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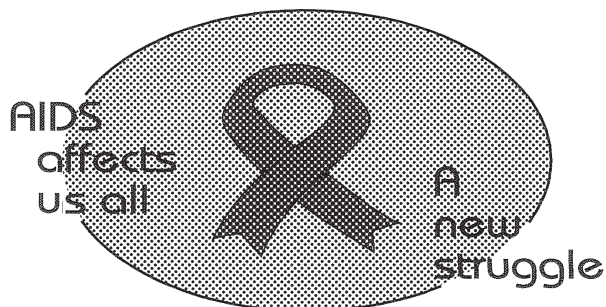
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PROVINCIAL NOTICES • PROVINSIALE KENNISGEWINGS**PROVINCIAL NOTICE 520 OF 2023****Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of restrictions in terms of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013)****ERF 2177 Walmer, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice given that condition/s B.6(a)-(d) in Deed of Transfer No. T454/2019 applicable to ERF 2177 Walmer is/are hereby removed.

PROVINCIAL NOTICE 521 OF 2023**BUFFALO CITY METROPOLITAN MUNICIPALITY (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act No. 16 of 2013:****ERF 2252 EAST LONDON**

In terms of Section 47(1) of the Spatial Planning and Land Use Management Act No. 16 of 2013, read with Section 59 of the Buffalo City Metropolitan Municipality Spatial Planning and Land Use Management Bylaw of 2016, approval has been granted for the removal of restrictive title conditions B. 4. (a), (b), (c), (d) & (e) found in Deed of Transfer Number T3705/2017, pertaining to Erf 2252 East London.

PROVINCIAL NOTICE 522 OF 2023

Nelson Mandela Bay Municipality (EASTERN CAPE)

Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013)

ERF 33, COLLEEN GLEN, PORT ELIZABETH, EASTERN CAPE

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that conditions 4(a), (b),(c),(d) & (e) In Deed of Transfer No. T11040/2008 applicable to Erf 33 Colleen Glen are hereby removed.



Eastern Cape Provincial Integrated Waste Management Plan 2022 - 2026

J37232

FINAL

March 2022



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Eastern Cape Provincial Integrated Waste Management Plan, 2022 - 2026 FINAL DRAFT

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Executive Summary

Introduction

This is the second Integrated Waste Management Plan (IWMP) to be compiled for the Eastern Cape Province. The first Eastern Cape IWMP was completed in 2010 and defined the Department of Economic Development Environmental Affairs and Tourism's (DEDEAT) vision for solid waste management for the period 2010 to 2015. The 2010 IWMP has now been revised, and this second generation IWMP addresses the period 2022 – 2026. The Eastern Cape Provincial IWMP (PIWMP) is applicable to all areas falling within the Eastern Cape and covers all 6 district municipalities, 31 local municipalities and two metropolitan municipalities.

The objective of this PIWMP is to present a unified approach to waste management in the Eastern Cape. The PIWMP will cover a regional approach to waste management and identify projects on a regional level which can improve waste management in the province.

This IWMP consists of the following eleven sections:

- Section 1: Introduction
- Section 2: Environmental impacts associated with waste management
- Section 3: Approach and methodology
- Section 4: Legal requirements overview
- Section 5: Situation analysis
- Section 6: District and metropolitan municipality profiles
- Section 7: Gap analysis
- Section 8: Desired end state
- Section 9: Case studies
- Section 10: Implementation plan
- Section 11: Way forward

Policy and Legislation

In terms of Section 11(4)(a) of the National Environmental Management: Waste Amendment Act (26 of 2014) (NEMWA), all provinces are required to compile an IWMP, submit it to the Minister for endorsement. The contents of an IWMP are defined in NEMWA:

National Environmental Management: Waste Act (Act 59 of 2008) (NEMWA): Section 12(1) of the NEMWA specifies the minimum content of IWMPs which includes:

- a Situation Analysis including, amongst other things, an analysis of waste types, a description of services, and an indication of the number of persons not receiving waste collection services
- An indication of how the local authority intends to give effect to, amongst others, the objectives of the NEMWA, to provide for implementation of waste minimization and recycling, and best environmental practice;
- Setting out of priorities and objectives for waste management;
- Establishing targets for collection, minimization, re-use and recycling;
- Setting the approach for the planning of new facilities;
- Indicating financial resources required for giving effect to the plan; and
- Describing how the authority will give effect to the plan.

Approach

The following approach was used for this PIWMP.

- Review of IWMPs – a total of 26 IWMPs
- Survey of municipalities – 23 responses received
- Meetings with municipalities:
 - All 6 district municipalities
 - Both metropolitan municipalities
 - 15 local municipalities
- Literature review – SAWIS records, previous PIWMP, waste facility permits, IWMPs, case studies
- Meetings with waste management and recycling companies
- Site visits to select waste management facilities
- Project steering committee meetings
- 7 workshops of the draft PIWMP

Situation Analysis and Gap and Needs Assessment

The following table provides a summary of the situation analysis and gap and needs assessment in terms of waste management in the Eastern Cape.

TOPIC	FINDING
INSTITUTIONAL ISSUES	
Capacity in DEDEAT and municipalities	<ul style="list-style-type: none"> • Only 47% of municipalities have designed waste management officers in terms of the NEM: WA • Experience of WMOs ranges from 1 year to 19 years • There is a lack of employees at DEDEAT and in municipalities to fulfil the required waste management functions • Municipal WMOs do not match the profile of a WMO as per the DFFE's guideline on the designation of WMOs • The DEDEAT organogram was last revised in 2016.
SERVICE DELIVERY ISSUES	
Recycling	<ul style="list-style-type: none"> • 43% of the domestic waste stream is potentially recyclables • There is a lack of information available in the province regarding current recycling rates • Neither of the metros are running separation at source programmes • 12/31 local municipalities are running separation at source programmes • There are 13 MRFs in the province
Collection services	<ul style="list-style-type: none"> • Only 41.3% of households have access to a weekly refuse collection service in the province • 44.3% of households use their own refuse dumps
Waste disposal	<ul style="list-style-type: none"> • There are 89 operational landfill sites in the province • There are 48 closed landfill sites in the province • There are 3 landfill sites currently under construction • There are 2 landfill sites in a planning phase • 23.6% operational landfill sites are not permitted • At least 7 operational landfill sites were permitted but the permits have expired

Waste information management	<ul style="list-style-type: none"> • There is no standard template for municipalities to report information back to DEDEAT • Only 16 municipalities, 25 waste disposal facilities and 12 recycling companies are registered and reporting on the SAWIS • Waste information such as details of awareness campaigns and audit reports are not being submitted to DEDEAT • Only 1 local municipality submits annual IWMP performance reports to DEDEAT • The majority of landfill sites do not have weighbridges and only limited manual capturing of waste disposal tonnages is occurring • Only 13 IWMPs have been submitted to DEDEAT for endorsement • 4 local municipalities do not have IWMPs and 9 IWMPs are out of date
Waste facility compliance	<ul style="list-style-type: none"> • Only 76.4% of operational landfill sites are permitted • The closure and rehabilitation of a number of landfill sites has not occurred within permitted timeframes • Municipalities have not registered waste transfer stations, MRFs or buy-back centres in terms of National Norms and Standards • DEDEATs landfill site audit template is not comprehensive • Internal and external audits of waste facilities are not occurring as per permit requirements • Landfill sites lack equipment and infrastructure such as signage, gates, fencing, ablution facilities, landfill site compactors and TLBs
PUBLIC AWARENESS AND COMMUNICATION ISSUES	
Public awareness campaigns	<ul style="list-style-type: none"> • Municipalities do not submit reports on waste awareness campaigns to DEDEAT • Not all municipalities are undertaking waste awareness campaigns • Illegal dumping and littering are prevalent in the province
FINANCIAL MANAGEMENT	
Funding for waste management	<ul style="list-style-type: none"> • WMOs are not ensuring that funding is correctly allocated to waste management e.g. equitable share and MIG funding • WMOs are not aware of the portion of equitable share which is allocated to waste management • Other services are prioritised in terms of the funding over waste management • Indigent registers in some municipalities are not up to date, this could result in municipalities missing out on equitable share
Tariffs	<ul style="list-style-type: none"> • Only one municipality has undertaken a full cost accounting exercise • There is low payment rate of waste management tariffs which ranges from 13% -80%
STRATEGIC PLANNING	
Future planning	<ul style="list-style-type: none"> • There is a lack of staff in municipalities with planning skills • There is a lack of funding available to address future planning, funding is diverted to operations • There is a lack of integration between IWMPs and IDPs

Objectives

Eight objectives were defined based on the results of the needs analysis namely:

1. Ensure sufficient institutional capacity to implement integrated waste management
2. Improved integrated waste management and future planning
3. Increased waste minimisation, re-use, recycling and recovery
4. Effective waste information management
5. Improved waste facility management
6. Provide effective and financially viable services
7. Improved education, awareness and waste information sharing
8. Effective compliance monitoring and enforcement

Actions and Targets	Comment
1. Ensure sufficient institutional capacity to implement integrated waste management	
1.1 All municipalities to have a designated WMO appointed by year 1	WMOs should be designated as per the DFFE guidelines for designation of WMOs
1.2 DEDEAT to develop WMO performance and development plan template based on the requirements of the DFFE Guideline for the designation of WMOs.	DEDEAT should develop a template to outline the duties, powers and profile of WMOs as outlined in the DFFE guideline for designation of WMOs. This may assist in clarifying some of the current confusion regarding this role.
1.3 All LMs to review performance of WMOs against the DFFE Guidelines on WMO appointments, using the above DEDEAT template.	All LMs should undertake a review of their WMOs to ensure that the appointed WMO conform with the DFFE guideline for the designation of WMOs. Where an appointed WMO does not meet all the specified criteria an action plan should be developed to address the gaps.
1.4 DEDEAT to develop a training guideline for municipalities	DEDEAT to develop and finalise a training guideline for municipalities. The guideline will identify training requirements for employees at different levels e.g.: <ul style="list-style-type: none"> • Refuse truck driver • Landfill site supervisor • Waste management officer
1.5 DEDEAT and municipalities to identify extra positions and resources required to implement this provincial PIWMP.	This PIWMP places a requirement on DEDEAT to provide a greater supporting role to municipalities. This PIWMP also includes responsibilities for district, local and metropolitan municipalities. Additional employees may therefore be required to ensure that the projects identified in this PIWMP are implemented.
2. Improved integrated waste management future planning	
2.1 Development of a provincial waste infrastructure masterplan for the Eastern Cape. This plan should cover regional landfill sites, MRFs, public drop-off facilities, composting facilities and construction and demolition waste crushing facilities.	This would involve a review of short, medium- and long-term waste infrastructure needs for all municipalities in the Eastern Cape. The report would: <ul style="list-style-type: none"> • Identify required infrastructure • Contain generic conceptual design for different facilities (composting, MRF, drop-off centre etc.) • Contain high level budget estimates for different facilities to enable municipalities to budget accordingly.
2.2 Both metros to develop a waste infrastructure masterplan by year 5.	The waste infrastructure masterplan would: <ul style="list-style-type: none"> • Identify the needs in terms of waste management infrastructure (MRF, composting, recycling drop-off facilities, anaerobic digestion, transfer stations etc.)

