MERAFONG LOCAL MUNICIPALITY

DRAFT
INTEGRATED WASTE MANAGEMENT PLAN

15 June 2026

REVISION 00

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LIST OF ABBREVIATIONS

BRR	Basic Refuse Removal
CAPEX	Capital Expenditure
CBD	Central Business District
CBO	Community Based Organisation
CHDM	Chris Hani District Municipality
CMIP	Consolidated Municipal Infrastructure Programme
CSD	Community Services Directorate
COGTA	Department of Co-operative Governance and Traditional Affairs
DBSA	Development Bank of Southern Africa
DEA	Department of Environmental Affairs
DEDEAT	Department of Economic Development, Environmental Affairs and
	Tourism
DMR	Department of Mineral Resources
DWAF	Department of Water Affairs and Forestry
DWS	Department of Water and Sanitation
ECSECC	Eastern Cape Socio-Economic Consultative Council
ELM	Emalahleni Local Municipality
EIA	Environmental Impact Assessment
EMI	Environmental Management Inspector
FEL	Front End Loader
FY	Financial Year
GEF	Global Environment Fund
GW	General Worker (s)
HCRW	Health Care Risk Waste
HR	Human Resources
IDC	Industrial Development Corporation
IDP	Integrated Development Plan
I&APs	Interested and Affected Parties
IFC	International Finance Corporation
IYLM	Intsika Yethu Local Municipality
INLM	Inxuba Yethemba Local Municipality
Ind WMP	Industrial Waste Management Plan
IWMP	Integrated Waste Management Plan
LM	Local Municipality
MEC	Member of Executive Council
MFMA	Municipal Finance Management Act 2003 (Act No. 56 of 2003)

MIG	Municipal Infrastructure Grant
MIIU	Municipal Infrastructure Investment Unit
NEMA	National Environmental Management Act (Act 107 of 1998)
NEM:AQA	National Environmental Management Air Quality Act (Act 39 of 2004)
NEMWA	National Environmental Management: Waste Act (Act 59 of 2008)
NWA	National Water Act (Act 36 of 2008)
NWMS	National Waste Management Strategy
PIWMP	Provincial Integrated Waste Management Plan
PPP	Public Participation Process
SAEDF	Southern Africa Enterprise Development Fund
SAWIC	South African Waste Information Centre
SDF	Spatial Development Framework
SMME	Small, Medium, Micro Enterprise
SMIF	Special MIG Innovation Fund
WIS	Waste Information System

Technical definitions

Basic Refuse Removal	A baseline service level as established under Clause 9.1 of the National Policy of Refuse Removal to indigent households.
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.
Business waste -	Waste that emanates from premises that are used wholly or mainly for commercial, retail, wholesale, entertainment or government administration purposes.
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.
Communal Landfill -	The smallest landfill classification with a capacity of less than 25 tonnes per day.
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.
Daily Cover -	A daily application and compaction of approximately 15 centimetres of soil on top of the solid waste, with the intention to control blowing litter, odour, flies, rats and fires, intended for an exposure of less than one week.

Design Drawing - Drawings prepared by the landfill designer and include dimensions, specifications and other technical data regarding the construction of the landfill.

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

Domestic Waste Waste, excluding hazardous waste, that emanates from premises that are used wholly or mainly for residential, educational, institutional, retail, health care, sports or recreation purposes which include: garden and park wastes, office waste, municipal waste, food waste.

Environment The surroundings within which humans exist and that are made up of—

(i) the land. water and atmosphere of the earth:

(ii) micro-organisms, plant and animal life:

(iii) any part or combination of (i) and (ii) and the interrelationships among and between them: and

(iv) the physical chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being

Final Cover - An application and compaction of soil on the landfill after it has reached its designed elevation. The final cover material shall be relatively impermeable and have a thickness of approximately 50 centimetres.

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

General Waste - Waste that does not pose an immediate hazard or threat to health or to the environment, and includes-

a) Domestic waste;
b) Building and demolition waste;
c) Business waste;
d) Inert waste; or
e) any waste classified as non-hazardous waste in terms of the regulations made under section 69 of NEMWA, and includes non-hazardous substances, materials or objects within business,

domestic, inert, building and demolition wastes as outlined in Schedule 3, Category B of the NEM WA.

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 categorized in four hazard ratings with 1 being the most hazardous and 4 being the least hazardous.

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.

Landfill Classification - A system for classification of waste disposal site, previously under the 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 DEA 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 comes in contact with solid waste in a sanitary landfill.

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.

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 sludge's 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 in order to minimise the impact of the waste on the environment prior to further use of 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 Management Hierarchy	The Waste Management Hierarchy reflects the different waste management options, from reduction (more preferred) though 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 co-ordinating matters pertaining waste management in the municipality.
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.

Working area - 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

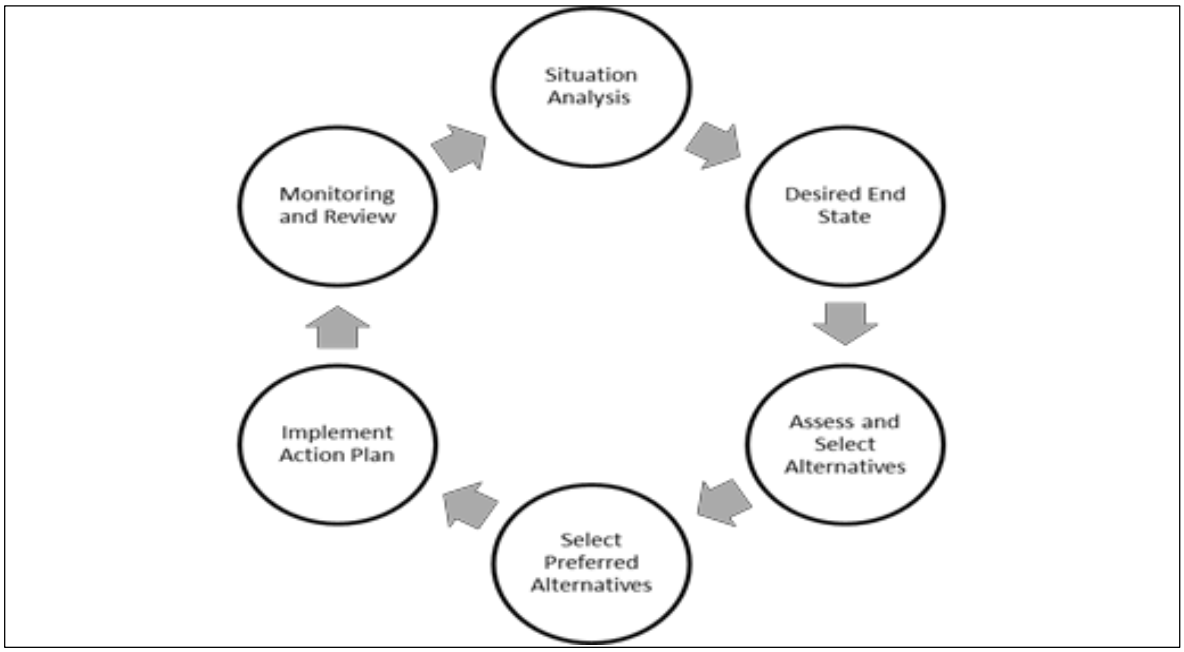
1. INTRODUCTION TO THE INTEGRATED WASTE MANAGEMENT PLAN FOR MERAFONG CITY LOCAL MUNICIPALITY

Section 11 in Chapter Three, of the National Environmental Management: Waste Act, 2008 (Act 59 of 2008) (NEM:WA) inter alia states that each Municipality must develop an Integrated Waste Management Plan (IWMP).

The first phase and one of the major components of an IWMP was documenting the Status Quo of current waste management services and practices within the municipal jurisdictional area.

Following on from the Status Quo report on Waste Management a detailed Gap Analysis and Needs Assessment were done. The aim of this analysis and assessment were to provide realistic prioritised requirements and needs identified during the Status Quo assessment for effective waste management within the MCLM.

Figure 3 below was the overall approach that's used in reviewing and generating the ELM integrated waste management plan as prescribed by the Department of Environmental Affairs and Tourism.



Subsequent hereto and based on the Gap Analysis and Needs Assessment, the Goals and Objectives were developed. The Goals and Objectives focussed on the standard of service pursued by the MCLM i.e. the goals present the standard of service with the objectives being the smaller practical components required to meet a goal.

Initially the Status Quo and Gap Analysis and Needs Assessment, the Goals and Objectives were two separate reports that were made available at public places after being advertised in the local

newspaper and distributed to key stakeholders for comment. A public meeting was also scheduled, but no one attended the meeting, and no comments were received.

Where practicable, appropriate alternatives were evaluated for each Goal and/or Objective with a recommendation for each. This data was then used to compile the IWMP implementation sheet to reflect the Goals and Objectives, the options considered, the proposed option, projects identified with associated costs and implementation programme for each project.

Regarding environmental management or protection (people being part of the environment, as NEMA so prescribes), it therefore has to have effective and efficient planning and monitoring measures or systems in place. In response to this need, the ELM has an Integrated Waste Management Plan which is part of its Integrated Development Plan (IDP). The plan has the overall objective of implementing a waste management system which contributes to sustainable development and a measurable improvement in the quality of life, by harnessing the energy and commitment of ELM residence for effective reduction of waste. In the past decades, waste management planning moved from being purely based on a remove and dump system to a more sophisticated Integrated Waste Management Planning system based on the waste hierarchy adopted by the South Africa's National Waste Management Strategy (NWMS).

NWMS offers a wide range of options for waste management and also requires translation of its goals and objectives into practice. These goals and objectives have to be implemented in line with a stakeholder agreed upon action plan. The action plan has to be crafted along the following key elements of the strategy: Integrated waste strategy; waste information systems; capacity building, education, awareness and communication. The element of education, awareness and communication include the following:

- Waste prevention and minimisation
- Generation of waste (Generation Areas and waste stream analysis)
- Separation of waste at source
- Waste Collection, transfer and transport
- Reduce, reuse and recycling of waste and;
- Disposal of Waste (as the last resort)

This education element involves identification of specific waste minimization strategies, whether it is separation at source or at collection. The official hierarchy adopted in the Government Waste Management Strategy is as reflected in figure 1 below:

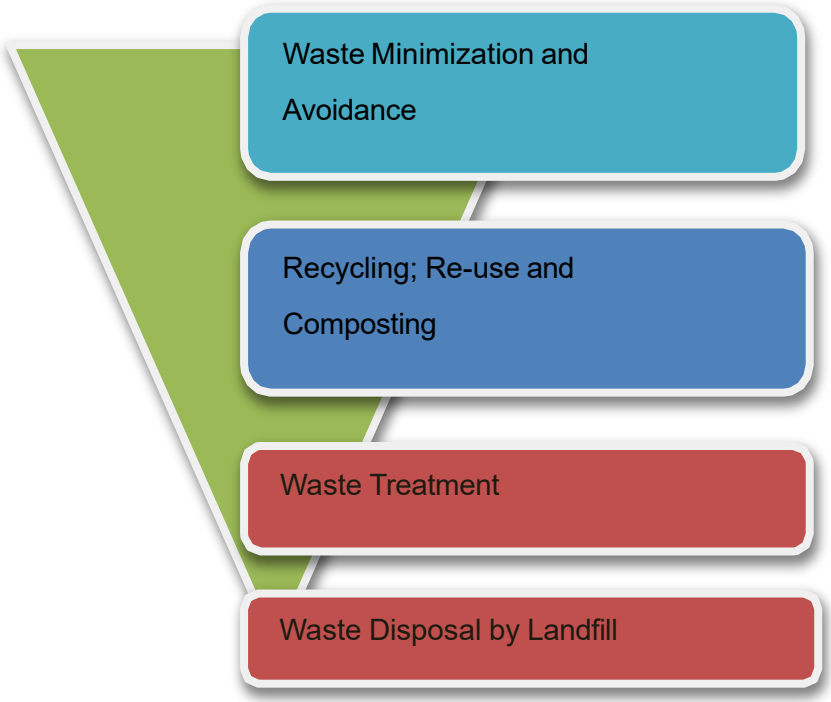


Figure 1: Waste Management hierarchy as adopted in the National Waste Management Strategy

As indicated in Figure 1 above, the primary objective of waste planning is to integrate and optimize waste management services, thereby maximizing efficiency and improving the quality of life of all citizens while the associated environmental impacts and financial costs are minimized (DEAT, 2000). The guideline document for the development of IWM Plans further emphasizes that the integration must be both horizontal and vertical within the government departments, as well as in other sectors and throughout the 'waste life-cycle' (DEAT, 2000).

Effective integration, coordination and alignment of actions of government at national, provincial and local spheres remain an important aspect in ensuring efficient and effective provision of basic services to all. As waste management issues gain public awareness, concern has risen about the appropriateness of various disposal methods. Within our modern scheme of waste management, disposal is the last phase. Most people acknowledge that disposal will always be needed (the exception being those advocating zero-waste policies). Solid waste professionals realize that the ideal way to reduce the stress on disposal systems is to reduce the amount of waste that is produced. The emphasis in modern solid waste management is on reduction, reuse, and recovery before disposal. These three words are at the centre of the discussion of integrated waste management systems as seen in figure 1 above.

This document is part of ELM's program of review of their waste management strategy which is being done as part of planning for the next 5 years. It has been done using the tried and tested research approaches which are inclusive of qualitative and quantitative methods.

Various stakeholders were engaged inclusive of municipal personnel and other stakeholders in an effort to ensure that the scope of the project was understood by the researching team and the municipality. The gap between where the municipality is and where it aspires to be was clarified through a process of value clarification and understanding what the municipal priorities are in relation to their realities. The previous IWMP document proved invaluable in terms of understanding some of the planning gaps of the municipality. Risks and stakeholder analysis were also done as part of the situation analysis phase. The IWMP review process then moved to crafting of objectives, strategies, indicators, standards and targets. This stage was based on understanding progress to-date regarding implementation of the previous IWMP. Subsequent to that process, alternatives for the projects or activities selected were identified and the final feasible projects or strategies were drawn up and then costed. As a follow up to that, an implementation program was drawn up. The project ended by making conclusions about the process and came up with recommendations.

The first part of this report addresses the Status Quo report on Waste Management in MCLM, the second part the Gap Analysis and Needs Assessment as well as the Goals and Objectives and the third part the Implementation Plan for the MCLM IWMP.

2. PART 1: STATUS QUO OF WASTE MANAGEMENT IN THE MERAFONG CITY LOCAL MUNICIPALITY

2.1. Introduction

The Status Quo provides a baseline for waste management planning and highlights problems, issues of concern and gaps experienced with regards to waste management (a detailed Gap Analysis and Needs Assessment was done after the completion of the Status Quo). Collecting reliable data and other information therefore is a critical first step in compiling an IWMP. The aim of gathering current information on the state of waste management in the MCLM, it also provides a realistic and quantitative basis for the development of the IWMP, based on actual data and prioritised requirements and needs.

Since information changes on a continual basis, the Status Quo will include information as relevant up to the end of June 2009.

2.2. Objectives and Methodology

The objective of the Status Quo is to qualify and quantify all aspects related to the waste streams, environmental impacts, existing waste management services, practices and organisational structures as relevant to the MCLM. This information will form the basis for any future planning and the development of the IWMP.

The information gathered for the Status Quo assessment included the following:

a. Current legislation and MCLM Waste Management By-laws;
b. Obtaining information on the current population of the area, growth estimates, development patterns, densities and the population's socio-economic categories;
c. Identifying and estimating/calculating the types and amounts of general waste generated in the municipal area, the composition thereof and defining distinctive waste generation areas. This included a visual waste characterisation exercise of the waste streams disposed of at the Rooipoort landfill site to obtain information regarding the potential types and volumes of recyclable material in the waste stream;
d. Describing and assessing the existing waste management services i.e. collection, transport and disposal systems as well as types of equipment, personnel and management practices provided by the municipality. Shortfalls were also identified; and
e. Analysing the waste management budget and determining the unit costs associated with providing the waste management services, specifically establishing unit costs for collection, transport and disposal.

Site visits were carried out to gain first hand knowledge of waste management within specific areas. The various waste management supervisors were interviewed and the landfill site and the collection areas were visited. Information was obtained during these visits and supplemented by information obtained from municipal reports i.e. IDP, Spatial Development Framework (SDF), the Departmental Budget, the MCLM Waste Management By-laws, etc. A desk top study was carried out which included the review and interpretation of existing MCLM records and documentation.

Most of the population data, demographical information and information concerning the various settlements not serviced by the Municipality were obtained from the Spatial Development Framework, reviewed 2008 (SDF).

The results of the Status Quo investigation are documented in this report and form the basis for the IWMP.

2.3. Current Legislation And By-Laws

2.3.1. Current legislation

The Constitution Act no. 108 of 1996, Schedule 5, Part B, lists refuse removal, refuse dumps and solid waste disposal and cleaning as functions, which have to be undertaken by the local authority. This is reiterated in the Municipal Structures Act, Section 84. Legislation can and does have an effect on planning and implementation of projects.

This is also true for the development and implementation of the municipal IWMP. Existing environmental legislation pertaining to the management of general waste is regulated through over thirty Acts of Parliament, many provincial regulations as well as the local authority by-laws and some of the important general waste related legislation is listed below:

a. The South African Constitution, Act 108 of 1996;
b. The National Road Traffic Act, Act 93 if 1996;
c. The National Environmental Management Act, Act 107 of 1998;
d. The Occupational Health and Safety Act, Act 85 of 1993;
e. The Atmospheric Pollution Prevention Act, Act 45 of 1965;
f. The Air Quality Act, Act 39 of 2004;
g. The Environment Conservation Act (ECA), Act 73 of 1989;
h. The National Water Act (NWA), Act 36 of 1998;
i. The Nuclear Energy Act, Act 131 of 1993;
j. The Health Act, Act 63 of 1977;
k. The Human Tissue Act, Act 65 of 1983;

l. The Mineral and Petroleum Resources Development Act, Act 28 of 2002; and
m. The National Environmental Management Waste Act, Act 59 of 2008.

The new NEM:WA aims to consolidate most of the waste legislation into one framework Act. NEM:WA has been developed as part of the law reform process enacted through the White Paper on Integrated Pollution and Waste Management and the National Waste Management Strategy (NWMS).

However, current legislation will have to be complied with, especially when implementing the IWMP. It should be noted that only the most significant provisions pertaining to general waste rather than hazardous waste are included. The underlying government policy driving NEM: WA is the NWMS with the general aim complying with the following requirements:

Provide waste management services and the management of waste disposal facilities;

1. Compile and implement integrated waste management plans;
2. Compile and implement a waste management policy as part of the IDP; and
3. Develop and implement by-laws and ordinances in line with the national waste management policy and within provincial legislation and policies.

The NWMS also refers to requirements intended for local authorities, which among other requirements state that:

1. Local government is responsible for drawing up first generation plans for general waste management. The plans will have to be submitted to provincial government for incorporation into the provincial environmental management plans; and
2. Although recycling of waste is to be facilitated by the Department of Water and Environmental Affairs (DWEA), the strategy highlights the involvement of local government, which is essential for recycling to be effective.

In addition to the NWMS, the Municipal Systems Act sets out functions that have to be exercised by the authority, some of which are indicated below. These functions have a direct bearing on waste management, and include:

1. Developing policy, plans, strategies and programmes, including setting targets for delivery;
2. Implementing applicable national and provincial legislation and its by-laws;
3. Providing municipal services to the local community; and
4. Imposing and recovering rates, taxes levies, duties and fees, including setting and implementing tariff, rates and tax policies.

Monitoring the impact and effectiveness of any services, policies, programmes or plans; consequently, the IWMP of the municipality should be approved by the Member of the Executive Council to ensure successful waste management in a municipal area.

2.3.2. Waste Management By-Laws

The MCLM Waste Management By-laws are still in draft format and need to be finalised as soon as possible.

MCLM conducted a high level review of the by-laws and based on this review the following aspects requires action:

Chapter 1 - Introduction

“2 Definitions”. The definitions of “Builders rubble” and “Construction waste” are in essence the same. It is recommended that these definitions be revised to define more clearly.

The definition of “Domestic waste” should indicate clearly that it is non hazardous waste. Chapter 2 - Waste management information system

The current record keeping system of the council relating to waste management will have to be improved drastically to support a waste information system.

Chapter 4 – Garden and Bulky waste:

It is proposed that the words “mini dump” be replaced with “Public disposal facility” and that this be included under the definitions in Chapter 1.

Chapter 5 – Builders waste

Consider revising heading of this section to “Builders rubble and construction waste. The reference to Section15 in Section 15 (1) (a) should be to Section 14.

Chapter 6 – Special industrial, hazardous, medical and infectious waste

The reference to Section16 (1) in 19 (1) (a) should be to Section 18 (1). Some of the other references also seem to be out of place.

It is proposed that Chapter 6 be reviewed since it is in conflict with national legislation regarding the storage and transportation of waste.

Chapter 7 – Solid waste disposal

Section 22 should refer to the National Environmental Management: Waste Act (Act no 59, 2008) (NEM:WA) rather than the Section 20 of ECA.

All references to permits should be aligned with the requirements pertained in NEM:WA. Chapter 8 – Landfill location standards. Reference should be to NEMWA.

Chapter 9 – Landfill and Mini disposal sites and waste transfer stations

Consider changing “Mini Disposal Site” to Public disposal Facility”

Section 30 needs to be revised since this might have far reaching legal implications to the MCLM.

General

The Waste Management By-laws should be reviewed to incorporate the NEM: WA.

2.4. Study Area

The MCLM is located in the south-eastern extreme of the South Western Gauteng Province (Figure 2). The Municipal Area is connected to Johannesburg to the east and Potchefstroom in the west by the N12 freeway. Apart from the N12, the N14 traverses the Municipal Area, linking the Municipal area to Pretoria in the northeast.

The MCLM area of jurisdiction is approximately 1 631 km2 and consists of two major waste generating areas/towns. This grouping of areas is also aligned with the placement of the two regional offices in relation to the towns and areas serviced. For the purposes of this report the areas has been divided into a northern region and a southern region as described below, with the R501 (Potchefstroom Johannesburg road) functioning as the divider between the regions, except Wedela being serviced from Fochville:

A. Carletonville/Khutsong area (Northern Region)

- Carletonville town
- Blybank
- Khutsong
- Welverdiend
- Driefontein

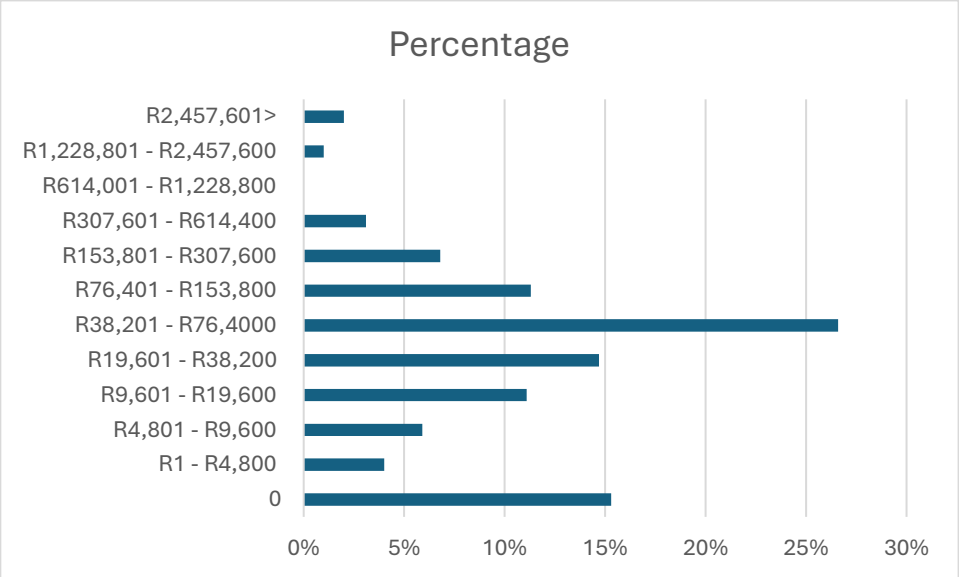
B. Fochville/Kokosi area (Southern Region)

- Fochville town
- Green's Park
- Kokosi
- Wedela

The estimated population for the MCLM area as provided by the Spatial Development Framework and Integrated Development Plan is 225 476 people. It is estimated that the population increased from 197 520 in 2011 to 225 476 in 2022 (a 14.5% increase).

According to Census 2022, almost 70% of the population of Merafong City had a household income of R 13 312.00 or less and the Average Weighted Income (AWI) as measured in 2001 is shown in Figure 1 below.

Income Band				%	Midpoint (R)	Weighted Value
	-			15%	R -	R -
R	1.00	R	4 800.00	4%	R 2 400.50	R 96.02
R	4 801.00	R	9 600.00	6%	R 7 200.50	R 432.03
R	9 601.00	R	19 600.00	11%	R 14 600.50	R 1 606.06
R	19 601.00	R	38 200.00	15%	R 28 900.50	R 4 335.08
R	38 201.00	R	76 400.00	27%	R 57 300.50	R 15 471.14
R	76 401.00	R	153 800.00	11%	R 115 100.50	R 12 661.06
R	153 801.00	R	307 600.00	7%	R 230 700.50	R 16 149.04
R	307 601.00	R	614 400.00	3%	R 461 000.50	R 13 830.02
R	614 001.00	R	1 228 800.00	0%	R 921 400.50	R -
R	1 228 801.00	R	2 457 600.00	1%	R 1 843 200.50	R 18 432.01
R	2 457 601.00	R	3 686 400.00	2%	R 3 072 000.50	R 61 440.01



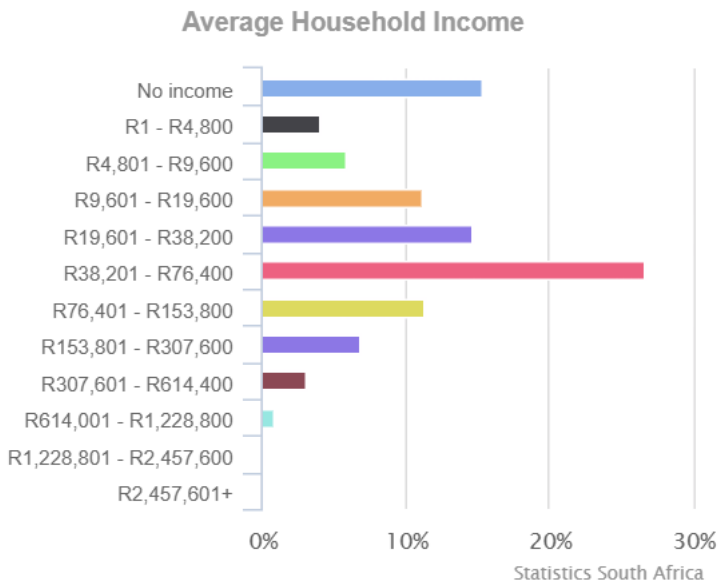


Figure 1: The Annual Household Income for Merafong, 2001 Source: Quantec and Urban-Econ calculations

Assuming that the percentage distribution of households with regard to income category remains constant between 2011 and 2022, the estimated AWI* of Merafong in 2022 is R13 312.00 compared to R13, 635 in North West (Source: Quantec Research & Urban-Econ calculations).

*AWI is the average income of households, taking into account the distribution of households across income categories.

Table 1 indicates the estimated employment status within the MCLM compared to the provincial and national employment status.

