged & acknowledgement.	Unknown	Unknown	Cell: 082 719 7834	Unknown
	Molpat Trading and Projects-	Registered	Unknown	Unknown	Unknown	Unknown

ANNEXURE B: STAKEHOLDER ENGAGEMENT REPORT

Project Stakeholder Engagement

Report:

Mopani District Municipality Integrated Waste Management Plan






PROJECT INFORMATION

Title	Stakeholder Engagement Report for Development of Mopani District Municipality Integrated Waste Management Plan
Submission Date	30 November 2022
Classification	Company Confidential
Our Reference	MC.MDM. STR.001

VERSION AND AMENDMENT SCHEDULE

Version	Version date	Author	Description of Amendments
1	11 November 2022	Mmapula Moropo (Environmental Consultant)	Original Document

APPROVAL AND CONTROL SCHEDULE

Approved by	Designation	Responsibility	Signature	Date approved
Mmapula Moropo	Environmental Consultant	Compiler		11 November 2022
Hulisani Netshisaulu	Environmental Consultant	Review		25 November 2022
Ike Rampedi	Chief Operational Officer	Approval		29 November 2022

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REPORT STATUS	DRAFT		FINAL	
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Appendices

Appendix A: Project Steering Committee Meeting Minutes

Appendix B: Public Meetings Meeting Minutes

1. COMMUNICATION AND STAKEHOLDER PARTICIPATION

The stakeholder consultation and Public Participation Process (PPP) was done in accordance with Section 11(1& 4) read with Section 73 of the National Environmental Management: Waste Act (Act No. 59 of 2008) as amended (NEM: WA). The purpose of this report is therefore to present the stakeholder approach, identified stakeholders and the consultative processes undertaken during the development of an Integrated Waste Management Plan (IWMP). The stakeholder engagement was an ongoing process throughout the IWMP development. The process involved the participation and contribution of two “groups” of stakeholders – A smaller and more focused group i.e., Project Steering Committee (PSC) and a larger group of stakeholders (The general public). The process focused strongly on the direct and productive involvement of stakeholders in developing the plan.

Stakeholders were identified and consulted during the development of this plan, per the DEA IWMP guidelines published in 2009. The following should be included in the report:

- A summary of the stakeholders that have been consulted; their issues, concerns, views and inputs;
- Responses to the concerns and issues raised by stakeholders; and
- A record on details of the stakeholders and their inputs.

1.1. STAKEHOLDER ENGAGEMENT APPROACH

A consultative process was followed throughout the development of the IWMP, and the following steps were followed to ensure that stakeholders were provided with an opportunity to comment on the draft IWMP.

- **Identification of role players:** Key role players that contribute to waste management and inform current waste management practices within the district were identified. Key role players are listed in section 2.
- **Role Player Database:** After all the role players were identified, a data base was developed and updated throughout the IWMP process.
- **Public Participation:** A “Call for Expression of Interest” i.e. an advert was placed in at least one newspaper namely Daily Sun to inform the public about the availability of the draft IWMP for review (for a period of 30 days) and also to invite the public to attend the various public meetings so they be informed of the development of the IWMP, and have an opportunity to comment as well as give inputs on the IWMP.

Figure 1 below summarises the steps that were followed when undertaking stakeholder engagement:

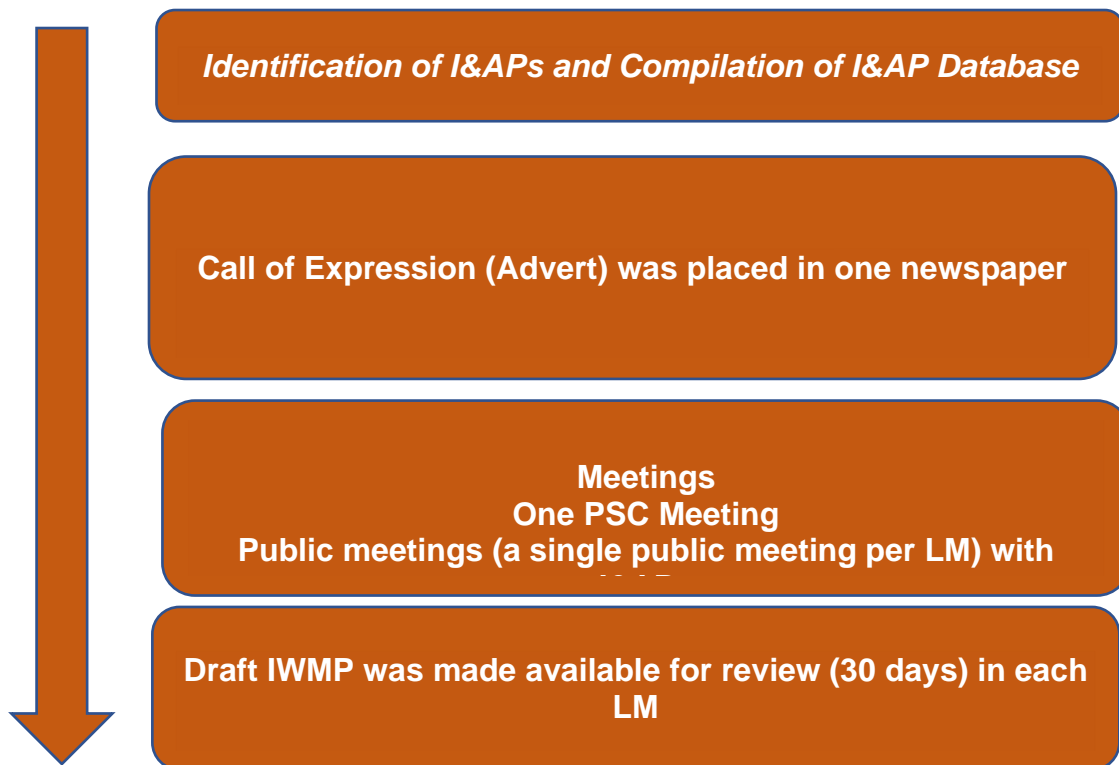


Figure 1-1: Public participation process undertaken

2. AWARENESS CONSULTATION WITH KEY STAKEHOLDERS

The identified key stakeholders included but not limited to the following:



Figure 2-1:Key Stakeholders

Consultation with the key stakeholders was in the form of written emails, telephonic communication. Key stakeholders were invited via emails to attend the PSC and were given an opportunity to give inputs and comments on the draft IWMP. One PSC meeting was held on the 19th September 2022 at Mopani District Municipality offices. PSC consisted of Mamadi technical team and Mopani project management team, Local Municipalities waste management officials, LEDET officials and DFFE officials. The purpose of the PSC was to discuss the progress of the project. See attached PSC minutes Appendix A.

2.1. PUBLIC MEETINGS

Five public meetings were held within the District Municipality (DM), each LM had one public meeting. The purpose of the public meetings was to engage Interested and Affect Parties (I&As), to give them an opportunity to comment and give inputs on the draft IWMP. Meeting invites were sent by MDM to key stakeholders inviting them to the public meetings while an advert inviting the public was placed in one newspaper. See attached Appendix B for public meeting minutes.

The public meetings were held as follows:

Table 2-1:Public Meeting

Municipality	Date	Time	Venue	Availability of Report
Greater Tzaneen LM	Monday 31 October 2022	10;00 a.m.	Waste Management Training Centre	Tzaneen Library
Greater Letaba LM	Tuesday 01 November 2022	10;00 a.m.	Letaba Community Hall	Mokwakwaila Library
Ba-Phalaborwa LM	Wednesday 02 November 2022	10;00 a.m.	Activity Hall	Phalaborwa Library
Greater Giyani LM	Thursday 03 November 2022	10;00 a.m.	Giyani Community Hall	Giyani Public Library
Maruleng LM	Friday 04 November 2022	10;00 a.m.	Oak Community Hall	Maruleng Library

Public Meetings pictures are depicted below



Figure 2-2:Public Meetings Pictures

2.2. NEWSPAPER ADVERTISEMENTS

Notice notifying, I&APs was given in terms of Section 11(1& 4) read with Section 73 of the National Environmental Management: Waste Act (Act No. 59 of 2008) as amended (NEM: WA). The advert was placed in one newspaper i.e., Daily Sun. See Figure 2-3 for advert tear sheet and Figure 2-4 for the advert.

6
DAILY SUN
Friday 28 October 2022

IN HONOUR OF LITTLE BOKGABO

By EMILY MGOH

RESIDENTS gathered at a community centre in Wattville, Ekurhuleni, on Wednesday, 26 October, to honour the life of the late Bokgabo Poo, whose mutilated body was found on 11 October.

The man who allegedly kidnapped and murdered her, Ntokozi Zikhali, is in police custody and will appear again in the Benoni Magistrates Court on 14 November.

Bokgabo's pogo, Lillian Poo, said the family was beyond broken.

"Every day we question why God would allow this to happen, but only God has all the answers," said Lillian.

She said she hoped God would fight this battle for them.

Lillian said they had not arranged the funeral of Bokgabo yet because they were still trying to find her missing body parts.