Actions and Targets	Comment
	<ul style="list-style-type: none"> Identify priority areas for the development of infrastructure Estimate budgets for the development of infrastructure Provide concept designs for infrastructure
2.3 Development of guidelines for challenging problematic waste streams as needed, for example <ul style="list-style-type: none"> E-waste Organic waste Domestic hazardous waste Abattoir waste 	The guideline would outline best management practices for the management of problematic waste streams. Specific examples of how these waste streams can be managed in the province is to be provided.
2.4 All municipalities to have current IWMPs which are endorsed by DEDEAT by year 5	All municipal IWMPs should be submitted to DEDEAT for endorsement.
2.5 All municipalities to have integrated IWMP projects into IDPs	Once the IDP and IWMP review timeframes are aligned municipalities will be able to incorporate IWMP projects into the IDP.
2.6 All municipalities to report on IWMP implementation on an annual basis to DEDEAT.	DEDEAT to prescribe a reporting format for IWMP progress reports. Municipalities to submit reports on an annual basis.
3. Increased waste minimisation, re-use, recycling and recovery	
3.1 DEDEAT quarterly Waste Management Forum: <ul style="list-style-type: none"> All municipal waste managers to attend Greater involvement of private recycling industry (e.g. PETCO, eWASA) at meetings. 	Greater interaction between municipalities and the private sector is required to identify and address waste management issues in the province. DEDEAT currently host quarterly Waste Management Forum meetings.
3.2 50% of urban households in the two metros to have separation at source programmes in place by year 5. Local municipalities to create an enabling environment for recycling in the main town in the municipality by year 5.	Neither of the metros have any municipal separation at source programmes in place. Operation Phakisa sets a target of 50% of households in metros to be separating waste at source by Year 5. Local municipalities also need to move towards separation at source.
3.3 Development of MRFs <ul style="list-style-type: none"> Both metropolitan municipalities to have at least one MRF operational by year 5 12 local municipalities to have MRFs in operation by year 5 	A MRF is required to support as separation at source programme in the metros. It is anticipated that municipalities will run a two bag/ bin system with one bin being dedicated to clean recyclables. Use of multiple bags/ bins for each waste stream e.g. plastic, paper. Cardboard, metal is not recommended as it complicates the system. The design of the MRF will be dependent on available land and funding. The design can vary from a mechanised MRF with conveyor belts to a facility where waste is sorted on sorting tables.
3.4 Municipalities to create an enabling environment for composting	The National Norms and Standards for Disposal of Waste to Landfill require a 25% diversion of green waste from landfill in 2018 and a 50% diversion by year 5. There are currently no municipal composting schemes in place in the province to address this requirement. Municipalities could undertake various programmes to reduce green waste to landfill including: <ul style="list-style-type: none"> Outsourcing of composting In-house composting of waste generated from municipal parks etc. Home composting programmes etc.
3.5 Both metros to investigate the feasibility of facilitating a programme for the crushing of construction and demolition waste (C&DW) by Year 3 and, if feasibility implement a programme by Year 4.	Construction and demolition waste disposal at landfill can be reduced through crushing C&DW into reusable components for re-use in the construction industry.
3.6 All municipalities to facilitate the development of at least	Public drop-off centres can be incorporated into existing

Actions and Targets	Comment
one recycling public drop-off centre in the main town by year 4.	infrastructure such as transfer stations.
3.7 All municipalities to implement an in-house waste recycling programme by year 1	Programmes for recycling of office paper, plastic etc. should be implemented. Local recycling companies can be contracted to collect the recyclables.
4. Effective waste information management	
4.1 DEDEAT to develop a written template or database to standardise information received from municipalities by year 1	DEDEAT to develop a standard template for use by municipalities to ensure uniformity of data received. The template will include: <ul style="list-style-type: none"> • WMO status • No. permitted and unpermitted landfills • Results of waste compliance audits • Recycling programmes • Training programme • Awareness campaigns etc.
4.2 At all waste facilities without weighbridges, the SAWIS manual system for estimating incoming waste is to be implemented, so as to allow waste disposal tonnages to be estimated.	The National Waste Information Regulations require all landfill sites over 200m ² in size to report tonnages on the SAWIS.
4.3 DEDEAT to develop a standard in-house e-filing system to ensure correct management of waste information and records. To be developed by year 1.	The filing structure would contain individual files for: <ul style="list-style-type: none"> • IWMPs • Audit reports • Recycling data • Training materials etc.
4.4 All municipalities to be reporting on SAWIC/s by year 4	With the implementation of a manual system for collecting waste disposal tonnages in place, all municipalities should be able to report at least estimated waste data.
4.5 Ensure accurate data is reported on SAWIC through training and verification audits	Only 25 operational landfill sites in the province are reporting on SAWIS. In addition errors in SAWIS data were identified during a review of SAWIS data.
5. Improved waste facility management	
5.1 DEDEAT to develop basic guideline documents for the operation of small waste management facilities which do not trigger the requirement for a waste management license or registration in terms of the National Norms and Standards.	Guideline documents to be developed for the operation of: <ul style="list-style-type: none"> • Drop-off centres/ transfer stations • Material recovery facility
5.2 100% of landfill sites to be permitted by year 5	All operational landfill sites to be permitted by year 4. A review of the status of landfill site permits will also be required as a number of permits have expired.
5.3 All waste facilities to have operational plans in place by year 5. Where operational plans are in place these should be reviewed by year 4.	All waste management license applications and registration in terms of the National Norms and Standards for the Storage of Waste require an operational plan to be submitted as part of the application. Old landfill sites (permitted before the NEM: WA) may not have operational plans and operational plans for facilities may be out of date to align with changes in legislation,
6. Provide effective and financially viable services	
6.1 Development of service delivery guidelines for rural areas by year 3	Guidelines will be developed which identify methods for practical and efficient waste service delivery to rural areas.
6.2 Achieve at least a 10% increase in refuse collection rates or services in all municipalities by year 3.	This could be through the use of co-operatives for kerbside collection, provision of central waste drop-off facilities etc. The National Treasury is providing equitable share for provision of basic services. This funding should be directed to provision of waste collection services to rural areas.
6.3 Full cost accounting exercises to be undertaken by both	The DFFE have developed a Solid Waste Tariff Model. This

Actions and Targets	Comment
metropolitan municipalities by year 2, and all LMs by year 4.	model can be used by municipalities to assist with full cost accounting exercises.
7. Improved education, awareness and waste information sharing	
7.1 DEDEAT to hold annual technical workshops / engagements with all WMOs or waste managers	A technical workshop/ engagement should be hosted by DEDEAT on an annual basis. The workshop can be used to present: <ul style="list-style-type: none"> • New policy and legislation • New template • New reporting requirements • Waste management solutions e.g. new technology
7.2 DEDEAT to host annual workshops / knowledge updates for small companies involved in the waste industry	National recycling bodies (PETCO, POLYCO, The Glass Recycling Company) could be invited to present to EMEs and small recycling companies. DEDEAT could also present a summary of legislation applicable to small recycling companies such as the National Norms and Standards for Storage of Waste (GN 926 of 2013)
7.3 DEDEAT to publish an annual waste newsletter	A waste newsletter should be published annually and distributed to the public and stakeholders in the waste management industry electronically.
7.4 DEDEAT and municipalities to develop and implement awareness programme.	Awareness campaigns can include print based, radio advertising, road shows at taxi ranks, churches etc. workshops with communities or ward structures, door to door visits and school visits.
8. Effective compliance monitoring and enforcement	
8.1 DEDEAT to update their waste facility audit report template by year 1 to ensure all conditions of waste permits are audited and to include a scoring system.	A standard audit report template for the province should be developed. The template would require each permit condition to be audited and scored (compliant, partially compliant, non-compliant, not applicable).
8.2 DEDEAT waste officers and municipalities to receive training on performance auditing	An induction training session should be held for all persons who undertake waste facility audits.
8.3 DEDEAT regional offices to develop and implement auditing schedules for government and private waste facilities where DEDEAT is the competent authority (industry landfill sites, waste storage facilities and recycling facilities) and undertake audits as per the schedule.	DEDEAT should undertake audits of industry to determine: <ol style="list-style-type: none"> 1. if a registration of WML is in place 2. if the conditions of the norms and standards or WML are being complied with
8.4 All waste facilities to be audited at least annually by DEDEAT	This includes municipal and private waste facilities.
8.5 All municipal landfill facilities are to be audited internally by municipalities at least once per annum (or more frequently if required by license conditions).	Municipalities to audit using the audit template developed by DEDEAT.
8.6 DEDEAT to determine the baseline of enforcement actions taken against non-compliant waste facilities and increase the number of enforcement actions by 5% a year. Fines to be issued for all repeat non-compliances by year 5	DEDEAT is currently not focusing on enforcement. Municipalities are issued with non-conformance reports, but no action or limited action is taken by the municipality to remedy the non-compliance.