Table 1: MCLM Financial Commitment Section

Table 1: Employment Status for 2022

Employment Status 2022			
	South Africa (%)	North West (%)	Merafong (%)
Employed	28.9	27.8	35.5
Not Employed	30.1	27.2	29.9

Not economically active	41.1	45.0	34.6
Total	100	100	100

Source: Quantec Research and Urban-Econ Calculations

Figure 2 provides an overview of the locations of the various towns and settlements within the study area.

Various informal settlements in the Khutsong area are not serviced by MCLM and these include:

- Mandela Park.
- Share Well
- Cross Roads
- Sonder Water
- Phola Park
- Chris Hani
- Joe Slovo.

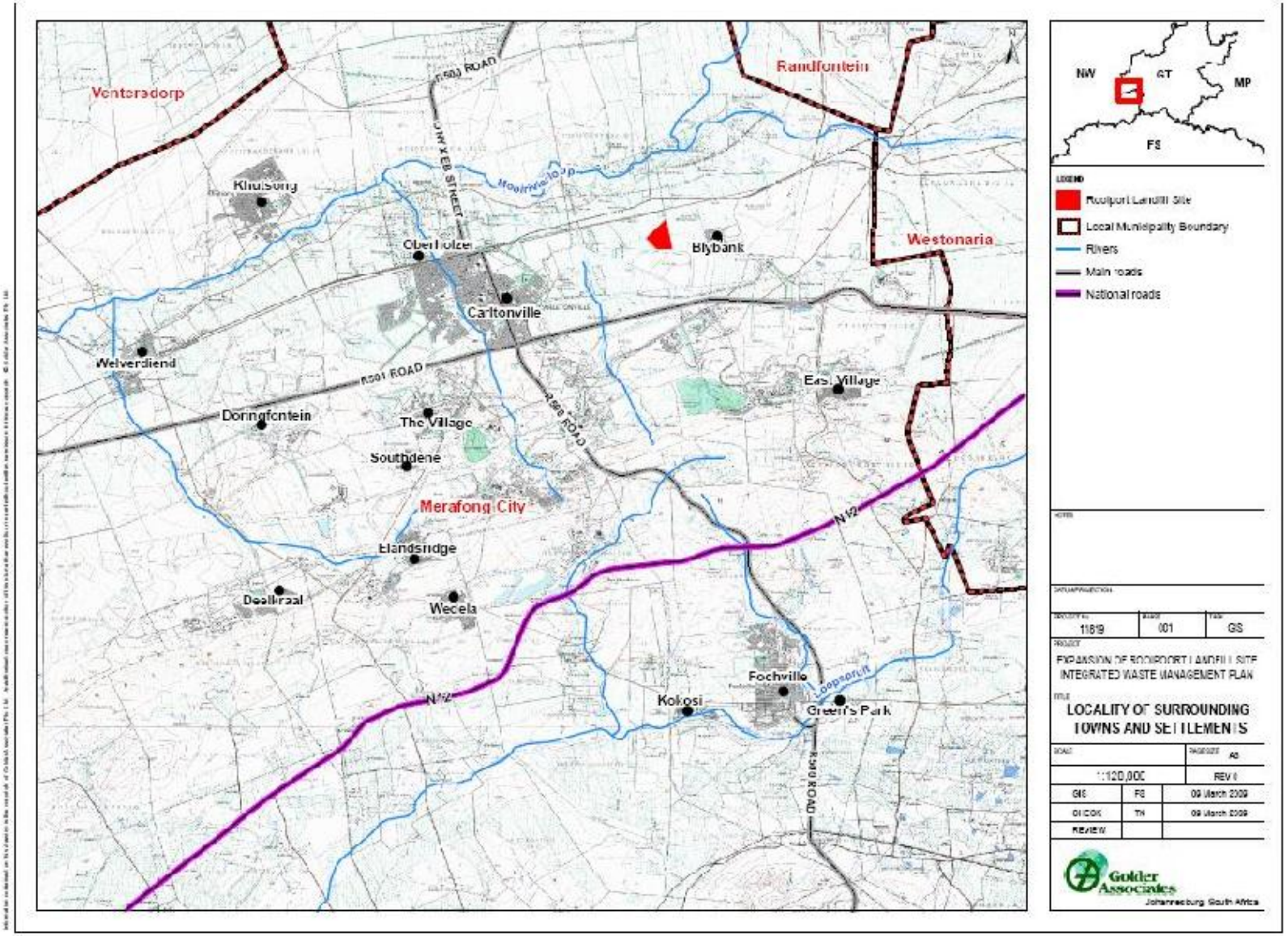


Figure 2: Merafong City Local Municipality Service Area

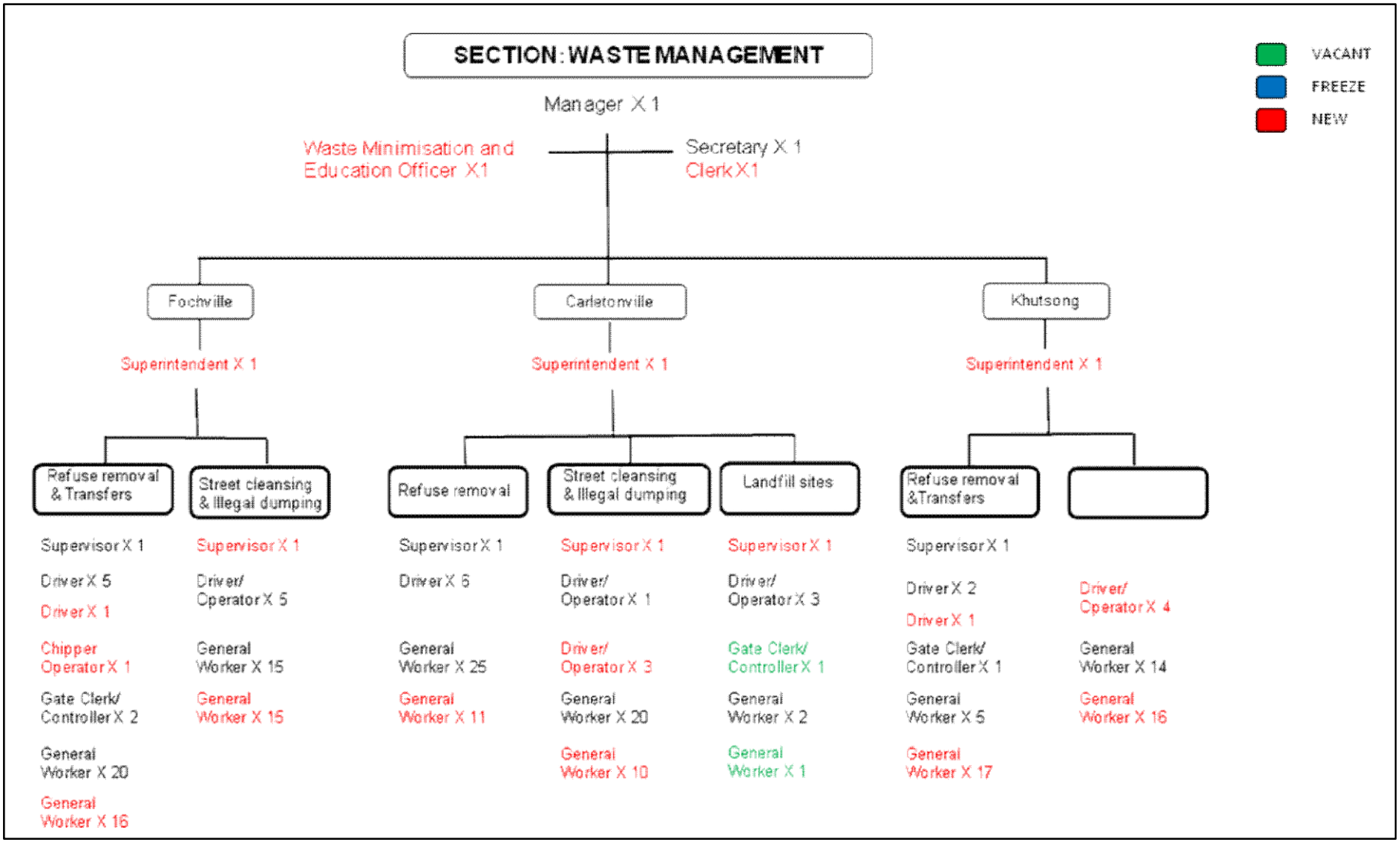


Figure 3: Waste Management Personnel Structure within the MCLM

2.5. Waste Management In The Merafong City Local Municipality

This section describes a number of aspects that are critical to the effective delivery of waste management services within the MCLM. These aspects include demographics, waste generation, collection services, landfills, personnel and issues influencing the service. The information was obtained for the different waste generating areas within the MCLM.

2.5.1. Personnel utilised for waste management within the MCLM

Figure 3 above shows the personnel structure relating to waste management within the MCLM. There should be a total of 241 personnel within this department but there are currently a number of vacancies (109) within the department making the current utilisation of personnel a challenge.

There is currently no middle management in this waste management sections' structure with the superintendent posts created in the structure is long overdue for staffing.

The drivers are also not allocated to a specific vehicle which can result in drivers not taking ownership of the vehicles, resulting in them not taking responsibility for the condition of a vehicle. It also poses challenges for collection teams since drivers and collection crew do not get to know each other well, which also might have an effect on productivity.

2.5.2. Carletonville/Khutsong/Blybank/Welverdiend (Northern Region)

General description

Carletonville

Carletonville is situated in the northern portion of the municipality and is the business hub of this area. Carletonville contains the only significant central business district (CBD) and industrial area within the municipal area and it also contains the majority of higher-order urban functions and a significant portion of its population. Carletonville is also equipped with municipal infrastructure (roads, rail, water, electricity, sanitation) with sufficient capacity to accommodate future urban development. Based on the information received general waste management in Carletonville is of a fairly good standard.

A black bag system is used to collect domestic waste once a week from the 4,158 domestic service points. Residents have to supply their own 85 ℓ bin liners (black bags) which are placed on the pavement outside the stand on the day of collection. Some residents have built innovative refuse bag holders in front of their homes to eliminate stray dogs from tearing the bags.

Commercial waste is collected at various frequencies (1, 2, 3 and 5 times/week) depending on the type of business or other type of premises such as municipal depots, hospitals andeducational facilities. The business, shopping centres and other premises have dedicated waste areas where the containers are kept and are usually fairly accessible. Types of containers used as receptacles vary depending on the type of business or premises but consists mainly of 1.75 m3 wheelie bins and 6 m3 skips.

There are approximately 35 permanently employed street sweepers as well as a number of temporary staff employed to serve mainly the CBD area of Carletonville as well as the approach routes to the CBD area. Street cleaning commence between 5h00 and 6h00 in the mornings with each person allocated a certain area to clean. Street cleaning personnel are issued with a trolley, broom, spade, rake and “easy-reacher” (an extended grabbing tool used to pick litter lying on the ground). There are also 229 concrete and steel street bins placed al over the CBD area which are lined with plastic bin liners for easy cleaning. These bins are cleaned on a daily bases as part of the daily collection routes within the CBD areas.

Waste is collected in 2 x 20 m3 (residential) and 1 x 12 m3 (commercial) RELs each with a crew consisting of one driver and four runners. Waste is taken to the Rooipoort landfill site for disposal. The Rooipoort landfill is discussed in more detail below.

Khutsong

Khutsong is located approximately 8 km north west of Carletonville and has a population of approximately 140,000 people. Refer to Figure 2 for the locality of Khutsong.

Khutsong consists of a mixture of low cost formal housing and informal settlements. The low cost housing areas in Khutsong are equipped with municipal infrastructure such as roads, water, electricity and sanitation. The informal settlements have mainly poor roads that are usually inaccessible to waste collection equipment.

Figure 4: Unpaved road in Khutsong

Figure 5: Paved road in Khutsong

Figure 6: Four dwellings on one premises

Figure 7: Illegal dumping on street corner

Domestic waste is collected once a week from the estimated 8,500 domestic service points in the more formal residential areas. A wide variety of receptacles are used by the residents in Khutsong varying from 85 ℓ bins and old 20 ℓ oil containers to black bags and washing basins. Some houses, especially the more formal ones have dustbins for waste disposal where as the informal areas make use of communal dumping spaces since the collection equipment can not access the roads between the dwellings. Figure 4 to Figure 7 above indicate waste collection conditions in Khutsong. There is 45 service points registered as business or other type of premises such as municipal depots, hospitals and educational facilities in Khutsong. Of these 39 service points receive a three times per week collection service.

It is also envisaged to obtain 240 ℓ bins for the Khutsong area according to the new IDP.

Illegal dumping occurs on a regular basis in the informal and formal areas. One of the depot waste management supervisors launched an initiative to clean up these areas and turn the open space into a formal park where families can gather and kids can play. Figure 7 above shows the extent of illegal dumping in Khutsong. Litter picking and street cleaning happens on an ad hoc basis when complaints are received.

Waste is collected in 1 x 20 m3 (residential) and 1 x 12 m3 (commercial) RELs each with a crew consisting of one driver and six runners. The six runners seems to be a legacy from the past when there was a shortage of equipment and more workers were required to assist with collection. Waste is taken to the Rooipoort landfill site for disposal. The Rooipoort landfill is discussed in more detail below.

Blybank

Blybank is an old mining community that has recently being extended with the addition of RDP housed and other formal developments, is situated north east of Carletonville. It has a current population of approximately 1,000 people but this number changes constantly due to the development of a new residential area. Blybank has no central business district (CBD) and no industrial area as it consists mostly of low cost housing with a small number of formal houses, refers to Figure 9 to Figure 10 below. A housing project consisting of 563 residential stands are being developed in this area. Blybank is equipped with adequate municipal infrastructure (roads, water, electricity, sanitation).The newly developed areas has formal ring roads (paved) around blocks of developments with gravel roads in between stands. The Rooipoort landfill site is closely situated to Blybank.

Figure 9: The 'formal' houses in Blybank

Figure 10: The low cost housing in the Blybank area

Waste is collected once a week from the areas that is easily accessible to the collection equipment (the old part of Blybank, approximately 200 houses). Due to the scattered development of the new area the municipality has decided to place 6 m3 skips at central locations to allow the residents to dispose of their waste into the skips. These skips are collected on a routine basis by the municipality.

There is no formal street cleaning service in Blybank and this service is rendered on an ad hoc basis.

Waste is collected with 1.75 m3 wheelie bins and 6 m3 skips with 20 m3 RELs consisting of one driver and four runners. The skips are collected by a skip loader and the waste disposed of at the nearby Rooipoort landfill.

Welverdiend

Welverdiend is situated approximately 14 km west of Carletonville and has a population of approximately 2,900 people. The town has a small CBD area with a number of small businesses as well as a small industrial area on the north eastern portion of the town. Welverdiend has formal road infra-structure, water, sanitation and electricity that is provided and maintained by the MCLM.

A black bag system is used to collect domestic waste once a week from the estimated 580 domestic service points. Residents have to supply their own 85 ℓ bin liners (black bags) which are placed on the pavement outside the stand on the day of collection. There are only one business registered on the municipal billing system but there seems to be a number of businesses operating in the town as well as a number of small industries. Waste is collected from these premises on a weekly basis and transported directly to the Rooipoort landfill.

There is also a transfer station (TS) for residents to dispose of their garden refuse and bulky waste. Two 30 m^3 Roll on Roll of containers are placed next to an elevated area to enable the public to dispose of their waste into the containers. The TS is not fenced off and there is no control over waste being dumped after hours. This often leads to waste being dumped around the TS instead of into the bins. A lack of regular removal of the containers often leads to the containers being filled to capacity and waste then being dumped at the back of the TS, resulting in various nuisances.

Figure 11: Welverdiend CBD	Figure 12: Transfer station
	
Figure 13: Waste piled behind TS	**Figure 14: Waste in container at TS**

There is not a formal street cleaning service in Welverdiend with this service being rendered on an *ad hoc* basis.

A recycling company “DJ Afval papier” is situated in the industrial area in Welverdiend and it is assumed that most of the recyclable paper collected in the municipal area is handled by this recycler.

Waste is collected with a 20 m^3 RELs consisting of one driver and four runners. The skips are collected by a skip loader and the waste disposed of at the nearby Rooipoort landfill.

General

The MCLM provides a container service to the public and businesses as well as a street bin service in the CBD areas to the general public. A complete list of current rates of rentals and other services are attached in Appendix B of this document.

The containers for supplementary and special services include the following:

- 6 m^3 Skips for hire by businesses and community at R100/day;
- 30 m^3 Roll-on Roll off containers for hire to businesses (rates depend on frequency of lifts);
- street pole refuse bins placed in the CBD;
- concrete litter bins placed in the CBD; and
- steel bins placed in the CBD.

Waste collection programme

The weekly waste collection programme in the northern area is shown in Table 2 below.

Table 2: The weekly waste collection for the Northern Region

Day	Area	Area
Monday	Batswana section Sotho section	Carletonville extension 4 Carletonville extension 8 Western deep levels mine village Carletonville CBD
Tuesday	Xhosa section Zulu section	Carletonville extension 9 Welverdiend Carletonville extension 16 Carletonville CBD
Wednesday	Khutsong extension 1, 2, and 3	Carletonville extension 5 Orberholzer 3 and 10 Elandsridge village Carletonville CBD
Thursday	Khutsong south	Orberholzer 1 Carletonville extension 1 and 2 Blybank Carletonville CBD
Friday	Khutsong business - Khutsong clinics - Khutsong schools - Welverdiend business	Carletonville CBD
Saturday		Carletonville CBD

Waste Collection Vehicles and Equipment

All waste collection vehicles and equipment are rented on a full maintenance lease basis eliminating the risk of not having vehicles available for waste removal and improving collection services. Rear End Loading (REL) mobile compacters are used for domestic and commercial waste collection and roll on roll offs (RoRo) and skip loaders are used for mass containers at businesses and rentals by the public. The equipment used in the northern region is indicated in Table 3 below.

Table 3: Waste collection vehicles and equipment for the Northern Region

Type of vehicle	Number	Application	Picture
Opel Corsa Utility	2	Supervisor	
Isuzu KB	1	Supervisor	
Nissan UD 80 Chassis 12m^3 REL	2	Domestic and commercial collection	

Type of vehicle	Number	Application	Picture
			
Nissan UD 290 Refuse Compactors	3	Domestic collection	
Nissan UD 85 Chassis Tipper	1	Clearing of illegal dumping and Landfill	
Nissan UD 290 Chassis Tipper	1	Clearing of illegal dumping and Landfill	
Bell L2606D Front end loader (FEL)	1	Clearing of illegal dumping and Landfill	
Nissan UD 80 Chassis Roll on Roll of	1	Commercial rental and Transfer	

Type of vehicle	Number	Application	Picture
		station at Welverdiend	
30 m^3 RoRo container	6	Business use and rentals	
Nissan UD 85 Chassis Skip Loader	1	Commercial and private rentals	
6 m^3 Skip containers	58	Business use and rentals	
1.75 m^3 containers	21		
Agrico Landfill Compactor	1	Compacting of waste	Compactor

Recycling

There are no formal waste recycling programmes presently in the northern area. The MCLM do however encourages recycling and is in the process of establishing a buy back centre which they plan

to contract out to a private contractor. Informal recycling is however carried to the point of disposal, at the Rooipoort landfill site. Quantities and types of recyclable material recovered at the Rooipoort landfill site are indicated in Table 4 below:

A few business as well as private companies actively separate waste at source but no records are kept.

Illegal dumping

Illegal dumping is a major problem especially in Khutsong and at the transfer station in Welverdiend. There is a semi-formal initiative in Khutsong to convert the illegal dumping spots to parks but seems to lack drive and commitment. The lack of a fence and proper access control and all weather access at the Welverdiend TS allows people to dump illegally at around the site. The MCLM only keeps record of the cost of contactors used to clear illegal dumping. The cost for illegal dumping for the previous financial year 2008/2009 was R 672,998.60.

Landfill site: Rooipoort Landfill Site

All general waste generated within the MCLM is disposed of at the Rooipoort landfill site. This is the only permitted landfill site within the MCLM area. Rooipoort landfill site is located on portions of the farms Rooipoort 109 IQ and Wonderfontein 110 IQ, near Blybank and is classified as a GMB- disposal facility. The site receives general waste “G”, is a size medium “M” (will be receiving 150 to 500 of waste/day during its final year of operation) and has a negative water balance, “B-“ (higher evaporation than rainfall). However, due to recommendations in the permit application relating to the being located on dolomites, DWAF permitted the site as a GMB+ to provide for more stringent liner requirement.

The original landfill design allowed for seven phases on the 63 ha site, but only phase 1 was developed in 1999 in relation to the needs of the than Carletonville Municipality. No further development took place since then. Phase 1 is presently over its capacity due to a height restriction on the development of the landfill (as per the permit issued by DWAF). The current state of the landfill is also not in a good state, because waste can not be covered on a regular basis due to airspace constraints. Access is also impossible during wet weather resulting in waste being dumped on open spaces around Phase 1. The MCLM has obtained MIG funding to develop a number of additional cells and is currently busy with a tender process for the construction of the supplementary phases.

Drainage around the landfill is also of concern since surface drains have been blocked resulting in water ponding during wet periods. There is currently also not a system separating contaminated and

uncontaminated water resulting in contaminated water draining into the environment. Figure 15 below indicates water ponding on site.

There is no weighbridge at present but the MCLM recently commenced with manual record keeping based on volume estimations. Please see Appendix C for details.

Figure 15: Water ponding at the Rooipoort Landfill Site

Figure 16: Side slopes not shaped and covered

Figure 17: Informal harvesting of waste at Rooipoort

Figure 18: Contaminated water pond

Informal harvesting of waste occurs at the site and waste is sold from time to time to recycling companies.

A number of critical aspects were identified at the Rooipoort Landfill Site. Table 5 below summarises the critical aspects as well as the current conditions on site.

Table 5: Summary of the Landfill Conditions

Subject	Status
Permit status	The site received a permit in 1999
Site owner / permit holder	Merafong City Local Municipality
Site Classification	**G:M:B$^-$** facility with special liner requirements having to comply with a **G:M:B$^+$** liner requirement
Waste quantities	More or less 148 233 kg/day
Operating hours	Mon – Fri: 08:00 – 17:00, Sat: 08:00 – 13:00, Sun: Closed

Subject	Status
Location, size, buffer zone	Approximately 10 km north east of Carletonville. The site is approximately 63 ha with no other development in close proximity to the site. The buffer zone as specified in the landfill permit is 800m.
Resources (Plant, personnel)	Plant: 1 x landfill compactor with other equipment such as tipper, FEL and water cart on an *ad hoc* basis. Personnel: 1 x Plant operator, 1 x spotter, 2 x gate controller, 1 x Supervisor
Site life (remaining airspace, site life	Phase 1 has reached its capacity. The remaining airspace is estimated at ± 20 years. Phase 2 — 6 will be developed in near future.
Access (signage, fencing, controls)	The main access road from Carletonville is the Randfontein road. There is signage on this road indicating the landfill site access road. The Gravel access road from the main road to the landfill is in good condition. The on site roads are inaccessible during wet periods. The notice board at the site is not up to standard. Phase 1 is presently fenced.
Infrastructure (offices, ablutions, etc)	There is a small site office with ablution facilities at the entrance to the site. There is a HDPE lined contaminated water/leachate pond.
Traffic (roads, signposting, controls, etc)	The roads on site are not accessible in the rainy season making access difficult. There is no on site signage and only one spotter present to direct incoming traffic.
Waste Deposition (type of operation, cover, etc)	The waste is currently disposed of in an un-orderly manner due to the lack of airspace. There is adequate cover stockpiled but can not be used due to a lack of airspace. A landfill compactor is available on site and other equipment is utilised at the discretion of the site manager.
Drainage and erosion	The storm water drainage around the site is not in a good condition. Du to waste not being covered there is no visible signs of erosion.
Aesthetics and nuisances (dust, odours, litter, visibility, etc)	The landfill is currently not operated to the required standard due to reasons mentioned above. Odours, dust and litter is a major concern and the site is aesthetically unpleasing.
'Other' waste e.g. problematic	No seen on site.

Subject	Status
waste	
Safety and Health (operational safety, PPE, emergency preparedness, vectors, salvaging)	The municipality has a health and safety committee. No formal health and safety training relating to landfills were provided to the workers on site. The workers on site have limited PPE.
Monitoring and Record Keeping (Environmental monitoring, operational auditing, records of wastes, complaints, etc.)	Auditing is done internally by the Senior Environmental Officer at Town Planning. External auditing is not done and no reports are sent to GDACE and DEAT as required.
Major Landfill Problems	Airspace and lack of proper management and resources.
Future plans/Development	As per the permit application.
Strategic importance	This is the only permitted landfill in the municipal area, making it a facility of strategic importance.

Summary of issues: Carletonville Town area

The effectiveness of waste management in the northern region is dependent upon serviceable equipment as well as personnel to effectively execute duties. The matter of serviceability of equipment is already addressed by the leasing of equipment. However, all vacant posts should be filled and budgets approved to alleviate stress on existing personnel.

Effective record keeping of waste collection (time, distance, number of service point per round etc.) is required to assist with planning of routes, equipment required and personnel required.

1.1.1 *Fochville/Kokosi/Green's Park/Wedela (Southern Region)*

General description

Fochville

Fochville is situated approximately 20 km south east of Carletonville and has an estimated population of 15,500 people. The town has a fair size CBD as well as a semi industrial area with municipal infrastructure such as water, roads, electricity and sanitation. The waste collection service in Fochville seems to be of an acceptable standard.

A black bag system is used to collect domestic waste once a week from the estimated 3 260 domestic service points in town. Residents are responsible for supplying their own 85 ℓ bin liners (black bags)

which are placed on the pavement outside the stand on the day of collection.

Commercial waste is collected at various frequencies (1, 2, 3 and 5 times/week) from the 40 service points, depending on the type of business or other type of premises such as municipal depots, hospitals and educational facilities. Some of the business, shopping centres and other premises have dedicated waste areas where the containers are kept and are usually fairly accessible. Types of containers used as receptacles vary depending on the type of business or premises but consists mainly of 6 m3 containers and black bags.

There are approximately 15 permanently employed street sweepers as well as a number of temporary staff employed to serve mainly the CBD area of Fochville as well as the approach routes to the CBD area. Street cleaning commence at 7:30 in the morning with each person allocated a certain area to clean. Street cleaning personnel are issues with a trolley, broom, spade, rake and “easy reacher” (an extended grabbing tool used to pick litter lying on the ground). There are also 64 concrete and steel street bins placed al over the CBD area which are lined with plastic bin liners for easy cleaning. These bins are cleaned on a daily bases as part of the daily collection routes within the CBD areas.

Both domestic and commercial waste is collected in 1 x 20 m3 RELs each with a crew consisting of one driver and four runners. Waste is taken to the Rooipoort landfill site for disposal. The MCLM is in the process of constructing a transfer station (TS) to transfer waste in bulk containers from Fochville to Rooipoort landfill. The TS will service all the collection areas in the southern region ensuring that collection vehicles can be utilised for collection and not long distance transport.

Kokosi

Kokosi is situated just west of Fochville and has an estimated population of 30 000 people. Kokosi does not have a CBD and businesses is scattered throughout the settlement with no industrial area present. There are a number of informal areas on the eastern and southern outskirts of Kokosi that are inaccessible to waste collection vehicles. The municipal infrastructure such as roads, water, electricity, sanitation seems to be up to standard in the formal areas but lacking in the informal areas. The waste collection service in Kokosi is fairly good in the formal areas but no service is rendered in the informal areas due to vehicles not being able to access these areas (road infrastructure poor). This caused large volumes of illegal dumping on the outskirts of the informal settlements. Skips are also placed in areas where illegal dumping occurs but people dump waste around the skips instead of into the skips.

