



BOJANALA PLATINUM
DISTRICT MUNICIPALITY

INTEGRATED WASTE MANAGEMENT PLAN

2025



BOJANALA PLATINUM
DISTRICT MUNICIPALITY

TABLE OF CONTENTS

List of Acronyms.....	vii
Glossary.....	ix
Executive Summary	xvi
1. Introduction	19
1.1. Objectives and Aims of the IWMP	19
1.2. Scope of the IWMP	20
1.3. Methodology	20
1.3.1. Data Collection and Review	20
1.3.2. Ground truthing and Site Visits	20
1.3.3. Situational Analysis	21
1.3.4. Gap Analysis	21
1.4. Assumptions and Limitations.....	21
2. Policy and legal framework.....	22
2.1. Role of Government at different levels	22
2.1.1. Role of National government	22
2.1.2. Role of Provincial government	22
2.1.3. Role of the District Municipality	22
2.1.4. Role of Local government.....	23
2.2. Summary of relevant legislation and policies	23
3. Situational Analysis	32
3.1. Geographical overview.....	32
3.2. Climate conditions	32
3.2.1. Temperature.....	32
3.2.2. Rainfall	33
3.2.3. Evaporation	33
3.2.4. Prevailing winds.....	33
3.3. Climate Change	33
3.4. Demographics features of the area	35

3.4.1.	Base population	35
3.4.2.	Age distribution.....	36
3.4.3.	Gender	37
3.4.4.	Number of households	37
3.5.	Growth projections	38
3.5.1.	Population growth trends.....	38
3.5.2.	Projected increase in waste generation.....	39
3.6.	Economic profile	39
3.6.1.	Economic sectors	39
3.6.2.	Employment.....	40
3.6.3.	Monthly household income.....	41
3.6.4.	Waste Circular Economy	42
3.7.	Waste characterisation	43
3.7.1.	Types of waste generated	44
3.7.2.	Waste stream survey	45
3.8.	Status of waste management.....	49
3.8.1.	Institutional Arrangements	50
3.8.2.	Education and Awareness.....	51
3.8.3.	Waste Minimisation, Reuse and Recycling	52
3.8.4.	Waste Picker Integration	53
3.8.5.	Waste collection services	54
3.8.6.	Storage and transportation	57
3.8.7.	Waste transfer stations	59
a)	Brits Waste Transfer Station	61
b)	Kosmos Waste Transfer Station	62
c)	Hebron Waste Transfer Station.....	62
d)	Damonsville Waste Transfer Station	63
e)	Mothutlung Waste Transfer Station.....	64
f)	Klipgat Waste Transfer Station	65

a)	Strumosa Garden Waste Transfer Station	66
3.8.8.	Specialised Waste Management Fleet	67
3.8.9.	Waste disposal facilities.....	68
3.8.10.	Hazardous waste management.....	70
3.9.	Existing organisational structure	70
3.10.	Financial requirements.....	72
4.	Gap Analysis and Needs Assessment	74
5.	Strategic goals, targets, and indicators.....	77
6.	Recommendations	83
6.1.	Waste collection infrastructure	83
6.2.	Institutional arrangements	83
6.3.	Disposal infrastructure development.....	84
6.4.	Financial resources	84
6.5.	Economic instruments	84
6.5.1.	Infrastructure Funding options.....	84
6.6.	Information management and dissemination.....	85
6.7.	Management of illegal activities	85
6.8.	Waste minimisation strategies	85
6.9.	Waste Circular Economy	86
6.9.1.	Industrial Symbiosis	87
6.10.	District Development Model.....	87
7.	Implementation plan	89
8.	Conclusion and way forward	94
8.1.	Monitoring of the implementation of the IWMP.....	94
8.2.	Evaluation and review	94
8.3.	Public participation process	94
8.4.	Approval process of the IWMP	95

List of Tables and Figures

TABLES

Table 1: Dates of meetings held.....	21
Table 2: Population distribution	36
Table 3: District population structure and growth	36
Table 4: Age distribution	36
Table 5: Projected population growth as compared to province and national levels.....	38
Table 6: Current and Projected waste generation over 5 and 10 year periods	39
Table 7: Formal and informal employment by economic sector	40
Table 8: Monthly household income.....	41
Table 9: Types of waste generated	44
Table 10: Reported waste quantities and types in Tonnages.....	45
Table 11: MLM WCS results.....	46
Table 12: Opportunities associated with identified major waste streams	47
Table 13: Waste management overview	49
Table 14: IWMPs, By-laws, and WMO designation status	50
Table 15: Percentage of households with access to municipal refuse removal services	54
Table 16: Waste storage and transportation	57
Table 17: Waste Transfer stations.....	60
Table 18: Specialised waste management fleet.....	68
Table 19: Waste disposal facilities in the district	68
Table 20: BPDM Gaps & Needs.....	74
Table 21: Strategic goals, targets and indicators	81
Table 22: Key Principles of Circular Economy	86
Table 23: Potential outcomes of DDM implementation	88
Table 24: Implementation programme	90

FIGURES

Figure 1: Waste Management hierarchy	19
Figure 2: Map of the BPDM (QGIS Software)	32
Figure 3: Gender distribution across the district (Census, 2022)	37
Figure 4: Number of households (BPDM IDP 2023/2024)	38
Figure 5: Waste generation growth in the BPDM	46
Figure 6: MLM Waste stream profile	47
Figure 7: Waste characterisation	47

Figure 8: Number of serviced households 2001 – 2022	55
Figure 9: Number of unserved households 2001 – 2022	55
Figure 10: Household Access to Municipal Refuse removal in BPDM 2001 – 2022.....	56
Figure 11: Household access to refuse removal in local municipalities 2001 – 2022	56
Figure 12: Brits Transfer Station (09/11/2023)	61
Figure 13: Kosmos Transfer Station (09/11/2023)	62
Figure 14: Hebron Transfer Station (09/11/2023).....	63
Figure 15: Damonsville Transfer Station (09/11/2023).....	64
Figure 16: Mothotlung Transfer Station (09/11/2023).....	65
Figure 17: Klipgat Transfer Station (09/11/2023)	66
Figure 18: Strumosa Garden Transfer Station (16/11/2023)	67
Figure 19: BPDM Waste Management and Biodiversity Services Department organisational structure	71

List of Acronyms

BPDM	Bojanala Platinum District Municipality
CBD	Central Business District
COGTA	Department of Cooperative Governance and Traditional Affairs
CoT	City of Tshwane Metropolitan Municipality
DEDECT	Department: Economic Development, Environment, Conservation and Tourism
DFFE	Department of Forestry, Fisheries and the Environment
DDM	District Development Model
ECA	Environmental Conservation Act
EIA	Environmental Impact Assessment
EPWP	Extended Public Works Programme
e-Waste	Electronic Waste
FY	Financial Year
HCRW	Health Care Risk Waste
IDP	Integrated Development Plan
IPWM	Integrated Pollution and Waste Management
IWMP	Integrated Waste Management Plan
IWMSA	Institute of Waste Management of Southern Africa
KRLM	Kgetlengrivier Local Municipality
LMM	Local Municipality of Madibeng
LFS	Landfill Site
MFMA	Municipal Finance Management Act
MIG	Municipal Infrastructure Grant
MLM	Moretele Local Municipality
MKLM	Moses Kotane Local Municipality
MOU	Memorandum of Understanding

MRF	Material Recovery Facility
MSW	Municipal Solid Waste
MSA	Municipal Structures Act
NEMA	National Environmental Management Act
NEM: WA	National Environmental Management: Waste Act
NWMS	National Waste Management Strategy
PPP	Public-Private Partnerships
PPE	Personal Protective Equipment
PRO	Performance Rights Organisation
RBA	Royal Bafokeng Administration
RBN	Royal Bafokeng Nation
RLM	Rustenburg Local Municipality
SAPS	South African Police Service
SAWIC	South African Waste Information Centre
SAWIS	South African Waste Information System
SLP	Social Labour Plan
SMMEs	Small, Medium and Micro Enterprises
TIC	The Impact Catalyst
WEEE	Waste from Electrical & Electronic Equipment
WIS	Waste Information System
WTE	Waste-to-Energy

Glossary

Basic Refuse Removal – A baseline service level as established under Clause 9.1 of the National Policy of Refuse Removal to indigent households

Biogas - Refers to the mixture of gases produced by the breakdown of organic matter in the absence of oxygen (anaerobically), primarily consisting of methane and carbon dioxide

Biomass - Refers to plant or animal material used for energy production (electricity or heat), or in various industrial processes as raw substance for a range of products

Bin – A standard type of waste bin with a capacity of 1 m³ or 85 litre as approved by the Council Municipality, and which can be supplied by the Council. The bin may be constructed of galvanised iron, rubber or polythene

Bin liner – A plastic bag approved by the Municipality which is placed inside a bin with a maximum capacity of 0,1m³. These bags must be of a dark colour 950mm x 750mm in size of low-density minimum 40 micrometre or 20 micrometre high density

Building and demolition waste – Waste, excluding hazardous waste, which is 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 as outlined in Schedule 3 of the NEMWA, as amended. Referred to as construction and demolition in this document

Bulky Waste – Which emanates from any premises, excluding industrial waste which by virtue of its mass, shape, size or quantity is inconvenient to remove in the routine door-to-door service provided by the Municipality or service provider

Bulky Garden Waste – Such as tree-stumps, branches of trees, hedge-stumps and branches of hedges and any other grade waste of quantities more than 2m³

Business Waste – Waste that emanates from premises that are used wholly or mainly for commercial, retail, wholesale, entertainment, or government administration purposes. This shall not include builders waste, bulky waste, domestic waste or industrial waste

Buy Back Centre – A facility where people sell recyclable material they have collected, and recycling companies buy recyclable materials from the buy-back centre and pay only for the materials they can use

By-Law – Legislation passed by the council of a municipality which is binding in the municipality on the persons to whom it applies

Circular Economy - An economy that is restorative and regenerative by design and aims to keep products, components, and materials at their highest utility and value always, distinguishing between technical and biological cycles

Composting – The controlled aerobic biological decomposition of organic matter, such as food scraps and plant matter, into compost, a soil-like material. Aerobic is the decomposition process in the presence of oxygen

Controlled Landfill – A solid waste management facility used for the disposal of non-hazardous domestic waste and non-infectious medical waste, which employs compaction of wastes, covering of waste with soil cover material, and the management of leachate and gaseous materials produced by the organic decomposition of the landfilled waste, all in such a manner as not to harm human health and minimize negative impacts to the environment

Disposal – The burial, deposit, discharge, abandoning, dumping, placing or release of waste into, or onto any land

District Municipality – Refers to a Category C Municipality envisaged in section 155(1)(c) of the Constitution, which is defined as a municipality that has municipal executive and legislative authority in an area that includes more than one Municipality

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. Domestic waste can be classified into recyclable and reusable, compostable, and also non-recyclable or non-usable waste

Dry Industrial Waste – Dry waste generated from manufacturing, maintenance, fabricating and dismantling activities and the activities of railway marshalling yards, but shall not include builders waste, special industrial waste or domestic waste

Extended Producer Responsibility – Refers to an environmental policy approach in which a producer's responsibility for a product is extended to the "post-consumer stage of a product's life"

Garden Waste – Any organic biodegradable waste material generated from plant material such as grass, flower, hedge cuttings or tree trimmings

Groundwater – All waters flowing or existing under the ground surface

Hazardous Waste – Any waste, which by reason of chemical reactivity or toxic, explosive, corrosive or other characteristics causes danger or is likely to cause danger to human health and/or to the environment, whether alone or in combination with other wastes. Hazardous

waste is categorised in four hazard ratings with 1 being the most hazardous and 4 being the least hazardous

Health Care Risk Waste – Waste capable of producing any disease and includes, but is not limited to the following:

- (a) laboratory waste;
- (b) pathological waste;
- (c) isolation waste;
- (d) genotoxic waste;
- (e) infectious liquids and infectious waste;
- (f) sharps waste;
- (g) chemical waste; and
- (h) pharmaceutical waste.

Incineration – The controlled combustion of solid waste employing closed combustion chambers, controlled combustion air, temperature monitoring and control to ensure complete combustion of organic matter with a minimum of undesirable air emissions and wastewater discharges

Industrial Waste – Waste generated because of manufacturing, maintenance, fabricating, processing or dismantling activities, but does not include building waste, business waste, special industrial waste, hazardous waste, health care risk waste or domestic waste

Inert Waste – Waste that does not:

- (a) undergo any significant physical, chemical, or biological transformation after disposed.
- (b) burn, react physically or chemically biodegrade or otherwise adversely affect any other matter or environment with which they may come into contact and
- (c) impact negatively on the environment, because of its pollutant content and because of the toxicity of its leachate is insignificant

Industrial Symbiosis – Refers to a resource efficiency approach where unused or residual resources (Material, energy, water, waste, assets, logistics, expertise etc.) of one company are used by another, resulting in mutual economic, social and environmental benefits

Infectious Waste – Waste capable of producing an infectious disease because it contains pathogens of sufficient virulence and quantity so that exposure to the waste by a susceptible human host could result in an infectious disease

Intermediate Cover – An application and compaction of cover having the same functions as daily cover but applied at a thickness of 30 centimetres, intended to be exposed for a period of one week to one year

Landfill Classification – A system for classification of waste disposal site, previously under the Department of Water Affairs and Forestry (DWAF) Minimum Requirements for classifying landfill according to the type and size of the landfill, and its potential for significant leachate generation; and currently under DFFE Waste Classification and Management Regulations

Landfill Site – A site for the controlled disposal of waste materials

Landfill gas – The gaseous by-product of organic decomposition of landfilled waste. Landfill gas contains significant concentrations of methane gas, which is explosive at concentrations exceeding 5 percent

Leachate – The liquid by-product of organic decomposition of landfilled waste or any liquid that encounters solid waste in a sanitary landfill

Litter – Waste, excluding hazardous waste, arising from activities in public areas that has not been deposited of in a public litter container

Local Municipality - Refers to a category C municipality envisaged in section 155(1)(b) of the Constitution, which is defined as a municipality that shares executive and legislative authority in its area with Category C Municipality within whose area it falls

Material Recovery Facility – A specialised facility that receives, separates, and prepares recyclable materials for marketing to end-user manufacturers and /or recycling companies

Medical Waste (Health Care Risk Waste) - Any waste generated by hospitals, clinics, nursing homes, doctor's offices, medical laboratories, research facilities and veterinarians, which is infectious or potentially infectious

Municipal Waste – waste that emanates from residential, business, and public areas, and includes refuse, organic waste, recyclables, and any other waste that a municipality collects or disposes of

Nuisance – Any injury, harm, damage, inconvenience or annoyance to any person which is caused in any way whatsoever by the improper handling or management of waste, including but not limited to, the storage, placement, collection, transport or disposal of waste or by littering

Operating Plan – Consists of drawings, descriptions, and other documents regarding the operation of the landfill, placement of waste, building daily cells and lifts, leachate management, landfill gas management and all other functions related to the operation of the landfill

Operator – The person or organisation responsible for the operation of the landfill. The operator may be the owner, another public agency or private contractor

Owner – The person or organisation that owns the property and/or facilities that constitute the Landfill

Perimeter Drains – Open ditches surrounding the landfill installed to prevent surface water from entering the landfill

Pollution – Any change in the environment caused by— (i) substances; (ii) radioactive or other waves; or (iii) noise, odours, dust, or heat

Reclaiming – The separation of solid waste for re-usable and recyclable materials and food for human consumption

Recycling – The sorting, processing, and transportation of solid waste materials, products or containers for the purpose of remanufacture or reuse

Solid Waste Management Facility – Any facility used for the transportation, processing or disposal of solid waste, and includes transfer stations, recycling facilities, composting facilities, waste incinerators and landfill sites

Sorting – The authorised separation of solid waste materials for the purpose of re-use and/or recycling or disposal, either at the source of generation or at a solid waste management facility

Special Waste – A non-hazardous waste, which due to its nature requires special or separate handling at a sanitary landfill. Special waste includes but is not limited to tyres, asbestos, demolition waste, industrial sludges of a non-hazardous nature, paper mill sludge, olive oil waste, abattoir wastes and petroleum waste oil

Surface Water – All water in or coming from a water source, which is found on the surface of the ground, excluding water under the surface of the ground and seawater

Transfer Station – A waste management facility that provides temporary storage of waste prior to final disposal and/ or processing

Treatment – 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 to minimise the impact of the waste on the environment prior to further use or disposal (NEMWA, 2008)

Vectors – Birds, insects, and rodents capable of carrying disease-causing bacteria, viruses or fungi from one host to another

Waste – Any substance, whether 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;
- (c) that must be treated or disposed of

Waste Beneficiation – Refers to the treatment of waste to improve its physical or chemical properties to use it as a raw material into production processes and extracting economic value

Waste Management Hierarchy – The Waste Management Hierarchy reflects the different waste management options, from reduction (more preferred) through to re-use, recycling, recovery, treatment/destruction, and lastly disposal (least preferred), that should all form part of an integrated waste management system

Waste Information System – A computerised database containing information about waste management organisations and agencies, as directed to be established as part of the implementation of the National Waste Management Strategy of South Africa

Waste Management License – A license for a waste management facility (transfer station, MRF, landfill site, etc.) issued in terms of section 49 of the National Environmental Management, Waste Act, 2009

Waste Management Officer – A person designated in terms of section 10 of NEMWA, (Act 59 of 2008) who is responsible for coordinating matters pertaining waste management in the municipality

Waste Minimisation – A waste management approach that focuses on reducing the amount and toxicity of hazardous waste generated. Waste minimisation techniques focus on preventing waste from ever being created, otherwise known as source reduction, and recycling. These techniques can be practiced at several stages in most waste generating processes, but require careful planning, creative problem solving, changes in attitude, sometimes capital investment, and genuine commitment

Waste-to-Energy – The process of generating energy in the form of electricity and/or heat from the primary treatment of waste, or the processing of waste into a fuel source

Water Balance – A method for determining the potential for significant leachate generation, which includes climatic conditions (rainfall and evaporation) and site condition. It also provides approximations relating to water use and management at an operation/ facility

Work Area/ Work Face – The area of the landfill where waste is unloaded, compacted, and covered. It generally includes adequate space for several trucks to unload at the same time, for waste compaction and storage of cover soil

Executive Summary

The Bojanala Platinum District Municipality (BPDM) recognised the need to revise its Integrated Waste Management Plan (IWMP) as per the National Environmental Management: Waste Act (Act No.59 of 2008) as amended; in line with the Department of Forestry, Fisheries and Environment (DFFE) IWMP guidelines and the National Waste Management Strategy (2020), alongside other related environmental management legislation. This IWMP is the district's second generation. The first IWMP for BPDM was endorsed in 2009.