Implementation Plan

An implementation plan has been developed based on the 8 objectives. The plan contains a number of projects and initiatives which, if properly executed, should move the Eastern Cape Province towards improving waste management. The 39 projects listed below have been identified spanning a period of 5 years.

Actions	Period
Objective 1. Ensure sufficient institutional capacity to implement integrated waste management	
1.1 All municipalities to have a designated WMO appointed	Year 1 -Year 2
1.2 DEDEAT to develop WMO performance and development plan template based on the requirements of the DFFE Guideline for the designation of WMOs.	Year 2
1.3 All LMs to review performance of WMOs against the DFFE Guidelines on WMO appointments, using the above DEDEAT template.	Year 2-Year3
1.4 DEDEAT to develop a training guideline for municipalities	Year 1
1.5 DEDEAT and municipalities to identify extra positions and resources required to implement this provincial PIWMP.	Year 1
Objective 2. Improved integrated waste management future planning	
2.1 Both metros to develop a waste infrastructure masterplan for provision of public drop off facilities for recyclable material.	Year 5
2.2 DEDEAT to develop a provincial waste infrastructure masterplan for the Eastern Cape. This plan should cover regional landfill sites, MRFs, public drop-off facilities, composting facilities and construction and demolition waste crushing facilities. This plan should address short, medium- and long-term infrastructure needs.	Year 3- Year 4
Development of guidelines for challenging/ opportunistic waste streams (e.g. abattoir waste, nappies)	Year 4
2.3 All municipalities to have IWMPs which are current and endorsed by DEDEAT.	Year 5
2.4 All municipalities to have integrated IWMP projects into IDPs	Year 1 – Year 5
2.5 All municipalities to report on IWMP implementation on an annual basis to DEDEAT.	Year 1 – Year 5
3. Increased waste minimisation, re-use, recycling and recovery	
3.1 DEDEAT quarterly Waste Management Forum: <ul style="list-style-type: none"> - All municipal waste managers to attend - Greater involvement of private recycling industry (e.g. PETCO, eWASA) at meetings. 	Year 1 – Year 5
3.2 50% of urban households in the two metros to have separation at source programmes in place. Local municipalities to create an enabling environment for recycling in the main town in the municipality.	Year 5
3.3 Development of MRFs <ul style="list-style-type: none"> - Both metropolitan municipalities to have at least one MRF operational - 12 local municipalities to have MRFs in operation 	Year 5
3.4 Municipalities to create an enabling environment for composting.	Year 5
3.5 Both metros to investigate the feasibility of facilitating a programme for the crushing of construction and demolition waste (C&DW) and, if feasibility implement a programme	Year 1 – Year 2
3.6 All municipalities to facilitate the development of at least one recycling public drop-off centre in the main town.	Year 4
3.7 All municipalities to implement an in-house waste recycling programme.	Year 2
4. Effective Waste Information Management	
4.1 DEDEAT to develop a written template or database to standardise information received from municipalities	Year 1
4.2 At all waste facilities without weighbridges, the SAWIS manual system for estimating incoming waste is to be implemented, so as to allow waste disposal tonnages to be estimated.	Year 1
4.3 DEDEAT to develop a standard in-house e-filing system to ensure correct management of waste information and records. To be developed	Year 1
4.4 All municipalities to be reporting on SAWIC/s	Year 1
4.5 DEDEAT to ensure accurate data is reported on SAWIC through training and verification audits	Year 2 – Year 5
5. Improved waste facility management	
5.1 DEDEAT to develop basic guideline documents for the operation of small waste management facilities which do not trigger the requirement for a waste management license or registration in terms of the National Norms and Standards.	Year 2
5.2 100% of landfill sites to be permitted	Year 5

Actions	Period
5.3 All waste facilities to have operational plans in place. Where operational plans are in place these should be reviewed. DEDEAT to develop a generic template for each waste facility type e.g. landfill site, MRF, transfer station.	Year 2 – Year 4
6. Provide effective and financially viable services	
6.1 Development of service delivery guidelines for rural areas	Year 2
6.2 Achieve at least a 10% increase in refuse collection (% of households serviced) in all municipalities.	Year 5
6.3 Revision of waste tariffs to be informed by full cost accounting exercises to be undertaken by both metropolitan municipalities, and all LMs.	Year 2, Year 4
7. Improved education, awareness and waste information sharing	
7.1 DEDEAT to hold annual technical workshops / engagements with all WMOs or waste managers	Year 1 – Year 5
7.2 DEDEAT to host annual workshops / knowledge updates for small companies involved in the waste industry	Year 1 – Year 5
7.3 DEDEAT to publish an annual waste newsletter (electronic).	Year 2 – Year 5
7.4 DEDEAT and all municipalities to develop and implement awareness programme.	Year 1 – Year 5
8. Effective compliance monitoring	
8.1 DEDEAT to update their waste facility audit report template to ensure all conditions of waste permits are audited and to include a scoring system.	Year 1
8.2 DEDEAT waste officers and municipalities to receive training on performance auditing	Year 1
8.3 DEDEAT regional offices to develop and implement auditing schedules for government and private waste facilities where DEDEAT is the competent authority (industry landfill sites, waste storage facilities and recycling facilities) and undertake audits as per the schedule.	Year 3 – Year 5
8.4 All waste facilities to be audited at least annually by DEDEAT	Year 3 – Year 5
8.5 All municipal landfill facilities are to be audited internally by municipalities at least once per annum (or more frequently if required by license conditions), and audit reports to be submitted to DEDEAT.	Year 1 – Year 5
8.6 DEDEAT to determine the baseline of enforcement actions taken against non-compliant waste facilities and increase the number of enforcement actions by 5% a year. Determine baseline by 2012, 5% increase per annum thereafter. Fines to be issued for all repeat non-compliances	Year 1– Year 5

Way Forward

Public Participation Process

A public participation process (PPP) of the final draft of the PIWMP will be undertaken by DEDEAT.

Endorsement of Eastern Cape Provincial Integrated Waste Management Plan

Once this provincial IWMP is finalised it will be submitted to the Minister for endorsement. The endorsed IWMP will then be gazetted.

Regular and on-going monitoring of the IWMP is required to ensure the objectives of the IWMP are accomplished. Monitoring of the success of projects during the IWMP implementation phase will ensure that corrective action is taken when necessary.

Monitoring of the Provincial Integrated Waste Management Plan

Regular and on-going monitoring of the IWMP is required to ensure the objectives of the IWMP are accomplished. Monitoring of the success of projects during the IWMP implementation phase will ensure that corrective action is taken when necessary.

A close down report will be completed in 2027 at the end of this IWMP's 5 year lifespan. The closedown report will evaluate the successes and challenges associated with the proposed projects.

Review of the Eastern Cape Provincial Integrated Waste Management Plan

This provincial IWMP covers a five-year period, the plan needs to be revised every 5 years to ensure it remains current. It is recommended that the revision of the PIWMP commences at least 6 months prior to the PIWMP's lifespan being complete to minimise the gap between the 2022 – 2026 IWMP and the 2027 – 2031 IWMP.

1 Introduction

The Department of Economic Development Environmental Affairs and Tourism (DEDEAT) is required to develop a Provincial Integrated Waste Management Plan (PIWMP) as per the requirements of the National Environmental Management Waste Act (59 of 2008) as amended (hereafter referred to as the NEM: WA).

1.1 Contents of a Provincial IWMP

The NEM: WA outlines the requirements for a PIWMP. These requirements have been included in the table below along with a description of how this requirement has been met and details of where in this report that relevant information is located.

Table 1: The NEM: WA Requirements for a Provincial Integrated Waste Management Plan –

NEM: WA section no.	Requirement	Comments	Section in the PIWMP
12(1)(a)	Contain a situation analysis that includes-		
12(1)(a)(i)	A description of the population and development profiles of the area to which the plan related		Section 5.3
12(1)(a)(ii)	An assessment of the quantities and types of waste that are generated in the area		Section 5.7
12(1)(a)(iii)	A description of the services that are provided, or that are available for the collection, minimisation, re-use, recycling and recovery, treatment and disposal of waste		Section 5.8
12(1)(a)(iv)	The number of persons in the area who are not receiving waste collection services		Section 5.8
12(1)(b)	Within the domain of the provincial department or municipality, set out how that provincial department or municipality intends to:		
12(1)(b)(i)	To give effect, in respect of waste management, to chapter 3 of the National Environmental Management Act		Section 8.4 Objectives and targets & section 10 implementation plan
12(1)(b)(ii)	To give effect to the objectives of this Act		Section 8.4 Objectives and targets & section 10 implementation plan
12(1)(b)(iii)	To identify and address the negative impacts of poor waste management practise on health and the environment		Section 2 environmental impacts associated with waste management Section 8.4 Objectives and targets & section 10 implementation plan
12(1)(b)(iv)	To provide for the implementation of waste minimisation, re-use, recycling and recovery targets and initiatives		Section 8.4 Objectives and targets & section 10 implementation plan
12(1)(b)(vi)	To implement the Republic's obligations in respect of relevant international agreements		Section 8.4 Objectives and targets & section 10 implementation plan

NEM: WA section no.	Requirement	Comments	Section in the PIWMP
12(1)(b)(vii)	To give effect to best environmental practice in respect of waste management		Section 8.4 Objectives and targets & section 10 implementation plan
12(1)(c)	Set out how the provincial department intends to identify the measures that are required to support municipalities to give effect to the objectives of this Act.		Section 8.4 Objectives and targets & section 10 implementation plan
12(1)(d)	Set out the priorities of the provincial department in respect of waste management		Section 8.4 Objectives and targets
12(1)(e)	Establish targets for the collection, minimisation, re-use and recycling of waste		Section 8.4 Objectives and targets
12(1)(f)	Set out the approach for the planning of any new facilities for disposal and decommissioning of existing waste disposal facilities	The approach for planning new facilities will be determined through the development of a provincial waste infrastructure masterplan – refer to implementation plan	Section 10 implementation plan
12(1)(g)	Indicate the financial resources required to give effect to the plan		Section 10 implementation plan
12(1)(h)	Describe how the provincial department intends to give effect to its integrated waste management plan		Section 10 implementation plan
12(1)(i)	Comply with requirements prescribed by the Minister	The PIWMP has been developed in compliance with the NEM: WA. No specific requirements for the Eastern Cape PIWMP have been received from the minister	-

1.2 History of Provincial Waste Management Plans in the Eastern Cape

The first Eastern Cape PWIMP was developed in 2010 and covered the period 2010 -2015. This plan is now out of date and is hence being reviewed.