People and businesses are responsible for supplying their own receptacles and as a result a wide variety of containers is used as receptacles. There is only one business registered on the financial system. Street cleaning is done on an ad hoc basis.

Figure 19: Roads fairly accessible

Figure 20: Illegal dumping next to a school

Figure 21: Skip with waste dumped around it

Figure 22: Children playing with waste

Both domestic and commercial waste is as roads, water, electricity, sanitation seems to be up to standard with most of the roads paved. The waste collection service in Green's Park is fairly good with vehicles being able to access areas within Green's Park without any difficulty.

People and businesses are responsible for supplying their own receptacles and as a result a wide variety of containers is used as receptacles. Skips are placed in areas where illegal dumping occurs but most people dump around these skips and not inside them. There is no business registered on the financial system of the MCLM. Street cleaning is done on an ad hoc basis.

Figure 23: Small shop

Figure 24: Waste being dumped around skip

Figure 25: Paved roads in Green's Park

Figure 26: Builders rubble dumped illegally on the pavement

Both domestic and commercial waste is collected in Green's Park with 20 m3 RELs consisting each with a crew of one driver and four runners. The same compactor is used as for Fochville.

Until the completion of the TS, waste will be taken directly to the Rooipoort landfill site for disposal.

Wedela

Wedela is situated approximately15 km west of Fochville and has an estimated population of 10 000 people. Wedela is an old mining settlement which is now open to anyone and there are a number of new houses being built in the area. Wedela does not have a CBD and small businesses are scattered throughout the settlement with no industrial area percent. Municipal infrastructure such as roads, water, electricity, sanitation seems to be up to standard with most of the roads being paved. The waste collection service in Wedela is fairly good but there are access issues in some of the areas where the streets are narrow and the RELs have difficulty manoeuvring.

People and businesses are responsible for supplying their own receptacles and as a result a wide variety of containers is used as receptacles. Illegal dumping occurs in open spaces despite a fairly good collection service in the area. There is only one business registered on the financial system.

Street cleaning is done on an ad hoc basis.

Figure 27: Informal shop with formal residential house in the background

Figure 28: Illegal dumping on open spaces

Both domestic and commercial waste is collected in 20 m3 RELs each with a crew consisting of one driver and four runners. The same compactor used for Kokosi, Fochville and Green's Park are used for Wedela on Fridays.

Until the completion of the TS waste will be taken directly to the Rooipoort landfill site for disposal.

General

In Fochville the MCLM provides a container service to the public and businesses as well as a street bin service in the CBD areas to the general public. A full list of current rates of rentals and other services is attached in Appendix A at the back of the document.

The containers for supplementary and special services include the following:

- 6 m3 Skips for hire by businesses and community at R100/day;
- 30 m3 Roll-on Roll off containers for hire to businesses (rates depend on frequency of lifts);
- street pole refuse bins placed in the CBD;
- concrete litter bins placed in the CBD; and
- steel bins placed in the CBD.

Waste collection programme

The weekly waste collection programme in the northern area is shown in Table 6 below.

Table 6: The weekly waste collection in the Southern Region

Day	Area
Monday	Fochville extension 1; Kiepersol street to 6th street Kokosi proper, Kokosi extension 2 and Kokosi hostel Fochville CBD
Tuesday	From 7th street to Danie Theron street Kokosi extension 1 Fochville CBD
Wednesday	Fochville extension 4 and 5; from Jakaranda street to 1st street Green's Park Kokosi extension 3 and Kokosi hostel Fochville CBD
Thursday	Fochville ; 2nd street to Potchefstroom street Kokosi extension 4 Fochville CBD
Friday	Wedela proper and Wedela extension 3 Wedela extension 1 and 2, Skoppers and Mshengu
Saturday	Fochville CBD

Waste Collection Vehicles and Equipment in the Southern Region

All waste collection vehicles and equipment are rented on a full maintenance lease basis eliminating the risk of not having vehicles available for waste removal and improving collection services. Rear End Loading (REL) mobile compacters are used for domestic and commercial waste collection and roll on roll offs (RoRo) and skip loaders are used for mass containers at businesses and rentals by the public. The equipment used in the northern area is indicated in Table 7 below.

Table 7: Waste collection vehicles and equipment

Type of vehicle	Number	Application	Picture
Isuzu	1	Supervisor	
20 m^3 Nissan UD 290 Refuse Compactors	2	Domestic collection	

Type of vehicle	Number	Application	Picture
			
Nissan UD 85 Chassis Tipper	1	Clearing of illegal dumping (ad-hock basis)	
Bell L2606D Front end loader (FEL)	1	Clearing of illegal dumping (ad-hock basis)	
Nissan UD 85 Chassis Skip Loader	1	Commercial and private rentals	
30m^3 RoRo container	4	Business use and rentals	

Type of vehicle	Number	Application	Picture
6m^3 Skip containers	49	Business use and rentals	
1.75 m^3 containers	21		
Agrico Landfill Compactor	1	Compacting of Waste	Compactor

Recycling

There are currently no formal or informal recycling activities in the Southern Region. All waste collected in the Southern region is transported to the Rooipoort landfill where informal recycling takes place.

Illegal dumping

Illegal dumping is a problem in Kokosi, Green's Park and Wedela and the waste collected from illegal dumping areas are not recorded separately when disposed of at Rooipoort Landfill Site.

Landfill site: Rooipoort Landfill Site

All general waste generated within the MCLM is disposed of at the Rooipoort landfill site. Waste is currently being transported by the collection vehicles to the Rooipoort landfill but will be transferred as soon as the TS are completed.

Summary of issues in the Southern Region

The same apply as for the northern region but is repeated hereafter. The effectiveness of waste management in the northern region is dependent upon serviceable equipment as well as personnel to effectively execute duties. The matter of serviceability of equipment is already addressed by the leasing of equipment. However, all vacant posts should be filled and budgets approved to alleviate stress on existing personnel.

Effective record keeping of waste collection (time, distance, number of service point per round etc.) is required to assist with planning of routes, equipment required and personnel required.

2.6. Status Quo of Closed Landfill Sites Within Merafong City Local Municipality

The only recently closed landfill site within the MCLM which records could be obtained for is the Fochville landfill site. This site was visited to obtain a visual assessment of the current status of the site but access could not be gained since the site was locked. The landfill is situated on private property and was operated by the MCLM. The owner of the property had numerous complaints concerning the operation of the landfill and the landfill was subsequently closed in late 2007. The site is still fenced and the access road is accessible up to the gate of the landfill. Illegal dumping occurs on regular bases next to the old access road resulting in the MCLM having to clear the illegally dumped waste. The MCLM appointed a consultant to conduct an EIA and obtain a closure permit for the landfill. Approval of the closure design was received from DEAT providing the soil cover is increased from 150 mm to 200 mm.

Figure 29: View of the closed Fochville landfill

Figure 30: Illegal dumping waste next to the old access road

2.7. Mining Areas Serviced by The Municipality

The MCLM provides a collection service to a number of mines situated within the municipal area. These services are rendered with Ro-Ro, skip loaders and RELs depending on the type of container. Details of these services are provided in Table 8 below.

Table 8: Mining areas serviced by the MCLM

Service area	Number & type of container	Frequency of collection
Village, Farmhouses, Schoonplaas	275 x 85 ℓ refuse containers	1 x week
Ekhayalihle residence	4 x 6 m³ skip containers	1 x week
Ntsonalanga residence	1 x 30 m³ container	1 x week
Motebong residence	1 x 30 m³ container	1 x week
Numbawani residence	1 x 30 m³ container	1 x week
Hospital	3 x 1,75 m³ container	4 x week
Elandsridge	REL	1 x week
Deelkraal	No service	Serviced by mining company

2.8. Areas Not Serviced By The Municipality

Various informal settlements in the Khutsong area are not serviced by MCLM and these include:

- Mandela Park.
- Share Well
- Cross Roads
- Sonder Water
- Phola Park
- Chris Hani
- Joe Slovo.

Due to narrow streets not accessible to the waste collecting vehicles, the following areas are also not serviced by the municipality:

- Extension 99 of Kokosi (Informal settlement),
- Extension 5 of Kokosi (Informal settlement),
- Driefontein (Mining area)

2.9. Administrative Issues

2.9.1. Discussion of Budget and Rates

The budget for Waste Management for the MCLM for 2009/2010 is R20, 507,997. The estimated income is R33, 764,304 resulting in a profit of R13, 256,307. Table 9 below refers to comments on certain issues in the budget. Refer to Appendix B for the current rates of rentals and other services.

Table 9: Summary of the budget

Vote no		Description	Budget 2009/2010 (R)	Comment
3433	3377	Telephone	R2,856.00	This is very low considering the supervisors and managers al have cell phones and making official calls
3434	1108	Uniforms	R0,00.00	Is this allowed for elsewhere?
3434	3423	Street Cleaning Contracts	R349,800.00	Not aware of any contract for street cleaning
3435		Salaries and Allowances	R2,173,911.00	There is a number of additional personnel's cost allocated to landfill cost.

2.9.2. Waste Projects listed in the IDP

Table 10 below provides a summary of the waste related projects listed in the MCLM IDP document.

Table 10: The 2009/2010 IDP Project Description Budget

	Project Description	Funding Source	Total Budget	Scheduling of total budget cost estimate over MTREF period				Prioritization	
	Waste Management			2009/2010	Unsecured	2010/2011	2011/2012	Score	Priority
1	a. Construction of transfer station (Phase 1 rehabilitation)- Fochville	MIG	R3,426,213	R3,426,213				129	2
	b. Construction of drop of centre Wedela (roll-over)	MIG	R395,847	R395,847				129	2

	Project Description	Funding Source	Total Budget	Scheduling of total budget cost estimate over MTREF period				Prioritization	
	Waste Management			**2009/2010**	**Unsecured**	**2010/2011**	**2011/2012**	**Score**	**Priority**
	c. Rooipoort Waste Disposal Site	MIG	R11,797,510	R11,797,510				157.5	2
2	Waste buy back centre/ Drop off facility at Khutsong	MIG	R15,430.000			R15,430,000		129	2
3	Roll-out of 240 L bins	MIG	R44,708,00			R44,708,00		129	2
4	Development of Carletonville Waste Depot	MIG	R128,000,000			R64,000,000	R64,000.000	129	2
	Total		**R203,757,570**	**R15,619,570**	**R0,00**	**R124,138,000**	**R64,000,000**		

2.10. Waste Generation Model

2.10.1. Estimated Waste Generation

A waste generation model was developed that based on information from the SDF where population and number of stand was indicated. An estimated waste generation per person per day was used (based on industry standards) and grown by 3% per year. Table 11 below provided a summary of the estimated waste generation. The waste disposed of at the Rooipoort landfill consists mainly of domestic waste, builder's rubble and garden waste.

Table 11: Waste generation model summary

Proclaimed Townships	Population	Tons/ day	2015	2020	2025	2030
Northern Region	171,730.00	86	102	119	138	159
Southern Region	57,975.00	30.6	36.5	42.3	49.1	56.9
Sub total	229,705.00	116	139	161	187	216
Mine towns	53037	27	31.7	36.7	42.6	49.3
Total	282,742.00	142.82	170.53	197.69	229.18	265.68

3. PART 2: GAP ANALYSIS AND NEEDS ASSESSMENT AND GOALS AND OBJECTIVES FOR THE IWMP FOR MCLM

3.1. Background To The Gap Analysis And Needs Assessment

The objective of this section of the document is to identify the issues, concerns, gaps and needs which have to be addressed by the IWMP. This will provide a guideline for service provision mechanisms and an Implementation Strategy. The objectives of the National Waste Management Strategy, the principles listed in the National Environment Management Act and the internationally acceptable waste management hierarchy are used as benchmarks. The requirements of the National Environmental Management Waste Act, Act 59 of 2008 are also considered.

A number of priority initiatives, in which local authorities are required to play a leading role, have been listed in the NWMS. Some of these are listed below:

- Implement general waste collection services in un-serviced or poorly serviced areas (this includes new areas);
- Promote separation of waste at source, i.e., at the point of generation;
- Develop recycling centres following separation at source;
- Minimise the environmental impacts of waste disposal facilities and litter;
- Ensure that sufficient waste disposal sites will be planned, permitted and developed (at regional level);
- Develop and implement a Waste Information System (WIS); and
- Capacitate people and create job opportunities.

In addition to the above, local authorities also need to minimise waste management costs by optimising the efficiency of the existing waste management systems in terms of usage of infrastructure, labour and equipment.

Information concerning Key Performance Areas was obtained from the following sources:

- Merafong City State of the Environment Report, unknown date;
- The Integrated Development Plan dated May 2008; and
- Performance Management Scorecard used by the MCLM.

From the Merafong City State of the Environment Report, the following was reported:

State

The MCLM environmental section has a budgeted income of R 29 661 765-00 and expenditure of R 31 102 497-00. The 2004/2005 budget provides for 30% of the staff compliment compared to the national norm due to financial constraints.

Pressure

1. Staff capacity is inadequate and seriously affects service delivery;
2. The impact of uncontrolled informal settlements on health and the environment; Lack of reliable data pertaining to newly incorporated areas;
3. Escalating informal and uncontrolled food vendors; and
4. The effect of HIV/AIDS on resources with references to pauper burials and indigents.

Responses

- A clear Memorandum of Understanding and Service Level Agreements should be developed in accordance with the needs of the communities and within the policy directives of Government;
- Informal settlement must be formalised with basic levels of services; and Create public education and awareness.

Related topics

- Health;
- Local Economy; and
- Water.

The information in the above documents was used together with the priority issues identified to determine baseline objectives and / or targets to measure the Gaps and Needs against.

Table 12 below indicates the Objectives / Targets, Gap Analysis and Needs Assessment relating to waste management within the various areas.

Table 12: Gap Analysis and Needs Assessment.

Area	Objectives / Targets	Gap Analysis	Needs Assessment
Overall	Render a sustainable, equitable and cost effective refuse removal service to all domestic and business premises in MCLM area.	Personnel to assist with roles and tasks as set out in the waste management section structure.	Ensure that recruitment procedures are followed when interviewing new candidates. Staff employed should have all the relevant qualifications required. Criteria and job descriptions to be reviewed.
	Improve refuse collection in informal settlements.	Lack of service and or sustainable initiatives.	Detail evaluation of existing waste collection relating to the proposed collection system in the informal areas. Alternative collection systems and methodologies to be investigated.
	Public education and awareness campaigns.	Lack of a proper budget, action plan and personnel to drive the education and awareness process fulltime.	A proper action plan with an associated budget as well as dedicated persons to drive the public education and awareness campaigns, are required.
	Promote separation of waste at source, i.e. at the point of generation (for recycling and composting projects)	No evidence found of separation at source initiatives.	Education on separation at source should be included in the public education and awareness campaigns described above. Educate the private sector to assist or get involved with the municipality on projects of this nature. Start with a pilot project to establish feasibility and co-operation.
	Assist and encourage the development of buy-back centres, recycling sorting centres following separation at source. Provide for public recycling drop-off facilities such as at shopping centres, landfills, etc.	There are no municipal facilities of this nature. There is no formal partnership with recycling companies.	Establish a formal partnership with recycling companies. This could be done as a request for an expression of interest from such companies. Implement incentives to help drive the process.

Area	Objectives / Targets	Gap Analysis	Needs Assessment
	Develop and implement a Waste Information System (WIS).	No formal WIS is in place.	Implement a WIS. Require accurate information concerning waste collection i.e. number of service points and landfill data i.e. weighbridge data. Development of the WIS can be based on the short, medium and long term needs of the MCLM as well as requirements from national and provincial government. Implementation of a waste licensing system is required by legislation. Integration of the WIS and licensing system should be considered.
	Decrease the volume of illegal dumping.	A lack of proper public dumping/disposal facilities.	Implement proper public dumping/disposal facilities for residents to dispose of various waste types.
	Efficient client and customer relations.	Lack of a formalised complaints system.	Development of a formal complaints system linked to the WIS.
	To have effective inter-departmental communication channels in place, especially with the planning department.	No information available on development in the area or where new residential developments will be established.	Establish a waste management development forum where all new developments are discussed. The criteria for allocation of areas for bin storage as well as numbers of dwellings, location, etc. also need to be addressed.
	To have all the vacant posts staffed in the waste management section.	There are a number of posts created that have never been staffed.	Staff all the vacant posts to ensure the effective management and operation of the waste management section.
	Proper waste depot with ablution facilities.	Lack of a proper waste depot for the waste management section.	Proper waste depots need to be constructed to house the waste management section.
	Current and relevant by-laws.	The current draft Waste Management by-laws are not in line with current legislation and waste management practices.	The current draft Waste Management By-laws needs to be reviewed to ensure that they are relevant and in line with current legislation.
	Waste management rate structures that are reflecting the actual cost of services.	Most of the current rates charged are not in line with the actual cost for delivering a specific service.	Review all rates to ensure that the rates are market related.
Rooipoort Landfill Site	Proper operation and maintenance of the Rooipoort	There is a lack of resources and properly trained personnel for the running and	Training of personnel responsible for the day to day operation of the landfill site. A proper budget

Area	Objectives / Targets	Gap Analysis	Needs Assessment
	landfill site.	operation of the site.	to allow for the purchase of a new landfill compactor and to hire additional equipment as and when required. Institute an invoicing system at the landfill to collect revenue for disposal operations as well as for closure and rehabilitation costs.
	Proper rehabilitation and closure of the Rooipoort landfill.	There is no provision for a closure fund for the Rooipoort landfill.	A closure fund needs to be established for the rehabilitation and closure of the Rooipoort landfill.
	Audit and monitor site as required by legislation.	The site has not been externally audited for the last number of years. No monitoring of boreholes is being done.	Re-instate the monitoring programme as part of the regular auditing of the site. An external auditor to be used on an annual basis.
	Continuous development of the site.	The development of future phases has been behind schedule causing phase one to exceed the allowable height and resulting in steep side slopes.	Record volumes entering the site and have an airspace calculation done every year to ensure that proper future planning can be done for the development of future cells.
	Ensure compliance to the landfill permit conditions and institute formal site information system.	The landfill is not operated as required in the permit. Non-compliance issues include the lack of a proper information board at the entrance to the site, excessive windblown litter, lack of proper access control, deposition not up to standard, drainage systems not functioning properly, etc.	Ensure compliance to the landfill permit. This requires trained personnel or possible outsourcing of the operation of the landfill with MCLM monitoring the landfill operator.
	Implement proper rates at landfill	The current rates are very low compared to other landfills.	Investigate the current rates in relation to other landfills. Update rates if required.
Collection	Reliable collection system for domestic and commercial service points.	Lack of sufficient back-up collection units as well as sufficient personnel to assist with collection. Routing is not optimised. Certain areas are not serviced due to restricted access.	Acquire additional collection units to serve as backup units to the existing fleet. One $20m^3$ unit and one $12m^3$ unit are required as an interim measure. Ensure that there is 5-6 runners per collection unit at all times. Consider outsourcing of current un-serviced areas and /or informal settlements. Undertake a round balancing study to optimise

Area	Objectives / Targets	Gap Analysis	Needs Assessment
			routing for collection. Investigate alternative collection methods for areas with access problems. A need has been identified by council to implement a 240ℓ wheelie bin system for all resident that have a municipal services account.
	Ensure that a proper mass container rental system is implemented in the MCLM area.	Rates currently charged for mass container service is not market related.	Evaluate proposed collection system for informal areas. Purchase additional equipment if required, based on the outcome of the evaluation. Consider utilising SMMEs and *One-person- contractors* for primary and secondary collection.
Street cleaning	Comprehensive street cleaning service.	Only CBD and surroundings receive street cleaning service	A plan of areas which require street cleaning needs to be developed. Based on this, the required personnel to provide the more comprehensive street cleaning service should be allocated.
	Implement a more comprehensive public litter (disposal) system in decentralised business centres.	Only the Carltonville and Fochville CBD areas have street containers.	Place additional street containers in areas where high volumes of people gather on a regular basis. Frequency of bin clearing needs to be determined to prevent overfull containers from over flowing.
	Effective support for street cleaning service.	There are currently no dedicated vehicles to assist with the collection of waste collected by street cleaners. Proper transportation for street cleaners to and from their work areas is also lacking.	Adequate equipment needs to be obtained for the collection of street cleaning waste as well as for the transportation of street cleaners to and from their work areas. Maintenance management plans for equipment should also be addressed.
Recycling	Implementation of recycling initiatives at both domestic and commercial service points.	A proper recycling plan and programme is lacking in MCLM, this also includes aspects such as composting.	Develop a proper recycling action plan and programme. Establish a formal partnership with recycling companies. This could be done as a request for an expression of interest from such companies. Discuss implementation of the proposed plan with the preferred company. Benchmark with other municipalities on waste re-using programmes and/or involve the public/ communities.

Area	Objectives / Targets	Gap Analysis	Needs Assessment
Illegal dumping	Decrease illegal dumping	There is no proper public waste dumping/disposal facilities in the area. Lack of enforcement of by-laws and legislation. Lack of formalised service to the informal areas in particular is creating illegal dumping in those areas.	Implement proper public dumping/disposal facilities for residents to dispose of various waste types. Conduct a proper investigation into the need for such facilities. Determine best locations for such facilities. With the new By-laws in place, the introduction of active enforcement must be done. Implement formal collection services to informal settlement areas.
Northern region: overall	To have a cost-effective mass container system in place to be used by businesses and communities.	The mass containers are hired by businesses and communities for R100/day, which is not a market related price.	The mass containers should be hired to businesses and community members at market related rates.
	Have adequate and experienced staff available in the head office and regional offices of the WMS.	The supervisory positions are vacant for this area. As a result, proper management and actions are lacking.	Vacancies to be filled as soon as possible with staff having qualifications and competencies fitting the required job descriptions. Proper job descriptions to be developed where necessary.
	To provide effective public waste dumping facilities.	There is only one public waste dumping facility is this area.	Public waste dumping facilities need to be investigated for all the areas in the northern region.

Area	Objectives / Targets	Gap Analysis	Needs Assessment
Southern Region: Overall	Decrease illegal dumping in Kokosi, Green's Park and Wedela.	No formal waste collection is done in Ext 5 and 99 of Kokosi and Driefontein as the streets are too narrow for waste collection vehicles. There is no proper public waste dumping/disposal facilities in the area of Green's Park and Wedela. Lack of enforcement of by-laws and legislation. Lack of formalised service to the informal areas in particular is creating illegal dumping.	Investigate alternative options for waste collection in these areas. Implement proper public waste dumping/disposal facilities for residents to dispose of various waste types. Conduct a proper investigation into the need for such facilities. Determine best locations for such facilities. When new By-laws are in place, active enforcement must be done. Implement formal collection services to informal settlement areas.
	Comprehensive street cleaning service	Only the CBD and surroundings receive street cleaning services if there are personnel available.	A plan of areas which require street cleaning needs to be developed. Based on this, the required personnel to provide the more comprehensive street cleaning service should be allocated.

3.2. Summary of needs

The needs identified can be summarised as follows:

3.3. Service provision

Domestic waste collection is nonexistent in informal and rural areas. A service needs to be implemented where required;

- Adequate equipment and personnel is required to render an effective service to the communities;
- Education and awareness campaigns need to be implemented throughout the area. General waste awareness, management and recycling should be key focus areas;
- A proper Waste Information System is required to ensure the effective implementation of any waste related projects, i.e. the base from which any project is launched should be sound and correct; and
- The commercial waste collection containers should be standardised and the service point should be serviced if paid for.

3.3.1. Equipment

Additional Mobile Compactor Units are required since no back-up equipment is available;

- A proper assessment to determine the optimum collection fleet is required; and
- Proper landfill equipment is required.

3.3.2. Personnel

There is a general shortage of runners for the round collected waste;

- There is a need for sufficient street sweepers in all areas. An in-depth assessment of street sweeping requirements is required; and
- There is a general lack of proper training of personnel.

3.3.3. Landfills

The Rooipoort landfill requires immediate rehabilitation and upgrading as well as the development of the following phases.

3.3.4. Street Cleaning/Sweeping

There is a need for proper street cleaning/sweeping services in all the areas. In Carltonville and Fochville the service is limited to certain areas with no service in the other areas. An in-depth assessment of street cleaning/sweeping requirements is required to ensure an effective and sustainable service.

3.3.5. Waste Minimisation and Recycling

There is a need for Waste Minimisation initiatives as well as the implementation of formal Recycling programmes. The possibility of expanding existing initiatives needs to be investigated and possible benchmarking at other local municipalities is suggested.

3.3.6. Illegal Dumping

The illegal dumping of waste needs to be evaluated in detail to determine the cause as well as the cost associated with clearing illegal dumping. Systems need to be implemented to reduce illegal dumping.

3.3.7. Industrial Waste

A proper industrial waste survey needs to be conducted to determine the volumes and types of industrial waste generated in the area. The methods of disposal also need to be recorded. This information should be incorporated into the waste information system.

3.3.8. Waste Management By-laws

The existing draft Waste Management By-laws needs to be reviewed and updated to ensure that they are in line with current legislation and relevant to the services provided by the MCLM.

3.4. Goals and Objectives

Goals and Objectives have to be developed to ensure that an environmentally and socially acceptable service based on a certain standard, is rendered at a reasonable price to the communities within the MCLM.

Priority issues were identified in the Status Quo report, as well as the above Gap Analysis and Needs assessment. An implementation mechanism needs to be developed that will set clear Goals to ensure that the issues identified are addressed. Objectives have to be identified in order to ensure the Goals are achieved in time. Objectives have to be in line with applicable legislation, environmental systems and principles, best practice, etc., that have been adopted nationally and internationally.

Baseline Goals and Objectives are listed below and was finalised after the public consultation

process was completed. These Goals and Objectives were also made available to the stakeholders for their comment and input.

The following Goals pertaining to waste management within the MCLM were identified:

General

1. Development of the IWMP;
2. Promulgation of By-laws and implementation of a licensing system;
3. Development and Implementation of a Waste Information System (WIS); and
4. Efficient client and customer relations.

Public awareness

Community involvement, awareness and education programmes concerning recycling, separation at source and waste management in general.

Waste minimisation and recycling

Implement achievable, sustainable and feasible waste minimisation and recycling programmes and initiatives.

Service provision (Collection)

Domestic collection

Rendering a sustainable, affordable, reliable and effective collection service to all residential areas within the MCLM.

Commercial collection

To render a sustainable cost effective commercial refuse removal service in formal areas as per the required frequency. To further ensure the standardisation of commercial containers and adequate storage space at the service point.

Public dumping facilities / garden sites.

To investigate the feasibility of public dumping facilities to provide an additional facility for the community to primarily take their garden waste and uncollected domestic waste to and as a method of reducing illegal dumping, collection time and transport cost.

Equipment

There should be sufficient back-up collection equipment at all times.

Street sweeping

To implement a proper, well staffed street cleaning service in all business areas, decentralised business areas and along all major routes at the various towns within the MCLM area.

To place an adequate number of litter bins within business areas and high use areas throughout the MCLM which are serviced on a regular basis.

Landfills

To ensure that the Rooipoort landfill is run according the Minimum Requirements for Waste Disposal By landfill (DWAF 1998) as well as the permit conditions.