One of the people who found Bokgabo's body, community leader Boyo Dlamini said crime in Wattville was at its peak.

He urged residents to join hands in fighting crime because police were relaxed.

"I'm devastated about Bokgabo's death. As a father, I can't imagine what the family is going through," said Boyo.

Tshepi Mekwa of Action Society talked about how neighbourhoods used to be safe back in the day. "Now the world has changed for the worse," said Tshepi.

She encouraged the community to work together to fight crime.

Her family is shattered!

Baby Bokgabo

NOTICE IN TERMS OF SECTION 11(1) OF THE NATIONAL ENVIRONMENTAL WASTE ACT, ACT NO. 59 OF 2008: DEVELOPMENT OF MOPANI DISTRICT MUNICIPALITY INTEGRATED WASTE MANAGEMENT PLAN IN THE LIMPOPO PROVINCE.

Notice is hereby given in terms of Section 11(1) read with Section 73 of the National Environmental Management: Waste Act (Act No. 59 of 2008) as amended (NEM: WA), that Mopani District Municipality (MDM) in the Limpopo Province is developing an Integrated Waste Management Plan (IWMP).

Name of project: Development of an IWMP for Mopani District Municipality.

Project description: The proposed project entails developing an IWMP for MDM in terms of Section 11(1) & (4) of NEM: WA, which requires the departments responsible for waste management to develop IWMP and submit to the Member of the Executive Council (MEC) for endorsement. The endorsed plan may be incorporated into any relevant plan of the Municipality.

Project location: MDM is in the North-eastern part of Limpopo Province. MDM has five Local Municipalities (LMs) namely: Greater Tzaneen LM, Greater Letaba LM, Se-Potlhaba LM, Greater Gopani LM & Marburg LM.

Public meeting: The public is invited to attend the public meetings that will be held as follows:

Municipality	Date	Time	Venue	Availability of Report
Greater Tzaneen LM	Monday 31 October 2022	10:00 a.m.	Training Centre (Waste Management)	Tzaneen Library
Greater Letaba LM	Tuesday 01 November 2022	10:00 a.m.	Letaba Community Hall	Midrand Library
Se-Potlhaba LM	Wednesday 02 November 2022	10:00 a.m.	Activity Hall	Phalaborwa Library
Greater Gopani LM	Thursday 03 November 2022	10:00 a.m.	Gopani Community Hall	Gopani Public Library
Marburg LM	Friday 04 November 2022	10:00 a.m.	The Oak Community Hall	Marburg Library

Mamadi and Company SA (Pty) Ltd (Mamadi) has been appointed by MDM as an independent Environmental Assessment Practitioner (EAP) responsible for the development of IWMP and the associated Public Participation Process (PPS).

Availability of the Draft IWMP: The Draft IWMP will be available for public review for a period of 30 days, commencing from Monday, 31 of October 2022 to Tuesday, 29 of November 2022 at the above-mentioned libraries and via email upon request at Mamadi Consultants. Parties wishing to comment on the Draft IWMP are requested to forward their comments to Mamadi not later than Tuesday, 29 November 2022 at the contact details below.

Mamadi Consultants: Mopani/Mopani/Mopani/Mopani/Mopani, Thabane Office Park, Midrand, 1655 or Email: Mamadi@mamadi.co.za / Hulani@mamadi.co.za.

SkyTents
Quality back into Africa

DEAL 1 Tent 4m x 10m R14 500	DEAL 2 Tent 4m x 10m R17 999	DEAL 3 Tent 7m x 12m R18 000	DEAL 4 Tent 7m x 12m R21 499
DEAL 5 Tent 5m x 5m R9 500	DEAL 6 Tent 5m x 5m R35 000	DEAL 7 Tent 5m x 5m R58 800	DEAL 8 Tent 5m x 5m R19 999
DEAL 9 Tent 5m x 5m R9 500	DEAL 10 Tent 5m x 5m R9 900	DEAL 11 Tent 5m x 5m R15 000	DEAL 12 Tent 5m x 5m R15 000

DAILY SUN

To advertise in the Classifieds Section: 087 859 1317
Main body section: 011 715 4388

Figure 2-3: Adverts tear sheets

NOTICE IN TERMS OF SECTION 11(1) OF THE NATIONAL ENVIRONMENTAL WASTE ACT, ACT NO. 59 OF 2008: DEVELOPMENT OF MOPANI DISTRICT MUNICIPALITY INTEGRATED WASTE MANAGEMENT PLAN IN THE LIMPOPO PROVINCE.

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Availability of the Draft IWMP: The Draft IWMP will be available for public review for a period of 30 days, commencing from **Monday, 31 of October 2022 to Tuesday, 29 of November 2022** at the above-mentioned libraries and via email upon request at Mamadi Consultants. Parties wishing to comment on the Draft IWMP are requested to forward their comments to Mamadi not later than **Tuesday, 29 November 2022** at the contact details below:

Mamadi Consultants: Mmapula Moropo/Hulisani Netshisaulu, Thandanani Office Park, Midrand, 1658 or Email: Mmapula@mamadi.co.za / Hulisanin@mamadi.co.za.



Figure 2-4: Advert

2.3. AVAILABILITY OF THE IWMP DRAFT

All IA&Ps and stakeholders were notified of the availability of the IWMP Draft report. The Draft IWMP was available for public review for a period of 30 days, which commenced from Monday, the 31st of October 2022 to Tuesday, the 29th of November 2022 in all LMs. Hard copies of Draft IWMP reports were placed at public libraries listed in Table 2-1 above, and via email upon request. Parties wishing to comment on the Draft IWMP were requested to forward their comments to Mamadi & Company (Pty) Ltd no later than Tuesday, the 29th of November 2022.

3. COMMENTS AND RESPONSE TRAIL

The technical issues, comments and concerns received during the public participation process were noted and captured in the comments and response report below and categorised per LM

Table 3-1: Comments and Response trail

Organisation	Issues raised/ Concerns	Response
Comments from Greater Tzaneen Local Municipality-Public Meeting		
Provincial Government	Will wastewater treatment plants information be included in the report?	Yes, there will be a section on sanitation in the report.
NGO	Ward Councillors should be part of the development of IWMP.	Comment noted.
Private Organisation	Medi-Clinic is struggling to get a company that can recycle medical glass bottles that are used within the hospital, and as a result it is disposed of with other medical waste.	We are not aware of any company that recycle medical waste at the current moment, however the issue will be included in the IWMP as one of the challenges so that when Industrial Symbiosis is conducted within the province it can also be looked into for possible synergy or for solutions.
Private Hospital	The cost implications in terms of disposal of medical waste can be one contributing factors for inappropriate disposal of medical waste.	Comment Noted.
District Government	Medical waste must have a section in the report showing the current status of medical waste and how it is managed within the district.	Comment noted, there is a section dealing with medical waste in the draft IWMP which will be update with more information that has been acquired from the meeting.
Comments from Greater Letaba Local Municipality-Public Meeting		
Community Member	We will appreciate if the municipality can develop the landfill site to ensure proper waste disposal within the municipality.	The issue has been presented to the council and awaiting decision and budget allocation.

Organisation	Issues raised/ Concerns	Response
Community Member	The municipality must rehabilitate the community Buy-back Centre so that it can be utilized by the recyclers.	The municipality is aware of the situation, and they are in the process of acquiring budget to do rehabilitate the Buy-back centre.
Community Member	Issue of disposal of diapers is a problem in the community and this diapers end-up in the nearby rivers.	The community is encouraged to refrain from illegally dumping waste and encouraged to use the provided skip bins.
Community Member	The municipality must conduct awareness on proper waste disposal.	The municipality has been inviting the community to planned awareness initiatives, however, most of the community members are reluctant to attend.
Comments from Ba-Phalaborwa Local Municipality-Public Meeting		
Business	Who can assist Caltex service station in disposing hazardous empty oil cans within the Ba-Phalaborwa Local Municipality (BLM)?	Councillor indicated he will assist the service station with the contact details of the company that assist with hazardous disposal within the BLM.
Community Member	How do we access a copy of the draft IWMP.	The copy of the IWMP is placed at the Ba-Phalaborwa Library, it can also be distributed among attendances via emails. Councillor also added that the LM will make copies of the draft IWMP and distribute it in all libraries within the LM.
Mine	Is sludge excluded from waste streams?	Sludge is part of the waste streams, and it will be included in the graphic showing waste streams within the report.

Organisation	Issues raised/ Concerns	Response
Comments from Greater Giyani Local Municipality-Public Meeting		
Community Member	The issue of disposal of diapers is a problem in the community and this diapers end-up in the nearby rivers.	Comment noted and necessary interventions will be undertaken.
Community Member	Strengthen the relationship between recycling companies and the municipality.	Comment noted, the recommendation has been included in the IWMP.
Community Member	The recycling companies need assistance with transport to deliver recyclables to Gauteng province.	Comment noted, will be included under recycling.
Community Member	The municipality must take initiatives to visit the local recycling companies to check their operational conditions.	Comment noted, will be included under recycling.
Comments from Maruleng Local Municipality-Public Meeting		
Community Member	What method was used to invite the public?	A newspaper advert was published on Daily Sun newspaper on the 28 th of October 2022 and also invitations were sent to stakeholders and ward councillors by the district and local municipality.
Community Member	How do we get involved?	The draft IWMP will be available for public review, a copy will be placed at the Maruleng library and soft copies will be made available to the community members upon request via email addresses.