A review of implementation process of the 2010 IWMP is presented in the situation analysis section of this report.

1.3 Objectives of a Provincial Integrated Waste Management Plan

The objective of this PIWMP is to present a unified approach to waste management in the Eastern Cape. The PIWMP will cover a regional approach to waste management and identify projects on a regional level which can improve waste management in the province.

The National Waste Management Strategy of 2020 (NWMS) identifies the objective of integrated waste management planning as being to: “integrate and optimize waste management so that the efficiency of the waste management system is maximised and the impacts and financial costs associated with waste management are minimised, thereby improving the quality of life of all South Africans.” The PIWMP will take into consideration the principles as identified in the NWMS 2020.

The NWMS also presents the waste management hierarchy which outlines the preferred methods for management of waste. The waste hierarchy is presented below.

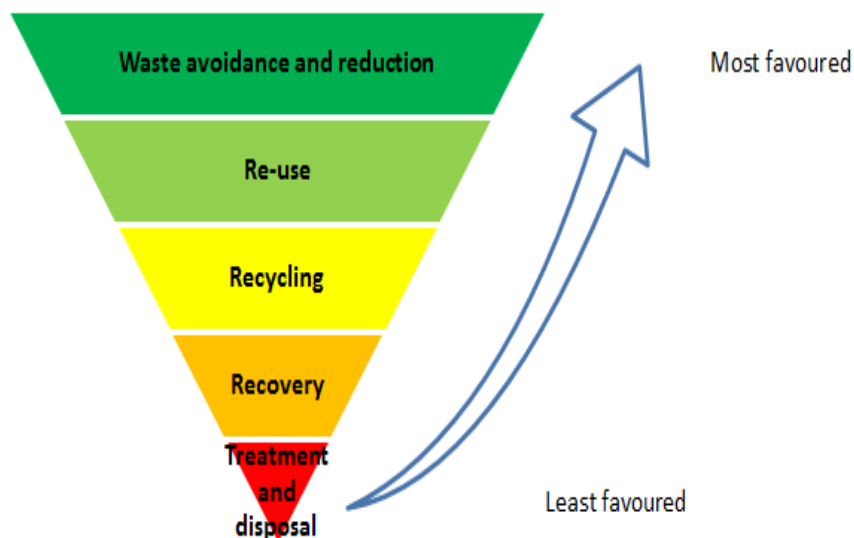


Figure 1: The waste hierarchy as per the National Waste Management Strategy (DFFE, 2011)

1.4 Integrated Waste Management Plan Development Process

The planning process for an IWMP is specified in the Guideline for the Development of Integrated Waste Management Plans (IWMPs) published by the Department of Forestry, Fisheries and the Environment (DFFE). The guideline outlines the following planning process.

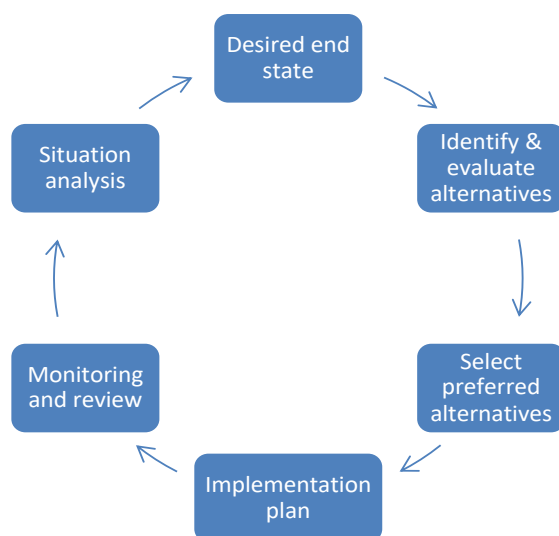


Figure 2: IWMP planning phases

This approach has been applied in the development of this IWMP.

1.5 Scope of Provincial Integrated Waste Management Plan

This PIWMP is limited to the Eastern Cape Province which consists of six district municipalities, two metropolitan municipalities and 31 local municipalities as listed in the table below.

Table 2: Eastern Cape Municipalities

District Municipality	Local Municipality	Municipal code
N/A	Nelson Mandela Bay Metropolitan Municipality	NMA
N/A	Buffalo City Metropolitan Municipality	BUF
Alfred Nzo District Municipality (DC44)	Matatiele Local Municipality	EC441
	Winnie Madikizela Mandela Local Municipality	EC443
	Ntabankulu Local Municipality	EC444
	Umzimvubu Local Municipality	EC442
Amathole District Municipality (DC12)	Amahlathi Local Municipality	EC124
	Great Kei Local Municipality	EC123
	Mbhashe Local Municipality	EC121
	Mnquma Local Municipality	EC122
	Ngqushwa Local Municipality	EC126
	Raymond Mhlaba Local Municipality	EC129
Chris Hani District Municipality (DC13)	Emalaheni Local Municipality	EC136
	Engcobo Local Municipality	EC137
	Enoch Mgijima Local Municipality	EC139
	Intsika Yethu Local Municipality	EC135
	Inxuba Yethemba Local Municipality	EC131
	Sakhisizwe Local Municipality	EC138
	Elundini Local Municipality	EC141

District Municipality	Local Municipality	Municipal code
Joe Gqabi District Municipality (DC14)	Senqu Local Municipality	EC142
	Walter Sisulu Local Municipality	EC145
OR Tambo District Municipality (DC15)	Ingquza Hill Local Municipality	EC153
	King Sabata Dalindyebo Local Municipality	EC157
	Mhlontlo Local Municipality	EC156
	Port St John's Local Municipality	EC154
	Nyandeni Local Municipality	EC155
Sarah Baartman District Municipality (DC10)	Blue Crane District Municipality	EC102
	Dr Beyers Naudé Local Municipality	EC101
	Kouga Local Municipality	EC108
	Koukamma Local Municipality	EC109
	Makana Local Municipality	EC104
	Ndlambe Local Municipality	EC105
	Sundays River Valley Local Municipality	EC106

Since the 2010 IWMP the number of municipalities has decreased from 39 to 31 and some municipalities have been renamed. The table below presents a summary of these changes.

Table 3: Summary of changes to municipalities since 2010

2010 municipality	Comments	2021 municipality
Camdeboo local municipality	Dissolved in August 2016	Merged to create Dr Beyers Naudé local municipality
Ikwezi local municipality		
Baviaans local municipality	Dissolved in August 2016	Merged to create Raymond Mhlaba local municipality
Nkonkobe local municipality		
Nxuba local municipality	Dissolved in August 2016	Merged to create Enoch Mgijima local municipality
Tsolwana local municipality		
Inkwanca local municipality		
Lukhanji local municipality	Dissolved in 2016	Merged to create Walter Sisulu local municipality
Maletswai local municipality		
Gariep local municipality	Renamed in 2014	Renamed to Sarah Baartman district municipality
Cacadu district municipality		
Mbizana local municipality	Renamed	Renamed Winnie Madikizela Mandela local municipality

The figure below shows the location of the present municipalities in the province.