The closed landfill at Fochville must be properly rehabilitated and monitored on a regular basis and should be permitted for closure as a legal requirement.

Personnel

Have adequate, medically fit, well-trained personnel to cover the range of tasks required to deliver a total waste management service to the communities. All management and supervisory positions to be filled.

Industrial and Health Care Risk Waste

To ensure the safe handling and disposal of Industrial (non-hazardous and hazardous) waste and Health Care Risk Waste generated or handled within the municipal area.

Finances / income / revenue

Have council committed to the IWMP, to ensure that the correct budgeting takes place and that the appropriate revenue collections systems are in place.

3.4.1. Discussion on Goals and objectives

A. General

1. Integrated Waste Management Plan Goal

To have an Integrated Waste Management Plan in place that will assist the MCLM with future planning of waste related activities within the municipality.

Objectives

In order to reach the above goal, the following objectives for the IWMP are set:

- The 2009 baseline conditions must be clearly stated i.e. the Status Quo needs to be factual;
- The gaps and needs must be identified;
- Achievable goals and objectives must be identified;
- Establish sustainable and fit-for-purpose solutions / option;
- Programmes and budgets must be developed in order to meet the goals and objectives; and
- Five yearly review of the plan including the baseline (status quo)

2. Waste Management By-Laws and licensing system Goal

To have relevant and up-to-date Waste By-Laws in place and to ensure the implementation of a formal licensing system.

Objectives

1. To ensure that the By-laws is not in conflict with any current legislation as well as the proposed Waste Bill;

2. To ensure that the By-laws support the outcomes and implementation strategy from the Integrated Waste Management Plan;

3. To have an adequate waste information system to support the actions required in the draft Waste By-laws;

4. To implement an appropriate licensing system with the associated support systems and personnel. This will be applicable to the licensing of the collection of commercial waste by private contractors and to keep track of industrial and Heath Care Risk Waste;

5. Requirements, which form part of the licensing aspect to be indicated. This could include what information is required of the licensee for input into the Waste Information System;

6. Development of standards for the licensees; and

7. Aspects on waste minimisation, recycling and separation at source should be included in the By-laws before they are promulgated.

3. Implementation of a waste information system (WIS) Goal

To have a waste information system that will assist in future planning of waste management and allow for quick and easy access to information not limited to but including aspects such as number of service points per area, population densities, equipment available, reliability of equipment, personnel involved in various aspects, volumes of waste from areas, volumes of

waste disposed of at the landfills and auditing information on the landfills.

Objectives

1. To develop a WIS linked to a database. This system should be easy to use and maintain;
2. The WIS must contain operational information as well as financial information;
3. Appoint and train personnel to collect the information required and to operate and to maintain the system;
4. All information relating to waste types such as domestic, commercial, industrial, hazardous and health care waste should be recorded and updated on a regular basis;
5. The system must be linked to all the departments that provide input to the Waste Management Section i.e. Financial Dept., Transport Dept, Human Resources Dept, etc.

The WIS should be aligned to the National Waste Information System (NWIS) but should provide more detail than currently required by the NWIS.

4. Efficient client and customer relations Goal

Ensuring prompt reaction to complaints received from customers (general public, domestic and commercial service).

Objectives

1. Establish a call centre that deals with complaints related to the waste management service or appoint a person that deals exclusively with waste related complaints;
2. Formalise the complaints system, which will include registering calls and complaints, referral of complaint to the relevant official and follow up action procedure and feedback to the customer; and
3. Ensure that the person is well trained to handle difficult and angry people, knows how to deal with situations that might arise (contact the appropriate person to deal with the complaint) and to follow up and ensure that the complaints have been dealt with as required.

5. Public awareness

Community involvement, awareness and education programmes concerning recycling, separation at source and waste management in general.

Goal

Develop, promote, introduce involve and educated the communities and general public regarding waste related issues such as separation at source, waste minimisation, recycling and getting the people involved in waste management issues.

Objectives

1. Develop a strategy that will encourage community participation in waste related issues such as separation at source, waste minimisation, and recycling. The strategy will have to be phased since aspects such as waste collection in the informal areas first have to be addressed before separation at source can be introduced in these areas;
2. The strategy will allow for a number of tiers of programmes to accommodate the various communities' needs and insure appropriate mechanism for communicating the message;
3. Appoint a person/s that will be responsible for the development, promotion, driving and education aspects of this strategy;
4. Training and awareness on environmental issues need to developed or sourced from existing programmes;
5. Make the communities aware of the negative impact of illegal dumping and provide them with adequate facilities or services to reduce the need for illegal dumping;
6. Establish community based environmental programmes that involve the community in awareness and cleanup campaigns; and
7. Develop anti-litter campaigns and have a suitable litter system in place.

6. Waste minimisation and recycling Goal

Implement achievable, sustainable and feasible waste minimisation and recycling programmes and initiatives.

Objectives

1. To establish a formal partnership with Buyisa-e-bag and/or others for the establishment of a buyback centres at strategic locations;
2. Development and implementation of formal recycling programmes. High recyclable generation areas such as the commercial sector and medium to high income areas should be targeted in the short-term;
3. Develop and support community based environmental, waste minimisation and recycling initiatives; and
4. Appoint a person/s that will be responsible for the development, promotion, driving and management aspects of this strategy.

B. Service provision (Collection)

1. Domestic collection Goal

To render a sustainable, affordable, reliable and effective residential collection services.

Objectives

1. Round balancing needs to be done on collection routes to optimise the routes and to ensure effective utilisation of resources;
2. Separation at source projects to be initiated. Collection systems to be to be flexible to accommodate separation at source;
3. Obtain additional collection unit as backup to existing collection units;
4. Roll out of 240ℓ wheelie bins to all residents that have a municipal services account;
5. Fit bin lifters on collection vehicles to lift 240ℓ wheelie bins;
6. Waste receptacles should be provided to households in informal areas and a system of collection should be investigated, and
7. Improve refuse collection in informal settlements.

2. Commercial collection Goal

To render a sustainable cost effective commercial refuse removal service in formal areas as per the required frequency. To further ensure the standardisation of commercial containers and adequate storage space at the service point.

Objectives

1. The implementation of a reliable service i.e. to service each service point as per the number of times paid for per week.
2. Inputs from the WMS into building and development plans to ensure that adequate allowance has been made for waste storage areas.
3. Incentives for recycling at source such as reduced rates should be considered for commercial service points. The feasibility of such an option should be investigated.

3. Public disposal facilities Goal

To investigate the feasibility of public disposal facilities so as to provide an additional facility for the community to primarily take their garden waste and uncollected domestic waste to and as a method of reducing illegal dumping, collection time and transport cost.

Objectives

Investigate the feasibility of utilising public disposal facilities as a method of reducing illegal dumping (Possible time lost and transport cost savings should also be investigated in more detail once the WIS is operation since no data is currently available on volumes and costs associated with illegal dumping).

Public acceptability of public disposal facilities (communal disposal facility where resident dispose of their waste themselves) should be investigated for the informal areas and areas where there is a lack of proper service. The option of appointing local entrepreneurs for collection in the informal areas should be investigated. They can collect from the informal areas and dispose at a public disposal / transfer facility from where the municipality can than collect to landfill. All aspects of the operation of such facilities should be considered. Facilities should comply with legislative requirements.

4. Equipment

Goal

There should be sufficient back-up collection equipment at all times.

Objectives

Ensure that there is adequate spare capacity for any type of collection unit or systems (additional equipment that can be on standby) as well as reliable backup service from leasing company. Reliable back-up service will result in less down time and overtime.

The renewal of the existing or a new contract for Full Maintenance Leasing (FML) should be planned in advance. This will ensure that there are no delays in the supply of equipment (the MCLM does not own waste collection equipment).

The appropriate waste handling unit should be investigated for any new service.

A reputable make landfill compactor with reliable backup service should be acquired for the operation of the Rooipoort Landfill. Additional equipment such as a bulldozer, tipper, loader and water cart needs to be sourced for operation at the landfill. The landfill compactor should not be used as a bulldozer if adequate equipment is not available. Proper operator training will result in less costly breakdowns.

The possibility of outsourcing the operations of the landfill should be investigated.

5. Street cleaning/Sweeping

Goal

To implement a proper, well staffed street cleaning service in all business areas, decentralised business areas and along all major routes at the various towns within the MCLM area.

To place an adequate number of litter bins within business areas and high use areas throughout the MCLM which is serviced on a regular basis.

Objectives

To implement a regular reliable street sweeping service in all business areas decentralised business areas and major access routes within the municipality. Adequate permanent staffing will be required for each area. A survey should be done of each area to determine the total area to be covered and the personnel required.

Acquire an adequate number of street bins for each business area and high use area within the municipality. A survey should be done of all these areas within the municipality to determine the need and if required the number of street bins for each area.

The method of servicing these bins and the time and cost implication should also be investigated. Recommendation should be made on the implementation of the service and possible financial social and environmental impacts.

Equipment dedicated to the street cleaning service should be sourced. This will make collection equipment available and assist with the transport of the street sweeping personnel.

6. Landfills

Goal

To ensure that the Rooipoort landfill is run according the Minimum Requirements for Waste Disposal By landfill (DWAF 1998) as well as the permit conditions. The closed landfill at Fochville must be properly rehabilitated and monitored on a regular basis and should be permitted for closure as a legal requirement.

Objective

The proper upgrading, rehabilitation, operation, maintenance and monitoring of the Rooipoort Landfill should be prioritised due to the current situation at the site. There is little to no control at present with equipment available on ad hoc basis to operate the site.

The option of appointing a private company to operate and maintain the Rooipoort landfill should be investigated in terms of Section 78 of the Municipal Systems Act as well as a Municipal Financial Management Act. Based on previous experience the municipality has demonstrated that they do not have the ability to operate the site in an environmentally acceptable manner and to the standards required by the Minimum requirements (it should be noted that there has been improvements during the last year).

The existing landfill site, the closed landfill and any future landfill sites have to be monitored on a regular basis. Any operational site also needs to be audited on a regular basis. (At least

annually, ideally bi-annually). The MCLM should obtain quotes for the monitoring and auditing of the sites from competent external consultants, and budget accordingly.

7. Personnel

Goals

To staff all management and supervisory positions and to have adequate, medically fit, well trained personnel to cover the range of tasks required to deliver a total waste management service to the communities.

Objectives

To have medically fit personnel to use as runners for the collection service. This is physically demanding work and requires personnel that can handle the physical stress. There needs to be at least 5 runners per collection vehicle for domestic collection.

Personnel should be trained in their respective task since they are dealing with potentially hazardous material. There are numerous training modules available from private waste contractors on the various aspects of waste management.

The landfill manager, access controller, spotter and operator need to undergo various levels of training to ensure that the landfills are operated according to the required standards.

Consideration should be given to creating a position for an education and awareness / recycling and waste minimisation co-ordinator.

8. Industrial and Health Care Risk Waste

Goals

To ensure the safe handling and disposal of Industrial (non-hazardous and hazardous) waste and Health Care Risk Waste generated or handled within the municipal area.

Objectives

That the MCLM keeps track of any/ all Industrial and Health Care Risk Waste generated or handled within the municipal area.

The implementation and management of the WIS will have to be such as to ensure the successful monitoring of these types of waste.

Ensure that the generators of Industrial and Health Care Risk Waste register with the MCLM (capture in By-laws). Further that they handle and dispose of the waste as prescribed by the By-laws (MCLM to ensure that this aspect is covered correctly in the By-laws) and that this process is monitored through the WIS.

9. Finances / income / revenue

Goal

Have council committed to the IWMP, to ensure that the correct budgeting takes place and that the appropriate revenue collections systems are in place.

Objectives

Council should adopted the IWMP in its entirety, including the associated budgets and programmes

The IDP should be adjusted accordingly as to ensure the correct budgeting and implementation of recommendations.

Council should ensure that the revenue generated by the WMS is channelled back into the department.

10. Utilisation of subsidised funding schemes

The above section of the report initially formed a separate report (Gap Analysis and Needs Assessment, the Goals and Objectives) and was made available for public comment together with the Status Quo report.

4. PART 3: PUBLIC PARTICIPATION

As required by section 11 and section 73 of the NEM:WA, the municipality must, before finalising its IWMP follow the consultative process contemplated in section 29 of the Municipal Systems Act, The consultative process can be done either as a separate process or as part of the consultative process relating to its Integrated Development Plan.

During the process of developing the IWMP for MCLM, the public participation process was initiated after the Status Quo Report, the draft Gap Analysis and Needs Assessment & Goals and Objectives Reports were compiled. These two reports were available for public review over the period 9 December 2009 until 28 January 2010 at the same locations where the IDP document is available for public comment. The public review period was advertised in the local newspaper (Carletonville Herald dated 4 December 2009). Refer to Appendix H. The reports were also sent to key stakeholders identified by the MCLM. Thereafter a Stakeholder Meeting was scheduled for the 28th January 2010 at the Carltonville Civic Centre to obtain inputs from the stakeholder and the public.

Unfortunately, no-one attended the meeting and no inputs or comments were received from any of the identified stakeholders. The IWMP was further developed after the public participation process to its current state incorporating the Status Quo; Gap Analysis and Needs Assessment; the Goals and Objectives; the evaluation of alternatives and the Implementation Plan.

The draft IWMP was, once more, made available for review to the public during a public review period from 24 June until 8 July 2010. The public review period as well as the public meeting was, for a second time, advertised in the Carltonville Herald dated 25 June 2010. The public meeting was held on 8th July 2010 where 123 persons attended the meeting. At the meeting, the content of the IMWP was presented and the comments from the public was discussed and addressed by MCLM. Refer to Appendix H for details on the above.

An IWMP workshop was also held with the councillors of MCLM where the IWMP was presented to the councillors. A summary of the questions raised at the workshop is also included in Appendix I.

5. PART 4: EVALUATION OF ALTERNATIVES

From the Goal and Objectives identified there might be more than one option (alternative) to achieve the desired goal or objective. The objectives as stated above forms the building blocks to eventually reach the agreed goals.

For a number of the alternatives evaluated base line information such as the number of service points and population were required. For the *Status Quo* this information was obtained from the IDP and used to develop the estimated future waste generation. During the alternatives investigation this data was used more extensively and found to be questionable. It seems as if the population data is based on the number of stands and that it was assumed that there are five people per stand for all area in the municipality. This implies that the population data used for estimated waste generation during the Status Quo phase might be inaccurate and also place doubt on the calculations used in this section of the IWMP.

Options that can serve as objectives to eventually achieve the identified Goals are discussed below.

5.1. General

The following Goals are depicted in the table above:

- Development of the IWMP;
- Promulgation of By-laws and implementation of a licensing system;
- Development and Implementation of a Waste Information System (WIS); and
- Efficient and effective client and customer relations.

The MCLM has to develop an IWMP in terms of NEM: WA which in turn has to be supported by the Waste Management By-laws. A licensing system and WIS are required to ensure that there is adequate control over waste generators and waste managers within the MCLM and that proper record are kept of waste generated, transported, disposed, reclaimed, reused and recycled. The WIS is therefore an essential management tool that will empower the MCLM to plan and control waste management to a greater extend and decisions can be taken based on qualitative and quantitative information. The importance of the WIS is further highlighted by the issues addressed in the second paragraph under point 5 above.

There are several companies that specialize in development of Waste Management By-laws, WIS and licensing systems and it is recommended that the MCLM consider appointing such companies to assist with the development of the above.

Similarly important is ensuring that the MCLM also provides a service to the community to report on issues and complaints in respect of inadequate waste management. This can be done by setting up a call centre that relays complaints to the waste management division effectively. This system should include providing feedback to the community as well as when complaints are resolved.

5.2. Public Awareness

Community involvement, awareness and education programmes concerning waste reduction, separation at source, recycling and information on waste management in general are

important aspects that should be addressed by the municipality. These functions can be outsourced, but a preferred option is that people are appointed within the MCLM to assist with the development and execution of such programmes also due to benefits derived from their direct involvement in daily waste management issues within the MCLM.

5.3. Waste Minimisation And Recycling

Achievable, sustainable and feasible waste minimisation and recycling programmes and initiatives are important and should be developed and implemented within the MCLM. These functions and aspects can be outsourced, but it is proposed that people are appointed within the MCLM to assist with the development of programmes and campaigns since they will be directly involved in the daily issues of waste management in the MCLM.

It is also proposed that the MCLM establish partnerships with contractors for the establishment of buy-back centres. Separation at source should also be investigated by MCLM and to the extent of being feasible pilot projects be initiated in certain suburbs of the

municipality and progressively growing it to the other suburbs. A two bag system is proposed with the recycling companies doing their own collection.

Garden refuse should be composted on top of Phase 1 of the Rooipoort landfill. Since volumes of garden waste is currently unknown it is proposed that garden waste be sorted and mixed in the correct manner before being placed in windrows. As a minimum a TLB should be used to turn the compost as and when required. Once the volumes are known proper planning should be done and if required equipment such as a shredder and screens could be purchased to ensure more effective composting.

Waste to landfill reduction and recycling target can only be met once the weigh bridge at the Roooipoort landfill is operational and proper records are kept on waste entering the site (WIS need to be implemented asap). Due to a lack of proper data it is suggested that when the above systems are in place the waste quantities from the various origins are measured for a period of three month and that a realistic target of 5% reduction in waste to landfill be set i.e. that 5% of the waste stream be recycled or re-used. This figure needs to be evaluated and adjusted on an annual basis.

5.4. Service Provision (Collection)

5.4.1. Domestic collection

The MCLM's Goal is to render a sustainable, affordable, reliable and effective collection service to all residential areas within the MCLM. Waste generation never stops and therefore reliable and available collection equipment and personnel remains the biggest challenge with collection of waste. Another challenge in South Africa is to service the informal settlements especially since access with waste collection vehicles are usually constrained due to inadequate and narrow roads in these areas. The cost implications for the implementations of such services was investigated and estimated costs were determined based on existing FML costs.

Due to planned development within the MCLM additional collection equipment will be required in the next number of years. Appendix G provided detail on the additional equipment and associated personnel requirements as well as the costs involved.

It is proposed that the collection routes in the formal areas be assessed and that round balancing is done to ensure that equipment and staff are used to capacity. This should be done in-house by the team of Senior Operators since they know the area best. After this, the correct number of collection vehicles should be determined and budget provided. An estimate of the collection vehicle requirements and personnel were done (refer to Appendix G). A detailed evaluation of the collection in the informal areas is required with a view of possible outsourcing the service to local entrepreneurs within the community. It is proposed that the City of Cape Town model be followed where local entrepreneurs collect the waste to central transfer areas where it is collected in mass containers for disposal. This option should be investigated by a Waste Management Specialist should no in-house expertise exists within

the municipality.

As an interim measure it is proposed that a collection system be put in place to ensure service delivery in these areas. For this service the number and type of mass container required was determined (refer to Appendix G for detail).

The MCLM is also implementing a 240ℓ wheelie bin system to the residents that have a municipal services account and has prepared an implementation plan see Appendix J for detail). One of the main reasons for implementing such a system is that the current black bag system cause a number of frustrations as listed below:

- The bags are torn by stray dogs causing a litter problem;
- The collection personnel often injure themselves when cleaning the litter (cut by glass and metal tins); and
- Some of the bags have sharp objects in them that injures the collection personnel from time to time.

5.4.2. Commercial collection

The rendering of a sustainable cost effective commercial refuse removal service in formal areas at the required frequency is a goal that has been identified by the MCLM. Further to this it is important that the standardisation of commercial containers and adequate storage space at service points must be ensured. These are all aspects that need to be addressed by the MCLM themselves.

The level of service can only be improved if adequate mass containers are supplied and collection vehicles and personnel are available. The number of vehicles required should be determined during the route balancing exercise and thereafter the correct number of personnel should be allocated to the vehicles.

The MCLM should also do an evaluation of the various types of containers currently used for commercial collection and determine which type of container is the most durable and easy to handle and store. It is proposed that a combination of 1.75m^3 mass containers, 6m^3 skips, 20m^3 RoRo and 30m^3 RoRo containers be considered based on the size and requirements of each business and or industry. It is suggested that these containers be bought and financed by the MCLM and that the costs then be recovered from the businesses/industry over a period of three years.

5.5. Public dumping facilities / garden sites

The Goal is for the MCLM to determine the feasibility of public dumping facilities in order to provide an additional facility for the community to dispose of their garden and uncollected

domestic waste. The aim is to reduce illegal dumping, collection time and transport cost. The feasibility of outsourcing the operation of these facilities can also be considered and a Section 78 study can be conducted for this.

The MCLM could conduct the feasibility study for public dumping facilities in-house, provided they have the required expertise. Failing this it is proposed that a specialist consultant be appointed to conduct such a feasibility study and if proven feasible to determine the best location for such facilities.

5.6. Equipment

The Goal is to ensure that sufficient back-up collection equipment are available at all times as well as supporting equipment for the street cleansing service, illegal dumping service and for landfill. The need to ensure the availability of collection equipment will however be addressed by the actions mentioned in the relevant section earlier in this report.

The FML contracts should be reviewed by the waste division and inputs provided to ensure that any issues that arose during the past number of years are adequately addressed in the new contracts. The waste collection rates should also be reviewed to ensure that market related rates are charged for the collection service.

The MCLM could purchase and maintain their own landfill equipment to a minimum that could include a landfill compactor, waster cart, tipper truck and front end loader. The equipment currently on site is not adequate and is difficult to maintain due to procurement procedures. Landfill equipment cannot be out of commission for longer than two days since the landfill site is operated on a daily basis whilst waste volumes are continually increasing over time. It is therefore proposed that the MCLM considers conducting a Section 78 study to determine the feasibility of outsourcing their operations at the Rooipoort landfill to a private contractor. All indications are that outsourcing the operation of the landfill is more cost effective and that the site will be better managed from an operational point of view. There are various examples where municipal landfills are successfully operated by private contractors.

5.7. Street sweeping

The implementation of a proper well staffed street cleaning service in all business and decentralised business areas and along all major routes at the various towns within the MCLM area is regarded as one of the major and important Goals. This should be complimented by placing an adequate number of litter bins within business and high use areas throughout the MCLM to be serviced on a regular basis.

For the above to be implemented, the MCLM needs to make a decision on the extent of the service in respect of the type of routes and areas to be cleaned. Once this is done, it is

proposed that a specialist be appointed to review the existing service and make recommendations on changes to expand to the proposed new service. This service also requires dedicated vehicles for transporting both people and waste i.e. at least one vehicle per region estimated to cost R600 000 per vehicle.

5.8. Landfills

The Goal is to ensure that the Rooipoort landfill is operated according to the Minimum Requirements for Waste Disposal by Landfill (DWAF, 1998) as well as the permit conditions and that the closed landfill at Fochville is properly rehabilitated, monitored on a regular basis and that the site is authorised (legal requirement) for closure.

For the Rooipoort landfill, the option of a Section 78 Feasibility Study for the outsourcing of the landfill is proposed (discussed under “Equipment” section above).

The Fochville landfill needs to be licensed, rehabilitated and closed to ensure that legislative requirements are met. A consultant should be considered to conduct the Basic Assessment/EIA and licensing process and well as the remedial design and tendering.

5.9. Personnel

It is important to have adequate, medically fit, well trained personnel to cover the range of tasks required to deliver a total waste management service to the communities and that the more senior levels within the Waste Management structure are filled to alleviate pressure on the Manager.

Based on the requirements under “General”, concerning the WIS, call centre and education and training as well as the proposed expansion of the collection system, a number of new positions are proposed. A suggested new structure was developed in consultation with the MCLM and cost compared between the existing structure and the proposed new structure. The existing structure should cost the MCLM approximately R14,5 million compared to the proposed new structure’s cost of approximately R 40 million, a difference of approximately R 25 million.

The following pages present the current Waste Management Structure as displayed in part 1, the Status Quo, of this report compared to the proposed Waste Management Structure indicated in Figure 32. Table 13 summarises the differences between the two structures as the personnel structures according to the figures differ considerably. The present personnel structure focusses on waste management per area (Fochville, Carltonville and Khutsong) and the proposed personnel structure focus on the different sections of waste management

ensuring that all the different aspects of waste management is addressed.

The Personnel the costs are compared according to Table 13, see Appendix E for details.