Organisation	Issues raised/ Concerns	Response
Community Member	Can you reschedule the meeting?	Unfortunately, the meeting cannot be rescheduled, however, the draft report will be made available to community structures via email and WhatsApp.
Comments from Project Steering Committee Meeting		
Local Government	Ensure that IWMP information is aligned the Integrated Development Plans (IDP) information.	Comment noted, Mamadi will ensure that information within the IWMP is aligned with municipal IDPs.
Local Government	Greater Letaba IWMP has been endorsed.	Comment noted and will be updated in the IWMP.
Local Government	Draft IWMP to be shared with the PSC before it goes to the public.	Comment noted, and the draft IWMP will be shared with the PSC before the public meetings.
Local Government	Health care waste should still be reflected in the IWMP.	Comment noted, health care waste will still be included in the IWMP.
Local Government	The IWMP should not compare municipalities but to highlight if available resources meet needs of the people	Comment noted.

4. MOPANI DISTRICT MUNICIPALITY IWMP DATA BASE

A project database has been established and updated throughout the project based on the interaction with key stakeholders and I&Aps. Table 4-1 below details the project stakeholder database.

Table 4-1:Project Data Base

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS
1. Ike Rampedi	Mamadi and Company SA (Pty) Ltd	Chief Operating Officer	Email: Ike@mamadi.co.za Cell:079 058 2847
2. Mmapula Moropo	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Hulisanin@mamadi.co.za 074 2590 501
3. Hulisanani Netshisaulu	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Hulisanin@mamadi.co.za Cell:071 335 4180
4. Given Nkosi	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email Given@mamadi.co.za Cell:078 336 0054
5. Ntshavheni Mudau	Mopani District Municipality	Manager Environment	Email: mudaun@mopani.gov.za Tel: 015 811 6300 Cell: 073 557 9689
6. Nsovo Makelana	Mopani District Municipality	Environmental Management Inspector	Email: makelanan@mopani.gov.za Cell: 063 292 9423
7. Ntswaki Mailula	Mopani District Municipality	Air Quality Officer	Tel: 015 811 6300 Cell: 065 926 4842 Email: mailulan@mopani.gov.za
8. Thabo Hlongwane	Department of Forestry, Fisheries and the Environment	Control Environmental Officer Local Government Support	Email: thlongwane@dffe.gov.za Tel: 015 811 6300 Cell: 067 417 3718
9. Nkhensani Makhubele	Limpopo Economic Development, Environment & Tourism	Control Environmental Officer Local Government Support	Email: MakhubeleNJ@ledet.gov.za

10. Phuti Mabotha	Limpopo Economic Development, Environment & Tourism	Control Environmental Officer	Email: MabothaPJ@ledet.gov.za Cell: 079 5295339
11. Tebogo Mamabolo	Limpopo Economic Development, Environment & Tourism	Principal Environmental Officer	Email: MamaboloTM@ledet.gov.za Cell: 079 527 8329
12. TM Magongwa	Limpopo Economic Development, Environment & Tourism	LGO	Email: MagongwaTM@ledet.gov.za Cell: 079 527 8329
13. Mohale Sekhwela	Ba-Phalaborwa Local Municipality	Assistant Superintendent Waste Management	Email: SekhwelaM@baphalaborwa.gov.za Tel: 015 780 6894 Cell: 071 584 9901
14. Philani Mkhabela	Ba-Phalaborwa Local Municipality	Assistant Superintendent Waste Management	Email: mkhabelap@baphalaborwa.gov.za Cell: 079 867 4044
15. Mokgadi Kapa	Maruleng Local Municipality	Waste Management Officer	Email: mokgadimamabolo112@yahoo.com Cell: 072 481 7173
16. Helen Phasha	Maruleng Local Municipality	Director	Email: phashadh75@gmail.com Cell: 082 550 3130
17. Lerato Shoroma	Greater Letaba Local Municipality	Environmental Manager	Email: shoromalerato@gmail.com Cell: 082 578 9524
18. Given Mathebula	Greater Giyani Local Municipality	Environmental Officer	Email: MathebulaGN@greatergiyani.gov.za Cell: 083 476 5739
19. Julie Somanje	Greater Giyani Local Municipality	Manager Environmental Services	Email: SomanjeNJ@greatergiyani.gov.za Cell: 072 385 4803
20. Eugene Schutte	Greater Tzaneen Local Municipality		Email: eugene.schutte@tzaneen.co.za Cell: 082 773 0759

21. Mashinya MP	Maruleng Municipality	Parks, Gardens and Cemetery Officer	Email: mashinyap@maruleng.gov.za Cell: 064 804 5094
22. Thobejane M. L	Maruleng Municipality	Youth Sports and Arts Culture	Email: thobejanem@maruleng.gov.za Cell: 0764855260
23. Marias Sekgobela	Ward Commute	The Oaks (W/03)	Cell: 0763405601
24. Renkie Moakamela	EPWP	The oaks (03)	Cell: 0727058963
25. Linky Serage	EPWP	The oaks (03)	Cell: 0766475641
26. Mashilo Paris	EPWP	The oaks (03)	Cell: 0762317559
27. Matshimawe	EPWP	The oaks (03)	Cell: 0793429586
28. Bongani Moeng	EPWP	The oaks (03)	Cell: 0760413194
29. Rose Pako	MLM	The oaks hall	Cell: 0768755224
30. Listen Ramoshaba	Lissenium General Dealer	Director	Cell: 0794760938
31. Revoluer Mthombeni	DFFE	Local Government Support (Student)	Cell: 0630813556
32. Nkgokgo Kgopha	Cogalsta (CDP)	GW	Email: kgophamichael@gmail.com Cell: 0829594992
33. Lewele Tebogo	The oats community member	Local Government Support	Email: leweletebogo7@gmail.com Cell: 076 669 7111
34. Lethabo Rasakanya	KZC	Waste Coordinator	Email: lethabo@krugerzzcanyons.org Cell: 0712039835
35. Tebogo Mamabolo	LEDET	PEO	Cell: 079 521 8329
36. Aubrey Pule	Ward Committee	Maruleng	Cell: 072 965 6869
37. Sebatana Jimmy	Ward Committee	Maruleng	Cell: 0827352187

38. Malepe T. A	MLM	PPO MLM	Cell:0736375180
39. Lowele Dikeledi	Ward Committee	Maruleng	Cell:079 253 7761
40. Malatji Eulenda	Ward Committee	Maruleng	Cell: 0607746169
41. Margareth Matene	Ward Committee	Maruleng	Cell: 0712912579
42. Talani Makhubele	Mugwenah waste	Representative	Email: tmakhubele@gmail.com Cell: 0711467055
43. Masingita Ngobeni	LEDET	Environmental Empowerment Services (Leaner)	Email: masingitashewi99@gmail.com Cell: 06740356540
44. Listen Ramoshebe	Lissenivm General Dealer	Director	Cell: 0794760938
45. Lydia Mpenyani	Phalaborwa Ballanoto Secondary Co-operative	Director Majeje Harbour	Cell:0796357729
46. Elizabeth Malatsi	Phalaborwa Ballanoto Secondary Co-operative	Director Selwani Harbour	Cell:0763721794
47. Willie Ramoshack	Thinavhuu Recycling	Chairman	Cell:0799931442
48. Mmapula Shai	FOSKOR	Sample Analyst	Cell: 0730775936
49. Tshidzumba Lufuno	FOSKOR	EW Specialist	Cell: 072 2323867
50. Makhubele Nkhesani	LEDET	EO	Cell:0824197482
51. Nkuna Rose	Recycling, Pfuna Scrap	Recycler	Cell:0835960459
52. Nicholas Jack Sheseni	JN Recycling Company	Recycler	Cell:0736578328/0836337744
53. Mashaba Soza	Mhlavelemu	Community member	Cell:0733656061
54. Msengi Eugene Lucky	Giyani Section (E)	EPWP (Giyani)	Cell:0664509067
55. Magezi	Homu 14B	EPWP	Cell:0605335856