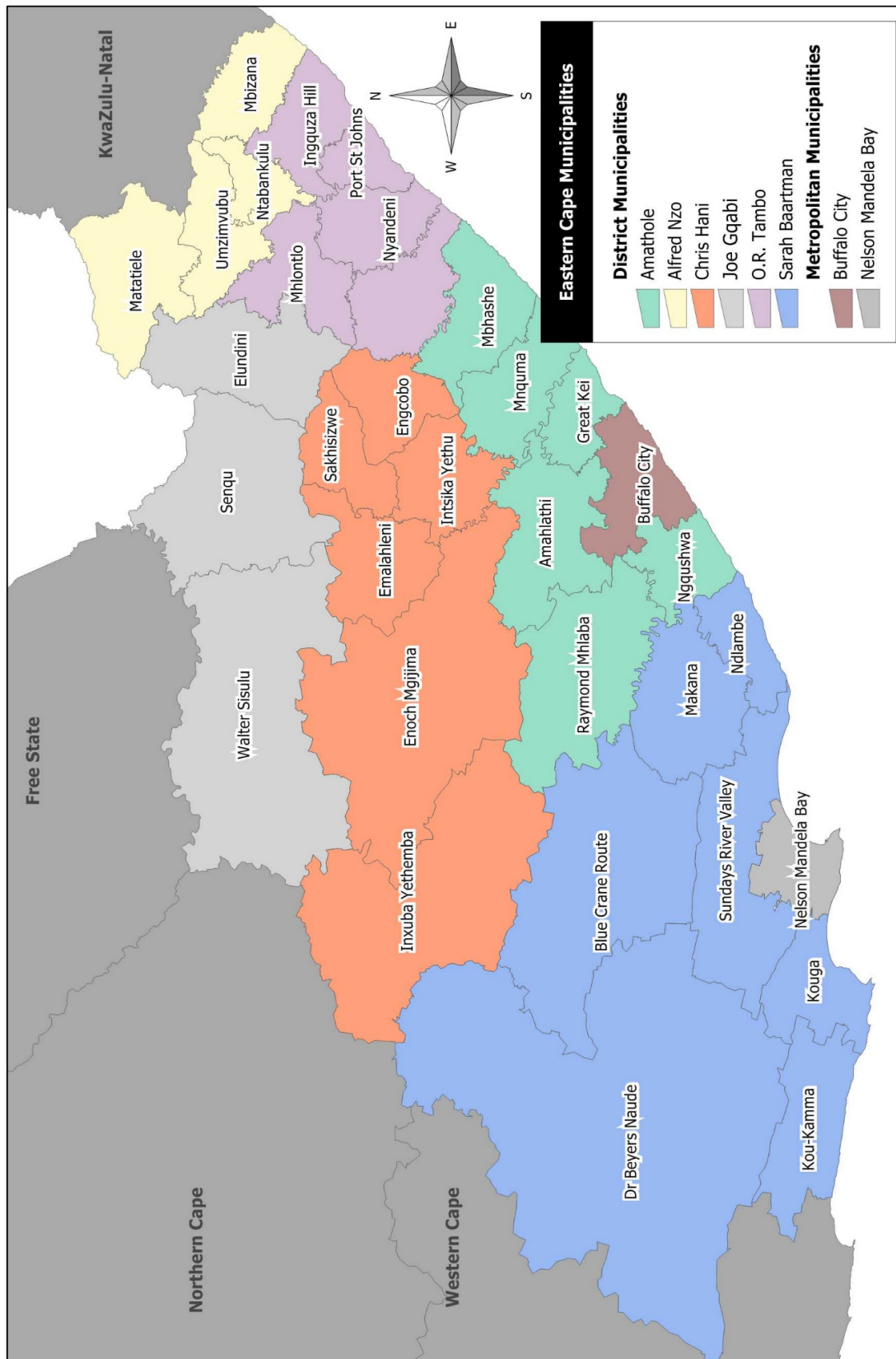


Figure 3: Eastern Cape Province showing the local, district and metropolitan municipalities

1.6 Alignment with other Strategic Plans

There are a number of strategic plans on a national, provincial and local level which have been taken into consideration during the developing this PIWMP. A summary of these is provided in this section below.

1.6.1 National Waste Management Strategy

The National Waste Management Strategy (NWMS) is structured around five key principles as seen in the table below.

Table 4:: Key Principles underpinning the NWMS 2020

PRINCIPLE	EXPLANATION
Waste Minimisation.	This refers to avoiding the amount and toxicity of waste that is generated and, in the event that waste is generated, the reduction of the amount and toxicity of the waste that is disposed.
Waste Prevention	This refers to avoiding the generation of waste and avoiding toxicity in waste.
Waste as a Resource	This refers to beneficiating waste through re-use, recycling, treatment and recovery to reduce the amount and the toxicity of waste disposed of.
Sustainable Strategic Partnerships	This refers to government establishing and sustaining collaborative working relationships with non-government role-players involved in the management of waste, i.e. private sector, academia, civil society organisations and other development funding institutions.
Environmentally sound socioeconomic growth and development	This refers to ensuring that the intent and commitments of the SDGs, NDP are continuously integrated and aligned to all environmental protection considerations, and that environmental protection programmes contribute to improving the socio-economic lives of people.

1.6.2 Operation Phakisa: Chemicals and Waste Phakisa

Operation Phakisa, an initiative which looks to unlock South Africa's economic potential, sets a number of waste-related national targets. These targets include:

- Reduce industrial waste to landfill by 75%
- Reduce municipal waste to landfill site 50%
- Move towards zero sewage sludge to landfill by 2023
- Move toward zero meat production waste to landfill by 2023

- Increase e-waste recycling from 7% to 30%
- Create 1,000 jobs through recycling and re-use of government computer
- 50% of households in metropolitan municipalities separating at source by 2023
- 8,000 direct and indirect jobs through plastic recycling
- Produce building aggregates and construction inputs from rubble and glass

1.6.3 Eastern Cape Provincial Development Plan

The theme of the Eastern Cape Provincial Development Plan is ‘flourishing people in a thriving province’. The 2014 draft Eastern Cape Development Plan sets the following targets related to waste management.

- An inclusive, equitable and growing economy for the province
- An educated, innovative and empowered citizenry
- A healthy population
- Vibrant, equitably enables communities
- Capable agents across government and other institutional partners committed to the development of the Province.

The plan recognises that poor waste management results in environmental challenges and can cause health issues. Strategic objective 3.6 is titled “Address the social determinants that affect health and disease”, and highlights the need for infrastructure to improve roads, water and sanitation supply, the safe disposal of refuse/ waster, and proper spatial planning of human settlements.

Goal 4 titled “Vibrant, equitably enables communities” identifies the need for safe disposal of refuse and waste and the need for universal access to waste management infrastructure.

1.6.4 Working on Waste

The Working on Waste programme is run by the Department of Forestry, Fisheries and the Environment and is implemented under the Expanded Public Works Programme (EPWP). The aim of the Working on Waste Programme is to work towards the achievement of goals of the NWMS.

1.6.5 National Development Plan

South Africa National Development Plan (NDP) was published in 2012 and outlined the required steps to eliminate poverty and reduce inequality by 2030.

The NDP sets the following objectives related to waste management:

- An absolute reduction in the total volume of waste disposed to landfill site each year through a national recycling strategy
- Carbon price, building standards, vehicle emission standards and municipal regulations to achieve scale in stimulating renewable energy, waste recycling and retrofitting buildings

- Consumer awareness initiatives and sufficient recycling infrastructure should result in South Africa becoming a zero-waste society
- Implement a waste management system through rapid expansion of recycling infrastructure and encouraging composting of organic domestic waste to bolster economic activity in poor urban communities

The NDP also recognises the opportunity for the manufacturing sector to reuse waste.

1.6.6 Youth Jobs in Waste

The Youth Jobs in Waste programme was launched in 2013. The project was launched in response to a high level of unemployment amongst the youth and a lack of service delivery and government capacity. The programme aimed to create job opportunities and provided on-the-job training and skills development. An estimated 3,577 jobs were created through the programme, 566 of which were in the Eastern Cape. The beneficiaries of the EPWP programme were largely employed as landfill site assistants, waste collectors, administrators and environmental awareness educators (web reference 2).

1.6.7 Back to Basics

The National Department of Cooperative Governance and Traditional Affairs (COGTA) show cases a new strategy at the Presidential Local Government Summit in 2014. The strategy was titled Back to Basics serving our communities better.

The strategy identified that although progress has been made with regard to service delivery since 1994 more actions are needed to support, education and where required enforce the government mandate for service delivery.

The Back of Basics programme is centred around five pillars:

1. **Put people and their concerns first** and ensure constant contact with communities through effective public participation platforms
2. **Create conditions for decent living** by consistently delivering municipal services to the right quality and standard. This includes planning for and delivery of infrastructure and amenities, maintenance and upkeep, including the budgeting to do this. Ensure no failures in services and where there are, restore services with urgency
3. **Be well governed** and demonstrate good governance and administration – cut wastage, spend public funds prudently, hire competent staff, ensure transparency and accountability
4. **Ensure sound financial management and accounting**, and prudently manage resources so as to sustainably deliver services and bring development to communities
5. **Build and maintain sound institutional and administrative capabilities**, administered and managed by dedicated skilled personnel at all levels

The Back of Basis pillars are all applicable to waste management within the province.

1.7 Status of Provincial Integrated Waste Management Plans in South Africa

The nine provinces of South Africa are in various stages of compiling or updating their provincial IMWPs. The table below details this progress.

Table 5: Summary of Provincial Integrated Waste Management Plans

Province	IWMP date	Comments
North West	2022	IWMP valid
Gauteng	2023	IWMP Valid
Limpopo	2025	IWMP valid
Mpumalanga	2024	Final Draft not yet endorsed
KwaZulu-Natal	No	Service provider appointed
Western Cape	2022	Under review
Northern Cape	No	To be reviewed
Free State	No	Under development

2 Environmental Impacts Associated with Waste Management

If waste is not managed correctly it can result in a variety of environmental impacts. This section is not intended to provide a detailed account of all waste related impacts, it instead serves as a summary of common impacts. Key impacts are summarised below.

2.1 Surface and Groundwater Impacts

2.1.1 Contamination of ground and surface water

Waste which is disposed of into unlined landfill sites or waste which is dumped illegally can generate organic-rich leachate which can cause the pollution of surface and groundwater or lead to eutrophication of watercourses. Leachate can also contain salts, heavy metals, pathogens, oils and other pollutants particularly if hazardous waste is disposed of. All of these pollutants can negatively affect both groundwater and surface water as well as potentially impact on downstream users.

2.1.2 Loss of ecological functioning and biodiversity

In addition to the contamination of surface water poorly managed waste can cause blockages in streams and rivers which impacts the functioning of the aquatic ecosystem. Valuable aquatic habitats can be lost when landfill sites or illegal dumping sites encroach onto riparian habitat or wetlands. Blockages of rivers, streams and stormwater system can result in flooding which can cause damage to property or infrastructure and pose a health and safety risk to those affected.



Figure 4: Illegal dump site located within a wetland

2.2 Soil Impacts

In addition to leachate from landfill sites polluting surface and groundwater, soil contamination can also occur in areas surrounding landfill sites. This contamination can affect soil fertility and vegetation growth.

2.3 Air Quality Impacts

2.3.1 Burning of Waste

Burning of waste occurs across the province, particularly in areas that do not have access to formal waste collection systems.

The table below details recorded waste fires at landfills and dumping sites in the province over the past 5 years. It is anticipated that the actual number of waste fires is significantly higher than the figures listed below, since not all fires are reported to the fire brigade.