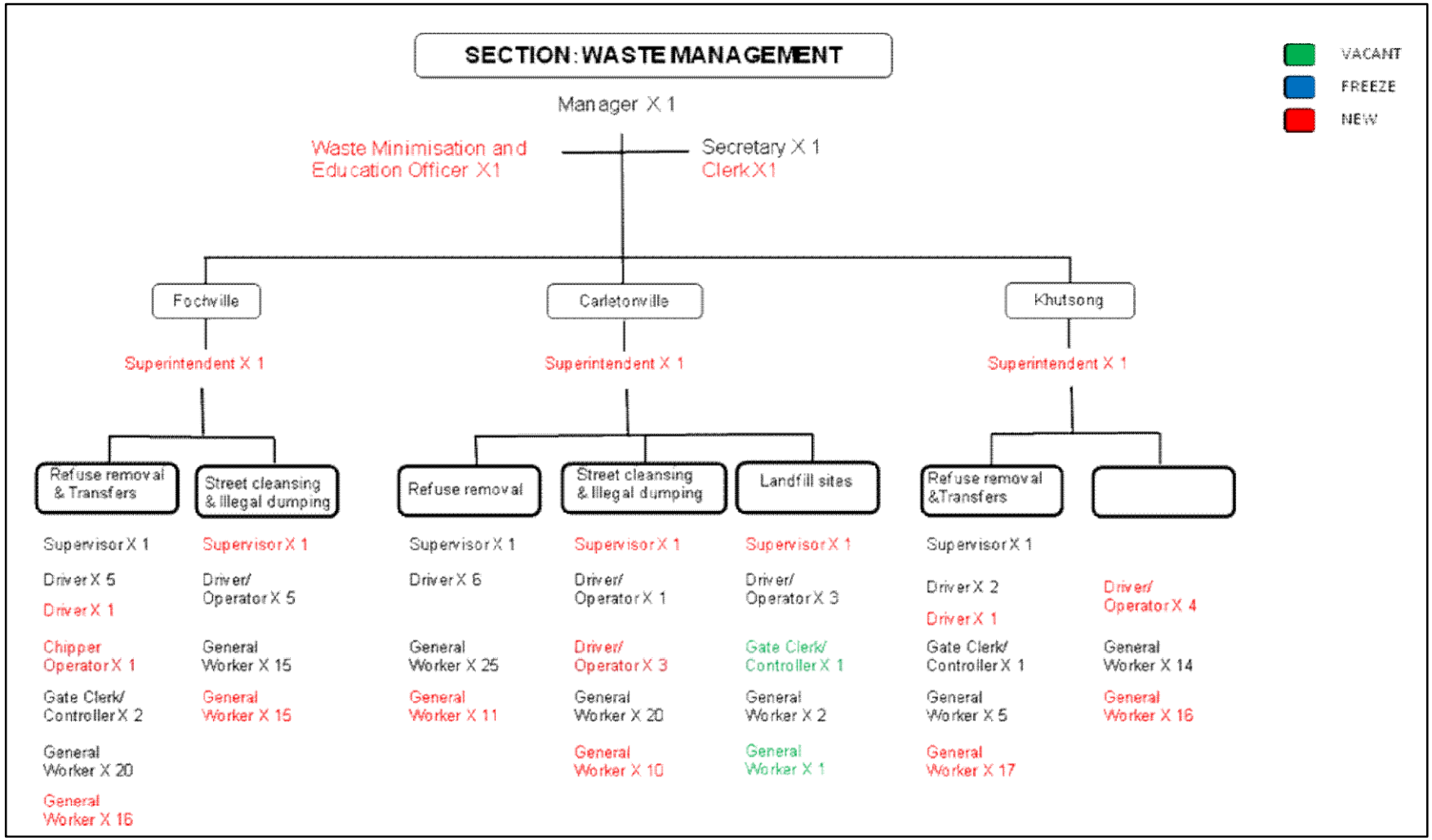


Figure 31: Waste Management Personnel Structure within the MCLM

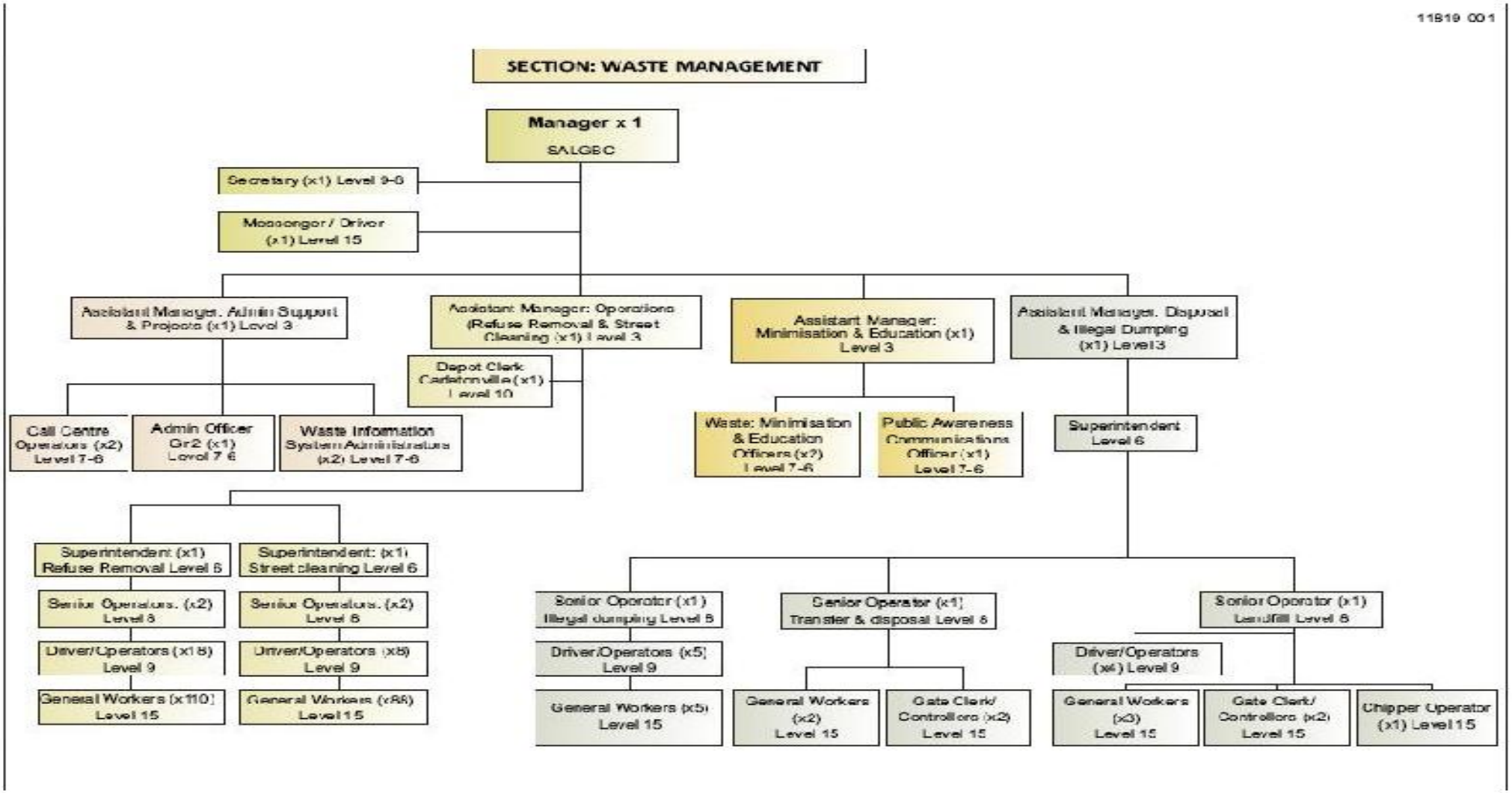


Figure 32: The proposed waste management structure of MCLM

Table 13: Summary of the current and proposed personnel structure of MCLM

Current				Proposed			
Personnel Description	Level	Amount of personnel	Total in section	Personnel Description	Level	Amount of personnel	Total in section
Waste Management Section: Management							
Waste Management Manager	1	1		Waste Management Manager	1	1	
Secretary	9 to 8	1		Secretary	8 or 9	1	
Messenger	15	0	2	Messenger	15	1	3
Admin Support							
		0		Assistant Manager: Admin Support and Projects	3	1	
		0		Call Centre	7 or 6	2	
		0		Admin officer	7 or 6	1	
		0		WIS administrators	7 or 6	2	6
Education							
		0		Assistant Manager Minimisation & Education	3	1	
		0		Waste Minimisation & Education Officer	6 or 7	2	
		0		Public Awareness/ Communication Officer	6 or 7	1	4

Current				Proposed			
Personnel Description	Level	Amount of personnel	Total in section	Personnel Description	Level	Amount of personnel	Total in section
Disposal & Illegal Dumping							
		0		Assistant Manager: Disposal & Illegal Dumping	3	1	
		0		Superintendent	6	1	2
Illegal Dumping							
		0		Senior Operator: Illegal Dumping	8	1	
		0		Driver/ Operator	9	5	
		0		General Workers	15	5	11
Disposal & Transfer							
Senior Operator: Transfer	8	0		Senior Operator: Transfer	8	1	
		0		General Workers	15	2	
		0		Gate Clerk/ Controllers	15	2	
Senior Operator: Landfill		0		Senior Operator : Landfill	8	1	
Driver/Operators: (Water Cart, Refuse Tipper, Black Hoe, Landfill Compactor)	9	3		Driver/ Operator	9	4	
General Workers (Spotters)	19	3		General Workers	15	3	

Current				Proposed			
Personnel Description	Level	Amount of personnel	Total in section	Personnel Description	Level	Amount of personnel	Total in section
Chipper Operator	15	0		Chipper Operator	15	1	
Gate Controller	16	1	7	Gate Controller	15	2	16
Total Disposal & Illegal Dumping							
Operations (Refuse Removal & Street Cleaning)							
Assistant Manager: Operations (Refuse Removal & Street Cleaning)	3	0		Assistant Manager: Operations (Refuse Removal & Street Cleaning)	3	1	
Depot Clerk	10	0		Depot Clerk	10	1	
Superintendent	6	0		Superintendent	6	1	
Senior Operator	8	0		Senior Operator	8	2	
Driver/ Operator	9	0		Driver/ Operator	9	18	
General Workers	15	0		General Workers	15	110	133
Superintendent	6	1				0	
Supervisor	9	1				0	
Driver/ Operator	9	5				0	
Driver/ Operator	9	0				0	
General Workers	15	24	31			0	
Fochville: Refuse Removal & Transfers							
Superintendent	6	0				0	

Current				Proposed			
Personnel Description	Level	Amount of personnel	Total in section	Personnel Description	Level	Amount of personnel	Total in section
Supervisor	9	1				0	
Refuse Truck Driver	10 or 11	6				0	
Chipper Operator	19	1				0	
Gate Clerk Controller	19	1				0	
General Workers	19	20	29			0	
Khutsong: Refuse Removal & Transfers							
Superintendent	6	0				0	
Supervisor	9	1				0	
Driver/ Operator	9	2				0	
Refuse Truck Driver	10 or 11	0				0	
Gate Clerk Controller	16	1				0	
General Workers	19	5	9			0	
Total Refuse Removal							
Street Cleaning							
		0		Superintendent	6	1	
		0		Senior Operator	8	2	
		0		Driver/ Operator	9	8	
		0		General Workers	15	88	99
Carltonville: Street Cleaning & Illegal Dumping							
Supervisor	9	0				0	
Driver/ Operator	9	1				0	
General Workers	19	31	32			0	

Current				Proposed			
Personnel Description	Level	Amount of personnel	Total in section	Personnel Description	Level	Amount of personnel	Total in section
Fochville: Street Cleaning & Illegal Dumping							
Supervisor	9	0				0	
Driver/ Operator	9	4				0	
General Workers	19	15	19			0	
Khutsong: Street Cleaning & Illegal Dumping							
Supervisor	9	0				0	
Driver/ Operator	9	0				0	
General Workers	19	14	14			0	0
Total Street Cleaning							
Total Operations (Refuse Removal & Street Cleaning)							
Total amount of personnel			143				274

5.10. Industrial and Health Care Risk Waste

The Goal is to ensure the safe handling and disposal of Industrial (non-hazardous and hazardous) waste and Health Care Risk Waste generated or handled within the municipal area.

The above aspects will be monitored as part of the WIS and it proposed that generators and transporters are included under the licensing system.

5.11. Finances / income / revenue

Council's commitment to the IWMP to ensure that the correct budgeting and the appropriate revenue collections systems are in place is of the utmost importance. Without this commitment this IWMP report would merely become a further report ending up on the shelve without having contributed to the improvement of waste management in MCLM. Council should note that the annual performance report prepared in terms of section 46 of the Municipal Systems Act must contain information on the implementation of the municipal IWMP insofar as it relates to the performance of the MCLM.

Following is a table where appropriate alternatives/options for each of the objectives were identified, with a motivation on the preferred alternative.

Table 14: Alternatives/options for each objective

No	***Component***	***Options***	***Proposed option***
A.	**GENERAL**		
A.1.	***Integrated Waste Management Plan***		
	Goal		
	To have an Integrated Waste Management Plan in place that will assist the MCLM with future planning of waste related activities within the municipality.		
	Objectives		
A.1.1	In order to reach the above goal, the following objectives for the IWMP are set:	Done	Done
A.1.1.1	The 2009 baseline conditions must be clearly stated i.e. the *Status Quo* needs to be factual;	Done	Done
A.1.1.2	The gaps and needs must be identified;	Done	Done
A.1.1.3	Achievable goals and objectives must be identified;	Done	Done
A.1.1.4	Establish sustainable and fit-for-purpose solutions / option;	Done	Done
A.1.1.5	Programmes and budgets must be developed in order to meet the goals and objectives; and	Done	Done
A.1.1.6	Reporting and implementation of the IWMP	**COMPULSORY**: Submit annual performance report as per Chapter 3, section 13 of the NEM:WA	**COMPULSORY**: Submit annual performance report as per Chapter 3, section 13 of the NEM:WA
A.1.1.7	Five yearly review of the plan including the baseline (*status quo*)	IWMP to be reviewed every five years.	IWMP to be reviewed every five years.
A.2.	***Waste Management By-Laws and Licensing System***		
	Goal		

No	***Component***	***Options***	***Proposed option***
	To have relevant and up-to-date Waste By-Laws in place and to ensure the implementation of a formal licensing system.		
	Objectives		
A.2.1	To ensure that the By-laws are not in conflict with any current legislation as well as the NEM:	Review current Waste Management By-laws in terms of the objectives of NEM:WA	Review current Waste Management By-laws by a legal company and a waste company in close co-corporation with the MCLM legal department.
A.2.2	To ensure that the By-laws support the outcomes and implementation strategy from the Integrated Waste Management Plan.	To be revisited once this document has been adopted by the MCLM.	To be revisited once this document has been adopted by the MCLM.
A.2.3	To have an adequate waste information system to support the actions required in the draft Waste By-laws.	Addressed in A.3.	Addressed in A.3.
A.2.4	To implement an appropriate licensing system with the associated support systems and personnel. This will be applicable to the licensing of the collection of commercial waste by private contractors and to keep track of industrial and Heath Care Risk Waste.	MCLM to develop the licensing system.	MCLM to develop the licensing system.
A.2.5	Requirements, which form part of the licensing process to be indicated. This could include stipulating the information required from the license applicant for input into the Waste Information System.	**Option 1**: MCLM to develop licensing system. **Option 2:** Appoint a specialist to develop and assist with the implementation of a licensing system.	Appoint a specialist to develop and assist with the implementation of a licensing system since there is no in-house expertise available. Ensure that licensing system is included in the Waste Management By-laws.
A.2.6	Development of standards for the licensees.	**Option 1:** MCLM to develop **Option 2:** Appoint a specialist to develop standards.	Appoint a specialist to develop standards.
A.2.7	Aspects on waste minimisation, recycling and separation at source should be included in the By-laws before they are promulgated.	To be addressed by MCLM.	To be addressed by MCLM.

No	***Component***	***Options***	***Proposed option***
A.3.	***Implementation of a Waste Information System (WIS)***		
	Goal		
	To have a waste information system that will assist in future planning of waste management and allow for quick and easy access to information including (but not limited to) aspects such as number of service points *per* area, population densities, equipment available, reliability of equipment, personnel involved in various aspects, volumes of waste from areas, volumes of waste disposed of at the landfills and auditing information on the landfills.		
	Objectives		
A.3.1	To **develop** a WIS linked to a database.		
A.3.1.1	All information relating to waste types such as domestic, commercial, industrial, hazardous and health care waste should be recorded and updated on a regular basis;	**Option 1:** MCLM to develop WIS in-house. **Option 2:** Appoint a specialist to develop a WIS and train MCLM in using the system. **Option 3**: Appoint a specialist to develop a WIS and run the system	Appoint a specialist to develop a WIS and train MCLM in using the system since no in-house expertise exists within the MCLM. The MCLM will have to ensure that suitably qualified people are appointed or trained on the system, that the system is maintained in the correct manner and that the data is submitted to the national WIS.
A.3.1.2	The system must be linked to all the departments that provide input to the Waste Management Section i.e. Financial Dept., Transport Dept, Human Resources Dept, etc.		
A.3.1.3	The WIS should be aligned to the National Waste Information System (NWIS) but should provide more detail than currently required by the NWIS.		
A.3.1.4	The WIS should address the requirements from provincial and national government.		
A.3.1.5	Integration of the WIS and licensing system should be considered.		

No	***Component***	***Options***	***Proposed option***
A.3.1.6	Development of the WIS should be based upon short, medium and long term needs of the MCLM.		
A.3.2	To **operate** a WIS linked to a database. This should as a minimum record the data which is required by the National Waste Information System.	**Option 1**: Budget, advertise, appoint and train personnel to operate and maintain the WIS. **Option 2:** Budget, advertise and appoint a specialist to operate and maintain the WIS.	Budget, advertise, appoint and train personnel to operate and maintain the WIS. This will support job creation initiatives by the MCLM
A.3.2.1	Appoint and train personnel to collect the information required and to operate and to maintain the system.		
A.4.	***Efficient client and customer relations***		
	Goal		
	Ensuring prompt reaction to complaints received from customers (general public, domestic and commercial service).		
	Objectives		
A.4.1	**Establish** a call centre that deals with complaints related to the waste management service or appoint a person that deals exclusively with waste related complaints.	**Option 1:** MCLM to establish a call centre Internally. **Option 2:** Appoint a specialist that deals with complaints related to the waste management services.	MCLM to establish a call centre. This will support job creation initiatives by the MCLM
A.4.1.1	Ensure that the (se) person(s) are well trained to deal with difficult clients and customers and are skilled to resolve complaints pertaining to municipal waste management challenges/problems.		
A.4.2	**Operate** an efficient client and customer relation centre including a call centre.	**Option 1:** MCLM to operate own call centre.	MCLM to operate own call centre.

No	***Component***	***Options***	***Proposed option***
A.4.2.1	Formalise a complaints system, which will include registering calls and complaints, referral of complaint to the relevant official and follow up action procedure and feedback to the customer. Link the formal complaints system to the WIS.	**Option 2:** Outsource call centre	
B	***Public awareness***		
B1	***Community involvement, awareness and education programmes concerning recycling, separation at source and waste management in general.***		
	Goal		
	Develop, promote, introduce involve and educate the communities and general public regarding waste related issues such as separation at source, waste minimisation, recycling and getting the people involved in waste management initiatives..		
	Objectives		
B1.	Develop a strategy that will encourage community participation in waste related issues such as separation at source, waste minimisation, and recycling. The strategy will have to be phased since aspects such as waste collection in the informal areas first have to be addressed before separation at source can be introduced in these areas. A proper action plan with an associated budget as well as dedicated persons to drive the public education and awareness campaigns, are required. The strategy will allow for a number of tiers of programmes to accommodate the various communities' needs and ensure appropriate mechanism for communicating the message.	**Option 1:** Appoint a specialist to develop a community participation strategy. **Option 2:** Appoint persons within the MCLM to develop a community participation strategy. Benchmark with other municipalities such as Potchefstroom.	Appoint competent person/s within the MCLM to develop a community participation strategy. Employ the train the trainer principle.
B1.1	Appoint a person/s that will be responsible for the development, promotion, driving and education aspects of this strategy.		
B1.2	Training and awareness on environmental issues needs to developed or sourced from existing programmes.		

No	***Component***	***Options***	***Proposed option***
B1.3	Make the communities aware of the negative impact of illegal dumping and provide them with adequate facilities or services to reduce the need for illegal dumping.		
B1.4	Establish community based environmental programmes that involve the community in awareness and cleanup campaigns.		
B1.5	Develop anti-litter campaigns together with public education and have a suitable litter system in place.		
C	**Waste minimisation and recycling**		
	Goal		
	Implement achievable, sustainable and feasible waste minimisation and recycling programmes and initiatives.		
	Objectives		
C.1	**Development**		
C.1.1	To establish a formal partnership with Buyisa-e-bag and/or others for the establishment of a buyback centres at strategic locations (domestic and commercial). Assist and encourage the development of buy-back centres, recycling sorting centres following separation at source. Provide for public recycling drop-off facilities such as at shopping centres, landfills, etc.	**Option 1:** Appoint a specialist to develop waste minimisation and recycling programmes and initiatives. Investigate the feasibility of setting up a composting plant from garden waste at a garden waste facility. **Option 2:** Appoint persons within the MCLM to develop and implement waste minimisation and recycling programmes and initiatives. Seek assistance from Buyisa-e-bag and other companies. Benchmark with other municipalities on waste re-using programmes and/or involve the public/ community. **Option 3:** Appoint a municipal contract a company responsible for recyclable waste collection. **Option 4:** Consider waste recycling trolleys involving the community.	**Option 2, 3 and 4:** Appoint persons within the MCLM to develop a community participation strategy. These persons should be working closely with the communities to ensure the successful implementation of projects. Acknowledge/uphold the sustainability principle throughout the development and implementation of this initiative.
C.1.2	To development formal recycling programmes. High recyclable generation areas such as the commercial sector and medium to high income areas should be targeted in the short-term.		
C.1.3	Develop and support community based environmental, waste minimisation and recycling initiatives.		

No	***Component***	***Options***	***Proposed option***
C.2	**Implementation**		
C.2.1	To implement a formal partnership with other contractors for the establishment of a buyback centres at strategic locations (domestic and commercial). Assist and encourage the development of buy-back centres, recycling sorting centres following separation at source. Provide for public recycling drop-off facilities such as at shopping centres, landfills, etc. ;	Depending on the above options	Implement the following: Formal partnerships with contractors for the establishment of a buyback centres at strategic locations (domestic and commercial); Implement recycling programmes; Separation at source.
C.2.2	To implement formal recycling programmes. High recyclable generation areas such as the commercial sector and medium to high income areas should be targeted in the short-term.	Depending on the above options	
C.2.3	Appoint a person/s that will be responsible for the development, promotion, driving and management aspects of this strategy.	Depending on the above options	
C.2.4	Promote separation of waste at source, i.e. at the point of generation (for recycling and composting projects)	Education on separation at source should be included in the public education and awareness campaigns described above. Educate the private sector to assist or get involved with the municipality on projects of this nature. Start with a pilot project to establish feasibility and co-operation.	

No	***Component***	***Options***	***Proposed option***
D	**Service provision (Collection)**		
D1	***Domestic collection***		
	Goal		
	Rendering of a sustainable, affordable, reliable and effective residential refuse collection services.		
	Objectives		
D1.1	Round balancing needs to be done on collection routes to optimise the routes and to ensure effective utilisation of resources. Waste receptacles should be provided to households in informal areas and a collection system should be investigated.	**Option 1:** Task someone within the MCLM to optimise collection routes. **Option 2:** Appoint a specialist to investigate the optimisation of collection routes.	Task someone within the MCLM to optimise collection routes as they would be most familiar with the area.
D1.2	Separation at source projects to be initiated. Collection systems to be flexible to accommodate separation at source;		
D1.3	Obtain additional collection unit as backup to existing collection units. Ensure a reliable collection system	Review the current contract.	Review the current contract to ensure that there are adequate for collection and provision for back-up equipment.
D1.5	Ensure that there is enough crew for domestic collection in the MCLM area.	Ensure that recruitment procedures are followed when interviewing new candidates. Staff employed should have all the relevant qualifications required. Criteria and job descriptions to be reviewed.	Review crew requirements and appoint appropriate personnel.

No	***Component***	***Options***	***Proposed option***
D1.6	Ensure market related rates for collection. This also applies to the containers	Review all rates to ensure that the rates are market related.	Review all rates to ensure that the rates are market related.
D1.7	Improve refuse collection in informal settlements.	Detail evaluation of existing waste collection relating to the proposed collection system in the informal areas. Alternative collection systems and methodologies to be investigated. Consider outsourcing of current un-serviced areas and / or informal settlements.	Evaluation of collection services addressed under D.1.1. It is proposed that the collection service for the current unserviced areas and / or informal settlements be sourced out to locals (base on same system as used by City of Cape Town). Investigate as part of Section 78 study.
D1.8	Implement a 240ℓ wheelie bin system to all residents having a municipal services account	Conduct a costing to determine the impact such a service will have on the MCLM considering that the collection routes will have to be optimized (collection taking longer) and collection vehicles will have to be fitted with bin lifting systems.	Do cost analysis and implement a 240ℓ wheelie bin system.
D2	***Commercial collection***		
	Goal		
	To render a sustainable cost effective commercial refuse removal service in formal areas as per the negotiated frequency. To further ensure the standardisation of commercial containers and adequate storage space at the service point.		
	Objectives		
D2.1	The implementation of a reliable service i.e. to service each service point as per the frequency of collection per week paid for.	MCLM to ensure availability of adequate equipment and backup equipment.	Dealt with under equipment.

No	***Component***	***Options***	***Proposed option***
D2.2	Incentives for recycling at source such as reduced rates should be considered for commercial service points. The feasibility of such an option should be investigated.	Implement a pilot project to evaluate the sustainability of recycling at source.	MCLM to implement pilot project to test the sustainability of recycling at source.
D3	***Public disposal facilities***		
	Goal		
	To investigate the feasibility of public disposal facilities to provide an additional facility for the community to dispose of their garden and uncollected domestic waste and to serve as a method for reducing illegal dumping, collection time and transport cost.		
	Objectives		
D3.1	**Investigate the feasibility of utilising public disposal facilities** as a method of reducing illegal dumping. (Possible time lost and transport cost savings should also be investigated in more detail once the WIS is in operation since, no data is currently available on volumes and costs associated with illegal dumping).	**Option 1:** MCLM investigate the additional public disposal facilities and upgrading of the existing ones. **Option 2:** Appoint a specialist to investigate the feasibility of additional public disposal facilities, suitable areas for additional public disposal facilities and to meet NEM: WA licensing requirements.	There is no in-house expertise available to investigate this aspect. Appoint a specialist to investigate the feasibility of additional public disposal facilities and, suitable areas for these to meet NEM: WA licensing requirements.

No	***Component***	***Options***	***Proposed option***
D3.1.1	Public acceptability of public disposal facilities (communal disposal facility where residents dispose of waste themselves) should be investigated for the informal areas and areas where there is a lack of proper service. The option of appointing local entrepreneurs for collection in the informal areas should be investigated. They can collect from the informal areas and dispose at a public disposal / transfer facility from where the municipality can than collect to landfill.		
D3.1.2	Facilities for garden refuse, drop-off points for recyclables, drop-off points for household hazardous waste, drop-off points for non-hazardous waste. Also at places where high numbers of people gather, the frequency of bin clearing needs to be determined to prevent overfilled containers from over flowing.		
D3.2	**Operate the Public Disposal Facilities**		
D3.2.1	All aspects of the operation of such facilities should be considered. These facilities should comply with legislative requirements.	**Option 1:** MCLM to operate the public disposal facilities. **Option 2:** MCLM to appoint contractors to operate the public disposal facilities.	Appoint a consultant to conduct a MSA Section 78 study to determine the feasibility of using a private contractor to operate the site.
D4	***Equipment***		
	Goal		
	There should be sufficient backup collection equipment at all times.		
	Objective		

No	***Component***	***Options***	***Proposed option***
D4.1	Ensure that there is adequate spare capacity for any type of collection unit or systems (additional equipment that can be on standby) as well as reliable backup service from the body builder and chassis supplier. Reliable back-up service will result in less down time and overtime.	Evaluation to be done, backup service to be investigated by the MCLM. Review current contract if required.	The MCLM should obtain and compare quotes on the most reliable type of backup service from specialist/dealers and discuss these with the FML company.
D4.2	The renewal of the existing or a new contract for Full Maintenance Leasing (FML) should be planned in advance to ensure that there is no delays in the supply of equipment (the MCLM does not own waste collection equipment).	Ensure that contract renewal process is planned and in place before existing contracts expire.	Ensure that contract renewal process is planned and in place before existing contracts expire.
D4.3	Before contracting a new service, an appropriate waste handling unit should first be selected based on a thorough investigation.	Appoint specialist to investigate any new type of services.	Appoint specialist to investigate any new type of services since there are no one within the municipality that can conduct such an investigation.
D4.4	A reputable make landfill compactor with reliable backup service should be acquired for the operation of the Rooipoort Landfill. Additional equipment such as a bulldozer, tipper, loader and water cart needs to be sourced for operation at the landfill. The landfill compactor should not be used as a bulldozer if adequate equipment is not available. Proper training of operators will result in less costly breakdowns.	**Option 1:** Acquire proper waste handling equipment at the landfill, i.e. landfill compactor, excavator, bulldozer, tipper, water cart etc. To ensure that the landfill is properly operated and maintained. Personnel must be properly trained by an accredited specialist. **Option 2**: Outsource the operation of the landfill.	Indications are that the outsourcing of the operation of the landfill is less expensive than purchasing equipment and training people. It is therefore proposed to outsource the operation of the landfill since this is a specialist field and most municipalities do not have the skills required to operate a landfill according to the required standards.
D5	***Street cleansing/Sweeping***		
	Goal		

No	***Component***	***Options***	***Proposed option***
	To implement a proper, well staffed street cleaning service in all business areas, decentralized business areas and along all major routes at the various towns within the MCLM area.		
	To place an adequate number of litter bins within business areas and high use areas throughout the MCLM and which is serviced on a regular basis.		
	Objectives		
D5.1	To **implement** a regular reliable street sweeping service in all business areas, decentralised business areas and major access routes within the municipality. Adequate permanent staffing will be required for each area. A survey should be done of each area to determine the total area to be covered and the number of personnel required. MCLM needs to decide on the level of service required and based here on compile a guideline document, and thereafter should conduct an investigation into the needs to fulfill the requirements of the guideline document.	**Option 1:** MCLM to decide on level of service and then conduct proper survey of where street cleansing services are required and determine the number of personnel. Appoint additional personnel, if required. **Option 2:** Appoint a specialist to conduct the survey.	MCLM needs to decide on level of service required. Appoint a specialist to conduct the survey since the required skills is not within the MCLM to conduct such a survey.
D5.2	The method of servicing street bins and the time and cost implication should also be investigated. Recommendation should be made on the implementation of the service and possible financial, social and environmental impacts.		