56. Sinhle Mthembu	Ndhambi Village	EPWP	Cell:0638470022
57. Abel Mamatepa	Maxavele	EPWP	Cell:0726462204
58. Sikhon sean-P	Sikhumoyano Village	EPWP	Cell:0634529666
59. Mashimbye Rirhandzu	Thomo	EPWP	Cell:0716371122
60. Makamu Q.R	Siyandlani	Greater Giyani Municipality	Cell: 0834257874
61. Vilankulu V.R	F.1512	EPWP	Cell:0734785667
62. Ngoveni Shavelela Phumzile	Ndengeza R.D. P	EPWP	Cell:0734176285
63. Hlungwani Hlamalani Sweetnes	Mushiyani	EPWP	Cell:0836129270
64. Patricia Ndou	Thomo	C.W. P	Cell:0794068190
65. Mikateko Marhule	Siyandhani	C.W. P	Cell:0734039545
66. Thomas Nkonwane	Gandlamani	EPWP	Cell:0730849409
67. Henry Boje	Caltex Fresh stop	Manager	Cell:0714886277
68. Mathebula	Caltex Fresh stop	Store-manager	Cell:0827928625
69. Mailula Paulinah	Baphalaborwa Municipality	Councillor	Cell:0792910997
70. Sybranalt De Beer	Baphalaborwa Municipality	Councillor	Cell:0822120917
71. Lucy Shai	Baphalaborwa Municipality	Manager: Parks	Cell:0737461575
72. Rikhotso Bongani	Baphalaborwa Municipality	Training officer	Cell:0836963517
73. Patience Mdungazi	SANPARKS: KNP	Senior Social Ecologist	Email: patience.mdungazi@sanparks.org Cell: 0828888361

Appendix A: Project Steering Committee Meeting Minutes

Project Steering Committee Meeting

Minutes:

Mopani District Municipality Integrated Waste Management Plan



Prepared for Mopani District Municipality





PROJECT INFORMATION

Title	Development of an Integrated Waste Management Plan
Submission Date	30 September 2022
Classification	Company Confidential
Our Reference	MC.MDM. IWMP.PSC Min-001

VERSION AND AMENDMENT SCHEDULE

Version	Version date	Author	Description of Amendments
1	28 September 2022	Given Nkosi (Environmental Consultant)	Original Version

APPROVAL AND CONTROL SCHEDULE

Approved by	Designation	Responsibility	Signature	Date approved
Mmapula Moropo	Environmental Consultant	Review		29 September 2022
Ike Rampedi	Chief Operational Officer	Approval		29 September 2022

CLIENT APPROVAL

NAME	DESIGNATION	DATE	SIGNATURE
Nsovo Makelana	Environmental Management Inspector		
Ntshavheni Mudau	Manager for Environmental Management		

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REPORT STATUS	DRAFT		FINAL	
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Item No.	DISCUSSIONS	Actions
1	<p>OPENING AND WELCOME</p> <p>The Chairman, Mr. Thabo Hlongwane (TH), welcomed all those present.</p> <p>ATTENDEES</p> <ul style="list-style-type: none"> • Mmapula Moropo (MM) – Mamadi & Company (Pty) Ltd • Hulisani Netshisawulu– Mamadi & Company (Pty) Ltd • Given Nkosi– Mamadi & Company (Pty) Ltd • Ntshavheni Mudau (NM) – Mopani District Municipality (MDM) • Nsovo Makelani (NM) – MDM • Ntswaki Mailula (NM) – MDM • Thabo Hlongwane (TH) – Limpopo Economic Development, Environment & Tourism (DFFE) • Mokgadi Kopa (MK)- Maruleng Local Municipality (MLM) • Philani Mkhabela (PM) – Ba-Phalaborwa Local Municipality (BLM) • Phuti Mabothe (PM) – Limpopo Economic Development, Environment & Tourism (LEDET) • Tebogo Mamabolo (TM)– LEDET • TM Magongwa (TTM)– LEDET • Lerato Shoroma (LS)– Greater Letaba Local Municipality (GLM) • Julie Somanje (JM) – (Greater Giyani Local Municipality (GGM) • Eugene Schutte (ES) – Greater Tzaneen Local Municipality (GTM) 	
2	<p>INTRODUCTIONS</p> <ul style="list-style-type: none"> • All attendees introduced themselves. 	ALL
3	<p>APOLOGIES</p> <ul style="list-style-type: none"> • Ike Rampedi (IK) – Mamadi & Company (Pty) Ltd. • LEDET colleagues are running late and will be joining late. • ES has joined another meeting and will be joining late. 	MM
4	<p>PURPOSE OF THE MEETING</p> <ul style="list-style-type: none"> • To provide progress of the project to the PSC. • Receive inputs from PSC. 	TH

Item No.	DISCUSSIONS	Actions																		
5	HEALTH SAFETY SECURITY & ENVIRONMENT (HSSE) MOMENTS <ul style="list-style-type: none"> Under difficult circumstances, priorities life over possessions. Keep car doors locked at all times, even when sitting inside- to prevent loss of goods placed in the car. 	MM, GN																		
6	IWMP PRESENTATION Mamadi presented on the following: for a detailed presentation find presentation attached as Appendix C. <ul style="list-style-type: none"> Project Overview Project Process Flow Waste Management Status Quo Gaps & Needs Assessment Setting Strategic Goals Stakeholder Engagement Public Meeting Proposed Dates <table border="1"> <thead> <tr> <th>Local Municipalities</th><th>Proposed Dates</th><th>Proposed Time</th></tr> </thead> <tbody> <tr> <td>Greater Tzaneen LM</td><td>Monday 31 October 2022</td><td>10:00 a.m.</td></tr> <tr> <td>Greater Letaba LM</td><td>Tuesday 01 November 2022</td><td>10:00 a.m.</td></tr> <tr> <td>Ba-Phalaborwa LM</td><td>Wednesday 02 November 2022</td><td>10:00 a.m.</td></tr> <tr> <td>Greater Giyani LM</td><td>Thursday 03 October 2022</td><td>10:00 a.m.</td></tr> <tr> <td>Maruleng LM</td><td>Friday 04 November 2022</td><td>10:00 a.m.</td></tr> </tbody> </table>	Local Municipalities	Proposed Dates	Proposed Time	Greater Tzaneen LM	Monday 31 October 2022	10:00 a.m.	Greater Letaba LM	Tuesday 01 November 2022	10:00 a.m.	Ba-Phalaborwa LM	Wednesday 02 November 2022	10:00 a.m.	Greater Giyani LM	Thursday 03 October 2022	10:00 a.m.	Maruleng LM	Friday 04 November 2022	10:00 a.m.	NM, GN
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Ba-Phalaborwa LM	Wednesday 02 November 2022	10:00 a.m.																		
Greater Giyani LM	Thursday 03 October 2022	10:00 a.m.																		
Maruleng LM	Friday 04 November 2022	10:00 a.m.																		
7	DISCUSSIONS <ul style="list-style-type: none"> Ensure that IWMP information is aligned the Integrated Development Plans (IDP) information. Greater Letaba IWMP has been endorsed. Draft IWMP to be shared with the PSC before it goes to the public. Health care waste should still be reflected in the IWMP. 																			

Item No.	DISCUSSIONS	Actions
	<ul style="list-style-type: none"> The IWMP should not compare municipalities but to highlight if available resources meet needs of the people. 	
8	WAY FOWARD <ul style="list-style-type: none"> Mamadi to send Status Quo and Gaps and Needs Report on the 21st of September 2022. PSC to send comments to Mamadi on the 03rd of September 2022. 	NM
9	CLOSURE <ul style="list-style-type: none"> TH thanked everyone for attending the meeting. 	TH

Appendix A: Progress Update Meeting Agenda

 Mamadi & Company I SA	Project Refer	Mopani District Municipality IWMP & Feasibility Project Steering Committee (PSC) Meeting.	
	Circulation:	PSC Meeting	
	Compiled by:	Mamadi COO	
	Revision:	Version 1.0	
	Date:	19 th September 2022	
Document Type:	Meeting Agenda		
Title:	Mopani District Municipality PSC Meeting		
Venue:	Mopani District Municipal Offices	Date	19/09/2022
Chair:	Mr. Mudau	Time	10h00 -13h00

FOCUS	ITEM		PRESENTER
Welcome and Administration	1	Opening and Welcome	MDM
	2	Introductions	All
	3	Apologies	All
	4	Purpose of the Meeting	MDM
HSSE	5	Health & Safety Moments	All
Presentation	6	Presentations	Mamadi
	6.1	IWMP	
	6.2	Feasibility Study for Regional Landfill Site	
Discussion	7	Discussions	All
Way Forward	8	Way Forward	All
Closure	9	Closure	All

APPENDIX B- Register

	PROJECT: REGIONAL LANDFILL FEASIBILITY STUDY FOR MOPANI DISTRICT MUNICIPALITY	 Mamadi & Company SA
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ATTENDANCE REGISTER



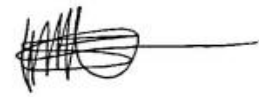


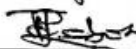
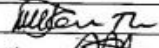
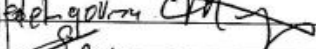


MEETING DETAILS

DATE: 19/09/2022

VENUE: MOPANI DISTRICT MUNICIPALITY OFFICES

TIME :10H00

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
1. Ike Rampedi	Mamadi and Company SA (Pty) Ltd	COO	Email: jke@mamadi.co.za Cell: 079 058 2847	—
2. Mmapula Moropo	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Hulisanin@mamadi.co.za 074 2590 501	
3. Hulisani Netshisaulu	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Hulisanin@mamadi.co.za Cell: 071 335 4180	
4. Given Nkosi	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Given@mamadi.co.za Cell: 061 4767 868	
5. Ntshavheni Mudau	Mopani District Municipality	Environmental Manger	Cell: 073 557 9689 Email: mudaun@mopani.gov.za	