Table 6: Number of waste fires recorded in the Eastern Cape (data source, Eastern Cape Department of Cooperative Government and Traditional Affairs, Fire Brigade Services)

Financial year	No. fires
2012/13	1,455
2013/14	740
2014/15	879
2015/16	652
2016/17	910
2017/18	1,072



Figure 5: Burning of waste at landfill sites

The burning of waste on landfill sites occurs for a number of reasons including poor management of the landfill site, burning by informal reclaimers to access valuable materials such as metal, unplanned fires from informal reclaimers residing on site who make fires for heat or cooking, and fires spreading to landfill sites from adjacent bush fires.

2.3.2 Dust

Fugitive dust emissions from landfill sites can impact on surrounding vegetation and cause health issues to surrounding receptors, particularly if the dust is contaminated with pollutants or other hazardous materials.

2.3.3 Emissions and release of Greenhouse Gases

As organic waste in landfill sites decomposes a mixture of gases is released. These include methane, carbon dioxide, carbon monoxide, nitrogen and hydrogen sulphide. Methane and carbon dioxide are greenhouse gases and their release can contribute towards climate change. Carbon dioxide emissions from vehicles and equipment used for the management of waste can similarly have climate impacts.

2.4 Health and Safety

Informal reclaimers operate on the majority of municipal landfill sites in the Eastern Cape. While informal reclaimers form an essential step in the waste recycling process, their presence on landfill sites represents a health and safety risk to the informal reclaimers, landfill site employees and users of the landfill sites. Informal reclaimers often operate without personal protective equipment and collect waste from areas where vehicles are active. Risks to informal reclaimers include collision with vehicles accessing the sites and landfill sites compactors, exposure to contaminated food, injuries from broken glass and sharp objects, exposure to HCRW such as nappies, sharps, and exposure to vermin such as rats.



Figure 6: Informal waste pickers operating and residing on landfill sites

Unfenced landfill sites are accessible to livestock. Risks to livestock include ingestion of plastic or contaminated waste which can result in death or injury, exposure to pathogens and risk of collision with vehicles on site.



Figure 7: Livestock on landfill sites

2.5 Loss of Biodiversity

The loss of biodiversity may occur when landfill sites disturb natural areas. For example, the development of a landfill may require vegetation clearing, or the illegal dumping of waste may also damage vegetation. Fires from the illegal burning of waste may also damage vegetation.



Figure 8: Loss of biodiversity from a landfill site encroaching of natural vegetation and from an illegal dumping site

2.6 Socio-economic Impacts

Illegal dumping of waste and littering can degrade the sense of place of an area and result in negative perceptions of tourists visiting the Eastern Cape. Persistent illegal dumping may also impact on house prices. The cost of cleaning up illegally dumped waste falls to the municipalities and removal of illegal dumping can consume significant portions of municipal budgets.

3 Approach and Methodology

3.1 Legislated Requirements for Integrated Waste Management Plans

The requirements of the National Environmental Management Waste Act (Act 59 of 2008, as amended) (refer to table 1) and the Department of Forestry, Fisheries and the Environment (DFFE) Guideline for the Development of Integrated Waste Management Plans were used to guide the development of this PIWMP.

3.2 Methodology

A phased approach was used to develop the IWMP, as detailed below.

3.2.1 Integrated Waste Management Plan Review

GIBB requested IWMPs from all local, district and metropolitan municipalities. The available IWMPs were reviewed and informed the situation analysis chapter of the PIWMP (including the outdated copies, due for review).

Table 7: Summary of integrated waste management plans received

Name of the Municipality	Date due for review	Comments	Endorsed by DEDEAT
METROPOLITAN Municipalities			
Nelson Mandela Metro	2020	Under review	No
Buffalo City Metro		Under review - Draft	No
Alfred Nzo DM	NO		No
Umzimvubu	2025	Valid	Yes
Matatiele	2015		No
Ntabankulu		Submitted for endorsement	No
Winnie Madikizela Mandela		Under review	No
Amathole DM	NO		No
Amahlathi, Great Kei, Mbhashe, Mquma, Ngqushwa		Under review	No
Raymond Mhlaba		No IWMP	No
Chris Hani DM		Under review	No
Engcobo		Under review	No
Intsika Yethu	2021	Outdated	No
Emalahleni		Service Provider appointed	No
Inxuba Yethemba		Under review	No
Sakhisizwe		Under review	No

Enoch Mgijima		Under development	No
Joe Gqabi DM	NO		No
Senqu	2020	Outdated	No
Elundini	2022	Valid	Yes
Walter Sisulu		Under development	No
OR Tambo DM		Under review	No
King Sabata Dalindyebo (KSD)	2024	Valid	Yes
Nyandeni	2027	Valid	Yes
Port St Johns (PSJ), Mhlontlo		Under review	No
Ingquza Hill	2027	valid	Yes
Sarah Baartman DM	NO		No
Makana		Under review	No
Dr Beyers Naude,		Under development	No
Blue Crane, Ndlambe, Kouga, Koukamma, Sundays River	No		No

3.2.2 Literature Review

A review of legislation was undertaken. This included the following key documents.

- Eastern Cape Integrated Waste Management Plan: General Waste, 2010
- Eastern Cape Integrated Waste Management Plan: Hazardous Waste 2010
- IWMPs for the local, district and metropolitan municipalities
- SAWIS statistics
- Waste facility permits
- Statistics SA Census 2011 and Community Survey 2016 data

A full list of documentation reviewed is available as the reference list at the end of this report.

3.2.3 Questionnaires

A questionnaire was developed to capture status quo information for the PIWMP. The questionnaire was issued to all local and district municipalities in the Eastern Cape. A total of 23 questionnaires were completed.

Table 8: Summary of completed surveys

Municipality	Survey completed	Comments
Metropolitan Municipalities		
Buffalo City	Yes	
Nelson Mandela Bay	Yes	
Alfred Nzo District Municipality	Yes	
Matatiele local municipality		
Winnie Madikizela Mandela local municipality		
Ntabankulu local municipality		
Umzimvubu local municipality	Yes	
Amathole District Municipality	Yes	
Amahlathi local municipality	Yes	
Great Kei local municipality	Yes	
Mbashe local municipality	Yes	

Municipality	Survey completed	Comments
Mnquma local municipality		Municipality was visited and a survey was left with the municipality. No survey was returned following the visit.
Ngqushwa local municipality	Yes	
Raymond Mhlaba local municipality	Yes	
Chris Hani District Municipality		
Emalahleni local municipality		Municipality was visited and a survey was left with the municipality. No survey was returned following the visit.
Engcobo local municipality		
Enoch Mgijima local municipality	Yes	
Inxuba Yethemba	Yes	
Intsika Yethu local municipality	Yes	
Sakhisizwe local municipality		Municipality was visited and a survey was left with the municipality. No survey was returned following the visit.
Joe Gqabi District Municipality	Yes	
Elundini local municipality	Yes	
Senqu local municipality	Yes	
Walter Sisulu local municipality		
OR Tambo District Municipality	Yes	
King Sabata Dalindyebo		Municipality was visited and a survey was left with the municipality. No survey was returned following the visit.
Mhlontlo local municipality		
Ingquza Hill local municipality	Yes	
Nyandeni local municipality		
Port St Johns local municipality		
Sarah Baartman District Municipality	Yes	
Blue Crane Route local municipality	Yes	
Dr Beyers Naudé local municipality		
Kouga local municipality		
Kou-Kamma local municipality	Yes	
Makana local municipality		
Ndlambe local municipality	Yes	

3.2.4 Site Visits and Ground Truthing

(a) Engagements with Government Authorities

Meetings were undertaken with both of the metropolitan municipalities, all six district municipalities and a total of 15 local municipalities. A schedule of visits and meetings is provided below.

Table 9: Engagements with municipalities

Municipality	Date of visit/ meeting
Local Municipality	
Amahlathi Local Municipality	16 January 2018
Great Kei Local Municipality	16 January 2018
Raymond Mhlaba Local Municipality	18 January 2018
Ngqushwa Local Municipality	19 January 2018

Municipality	Date of visit/ meeting
King Sabata Dalindyebo Local Municipality	22 February 2018
Umzimvubu Local Municipality	26 February 2018
Senqu Local Municipality	27 February 2018
Walter Sisulu Local Municipality	27 February 2018
Sakhisizwe Local Municipality	28 February 2018
Emalahleni Local Municipality	28 February 2018
Intsika Yethu Local Municipality	28 February 2018
Blue Crane Route Local Municipality	28 February 2018
Inxuba Yethemba Local Municipality	01 March 2018
Kou-Kamma Local Municipality	22 March 2018
Mnquma Local Municipality	05 – 06 April 2018
District Municipalities	
Amathole District Municipality	25 January 2018
Sarah Baartman District Municipality	29 January 2018
OR Tambo District Municipality	22 February 2018
Alfred Nzo District Municipality	26 February 2018
Joe Gqabi District Municipality	27 February 2018
Chris Hani District Municipality	28 February 2018
Metropolitan Municipalities	
Buffalo City Metropolitan Municipality	25 January 2018
Nelson Mandela Bay Metropolitan Municipality	26 February 2018

(b) Engagements with Key Stakeholders in the Waste Management Industry

Private companies and other key stakeholder involved with waste management were engaged. Details of the engagements are present below.

Table 10: Stakeholders engaged

Company	Location	Date	Engagement
The Waste Trade Company	Port Elizabeth, Nelson Mandela Bay Metro	19 February 2018	Meeting
Greencycle	Port Elizabeth, Nelson Mandela Bay Metro	26 January 2018	Meeting
Cannibal Glass	Port Elizabeth, Nelson Mandela Bay Metro	02 February 2018	Meeting
EWASA	Durban	15 February 2018	Telephonic interview
Waste Takers	Port Elizabeth, Nelson Mandela Bay Metro	19 February 2018	Meeting
Blue Crane Recycling	Somerset East, Blue Crane Route LM	28 February 2018	Site inspection and interview
Middelburg Waste Management	Middelburg, Inxuba Yethemba LM	01 March 2018 & 07 March 2018	Facility inspection Telephonic interview
The Glass Recycling Company	National	16 March 2018	Telephonic interview
Collectall	Eastern Cape	05 April 2018	Site inspection and interview

Company	Location	Date	Engagement
DNF Waste & Environmental Services	Eastern Cape	05 April 2018	Site inspection and interview
Supreme Mouldings	East London	20 April 2018	Site inspection and interview
Coega SEZ	Nelson Mandela Bay Municipality	09 October 2018	Presentation of draft IWMP

3.2.5 Project Steering Committee

A meeting was held on 24 January 2018 to establish the project steering committee (PSC). The PSC consisted of DEDEAT, local authorities and SALGA. The details of the PSC are presented in the table below.