No	***Component***	***Options***	***Proposed option***
D5.2.1	Acquire an adequate and appropriate number of street bins for each business area and high use areas within the municipality. A survey should be done of all these areas within the municipality to determine the need and if required the number of street bins for each area.	MCLM to conduct survey and put placement of bins out to tender. **Option 1:** MCLM to run the street cleansing services. **Option 2:** Outsource the service.	Conduct a feasibility study on the number of bins required, where these should be placed and who should provide the service (Section 78 study).
D5.3	Equipment dedicated to the street cleaning services should be sourced. This will provide equipment for collection and to assist with the transport of the street sweeping personnel.	Adequate equipment needs to be obtained for the collection of street cleaning waste as well as for the transportation of street cleaners to and from their work areas.	Adequate equipment needs to be obtained for the collection of street cleaning waste as well as for the transportation of street cleaners to and from their work areas. This can be done as an FML or through equipment purchased by the municipality.
D6	***Landfills***		
	Goal		
	To ensure that the Rooipoort landfill is operated according the permit conditions and the Minimum Requirements for Waste Disposal by Landfill (DWAF 1998) and. that the closed landfill at Fochville is properly rehabilitated, monitored on a regular basis and that the site is authorised (legal requirement) for closure..		
	Objective		

No	***Component***	***Options***	***Proposed option***
D.6.1	The proper upgrading, rehabilitation, operation, maintenance and monitoring of the Rooipoort Landfill should be prioritised due to the current situation at the site. There is little to no control at present and equipment is only available on *ad hoc* basis to operate the site:	**Option 1:** The option of appointing a private company to operate and maintain the Rooipoort landfill should be investigated in terms of Section 78 of the Municipal Systems Act as well as a Municipal Financial Management Act. **Option 2:** MCLM to operate the Rooipoort landfill. See options 2a - 2c below.	Investigate appointing a private company to operate and maintain the Rooipoort landfill in terms of Section 78 of the Municipal Systems Act as well as a Municipal Financial Management Act.
D6.1.1	Proper operation and maintenance of the Rooipoort landfill site.	**Option 2a:** Training of personnel responsible for the day to day operation of the landfill site. A proper budget to allow for the purchase of a new landfill compactor and to hire additional equipment as and when required.	Training of personnel responsible for the day to day operation of the landfill site and proper budget to allow for the purchase of a new landfill compactor and to hire additional equipment as and when required, if the above mentioned Section 78 study not be done.
D6.1.3	Audit and monitor site as required by legislation.	**Option 2b:** Commence with the monitoring programme as part of the regular auditing of the site. An external auditor to be used on an annual basis.	Commence with the monitoring programme as part of the regular auditing of the site. An external auditor to be used on an annual basis.
D6.1.4	Continuous development of the site.	**Option 2c:** Record volumes entering the site and have an airspace calculation done every year to ensure that proper future planning can be done for the development of future cells.	Record volumes entering the site and have an airspace calculation done every year to ensure that proper future planning can be done for the development of future cells.
D6.1.5	Implement proper rates at Rooipoort Landfill Site.	Investigate the current rates in relation to other landfills. Update rates if required.	Investigate the current rates in relation to other landfills. With the new weighbridge being installed; third party disposers can be levied.

No	***Component***	***Options***	***Proposed option***
D6.1.6	Rehabilitation of the existing phase and upgrading and development of the subsequent phases of the Rooipoort Landfill Site	Institute an invoicing system at the landfill to collect revenue for disposal operations as well as for closure and rehabilitation costs. A closure fund needs to be established for the rehabilitation and closure of the Rooipoort Landfill.	Develop and implement the invoicing system at the Roipoort landifll and establish the closure and rehablilitation fund for the Rooipoort Landfill.
D.6.2	The existing, the closed and any future landfill sites have to be monitored on a regular basis. Any operational site also needs to be audited on a regular basis. (At least annually, ideally bi-annually). The MCLM should obtain quotes for the monitoring and auditing of the sites from competent external specialists, and budget accordingly.	Commence with the monitoring programme as part of the regular auditing of the site. An external auditor to be used on an annual basis.	
D7	***Personnel***		
	Goals		
	Have adequate, medically fit, well trained personnel to cover the range of tasks required to deliver a total waste management service to the communities. All management and supervisory positions to be filled.		
	Objectives		
D7.1	To have medically fit personnel to use as runners for the collection service. This is physically demanding work and requires personnel that can handle the physical stress. There needs to be at least 5 runners per collection vehicle for domestic collection.	Appoint adequate personnel, cost implication to l be assessed.	MCLM to appoint adequate personnel.
D7.2	Personnel should be trained in their respective task since they are dealing with potentially hazardous material. There are numerous training modules available from private waste contractors on the various aspects of waste management.	Appoint specialist to train personnel.	MCLM to appoint an accredited specialist to train personnel in general waste management principles and for specific tasks allocated to personnel since such expertise in not available within the MCLM.

No	***Component***	***Options***	***Proposed option***
D7.3	The landfill manager, access controller, spotter and operator need to undergo various levels of training to ensure that the landfills are operated according to the required standards.		
D7.4	Consideration should be given to creating a position for an education and awareness / recycling and waste minimisation co-ordinator and/or a Waste Management Control Officer in terms of NEMWA.	MCLM to consider such a position.	MCLM to appoint an education and awareness / recycling and a waste minimisation co-ordinator and /or a Waste Management Control Officer in terms of NEMWA as indicated above.
D7.5	Have adequate and experienced staff available in the head office and regional offices for the WMS.	Vacancies to be filled as soon as possible with staff having qualifications and competencies fitting the required job descriptions. Proper job descriptions to be developed where necessary.	Vacancies to be filled as soon as possible with staff having qualifications and competencies fitting the required job descriptions. Proper job descriptions to be developed where necessary.
D7.6	To have all the vacant posts staffed in the waste management section.	Staff all the vacant posts to ensure the effective management and operation of the waste management section.	Staff all the vacant posts to ensure the effective management and operation of the waste management section.
D7.7	Proper waste depot with ablution facilities.	Proper waste depots need to be constructed to house the waste management section and to provide them with their own identity.	The construction of waste depots.
D8	***Industrial and Health Care Risk Waste***		
	Goals		
	To ensure the safe handling and disposal of Industrial (non-hazardous and hazardous) waste and Health Care Risk Waste generated or handled within the municipal area.		
	Objectives		

No	***Component***	***Options***	***Proposed option***
D8.1	The MCLM to keep track of any/ all Industrial and Health Care Risk Waste generated or handled within the municipal area. The implementation and management of the WIS will have to be such as to ensure the successful monitoring of these types of waste.	Part of the Waste Information System (WIS).	To be implemented under the WIS and waste minimization initiative as indicated above.
D8.2	Ensure that the generators of Industrial and Health Care Risk Waste register with the MCLM (to be captured in By-laws). Further that they handle and dispose of the waste as prescribed by the By-laws (MCLM to ensure that this aspect is covered correctly in the By-laws) and that this process is monitored through the WIS supported by a waste manifest system.		
E	***Finances / income / revenue***		
	Goal		
	To have council committed to the IWMP, to ensure that the correct budgeting takes place and that the appropriate revenue collections systems are in place.		
	Objectives		
E1.1	Council should adopt the IWMP in its entirety, including the associated budgets and programmes.	MCLM council to adopt IWMP.	MCLM council to adopt IWMP.
E1.2	The IDP should be adapted accordingly to ensure the correct budgeting and implementation of recommendations.	Amend IDP to incorporate IWMP.	Amend IDP to incorporate IWMP.
E1.3	Council should ensure that the revenue generated by the WMS is channeled back into the department.	MCLM council to adopt such a policy.	MCLM council to adopt such a policy.

No	***Component***	***Options***	***Pr***
E1.4	Utilisation of subsidised funding schemes	Municipality to use MIG and similar funding for waste management projects.	Mu was
E1.5	Waste management rate structures that are reflecting the actual cost of services.	Review all rates to ensure that the rates are market related.	

6. PART 5: IMPLEMENTATION PLAN FOR THE INTEGRATED WASTE MANAGEMENT PLAN FOR MERAFONG CITY LOCAL MUNICIPALITY

6.1. BACKGROUND TO THE IMPLEMENTATION PLAN FOR THE INTEGRATED WASTE MANAGEMENT PLAN

The proposed options were discussed and agreed in consultation with MCLM. The preferred options suggested address the Implementation Plan of the IWMP. To describe how MCLM intends to give effect to its integrated waste management plan; each preferred option is managed as a project with the associated costs involved, the funding sources, the resources needed and the timescale relative to the region of implementation.

The suggested Implementation Plan of the IWMP for MCLM is summarised in the table overleaf:

TABLE : IWMP Options for Merafong City Local Municipality (October 2010)

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No	Component	Options	Proposed option	Project	Location / Region	Type of Personnel Required	No Required	Cost per Annum (Level)	Estimated cost 2011	Once off / Per Annum	Possible funding	Implementation programme				
												Year				
												2011 - 2012	2012 - 2013	2013 - 2014	2014-2015	2015-2016
A.	**GENERAL**															
A.1.	***Integrated Waste Management Plan***															
	Goal															
	To have an Integrated Waste Management Plan in place that will assist the MCLM with future planning of waste related activities within the municipality and implement accordingly in integrated fashion, on priority basis and in compliance with NEM:WA.															
	Objectives															
A.1.1	In order to reach the above goal, the following objectives for the IWMP are set:	Done	Done	**Develop IWMP for MCLM (Done)**	MCLM											
A.1.1.1	The 2009 baseline conditions must be clearly stated i.e. the Status Quo needs to be factual;	Done	Done													
A.1.1.2	The gaps and needs must be identified;	Done	Done													
A.1.1.3	Achievable goals and objectives must be identified;	Done	Done													
A.1.1.4	Establish sustainable and fit-for-purpose solutions / option;	Done	Done													
A.1.1.5	Programmes and budgets must be developed in order to meet the goals and objectives; and	Done	Done													
A.1.1.6	Reporting and implementation of the IWMP	**COMPULSORY**: Submit annual performance report as per Chapter 3, section 13 of the NEM:WA	**COMPULSORY**: Submit annual performance report as per Chapter 3, section 13 of the NEM:WA	**Report implementation progress on an annual basis and review IWMP every five (5) years.**	MCLM				R 50,000.00	Annual progress report	Internal	R 55,000.00	R 60,500.00	R 66,550.00	R 73,205.00	R 80,525.50
A.1.1.7	Five yearly review of the plan including the baseline (*status quo*)	IWMP to be reviewed every five years.	IWMP to be reviewed every five years.		MCLM				R 500,000.00	5 year review of IWMP	Internal					R 805,255.00
A.2.	***Waste Management By-Laws and Licensing System***															
	Goal															
	To have relevant and up-to-date Waste By-Laws in place and to ensure the implementation of a formal licensing system.															
	Objectives															
A.2.1	To ensure that the By-laws are not in conflict with any current legislation as well as the NEM:WA (Act 59 of 2008).	Review current Waste Management By-laws ito NEM:WA	Review current Waste Management By-laws by external legal company and waste company in close co-corporation with the MCLM legal department.	**Review and amend current Waste Management By-laws**	MCLM				R 300,000.00	Once off	Internal	R 150,000.00	R 150,000.00			
A.2.2	To ensure that the By-laws support the outcomes and implementation strategy from the Integrated Waste Management Plan.	To be revisited once this document has been adopted by the MCLM.	To be revisited once this document has been adopted by the MCLM.													
A.2.3	To have an adequate waste information system to support the actions required in the draft Waste By-laws.	Addressed in A.3.	Addressed in A.3.													
A.2.4	To implement an appropriate licensing system with the associated support systems and personnel. This will be applicable to the licensing of the collection of commercial waste by private contractors and to keep track of industrial and Heath Care Risk Waste.	MCLM to develop the licensing system.	MCLM to develop the licensing system.	**Develop and implement a licensing system.**	MCLM				R 500,000.00	Once off development	Internal		R 300,000.00	R 200,000.00		
A.2.5	Requirements, which form part of the licensing aspect to be indicated. This could include what information is required of the licensee for input into the Waste Information System.	**Option 1**: MCLM to develop licensing system. **Option 2:** Appoint a specialist to develop and assist with the implementation of a licensing system.	Appoint a specialist to develop and assist with the implementation of a licensing system since there are no in-house expertise available. Ensure that licensing system is included in the Waste Management By-laws.													
A.2.6	Development of standards for the licensees.	**Option 1:** MCLM to develop **Option 2:** Appoint a specialist to develop standards.	Appoint a specialist to develop standards.			Licence administrator and assistant	2		R -	Annual operating cost	Internal	R -	R -	R -	R -	R -
A.2.7	Aspects on waste minimisation, recycling and separation at source should be included in the By-laws before they are promulgated.	To be addressed by MCLM.	To be addressed by MCLM.	**Included with project for A2.1 and 2.2 above**												
A.3.	***Implementation of a Waste Information System (WIS)***															
	Goal															
	To have a waste information system that will assist in future planning of waste management and allow for quick and easy access to information not limited to but including aspects such as number of service points per area, population densities, equipment available, reliability of equipment, personnel involved in various aspects, volumes of waste from areas, volumes of waste disposed of at the landfills and auditing information on the landfills.															
	Objectives															
A.3.1	To **develop** a WIS linked to a database.															
A.3.1.1	All information relating to waste types such as domestic, commercial, industrial, hazardous and health care waste should be recorded and updated on a regular basis;	**Option 1:** MCLM to develop WIS in-house. **Option 2:** Appoint a specialist to develop a WIS and train MCLM in using the system. **Option 3**: Appoint a specialist to develop a WIS and run the system	Appoint a specialist to develop a WIS and train MCLM in using the system since no in-house expertise exists within the MCLM. The MCLM will have to ensure that suitably qualified people are appointed or trained on the system and that the system is maintained in the correct manner. Further that the data is distributed to the national WIS.	**Develop a Waste Information System (WIS)**	MCLM				R 300,000.00	Once off	Internal		R 200,000.00	R 100,000.00		
A.3.1.2	The system must be linked to all the departments that provide input to the Waste Management Section i.e. Financial Dept., Transport Dept, Human Resources Dept, etc.															
A.3.1.3	The WIS should be aligned to the National Waste Information System (NWIS) but should provide more detail than currently required by the NWIS.															
A.3.1.4	The WIS should address the requirements from provincial and national government.															
A.3.1.5	Integration of the WIS and licensing system should be considered.															
A.3.1.6	Development of the WIS should be based upon short, medium and long term needs of the MCLM.															
A.3.2	To **operate** a WIS linked to a database. This should record as a minimum record what is required in the National Waste Information System.	**Option 1**: Budget, advertise, appoint and train personnel to operate and maintain the WIS. **Option 2:** Budget, advertise and appoint a specialist to operate and maintain the WIS.	Budget, advertise, appoint and train personnel to operate and maintain the WIS. This will support job creation initiatives by the MCLM	**Appoint and train personnel to operate and maintain the WIS**	MCLM	WIS administrator	1		R -	Annual operating cost	Internal - included with personnel cost below	R -	R -	R -	R -	R -
A.3.2.1	Appoint and train personnel to collect the information required and to operate and to maintain the system;															
A.4.	***Efficient client and customer relations***															
	Goal															
	Ensuring prompt reaction to complaints received from customers (general public, domestic and commercial service).															
	Objectives															
A.4.1	**Establish** a call centre that deals with complaints related to the waste management service or appoint a person that deals exclusively with waste related complaints;	**Option 1:** MCLM to establish a call centre Internally. **Option 2:** Appoint a specialist that deals with complaints related to the waste management services.	MCLM to establish a call centre. This will support job creation initiatives by the MCLM	**Establish a call centre, employ and train personnel to operate the call centre.**	MCLM					Annual operating cost						
A.4.1.1	Ensure that the persons are well trained to handle difficult and irritated clients and customers, knows how to deal with situations that might arise (contact the appropriate person to deal with the complaint) and to follow up and ensure that the complaints have been dealt with as required.															
A.4.2	**Operate** an efficient client and customer relation call centre	MCLM to operate a call centre Internally.	MCLM to operate a call centre.			Supervisor	1		R -	Annual operating cost	Internal - included with personnel cost below	R -	R -	R -	R -	R -
A.4.2.1	Formalise a complaints system, which will include registering calls and complaints, referral of complaint to the relevant official and follow up action procedure and feedback to the customer. Link the formal complaints system to the WIS.					Call centre operators	1		R -	Annual operating cost	Internal - included with personnel cost below	R -	R -	R -	R -	R -
B	***Public awareness***															
B1	***Community involvement, awareness and education programmes concerning recycling, separation at source and waste management in general.***															
	Goal															
	Develop, promote, introduce involve and educated the communities and general public regarding waste related issues such as separation at source, waste minimisation, recycling and getting the people involved in waste management issues.															

No	Component	Options	Proposed option	Project	Location / Region	Type of Personnel Required	No Required	Cost per Annum (Level)	Estimated cost 2011	Once off / Per Annum	Possible funding	Implementation programme				
												Year				
												2011 - 2012	2012 - 2013	2013 - 2014	2014-2015	2015-2016
	Objectives															
B1.	Develop a strategy that will encourage community participation in waste related issues such as separation at source, waste minimisation, and recycling. The strategy will have to be phased since aspects such as waste collection in the informal areas first have to be addressed before separation at source can be introduced in these areas. A proper action plan with an associated budget as well as dedicated persons to drive the public education and awareness campaigns, are required. The strategy will allow for a number of tiers of programmes to accommodate the various communities' needs and insure appropriate mechanism for communicating the message.	**Option 1:** Appoint a specialist to develop a community participation strategy. **Option 2:** Appoint persons within the MCLM to develop a community participation strategy. Benchmark with other municipalities such as Potchefstroom.	Appoint competent person/s within the MCLM to develop a community participation strategy. Train the trainer principle.	**Implement community participation strategy**	MCLM	Communications officer	1		R -	Annual operating cost	Internal - included with personnel cost below	R -	R -	R -	R -	R -
B1.1	Appoint a person/s that will be responsible for the development, promotion, driving and education aspects of this strategy.															
B1.2	Training and awareness on environmental issues needs to developed or sourced from existing programmes.															
B1.3	Make the communities aware of the negative impact of illegal dumping and provide them with adequate facilities or services to reduce the need for illegal dumping.															
B1.4	Establish community based environmental programmes that involve the community in awareness and cleanup campaigns.															
B1.5	Develop anti-litter campaigns together with public education and have a suitable litter system in place.															
B1.6	Budget, procure and display signage boards at areas where illegal dumping occur and at entrances of the various formal and informal towns.	MCLM to budget, procure and display signage/ information boards.	MCLM to budget, procure and display signage/ information boards.	**Procurement of signage/ information boards**					R 50,000.00	Per annum	Internal	R 55,000.00	R 60,500.00	R 66,550.00	R 73,205.00	R 80,525.50
C	**Waste minimisation and recycling**															
	Goal															
	Implement achievable, sustainable and feasible waste minimisation and recycling programmes and initiatives.															
	Objectives															
C.1	**Development**															
C.1.1	To establish a formal partnership with Buyisa-e-bag and/or others for the establishment of a buyback centres at strategic locations (domestic and commercial). Assist and encourage the development of buy-back centres, recycling sorting centres following separation at source. Provide for public recycling drop-off facilities such as at shopping centres, landfills, etc.	**Option 1:** Appoint a specialist to develop waste minimisation and recycling programmes and initiatives. Investigate the feasibility of setting up a composting plant from garden waste at a garden waste facility. **Option 2:** Appoint persons within the MCLM to develop and implement waste minimisation and recycling programmes and initiatives. Seek assistance from Buyisa-e-bag and other companies. Benchmark with other municipalities on waste re-using programmes and/or involve the public/ community. **Option 3:** Appoint a municipal contract a company responsible for recyclable waste collection. **Option 4:** Consider waste recycling trolleys involving the community.	**Option 2, 3 and 4:** Appoint persons within the MCLM to develop a community participation strategy. These persons should be working closely with the communities to ensure the successful implementation of projects.	**Develop community participation strategy**	MCLM	Community education officers	2		R -	Annual operating cost	Internal - included with personnel cost below	R -	R -	R -	R -	R -
C.1.2	To development formal recycling programmes. High recyclable generation areas such as the commercial sector and medium to high income areas should be targeted in the short-term.															
C.1.3	Develop and support community based environmental, waste minimisation and recycling initiatives.															
C.2	**Implementation**															
C.2.1	To implement a formal partnership with other contractors for the establishment of a buyback centres at strategic locations (domestic and commercial). Assist and encourage the development of buy-back centres, recycling sorting centres following separation at source. Provide for public recycling drop-off facilities such as at shopping centres, landfills, etc.;	Depending on the above options	Implement the following: Formal partnerships with contractors for the establishment of a buyback centres at strategic locations (domestic and commercial); Implement recycling programmes; Separation at source.	**Develop waste minimisation strategy and implementation plan.**	MCLM	Waste Minimisation officer	1		R -	Annual operating cost	Internal - included with personnel cost below	R -	R -	R -	R -	R -
C.2.2	To implement formal recycling programmes. High recyclable generation areas such as the commercial sector and medium to high income areas should be targeted in the short-term.	Depending on the above options														
C.2.3	Appoint a person/s that will be responsible for the development, promotion, driving and management aspects of this strategy.	Depending on the above options														
C.2.4	Promote separation of waste at source, i.e. at the point of generation (for recycling and composting projects)	Education on separation at source should be included in the public education and awareness campaigns described above. Educate the private sector to assist or get involved with the municipality on projects of this nature. Start with a pilot project to establish feasibility and co-operation.														
C.2.5	Budget, procure and display signage boards at areas where illegal dumping occur and at entrances of the various formal and informal areas.	MCLM to budget, procure and display signage/ information boards.	MCLM to budget, procure and display signage/ information boards.	**Procurement of signage/ information boards**	MCLM				R 50,000.00	Per Annum	Internal	R 55,000.00	R 60,500.00	R 66,550.00	R 73,205.00	R 80,525.50
D	**Service provision (Collection)**															
D1	***Domestic collection***															
	Goal															
	Rendering of a sustainable, affordable, reliable and effective residential refuse collection services.															
	Objectives															
D1.1	Round balancing needs to be done on collection routes to optimise the routes and to ensure effective utilisation of resources. Waste receptacles should be provided to households in informal areas and a collection system should be investigated.	**Option 1:** Task someone within the MCLM to optimise collection routes. **Option 2:** Appoint a specialist to investigate the optimisation of collection routes.	Task someone within the MCLM to optimise collection routes as they would be most familiar with the area.	**Optimise collection routes**	MCLM						Internal					
D1.2	Separation at source projects to be initiated. Collection systems to be flexible to accommodate separation at source;															
D1.3	Obtain additional collection unit as backup to existing collection units. Ensure a reliable collection system	Review the current contract.	Review the current contract to ensure that there are adequate for collection and provision for back-up equipment.	**Review current contract and allow for additional equipment based on future housing development**	MCLM						Internal	R 44,000.00	R 90,750.00	R 46,585.00	R 190,333.00	
D1.5	Ensure that there are enough crew for domestic collection in the MCLM area.	Ensure that recruitment procedures are followed when interviewing new candidates. Staff employed should have all the relevant qualifications required. Criteria and job descriptions to be reviewed.	Review crew requirements and appoint appropriate personnel.	**Dealt with under personnel**	MCLM						Internal					
D1.6	Ensure market related rates for collection. This also applies to the containers	Review all rates to ensure that the rates are market related.	Review all rates to ensure that the rates are market related.	**Review waste management rates**	MCLM						Internal					
D1.7	Improve refuse collection in informal settlements.	Detail evaluation of existing waste collection relating to the proposed collection system in the informal areas (Section 78). Alternative collection systems and methodologies to be investigated. Consider outsourcing of current unserviced areas and / or informal settlements.	Evaluation of collection services addressed under D.1.1. It is proposed that the collection service for the current unserviced areas and / or informal settlements be sourced out to locals (base on same system as used by City of Cape Town). Investigate as part of Section 78 study.	**Detail evaluation of collection in informal areas and possible outsourcing of these services**	MCLM				R 120,000.00	Once off for study, there after budget for implementation of service	National Treasury	R 132,000.00				
D1.8	Initial implementation of above service	Acquire containers and equipment to implement a service until Section 78 is completed	Acquire containers and equipment to implement a service until Section 78 is completed	**Initial implementation of collection system**	MCLM				R 197,000.00	Per annum	Internal	R 216,700.00	R 238,370.00	R 262,207.00	R 288,427.70	R 317,270.47
D1.9	Implement a 240ℓ wheelie bin system to all residents having a municipal services account	Conduct a costing to determine the impact such a service will have on the MCLM considering that the collection routes will have to be optimized (collection taking longer) and collection vehicles will have to be fitted with bin lifting systems.	Do cost analysis and implement a 240ℓ wheelie bin system.	**Roll-out of 240ℓ wheelie bin system, already implemented in the 2010/2011 financial year (implementation cost R 20 500 000)**	MCLM				R -	Once off implementation cost (allows for bin, bin lifters, additional trucks and personnel	Internal	R -				
D2	***Commercial collection***															
	Goal															
	To render a sustainable cost effective commercial refuse removal service in formal areas as per the negotiated frequency. To further ensure the standardisation of commercial containers and adequate storage space at the service point.															
	Objectives															
D2.1	The implementation of a reliable service i.e. to service each service point as per the number of times paid for per week.	MCLM to ensure availability of adequate equipment and backup equipment.	Dealt with under equipment.	**Dealt with under equipment (D4).**												
D2.2	Incentives for recycling at source such as reduced rates should be considered for commercial service points. The feasibility of such an option should be investigated.	Implement a pilot project to evaluate the sustainability of recycling at source.	MCLM to implement pilot project to test the sustainability of recycling at source.	**Dealt with under C above.**												
D3	***Public disposal facilities***															
	Goal															
	To investigate the feasibility of public disposal facilities so as to provide an additional facility for the community to primarily take their garden waste and uncollected domestic waste to and as a method of reducing illegal dumping, collection time and transport cost.															