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
6. Nsovo Makelana	Mopani District Municipality	Environmental Management Inspector	Cell: 063 292 9423 Email: makelanan@mopani.gov.za	
7. Ntswaki Mailula	Mopani District Municipality	Air Quality Officer	Tel: 015 811 6300 Cell: 065 926 4842 Email: mailulan@mopani.gov.za	
8. Thabo Hlongwane	Department of Forestry, Fisheries and the Environment	Control Environmental Officer Local Government Support	Tel: 015 811 6300 Cell: 067 417 3718 Email: thlongwane@dfre.gov.za	
9. Bule Sontsho	GREATER GIBANI LOCAL MUNICIPALITY	MANAGER: ENVIRONMENTAL SERVICES	015 811 5500 012 325 4803 Sontsho@GREATERGIBANI.GOV.ZA	
10. Kapa Morogodi	Maruleng Municipality	SK/MO	072 481 7173 morogodi@maruleng-llc.co.za	
11. Phah Mabotla	Ledet: IPWm	EOC	079 529 5339 MabotlaPJ@ledet.gov.za	
12. Mombela Tobogo	LEDET	PEO	079 529 5339 / mombela@ledet.gov.za	
13. Moya Moya	LEDET	UGO	079 529 5339 / moya@ledet.gov.za	
14. Shadema Mabotla	Greater Tlokweng Municipality	Env. Manager	082 678 9524	
15. Philani Mchabane	Bq-Phalaborwa Local Municipality	Ass Superintendent	079 86 74 044	
16.				
17.				
18.				

Appendix B: Public Meetings Minutes

Appendix B1: Ba-Phalaborwa Public Meetings Minutes

PROJECT: PUBLIC PARTICIPATION MEETING FOR DEVELOPMENT OF MOPANI DISTRICT MUNICIPALITY INTEGRATED WASTE MANAGEMENT PLAN

PROJECT REFERENCE: MDM 2021/22-028

Date: 01 November 2022



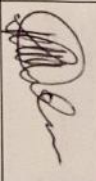

Time: 10H00

Venue: Ba-Phalaborwa Local Municipality (Activity Hall)

Item No.	Items	Responsibility
1	OPENING AND WELCOME <ul style="list-style-type: none">The Chairman, Mr. De Beer (DB), opened the meeting and the prayer item was rendered by Mr. Philani Mkhabela (PM)Councilor Paulinah (CP). welcomed all attendees and encouraged them to feel free and participate.	DB CP PM
2	INTRODUCTIONS <ul style="list-style-type: none">All attendees introduced themselves. See Appendix A (Attendance Register) for all attendees.	ALL
3	PURPOSE OF THE MEETING <ul style="list-style-type: none">Mr. Thabo Hlongwane (TH), indicated that the purpose of the meeting was present the Mopani District Municipality draft Integrated Waste Management Plan (IWMP) to the public, and to also give them an opportunity to comments on the draft IWMP before is finalised.	TH
4	IWMP PRESENTATION <p>Mamadi presented on the following: for a detailed presentation find presentation attached as Appendix B.</p> <ul style="list-style-type: none">Project OverviewProject Process FlowWaste Management Status QuoGaps & Needs AssessmentSetting Strategic GoalsStakeholder Engagement	MM

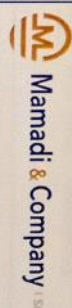
Item No.	Items	Responsibility
5	<p>DISCUSSIONS</p> <p>5.1 Who can assist Caltex service station in disposing hazardous empty oil cans within the Ba-Phalaborwa Local Municipality (BLM)?</p> <p>Response: Councillor DB indicated he will assist the service station with the contact details of the company that assist with hazardous disposal within the BLM.</p> <p>5.2 How do we access a copy of the draft IWMP.</p> <p>Response: The copy of the IWMP is placed at the Ba-Phalaborwa Library, it can also be distributed among attendances via emails. Councillor DB also added that the LM will make copies of the draft IWMP and distribute it in all libraries within the LM.</p> <p>5.3 Is sludge excluded from waste streams.</p> <p>Response: Sludge is part of the waste streams, and it will be included in the graphic showing waste streams within the report.</p>	All
6	<p>WAY FOWARD</p> <ul style="list-style-type: none"> • The draft IWMP report will be placed at the Ba-Phalaborwa Library. • The review period is from Monday 30th October to Tuesday 29th November 2022. 	MM
7	<p>CLOSURE</p> <p>Councillor DB thanked everyone for attending the meeting and the meeting was adjourned.</p>	NM

Appendix A: Attendance Register

NAME & SURNAME		ORGANISATION	DESIGNATION	CONTACT DETAILS		SIGNATURE
1.	Mmapula Moropo	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Mmapula@mamadi.co.za	074 2590 501	
2.	Hulisani Netsiisaulu	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Hulisani@mamadi.co.za	Cell: 071 335 4180	
3.	Ntshavheni Mudau	Mopani District Municipality	Environmental Manager	Email: mudau@mopani.gov.za	Cell: 073 557 9689	
4.	Nsovo Mamelana	Mopani District Municipality	Environmental Management Inspector	Cell: 063 292 9423	Email: mamelana@mopani.gov.za	



PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI DISTRICT MUNICIPALITY



ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-BA-PHALABORWA LM

DATE: 02/11/2022

VENUE: ACTIVITY HALL

TIME: 10H00am



PROJECT: DEVELOPMENT OF AN INTEGRATED WASTE MANAGEMENT
PLAN FOR MOPANI DISTRICT MUNICIPALITY



Mamadi & Company

ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-BA-PHALABORWA LM

DATE: 02/11/2022

VENUE: ACTIVITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
5. Ntswaki Mailula	Mopani District Municipality	Air Quality Officer	Tel: 015 811 6300 Cell: 065 926 4842 Email: mailulan@mopani.gov.za	
6. Thabo Hlongwane	Department of Forestry, Fisheries and the Environment	Control Environmental Officer Local Government Support	Tel: 015 811 6300 Cell: 067 417 3718 Email: thlongwane@dffe.gov.za	
7. REVOLVER MTHOMBENI	DFFE	Local Government Support (Student)	063 081 3556	
8. MASHWEITA NGOBENI	LEBET	ENVIRONMENTAL IMPROVEMENT SERVICE (LEARNER)	0674035654 mashingfanyibeni@gmail.com	
9. Lisbon Ramogadik	Lisbenium General dealer	Director	0794760938 Lisbon	



PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI
DISTRICT MUNICIPALITY



Mamadi & Company

ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-BA-PHALABORWA LM

DATE: 02/11/2022

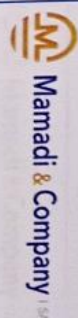
VENUE: ACTIVITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
10. Henry Bop'	Calter / Fr Shop	Manager	0714856277	
11. Abel Phalaborwa	Calter / Fr Shop	Store mgr. gpe	082 792 8625	
12. Mlice Kamoshela	Thimabund Recycling	Chairman	079 993 1442	
13. Mmapula Shai	FOSKOR	Sampler & Analyst	073 077 5936	
14. Lufuno Tsindunba	FOSKOR	Env Specialist	072 2323867	
15. Makubela Mkheasani	LEDET	GO	082 449 1482	



PROJECT: DEVELOPMENT OF AN INTEGRATED WASTE MANAGEMENT
PLAN FOR MOPANI DISTRICT MUNICIPALITY



ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-BA-PHALABORWA LM

DATE: 02/11/2022

VENUE: ACTIVITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
16. ELIZABETH MALATSE	PHALABORWA REGIONAL CO-OPERATIVE	DIRECTOR	0763721794	
17. LADIA MOPENYANI	Phalaborwa Bolland Secondary co-operative	DIRECTOR Mabete Harbour	0796357729	
18. Philani Mchabele	Ba-Phalaborwa LM	Acting Waste Manager	0798674044	
19. PHILIPINA MATHUKA	Phalaborwa Municipality	COUNCILLOR	0842110917	
20. SYBANDA PE BCEE	Ba-Phalaborwa Municipality	COUNCILLOR	0822120817	



PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI
DISTRICT MUNICIPALITY



Mamadi & Company (Pty) Ltd

ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-BA-PHALABORWA LM

DATE: 02/11/2022

VENUE: ACTIVITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
21. Lucy Shai	BPM	Manager: Parks	0737461575	
22. Pulato Bogosi	BPM	Training Officer	0836963517	
23. Patience Ndungai	SANParks! KNP	Senior Social Ecologist	Patience.Melungazi@sanparks.org 0838888361	
24.				
25.				