Table 11: Project Steering Committee Members

Name	Organisation
Lulama Daniels	DEDEAT
Tembela Mapukata	DEDEAT
Lyndon Mardon	DEDEAT
Gcobisa Mdoda	DEDEAT
Briant Noncembu	DEDEAT
Babane Thozamile	DEDEAT
Sinetemba Mduzana	DEDEAT
Hlomela Hanise	DEDEAT
Mxolisi Fulumente	DEDEAT
Walter Fyvie	GIBB
Kate Flood	GIBB
Thabisa Mkize	Amathole District Municipality
Bulelwa Dayimani	Amathole District Municipality
Archie Kama	Amathole District Municipality
Nqobile Ngcobo	Amathole District Municipality
Nosisa Tshika	Buffalo City Metropolitan Municipality
Honjiwe Mayapi	Department of Forestry, Fisheries and the Environment
Zona Cokie	SALGA
Yamkela Zitwana	OR Tambo District Municipality

Three PSC meetings have been held to date. Meeting details are presented below.

Table 12: Details of Project Steering Committee Meetings

Meeting no.	Date	Venue
1	24 January 2018	DEDEAT Offices, Bhisho
2	19 April 2018	SALGA Offices, East London
3	13 August 2018	DEDEAT offices, Bhisho

3.2.6 Workshops and Stakeholder Engagement

GIBB presented a brief overview of the PIWMP to the Eastern Cape Waste Management Officers (WMOs) at the Provincial Environmental Management Forum Meetings on 20 February 2018 and 14 August 2018.

A total of six workshops of the draft IWMP were held at DEDEATs regional offices and one workshop at GIBB's office in Port Elizabeth. A total of 106 stakeholders attended the IWMP workshops.

Table 13: Draft IWMP workshops

District	Date	No. attendees	Stakeholders in attendance
Chris Hani	15 October 2018	25	DEDEAT, Chris Hani DM, DFFE LGS, Emalahleni LM, Sakhisizwe LM, Inxuba Yethemba LM, GIBB
Joe Gqabi	16 October 2018	14	DEDEAT, Joe Gqabi DM, DFFE LGS, Walter Sisulu LM, GIBB
Alfred Nzo	17 October 2018	18	DEDEAT, Alfred Nzo DM, Matatiele LM, Ntabankulu LM, Umzimvubu LM, UmAfrica Recyclers, GIUBB
O.R. Tambo	18 October 2018	19	DEDEAT, DFFE, O.R. Tambo DM, Nyandeni LM, Ingquza Hill LM, GIBB
Sarah Baartman	22 October 2018	10	DEDEAT, Sarah Baartman DM, Blue Crane Route LM, SANRAL, GIBB
Amathole & BCMM	23 October 2018	17	DEDEAT, DFFE, Amathole DM, Raymond Mhlaba LM, Great Kei LM, Eastern Cape Parks and Tourism Agency, GIBB
NMBM	25 October 2018	3	NMBM, GIBB

3.3 Assumptions and Limitations

This situation analysis has drawn information from a number of sources including interviews with municipalities and stakeholders, IWMPs, SAWIS records, DEDEAT records and various literature sources. It is assumed that the information given verbally in interviews and documented information is accurate.

4 Legal Requirements Overview

A summary of how this PIWMP complies with the requirements of the NEM: WA is presented in Table 1.

A summary of key South Africa legislation governing waste management is presented in the table below. A more comprehensive summary of South Africa and international waste legislated in presented in **Appendix C**.

Table 14: Key waste legislation

Legislation/ guidelines	Summary
Constitution of the Republic of South Africa, 1996.	Section 24 of the Constitution states that everyone has the right to an environment that is not harmful to their health or wellbeing; and to have an environment protected for the benefit of present and future generations, through reasonable legislative and other measures
National Environmental Management Act (Act 107 of 1998, as amended) known as NEMA.	The objective of NEMA is to provide for operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance, and procedures for co-ordinating environmental functions exercised by organs of state. An important function of the Act is to serve as an enabling Act for the promulgation of legislation to effectively address integrated environmental management.
National Environmental Management Waste Act (Act 59 of 2008, as amended)	The act covers a wide spectrum of issues including requirements for a National Waste Management Strategy, IWMPs, definition of priority wastes, waste minimisation, treatment and disposal of waste, Industry Waste Management Plans, licensing of activities, waste information management, as well as addressing contaminated land.
National Pricing Strategy (GN 904 of 2016)	The strategy aims to fund re-use, recovery and recycling of waste through the extended producer responsibility principal.
National Waste Information Regulations (GN 625 of 2013)	These regulations give effect to the South African Waste Information System and specify registration and reporting requirements.
National Domestic Waste Collection Standards (GN 21 of 2011)	These specify methods for how domestic waste should be collected. Consideration is given to an appropriate level of service based on the nature (e.g. rural vs urban) of municipalities

5 *Situation Analysis*

5.1 *Scope and Purpose of the Situation Analysis*

The situation analysis is the first step of any IWMP. It is important to note that the situation analysis is a snap shot of the current status of waste management. Due to changes in legislation and the situation on the ground the situation analysis is constantly evolving. A detailed review of the situation analysis is therefore required at least in line with the five year review of the PWIMP.

The aim of the situation analysis is to determine the current status of waste management in the province. The situation analysis addresses all aspects of waste management from waste infrastructure to institutional capacity and funding of waste management services.

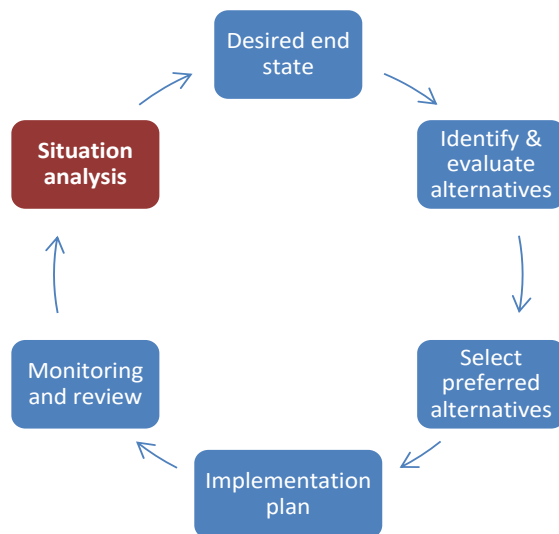


Figure 9: IWMP planning phases – situation analysis

5.2 Geographical Area

The Eastern Cape is the second largest province in South Africa in terms of geographical area covered. The Eastern Cape covers 168,966 km². It is comprised of six district municipalities, 31 local municipalities and two metropolitan municipalities.

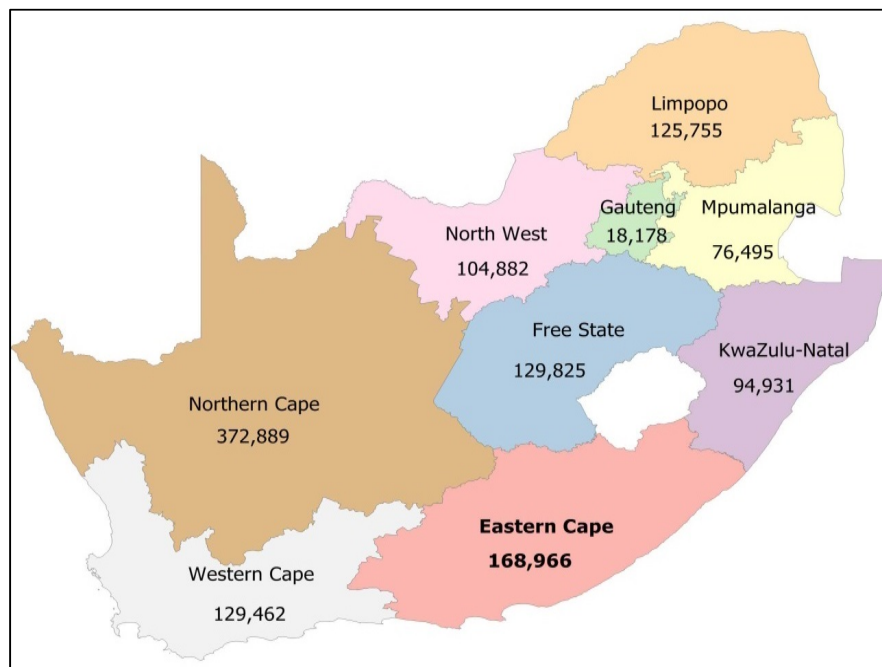


Figure 10: Geographical area of South Africa's nine provinces (km²)

5.3 Demographics

5.3.1 Population Profile

The Eastern Cape Province has the third largest population in South Africa. The Province with the highest population is Gauteng, followed by KwaZulu-Natal.

The population of the Eastern Cape is increasing more gradually than the population of South Africa as a whole. The population of the Eastern Cape increased by 14% between 1996 and 2016. This is relatively low compared to the national increase of 37%.

Table 15: Population overview

Year	EC Population	% change	SA population	% change
1996	6,147,244	-	40,583,573	-
2001	6,278,651	2.14%	44,819,778	10.44%
2007	6,527,747	3.97%	48,502,063	8.22%
2011	6,562,053	0.53%	51,770,560	6.74%
2016	6,996,976	6.63	55,653,684	7.50%

Of all the district municipalities and metros in the province, the O.R. Tambo district municipality has the largest population (20.8%) followed by the Nelson Mandela Bay Metropolitan Municipality (18.1%).