No	Component	Options	Proposed option	Project	Location / Region	Type of Personnel Required	No Required	Cost per Annum (Level)	Estimated cost 2011	Once off / Per Annum	Possible funding	Implementation programme				
												Year				
												2011 - 2012	2012 - 2013	2013 - 2014	2014-2015	2015-2016
	Objectives															
D3.1	**Investigate the feasibility of utilising public dumping facilities** as a method of reducing illegal dumping. (Possible time lost and transport cost savings should also be investigated in more detail once the WIS is in operation; since, no data is currently available on volumes and costs associated with illegal dumping).															
D3.1.1	Public acceptability of public disposal facilities (communal disposal facility where resident dispose of their waste themselves) should be investigated for the informal areas and areas where there is a lack of proper service. The option of appointing local entrepreneurs for collection in the informal areas should be investigated. They can collect from the informal areas and dispose at a public dumping / transfer facility from where the municipality can than collect to landfill.	**Option 1:** MCLM investigate the additional public disposal facilities and upgrading of the existing public dumping facilities. **Option 2:** Appoint a specialist to investigate the feasibility of additional public disposal facilities, suitable areas for additional public disposal facilities and to meet NEM:WA licensing requirements.	There are no in-house expertise available to investigate this aspect. Appoint a specialist to investigate the feasibility of additional public disposal facilities, suitable areas for additional dumping facilities and to meet NEM:WA licensing requirements.	**Investigate feasibility of additional public disposal facilities.**	MCLM				R 150,000.00	Once off	Internal	R 110,000.00	R 60,000.00			
D3.1.2	Facilities for garden refuse, drop off points for recyclables, drop-off points for household hazardous waste, drop-off points for non-hazardous waste. Also at places where high numbers of people gather- the frequency of bin clearing needs to be determined to prevent overfull containers from over flowing.															
D3.1.3	Upgrading of the existing transfer facility at Welverdiend	Appoint consultant for the upgrade design and tender documentation. Then appoint a contractor for the construction upgrade.	Appoint consultant for the upgrade design and tender documentation. Then appoint a contractor for the construction upgrade.	**Upgrade of transfer facility at Welverdiend**	Welverdiend				R 1,000,000.00	Once off	MIG		R 1,210,000.00			
D3.2	**Operate the Public Disposal Facilities**															
D3.2.1	All aspects of the operation of such facilities should be considered. These facilities should comply with legislative requirements.	**Option 1:** MCLM to operate the public disposal facilities. **Option 2:** MCLM to appoint contractors to operate the public disposal facilities.	Appoint a consultant to conduct a MSA Section 78 study to determine the feasibility of using a private contractor to operate the site.	**Conduct a MSA Section 78 study to determine the feasibility of using a private contractor to operate the sites.**	MCLM				R 2,000,000.00	Once off for study, there after budget for implementation of service	National Treasury		R 1,100,000.00	R 1,200,000.00	Budget for operation of facilities	Budget for operation of facilities
D4	***Equipment***															
	Goal															
	There should be sufficient back-up collection equipment at all times.															
	Objective															
D4.1	Ensure that there is adequate spare capacity for any type of collection unit or systems (additional equipment that can be on standby) as well as reliable backup service from the body builder and chassis supplier. Reliable back-up service will result in less down time and overtime.	Evaluation to be done, back up service to be investigated by the MCLM. Review contract if required.	The MCLM should obtain and compare quotes on the most reliable type of backup service from specialist/dealers and discuss these with the FML company.	**Review FML contracts. Review existing waste equipment ito of suitability of use.**	MCLM				R 50,000.00	Once off	Internal	R 55,000.00				
D4.2	The renewal of the existing or a new contract for Full Maintenance Leasing (FML) should be planned in advance to ensure that there is no delays in the supply of equipment (the MCLM does not own waste collection equipment).	Ensure that contract renewal process is planned and in place before existing contracts expire.	Ensure that contract renewal process is planned and in place before existing contracts expire.													
D4.3	The appropriate waste handling unit should be investigated for any new service.	Appoint specialist to investigate any new type of services.	Appoint specialist to investigate any new type of services since there are no one within the municipality that can conduct such an investigation.		MCLM											
D4.4	A reputable make landfill compactor with reliable backup service should be acquired for the operation of the Rooipoort Landfill. Additional equipment such as a bulldozer, tipper, loader and water cart needs to be sourced for operation at the landfill. The landfill compactor should not be used as a bulldozer if adequate equipment is not available. Proper operator training will result in less costly breakdowns.	**Option 1:** Acquire proper waste handling equipment at the landfill, i.e. landfill compactor, excavator, bulldozer, tipper, water cart etc. as to ensure that the landfill is properly operated and maintained. Personnel must be properly trained by an accredited specialist. **Option 2**: Outsource the operation of the landfill.	Indications are that the outsourcing of the operation of the landfill is less expensive than purchasing equipment and training people. There it is proposed to outsource the operation of the landfill since this is a specialist field and most municipalities does not have the skills required to operate a landfill according to the required standards.	**Conduct a MSA Section 78 study to determine the feasibility of using a private contractor to operate the site. Covered under landfill**	MCLM				R 1,000,000.00	Once off for study, there after budget for implementation of service	National Treasury	R 1,100,000.00				
D5	***Street cleansing/Sweeping***															
	Goal															
	To implement a proper, well staffed street cleaning service in all business areas, decentralised business areas and along all major routes at the various towns within the MCLM area.															
	To place an adequate number of litter bins within business areas and high use areas throughout the MCLM which is serviced on a regular basis.															
	Objectives															
D5.1	To **implement** a regular reliable street sweeping service in all business areas, decentralised business areas and major access routes within the municipality. Adequate permanent staffing will be required for each area. A survey should be done of each area to determine the total area to be covered and the personnel required. MCLM needs to decide on the level of service required i.e. compile a guideline document and than conduct an investigation into the needs to fulfil the requirements from the guideline document.	**Option 1:** MCLM to decide on level of service and than conduct proper survey of where street cleansing services are required and determine the number of personnel. Appoint additional personnel. **Option 2:** Appoint a specialist to conduct the survey.	MCLM needs to decide on level of service required. Appoint a specialist to conduct the survey since there is no capacity within the MCLM to conduct such a survey.													
D5.1.1	Determine the street cleaning service needed in the CBD areas.	MCLM to conduct survey or appoint a consultant to determine the service needed for street cleaning in the CBD areas in Fochville and Carletonville. **Option 1:** MCLM to determine the street cleaning service needed in the CBD areas. **Option 2:** Appoint an consultant to conduct the survey on the service needed.	MCLM need to conduct a MSA Section 78 study to evaluate the internal and external mechanisms for the Fochville and Carletonville CBD Cleaning	**Conduct a MSA Section 78 study to evaluate the internal and external mechanism needed for the Fochville and Carletonville CBD Cleaning**	Fochville Carletonville				R 500,000.00	Once off	National Treasury	R 275,000.00	R 280,000.00			
D5.2	The method of servicing street bins and the time and cost implication should also be investigated. Recommendation should be made on the implementation of the service and possible financial social and environmental impacts.															
D5.2.1	Acquire an adequate and appropriate number of street bins for each business area and high use area within the municipality. A survey should be done of all these areas within the municipality to determine the need and if required the number of street bins for each area.	MCLM to conduct survey and put placement of bins out to tender. **Option 1:** MCLM to run the street cleansing services. **Option 2:** Outsource the service.	Conduct a feasibility study on the number of bins required, where these should be placed and who should provide the service (Section 78 study).	**Meeting street bin requirements**	MCLM				R 150,000.00	Once off	MIG	R 165,000.00				
D5.3	Equipment dedicated to the street cleaning services should be sourced. This will make collection equipment available and assist with the transport of the street sweeping personnel.	Adequate equipment needs to be obtained for the collection of street cleaning waste as well as for the transportation of street cleaners to and from their work areas.	Adequate equipment needs to be obtained for the collection of street cleaning waste as well as for the transportation of street cleaners to and from their work areas. This can be done as an FML or equipment purchased by the municipality.	**Acquiring equipment dedicated to street cleansing**	MCLM				R 1,200,000.00	Once off	Internal Loan	R 600,000.00	R 660,000.00			
D6	***Landfills***															
	Goal															
	To ensure that the Rooipoort landfill is run according the Minimum Requirements for Waste Disposal By landfill (DWAF 1998) as well as the permit conditions. The closed landfill at Fochville must be properly rehabilitated and monitored on a regular basis and should be permitted for closure as a legal requirement.															
	Objective															
D.6.1	The proper upgrading, rehabilitation, operation, maintenance and monitoring of the Rooipoort Landfill should be prioritised due to the current situation at the site. There is little to no control at present with equipment available on *ad hoc* basis to operate the site:	**Option 1:** The option of appointing a private company to operate and maintain the Rooipoort landfill should be investigated in terms of Section 78 of the Municipal Systems Act as well as a Municipal Financial Management Act. **Option 2:** MCLM to operate the Rooipoort landfill. See options 2a - 2c below.	Investigate appointing a private company to operate and maintain the Rooipoort landfill in terms of Section 78 of the Municipal Systems Act as well as a Municipal Financial Management Act.	**Conduct Section 78 for the possible outsourcing of the operations of the Rooipoort landfill**	Rooipoort				R 2,000,000.00	Once off	National Treasury		R 1,100,000.00	R 1,200,000.00		
D6.1.1	Proper operation and maintenance of the Rooipoort landfill site.	**Option 2a:** Training of personnel responsible for the day to day operation of the landfill site. A proper budget to allow for the purchase of a new landfill compactor and to hire additional equipment as and when required.	Training of personnel responsible for the day to day operation of the landfill site and proper budget to allow for the purchase of a new landfill compactor and to hire additional equipment as and when required, should the above mentioned Section 78 study not be considered.	**Committed operating and maintenance of the Rooipoort landfill**	Rooipoort				R 1,200,000.00	Per annum	Internal	R 1,320,000.00	R 1,452,000.00	R 1,597,200.00	R 1,756,920.00	R 1,932,612.00

No	Component	Options	Proposed option	Project	Location / Region	Type of Personnel Required	No Required	Cost per Annum (Level)	Estimated cost 2011	Once off / Per Annum	Possible funding	Implementation programme				
												Year				
												2011 - 2012	2012 - 2013	2013 - 2014	2014-2015	2015-2016
D6.1.3	Audit and monitor site as required by legislation.	**Option 2b:** Commence with the monitoring programme as part of the regular auditing of the site. An external auditor to be used on an annual basis.	Commence with the monitoring programme as part of the regular auditing of the site. An external auditor to be used on an annual basis.	**See below.**												
D6.1.4	Continuous development of the site.	**Option 2c:** Record volumes entering the site and have an airspace calculation done every year to ensure that proper future planning can be done for the development of future cells.	Record volumes entering the site and have an airspace calculation done every year to ensure that proper future planning can be done for the development of future cells.													
D6.1.5	Implement proper rates at Rooipoort Landfill Site.	Investigate the current rates in relation to other landfills. Update rates if required.	Investigate the current rates in relation to other landfills. With the new weighbridge being installed third party disposers can be levied.	**Implement proper rates at the landfill**												
D6.1.6	Rehabilitation of the existing phase and upgrading and development of the subsequent phases of the Rooipoort Landfill Site	Institute an invoicing system at the landfill to collect revenue for disposal operations as well as for closure and rehabilitation costs. A closure fund needs to be established for the rehabilitation and closure of the Rooipoort Landfill.	Develop and implement the invoicing system at the Rooipoort landfill and establish the closure and rehabilitation fund for the Rooipoort Landfill.	**Rehabilitation and Development of the Rooipoort Landfill (phased approach)**	Rooipoort											
D6.1.7	Rehabilitation of phase 1 of Rooipoort Landfill	Rehabilitation and interim capping of Phase 1 of the Rooipoort landfill Option 1 Apply for MIG funding. Option 2: Internal funding	Rehabilitation and interim capping of Phase 1 of the Rooipoort landfill Option 1: Apply for MIG funding.	**Rehabilitation and interim capping of Phase 1 of the Rooipoort landfill**	Rooipoort				R 750,000.00	Once off	MIG	R 825,000.00				
D6.1.8	Budget, procure and display an information board at the Rooipoort Landfill.	MCLM to budget, procure and display information board at the Rooipoort Landfill.	MCLM to budget, procure and display information board at the Rooipoort Landfill.	**Procurement of signage/ information boards**	Rooipoort				R 12,000.00	Once off	Internal	R 13,200.00				
D.6.2	The existing landfill site, the closed landfill and any future landfill sites have to be monitored on a regular basis. Any operational site also needs to be audited on a regular basis. (At least annually, ideally bi-annually) The MCLM should obtain quotes for the monitoring and auditing of the sites from competent external specialists, and budget accordingly.	Commence with the monitoring programme as part of the regular auditing of the site. An external auditor to be used on an annual basis.		**Implement an audit and monitoring programme.**	All waste handling and processing facilities (allowed for Rooipoort and transfer station at Fochville).				R 80,000.00	Per annum	Internal	R 88,000.00	R 96,800.00	R 106,480.00	R 117,128.00	R 128,840.80
D6.3	The closed landfill at Fochville needs to be rehabilitated and closed. It will require a closure licence and EIA to be submitted to GDARD.	Appoint a consultant to conduct the license and EIA process for the closure of the site as well as the closure design and tender documents.	Appoint a consultant to conduct the license and EIA process for the closure of the site as well as the closure design and tender documents.	**Closure of the Fochville landfill (Estimated cost, will require detailed assessment to confirm closure cost)**	Fochville				R 15,000,000.00	Once off	MIG	R 750,000.00	R 750,000.00	R 1,000,000.00	R 17,500,000.00	
D7	***Personnel***															
	Goals															
	Have adequate, medically fit, well trained personnel to cover the range of tasks required to deliver a total waste management service to the communities. All management and supervisory positions to be filled.															
	Objectives															
D7.1	To have medically fit personnel to use as runners for the collection service. This is physically demanding work and requires personnel that can handle the physical stress. There needs to be at least 5 runners per collection vehicle for domestic collection.	Appoint adequate personnel, cost implication will be highlighted.	MCLM to appoint adequate personnel.	**MCLM to appoint adequate personnel.**												
D7.2	Personnel should be trained in their respective task since they are dealing with potentially hazardous material. There are numerous training modules available from private waste contractors on the various aspects of waste management.	Appoint specialist to train personnel.	MCLM to appoint an accredited specialist to train personnel in general waste management principals and for specific task allocated to personnel since such expertise in not available within the MCLM.	**Training of personnel**	MCLM				R 80,000.00	Per annum	Internal	R 88,000.00	R 96,800.00	R 106,480.00	R 117,128.00	R 128,840.80
D7.3	The landfill manager, access controller, spotter and operator need to undergo various levels of training to ensure that the landfills are operated according to the required standards.															
D7.4	Consideration should be given to creating a position for an education and awareness / recycling and waste minimisation co-ordinator.	MCLM to consider such a position.	MCLM to appoint a education and awareness / recycling and a waste minimisation co-ordinator as indicated above.													
D7.5	Have adequate and experienced staff available in the head office and regional offices of the WMS.	Vacancies to be filled as soon as possible with staff having qualifications and competencies fitting the required job descriptions. Proper job descriptions to be developed where necessary.	Vacancies to be filled as soon as possible with staff having qualifications and competencies fitting the required job descriptions. Proper job descriptions to be developed where necessary.													
D7.6	To have all the vacant posts staffed in the waste management section.	Staff all the vacant posts to ensure the effective management and operation of the waste management section.	Staff all the vacant posts to ensure the effective management and operation of the waste management section.		MCLM	Refer to Appendix E for detail			R 25,108,707.49	Per annum	Internal	R 27,619,578.24	R 30,381,536.07	R 33,419,689.67	R 36,761,658.64	R 40,437,824.51
D7.7	Proper waste depot with ablution facilities.	Proper waste depots need to be constructed to house the waste management section and to provide them with their own identity.	The construction of waste depots.	**New waste depots**	Carletonville or Kutsong and Fochville				R 65,000,000.00	Once off	MIG			R 86,515,000.00		
D8	***Industrial and Health Care Risk Waste***															
	Goals															
	To ensure the safe handling and disposal of Industrial (non-hazardous and hazardous) waste and Health Care Risk Waste generated or handled within the municipal area.															
	Objectives															
D8.1	That the MCLM keeps track of any/ all Industrial and Health Care Risk Waste generated or handled within the municipal area. The implementation and management of the WIS will have to be such as to ensure the successful monitoring of these types of waste.	Part of the Waste Information System (WIS).	To be implemented under the WIS and waste minimization initiative as indicated above.													
D8.2	Ensure that the generators of Industrial and Health Care Risk Waste register with the MCLM (to be captured in By-laws). Further that they handle and dispose of the waste as prescribed by the By-laws (MCLM to ensure that this aspect is covered correctly in the By-laws) and that this process is monitored through the WIS.															
E	***Finances / income / revenue***															
	Goal															
	To have council committed to the IWMP, to ensure that the correct budgeting takes place and that the appropriate revenue collections systems are in place.															
	Objectives															
E1.1	Council should adopted the IWMP in its entirety, including the associated budgets and programmes.	MCLM council to adopt IWMP.	MCLM council to adopt IWMP.													
E1.2	The IDP should be adapted accordingly as to ensure the correct budgeting and implementation of recommendations.	Amend IDP to incorporate IWMP.	Amend IDP to incorporate IWMP.													
E1.3	Council should ensure that the revenue generated by the WMS is channelled back into the department.	MCLM council to adopt such a policy.	MCLM council to adopt such a policy.													
E1.4	Utilisation of subsidised funding schemes	Municipality to use MIG and similar funding for waste management projects.	Municipality to use MIG and similar funding for waste management projects.													
E1.5	Waste management rate structures that are reflecting the actual cost of services.	Review all rates to ensure that the rates are market related.														
	Total Cost											R 33,716,478.24	R 38,347,756.07	R 125,953,291.67	R 56,951,210.34	R 43,992,220.08
	National treasury - Section 78 studies											R 1,507,000.00	R 2,480,000.00	R 2,400,000.00	R -	R -
	Consolidate section 78 (All the proposed Section 78 studies can be combined into one)											R 4,000,000.00				
	Total MIG funded											R 1,740,000.00	R 1,960,000.00	R 87,515,000.00	R 17,500,000.00	R -
	Counter funding											R 174,000.00	R 196,000.00	R 8,751,500.00	R 1,750,000.00	R -
	Municipal funded											R 30,469,478.24	R 33,907,756.07	R 36,038,291.67	R 39,451,210.34	R 43,992,220.08
	Total Municipal Funded											R 30,643,478.24	R 34,103,756.07	R 44,789,791.67	R 41,201,210.34	R 43,992,220.08
Note: All the costs reflected are based on best estimates																

7. CONCLUSION

The Gaps Analysis and Needs Assessment derived from the *Status Quo* analysis are the building blocks to the Goals and Objectives that are in essence what provides the way forward for the development of the IWMP. It is therefore important that the Goals and Objectives are realistic and achievable and that stakeholders are afforded the opportunity to comment on the goals and objectives to ensure that the “customer’s” inputs have also been obtained.

The option evaluated and proposed are practical and implementable options that ensure the successful building blocks towards sustainable waste management within the MCLM.

The information in this report was developed in close consultation with the MCLM and was also made available to the public and a number of identified stakeholders. Comments were received from the public at the second public meeting and was addressed (refer to Appendix H). This report will be submitted to the MEC for approval. It should also be noted that the IWMP is a dynamic document that should be updated as new information becomes available.

8. Recommendations

Council have to adopt and embrace the goals and objectives and commit to budget according to the finally adopted IWMP that will provide the detail on projects to be implemented, associated budgets and timeframes. The goals and objectives will have to be reviewed every five years to ensure the relevance thereof in an ever changing environment.

Following is a summary of the recommendations made in the Implementation Plan

8.1. General

- Integrated Waste Management Plan — That this plan be adopted by the MCLM and adopted in their IDP;
- Waste Management By-laws and licensing system — That the By-laws be reviewed and updated and that a licensing system be developed that will be supported by the By-laws;
- Implementation of a waste information system (WIS) – That a WIS be developed that will keep record of waste management activities within the MCLM and that can be fed into the national WIS; and
- Efficient client and customer relations – That a call centre be established to deal with complaints related to waste management.

8.2. Public awareness

- Community involvement, awareness and education programmes concerning recycling, separation at source and waste management in general – those personnel be appointed and trained to develop education programmes on waste management in general.

8.3. Waste minimisation and recycling

- Waste minimisation and recycling — That persons be appointed in portfolios to drive waste minimisation and recycling;
- Implementation of waste minimisation – That formal partnerships be developed with companies for the establishment of buy-back centres, recycling sorting centres following separation at source. Provide for public recycling drop-off facilities such as at shopping centres, landfills, etc.

8.4. Service provision

- Domestic collection — That collection routes be optimised, review of informal collection strategy, review of equipment contract (FML), review of collection rates and implementation of a 240ℓ wheelie bin system.
- Commercial collection – That adequate back-up equipment be available;
- Public Disposal Facilities — That additional public dumping facilities be investigated and implemented if required;
- Equipment — That the current FML contracts be reviewed and changed where required, that the existing equipment requirements be re-evaluated at the same time and that the outsourcing of the operation of the Rooipoort landfill be investigated;
- Street Cleaning/ Sweeping – That an appropriated level of service be agreed upon by the MCLM, that a company be appointed to investigate the requirements for the desired service and that dedicated equipment be supplied to the street cleansing service;
- Landfills — That a Section 78 study be conducted on the possible outsourcing of the operation of the landfill and that existing personnel be trained;
- Personnel – That personnel be appointed into the suggested structure
- Industrial and Health Care Risk Waste — That these waste types be monitored with the WIS.

Implementation of this IWMP will ensure that waste management within the MCLM is up to the required standard, this document should be review on an annual basis and updated every five years.

APPENDIX A

DOCUMENT LIMITATIONS

DOCUMENT LIMITATIONS

- Unclear income statistics information obtained from the IDP made it difficult to give reliable waste characterization data.
- Covid has made it difficult to progress with the project because stakeholders were not easy to consult.
- Operations at the landfill sites made it difficult to do waste characterization and access to various properties will have to be done as a standalone project supplementing this document. Sources of waste will have to be clearly defined and their waste output will have to be thoroughly researched.
- The limited budget for the project impacted the level of research our team could have undertaken and the team did the best it could under the circumstances.
- Limited funding for the service,
- Incomplete costing of the service
- Burning of waste at all the sites,
- No regional planning in relation to waste minimization,
- The review is mainly, but not wholly limited to the existing plan which had many gaps,
- Lack of records or information about the service and waste quantities (service photographs, resource usage or waste volumes generated),
- No documented standards for the service.
- No waste billing records availed to us

APPENDIX B

RATES OF RENTALS AND OTHER SERVICES AT THE TIME OF THE STATUS QUO STUDY

Refuse **3.70%**

		Approved 2025/2026	Proposed 2026/2027	% Increase
Residential and Business	1 bin/week	253.95	263.35	3.70%
Business	Bin/3 x week	663.58	688.13	3.70%
Business	Bin/5 x week	1 114.17	1 155.39	3.70%
REFUSE DEPT MMH 3 X P.W.		7 864.71	8 155.71	3.70%
REFUSE DEPT OTHER 1 X P.W. NO VAT		253.97	263.36	3.70%
Refuse 3 x P.W. Departmental		663.58	688.13	3.70%
MMH (1.75M³) 1x per week		3 195.04	3 313.26	3.70%
MMH (1.75M³) 2x per week		5 538.07	5 742.97	3.70%
MMH (1.75M³) 3x per week		7 864.71	8 155.71	3.70%
MMH (1.75M³) 5x per week		14 254.78	14 782.21	3.70%
Bulk container (30M³) 1x per week		45 058.23	46 725.38	3.70%
Bulk container (30M³) 2x per week		68 816.20	71 362.40	3.70%
Bulk container (30M³) 3x per week		123 705.31	128 282.40	3.70%
Bulk container (30M³) 5x per week		203 171.62	210 688.97	3.70%
Temporary service	Per Bin	120.26	124.71	3.70%
Bulky waste	Per m³	557.08	577.70	3.70%
Special Exemption	Per m³	278.55	288.85	3.70%
Garden services waste	LDV/Trailer	81.93	84.96	3.70%
Small Animal Carcasses		216.46	224.47	3.70%
Bulky garden waste	per 6m³	1 181.68	1 225.40	3.70%
Building rubble	per m³	560.69	581.43	3.70%

APPENDIX C

RECORD KEEPING OF WASTE VOLUMES

MERAFONG CITY LOCAL MUNICIPALITY DIRECTORATE:
COMMUNITY SERVICES DEPARTMENT:
WASTE MANAGEMENT

WASTE QUANTITIES LANDFILLED AND RECYCLED JULY 2025 – May 2026

WASTE	CLASSIFICATION	QUANTITY
Soil		
0		
Builder's	rubble	
257,220		t
Domestic	waste	
3,699,310		t
Garden	waste	
244,640		t
Illegal	waste	
385,440		t
Industrial	waste	
1,116,000		t
Recyclable’s	materials	
-302,820		t
GRAND	TOTAL	(Tonnes)(excluding recyclable’s)
5,702,610		t
GRAND	TOTAL	(Tonnes)(excluding recyclable’s)
6,005,430		t

APPENDIX D

WASTE GENERATION MODEL FROM POPULATION STATISTICS

Population statistics for Merafong City Local Municipality (Own Study) statistics for Merafong City Local Municipality as updated / verified in February 2022 *(Obtained from Chapter II of the IDP, CENSUS 2022)*

Proclaimed Townships	Population	Amount of houses	Informal structures	Back Yard Dwellers	Residential stands	Business stands	Industrial stands
Carletonville	28,090.00	5292	326		5322	195	168
Welverdiend	2,840.00	528	40		943	89	33
Blybank	950.00	190	-		2832	62	18
Khutsong (including Khutsong South)	139,850.00	8485	11000	8485	8912	33	81
Fochville	15,015.00	3003	-		4247	124	119
Kokosi	29,740.00	3854	1594	500	4443	37	0
Greenspark	3,655.00	343	22	366	395	6	0
Wedela	9,565.00	1436	79	398	5309	19	0
	229,705.00	23,131.00	13,061.00	9,749.00	32,403.00	565.00	419.00
Mine towns	**Population**	**Amount of houses**	**Informal structures**	**No of beds**			
Blyvooruitzicht	7060	1009	303	500			
Cementation	60	12					
Deelkraal	2030	406					
Elandsrand	5275	495		2800			
Doornfontein	2495	79		2100			
Driefontein	26264	842	2400	10054			
Western Deep Levels	9853	294	274	7013			
	53037	3137	2977	22467			

Waste generation model

Proclaimed Townships	Population	Growth rate	Estimated waste generation/person/day	Waste generated/day (kg)	Tons/day	2015	2020	2025	2030
Northern Region									
Carletonville	28,090.00	3%	0.75	21068	21.1	25.2	29.2	33.8	39.2
Welverdiend	2,840.00	3%	0.45	1278	1.3	1.5	1.8	2.1	2.4
Blybank	950.00	3%	0.45	428	0.4	0.5	0.6	0.7	0.8
Khutsong (including Khutsong South)	139,850.00	3%	0.45	62933	62.9	75.1	87.1	101.0	117.1
Sub total	171,730.00			85706	86	102	119	138	159
Southern Region						0.0	0.0	0.0	0.0
Fochville	15,015.00	3%	0.75	11261	11.3	13.4	15.6	18.1	20.9
Kokosi	29,740.00	3%	0.45	13383	13.4	16.0	18.5	21.5	24.9
Greenspark	3,655.00	3%	0.45	1645	1.6	2.0	2.3	2.6	3.1
Wedela	9,565.00	3%	0.45	4304	4.3	5.1	6.0	6.9	8.0
Sub total	57,975.00	3%		30593.3	30.6	36.5	42.3	49.1	56.9
Sub total	229,705.00	3%		116299	116	139	161	187	216
Mine towns	**Population**	3%							
Blyvooruitzicht	7060	3%	0.5	3530	3.5	4.2	4.9	5.7	6.6
Cementation	60	3%	0.5	30	0.0	0.0	0.0	0.0	0.1
Deelkraal	2030	3%	0.5	1015	1.0	1.2	1.4	1.6	1.9
Elandsrand	5275	3%	0.5	2638	2.6	3.1	3.7	4.2	4.9
Doornfontein	2495	3%	0.5	1248	1.2	1.5	1.7	2.0	2.3
Driefontein	26264	3%	0.5	13132	13.1	15.7	18.2	21.1	24.4
Western Deep Levels	9853	3%	0.5	4927	4.9	5.9	6.8	7.9	9.2
Sub total	53037	3%		26519	27	31.7	36.7	42.6	49.3
Total	**282,742.00**			**142817.25**	**142.82**	**170.53**	**197.69**	**229.18**	**265.68**