This document aims to inform the planning and budgeting of waste management activities as well as to be used as a sector plan within the district. The development of an IWMP will ensure that waste management planning is sustainable, feasible, acceptable, integrable and most importantly tailored to the needs of the district's people in both rural and urban areas. This document will provide further integration in the delivery of waste management services as current services are considered to be inefficient and do not meet the needs of all residents of the district municipality.

The main steps undertaken in formulating the IWMP include:

- Inception Meeting
- Situational Analysis/Status Quo
- Gap Analysis and Needs Assessment
- Development Objectives, Targets and Policies
- Development of Programme, Project and Activities
- Communication and Stakeholder Participation
- Implementation and Project Activities
- Monitoring and Evaluation of IWMP
- Final development of IWMP

The situation analysis report is the basis for the development of the IWMP which involves collecting and assessing existing waste management information, analysing and summarizing the information to identify deficiencies in order to plan for waste management for the next five years. It provides the context in which the IWMP fits and helps understand the current situation of waste management within the BPDM.

Existing waste management facilities were visited and assessed. This assisted in identifying gaps and needs in waste management within district. Identifying the gaps and needs informed the desired waste management end state for the district and helped eliminate inefficiencies in current waste management practices.

The main problems identified in terms of the current waste management system within the district are outlined below:

- **Policy and Legislation** – It is not legislated that districts should have its own waste management by-laws, but in case where local municipalities don't have, the district can prepare to assist its municipalities. Currently the district does not have waste management by-laws.
- **Finances and Budgeting** – Households in urban areas pay for services, while those in rural areas receive services but do not pay for them.
- **Waste Information Management** – According to Waste Information Regulation (2012), waste handlers practicing activities listed in Annexure 1 on this Regulation, should register and report to SAWIS. Moretele and Kgetlengrivier LMs are currently not reporting. Non-compliance in reporting to SAWIS in terms of waste quantities affects future planning.
- **Waste Minimisation and Recycling** – Although there are recycling initiatives taking place within the district, there is limited separation of waste at source at residential areas.
- **Local Waste Generation** - Most of the waste generation occurs within the urban areas and towns which is where the local municipalities provide collection service. Rural areas are currently not regarded as major generators of waste and have received little attention regarding waste collection.
- **Waste Collection** – Local municipalities are responsible for waste collection as per the NEM: WA (Act of 2008). The local municipalities provide weekly waste collection to residential areas (urban, peri-urban, and rural). The level of service differs between areas based on the practicality and cost-efficiency of delivering the service. Service levels vary between kerbside collection, community transfer to a central collection point, and a combination of both in certain areas and is further determined by collection frequency.
- **Transfer Stations** – According to the study conducted by the district and the province, there is a need for regional transfer station to assist municipalities without disposal facilities. Current operational transfer stations are located in Madibeng and Rustenburg LMs.
- **Waste Disposal** – According to the study conducted by the district and the province, there is a need for regional landfill site to assist municipalities without disposal facilities. There are four waste disposal facilities within the district that are owned by local municipalities; namely Hartebeesfontein, Waterval, Mogwase New and Madikwe. The

waste disposal sites in Koster, Derby and Swartruggens are licensed for closure and rehabilitation.

1. Introduction

The Bojanala Platinum District Municipality (BPDM) is a Category C Municipality, constituted by the following Category B Municipalities: Rustenburg Local Municipality, Local municipality of Madibeng, Moses Kotane Local municipality, Moretele Local Municipality, and Kgetlengrivier Local Municipality. The development of an IWMP is a legal requirement for municipalities as outlined in terms of section 11 of the Waste Act. The district does not have any previously endorsed IWMP in place but only a draft. The waste management activities within the district are addressed in this Integrated Waste Management Plan (IWMP). This document is a revision of the 2012 draft IWMP that was first developed. The update considers changes in the waste management sector that have taken place since the previous update, including shifts in population, coverage, and operations within the district, as well as changes in legislation and regulations.

The Waste Act adopts the waste management hierarchy approach to dealing with and addressing waste issues in the country, where the emphasis is on waste reduction, if not possible re-use, recycling and composting, recovery to create energy, with disposal as a last resort as illustrated on figure 1.



Figure 1: Waste Management hierarchy

North West Department of Economic Development, Environment, Conservation and Tourism (DEDECT) developed a Provincial Integrated Waste Management Plan (PIWMP) to establish provincial perspective on waste management within the province. The PIWMP has set a good example for municipalities to align their waste management objectives with the province to ensure the provincial objectives are achieved.

1.1. Objectives and Aims of the IWMP

The objective of the IWMP is to direct the district and its constituent municipalities to develop appropriate waste management systems and build management capacity in order to maximize

efficiency in waste management, minimize environmental impacts, associated financial costs within the district, address waste management challenges and to guide waste management situation within the district, aligned with the NWMS and the Provincial IWMP.

The plan aims to assess and measure the various elements of waste management services and practices conducted by the municipalities in the district, with the intention of utilizing this data for future planning purposes. This includes develop and reviewing waste management by-laws, policies, and strategies, explaining the population and development characteristics of the Municipality, evaluating the amount and types of waste produced, detailing the Municipality's waste services focusing on reduction, recycling, disposal, and discussing private waste management within the Municipality.

1.2. Scope of the IWMP

The development of this IWMP will comprehensively assess and update the district's current waste management strategies, ensuring alignment with national policies and legislation. The scope of the development will cover evaluation the performance of waste management services, waste minimisation efforts, recycling initiatives, and disposal practices.

It will also focus on identifying gaps in service delivery, the effectiveness of existing infrastructure, and the capacity of local municipalities to meet waste management targets. Additionally, the document will address emerging challenges such as population growth, urbanisation, and climate change impacts, while fostering sustainable practices and enhancing public participation in waste management initiatives across the district.

1.3. Methodology

The following research methods were applied in the compilation of this document:

1.3.1. Data Collection and Review

Baseline data on current waste management practices, waste generation volumes, recycling rates, and landfill capacities have been gathered from local municipalities, and relevant government departments. This includes an assessment of historical data, reports, and existing IWMPs for consistency and trends analysis.

1.3.2. Ground truthing and Site Visits

The assessment was undertaken through a process of consultation with officials in waste management from the district as well as the local municipalities. A series of site visits were conducted in the form of ground-truthing as well as one-on-one meetings were held with district officials, local officials, private sector and informal waste pickers. The table below details the dates for meetings held with district and municipal's officials.

Table 1: Dates of meetings held

Municipality	Meeting Date(s)
Local Municipality of Madibeng	16/10/2023; 09/11/2023; 22/01/2024
Rustenburg Local Municipality	19/10/2023; 16/11/2023
Moretele Local Municipality	17/10/2023; 7/06/2024
Kgetlengrivier Local Municipality	20/10/2023; 05/12/2023
Moses Kotane Local Municipality	24/10/2023; 15/01/2024; 18/06/2024; 4/07/2024
Bojanala District Municipality	27/09/2023; 4/07/2024; 29/07/2024; 26/09/2024; 16/05/2025

1.3.3. Situational Analysis

Using the data collected, a situational analysis has been conducted to assess the current state of waste management in the district. This includes evaluating the effectiveness of waste collection services, waste generation trends, disposal methods, and existing infrastructure such as waste disposal sites, Transfer Stations, Drop-offs and Recycling facilities.

1.3.4. Gap Analysis

The development identifies gaps between the existing waste management practices at district and local municipal level, including resource constraints, service delivery backlogs, and policy implementation shortfalls. This analysis intends to guide the formulation of targeted recommendations for improvement. Following this methodology, the IWMP development will ensure a thorough, data-driven, and participatory process that addresses the waste management needs of the BPDM effectively and sustainably.

1.4. Assumptions and Limitations

Assumptions

- Some of the information is assumed to be accurate, e.g. information from Statistics South Africa (Stats SA), on the strength and presumed credibility of the source. The data of Stats SA is valid and is reliable for projecting developments, e.g. population numbers
- The information documented in reports received from the officials of provincial, district and local governments, e.g. IDP documents, is assumed to be valid and authentic as presented in the report.

Limitations

- Only data from official, legal and approved sources was used in the report

2. Policy and legal framework

All spheres of government are legally responsible for waste management in the country.

2.1. Role of Government at different levels

2.1.1. Role of National government

With respect to waste management and the roles and responsibilities of national government, the primary legislative instrument is the National Environmental Management: Waste Act. The National Department of Forestry Fisheries and the Environment (DFFE) is ultimately responsible for ensuring that the National Waste Management Strategy is implemented and that the various provisions are used in the most appropriate and effective ways. The Waste Act specifies various mandatory and discretionary provisions that DFFE is required to address. In terms of mandatory provisions, the DFFE is responsible for:

2.1.2. Role of Provincial government

The Department of Economic Development, Environment, Conservation and Tourism (DEDECT), as the provincial Department responsible for environmental management as well as waste management, has the exclusive responsibility to ensure that local government carries out the functions of refuse removal and solid waste disposal effectively.

The provincial government is tasked with the implementation of the national waste management strategy and national norms and standards, and may set additional, complementary provincial norms and standards. The Waste Act notes that these norms and standards must amongst other things facilitate and advance regionalization of waste management services.

The provincial government is also responsible for developing a provincial IWMP. All district municipalities and local municipalities should align their IWMPs to the provincial IWMP.

2.1.3. Role of the District Municipality

The powers and functions of the district municipality are outlined in the Municipal Structures Act (Act No. 117 of 1998), in sections 83 and 84. BPDM must seek to achieve the integrated, sustainable and equitable social and economic development of its area as a whole by ensuring integrated development planning for the district as a whole, aligning all developmental activities, including waste management, with broader regional objectives. It plays a key role in promoting bulk infrastructural development and shared services that benefit multiple local municipalities, such as regional waste disposal facilities.

Additionally, the district supports and builds the capacity of local municipalities to perform their functions effectively, particularly where technical or financial constraints exist. It also ensures

the equitable distribution of resources among municipalities within its jurisdiction to maintain appropriate and consistent levels of service delivery. Furthermore, the district is tasked with the development and management of solid waste disposal sites that serve the district collectively, ensuring sustainable and coordinated waste management across all local municipalities.

2.1.4. Role of Local government

According to Section 83 of the Municipal Structures Act (Act No. 117 of 1998), a municipality has the functions and powers assigned to it in terms of Sections 156 and 229 of the Constitution. These powers and functions relate to the administration of matters listed in Schedules 4B and 5B of the Constitution, which include local environmental and waste management services. Local municipalities are tasked with providing waste collection, cleaning, and refuse removal services within their areas.

2.2. Summary of relevant legislation and policies

2.2.1. The Constitution of the Republic of south Africa, 1996 (Act 108 of 1996)

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

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

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

2.2.2. The National Environment Management Act, 1998 (Act 107 of 1998)

NEMA is the mother of all environmental management Acts in South Africa. The purpose of NEMA is to uphold the provisions of section 24 of the Bill of rights (The Constitution of the

Republic of South Africa). It aims to promote and uphold the rights of South African citizens to live in an environment that is not harmful to their health or well-being.

It places sustainable development at the centre of every development process that has the potential to have an impact on social, economic and environment whereby it requires the integration of social, economic and environmental factors in the planning, implementation and evaluation of decisions to ensure that development serves present and future generations.

2.2.3. The National Environmental Management Waste Act, 2008 (Act 59 of 2008)

The purpose of the National Environmental Management: Waste Act (Act 59 of 2008) (NEM: WA), as amended, is to reform the law regulating waste management. It proposes this by, “providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development; to provide national norms and standards for regulating the management of waste by all spheres of government for specific waste management measures; and for matters incidental thereto”.

The Act is the overarching legislation governing waste management in South Africa. As such compliance with its provisions is taken for granted by the IWMP. The Act sets the framework for Integrated Waste Management in South Africa including:

- Giving effect to the National Waste Management Strategy (NWMS);
- Providing for the written designation of a waste management officer in each municipality. This officer is responsible for co-coordinating matters pertaining to waste management in the municipality.
- Setting National Standards in terms of classification of wastes, provision of waste management services, the waste management hierarchy, remediation of contaminated land, and waste treatment and disposal. Provincial Standards may also be set, but Local Standards must include Municipal By-Laws;
- Integrated Waste Management Plans must be prepared by Local and District Municipalities, and Provincial Waste Management Plans must be incorporated into Provincial Development Plans as contemplated under the Local Government: Municipal Systems Act (Act 32 of 2000);
- Establishing the concept of General Duty of any holder or generator of waste to avoid the generation of waste, to re-use, recycle or recover waste and manage waste so that it does not endanger health or the environment; and
- Establishing a list of waste management activities that may have a detrimental effect on the environment which require a waste management licence, and the licensing procedures. These waste management activities require a licence in terms of NEMWA.

2.2.4. National Environment Management Air Quality Act, 2004(Act 39 of 2004)

The purpose of NEM; AQA is to reform the law regulating air quality in order to protect the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development; to provide for national norms and standards regulating air quality monitoring, management and control by all spheres of government; for specific air quality measures; and for matters incidental thereto.

2.2.5. National Water Act, 1998 (Act 36 of 1998)

The purpose of the Water Act is to provide fundamental reform of the law relating to the water resources; to repeal certain laws; and to provide for matters connected therewith. The Act imposes a duty of care on polluters to restrict the amount of pollution contaminating water resources. It also deals with water use licences. These are needed for users who discharge water containing waste into a water resource, amongst others.

2.2.6. National Environmental Management Biodiversity Act, 2004 (Act 10 of 2004)

The purpose of this Act is to provide with the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources; the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources; the establishment and functions of a South African National Biodiversity Institute; and for matters connected therewith

2.2.7. The Environment Conservation Act, 1989 (Act 73 of 1989)

This Act provides the effective protection and controlled utilisation of the environment. This Act has been largely repealed by the NEMA, but certain provisions remain, such as the Regulations for the prohibition of the use, manufacturing, import and export of asbestos and asbestos-containing materials (GN 341 of 2001), which is applicable to the management of asbestos- or asbestos-containing waste material.

2.2.8. Climate Change Act 22 of 2024 (Act 22 of 2024)

The objective of this Act is to enable the development of an effective climate change response and a long-term, just transition to a low-carbon and climate-resilient economy and society for South Africa in the context of sustainable development; and to provide for matters connected therewith.

2.2.9. The National Health Act, 2003 (Act 61 of 2003)

This Act controls nuisance (which can be caused by waste) and compels local government to take steps to prevent the occurrence of unhygienic conditions. The implementation of this Act is of particular importance for local government.

2.2.10. Occupational Health and Safety Act, 1993 (Act 85 of 1993)

The Occupational Health and Safety Act (Act 85 of 1993) provides for the health and safety of persons at work and the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work. It places duties on employers and employees not to endanger the health of others and to provide a safe place of employment.

2.2.11. The Hazardous Substances Act, 1973 (Act 15 of 1973)

This Act controls the disposal and dumping of scheduled hazardous substances. This schedule of products has relevance to any waste manager.

2.2.12. Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

The Mineral and Petroleum Resources Development Act, Act 28 of 2002 provides for the regulation and management of mining waste in the form of residue deposits and residue stockpiles.

2.2.13. Municipal Structures Act, 1998 (Act 117 of 1998)

The main objective of the Municipal Structures Act 117 of 1998 is to provide for the establishment of municipalities in accordance with the requirements relating to categories and types of municipalities and to provide for an appropriate division of functions and powers between categories of municipality. The district's function and power may include but not limited to serving the area of the district municipality as a whole with solid waste disposal sites (Municipal Structures Act 117 of 1998, Section 84 (e))

2.2.14. Municipal Systems Act, 2000 (Act 32 of 2000)

The Act provides the enabling framework for planning processes. It also ensures environmentally sustainable service delivery by including the following definition in Chapter 1, with respect to the provision of a municipal service in a manner aimed at ensuring that:

- a. the risk of harm to the environment and to human health and safety is minimised to the extent reasonably possible under the circumstances;
- b. the potential benefits to the environment and to human health and safety are maximised to the extent reasonably possible under the circumstances;
- c. legislation intended to protect the environment, and human health and safety is complied with".

2.2.15. Municipal Financial Management Act, 2003 (Act 56 of 2003)

The purpose of this Act is to secure sound and sustainable management of the financial affairs of municipalities and other institutions in the local sphere of government; to establish treasury norms and standards for the local sphere of government; and to provide for matters connected therewith.

2.2.16. Municipal Demarcation Act, 1998 (Act 27 Of 1998)

The Act provides criteria and procedures for the determination of municipal boundaries by an independent authority. In terms of the Act, the Municipal Demarcation Board is established to determine municipal boundaries.

2.2.17. Extended Producer Responsibility Regulations, 2020

This is a regulation of National Environmental Management: Waste Act (Act 59 of 2008) which came into effect on 5 May 2021. The regulations make it mandatory for all producers, brand owners, retailers, and importers to design, make, sell, and keep their products in the recycling loop. It requires producers to take responsibility for packaging waste after consumer use.

2.2.18. National Waste Information Regulations

This is a regulation of National Environmental Management: Waste Act (Act 59 of 2008) which came into effect on 13 August 2012. The purpose of the regulations is to regulate the collection of waste data and information for the national waste information system provided for in Section 61 of NEM: WA. The regulations apply to waste generators and recyclers, and those treating and disposing of waste. Registered persons must report monthly data at the end of each quarter.

2.2.19. Waste Classification and Management Regulations, 2013

The Waste Classification and Management Regulations were published in terms of the National Environmental Management: Waste Act (Act 59 of 2008) in the Government Gazette on 23 August 2013. The regulations provide for the classification of the various waste streams and the management of waste according to their classification. The regulations make provision for the listing of waste management activities that do not require a Waste Management Licence. The prescribe the requirements for the disposal of waste to landfill and provide for the general duties of waste generators, transporters and managers. The regulations make it an offence to deal with waste in a manner not provided for in the regulations. The regulations incorporate the National Norms and Standards for the Assessment of Waste for Landfill Disposal. These norms and standards prescribe the requirements for the assessment of waste prior to disposal to landfill.

2.2.20. Waste Tyre Regulations, 2017

The Waste Tyre Regulations were published in terms of the National Environmental Management: Waste Act (Act 59 of 2008) on 29 September 2017 and their purpose is to regulate the management of waste tyres. The regulations prohibit the disposal of waste tyres in landfills. The regulations provide for the registration of persons who form part of the waste tyre value chain, the storage of waste tyres and the abatement of waste tyre storage. The regulations make it an offence to deal with waste tyres in a manner not provided for in the regulations.

2.2.21. National Waste Management Strategy, 2020

The NWMS provides a framework and strategy for the implementation of the Waste Act and outlines government's policy and strategic approach to waste management within South Africa. The 2020 reviewed NWMS addresses waste management challenges through 3 Pillars: 1. Waste Minimisation; 2. Effective and Sustainable Waste Services; and 3. Compliance, Enforcement and Awareness. The strategy includes an implementation plan with key interventions, associated actions, performance indicators, targets, timelines and implementing agent roles and responsibilities.