Appendix B2: Greater Giyani LM Public Meetings Minutes

PROJECT: PUBLIC PARTICIPATION MEETING FOR DEVELOPMENT OF MOPANI DISTRICT MUNICIPALITY INTEGRATED WASTE MANAGEMENT PLAN

PROJECT REFERENCE: MDM 2021/22-028

Date: 03 November 2022

Time: 10H00

Venue: Giyani Community Hall

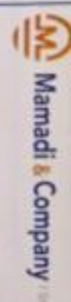
Item No.	Items	Responsibility
1	OPENING AND WELCOME <ul style="list-style-type: none"> Mr. Thabo Thlongwane (TT) opened the meeting and requested that a prayer item be rendered to open the meeting Hulisani Netshisaulu (HN). Mr. Mathebula Given (MG) welcomed all attendees and encouraged them to feel free and participate. 	TT HN MG
2	INTRODUCTIONS <ul style="list-style-type: none"> All attendees introduced themselves. See Appendix A (Attendance Register) for all attendees. 	ALL
3	PURPOSE OF THE MEETING <ul style="list-style-type: none"> TT indicated that the purpose of the meeting was to present the Mopani District Municipality draft Integrated Waste Management Plan (IWMP) to the public, and to also give them an opportunity to comments on the draft IWMP before it is finalised. 	TT
4	IWMP PRESENTATION <p>Mamadi presented on the following: for a detailed presentation find presentation attached as Appendix B.</p> <ul style="list-style-type: none"> Project Overview Project Process Flow Waste Management Status Quo Gaps & Needs Assessment Setting Strategic Goals Stakeholder Engagement 	MM

Item No.	Items	Responsibility
5	<p>DISCUSSIONS</p> <p>5.1 The issue of disposal of diapers is a problem in the community and this diapers end-up in the nearby rivers. Response: Noted and necessary interventions will be undertaken.</p> <p>5.2 Strengthen the relationship between recycling companies and the municipality. Response: Noted, the recommendation has been included in the IWMP.</p> <p>5.3 The recycling companies need assistance with transport to deliver recyclables to Gauteng province.</p> <p>5.4 The municipality must take initiatives to visit the local recycling companies to check their operational conditions.</p> <p>5.5 The recyclers previously had a forum and this must be resuscitated. The forum will assist the recyclers with information sharing and establishing partnerships.</p>	All
6	<p>WAY FOWARD</p> <ul style="list-style-type: none"> • The draft IWMP report will be placed at the Giyani Library. • The review period is from Monday 30th October to Tuesday 29th November 2022. 	MM
7	<p>CLOSURE</p> <p>TT thanked everyone for attending the meeting and the meeting was adjourned.</p>	TT

Appendix A: Attendance Register



**PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI
DISTRICT MUNICIPALITY**



ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-GREATER GIVANI LM

DATE: 03/11/2022

VENUE: GIVANI COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
1. Mmepula Moropo	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Mmepula@mamadi.co.za 074 2590 501	
2. Hulisani Netshisaulu	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Hulisani@mamadi.co.za Cell: 071 335 4180	
3. Ntshavheni Mudau	Mopani District Municipality	Environmental Manager	Cell: 073 557 9689 Email: mudau@mopani.gov.za	
4. Nsovo Makelana	Mopani District Municipality	Environmental Management Inspector	Cell: 063 292 9423 Email: makelana@mopani.gov.za	



**PROJECT: DEVELOPMENT OF AN INTEGRATED WASTE MANAGEMENT
PLAN FOR MOPANI DISTRICT MUNICIPALITY**



Mamadi & Company

ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-GREATER GIVANI LM

DATE: 03/11/2022

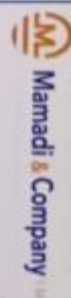
VENUE: GIVANI COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
5. Ntswaki Malula	Mopani District Municipality	Air Quality Officer	Tel: 015 811 6300 Cell: 065 926 4842 Email: malulan@mopani.gov.za	
6. Thabo Mhlongwane	Department of Forestry, Fisheries and the Environment	Control Environmental Officer Local Government Support	Tel: 015 811 6300 Cell: 067 417 3718 Email: thongwane@dtf.gov.za	
7. Nkomo Rose	Peking Puma Scrap	Recycler	083 5960459	
8. Nicholas Jack Gweseni	SA Peking Company 600 Kredo Road	Recycles	073 657 8328 083 633 7744	
9. REVOLVER MTHOMBENT	DTF	LCCOM Government Support (Growth)	063 081 3556 revolvermthombent@gmail.com	



PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI
DISTRICT MUNICIPALITY



ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-GREATER GIYANI LM

DATE: 03/11/2022

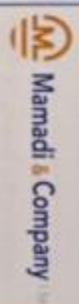
VENUE: GIYANI COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
10. MASINGETA NGOBEHI	LEDET	ENVIRONMENT EMPLOYEE SENIOR CLERK	0674035654 mastingengobhi@gmail.com	
11. TIMINI MOKHUBELE	MUCWENAH WASTE	Representative	071 44 7055 timinide@gmail.com	
12. MATHIBULU N. G	Qqoo	ENVIRONMENTAL OFFICER	015 811 5582 Mthibulu@qoo.org.za	
13. MATHIBULU S. DE	Mthibulu S. DE	Community member	078 3656 061	
14. MSENQALI EUGENE LAMGAY	GIYANI SECTION (E)	EPWP (GIYANI)	066 450 9067	
15. MAGGEZI MAGGEZI	HOMU 14B	EPWP	0605335856	



PROJECT: DEVELOPMENT OF AN INTEGRATED WASTE MANAGEMENT
PLAN FOR MOPANI DISTRICT MUNICIPALITY



ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-GREATER GIYANI LM

DATE: 03/11/2022

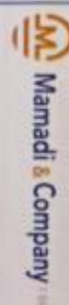
VENUE: GIYANI COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
16. Simhle mntsheni	Ndhambi village	EPWP	063 847 0022	
17. Abel Mamtsepa	Mekavete	EPWP	072 646 2204	Abel
18.				
19. Makamu ZR	Siyavulani	GGM	0834257874	
20. Mthawane P.	Sikhunyane Village	EPWP	0634529666	
Mashinaye Rimandzu	ithomo	EPWP	0116371122	



PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI
DISTRICT MUNICIPALITY



ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-GREATER GIYANI LM

DATE: 03/11/2022

VENUE: GIYANI COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
21. VITANTCHU V.C	F. ISIA	E.P.W.P.	0734785667	RAFAUL
22. HGDEN SHAWELU P.V.M.C.I.E	Ndengera R.d.P.	E.P.W.P.	0734176285	S.P. HGDEN
23. HUNGWANI HUNGWANI SWEETNESS	Ndshanyani	E.P.W.P.	0836129270	H.S. HUNGWANI
24. RAVICHA NDAU	Themo	CWOP	079 4064 190	NDIAU
25. MILECETO MAYWILE	Siyandhanyi	CWOP	073 4038 545	DM



**PROJECT : DEVELOPMENT OF AN INTEGRATED WASTE MANAGEMENT
PLAN FOR MOPANI DISTRICT MUNICIPALITY**



ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING- GREATER GIYANI LM

DATE: 03/11/2022

VENUE: GIYANI COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
26. <i>Phetane Mokwame</i>	<i>Gandevane</i>	<i>EPWP</i>	<i>093-08409 073 084 9409</i>	<i>[Signature]</i>
27.				
28.				
29.				
30.				

Appendix B3: Greater Letaba LM Public Meetings Minutes

PROJECT: PUBLIC PARTICIPATION MEETING FOR DEVELOPMENT OF MOPANI DISTRICT MUNICIPALITY INTEGRATED WASTE MANAGEMENT PLAN

PROJECT REFERENCE: MDM 2021/22-028

Date: 01 November 2022

Time: 10H00

Venue: Lebaka Community Hall

Item No.	Items	Responsibility
1	OPENING AND WELCOME <ul style="list-style-type: none"> Mr. Mabidilala Emgas-Ward Councilor (ME) opened the meeting and requested that a prayer item be rendered to open the meeting. Ms. Lerato Sheroma (LS) welcomed all attendees and encouraged them to feel free and participate. 	NM MM
2	INTRODUCTIONS <ul style="list-style-type: none"> All attendees introduced themselves. See Appendix A (Attendance Register) for all attendees. 	ALL
3	PURPOSE OF THE MEETING <ul style="list-style-type: none"> Mr Thabo Thlongwane (TT) indicated that the purpose of the meeting was to present the Mopani District Municipality draft Integrated Waste Management Plan (IWMP) to the public, and to also give them an opportunity to comments on the draft IWMP before it is finalised. 	NM
4	IWMP PRESENTATION Mamadi presented on the following: for a detailed presentation find presentation attached as Appendix B . <ul style="list-style-type: none"> Project Overview Project Process Flow Waste Management Status Quo Gaps & Needs Assessment Setting Strategic Goals Stakeholder Engagement 	MM