APPENDIX E

MERAFONG CITY LOCAL MUNICIPALITY PERSONNEL COSTS AND STRUCTURE

Appendix E: Personnel cost

Current					Proposed					
Personnel Description	**Level**	**Amount of personnel**	**Total Cost to Company**	**Total per section**	**Personnel Description**	**Level**	**Amount of personnel**	**Total Cost to Company**	**Total per section**	**Plus 13 percent increment**
Waste Management Section:										
Waste Management Manager	1	1	R 445,522.00	R 445,522.00	**Waste Management Manager**	1	1	R 445,522.00	R 445,522.00	R 503,439.86
Secretary	9 to 8	1	R 148,549.00	R 148,549.00	**Secretary**	8 or 9	1	R 148,549.00	R 148,549.00	R 167,860.37
Messenger	15	0	R 0.00	R 0.00	**Messenger**	15	1	R 107,662.00	R 107,662.00	R 121,658.06
				R 594,071.00					**R 701,733.00**	**R 792,958.29**
Admin Support										
		0	R 0.00	R 0.00	**Assistant Manager: Admin Support and Projects**	3	1	R 281,915.93	R 281,915.93	R 318,565.00
		0	R 0.00	R 0.00	**Call Centre**	7 or 6	2	R 224,705.00	R 449,410.00	R 507,833.30
		0	R 0.00	R 0.00	**Admin officer**	7 or 6	1	R 224,705.00	R 224,705.00	R 253,916.65
		0	R 0.00	R 0.00	**WIS administrators**	7 or 6	2	R 224,705.00	R 449,410.00	R 507,833.30
				R 0.00					**R 1,405,440.93**	**R 1,588,148.25**
Education										
			R 0.00	R 0.00	**Assistant Manager Minimisation & Education**	3	1	281915.93	R 281,915.93	R 318,565.00
			R 0.00	R 0.00	**Waste Minimisation & Education Officer**	6 or 7	2	R 224,705.00	R 449,410.00	R 507,833.30
			R 0.00	R 0.00	**Public Awareness/ Communication Officer**	6 or 7	1	R 224,705.00	R 224,705.00	R 253,916.65
				R 0.00					**R 956,030.93**	**R 1,080,314.95**
Disposal & Illegal Dumping										
		0	R 0.00	R 0.00	**Assistant Manager: Disposal & Illegal Dumping**	3	1	R 281,915.93	R 281,915.93	R 318,565.00
		0	R 0.00	R 0.00	**Superintendent**	6	1	R 224,705.00	R 224,705.00	R 253,916.65
				R 0.00					**R 506,620.93**	**R 572,481.65**
Illegal Dumping										
		0	R 0.00	R 0.00	**Senior Operator: Illegal Dumping**	8	1	R 192,615.00	R 192,615.00	R 217,654.95
		0	R 0.00	R 0.00	**Driver/ Operator**	9	5	R 99,785.00	R 498,925.00	R 563,785.25
		0	R 0.00	R 0.00	**General Workers**	15	5	R 107,662.00	R 538,310.00	R 608,290.30
				R 0.00					**R 1,229,850.00**	**R 1,389,730.50**
Disposal & Transfer										
Senior Operator: Transfer	8	0	R 0.00	R 0.00	**Senior Operator: Transfer**	8	1	R 192,615.00	R 192,615.00	R 217,654.95
		0	R 0.00	R 0.00	**General Workers**	15	2	R 107,662.00	R 215,324.00	R 243,316.12
		0	R 0.00	R 0.00	**Gate Clerk/ Controllers**	15	2	R 107,662.00	R 215,324.00	R 243,316.12
Senior Operator: Landfill		0	R 0.00	R 0.00	**Senior Operator : Landfill**	8	1	R 192,615.00	R 192,615.00	R 217,654.95
Driver/Operators: (Water Cart, Refuse Tipper, Black	**9**	**3**	R 95,282.00	R 285,846.00	**Driver/ Operator**	9	**4**	R 95,282.00	R 381,128.00	R 430,674.64
General Workers (Spotters)	19	3	R 85,569.00	R 256,707.00	**General Workers**	15	**3**	R 107,662.00	R 322,986.00	R 364,974.18
Chipper Operator	15	0	R 0.00	R 0.00	**Chipper Operator**	15	1	R 107,662.00	R 107,662.00	R 121,658.06
Gate Controller	16	1	R 98,403.00	R 98,403.00	**Gate Controller**	15	2	R 107,662.00	R 215,324.00	R 243,316.12
				R 640,956.00					**R 1,842,978.00**	**R 2,082,565.14**
Total Disposal & Illegal Dumping				**R 640,956.00**					**R 3,579,448.93**	**R 4,044,777.29**
Operations (Refuse Removal & Street Cleaning)										
Assistant Manager: Operations (Refuse Removal	3	0	R 0.00	R 0.00	**Assistant Manager: Operations (Refuse**	3	1	R 281,915.93	R 281,915.93	R 318,565.00
Depot Clerk	10	0	R 0.00	R 0.00	**Depot Clerk**	10	1	R 110,307.00	R 110,307.00	R 124,646.91
Superintendent	6	0	R 0.00	R 0.00	**Superintendent**	6	1	R 338,503.00	R 338,503.00	R 382,508.39
Senior Operator	8	0	R 0.00	R 0.00	**Senior Operator**	8	2	R 306,116.00	R 612,232.00	R 691,822.16
Driver/ Operator	9	0	R 0.00	R 0.00	**Driver/ Operator**	9	18	R 182,739.00	R 3,289,302.00	R 3,716,911.26
General Workers	15	0	R 0.00	R 0.00	**General Workers**	15	110	R 107,662.00	R 11,842,820.00	R 13,382,386.60
				R 0.00					**R 16,475,079.93**	**R 18,616,840.32**
Superintendent	6	1	R 0.00	R 0.00			0	R 0.00	R 0.00	R 0.00
Supervisor	9	1	R 306,116.00	R 306,116.00			0	R 0.00	R 0.00	R 0.00
Driver/ Operator	9	5	R 99,785.00	R 498,925.00			0	R 0.00	R 0.00	R 0.00
Driver/ Operator	9	0	R 0.00	R 0.00			0	R 0.00	R 0.00	R 0.00
General Workers	15	24	R 107,662.00	R 2,583,888.00			0	R 0.00	R 0.00	R 0.00
				R 3,388,929.00					**R 0.00**	**R 0.00**
Fochville: Refuse Removal & Transfers										
Superintendent	6	0	R 0.00	R 0.00			0	R 0.00	R 0.00	R 0.00
Supervisor	9	1	R 232,977.00	R 232,977.00			0	R 0.00	R 0.00	R 0.00
Refuse Truck Driver	10 or 11	6	R 0.00	R 0.00			0	R 0.00	R 0.00	R 0.00
Chipper Operator	19	1	R 0.00	R 0.00			0	R 0.00	R 0.00	R 0.00
Gate Clerk Controller	19	1	R 84,512.00	R 84,512.00			0	R 0.00	R 0.00	R 0.00
General Workers	19	20	R 100,368.00	R 2,007,360.00			0	R 0.00	R 0.00	R 0.00
				R 2,324,849.00					**R 0.00**	**R 0.00**
Khutsong: Refuse Removal & Transfers										
Superintendent	6	0	R 0.00	R 0.00			0	R 0.00	R 0.00	R 0.00
Supervisor	9	1	R 273,413.00	R 273,413.00			0	R 0.00	R 0.00	R 0.00
Driver/ Operator	9	2	R 83,941.00	R 167,882.00			0	R 0.00	R 0.00	R 0.00
Refuse Truck Driver	10 or 11	0	R 0.00	R 0.00			0	R 0.00	R 0.00	R 0.00
Gate Clerk Controller	16	1	R 88,579.00	R 88,579.00			0	R 0.00	R 0.00	R 0.00
General Workers	19	5	R 102,275.00	R 511,375.00			0	R 0.00	R 0.00	R 0.00
				R 1,041,249.00					**R 0.00**	**R 0.00**
Total Refuse Removal				**R 6,755,027.00**					**R 16,475,079.93**	**R 18,616,840.32**
Street Cleaning										
		0	R 0.00	R 0.00	**Superintendent**	6	1	R 338,503.00	R 338,503.00	R 382,508.39
		0	R 0.00	R 0.00	**Senior Operator**	8	2	R 306,116.00	R 612,232.00	R 691,822.16
		0	R 0.00	R 0.00	**Driver/ Operator**	9	8	R 182,739.00	R 1,461,912.00	R 1,651,960.56
		0	R 0.00	R 0.00	**General Workers**	15	88	R 107,662.00	R 9,474,256.00	R 10,705,909.28
				R 0.00					**R 11,886,903.00**	**R 13,432,200.39**
Carltonville: Street Cleaning & Illegal Dumping										
Supervisor	9	0	R 0.00	R 0.00			0	R 0.00	R 0.00	R 0.00
Driver/ Operator	9	1	R 82,738.00	R 82,738.00			0	R 0.00	R 0.00	R 0.00
General Workers	19	31	R 89,729.00	R 2,781,599.00			0	R 0.00	R 0.00	R 0.00
				R 2,864,337.00					**R 0.00**	**R 0.00**
Fochville: Street Cleaning & Illegal Dumping										
Supervisor	9	0	R 0.00	R 0.00			0	R 0.00	R 0.00	R 0.00
Driver/ Operator	9	4	R 182,739.00	R 730,956.00			0	R 0.00	R 0.00	R 0.00
General Workers	19	15	R 95,289.00	R 1,429,335.00			0	R 0.00	R 0.00	R 0.00
				R 2,160,291.00					**R 0.00**	**R 0.00**
Khutsong: Street Cleaning & Illegal Dumping										
Supervisor	9	0	R 0.00	R 0.00			0	R 0.00	R 0.00	R 0.00
Driver/ Operator	9	0	R 0.00	R 0.00			0	R 0.00	R 0.00	R 0.00
General Workers	19	14	R 102,275.00	R 1,431,850.00			0	R 0.00	R 0.00	R 0.00
				R 1,431,850.00					**R 0.00**	**R 0.00**
Total Street Cleaning				**R 6,456,478.00**					**R 11,886,903.00**	**R 13,432,200.39**
Total Operations				**R 13,211,505.00**					**R 28,361,982.93**	**R 32,049,040.71**
Total				**R 14,446,532.00**					**R 35,004,636.72**	**R 39,555,239.49**

Cost difference between current and proposed personnel structures and costs	R 25,108,707.49

Please note:

The maximum total cost (highest value) to company was used per personnel description and not the average as personnel do get promoted etc.

APPENDIX F

ESTIMATED NUMBER OF SERVICE POINTS PER AREA

Appendix F: Estimated number of service points per area

Obtained from chapter II of the IDP and reowrked to estimate the number of service points

			1	2	3	4	5	6		
Proclaimed Townships	**Population**	**Amount of houses**	**Informal structures**	**Back Yard Dwellers**	**Residential stands**	**Business stands**	**Industrial stands**	**Current service 1, 2. 3**	**Current service 1, 2. 4 (adjusted)**	**Informal not serviced***
Northern Region										
Carletonville	28,090.00	5292	326		5322	195	168	5618	5618	326
Welverdiend	2,840.00	528	40		943	89	33	568	568	40
Blybank	950.00	190	0		2832	62	18	190	190	0
Khutsong (including Khutsong South)	139,850.00	8485	11000	8485	8912	33	81	27970	12727.5	11000
Sub-total									19103.5	11366
Southern Region										
Fochville	15,015.00	3003	0		4247	124	119	3003	3003	0
Kokosi	29,740.00	3854	1594	500	4443	37	0	5948	4104	1594
Greenspark	3,655.00	343	22	366	395	6	0	731	526	22
Wedela	9,565.00	1436	79	398	5309	19	0	1913	1635	79
Sub-total									9268	1695
	229,705.00	23,131.00	13,061.00	9,749.00	32,403.00	565.00	419.00	45,941.00	28,371.50	13,061.00
Mine towns	**Population**	**Amount of houses**	**Informal structures**	**No of beds**						
Blyvooruitzicht	7060	1009	303	500						
Cementation	60	12								
Deelkraal	2030	406								
Elandsrand	5275	495		2800						
Doornfontein	2495	79		2100						
Driefontein	26264	842	2400	10054						
Western Deep Levels	9853	294	274	7013						
	53037	3137	2977	22467						

Informal not serviced* Assumed not currently serviced

APPENDIX G

EQUIPMENT AND PERSONNEL REQUIREMENTS

Appendix G: Equipment requirements

Existing capability

Type of equipment	No	Estimated service points / day	Service / day	Service / week	No of runners req	No of drivers req
				5	5	1
Northern section						
20m³ REL	3	900	2700	13500	15	3
12m³ REL	2	600	1200	6000	10	2
Total				19500	25	5
Southern region						
20m³ REL	2	900	1800	9000	10	2
					35	7

Current estimated services

Proclaimed Townships	Estimated current no of service points	Informal Areas	Number of units required*	Number of 20m³ containers required	Number of 20m³ containers req/week (adjusted)	Suggested container	Estimated cost of containers	Proposed equipment	Estimated cost of equipment
Northern Region				20					
Carletonville	5618	326	0.11	0.196	1	6m³ skip	R 10,000.00		
Welverdiend	568	40	0.01	0.024	1	6m³ skip	R 10,000.00		
Blybank	190	0	0.00	0.000					
Khutsong (including Khutsong South)	12727.5	11000	3.67	6.600	7	4 x 20m³ RoRo containers	R 60,000.00	1 x 16ton RoRo	R 38,500.00
Sub-total	**19103.5**	11366	3.8	6.820					
Southern Region									
Fochville	3003	0	0.00	0.000					
Kokosi	4104	1594	0.53	0.956	1	3 x 6m³ skip	R 30,000.00		
Greenspark	526	22	0.01	0.013	1	1 x 6m³ skip	R 10,000.00	1 x 16ton Skip loader	R 38,500.00
Wedela	1635	79	0.03	0.047	1	1 x 6m³ skip	R 10,000.00		
Sub-total	**9268**	1695	0.6				R 120,000.00		R 77,000.00
	28,371.50	13061							R 197,000.00
Number of units required*	12m³ RELs since 20m³ RELs are to large								

Additional formal housing developments planned in the next four years

Year	Planned houses*	No of 12m³ RELs req	No of 20m³ RELs req	Proposed combination		No of runners req	No of drivers req	Equipment cost				
				No of 12m³ RELs req	No of 20m³ RELs req	5	1	Estimated of 12m³ RELs req	Total cost /annum	Estimated cost of 20m³ RELs req	Total cost /annum	Total cost
2010/11	6088	2.03	1.35	2		10	2	R 22,000.00	R 44,000.00	R 38,500.00	R -	R 44,000.00
2011/12	8298	2.77	1.84	2	1	15	3	R 24,200.00	R 48,400.00	R 42,350.00	R 42,350.00	R 90,750.00
2012/13	5338	1.78	1.19		1	5	1	R 26,620.00	R -	R 46,585.00	R 46,585.00	R 46,585.00
2013/14	12320	4.11	2.74	3	2	25	5	R 29,282.00	R 87,846.00	R 51,243.50	R 102,487.00	R 190,333.00
Total		10.68	7.12			55	11	R 32,210.20	R -	R 56,367.85	R -	R -
Total rounded up		11.00	8.00									
Planned houses*	Information received verbally from municipality											

Table: Comments from the Public addressed during the Public Meeting on the MCLM IWMP

	Comments from the Public	Response by MCLM
1.	Why should Welverdiend drop-off facility still be a priority? The approach should be changed to focus on the townships that did not benefit previously.	- Welverdiend is an existing facility that requires to be upgraded. - Establishment of Public Disposal facilities are one of the projects identified in the Draft IWMP for implementation.
2.	Community Members should participate in the Personnel recruitment process of Council.	- Council has approved the Personnel Recruitment Policy, which does not allow the participation by members of the Public. Personnel Recruitment is an internal process.
3.	The establishment of the Call Centre isn't necessary. The current crisis faced by the MCLM and other Municipalities in the West Rand District Municipality, is the sinkholes due to the dolomite conditions of the area. Funds should be directed to address that.	- Establishment of the Call Centre is for the assistance with the rapid response to the matters of emergency (sinkholes included). Currently, there are projects directed to resolve the sinkholes matters and the relevant Directorates within Council are handling that.
4.	Community members should familiarize themselves with the costs related to the Implementation Plan of the IWMP.	- Waste Department appreciates the interests shown by the Members for the implementation of the IWMP and that can add value into the process to ensure that authorities can allocate funding for these projects.
5.	The IWMP project is appreciated and MCLM is applauded for that.	- Member's comment is appreciated as it provides an indication that, Waste Department has put together an IWMP, which is responsive to the Community needs.
6.	When will the Waste By-Laws be enforced to curb the illegal dumping activities?	- Development of the Waste By-Laws will follow immediately after the approval of the IWMP. Merafong is currently engaging in the removal of illegal dumping and is intended to be on going to minimize the spread of the activities.
7.	Ward Committees should be made aware of the implementation of the projects contained in this IWMP.	- Projects implemented in specific Wards are being communicated to the affected Ward Councillor, which ultimately is His/her responsibility to inform His/her Ward Committee Members.
8.	The construction progress of the Wedela drop-off facility is very slow.	- The matter is noted and will be handled with the Department of Project Management Unit (PMU), which is responsible for the implementation of the Infrastructure projects.
9.	Waste Management Department is invited to visit the informal settlements to get the first hand experience on the situation of the illegal dumping.	- Waste Department will be making arrangements to visit the area. The situation in the informal settlements is well known to the Office of Waste Management hence the details have been captured in the Status quo Document and the Gap Needs Analysis, Goals and Objectives of this IWMP, for them to be addressed. A specific project has been identified in the project list of the IWMP to address the situation in the informal settlements.

Comments from the Public	Response by MCLM
10. The litterbags generated by the Community Workers (appointed through the National Community Workers Programme by Seriti Consultants) are left for several days without collection.	- Council doesn't have vehicles for the street cleaning but Waste Department will continue to improvise with the available resources. Provision of the suitable and sufficient vehicles has been identified as one of the projects in the IWMP to address the identified need.
11. Waste Separation at source of generation should be introduced to intensify the recycling.	- That is the way to go as required by the NEMWA: Act No. 59 of 2008. Waste minimization has been identified as a need and there is a project in the IWMP designed specifically for that purpose.
12. Ageing Waste Personnel should voluntarily give way to the younger energetic recruits.	- Council has already invited the interested Employees to tender their resignations voluntarily. This process is not depended upon Council but the affected Employees, if the response is poor; Council has no option but to live with those Employees until their normal retirement period.
13. Community members with capacity should be invited to assist the Municipality with the fleet needs.	- There is a procurement process that is being followed by Council. Office of the Supply Chain Management can be visited for details of registration in to the database and they will describe the process.
14. Roll-out of the 240L bins is appreciated.	- Member's comment appreciated.
15. Collection in the informal settlements will minimize illegal dumping.	- The situation in the informal settlements is well known to the Office of Waste Management hence the details have been captured in the Status quo Document and the Gap Needs Analysis, Goals and Objectives of this IWMP, for them to be addressed. A specific project has been identified in the project list of the IWMP to address the situation in the informal settlements.
16. Waste has been a challenge in the townships, but now the approach of the Municipality is appreciated.	- Member's comment appreciated as an indication that the initiatives and efforts of the Waste Department are being recognised.
17. Local service providers should be given a priority on the procurement of goods and services.	- Supply Chain Management is the custodians of the Procurement Policy. Details of the policy can be found by visiting the Supply Chain Management Department.
18. Ward Committees should give necessary support to the Waste Department.	- Your efforts are not going unnoticed; Already the Waste Department appreciates your support by attending this important meeting.
19. Communal Skip containers removed from the townships, should be reinstated.	- The complaint will be attended to.

Comments from the Public	Response by MCLM
20. People engaging in the community projects should be integrated into the Waste Department.	- Employment of Personnel is depended upon the Personnel Recruitment Policy of Council.
21. Community members in some areas adopted the open spaces to establish parks.	- The initiatives are appreciated and will curb the illegal dumping as well to instil ownership of their immediate environment into community members.
22. Refuse collection schedule should be adhered to in order to avoid illegal dumping.	- The comment is appreciated and endeavours will be made to adhere to the schedule.
23. Waste Personnel should be trained on the handling of the envisaged 240L bins.	- Comments appreciated and proper training will be provided to the personnel prior implementation of the project.
24. Operation of the Call Centre in Merafong will assist a great deal.	- Comment appreciated.
25. Open stands/spaces should be developed to discourage illegal dumping.	- The matter of the open spaces has already been forwarded to the relevant Directorates to ensure that the open spaces are well managed.
26. Refuse collection vehicles with bigger capacity should be procured.	- The matter is receiving attention of Council to improve the fleet.
27. People who participated in the previous projects of Council should be given preference on the recruitment of staff.	- Employment of Personnel is depended upon the Personnel Recruitment Policy of Council.
28. Females dominate the staff percentage intake, but they are unable to perform physical jobs.	- Employment of staff should be in accordance with the Recruitment policy and without prejudice.
29. People currently engaging in waste salvaging at Rooipoort should be appointed.	- Council is in the process of formalizing this project. The project will be advertised to invite proposals from the prospective bidders.
30. Recycling project at Rooipoort landfill site should be monopolized by an individual, more people should be given permission to perform waste reclaim.	- Council is in the process of formalizing this project. The project will be advertised to invite proposals from the prospective bidders.
31. Cleaning of the Carletonville should in partnership with the mines, as the greater percentage of the town consumers/residents are from the mining sector.	- Comments appreciated, where possible the mining houses will be taken on board to form a partnership with Council.
32. The positioning of Wedela drop-off is not perceived to e proper in relation to the traffic that will be using the adjacent roads. Perhaps it should be reviewed.	- The concern will be raised with the PMU Offices for their attention.
33. Some of the Wards have already initiated recycling activities. E.g. Ward 25.	- The recycling projects which have been initiated will be pursued to give support.

MCLM: Registered Stakeholders

REGISTERED KEY STAKEHOLDERS/ STRUCTURES WITH IDP/PMS

ORGANISATION/ DEPARTMENT	SECTOR	AREA	CONTACT PERSON	CONTACT NUMBERS
Carletonville Hospital	Health	Merafong	Mr. N. Tlholwe	018 788 1704 P.O. Box 2020 Carletonville 2500
Khutsong Community Policing Forum	Community Policing	Speaker's Office	Cllr. Ngxabani S. Magodielo	083 642 7182/ 018 788 9747 smagodielo@merafong.gov.za
Wedela Community Policing Forum	Community Policing	Speaker's Office	Cllr. Ngxabani S. Magodielo	083 642 7182/ 018 788 9747 smagodielo@merafong.gov.za
Kokosi Community Policing Forum	Community Policing	Speaker's Office	Cllr. Ngxabani S. Magodielo	083 642 7182/ 018 788 9747 smagodielo@merafong.gov.za
Carletonville Community Policing Forum	Community Policing	Carletonville	Beki Ndlakuse	083 648 7607 bndlakuse@merafong.gov.za
Vuselela FET College	Education	Merafong	Mr. P. Hamilton	010 707 4102 20 South Street Carletonville 2600

Khutsong SAPS	Crime Prevention	Merafong	Mr. P.N. Matabane	(018) 783 9033 1 Sompane Road Khutsong 2499
AngloGold Ashanti	Mining houses	Merafong	Mr. Butiki Loliwe Mr. Thembile Ntsizi	bloliwe@anglogoldashanti.com 082 411 4391 cntsizi@anglogoldashanti.com 083 301 7407
DRD Gold Mine	Mining houses	Merafong	Mr. Paul Leenderts	Paul.leenderts@drdgold.com 082 383 9228
Harmony Gold Mine	Mining houses	Merafong	Ms. Thembi Mashinini	011 402 2134
Goldfields	Mining houses	Merafong	Mr. Danny Ramsuchit	danny.ramsuchit@goldfields.co.za

REGISTERED KEY STAKEHOLDERS/

ORGANISATION/ DEPARTMENT	AREA	CONTACT PERSON	CONTACT NUMBERS
Department of Agriculture & Rural Development (DARD)	Gauteng Provincial Department	Andrew Mathabathe	Tel: 011 355 1445 Fax: 011 355 1000 Cell: 083 252 6325 Andrew.mathabathe@gauteng.gov.za
West Rand District Municipality (WRDM)	District Municipality	RH. Hammer Susan Stoffberg	Tel: 011 411 5162 Cell: 083 449 5163 hhamer@wrdm.gov.za Tel: 011 411 5131 Cell: 073 191 2852 ssstoffberg@wrdm.gov.za
Carletonville Business Forum	LED Office	Tebogo Kgagara	Tel: 018 788 9603/9500 tkgagara@merafong.gov.za
Fochville Business Forum	LED Office	Tebogo Kgagara	Tel: 018 788 9603/9500 tkgagara@merafong.gov.za

ORGANISATION/ DEPARTMENT	AREA	CONTACT PERSON	CONTACT NUMBERS
Kokosi Business Forum	LED Office	Tebogo Kgagara	Tel: 018 788 9603/9500 tkgagara@merafong.gov.za
Khutsong Business Forum	LED Office	Tebogo Kgagara	Tel: 018 788 9603/9500 tkgagara@merafong.gov.za
Wedela Business Forum	LED Office	Tebogo Kgagara	Tel: 018 788 9603/9500 tkgagara@merafong.gov.za
Tourism Forum	LED Office	Tebogo Kgagara	Tel: 018 788 9603/9500 tkgagara@merafong.gov.za
Hawkers Forum	LED Office	Tebogo Kgagara	Tel: 018 788 9603/9500 tkgagara@merafong.gov.za
Mining Houses Forum	Merafong	Goldfields DRD Harmony	

ORGANISATION/ DEPARTMENT	AREA	CONTACT PERSON	CONTACT NUMBERS
Far West Rand Dolomitic Water Association	Merafong	AH Leuschner	andries@goldfields.co.za
Community Development Workers	Speaker's Office	Bobo Ndlakuza	083 648 7607 bndlakusa@merafong.gov.za
Kokosi Taxi Association	Kokosi	Cllr JM Ramokgoateci	083 648 7575
Carletonville Taxi Association	Merafong	Cllr JM Ramokgoateci	083 648 7575
Wedela Taxi Association	Merafong	Cllr JM Ramokgoateci	083 648 7575
Carletonville Local & Long Distance Taxi Association Metro-Rail Commuters Forum	Carletonville Merafong	Cllr JM Ramokgoateci Thandi Jada	083 648 7575 083 544 9026 / (011) 833 0320
Carletonville Technical College	Merafong	The Principal	
AngloGold Ashanti	Vaal Reefs	Mr. Mark Till	(018) 478 6268 - Tel (018) 478 6263 - Fax mtill@anglogoldashanti.com

APPENDIX I

MEETING WITH COUNCIL – MINUTES TO BE ATTACHED (29 JUNE 2026)

IWMP WORKSHOP FOR COUNCILLORS: 25/26 TBC