2.2.22. Rural Waste Management Strategy, 2019

The Rural Waste Management Strategy was developed in 2019 as a tool to manage all waste and set targets for the province. The development of the Rural Waste Management Strategy in the North West Province sets a trend in addressing waste management in rural areas. Through the implementation of this strategy, the Department believe that waste management within rural areas will address shortfalls and encourage the improvement of services where appropriate.

The aim of the Strategy is to enhance waste management services in rural areas where possible. The Strategy has been compiled as a non – technical guide to illustrate significant environmental importance of the rural areas. The overall objective of the strategy is to determine the extent of waste management services in rural areas including waste collection, transportation and disposal, at a minimum.

2.2.23. National Policy for the Provision of Basic Refuse Removal Services to Indigent Households, 2011

The National Policy for the Provision of Basic Refuse Removal Services to Indigent Households was published in on 11 June 2011. The purpose of the Policy is to ensure that poor households have access to at least an essential refuse removal service from municipalities. The Policy establishes the framework for the development, identification and management of households that can be enrolled for the basic refuse removal service and sets principles which will result in the adoption of by-laws for the implementation and enforcement

of tariff policies to the service in municipalities. The policy educates and raises awareness within municipalities regarding proper handling of domestic waste for the basic refuse removal service, including the need to minimize waste and promote recycling.

2.2.24. National Norms and Standards for the Disposal of Waste to Landfill (Regulation No. 636), 2013

The Norms and Standards for the Disposal of Waste to Landfill was published in terms of the National Environmental Management: Waste Act on 23 August 2013. The standards establish Class A, B, C and D Landfills, each with their own containment barrier requirements. The standards describe how Waste Types 0 to 4 should be disposed of at landfill. The standards also prescribe which are prohibited wastes and which cannot be disposed of to landfill.

2.2.25. National Norms and Standards for Assessment of Waste for Landfill Disposal (Regulation No. 635), 2013

The Norms and Standards for Assessment of Waste for Landfill Disposal were published in terms of the National Environmental Management: Waste Act on 23 August 2013. The norms and standards prescribe the requirements for the assessment of waste prior to disposal to landfill. The assessment of any waste should consider Total Concentration of all elements and chemical substances in the waste, and the Leachable Concentration of elements and chemical substances in the waste. Using these two units, the material is assessed as being either Type 0, Type 1, Type 2, Type 3 or Type 4 wastes.

2.2.26. National Domestic Waste Collection Standards (No. 21), 2011

The National Domestic Waste Collection Standards were published in terms of the National Environmental Management: Waste Act on 21 January 2011. The document sets standards for separation of household and related industry waste at source, the collection of recyclable waste, the provision of household and bulk waste receptacles, the provision of the communal collection points and the frequency of waste collection. The standards note how drop-off centres for recyclables should be provided and the standards for waste collection vehicles. Awareness creation amongst households with regards waste management practice was set as a standard.

2.2.27. National Norms and Standards for the Sorting, Shredding, Grinding, Crushing, Screening or Baling of General Waste (No. 1093), 2017

The National Norms and Standards for the Sorting, Shredding, Grinding, Crushing, Screening or Baling of General Waste were published in terms of the National Environmental Management: Waste Act on 11 October 2017. These norms and standards provide a uniform national approach to the management of waste facilities that sort, shred, grind, crush, screen, chip or bale general waste.

2.2.28. National Norms and Standards for the Storage of Waste (No. 926), 2013

The National Norms and Standards for the Storage of Waste were published in terms of the National Environmental Management: Waste Act on 29 November 2013. The document provides a uniform national approach for the management of waste storage facilities; ensures best practice in the management of waste storage facilities; and provides minimum standards for the design and operation of new and existing waste storage facilities.

2.2.29. National Norms and Standards for the Remediation of Contaminated Land and Soil Quality (No. 331), 2013

The National Norms and Standards for the Remediation of Contaminated Land and Soil Quality was published in terms of the National Environmental Management: Waste Act on 2 May 2014. The purpose of the norms and standards are to provide a uniform national approach to determine the contamination status of an investigation area; to limit uncertainties about the most appropriate criteria and method to apply in the assessment of contaminated land; and to provide minimum standards for assessing necessary environmental protection measures for remediation activities.

2.2.30. National Standards for the Scrapping or Recovery of Motor Vehicles (No. 925), 2013

The National Standards for the Scrapping or Recovery of Motor Vehicles were published in terms of the National Environmental Management: Waste Act on 29 November 2013. The standards aim at controlling the scrapping or recovery of motor vehicles at a facility with an operational area greater than 500m² and which came into operation after the standards were published.

2.2.31. National Standards for the Extraction, Flaring or Recovery of Landfill Gas (No. 924), 2013

The National Standards for the Extraction, Flaring or Recovery of Landfill Gas were published in terms of the National Environmental Management: Waste Act on 29 November 2013. These standards control the extraction, flaring or recovery of landfill gas at landfills to prevent or minimize potential negative impacts on the bio-physical and socio-economic environments. The standards lay out requirements for the planning, construction and operational phases of such projects.

2.2.32. National Norms and Standards for Organic Waste Composting (No. 561), 2021

The Norms and Standards for Organic Waste Composting were gazetted on 25 June 2021. These norms and standards provide for a national approach to controlling the composting of organic waste at facilities to prevent or minimise the potential negative bio-physical or

socioeconomic impacts, and to ensure that the best practicable environmental option for composting is implemented.

3. Situational Analysis

3.1. Geographical overview

The district occupies the eastern region of the province that contains five local municipalities covering an area of 18 421 km² and comprises 17% of the total area of the province with a population of 1 624 144 comprising 44% of the population of the province. The main economic activities of the district are agriculture, tourism, industry and mining. The district includes five local municipalities namely; Rustenburg LM, Madibeng LM, Moses Kotane LM, Kgetlengrivier LM and Moretele LM.



Figure 2: Map of the BPDM (QGIS Software)

3.2. Climate conditions

BPDM experiences a semi-arid to sub-humid climate, with distinct seasonal variations that impact waste management operations. The climate conditions are a key factor in determining the infrastructure and operational strategies of waste management facilities, influencing processes such as waste decomposition, odour management, and leachate control.

3.2.1. Temperature

The district's temperatures vary significantly across the year. Summers (November to March) are hot, with average maximum temperatures ranging between 28°C and 35°C. The hottest

months, typically December and January, can see peak temperatures exceeding 35°C. Winters (June to August) are mild to cool, with average minimum temperatures ranging from 4°C to 9°C, though cold fronts can occasionally drop temperatures below freezing in certain areas. These fluctuations require special considerations for managing waste decomposition and controlling odours during high heat periods (SAWS, 2023; Climate-Data, 2023).

3.2.2. Rainfall

Rainfall in the district is predominantly concentrated in the summer months, from November to March, with January and February being the wettest months – receiving up to 90 mm per month. The district receives an average annual rainfall of 600 to 750 mm, though there is variability depending on the specific location. The eastern parts tend to be wetter than the western regions. The dry winter months receive minimal precipitation, often less than 20 mm per month. This seasonality affects leachate generation at landfills and waste treatment facilities, requiring robust infrastructure to manage runoff during the rainy season and prevent contamination (SAWS, 2023; CSIR, 2022).

3.2.3. Evaporation

Evaporation rates are relatively high in the district due to its semi-arid climate, particularly during the hot summer months. Annual evaporation rates typically exceed 1,800 mm, with some areas recording values over 2,000 mm per year. This rate is much higher than the average annual rainfall, contributing to water stress and impacting waste facilities reliant on water for dust suppression or other operations. High evaporation also means less natural water retention, necessitating effective leachate management systems to prevent water loss during dry periods (CSIR SARVA, 2022; DFFE Climate Data Portal, 2023).

3.2.4. Prevailing winds

The region experiences moderate wind patterns, with prevailing winds generally blowing from the southeast to the northwest. During summer, wind speeds are higher, averaging between 15 and 25 km/h, often peaking during thunderstorms. Winter winds tend to be calmer, averaging between 5 and 15 km/h. The wind direction and speed have implications for air quality control at waste sites, particularly in terms of managing the dispersion of dust, odours, and emissions from waste treatment processes (Windfinder, 2023; Windy.com, 2023).

These climate factors together necessitate careful planning and design of waste management facilities to ensure environmental compliance and operational efficiency throughout the year.

3.3. Climate Change

Waste management contributes to climate change throughout the waste hierarchy. The production and use of any excess materials will eventually become waste, and these require

energy and emissions to produce. Any reduction and re-use in these materials will reduce the use of energy and emissions. Recycling and composting of waste is more energy and emissions efficient than production from raw materials, hence are climate change reducing activities. The production of energy from waste is more emissions efficient than fossil fuel energy production. Waste handling – through collection, transport and disposal, requires energy and the less waste volumes handled, the less the climate change impact of waste management will be. The climate change impacts of waste management have a particular effect on the following four aspects.

a. Production and Transport of Goods

Producing and transporting consumer and industrial products using raw materials requires significant energy, which is often derived from fossil fuels. This process often involves burning fossil fuels, which emits carbon dioxide and other greenhouse gases. When these products become waste, the energy used in their lifecycle is also wasted. Waste management techniques which encourage re-use, recycling and recovery reduce the need for raw materials and avoid energy wastage, reducing the overall amount of energy required to produce and transport these products.

b. Impact on Waste Services

Collecting, transporting, and processing waste consumes energy, adding to the overall carbon footprint. Reductions in the volumes of waste handled will reduce the carbon footprint of waste management. Organic waste, such as garden waste, decomposes in landfills, producing methane, a greenhouse gas that is much more effective at trapping heat in the atmosphere than carbon dioxide.

c. Behaviour Change

In terms of the Climate Change Act, waste management companies will be required to adopt practices that reduce greenhouse gas emissions to adhere to their carbon budgets. Aspects that may change are improved waste separation, recycling, and composting. This will increase the pace of technology adoption across the waste management industry. Community awareness efforts in pursuit of climate change goals will increase the level of engagement regarding waste management practices and sustainable waste disposal methods.

d. Infrastructure Impact

Climate change is generally considered to have a long-term impact on infrastructure. It also has a short-term impact on operations owing to more intensive weather events. The principal

weather-related changes associated with climate change are increased intensity of rainfall events and elevated temperatures.

3.4. Demographics features of the area

The demographic profile of a district is a fundamental consideration in the development of an IWMP, as it directly influences the generation, composition, and management of waste. In the district, understanding key demographic features – such as population size, density, age distribution, settlement types, and household structure – is essential for designing effective, inclusive, and context-specific waste management strategies.

Population size and distribution determine the scale and intensity of waste services required. Areas with higher population densities, such as urban centres like Rustenburg and Brits, typically generate more waste and require more frequent collection and larger-scale infrastructure, such as transfer stations and regional landfills. Conversely, sparsely populated rural areas and scattered settlements, as seen in Moretele and Kgetlengrivier, pose logistical and financial challenges for conventional waste collection methods. These require alternative approaches such as decentralised collection points, and community-based waste services.

The demographic composition – including age distribution and household size – affects both the quantity and type of waste produced. For example, younger populations may contribute more to plastic and packaging waste due to consumption patterns, while larger households tend to generate greater volumes of organic and domestic waste. These variations are important when planning for waste separation, recycling programmes, and public awareness campaigns, which must be tailored to local behaviours and needs.

Levels of education and literacy influence public understanding and participation in waste-related initiatives. In communities with lower literacy rates or limited environmental awareness, the success of source separation, recycling, and illegal dumping prevention efforts depends heavily on sustained education and outreach. Demographic insights help target these efforts more effectively, ensuring communication is accessible and culturally relevant.

Demographic growth trends have implications for long-term waste planning. Anticipated increases in population and urbanisation in parts of Bojanala require proactive planning for expanded waste infrastructure and services. This includes forecasting waste generation volumes, siting new facilities, and ensuring that growth areas are integrated into municipal waste service delivery.

3.4.1. Base population

As of the 2022 census, the district had a population of approximately 1 624 144 people. The population distribution is as follows:

Table 2: Population distribution

Municipality	2022		2016	
	Population	Population (%)	Population	Population (%)
<i>Rustenburg LM</i>	562 031	34.60%	626 522	37.81%
<i>Madibeng LM</i>	522 566	32.17%	536 110	32.35%
<i>Moses Kotane LM</i>	265 668	16.36%	243 648	14.70%
<i>Moretele LM</i>	219 120	13.49%	191 306	11.54%
<i>Kgetlengrivier LM</i>	54 759	3.37%	59 562	3.59%
<i>Bojanala Platinum District</i>	1 624 144	100%	1 657 148	100%

Source: Census, 2022

Table 3: District population structure and growth

Year	2022	2016
Population	1 624 144	1 657 148
Age Structure		
Population under 15	26.3%	30.3%
Population 15 to 64	67.7%	64.8%
Population over 65	5.9%	4.8%
Population Growth		
Per annum	0.73%	2.15%

Source: Census, 2022

3.4.2. Age distribution

The table below describes the age distribution within the district as per the most recent census report 2022 (Stats SA).

Table 4: Age distribution

Group	Male	Male (%)	Female	Female (%)
85+	2 130	0,10%	5 130	0,30%
80-84	3 109	0,20%	5 805	0,40%
75-79	6 383	0,40%	9 489	0,60%
70-74	10 850	0,70%	13 895	0,90%
65-69	18 693	1,20%	20 940	1,30%
60-64	25 363	1,60%	28 785	1,80%
55-59	32 594	2,00%	33 048	2,00%
50-54	37 066	2,30%	36 230	2,20%
45-49	47 774	2,90%	43 315	2,70%
40-44	65 086	4,00%	53 489	3,30%
35-39	76 431	4,70%	67 300	4,10%

Group	Male	Male (%)	Female	Female (%)
30-34	77 493	4,80%	74 689	4,60%
25-29	73 318	4,50%	72 242	4,40%
20-24	68 314	4,20%	63 128	3,90%
15-19	62 805	3,90%	61 578	3,80%
10-14	70 066	4,30%	68 458	4,20%
5-9	66 762	4,10%	66 177	4,10%
0-4	81 077	5,00%	75 098	4,60%

Source: Census, 2022

3.4.3. Gender

The pie chart below illustrates the gender distribution within the district

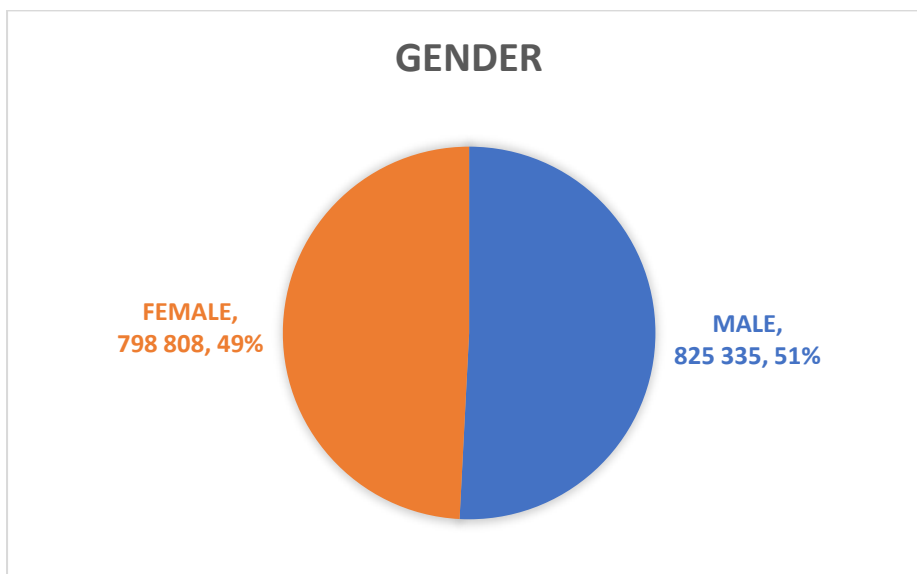


Figure 3: Gender distribution across the district (Census, 2022)

3.4.4. Number of households

The following figure depicts the number and types of households within the district:

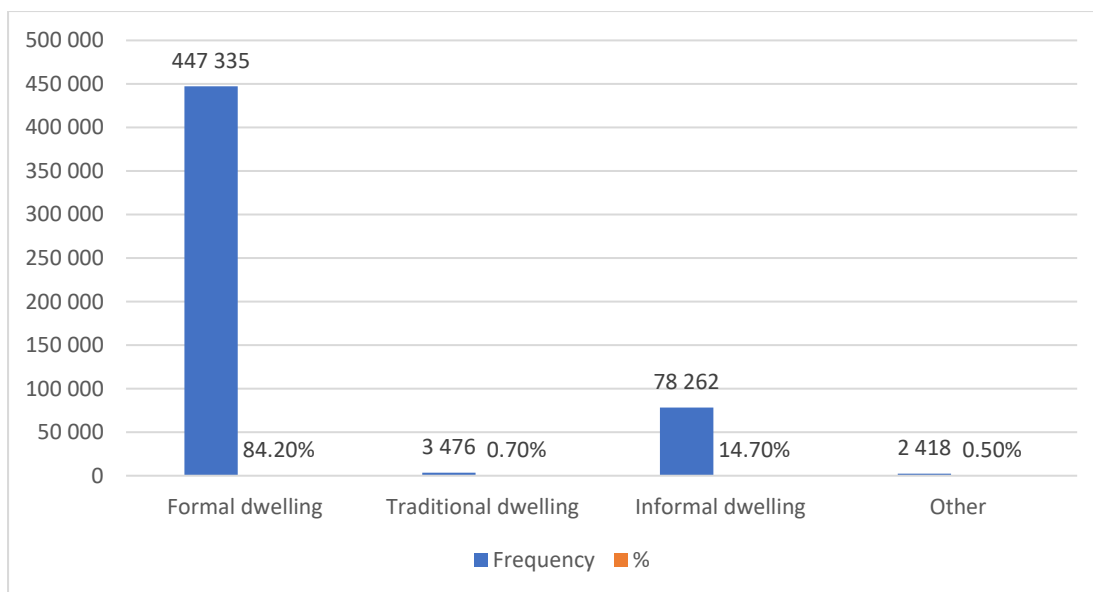


Figure 4: Number of households (BPDM IDP 2023/2024)

3.5. Growth projections

Growth projections are a critical component in waste management planning, as they enable municipalities to anticipate future waste generation volumes and infrastructure needs. In the context of the district, projected increases in population, urbanisation, and economic activity are expected to result in a corresponding rise of waste generated. Accurate growth forecasts inform the sizing and siting of waste facilities such as landfills, transfer stations, and recycling centres, and guide long-term investment in collection fleets and service expansion.