Item No.	Items	Responsibility
5	<p>DISCUSSIONS</p> <p>5.1 We will appreciate if the municipality can develop the landfill site to ensure proper waste disposal within the municipality. Response: The issue has been presented to the council and awaiting decision and budget allocation.</p> <p>5.2 The municipality must rehabilitate the community Buy-back Centre so that it can be utilized by the recyclers. Response: The municipality is aware of the situation and they are in the process of acquiring budget to do rehabilitate the Buy-back centre.</p> <p>5.3 The community is encouraged to refrain from illegally dumping waste and encouraged to use the provided skip bins.</p> <p>5.4 Issue of disposal of diapers is a problem in the community and this diapers end-up in the nearby rivers.</p> <p>5.5 The municipality must conduct awareness on proper waste disposal. Response: The municipality has been inviting the community to planned awareness initiatives, however, most of the community members are reluctant to attend.</p>	All
6	<p>WAY FOWARD</p> <ul style="list-style-type: none"> • The draft IWMP report will be placed at the Lekaba Community Library. • The review period is from Monday 30th October to Tuesday 29th November 2022. 	MM
7	<p>CLOSURE</p> <p>ME thanked everyone for attending the meeting and the meeting was adjourned.</p>	NM

Appendix A: Attendance Register



**PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI
DISTRICT MUNICIPALITY**



Mamadi & Company

ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-GREATER LATABA LM

DATE: 01/11/2022

VENUE: LETABA COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
1. Mmapula Moropo	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Mmapula@mamadi.co.za 074 2590 501	
2. Hulisani Netshisaulu	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Hulisani@mamadi.co.za Cell: 071 335 4180	
3. Ntshaheni Mudau	Mopani District Municipality	Environmental Manager	Cell: 073 557 9689 Email: mudau@mopani.gov.za	—
4. Nsovo Mamelana	Mopani District Municipality	Environmental Management Inspector	Cell: 063 292 9423 Email: mamelana@mopani.gov.za	



**PROJECT: DEVELOPMENT OF AN INTEGRATED WASTE MANAGEMENT
PLAN FOR MOPANI DISTRICT MUNICIPALITY**



ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-GREATER LETABA LM

DATE: 01/11/2022

VENUE: LETABA COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
5. Ntswaki Mailula	Mopani District Municipality	Air Quality Officer	Tel: 015 811 6300 Cell: 065 926 4842 Email: mailula@mopani.gov.za	
6. Thabo Hlongwane	Department of Forestry, Fisheries and the Environment	Control Environmental Officer Local Government Support	Tel: 015 811 6300 Cell: 067 417 3718 Email: thlongwane@dlfe.gov.za	
7. Masello Masediwa	BT	Proctor	0783291975 Masediwa@gmail	
8. Venus KUDZA	ANC	Ward Commettee	0794338782	
9. Masekela Masekela	N/A	W/C	082 282 1249	



PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI
DISTRICT MUNICIPALITY



Mamadi & Company

ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-GREATER LATABA LM

DATE: 01/11/2022

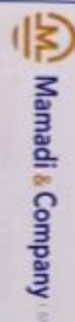
VENUE: LATABA COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
10. Jane Mokone	Ward Community		—	X
11. Phelekezela Katlago	Ward Community		066 3911 814	
12. Shomo Lento	GLN	Community Manager	086 578 4524	
13. Nkanyane Geezani	Jamela Ward Committee	Ward Committee	016 116 3825	
14. Moseamed Pentuniah	MohlABANTHAYI	Ward Committee	072 314 9324	M P Moseamed
15. Mkhumbane Maphu	MohlABANTHAYI	Ward Committee	071 578 5513	Mkhumbane



PROJECT: DEVELOPMENT OF AN INTEGRATED WASTE MANAGEMENT
PLAN FOR MOPANI DISTRICT MUNICIPALITY



ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-GREATER LETABA LM

DATE: 01/11/2022

VENUE: LETABA COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
16. Nkomo Shana	Ward 23	EPWP	0783861195	
17. Josephine Mweni	Ward 20	EPWP	0822120778	
18. Nicholas Mweni	Ward 19	EPWP	0193905598	
19. Constance Mweni	Ward 21	EPWP	0781947976	
20. Kapila Jemba	Ward 20	EPWP GLM	07674402655	



PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI
DISTRICT MUNICIPALITY



Mamadi & Company

ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-GREATER LATABA LM

DATE: 01/11/2022

VENUE: LETABA COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
21. Mofa bala Mamed Mokete	1. Hobosing	EPWP 21	0768-198816	Mokete Mamed
22. Molewene Seipuna	Sumuwa	EPWP 20	0726382563	S. Molewene
23. KHUTSO MATHLELO	Mamokgadi	EPWP 24	07200993099	
24. Kamekapa Edwin	Bellevue	EPWP 23	0767878402	
25. REVOLVER MTHOMBENI	DFFE	Local government support (Student)	063 081 3556	

Master_drummer@outlook.com



PROJECT: DEVELOPMENT OF AN INTEGRATED WASTE MANAGEMENT
PLAN FOR MOPANI DISTRICT MUNICIPALITY



Mamadi & Company

ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-GREATER LETABA LM

DATE: 01/11/2022

VENUE: LETABA COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
26. MASINGETA NGOBENI	LEBET	ENVIRONMENTAL EMPOWERMENT SERVICES (LEBET)	0674035634/ 0607352248	
27. MABIDIPANE EMGAS	GLM	WARD 19 CCLC	0724758409	
28. Selinah Rasempe	GLM	RD CILC	0712416340	
29.				
30.				

Appendix B4: Maruleng LM Public Meetings Minutes

PROJECT: PUBLIC PARTICIPATION MEETING FOR DEVELOPMENT OF MOPANI DISTRICT MUNICIPALITY INTEGRATED WASTE MANAGEMENT PLAN

PROJECT REFERENCE: MDM 2021/22-028

Date: 04 November 2022

Time: 10H00

Venue: The Oaks Community Hall

Item No.	Items	Responsibility
1	OPENING AND WELCOME <ul style="list-style-type: none"> Mr. Thabo Thlongwane (TT) opened the meeting and requested that a prayer item be rendered to open the meeting. Ms. Mashinya P (MP) welcomed all attendees and encouraged them to feel free and participate. 	TT MP
2	INTRODUCTIONS <ul style="list-style-type: none"> All attendees introduced themselves. See Appendix A (Attendance Register) for all attendees. 	ALL
3	PURPOSE OF THE MEETING <ul style="list-style-type: none"> TT indicated that the purpose of the meeting was to present the Mopani District Municipality draft Integrated Waste Management Plan (IWMP) to the public, and to also give them an opportunity to comments on the draft IWMP before it is finalised. 	TT
4	IWMP PRESENTATION <p>Mamadi presented on the following: for a detailed presentation find presentation attached as Appendix B.</p> <ul style="list-style-type: none"> Project Overview Project Process Flow Waste Management Status Quo Gaps & Needs Assessment Setting Strategic Goals Stakeholder Engagement 	MM

Item No.	Items	Responsibility
5	<p>DISCUSSIONS</p> <p>5.1 What method was used to invite the public? Response: A newspaper advert was published on Daily Sun newspaper on the 28th of October 2022 and also invitations were sent to stakeholders and ward councilors.</p> <p>5.2 How do we get involved? Response: The draft IWMP will be available for public review, a copy will be placed at the Maruleng library and soft copies will be made available to the community members with email addresses.</p> <p>5.3 Can you reschedule the meeting? Response: Unfortunately, the meeting cannot be rescheduled, however, the draft report will be made available to community structures via email and WhatsApp.</p>	All
6	<p>WAY FOWARD</p> <ul style="list-style-type: none"> • The draft IWMP report will be placed at the Maruleng Library. • The review period is from Monday 30th October to Tuesday 29th November 2022. 	MM
7	<p>CLOSURE</p> <p>TT thanked everyone for attending the meeting and the meeting was adjourned.</p>	TT

Appendix A: Attendance Register



**PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI
DISTRICT MUNICIPALITY**



Mamadi & Company

ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-MARULENG LM

DATE: 04/11/2022

VENUE: THE OAK COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
1. Mmepule Moropo	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Mmepule@mamadi.co.za 074 2590 501	
2. Hulisani Netshaulu	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Hulisani@mamadi.co.za Cell: 071 335 4180	
3. Ntshavheni Mudau	Mopani District Municipality	Environmental Manager	Cell: 073 557 9689 Email: mudau@mopani.gov.za	
4. Ntsovo Makelana	Mopani District Municipality	Environmental Management Inspector	Cell: 063 292 9423 Email: makelana@mopani.gov.za	



**PROJECT: DEVELOPMENT OF AN INTEGRATED WASTE MANAGEMENT
PLAN FOR MOPANI DISTRICT MUNICIPALITY**



Mamadi & Company

ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-MARULENG LM

DATE: 04/11/2022

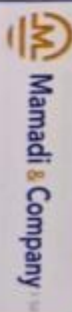
VENUE: THE OAK COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
5. Ntswaki Mailula	Mopani District Municipality	Air Quality Officer	Tel: 015 811 6300 Cell: 065 926 4842 Email: mailulan@mopani.gov.za	
6. Thabo Hlongwane	Department of Forestry, Fisheries and the Environment	Control Environmental Officer Local Government Support	Tel: 015 811 6300 Cell: 067 417 3718 Email: thlongwane@dfre.gov.za	
7. Masinga mo	Maruleng municipality	Parks, garden and cemetery officer	064 870 6094 masinga.pamaring gov.za	
8. Phobeyane M.C	Maruleng Mm	Justice, Parks and Arts Culture	0764855150 phobeyane@maruleng.gov.za	
9. Mamadi Setyobela	Mamadi Committee	The Dates (403)	0763405001	



PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI
DISTRICT MUNICIPALITY



ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-MARUENG LM

DATE: 04/11/2022

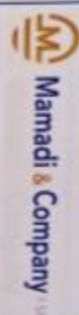
VENUE: THE OAK COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
10. Rennie Mooka	ERUP	The oaks (03)	0727058963	RM
11. Liny Seng	ERUP	The oaks (03)	0766475641	L. Seng
12. Mashio Pabis	ERUP	The oaks (03)	0762317559	Mashio
13. Makhivuvuwa	ERUP	The OAKS (03)	0793429586	Mkhivuvuwa
14. Bongani Mponi	ERUP	The OAKS (03)	0760413194	B. Mponi
15. Rose Pato	MLM	The oaks / wall	0768155224	Rose Pato



PROJECT: DEVELOPMENT OF AN INTEGRATED WASTE MANAGEMENT
PLAN FOR MOPANI DISTRICT MUNICIPALITY



ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-MARUJENG LM

DATE: 04/11/2022

VENUE: THE OAK COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
16. MASINGITA NDOBENI	LEDET	Municipal Support (Cleaner)	0674035654 masingitangobeni79@gmail.com	
17. AN RETHA LIFER MTHOMBENI	DIFFI	LOCAL GOVERNMENT Support	063 081 3556	
18. MUGOGO MUGOPHA	Logistics (GR)	GR	082 951 4992 grace.kaplan@mamel @gmail.com	
19. Loure Telogo	The Oaks Community Member	Local Government Support	076 669 7111 loure.telogo@oakmamel @gmail.com	
20. LETHABO Rasakanyo	K2C	Waste Coordinator	0712039835 lethaboburger20@gmail.com	



PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI
DISTRICT MUNICIPALITY



Mamadi & Company

ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-MARULENG LM

DATE: 04/11/2022

VENUE: THE OAK COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
21. Teboho Mamabodo	LEDDET	PEO	019 521 8229	
22. Pius Maseko	WARD COMMITTEE	Makulede	079 965 6869	
23. Sebastian Jiminy	WARD COMMITTEE	Makulede	082 7352 187	
24. Maseko T.A	MLM	PPD MLM	073 6375 180	
25. Louise Diveredi	WARD COMMITTEE	Makulede	079 2537761	



PROJECT: DEVELOPMENT OF AN INTEGRATED WASTE MANAGEMENT
PLAN FOR MOPANI DISTRICT MUNICIPALITY



ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-MARULENG LM

DATE: 04/11/2022

VENUE: THE OAK COMMUNITY HALL

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
26. maledi eurenda	wood committee	Maruleng	060746169	maledi ms
27. Margaret Platene	Ward committee	Maruleng	0712910579	Platene
28.				
29.				
30.				

Appendix B5: Greater Tzaneen LM Public Meetings Minutes

PROJECT: PUBLIC PARTICIPATION MEETING FOR DEVELOPMENT OF MOPANI DISTRICT MUNICIPALITY INTEGRATED WASTE MANAGEMENT PLAN

PROJECT REFERENCE: MDM 2021/22-028

Date: 31 October 2022







Time: 10H00

Venue: Waste Management Training Centre

Item No.	Items	Responsibility
1	OPENING AND WELCOME <ul style="list-style-type: none"> The Chairman, Mr. Ntshavheni Mudau (NM), opened the meeting and the prayer item was rendered by Mmapula Moropo (MM). Ms. Maggy Machumele (MGM) welcomed all attendees and encouraged them to feel free and participate. 	NM MM
2	INTRODUCTIONS <ul style="list-style-type: none"> All attendees introduced themselves. See Appendix A (Attendance Register) for all attendees. 	ALL
3	PURPOSE OF THE MEETING <ul style="list-style-type: none"> Ms Nsovo Malekana (NM) indicated that the purpose of the meeting was present the Mopani District Municipality draft Integrated Waste Management Plan (IWMP) to the public, and to also give them an opportunity to comments on the draft IWMP before is finalised. 	NM
4	IWMP PRESENTATION <p>Mamadi presented on the following: for a detailed presentation find presentation attached as Appendix B.</p> <ul style="list-style-type: none"> Project Overview Project Process Flow Waste Management Status Quo Gaps & Needs Assessment Setting Strategic Goals Stakeholder Engagement 	MM

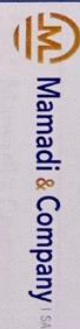
Item No.	Items	Responsibility
5	<p>DISCUSSIONS</p> <p>5.1 Will wastewater treatment plants information be included in the report? Response: Yes, there will be a section on sanitation in the report.</p> <p>5.2 Medi-Clinic is struggling to get a company that can recycle medical glass bottles that are used within the hospital, and as a result it is disposed of with other medical waste. Response: We are not aware of any company that recycle medical waste at the current moment, however the issue will be included in the IWMP as one of the challenges so that when Industrial Symbiosis is conducted within the province it can also be looked into for possible synergy or for solutions.</p> <p>5.3 The cost implications in terms of disposal of medical waste can be one contributing factors for inappropriate disposal of medical waste. Response: Noted</p> <p>5.4 Medical waste must have a section in the report showing the current status of medical waste and how it is managed within the district. Response: Noted</p> <p>5.5 Ward Councillors should be part of the development of IWMP. Response: Noted</p>	All
6	<p>WAY FOWARD</p> <ul style="list-style-type: none"> The draft IWMP report will be placed at the Tzaneen Library. The review period is from Monday 30th October to Tuesday 29th November 2022. 	MM
7	<p>CLOSURE</p> <p>NM thanked everyone for attending the meeting and the meeting was adjourned.</p>	NM

Appendix A: Attendance Register

		PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI DISTRICT MUNICIPALITY		 Mamadi & Company	
ATTENDANCE REGISTER					
PUBLIC PARTICIPATION MEETING-GREATER TZANEEN LM					
DATE: 31/10/2022		VENUE: WASTE MANAGEMENT TRAINING CENTRE		TIME: 10H00am	
NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE	
1. Mmapula Moropo	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Mmapula@mamadi.co.za 074 2590 501		
2. Hulisani Netshisaulu	Mamadi and Company SA (Pty) Ltd	Environmental Consultant	Email: Hulisani@mamadi.co.za Cell: 071 335 4180		
3. Ntshavheni Mudau	Mopani District Municipality	Environmental Manager	Cell: 073 557 9689 Email: mudau@mopani.gov.za		
4. Nsovo Machelana	Mopani District Municipality	Environmental Management Inspector	Cell: 063 292 9423 Email: machelana@mopani.gov.za		



PROJECT: DEVELOPMENT OF AN INTEGRATED WASTE MANAGEMENT
PLAN FOR MOPANI DISTRICT MUNICIPALITY



ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-GREATER TZANEEN LM

DATE: 31/10/2022

VENUE: WASTE MANAGEMENT TRAINING CENTRE

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
5. Ntswaki Mailula	Mopani District Municipality	Air Quality Officer	Tel: 015 811 6300 Cell: 065 926 4842 Email: mailulan@mopani.gov.za	
6. Thabo Hlongwane	Department of Forestry, Fisheries and the Environment	Control Environmental Officer Local Government Support	Tel: 015 811 6300 Cell: 067 417 3718 Email: thlongwane@dtf.gov.za	—
7. Mbuyela Mkhale A.	Tzaneen Community Forum	Community Base	082 349 7477/0734953250	
8. Anita Smith	MEDICLINIC TZANEEN	FINANCIAL ADMIN MANAGER	015 306 8505 anita.smith@medclinic.co.za	
9. Cornelia Potgieter	Mediclinic Tzaneen	IPC Manager	015 306 8526 cornelia.potgieter@medclinic.co.za	



PROJECT: INTEGRATED WASTE MANAGEMENT PLAN FOR MOPANI
DISTRICT MUNICIPALITY



Mamadi & Company (Pty) Ltd

ATTENDANCE REGISTER

PUBLIC PARTICIPATION MEETING-GREATER TZANEEN LM

DATE: 31/10/2022

VENUE: WASTE MANAGEMENT TRAINING CENTRE

TIME: 10H00am

NAME & SURNAME	ORGANISATION	DESIGNATION	CONTACT DETAILS	SIGNATURE
10. Tebogo Mamadi	LEDET	CEO	079 527 8329	
11. Johannes Sedutla	Recycling MOTHAPEBI TRADING	SITE MANAGER	072 812 1480	
12. Mphahlele	Greater Tzaneen Municipality	Municipal Manager	072 956 8264	
13.				
14.				
15.				