3.5.1. Population growth trends

The population projection of the district shows an estimated average annual growth rate of 1.7% between 2018 and 2023 (BPDM, IDP 2023/2024). The average annual growth rate in the population over the forecasted period for North-West Province is 1.6% and for South Africa 1.4% which is lower than the average annual growth in the Bojanala Platinum District Municipality.

The table below illustrates population growth trends within the district, as compared to the province, as well as the national total:

Table 5: Projected population growth as compared to province and national levels

Year	BPDM	North West	National Total	BPDM as % of the province	BPDM as % of national
2018	1 810 000	4 070 000	58 100 000	44.5	3.1
2019	1 850 000	4 140 000	59 000 000	44.6	3.1
2020	1 880 000	4 210 000	59 800 000	44.7	3.1

2021	1 910 000	4 280 000	60 600 000	44.7	3.2
2022	1 940 000	4 340 000	61 500 000	44.8	3.2
2023	1 970 000	4 410 000	62 300 000	44.8	3.2
Average annual growth (2018 – 2023)	1.72%	1.60%	1.38%		

Source: BPDM IDP 2023/2024

3.5.2. Projected increase in waste generation

The following table shows projected annual waste generation for the district:

Table 6: Current and Projected waste generation over 5 and 10 year periods

Municipality	No. of households	Current domestic waste generation rate per year (tonnes)	Future generation rate (5 years)	Future generation rate (10 years)
Madibeng LM	173 188	343.593	438.964	497.235
Rustenburg LM	203 658	387.484	374.978	409.542
Moretele LM	60 058	127.197	133.315	139.754
Kgetlengrivier LM	15 183	33.595	35.126	36.722
Moses Kotane LM	79 404	158.603	169.608	181.427
Total BPDM	531 491	1 050.472	1,151.991	1,264.68

3.6. Economic profile

The economic profile of the District significantly influences the scope, priorities, and feasibility of its IWMP. The district's economy is predominantly driven by mining, manufacturing, agriculture, and tourism – particularly in areas such as Rustenburg and Moses Kotane – which generate diverse waste streams including industrial by-products, hazardous materials, and packaging waste. Understanding this economic landscape is crucial for aligning waste management strategies with local development goals, available resources, and community needs. It also supports the formulation of sector-specific interventions and promotes collaboration with the private sector and Producer Responsibility Organisations (PROs) to enhance efficiency and sustainability in waste management across the district.

3.6.1. Economic sectors

The key economic sectors in the district are:

Mining and quarrying industry in the province and certainly in the district remains the backbone of the districts economic output. It is said that 94% of the country's platinum is found

in the Rustenburg and Brits areas which areas are also said to produce more platinum than any other single area in the world.

Agriculture activities account for 19% of the district's land area and are mainly geared towards commercial dry-land farming, commercial dry-land farming, commercially irrigated farming and subsistence dry-land activities. Mixed-crop farming and in the areas of Rustenburg and Brits, maize and sunflower are in abundance in the district.

Manufacturing sector has contributed an estimated R2.5bn to the GVA (Gross Value Added) of the district by 2001 and has grown by about 6.6% between 1996 and 2001.

Tourism: 45% of all tourism establishments in the North West Province are located within the BPDM. The district is home to the world-famous Sun City Complex and Pilanesburg National Game Park.

3.6.2. Employment

Employment status plays a significant role in shaping the state of waste management within the district, particularly in terms of waste generation, service demand, and participation in waste-related activities. Areas with higher levels of formal employment typically experience increased waste generation, driven by greater consumption patterns and more structured housing and commercial developments. These areas often demand regular and efficient municipal waste services, including collection, transportation, and disposal, and are more likely to have the infrastructure and resources to support such systems.

Conversely, communities with high levels of informal employment or unemployment face different challenges. While overall waste generation may be lower due to reduced consumption, these areas often lack reliable waste collection services, leading to illegal dumping, burning, and other unsafe disposal methods. However, the informal sector also plays a crucial role in recycling and waste recovery, with many individuals deriving income from the collection and sale of recyclables. Informal waste pickers contribute significantly to diverting waste from landfills, but often operate without formal recognition, or protection. The table below details formal and informal employment per economic sector:

Table 7: Formal and informal employment by economic sector

Sector	Formal employment	Informal employment
Agriculture	11 600	N/A
Mining	120 000	N/A
Manufacturing	26 700	4 660
Electricity	1 630	N/A
Construction	21 400	10 500

Trade	57 700	24 600
Transport	6 350	6 430
Finance	34 900	4 340
Community services	59 600	13 800
Households	33 100	N/A

Source: BPDM IDP (2023/2024)

3.6.3. Monthly household income

Household income has a direct influence on waste management, primarily through its effect on waste generation patterns, service affordability, and access to waste infrastructure. Higher-income households tend to generate more waste, particularly packaged goods, electronics, and organic waste, due to increased consumption levels. These households are more likely to have access to formal waste collection services and can often afford private waste services where municipal coverage is lacking. In contrast, lower-income households typically generate less waste but may face limited access to regular waste collection, especially in informal settlements or rural areas. This lack of access often results in illegal dumping, burning, or other unsafe disposal practices. Furthermore, households with lower income are less likely to participate in waste minimization practices unless incentivized or supported through education, infrastructure, or policy interventions.

The number of households is grouped according to predefined income categories or brackets, where income is calculated as the sum of all household gross disposable income: payments in kind, gifts, homemade goods sold, old age pensions, income from informal sector activities, subsistence income, etc.). Note that income tax is included in the income distribution.

Income categories start at R0 - R2,400 per annum and go up to R2,400,000+ per annum. A household is either a group of people who live together and provide themselves jointly with food and/or other essentials for living, or it is a single person living on his/her own. These income brackets do not consider inflation creep: over time, movement of households "up" the brackets are natural, even if they are not earning any more in real terms.

Households by income category - Bojanala Platinum, North-West and National Total, 2020
[Number Percentage]

Table 8: Monthly household income

Category (R)	Bojanala Platinum	North-West	National Total	Bojanala as % of province	Bojanala as % of national
0-2400	75	148	1760	50,68%	4,26%
2400-6000	1410	2860	35000	49,30%	4,03%
6000-12000	13900	27800	340000	50,00%	4,09%

Category (R)	Bojanala Platinum	North-West	National Total	Bojanala as % of province	Bojanala as % of national
12000-18000	26200	54000	665000	48,52%	3,94%
18000-30000	67500	148000	1850000	45,61%	3,65%
30000-42000	67500	150000	1860000	45,00%	3,63%
42000-54000	60700	129000	1630000	47,05%	3,72%
54000-72000	67100	136000	1750000	49,34%	3,83%
72000-96000	62400	127000	1590000	49,13%	3,92%
96000-132000	61400	118000	1480000	52,03%	4,15%
132000-192000	52600	104000	1430000	50,58%	3,68%
192000-360000	61800	124000	1850000	49,84%	3,34%
360000-600000	37200	71600	1170000	51,96%	3,18%
600000-1200000	29100	55100	973000	52,81%	2,99%
1200000-2400000	8630	16700	309000	51,68%	2,79%
2400000+	1070	2230	44800	47,98%	2,39%
Total	619000	1270000	17000000	48,74%	3,64%

Source: RLM IDP 2022-2027

3.6.4. Waste Circular Economy

Municipal involvement in facilitating circular economy activities is constrained by insufficient infrastructure, lack of incentives for waste minimisation, and limited partnerships with private sector actors. There are few district-level initiatives encouraging local beneficiation of recyclables, support for eco-industrial parks, or promotion of sustainable design and production. Producer Responsibility Organisations (PROs) have begun to play a role by supporting limited collection and recycling infrastructure, but these efforts are not yet harmonized at a district scale. Circular economy is an economy that is restorative and regenerative by design and aims to keep products, components, and materials at their highest utility and value always, distinguishing between technical and biological cycles.

To accelerate the circular economy transition, the district requires a comprehensive strategy incorporating waste prevention, material recovery, and industrial symbiosis, supported by education and awareness campaigns, investment in recycling infrastructure, and stronger policy enforcement. Integration of circular economy principles into the District Integrated Waste Management Plan (IWMP) would provide a roadmap for unlocking environmental, social, and economic benefits.

The following describes Circular Economy Initiatives conducted in the district:

- i. **DFFE Deputy Minister: Launched E-Waste Recycling Pilot in Rustenburg - May 2025**
 - Rustenburg LM signed MOU with E-WASA.

- Sebatleng Enterprises is in partnership with RLM in recycling initiative with the aim of recovering electronic waste

ii. Waste to energy projects

- Matzonox waste to value facility is processing chicken manure from Rainbow chicken Farms and liquid effluent from RCL processing plant to produce biogas and liquid fertilizer.
- Mphatlalatsane community centre use the food waste to generate biogas.
- RLM is intending to use economic beneficiation method (Mining waste to generate electricity) to rehabilitation of Townlands landfill site.

iii. Composting facilities registered in terms of Norms and Standards

- 9Five composting facility.
- Bophelo composting facility.

3.7. Waste characterisation

The district experiences diverse and complex waste generation patterns due to its mixed urban, peri-urban, and rural composition. The waste generated within the district includes domestic waste, commercial and industrial waste, organic waste, construction and demolition waste. Recyclables form a significant component of municipal waste; however, accurately recording the quantities recovered is challenging, as a large portion is collected and processed by the informal sector and private recyclers operating outside formal municipal reporting systems. This results in underreporting and data gaps in accurately quantifying recyclable waste.

Due to project constraints, a full waste stream analysis could not be undertaken during the course of this study. As an alternative approach, existing records of waste volumes were requested from the local municipalities within the district. To ensure consistency and facilitate comparative analysis, the various waste types were categorised in alignment with the standard reporting conventions used by municipalities when submitting data to the South African Waste Information Centre (SAWIC). This uniform classification allowed for a coherent analysis across jurisdictions. Additionally, a previous waste characterisation study conducted in the Moretele Local Municipality was referenced to provide indicative insights into the typical composition and proportions of waste streams within the district. This combination of reported data and secondary research formed the basis of the waste characterisation for the district.

3.7.1. Types of waste generated

The table below shows the types of waste generated:

Table 9: Types of waste generated

Type of waste generated	
Municipal Waste:	- o Urban Areas: High levels of domestic waste generation, primarily consisting of food scraps, packaging materials, plastics, and household items. The urban population's consumption patterns result in a steady increase in waste volume. - o Peri-urban and Rural Areas: Lower waste generation per capita compared to urban areas. Waste typically includes organic matter, plastics, and minimal industrial packaging. Informal settlements often have less formalised waste disposal systems, contributing to scattered waste.
Commercial and Industrial Waste:	- o Commercial Zones: Businesses in commercial areas, including shopping centres like Waterfall Mall, generate significant amounts of waste. This includes packaging materials, food waste from restaurants, and paper waste from offices. - o Industrial Areas: The district's industrial sector produces various types of waste, including hazardous materials, scrap metals, chemicals, and other by-products.
Agricultural Waste:	o Rural Areas: Agriculture is a major activity in rural parts of the district, generating organic waste, including crop residues, animal manure, and other biodegradable materials.
Construction and Demolition Waste:	o Urban and Peri-urban Areas: Construction and demolition activities produce substantial amounts of rubble, concrete, wood, metals, and other construction materials. This type of waste is often bulky and requires specialised handling and disposal methods.

3.7.2. Waste stream survey

The following table provides an overview of the waste quantities and types generated and reported by the local municipalities:

Table 10: Reported waste quantities and types in Tonnages

Municipality	Waste type	2019	2020	2021	2022	2023
Local Municipality of Madibeng	Municipal Waste	28332	28425	34322	30145	39207
	Building and demolition waste	5051	4338	3548	5208	10013
	Organic Waste	9696	4851	5641	9143	11103
	Commercial and Industrial Waste	5772	4923	5517	6051	6703
Rustenburg Local Municipality	Municipal Waste	9001	6573	11046	17026	28877
	Building and demolition waste	19186	18883	16916	18459	33775
	Organic Waste	10900	6376	4794	7971	8416
	Commercial and Industrial Waste	5633	3811	5123	296	7701
Moretele Local Municipality	Municipal Waste	Weighbridge data and estimates unavailable				
	Building and demolition waste					
	Organic Waste					
	Commercial and Industrial Waste					
Kgetlengrivier Local Municipality	Municipal Waste	Weighbridge data and estimates unavailable				
	Building and demolition waste					
	Organic Waste					
	Commercial and Industrial Waste					
Moses Kotane Local Municipality	Municipal Waste	7894,3	11270,1	10463,5	9757,0	12472,8
	Building and demolition waste	975,9	296,4	1280,9	1437,8	1495,5
	Organic Waste	195,2	350,8	172,5	183,3	296,0
	Commercial and Industrial Waste	3402,8	4581,5	4482,7	4232,6	3370,1
Bojanala District Municipality	Municipal Waste	37333	34998	45368	47171	68084
	Building and demolition waste	24237	23221	20464	23667	43788
	Organic Waste	20596	11227	10435	17114	19519
	Commercial and Industrial Waste	11405	8734	10640	6347	14404
	Total Waste (tonnes)	93571	78180	86907	94299	145795

Source: Weighbridge data estimates from local municipalities

The figure below describes waste generation growth in the district over a 5-year period (2019 to 2023):

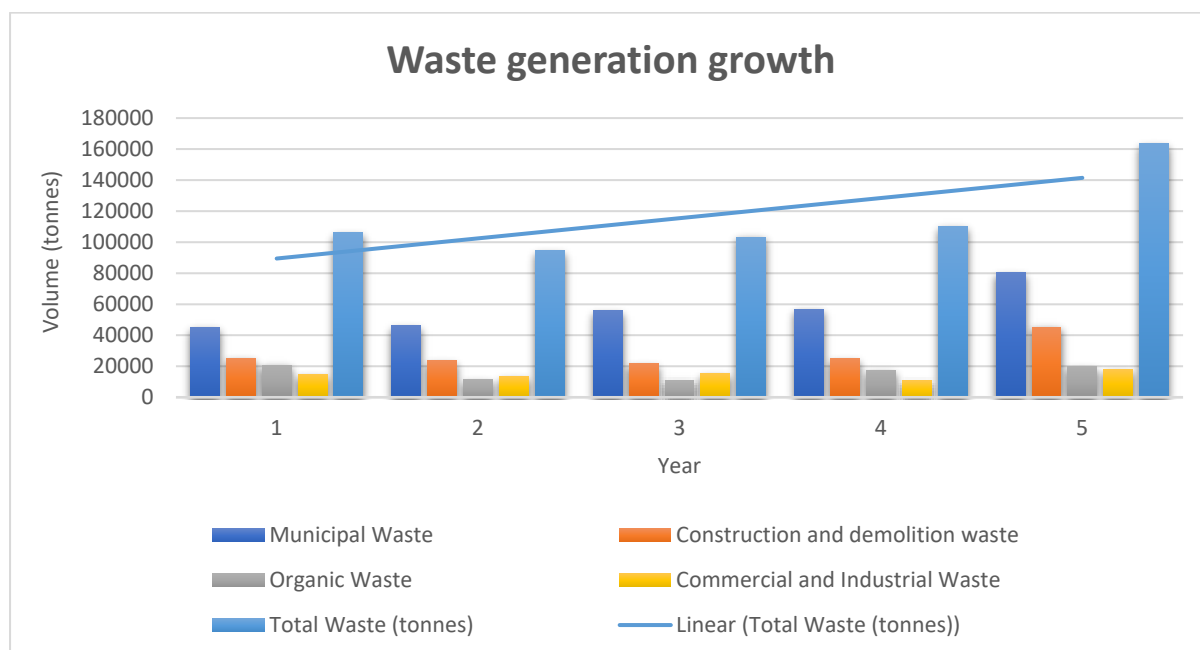


Figure 5: Waste generation growth in the BPDM

A waste characterisation study (WCS) was conducted on 20 October 2023 to identify the type of waste generated within the municipality. The WCS took place at the unlicensed Ga-Motla Waste Disposal Site.

Table 11: MLM WCS results

Waste Category	Mass (Kg)	Percentage of waste stream
Cardboard	50.0	7%
Plastics	152.6	21%
Glass	99.3	14%
Metals	11.4	2%
Paper	9.4	1%
Organic waste	216.4	30%
Sanitary waste (nappies)	157.4	22%
Textiles	21.4	3%
Other waste	12.4	2%
TOTAL	730.4	100%

Source: MLM IWMP 2024

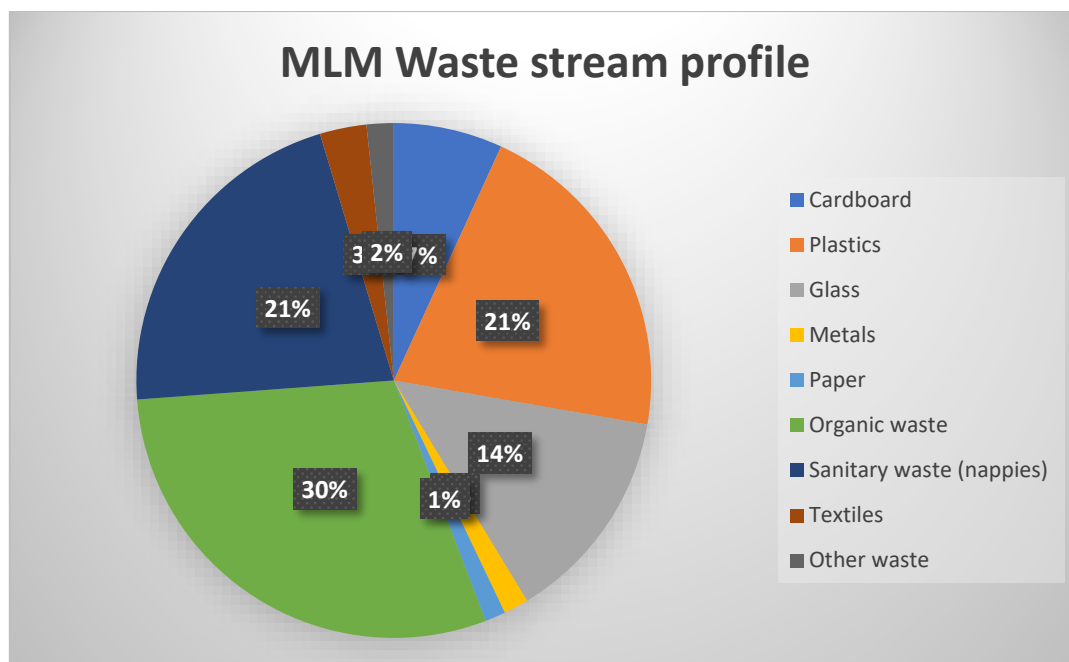


Figure 6: MLM Waste stream profile

Overview of the Waste Characterisation

The various waste streams generated within the district present several opportunities for improved waste management, economic development, and environmental protection. Below is a table of the potential opportunities associated with each major waste stream identified:

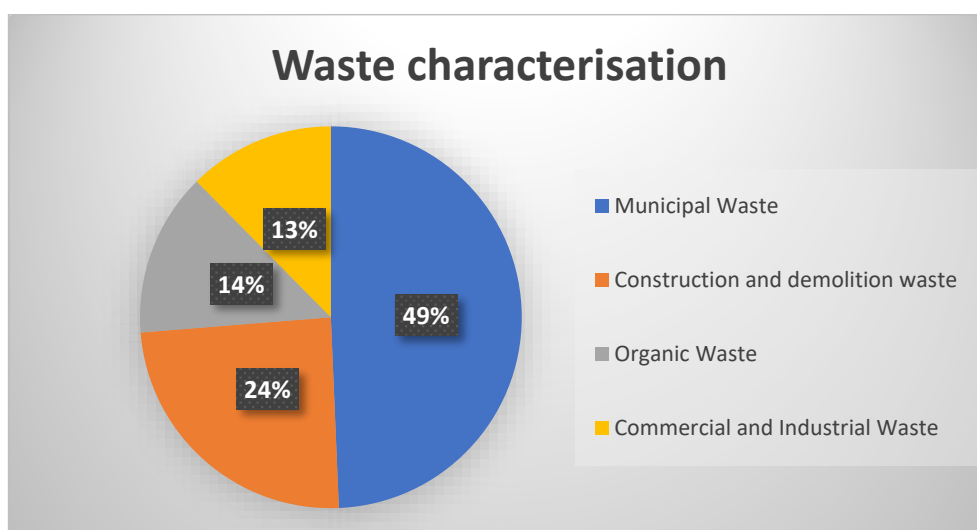


Figure 7: Waste characterisation

Table 12: Opportunities associated with identified major waste streams

Waste stream	Opportunities associated with identified major waste streams
General Domestic Waste	Typically consists of household waste, which includes organics, plastics, paper, glass, and metals. Opportunities lie in diverting recyclable materials

Waste stream	Opportunities associated with identified major waste streams
	from landfills through source separation and kerbside collection programmes. Organic fractions can be used for composting or anaerobic digestion, contributing to soil health and renewable energy production.
Garden/Green Waste	Green waste presents a significant opportunity for composting initiatives, particularly in rural and peri-urban areas where land is more readily available. Municipal composting facilities or public-private partnerships can produce compost for landscaping, agriculture, or resale, reducing landfill use and methane emissions
Recyclable Waste (Plastic, Paper, Glass, Metal)	Recyclables offer job creation and enterprise development opportunities in the collection, sorting, and processing sectors. Strengthening partnerships with waste picker cooperatives and formal recycling businesses can increase recovery rates, reduce environmental pollution, and generate income streams through extended producer responsibility (EPR) support.
Construction and Demolition (C&D) Waste	C&D waste, often unregulated, offers opportunities for recovery of aggregates, bricks, and concrete for reuse in construction projects. Municipal bylaws and procurement policies encouraging the use of recycled building materials can stimulate a secondary materials market and reduce illegal dumping
Hazardous Waste	Though challenging to manage, hazardous waste – such as e-waste, batteries, chemicals, and medical waste – presents opportunities for specialist service providers and small-scale entrepreneurs to recover valuable materials (e.g., precious metals from e-waste) under proper regulatory oversight. Establishing safe collection points and partnerships with licensed treatment facilities can improve public health outcomes and environmental safety
Commercial and Industrial Waste	These waste streams, particularly from the mining, manufacturing, and retail sectors, present opportunities for waste exchange platforms, where one industry's by-products can serve as raw materials for another. Circular economy initiatives can be developed through industrial symbiosis, promoting resource efficiency and cost savings
Organic and Food Waste	This stream offers untapped potential for food waste reduction campaigns, redistribution initiatives, and small-scale anaerobic digestion projects to produce biogas and nutrient-rich fertilisers. Integration with agricultural programmes can create closed-loop systems that benefit both waste management and food production
Electronic Waste (E-Waste)	E-waste contains valuable metals and components that can be recovered and resold. Opportunities exist in establishing district-level e-waste drop-off points, partnering with accredited recyclers, and promoting community awareness campaigns on the safe disposal and recycling of electronic items

By recognising and acting on these opportunities, the district can enhance its waste diversion rates, stimulate local economies, and move closer to achieving sustainable waste management in alignment with national policy priorities.

3.8. Status of waste management

Effective waste management is a critical component of sustainable development, particularly in the district, which is characterised by its rich natural resources, vibrant communities, and growing economic activities. As the district continues to experience urbanisation and population growth, the challenges associated with waste generation and management have become increasingly complex.

The waste service standards of local and district municipalities in waste management are defined by Sections 9 of the National Environmental Management: Waste Act 59 of 2008, Local municipalities are primarily responsible for waste collection, transportation, and local waste management services, including household waste collection, street cleaning, and managing localised waste disposal sites. They must also implement waste separation at source, recycling initiatives, and community awareness programs to promote waste minimisation. The table below summarises the waste management findings within the district:

Table 13: Waste management overview

Activity	Status Quo
Existing Waste Services	The district faces inefficiencies in waste collection and disposal, with only 57.5% of households receiving refuse removal services. Urban areas have better service coverage compared to rural and informal settlements that experience illegal dumping and burning due to limited collection
Waste Collection Infrastructure	Municipal fleets are aging and insufficient, with some local municipalities lacking vehicles altogether (e.g., Moretele LM). There is heavy reliance on outsourcing, and rural areas face logistical challenges due to poor road infrastructure
Waste Transfer Stations	The district lacks sufficient operational transfer stations. Some municipalities have none, while others have incomplete or vandalised facilities, e.g., the Marikana Transfer Station in Rustenburg
Disposal Facilities	The district has two regional landfills, but they are not fully operated as regional facilities. Some municipalities (Kgetlengrivier and Moretele) lack landfill sites, leading to disposal challenges
Plant and Equipment	Most local municipalities lack ownership of critical landfill machinery (compactors, dozers, front-end loaders), resulting in operational inefficiencies and reliance on outsourced equipment

Activity	Status Quo
Waste Minimisation and Recycling	Separation at source is limited; municipal recycling facilities are underutilised, and there is a shortage of waste processing and beneficiation plants. The informal sector plays a significant role in recycling, but integration with formal systems is limited
Hazardous Waste Management	There is no dedicated hazardous waste facility in the district, and hazardous waste is often mixed with general waste. Public awareness and municipal hazardous waste management plans are lacking
Education and Awareness	Existing programmes include school campaigns, cleanups, and waste picker workshops, but there is limited community engagement and inconsistent monitoring. There is a need for coordinated campaigns and integration into school curricula
Organisational Structure	The district's Health and Environmental Services Department is staffed but lacks specialised positions for waste minimisation, education, compliance monitoring, and regional infrastructure management. Staffing shortages particularly affect Kgetlengrivier and Moretele LMs
Private Sector Participation	Private companies operate mainly in urban areas, leaving underserved rural regions. There is fragmented engagement between formal and informal sectors, and opportunities for partnerships and co-financing of infrastructure require strengthening
Waste Characterisation	The district generates diverse waste streams including domestic, commercial, industrial, organic, and construction waste. A waste characterisation study in Moretele LM showed significant organic waste (30%) and sanitary waste (22%), highlighting the need for targeted waste diversion strategies
Growth Projections	Population growth and urbanisation trends indicate increasing waste generation, putting pressure on existing infrastructure. Projected waste volumes require expansion and improvement of waste services
Financial Requirements	Adequate budgeting is critical for recruiting staff, procuring equipment, and developing facilities. The district needs to explore additional funding sources

3.8.1. Institutional Arrangements

The table below describes the status of IWMPs, By-laws, and designation of a waste management officer within the district and its respective local municipalities.

Table 14: IWMPs, By-laws, and WMO designation status

Municipality	IWMP Status	By-laws	WMO
Bojanala Platinum District Municipality	Development of IWMP in progress	-	Designated

Local Municipality of Madibeng	Due for review. It was endorsed in 2018.	Promulgated 2022	Designated
Moretele Local Municipality	2025 Final Draft IWMP enroute for MEC endorsement	Promulgated 2025	Designated
Rustenburg Local Municipality	Due for review. It was endorsed in 2019.	Promulgated 2025	Designated
Kgetlengrivier Local Municipality	Endorsed 2023	Draft by-laws 2025	Not designated
Moses Kotane Local Municipality	No valid IWMP. Draft 2018	Promulgated 2019	Designated

Source: North West PIWMP 2025 Draft

Section 11 of the Waste Act requires that certain spheres of government must develop an Integrated Waste Management Plans.

A municipality has executive authority to make and administer by laws for effective administration of matters which it has a right to administer – waste or refuse is one of them, section 156 (2) of the constitution and section 11 (3) (m) of the number municipal systems act. The Waste Act states that each municipality must develop waste by-laws. As such, the responsibility of the district municipality is to support the local municipalities to develop and enforce the by-laws to ensure consistent and effective waste management across the district.

According to the Waste Act, section 10; each municipality authorised to carry out waste management services must designate in writing a Waste Management Officer from its administration to be responsible for coordinating matters pertaining to waste management in that municipality.

3.8.2. Education and Awareness

The NEM: WA, 2008 and the NWMS 2020 emphasise the importance of public education and awareness in achieving effective waste management. Pillar 3 of the Strategy highlights the need to increase public engagement and understanding of waste-related issues to support behavioural change and improved compliance with waste legislation.

Within the district, education and awareness initiatives are conducted but there is insufficient positive response to the awareness campaigns as well as consistent monitoring. Schools are utilised as platforms for environmental education, however community-based organisations are seldom formally engaged in awareness activities. To close this gap, there is a need for coordinated, district-led awareness campaigns, support integration of waste topics into school

curricula, and partnerships with local stakeholders to promote consistent, culturally relevant messaging around sustainable waste practices.

The following activities are conducted as part of the district's education and awareness programmes:

- School campaigns and competitions
- Cleanups
- Coordinating the participation of environmental camps for primary school learners
- Separation at source programmes
- Internal, PROs and DFFE training materials
- Workshops for waste pickers, partnering with PROs

It is evident that there are also other units supporting waste management activities within the district, especially some of the waste programmes which are cross-cutting. In addition, the community, organised business and environmental management non-governmental organisations (NGOs) are also involved in ensuring a clean environment. The PROs have also contributed towards the awareness programs but more inclined towards recovery of recyclables.

3.8.3. Waste Minimisation, Reuse and Recycling

Municipalities are required to promote waste minimisation, reuse, and recycling as a priority in the waste management hierarchy, in line with Section 17 of the Waste Act. These activities are essential for diverting waste from landfill, conserving resources, and creating employment opportunities within the circular economy. The Municipal Structures Act (Act No. 117 of 1998), in sections 83 and 84, requires district municipalities to promote bulk infrastructural development and services for the district as a whole.

In the district, the implementation of waste minimisation and recycling initiatives is still limited and uneven across local municipalities. The district has limited infrastructure such as buy-back centres and material recovery facilities particularly in rural areas. To advance waste minimisation efforts, there is a need for investment in recycling infrastructure, and better integration of informal waste pickers into the formal waste economy. The district leads public education and awareness campaigns, monitors waste minimisation performance, and encourages investment in recycling and green job creation to advance the circular economy. While operational waste services are delivered by local municipalities, the district ensures alignment, coordination, and long-term sustainability across the region.

Private sector contributes to waste management through a variety of interventions such as providing infrastructure support for the development of recycling, including material recovery facilities (MRFs), buy-back centres, and drop-off points. They support the Informal Sector by recognising the value of informal waste collectors, working to integrate waste pickers into formal systems by offering training, equipment, and access to markets. PROs collaborate with municipalities and service providers to gather and report on waste diversion and recovery data. Waste minimisation and recycling activities are piloted at local municipalities schools around the district.

The informal sector also has a notable presence, particularly in recycling. Informal waste pickers, or "reclaimers", are involved in collecting recyclable materials (such as paper, plastic, and metals) from landfills and urban areas. They contribute significantly to recycling efforts by diverting materials from landfills, although they often operate outside formal regulatory frameworks. Despite their valuable role, informal sector workers face poor working conditions and lack the infrastructure or support to expand their recycling efforts efficiently.

The district must support or implement waste recycling and minimization strategy by establishing community waste recovery projects, separation at source, waste avoidance programs such as sustainable packaging, design for environment, consumer-based waste reduction program and designing out construction and demolition waste program as a way of avoiding and reducing generation of waste.

3.8.4. Waste Picker Integration

The integration of waste pickers into the formal waste management system in Bojanala Platinum District Municipality remains limited and largely informal. Waste pickers, often operating independently or as part of reclaiming cooperatives, contribute significantly to recycling and resource recovery, particularly at landfill sites and transfer stations. In Rustenburg, for instance, several reclaiming companies operate informally at waste sorting facilities, with limited municipal oversight or support. However, these reclaimers often lack access to protective equipment, training, and basic infrastructure such as ablution facilities or designated sorting areas.

Currently, there is no district policy or formal programme to recognize and integrate waste pickers into municipal waste services. The lack of formal agreements, cooperatives' registration, and capacity-building initiatives limits opportunities for economic inclusion and undermines occupational safety. Additionally, the absence of structured data collection on waste picker activities hampers the ability to measure their impact on waste diversion rates and the recycling economy. Future integration efforts would benefit from collaborative

frameworks involving local municipalities, producer responsibility organisations (PROs), NGOs, and the private sector to promote recognition, improve working conditions, and support entrepreneurial opportunities for waste pickers.

3.8.5. Waste collection services

National Domestic Waste Collection Standards (2011) stipulates that equitable waste collection services must be provided to all households within the jurisdiction of the municipality. In areas where travelling distances and the resulting costs may render regular waste collection services impractical, the municipality, through by-laws, must allow for more feasible alternative ways of waste handling, such as on-site disposal.

Section 23 and 24 of the Waste Act (NEM: WA 59 Of 2008) states that waste collection services are subject to the need for an equitable allocation of such services to all people in a municipal area and no person may collect waste for removal from the premises unless such person is a municipality or municipal service provider. Sec 25 of the waste Act (NEM: WA 59 Of 2008) states that any person engaged in the transportation of waste must take all reasonable steps to prevent any spillage of waste or littering from a vehicle used to transport waste.

According to Census 2022, Bojanala Platinum District Municipality has a total number of 531 492 households. There is an increase in population and household access to refuse removal in the 2001 census as compared to 2022 Census.

The table below describes the level of access to refuse removal services within the district as reported by Census 2001 - 2022

Table 15: Percentage of households with access to municipal refuse removal services

Access to municipal refuse removal services within the BPDM						
Year	BPDM	Moretele	Madibeng	Rustenburg	Kgetlengriver	Moses Kotane
2001	26,1%	0,3%	26,7%	44,1%	44,1%	7,7%
2011	49,2%	1,0%	25,8%	69,2%	44,5%	80,8%
2016	57,2%	69,7%	35,5%	67,1%	27,5%	75,5%
2022	57,5%	33,8%	47,3%	75,6%	69,4%	48,7%

Source: Census 2022

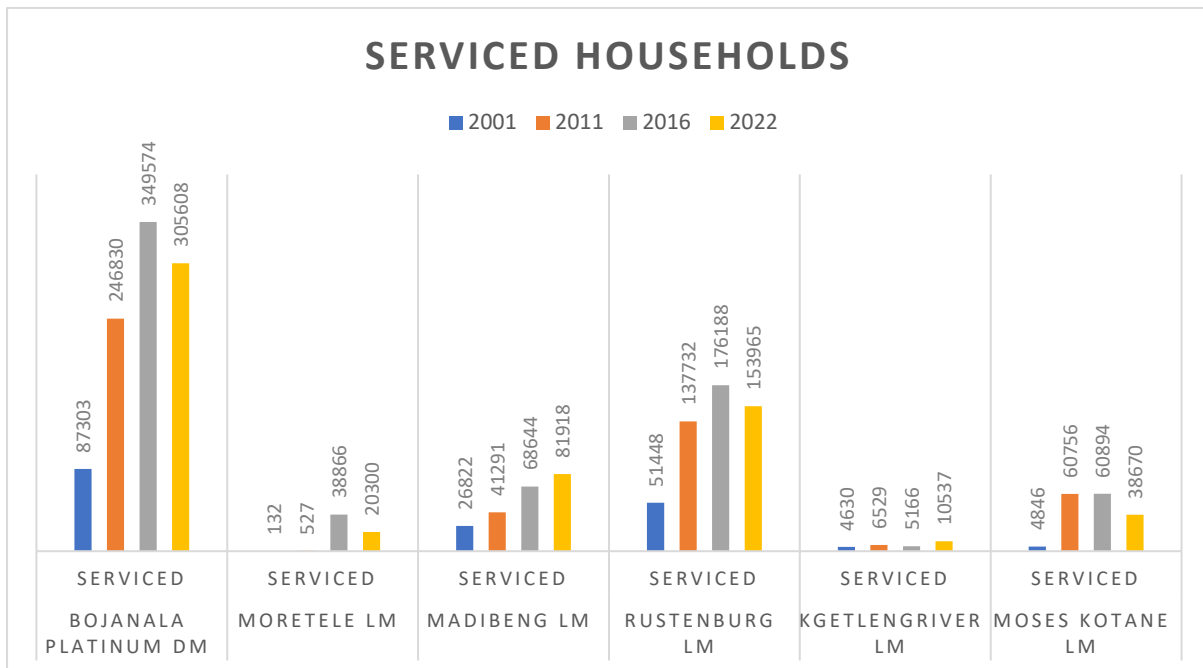


Figure 8: Number of serviced households 2001 – 2022

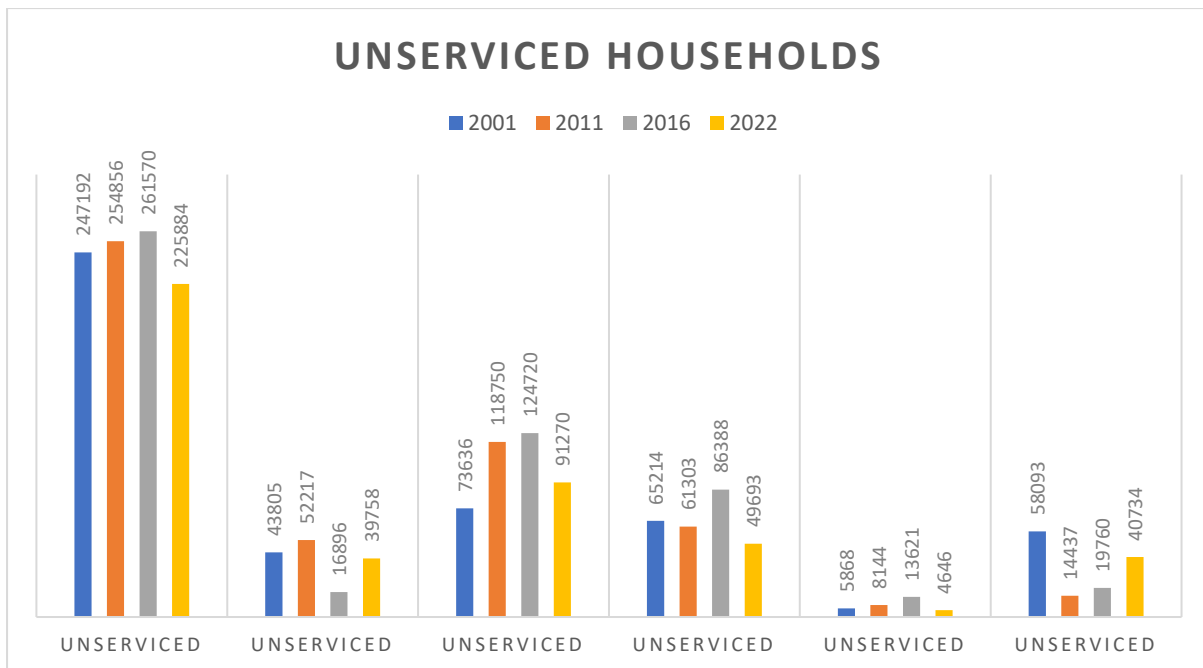


Figure 9: Number of unserviced households 2001 – 2022

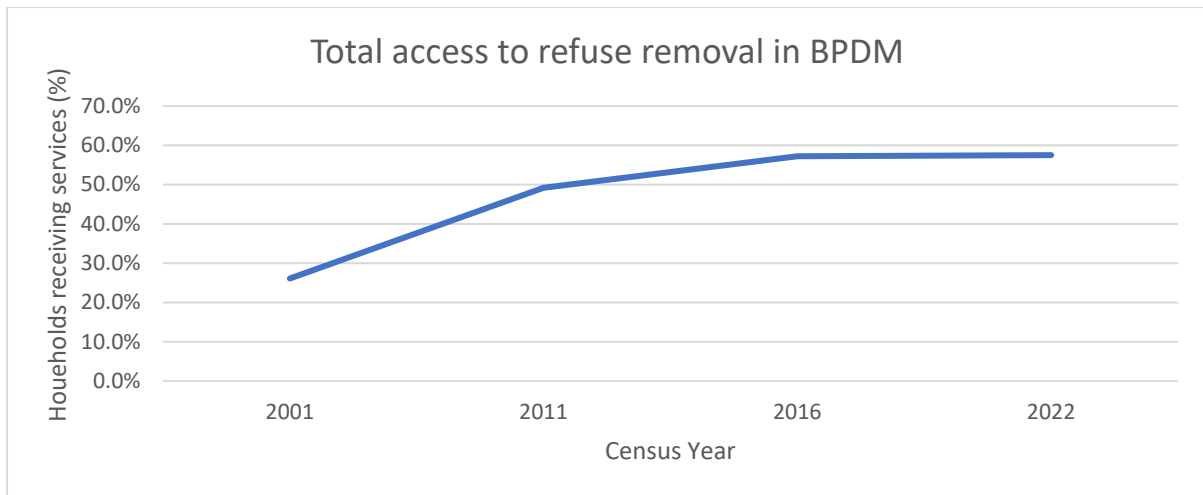


Figure 10: Household Access to Municipal Refuse removal in BPDM 2001 – 2022

Source: Census, 2022

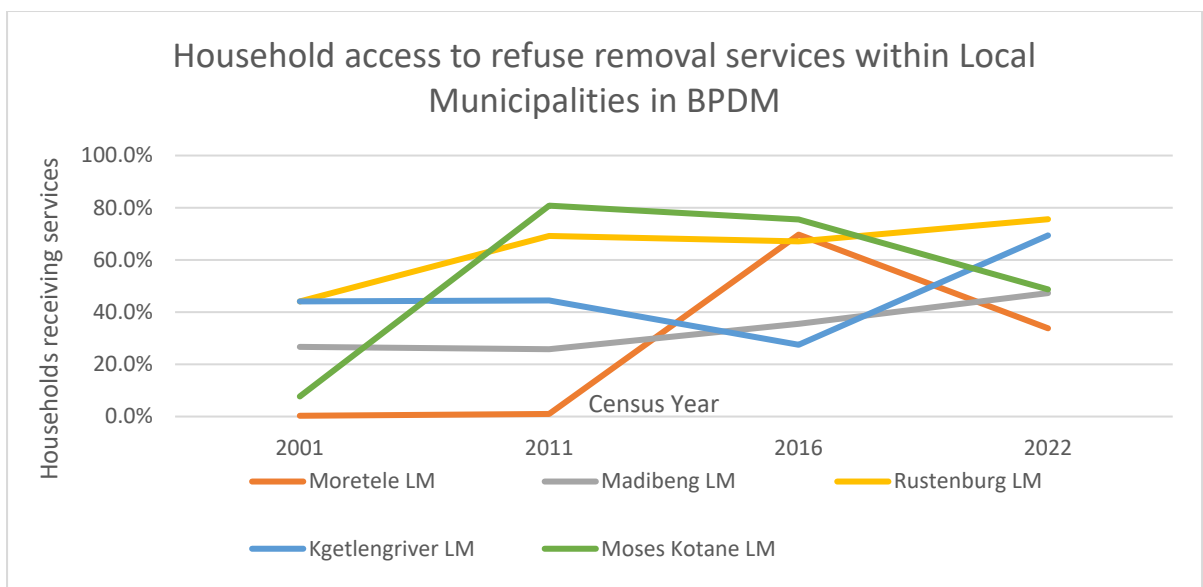


Figure 11: Household access to refuse removal in local municipalities 2001 – 2022

Source: Census, 2022

The current status of waste collection services in the district reflects a mixed level of performance across its constituent local municipalities, largely influenced by variations in fleet availability, population density, and geographic spread.

Despite some municipalities having a moderate number of collection vehicles, the coverage of waste collection services remains limited, particularly in rural and informal settlements where logistical challenges, inadequate road infrastructure, and resource constraints inhibit regular service delivery. Furthermore, some municipalities such as Moretele and

Kgetlengrivier have no skip loaders, roll-on-roll-off (RORO) trucks, or sufficient flatbed vehicles, which limits their capacity to manage waste effectively.

Waste collection within the district continue to experience service backlogs due to limited fleet capacity, poor road conditions, and insufficient logistical planning. This disparity underscores the need for strategic fleet expansion through Municipal Infrastructure Grant funding, optimised route planning, and greater inter-municipal coordination to improve the effectiveness and coverage of waste collection services.

The Royal Bafokeng Nation plays a significant role in waste management within the district, particularly in areas under its administration. Through its governance structure, RBN implements waste collection, recycling, and environmental sustainability initiatives to improve service delivery and promote cleaner communities. In alignment with national and provincial waste management policies, RBN has established community-based waste management programs, supports local recycling enterprises, and facilitates waste education and awareness campaigns to encourage responsible waste disposal.

3.8.6. Storage and transportation

Part 5 of the Waste Act sets out provisions for the storage, collection and transportation of waste. The general requirements for the storage of waste are that any person who stores waste must at least take steps to ensure that the containers where waste is stored are intact and not corroded and are fit for the storage of waste. The National Norms and Standards for the Storage of Waste (November 2013) states that the purpose of the norms and standards is to provide a uniform national approach relating to the management of waste storage facilities, ensuring best practices in the management of waste storage facilities and provide minimum standards for the design and operation of new and existing waste storage facilities.

According to the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), particularly Section 21(1)(a), municipalities are responsible for ensuring that waste is stored prior to collection in a manner that does not pose a risk to human health or the environment. Proper waste storage is a critical component of the waste management value chain, preventing illegal dumping, odour nuisances, and public health risks. The table below gives an overview of waste storage and transportation within the district.

Table 16: Waste storage and transportation

Storage Type	Area of use	Method of Collection	Type of Fleet
240L Bins	Households	Kerbside	Compactor
Skip Bins	Businesses and Industrial areas	Bulk	Skip Loader
Roro Bins	Rural and Informal settlement	Bulk	Roro Truck

Refuse Bags	Households and clean up	Roadside	Flatbed
Street Litter Bins	Towns and Suburbs	Roadside	Flatbed
Open Spaces	Illegal dumps	Central Collection Points	FEL and Tipper Truck

Notes:

- Most municipalities outsource their waste removal services due to internal challenges.
- Fleet maintenance and replacement remain major challenges due to limited budgets.
- In rural areas not all household are receiving waste removal services.
- Due to lack of collection services communities resort to dumping waste illegally in both rural and urban areas.

Within the district, the status of waste storage varies significantly across local municipalities. Urban areas within the district are relatively better serviced, with formal waste containers and standardised refuse bins provided to many households and businesses.

3.8.7. Waste transfer stations

The Municipal Structures Act (Act No. 117 of 1998), in sections 83 and 84, requires district municipalities to promote bulk infrastructural development and services for the district as a whole. The district does not own any waste transfer station within its jurisdiction. All waste transfer stations within the district are owned and managed by local municipalities. Local municipalities are responsible for ensuring that waste transfer stations established, particularly in areas where the distance from waste generation to disposal sites is more than 20 Km as per the IWMP guidelines. The table below gives an overview of the current status of waste transfer stations in the district.

Table 17: Waste Transfer stations

Municipality	Transfer station	Operational status	Permit/License Number	Location coordinates
Local Municipality of Madibeng	Brits Transfer Station	Operational	NWP/WMPF/BP2/2021/10	25°37'52" S & 27°47'48" E
	Damonsville Transfer Station	Operational	NWP/WMPF/BP2/2021/12	25°37.633' S & 27°51.119' E
	Lethabong Transfer Station	Not operational	NWP/WMPF/BP2/2021/09	25°27'10.91"S & 27°49'50.13"E
	Mothotlung Transfer Station	Operational	NWP/WMPF/BP2/2021/06	25°36'26" S & 27°53'46" E
	Kosmos Transfer Station	Operational	NWP/WMPF/BP2/2021/11	25°44'35.81" S & 27°49'24.44" E
	Klipgat Transfer Station	Not operational	NWP/WMPF/BP2/2021/07	25°32'25.37"S & 28°1'13.32"E
	Hebron Transfer Station	Operational	NWP/WMPF/BP2/2021/08	25°29'32.88"S & 27°58'48.35"E
Rustenburg Local Municipality	Strumosa Garden Transfer	Operational	NWP/WM/BP1/2011/17	25°39'47.6" S & 27°13'03.8" E
	Marikana Transfer Station	Not operational	NWP/WM/BP1/2010/13	25°41'31.6" S & 27°28'25.9" E

Source: North West PIWMP 2nd Generation

3.8.7.1. Local Municipality of Madibeng Transfer Stations

Madibeng LM has seven (7) waste transfer stations that are registered with DEDECT but only five (5) are operational, which are: Brits, Mothutlung, Damonsville, Hebron, and Kosmos. Klipgat and Lethabong transfer stations are no longer operational due to increased crime in the area. In terms of the transfer station sizes, they are all better positioned to develop extra infrastructure for material recovery and chipping of garden waste to making compost.

a) Brits Waste Transfer Station

Brits Waste Transfer Station is situated in Portion 52 of farm Krokodildrift 466, Brits town, with the coordinates of 25°37'55" S; 27°47'48" E, and the area size of 1.5 hectares. The site is registered to store general waste. The facility was visited and below are the findings:

The site is well designed with a ramp to allow easy access for vehicles to offload waste into the provided bulk bins. 2 Roro and 1 Skip bins for waste storage. Working ablutions facilities. The site is fenced. Reclamation of waste recyclable materials was observed where in there is a structure for storage of waste recyclables which is currently used by one of the local reclaimers.



Figure 12: Brits Transfer Station (09/11/2023)

b) Kosmos Waste Transfer Station

Kosmos Waste Transfer Station is situated at the coordinates of 25°44'31.39" S; 27°49'27.39" E, with the area size of 1.5 hectares. The site is Registered to store general waste. Ground truthing was conducted and below are the findings:

The site is well designed with a ramp to allow easy access for vehicles to offload waste into the provided bulk bins. 2 Roro and 2 Skip bins for waste storage. Working ablutions facilities. The site is fenced. Reclamation of waste recyclable materials was observed by the local reclaimers. There is no structure for storage of waste recyclables.



Figure 13: Kosmos Transfer Station (09/11/2023)

c) Hebron Waste Transfer Station

Hebron Waste Transfer Station is situated in Hebron. 25°32'26.21" S; 28°01'14.71" E, with the area size of 1.5 hectares. The site is registered to store general waste.

The site is well designed with a ramp to allow easy access for vehicles to offload waste into the provided bulk bins. 1 Roro bin for waste storage waste observed and was full. Working ablutions facilities. The site is fenced. Reclamation of waste recyclable materials was

observed by the local reclaimers. Recyclable Materials are stored in Bulkbags. There is no structure for storage of waste recyclables.



Figure 14: Hebron Transfer Station (09/11/2023)

d) Damonsville Waste Transfer Station

Damonsville Waste Transfer Station is situated at the coordinates of 25°37'38.06" S; 27°51'6.39" E, with the area size of 1.5 hectares. The site is permitted to store general waste. The facility was visited and below are the findings:

The site is well designed with a ramp to allow easy access for vehicles to offload waste into the provided bulk bins. 1 Roro bin for waste storage was observed. Ablutions facilities are vandalised. The site has structure for storing recyclable waste and not in use.



Figure 15: Damonsville Transfer Station (09/11/2023)

e) Mothutlung Waste Transfer Station

Mothutlung Waste Transfer Station is situated in Portion 91 of farm Elandsfontein 440 JQ, with the coordinates of 25°36'29.49" S; 27°53'46.6" E, and the area size of 1.5 hectares. The site is permitted to store general waste. The facility was visited and below are the findings:

The site is well designed with a ramp to allow easy access for vehicles to offload waste into the provided bulk bins. 1 Roro bin observed for waste storage. The site is without ablutions facilities. The fence is vandalised. Reclamation of waste recyclable materials was not observed. There is no structure for storage of waste recyclables.



Figure 16: Mothotlung Transfer Station (09/11/2023)

f) Klipgat Waste Transfer Station

Klipgat Waste Transfer Station is situated at the coordinates of 25°29.548'S; 27°58.087'E, with the area size of 1.5 hectares. The site is permitted to store general waste. The facility was visited and below are the findings:

There is no site access road leading to ramp offloading area. No Roro or Skip bins for waste storage. No evidence of ongoing waste removal activities occurring on site. The site is without ablution facilities. The fence is vandalised. Reclamation of waste recyclable materials was not observed. There is no structure for storage of waste recyclables.



Figure 17: Klipgat Transfer Station (09/11/2023)

3.8.7.2. Rustenburg Local Municipality Transfer Stations

Rustenburg LM has one operational transfer station (Strumosa Garden Transfer Station) and one under construction (Marikana waste transfer Station).

a) Strumosa Garden Waste Transfer Station

Strumosa is situated at the coordinates of 25° 39' 56.6388"S; 27° 13' 11.1108"E. The site is permitted to store garden waste. The facility was visited and below are the findings:

The site is designed without a ramp for easy vehicle access to offload waste into the provided bulk bins. 2 skip bins for waste storage. The site is without ablutions facilities. The site has no fence. The site only accepts Garden Waste.



Figure 18: Strumosa Garden Transfer Station (16/11/2023)

3.8.8. Specialised Waste Management Fleet

The powers and functions of the district municipality are outlined in the Municipal Structures Act (Act No. 117 of 1998), in sections 83 and 84. The district supports and builds the capacity of local municipalities to perform their functions effectively, particularly where technical or financial constraints exist. It also ensures the equitable distribution of resources among municipalities within its jurisdiction to maintain appropriate and consistent levels of service delivery.

The district does not own any waste transportation fleet nor provide waste collection and transportation services in its area of jurisdiction. Waste collection and transportation services within the district is undertaken by local municipalities and private companies. Specialised waste management vehicle availability across the district reveals notable imbalance and significant shortfalls that hinder effective general waste handling and landfill operations. The following tables describe the specialised waste management in use within the local municipalities.

Table 18: Specialised waste management fleet

Local Municipality	Municipal owned vehicles	Outsource Vehicles
Local Municipality of Madibeng	REL x15, Skip Loader x3, Roro x3, Flatbed x2, Landfill Compactor x1, Water Cart x17, Excavator x1	REL x9, Tipper Truck x12, Landfill Compactor x1, Dozer x1, Water Cart x1
Rustenburg Local Municipality	REL x4, Tipper x3, TLB x2	REL x10, Skip Loader x4, Tipper x2, Landfill Compactor x1, Dozer x1, Water Cart x1, Excavator x1
Moretele Local Municipality	No municipal owned vehicles	REL x8, Flatbed x6, Tipper Truck x1, Water Cart x1,
Kgetlengrivier Local Municipality	REL x1	REL x7, TLB x1
Moses Kotane Local Municipality	Skip Loader x1, Flatbed x1, Tipper trucks x1	REL x7, Landfill Compactor x1, Water Cart x2

3.8.9. Waste disposal facilities

The development and management of waste disposal facilities within the district must align with the National Norms and Standards for Disposal of Waste to Landfill (Reg. 636 of 2013) which deals with the standard containment barrier design, waste acceptance and waste disposal requirements. The Municipal Structures Act (Act No. 117 of 1998), in sections 83 and 84, requires district municipalities to promote bulk infrastructural development and solid waste disposal sites serving the area of the district municipality as a whole.

The district does not own any waste disposal facilities within its jurisdiction. All waste disposal facilities within the district are owned and managed by local municipalities. Local municipalities are responsible for ensuring that waste is properly disposed at licensed landfill sites or other designated disposal facilities. The district municipality, in turn, oversees the planning, development, and operation of regional landfill sites, ensuring compliance with environmental regulations and sustainability principles.

Table 19: Waste disposal facilities in the district

Local Municipality	Name of disposal site	Permit/license number	Status
Madibeng LM	Hartebeesfontein Regional Landfill	B33/2/0121/41/P81	Operational
	Eastern Platinum Landfill	16/2/7/A210/C29/Z1/P379	Operational
	Mooi-nooi – Lonmin Landfill	16/2/7/A210/C396/Z1	Operational
	Middelkraal – Lonmin Landfill	16/2/7/A210/C156/Z1	Operational

Local Municipality	Name of disposal site	Permit/license number	Status
	Necsa Landfill	B33/2/121/9/P66	Closed
Moretele LM	Ga-motla disposal	Unlicensed	Operational
	Bosplaas disposal	Unlicensed	Operational
Rustenburg LM	Waterval Landfill	NWP/WM/BP1/2011/02	Operational
	Townlands Landfill	NWP/WM/BP1/2013/30	Closed
	Lethabong Landfill	NWP/WM/BP1/2013/07	Closed
	Marikana Landfill	NWP/WM/BP1/2012/16	Closed
	Monnakato Landfill	NWP/WM/BP1/2013/10	Closed
	Bethanie Landfill	NWP/WM/BP1/2013/08	Closed
	Phatsima Landfill	NWP/WM/BP1/2013/09	Closed
	Rasimone Landfill	16/2/7/A240/C2/Z1/P441	Operational
	Karee – Lonmin Landfill	16/2/7/A210/C156/Z1	Operational
	Impala Platinum Landfill	16/2/7/A220/C10/Z1/P480	Operational
Kgetlengrivier LM	Koster disposal	NWP/WM/BP5/2013/23/01	Closure
	Derby disposal	NWP/WM/BP5/2013/25/01	Closure
	Swartruggens disposal	NWP/WM/BP5/2013/24/01	Closure
Moses Kotane LM	Mogwase new Landfill	NWP/WM/BP2/2010/03	Operational
	Madikwe disposal	Licensed (Traditional council of Madikwe)	Operational
	Old Mogwase landfill	Licensed	Closed
	Sun City Landfill	16/2/7/B200/C48/Z1/P267	Operational
	Anglo Platinum Landfill	Unlicensed	Closed
	Anglo Platinum Landfill	NWP/WM/BP3/2009/10	Operational

Source: North West Provincial IWMP 2017

Sun City has its own licensed landfill site. The resort partnered with private waste management service providers to ensure proper handling of general, organic, and hazardous waste, with a focus on waste minimization, composting, and reducing landfill dependency. While the resort independently manages its internal waste systems and landfill, the local municipality is responsible for oversight and ensuring regulatory compliance, aligning with district and provincial waste management strategies.

Mining houses operating within the BPDM contribute significantly to waste management efforts, primarily through the implementation of internal waste management systems aligned with national environmental regulations. These companies are required, under the National Environmental Management: Waste Act (Act 59 of 2008), to manage their own waste streams, particularly hazardous and industrial waste, through licensed on-site waste storage, treatment, and disposal facilities. Many large mining operations have established dedicated waste handling and separation areas, employed environmental officers, and implemented recycling initiatives within their operations.

3.8.10. Hazardous waste management

Hazardous waste management within the district remains limited and uncoordinated. Most local municipalities lack dedicated systems for identifying, collecting, storing, or safely disposing of hazardous waste. Within the district there is no municipality that is operating a hazardous waste treatment or storage facility, and hazardous waste is often mixed with general waste at source, posing significant environmental and health risks.

Common types of hazardous waste encountered include household hazardous waste (e.g. batteries, chemicals, cleaning agents), e-waste, and small-scale medical waste. Inadequate public awareness and limited monitoring contribute to the disposal of hazardous waste at general landfill sites, which are not engineered to handle such materials. Current hazardous waste management efforts rely heavily on private sector initiatives and compliance by individual waste generators, with limited enforcement from local authorities due to capacity constraints. As a result, accurate tracking, safe storage, and responsible disposal of hazardous waste remain key challenges, necessitating urgent interventions including awareness, training, infrastructure investment, and intergovernmental coordination. Hazardous waste generators should register with the relevant authority and that such waste be managed separately from general waste to prevent harm to human health and the environment. The district is not included in the process of issuing hazardous waste transport permits

3.9. Existing organisational structure

The Municipal Systems Act, 2000 (Act No. 32 of 2000) mandates municipalities to structure their administration to enable efficient service delivery. Within the district, the organisational capacity for waste management varies between the district and its local municipalities. The district municipality itself plays a largely supportive and coordinating role, with a dedicated waste management department to drive regional initiatives.

The figure below shows the current organisational structure as provided in the BPDM IDP 2024/2025:

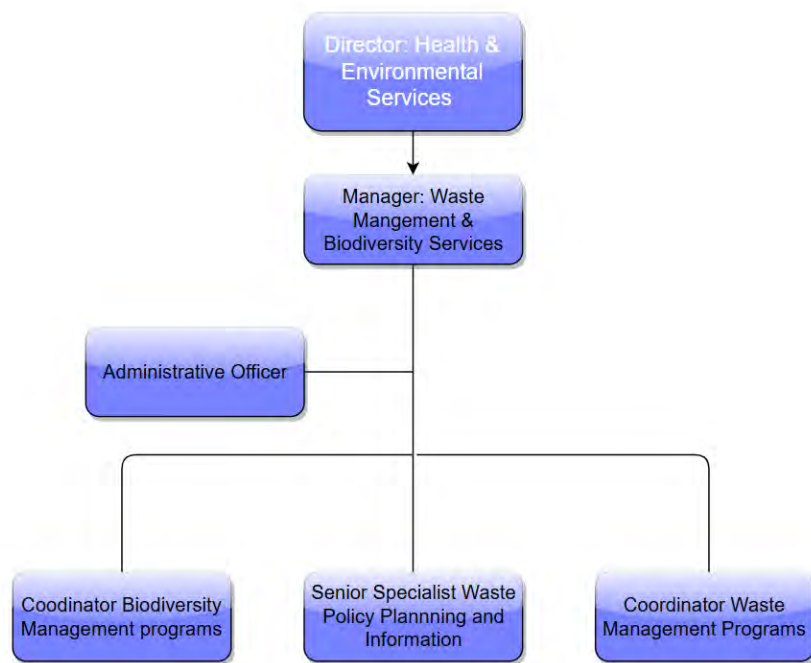


Figure 19: BPDM Waste Management and Biodiversity Services Department organisational structure

The above figure shows that the BPDM Waste Management and Biodiversity Services Department consists of the following positions:

Director: Health & Environmental Services (filled)

Manager: Waste Management & Biodiversity Services (filled)

Administrative Officer (filled)

Coordinator: Waste Management Programmes (filled)

Senior Specialist: Waste Policy Planning and Information (filled)

Coordinator: Biodiversity Management Programs (filled)

The current organisational structure demonstrates some functional strengths, particularly in high-level coordination and intergovernmental planning. The district plays an important role in supporting local municipalities and facilitating shared services such as regional waste disposal planning and capacity-building initiatives. However, there are notable shortfalls that affect the overall performance and impact of the waste management function.

3.10. Financial requirements

The implementation of the IWMP would require sufficient funds for the recruitment and training of staff, procurement of receptacles, machinery and fleet and construction of waste management facilities, among others, in support to local municipalities. The implementation of the IWMP should be done in a phased manner, taking into cognisance the district's priorities at the time. Additional sources of funding must be investigated, particularly with, inter alia, the following institutions: Municipal Infrastructure Grant (MIG), Development Bank of Southern Africa (DBSA), DFFE, and donor funding.

Tariff structure: The local municipalities, with the assistance of the district, must ensure that the tariff structure takes into consideration:

- (1) the current situation in the LMs,
- (2) self-sufficiency and
- (3) continued feasibility.

The structure must be reviewed at regular intervals and updated if necessary. The allocation of waste related funds must go to waste projects and infrastructure. The financial requirements for effective waste management must consider both capital and operational needs, and must be responsive to the scale of service delivery, the diversity of waste streams, and infrastructure gaps identified in the situational analysis.

The bulk of municipal waste management expenditure is directed toward waste collection and transportation – often constituting 70% to 85% of the total waste services budget, according to national benchmarking by the DFFE. Disposal operations and infrastructure maintenance typically account for an additional 10% to 20%, while the remainder is allocated to waste minimisation, education, compliance monitoring, and strategic planning. These estimates are consistent with the Municipal Infrastructure Investment Framework and guidance from the National Pricing Strategy for Waste Management (2016).

Revenue and Cost Recovery Strategies:

Waste Service Tariffs: Municipalities should implement full-cost recovery models through property-based waste tariffs, in line with Section 74 of the Municipal Systems Act. Tariffs should be cost-reflective, while allowing for indigent support mechanisms to ensure affordability for low-income households.

Landfill Gate Fees: Standardised gate fees across the district can help recover operational costs and support environmental rehabilitation. These should be informed by accurate weighbridge data and cost-of-service analysis.

Grants and Conditional Funding: Infrastructure development can be supported through national programmes such as the Municipal Infrastructure Grant (MIG), Expanded Public Works Programme (EPWP), and the Green Fund. These sources can fund capital items like vehicles, sorting sheds, or transfer stations.

Public-Private Partnerships: Private sector investment in recycling infrastructure or service delivery can be facilitated through PPPs, particularly where municipalities lack internal capacity.

Financial Management Considerations:

To ensure long-term sustainability, municipalities should adopt full-cost accounting methods that incorporate operational, maintenance, replacement, and compliance costs into financial planning. A detailed cost-of-service analysis should be conducted periodically to align budgeting with actual waste generation trends and service coverage. By improving cost recovery, leveraging external funding, and managing expenditures effectively, the district can strengthen the financial viability of its integrated waste management systems while meeting the environmental and social objectives outlined in national policies.

4. Gap Analysis and Needs Assessment

The gap analysis and needs assessment provides a structured evaluation of the current status of waste management within the district. It identifies key deficiencies, systemic challenges, and resource constraints that hinder the effective implementation of integrated waste management practices. This assessment is informed by the preceding situational analysis and ground-truthing exercises, which included site visits, stakeholder consultations, and an in-depth review of waste services and infrastructure across the district. By comparing the current state of waste management against legislative mandates, policy goals, and best practice benchmarks, this section presents an overview of the gaps and provides the specific needs required to improve service delivery, compliance, and sustainability in the district's waste management function.

Table 20: BPDM Gaps & Needs

Municipality	Activity	Gap	Needs
Bojanala Platinum District Municipality	Institutional Arrangements	One municipality does not have a designated Waste Management Officer	Designation of Waste Management Officers in all local municipalities
	Collection services	57,5% of the households in the district are receiving refuse removal services - Heavy reliance on outdated or insufficient waste collection vehicles and equipment in several municipalities	- Extension of waste collection services to underserved areas - Encourage procurement or refurbishment of waste collection fleet, including REL compactors and smaller vehicles for difficult terrain - Establishment of a monitoring and reporting framework for municipal and outsourced waste collection operations - Integration of informal waste collectors into municipal systems through co-operatives or formal recognition - Upgrading of existing transfer facilities to reduce long transport distances to disposal sites
	Waste minimisation, reuse and recycling	- Limited waste beneficiation initiatives - Lack of infrastructure for recyclable processing plants - Insufficient waste separation at source at the household level	- Improve initiatives/programmes to increase participation in separation at source internally - Increase the number of schools with separation at source programs across the district - To assist with separation at source at the household level

Municipality	Activity	Gap	Needs
		No formal relationship with PROs	- Promote waste diversion from landfill initiatives at the municipal level - Support the formalisation of waste recycling practices - To formalise relationships with PROs e.g. Memorandums of Understanding - Create a minimisation and diversion plan for construction and demolition waste - Support circular economy hub initiatives and increase awareness to promote the sharing, leasing, reusing, repairing, refurbishing, and recycling of existing materials and products. - Promote EPR initiatives to promote innovative and sustainable business models for waste management, product design for reuse and recyclability, and use of alternative materials - Integration of informal waste pickers within the district. This can be done through utilisation of buy-back centres and material recovery facilities to increase awareness and promote recycling
	Waste disposal facilities	- Kgetlengrivier and Moretele LMs do not have a disposal facility - Waste disposal facilities are not operated in accordance with their license conditions	- Encourage the establishment of a regional disposal facility - Feasibility study for the development of regional disposal facility - Integration between municipalities without a landfill with their closest municipalities for disposal, supporting them with resources - Engage with municipalities on the closure and rehabilitation of unlicensed disposal sites
	Waste Information	Inaccurate available waste information from local municipalities	- Assist local municipalities to gather accurate data through functional weighbridges. - Encourage municipalities to register and report to SAWIS.
	Education and awareness	Insufficient positive response by communities to the campaigns conducted.	- Awareness campaigns targeted at the general public on general and hazardous waste management - Encourage local municipalities to work with their communities to effectively manage waste - Innovative public awareness campaigns

Municipality	Activity	Gap	Needs
		- Limited monitoring after implementation of awareness programmes - Use of various media for education and awareness is limited	- Consistent monitoring of integrated waste management campaigns, including youth and school children, by increasing the use of social media, community radios, and the print media - Explore additional forms of media for education and awareness platforms such as radio ads, billboards etc.
	Compliance, enforcement and monitoring	- Non-compliance within municipalities' waste infrastructure and operations - Limited capacity and staffing to conduct regular inspections and compliance monitoring at disposal sites and waste facilities	- Support municipalities in managing facilities as per license conditions - Monitoring of internal and external audits - Monitor the closure and rehabilitation of landfill sites - Development and implementation of uniform enforcement procedures and inspection protocols across all municipalities

5. Strategic goals, targets, and indicators

The overarching goals for waste management in the district aim to achieve a sustainable, environmentally-friendly waste management system that aligns with national and provincial regulations. To guide sustainable waste management and service delivery within the district, eight strategic goals have been identified. Each goal is supported by targeted outcomes and measurable indicators to track progress and effectiveness over the IWMP implementation period.

The following goals and targets are determined from the situational analysis:

Goal 1: Institutional Capacity and Human Resources

National Policy Alignment

- NWMS Priority Area 1: Waste Minimisation and Diversion
- NWMS Priority Area 2: Effective and Sustainable Waste Services

Target(s)

1. All municipalities to designate and capacitate Waste Management Officers (WMOs).
2. All municipalities supported in implementing cost-reflective tariffs to ensure financial sustainability. Annual training on financial management for all municipalities (1 per municipality per year).

Indicators

- Number of municipalities with designated WMOs.
- Number of municipalities implementing cost-reflective tariffs.
- Number of coordinated financial management training sessions held annually.

Implementation Responsibilities

District Municipality

- Coordinate designation and capacity building of WMOs across all municipalities.
- Facilitate and provide training on financial management and tariff implementation.
- Monitor progress on institutional strengthening and report annually.

Local Municipalities

- Formally designate WMOs and ensure they are resourced.
- Implement cost-reflective tariffs and submit annual tariff reviews.
- Ensure participation of staff in district-coordinated training programmes.

Goal 2: Enhanced Waste Collection Services

National Policy Alignment

- NWMS Priority Area 2: Effective and Sustainable Waste Services
- NWMS Priority Area 3: Compliance, Enforcement and Awareness

Target(s)

1. Achieve 70% household waste collection coverage by 2031.
2. Support all municipalities in expanding collection to rural and underserved areas.

Indicators

- Percentage of households receiving weekly waste collection services.
- Number of municipalities supported in extending waste collection services to rural areas.

Implementation Responsibilities

District Municipality

- Provide planning support for improving service coverage.
- Conduct technical assessments and identify service gaps in rural areas.
- Facilitate resource sharing and coordination where necessary.

Local Municipalities

- Implement improved collection routes and service expansion plans.
- Allocate vehicles, staff and operational resources for rural collection.
- Maintain accurate records of serviced households and report annually.

Goal 3: Improved Waste Minimisation, Reuse and Recycling

National Policy Alignment

- NWMS Priority Area 1: Waste Minimisation and Diversion
- Extended Producer Responsibility (EPR) Regulations: Strengthening PRO and municipality collaborations.
- Circular Economy Model: Promoting recycling systems, separation-at-source, and recovery infrastructure (MRFs).

Target(s)

1. Increase waste diversion from landfills.
2. Strengthen municipal waste minimisation programmes through tools, equipment and partnerships.
3. Expand household/business participation in separation-at-source programmes.
4. Support and resuscitate Material Recovery Facilities (MRFs).

Indicators

- Increased waste diversion rate.
- Tonnage of recyclables collected and processed.
- Number of partnerships (private sector, PROs, cooperatives).
- Number of households or businesses participating in separation-at-source programmes.

Implementation Responsibilities

District Municipality

- Provide recycling equipment and support to municipalities.
- Facilitate partnerships with PROs and private recyclers, including drafting MOUs.
- Support the formalisation of cooperatives and informal reclaimers.
- Assist municipalities in operationalising and resuscitating MRFs.

Local Municipalities

- Implement separation-at-source programmes and community recycling initiatives
- Provide facilities/space for MRF operations.
- Work with local recyclers, cooperatives and PROs to support diversion.
- Monitor diversion performance and provide quarterly reports.

Goal 4: Improved Monitoring, Compliance, Enforcement, Education and Awareness

National Policy Alignment

- NWMS Priority Area 3: Waste Awareness, Compliance and Enforcement.
- NEM: Waste Act (Licensing & Compliance Provisions): Requirement for annual auditing of waste facilities.

Target(s)

1. All waste facilities conducting one compliance audit annually.
2. All licensed facilities reporting to SAWIS.
3. Completion of a feasibility study for a regional landfill site.
4. Strengthening districtwide waste awareness programmes.

Indicators

- Number of operational and compliant waste facilities.
- Number of facilities reporting to SAWIS annually.
- Feasibility study report completed.
- Number of awareness campaigns and community engagements conducted.

Implementation Responsibilities

District Municipality

- Coordinate annual compliance audits for all waste facilities.
- Provide annual SAWIS training to local municipalities.
- Lead the procurement and management of the regional landfill feasibility study.
- Develop and disseminate awareness and educational materials.
- Partner with local municipalities, schools and government departments for campaigns.

Local Municipalities

- Facilitate access to sites for compliance audits and implement corrective actions.
- Submit accurate and timely SAWIS data.
- Conduct local-level awareness events in communities and schools.
- Provide local support and inputs to the regional landfill feasibility study.

Table 21: Strategic goals, targets and indicators

Goal	Target(s)	Indicators	Intervention
Goal 1: Institutional Capacity and Human Resources	Strengthen waste management departments/units in all municipalities by designating WMOs	Number of municipalities with designated WMOs	Ensure that all municipalities have designated WMOs
	Support municipalities in implementing cost reflective tariffs	Number of coordinated financial management trainings	Coordinate Training on financial management related courses (1 training per municipality per annum)
		Number of municipalities implementing cost reflective tariff	
Goal 2: Enhanced Waste Collection Services	Achieve 70% coverage of households with regular waste collection services by 2031	Percentage of households receiving weekly waste collection	Provide planning and technical support for rural waste collection strategies
		Number of municipalities supported in extending waste collection services to rural areas	Support local municipalities in extending services to rural areas
Goal 3: Improved Waste Minimisation, Reuse, and Recycling	Support local municipalities in diversion initiatives	Increased waste diversion rate from landfills	Promote district waste minimisation programmes through procurement and distribution of recycling tools
		Tonnage of recyclables collected and processed	
	Support and collaborate with environmental clubs, schools and household pilots for waste diversion programmes	Support local municipalities in increasing the number of households or businesses participating in separation at source programmes	
		Number of functional public-private partnerships and cooperatives	Technical Support to EPR partnerships between local municipalities and PROs through MOUs

Goal	Target(s)	Indicators	Intervention
		Support the formalisation of waste recycling practices	Support resuscitation of material recovery facilities (MRFs)
Goal 4: Improved Monitoring, Compliance, Enforcement, Education and Awareness	Waste facilities operating in compliance with their licence conditions	Number of operational and compliant waste infrastructure facilities	1 compliance audit per facility annually
			Training on waste facilities' operation and management (1 training per municipality annually)
	Support local municipalities to report on SAWIS	Number of facilities reporting on SAWIS	Coordinate trainings on SAWIS reporting once a year
	Conduct a feasibility study for the development of a regional landfill site	Feasibility study report developed	Appoint a service provider to conduct a feasibility study Improve education and awareness resource materials
	Promote education and awareness programme	Number of awareness campaigns conducted Number of forums, schools and community engagement participating in education and awareness programmes	Partner with local municipalities and other spheres of government in piloting education and awareness programmes

6. Recommendations

The district faces significant challenges in waste management, particularly due to rapid urbanisation, industrial growth, and inadequate infrastructure in rural and peri-urban areas. To address these issues, a set of recommendations has been developed with the context of the district in mind. The following recommendations focus on improving waste collection infrastructure, building institutional capacity, enhancing disposal infrastructure, mobilising financial resources, implementing economic instruments, improving information management, controlling illegal activities, and minimising waste generation within the district.

6.1. Waste collection infrastructure

In rural and peri-urban areas, waste collection services are limited, leading to illegal dumping and environmental degradation. Waste collection is more efficient in urban centers, but increased population growth has strained services.

- Advise local municipalities to expand collection services to rural and underserved peri-urban areas by increasing collection frequency, adding new fleet and collection routes. This would mean municipalities would have to review their tendering specifications and increase budgets for waste services rendered in these areas.
- Encourage municipalities to place bulk bins in central collection points in communities with low waste collection coverage to reduce illegal dumping and educate communities on the use of bulk bins. Encourage EPWP employees to monitor and clean around bulk bins
- Encourage municipalities to create waste collection forums with appointed contractors and bring in expertise for regular training to optimise the waste collection.

6.2. Institutional arrangements

Municipal capacity to manage waste services is limited by a lack of technical skills, training of staff, and insufficient resources.

- Capacity Building within local municipalities by providing training on waste management policies, technology, and best practices. Encourage municipal officials to take up membership with the Institute of Waste Management of Southern Africa (IWMSA).
- Increase staffing levels in key departments, focusing on enforcement, monitoring, and education on waste minimisation.
- Recommended positions to strengthen the organisational structure:
 - o Coordinator: Waste Minimisation
 - o Coordinator: Education and Awareness

- o Coordinator: Monitoring and Compliance
- Establishment of waste management units in local municipalities where there are none (i.e. Kgetlengrivier and Moretele)
- Enhance inter-municipal coordination through joint training and workshops, especially in dealing with hazardous and medical waste.

6.3. Disposal infrastructure development

The district does not own or manage any landfill site. The available and used landfill sites within the district are owned by local municipalities and private companies.

- Investigate the feasibility of developing and managing a regional waste disposal facility
- Investigate the feasibility of developing and managing a hazardous waste management facility
- Consider facilitating arrangements for sharing of disposal airspace where municipalities are without disposal facilities
- Engage local municipalities to rehabilitate the existing communal landfills and illegal dumps
- Ensure that disposal facilities within the district are operated according to license conditions

6.4. Financial resources

Insufficient funding hampers waste management service improvements, particularly in rural areas. Limited municipal budgets and over-reliance on public funds pose challenges.

- Allocated funds for waste management should be used mainly for waste management and avoid diversion of funds.
- Allocate dedicated funds for rural waste management in municipal budgets, ensuring that rural areas receive adequate attention.
- Leverage external funding, including national government grants and international aid, for infrastructure development and capacity-building programs.
- Assist municipalities to ensure that service fee collection covers waste management operational costs

6.5. Economic instruments

6.5.1. Infrastructure Funding options

- Public-Private Partnerships (PPPs): Engage private companies to co-finance waste infrastructure projects and waste collection services in remote areas.

- Bring in mining houses and industrialist to fund the waste infrastructure and operations as part of their Social Labour Plan (SLP)
- Extended Producer Responsibility (EPR): Encourage regulations requiring manufacturers to fund the collection and disposal of their products at end-of-life.
- Municipal Infrastructure Grant (MIG) in South Africa funds basic municipal services, including waste management infrastructure, through its "other" basic services component, allowing municipalities to allocate funds to waste management as needed.

6.6. Information management and dissemination

Lack of accurate and timely waste data hinders effective planning and decision-making across municipalities. Information on waste that is reclaimed by waste pickers falls between the cracks as municipalities do not have an idea on the amount of material that is being recycled or reclaimed at their landfills.

- Encourage all municipalities to have working weighbridges to register and report on SAWIS
- Improve data sharing between municipalities to facilitate better waste management coordination.
- Promote community engagement through regular public reports and workshops on waste management performance and future plans.

6.7. Management of illegal activities

Illegal dumping and informal disposal of hazardous waste are persistent problems due to inadequate enforcement and lack of disposal options in rural areas.

- Increase enforcement of NEMWA regulations, imposing fines for illegal dumping and improper hazardous waste disposal.
- Maximise joint site inspection, monitoring and enforcement in waste management.
- Provide more accessible legal disposal options in rural areas to reduce incentives for illegal activities.
- Launch awareness campaigns targeting under-serviced communities to educate residents on the dangers of illegal dumping and the importance of proper waste disposal.

6.8. Waste minimisation strategies

Waste generation continues to rise due to population growth, with limited infrastructure for recycling and waste reduction.

- Encourage waste separation at source by providing households with recycling bins and educational materials.
- Promote composting of organic waste in rural areas, with community composting programs and training.
- Encourage diversion of green waste from landfill sites.
- Incentivise businesses to adopt circular economy practices, including waste minimisation and product redesign.
- Encourage local municipalities to develop waste minimisation plans

6.9. Waste Circular Economy

Waste circular economy aims to minimise waste and make the most of resources by creating a closed-loop system where products, materials, and resources are reused, repaired, refurbished, remanufactured, and recycled. This approach contrasts with the traditional linear economy, which follows a 'take, make, dispose' model.

South Africa faces unique challenges in waste management, including high volumes of waste, limited recycling infrastructure, and socio-economic disparities. Implementing a circular economy approach can address these challenges by promoting sustainable practices and creating economic opportunities. The table below describes the key principles of circular economy:

Table 22: Key Principles of Circular Economy

Principle	Description
Design Out Waste and Pollution	Products should be designed to be more durable, easier to repair, and easier to recycle. Encouraging eco-design principles can reduce waste generation from the outset.
Keep Products and Materials in Use	Emphasize reuse, repair, refurbishment, and recycling to maintain the value of products, materials, and resources. This includes supporting informal waste pickers who play a crucial role in the recycling sector
Regenerate Natural Systems	Support and enhance natural systems by returning valuable nutrients to the soil and creating conditions for regeneration, such as through composting organic waste

By adopting circular economy principles and implementing comprehensive waste management plans tailored to the context of the district, municipalities can significantly reduce waste, conserve resources, and promote sustainable development.

6.9.1. Industrial Symbiosis

Industrial Symbiosis (IS) is a resource-efficient approach, where unused or residual resources (material, energy, water, waste, assets, and logistics) of one company are used by another. The National Waste Management Strategy initially termed this program Industrial Waste Exchange (IWEX)

Key Benefits of Industrial Symbiosis

- **Resource Efficiency:** Maximizing the use of materials by redirecting waste to industries that can utilise it, thereby reducing the need for virgin raw materials.
- **Cost Savings:** Lowering disposal costs for waste-generating industries and reducing material costs for industries using the waste as input.
- **Environmental Protection:** Minimizing waste sent to landfills and reducing greenhouse gas emissions associated with waste disposal and raw material extraction.
- **Economic Opportunities:** Creating new business opportunities and markets for recycled materials, and supporting job creation in the recycling and waste management sectors.
- **Regulatory Compliance:** Helping industries meet regulatory requirements for waste management and environmental protection.

Industrial waste exchange presents a significant opportunity for the BPDM to enhance its waste management practices, support the circular economy, and promote sustainable industrial development. By implementing supportive policies, developing necessary infrastructure, engaging stakeholders, and investing in R&D, the district can create a robust and effective industrial waste exchange system that benefits the economy, environment, and society.

6.10. District Development Model

The District Development Model (DDM) was approved as an operational model for improving Cooperative Governance aimed at building a capable, ethical Developmental State, including improving and enhancing the state of Local Government. It is an All-of-Government and Society Approach providing a method by which all three spheres of government and state entities work in unison in an impact-oriented way.

The BPDM like all other districts is expected to embrace the DDM model as a way of fast-tracking service delivery and promoting cooperative governance in waste management. The Model is yet to be fully implemented and there are still gaps that need to be identified to fully produce cohesive interventions in waste management. A regional landfill site and Materials Recovery Facility (MRF) are two examples to be explored.

The Department of Cooperative Governance and Traditional Affairs is encouraging the adaptation of the DDM as a way of improving service delivery in smaller municipalities. The district is yet to apply the model in waste management to assist struggling municipalities.

Implementing the DDM within the district would result in the following impacts:

Table 23: Potential outcomes of DDM implementation

Category	Description
Integrated Planning	Holistic approach: DDMs promote integrated planning, considering the entire waste management value chain, from collection to disposal.
	Coordination: DDMs facilitate coordination among various stakeholders, including municipalities, waste management service providers, and other role players.
Improved Infrastructure	Investment planning: DDMs can help municipalities prioritize investments in waste management infrastructure, such as landfills, transfer stations, and recycling facilities.
	Efficient use of resources: By optimising infrastructure, municipalities can reduce waste management costs and improve service delivery
Enhanced Service Delivery	Increased access: DDMs can help municipalities expand waste collection services to more households and businesses, improving public health and environmental quality.
	Improved waste reduction and recycling: By incorporating waste reduction and recycling strategies into DDMs, municipalities can reduce the amount of waste sent to landfills and promote sustainable practices.
Community Engagement and Education	Public awareness: DDMs can facilitate community engagement and education on waste management best practices, promoting behavioural change and community involvement.
	Stakeholder participation: By involving stakeholders in the planning process, municipalities can build trust and ensure that waste management solutions meet community needs.
Monitoring and Evaluation	Performance tracking: DDMs can help municipalities track waste management performance, identifying areas for improvement and informing future planning.
	Data-driven decision-making: By leveraging data and insights, municipalities can make informed decisions about waste management, optimising resources and improving outcomes

By adopting District Development Models, municipalities can develop more effective waste management strategies, improving public health, environmental quality, and community well-being.

7. Implementation plan

A district municipality must develop an implementation plan which details how the targets set in the goals will be attained as well as what resources will be required to attain the targets in the next five years. In this instance, the implementation plan has been developed in a manner that will assist the district and the local municipalities to keep track of their progress.

The district should align with the 3 Pillars of the NWMS 2020 which includes:

- **Waste Minimisation (Pillar 1)**
 - o Increase in recycling and other waste treatment alternatives should be considered.
 - o Maximising the role of waste sector in the Circular Economy
- **Effective and Sustainable Waste Services (Pillar 2)**
 - o Waste storage and transfer infrastructure in public areas
 - o A deep collection and bulk (Roro) system has thus been identified as a method that can address the Villages, street litter challenges as well as illegal dumping of waste in the communal areas where waste is not easily collected.
- **Compliance, Enforcement and Awareness (Pillar 3)**
 - o Increasing compliance within BPDM is required
 - o A critical component in any waste management system is public awareness and participation.
 - o Waste is the result of human activities, and every citizen has to understand the challenges and hazards concerning waste handling, as well as the important part he or she plays in transforming waste into wealth.
 - o Education and awareness programs in commercial and residential areas
 - o Training of the EPWP participants

Table 24: Implementation programme

Goal	Target(s)	Indicators	Intervention	Timeframe (2026 – 2031)					Responsible Department	Budget
Goal 1: Institutional Capacity and Human Resources	Strengthen waste management departments/units in all municipalities by designating WMOs	Number of municipalities with designated WMOs	Ensure that all municipalities have designated WMOs	Y1	Y2	Y3	Y4	Y5	BPDM & Local municipalities	Operational budget
					x					
	Support municipalities in implementing cost reflective tariffs	Number of coordinated financial management trainings Number of municipalities implementing cost reflective tariff	Coordinate Training on financial management related courses (1 training per municipality per annum)	x	x	x	x	x		R1 500 000
Goal 2: Enhanced Waste Collection Services	Achieve 70% coverage of households with regular waste	Percentage of households receiving weekly waste collection	Provide planning and technical support for rural waste collection strategies	60%	63%	65%	67%	70%	BPDM, DFFE, DEDECT, COGTA & Local municipalities	R1 000 000

	collection services by 2031	Number of municipalities supported in extending waste collection services to rural areas	Support local municipalities in extending services to rural areas	x	x	x	x	x		
Goal 3: Improved Waste Minimisation, Reuse, and Recycling	Support local municipalities in diversion initiatives	Increased waste diversion rate from landfills	Promote district waste minimisation programmes through procurement and distribution of recycling tools	x	x	x	x	x	BPDM, Private sector, DFFE, DEDECT & local municipalities	R1 500 000
		Tonnage of recyclables collected and processed								
	Support and collaborate with environmental clubs, schools and household pilots for waste diversion programmes	Support local municipalities in increasing the number of households or businesses participating in separation at source programmes		x	x	x	x	x	BPDM, Private sector, DFFE, DEDECT & local municipalities	R500 000

		Number of functional public-private partnerships and cooperatives	Technical Support to EPR partnerships between local municipalities and PROs through MOUs		x	x	x		BPDM, Local Municipalities	Operational budget
		Support the formalisation of waste recycling practices	Support resuscitation of material recovery facilities (MRFs)	x	x	x	x	x	BPDM, Local Municipalities and PROs	Operational budget
Goal 4: Improved Monitoring, Compliance, Enforcement, Education and Awareness	Waste facilities operating in compliance with their licence conditions	Number of operational and compliant waste infrastructure facilities	1 compliance audit per facility annually	x	x	x	x	x	BPDM, DEDECT, and DFFE	Operational Budget
			Training on waste facilities' operation and management (1 training per municipality annually)	5	5	5	5	5	BPDM & Local municipalities	

	Support local municipalities to report on SAWIS	Number of facilities reporting on SAWIS	Coordinate trainings on SAWIS reporting once a year	5	5	5	5	5	BPDM, DEDECT, and DFFE	Operational Budget
	Conduct a feasibility study for the development of a regional landfill site	Feasibility study report developed	Appoint a service provider to conduct a feasibility study Improve education and awareness resource materials		x	x	x		BPDM, DEDECT, and DFFE	R2 000 000
	Promote education and awareness programme	Number of awareness campaigns conducted Number of forums, schools and community engagement participating in education and awareness programmes	Partner with local municipalities and other spheres of government in piloting education and awareness programmes		x	x				Operational Budget

8. Conclusion and way forward

8.1. Monitoring of the implementation of the IWMP

The success of the IWMP for the district relies on consistent and effective monitoring. A comprehensive monitoring framework is necessary to track the progress of the waste management strategies outlined in the plan. Monitoring should be conducted at regular intervals by the municipal waste management department in collaboration with relevant stakeholders, including private sector entities involved in waste collection and disposal. Key performance indicators (KPIs) such as waste collection coverage, recycling rates, landfill compliance, and illegal dumping incidents must be evaluated continuously. This monitoring process will allow the municipality to ensure that the objectives of waste reduction, recycling, and proper disposal are met in line with the stipulated timeframes and targets. Transparent reporting and data sharing across municipalities will be critical for timely adjustments.

8.2. Evaluation and review

Regular evaluation and review of the IWMP are essential to adapt to changing conditions, such as population growth, industrial expansion, and evolving waste management technologies. The plan should be reviewed every five years, with a focus on identifying areas of improvement, updating objectives, and integrating new legislation or environmental policies from national or provincial levels. The evaluation process should include consultations with stakeholders, including community members, private sector partners, and environmental experts, to ensure that the plan remains relevant and responsive to local needs. Data from the monitoring process will inform the review, allowing for a comprehensive assessment of successes, challenges, and gaps in implementation. If necessary, adjustments to infrastructure investment, enforcement mechanisms, and public education initiatives should be proposed during these reviews.

8.3. Public participation process

An engagement between all spheres of government is essential to ensure that a transparent process is followed in the development of the IWMP and to ensure that the plan has the support of each waste management stakeholder. NEMWA supports the principle of cooperative governance and stipulates in NEMWA Section 11 (7)(a) that a consultative process must be followed. This process as prescribed in Section 72 and 73, states that all organs of state that will be affected by any exercise of power must be consulted.

Furthermore, in terms of the Intergovernmental Relations Framework Act (Act No. 13 of 2005) the Constitution declares that government is comprised of National, Provincial and Local spheres of government which are distinctive, interdependent and interrelated. This comprises

the background to the stakeholder engagement that was carried out for the development of the IWMP.

Key stakeholders for the IWMP included:

- BPDM waste management department;
- BPDM councillors responsible for waste management;
- Waste management officials from all Local Municipalities within BPDM;
- Officials from the North West Province – DEDECT; and
- Officials from national government – DFFE.

Together these stakeholders form the core group of functional departments that have an interest in the contents of the IWMP.

Stakeholder Engagement

Stakeholder engagement took many forms during the development of the IWMP. The first phase of the engagement was during the Situational Analysis section of the report. The aims of the engagement were to discover the nature of waste management in the district, to fact check any information already gathered and to understand the challenges and frustrations experienced with waste management.

8.4. Approval process of the IWMP

The approval process of the IWMP requires a structured approach, involving multiple levels of governmental oversight. The IWMP must first be recognised by local municipalities within the district, ensuring alignment with their specific waste management needs and capacities. Following this, the plan is submitted to the district for review and approval. This process includes ensuring that the IWMP aligns with national regulations under the National Environmental Management: Waste Act (NEMWA) and provincial waste management strategies. Once the district council adopts the plan, it is forwarded to the North West Department: Economic Development, Environment, Conservation and Tourism (DEDECT) for MEC endorsement and final approval.

Chapter 3, Section 11 4a (ii) of the Waste Act states that each municipality must include the approved IWMP in its integrated development plan (IDP) as contemplated in chapter 5 of the Municipal System Act for approval by Council. This is to ensure that the approved IWMP is included in the municipal IDP, the goals and targets contained in the IWMP are prioritised and that Council will implement the IWMP. Further, it is also to ensure that waste management services are streamlined with other essential services such as water and sanitation, housing, and electrification.



BOJANALA PLATINUM
DISTRICT MUNICIPALITY