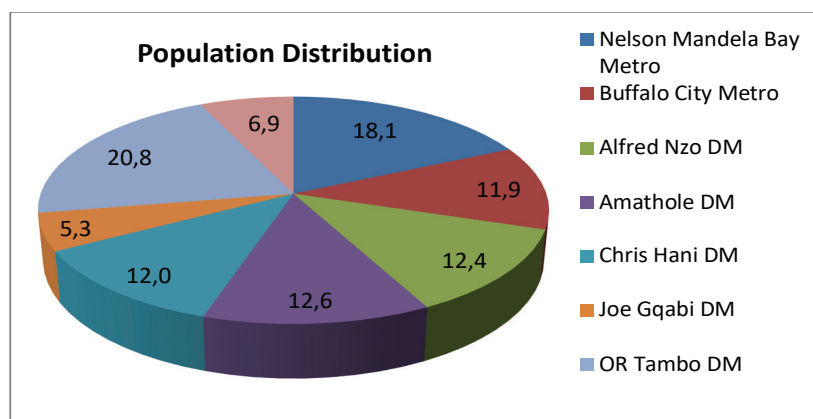


Figure 11: Eastern Cape population profile

5.3.2 Ethnic Profile

The majority of the population of the Eastern Cape are Black African (86.4%), followed by Coloured (8.6%), White (4.6%) and Indian/Asian (0.4%) (STATs SA, 2017).

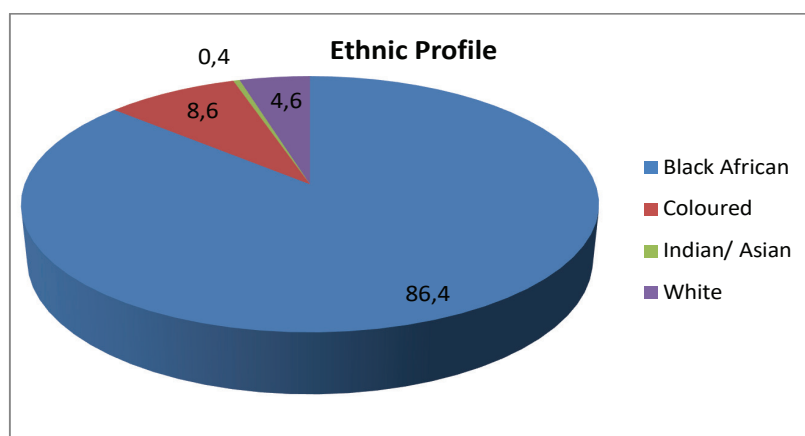


Figure 12: Eastern Cape ethnic profile

5.3.3 Language

All of the official languages of South Africa are represented in the Eastern Cape. IsiXhosa is the first language of the majority of the population (82.7%).

Table 16: Eastern Cape Language Profile

Language	No. person	% of population
IsiXhosa	5,666,891	82.7
Afrikaans	705,274	10.2
English	269,213	3.9
Sesotho	156,413	2.2
Other	20,761	0.3
IsiZulu	18,298	0.2
IsiNdebele	8,771	0.1
Setswana	1,616	0.02
Xitsonga	1,585	0.02
Sepedi	1,133	0.02
Tshivenda	573	0.01
SiSwati	563	0.01
Sign language	546	0.01
Khoi: Nama and San	385	0.01
Total	6,852,022	100

5.3.4 Local Economy

General government services is the largest contributor to the Eastern Cape GDP, followed by finance, real estate and business.

Table 17: Contribution to the Eastern Cape GDP by industry (figures are in millions of rands)

Industry	2011	2012	2013	2014	2015
General government services	46,229	46,465	46,515	47,033	47,291
Finance, real estate and business services	38,899	39,812	40,927	41,653	42,780
Wholesale & retail trade; hotels & restaurants	38,885	40,276	40,622	40,908	41,547
Manufacturing	28,266	28,782	28,918	28,748	28,771
Transport and communication	17,017	17,379	17,678	18,108	18,286
Community, social and other personal services	14,825	15,178	15,434	15,557	15,822
Construction	7,544	7,720	8,034	8,189	8,638
Agriculture, forestry and fishing	3,487	3,594	3,721	3,836	3,656
Electricity and water	2,666	2,679	2,561	2,541	2,536
Mining and quarrying	601	635	647	679	679
All industries at basic prices	198,421	202,520	205,057	207,250	210,006
-Taxes less subsidies on products	21,049	21,415	21,595	21,669	21,980
GDPR at market prices	219,470	223,935	226,652	228,919	231,987

5.3.5 Access of Households to Services

The table below provides a comparison of the percentage of houses which have access to different services.

Table 18: Percentage of households in the Eastern Cape which have access to basic services

Service	2011	2016
Refuse removal service from local authority or private company (weekly or less frequently)	43.4%	41.3
Electricity for lighting	75.0%	85.4%
Electricity for cooking	62.1%	76.8%
Electricity for heating	31.%	73.4%
Access to piped water in dwelling/yard	49.5%	51.4%
Flush/ chemical toilet	46.0%	52.4%

As can be seen, waste collection services is slightly behind the other basic services with the exception of electricity for heating purposes.

The provision of all basic services has increased between 2011 and 2016 with the exception of refuse removal services. The provision of a refuse removal service decreased slightly from 43.4% in 2011 to 41.3% showed the lowest percentage increase (0.1% increase) between 2011 and 2016. The highest increase was the provision of electricity for heating purposes with an increase of 42.4%.

5.4 Implementation of 2010 Provincial Integrated Waste Management Plan

The 2010 PIWMP identified six priority areas namely:

- Priority 1: Improved strategic waste planning
- Priority 2: Improved waste services and facilities
- Priority 3: Improved recovery and recycling
- Priority 4: Improved institutional functioning
- Priority 5: Improved financial management for waste services
- Priority 6: Improved information management and monitoring

A total of 27 targets were identified under the six priority areas. A review of the implementation status of each of the 27 targets was undertaken to determine progress made with regard to Provincial Waste Management since the 2010 IWMP.

Projects have been classified as complete, in progress and incomplete. The timeframes for projects have not been considered, for example, if the deadline for a project was 2011 but it was only completed in 2013, it is still listed as complete.

Project status

- Complete: 5 projects
- In progress: 8 projects
- Incomplete: 14 projects

-

Table 19: Implementation status of the 2010 PIWMP targets

Objective	Targets	Status	Comment
Priority Area 1: Improved Strategic Waste Planning			
Legally compliant IWMP process	DEDEAT to develop standardised IWMP reporting framework for LAs by 2011	Incomplete	No IWMP reporting framework has been developed.
	DEDEAT to develop a LA IWMP reviewing and approval system by 2012	Complete	A framework for the review and approval of IWMPs has been developed by DEDEAT.
	All LAs to have current (i.e. reviewed within the last 5 years) IWMPs which meet requirements by end of 2011	Incomplete	Only 13 municipalities have submitted IWMPs to DEDEAT for endorsement.
Provide landfill facilities throughout the Province	Develop regional waste facilities in high priority areas as identified in this PIWMP	Incomplete	A regional site was recommended from the O.R. Tambo District Municipality. The O.R. Tambo DM's 2015 IWMP sets a target of investigating site for a regional landfill site by 2016. A regional site in O.R. Tambo DM has not yet been developed.
Priority Area 2: Improve Waste Services and Facilities			
Provide at least an acceptable minimum waste collection service in all areas	All residential areas within urban settlements receiving a weekly collection service	Incomplete	Based on a review of IWMPs not all municipalities are providing a weekly collection service to all households within urban areas.
	Defining a waste collection target and strategy for rural settlements	In progress	A framework to address the maintenance of waste management infrastructure networks for waste collection in rural areas will be developed as part of this IWMP.
		Incomplete	Priority areas were Matatiele (Winnie Madikizela Mandela LM), Butterworth (Mnquma LM), Dutywa (Mbashe LM) and Mthata (King Sabata Dalindyebo LM). According to STATs SA the following percentage of household receive a weekly collection service (1) and (2) use their own refuse dump for each of the priority LMs Winnie Madikizela Mandela: (1) 1.4%, (2) 88.0% Mnquma: (1) 18.1%, (2) 68.1% Mbashe: (1) 10.9%, (2) 73.2% King Sabata Dalindyebo: (1) 21.5%, (2) 64.7% The low percentage of weekly collection services and high percentage of use of their own refuse dump cannot be considered as an acceptable basic level of service.
	An acceptable basic level of waste services in priority areas by 2014		

Objective	Targets	Status	Comment
Achieve legal compliance of waste facilities	Compliance with national legal requirements for waste facilities	Incomplete	DEDEAT has made progress with regard to licensing of unlicensed landfill sites however the landfill sites in the province are largely not operated in compliance with their permit conditions.
	DEDEAT to undertake annual, Province-wide landfill compliance monitoring	Complete	DEDEAT undertake compliance audits of landfill sites. However in some cases these audits are not thorough and the audit reports are not provided to the local municipality.
Priority 3: Improved Recovery and Recycling			
Legal/ policy compliance in terms of recycling	LAs to assess feasibility of drop-off centres and if feasible, develop a rollout programme and commence rollout by 2013, in line with NEMWA and draft National Domestic Waste Collection Standards	Incomplete	A feasibility study for drop-off centres has not been developed.
Maximise recycling opportunities in the Province	Provincial recycling strategy to be developed by 2012	In progress	DEDEAT has appointed a service provider to assist with the development of a Provincial Recycling Strategy in December 2017. The recycling strategy will be completed in 2018.
	DEDEAT to develop and implement an annual recycling awareness programme	In progress	DFFE developed Waste Awareness Strategic Framework in 2016. DEDEAT is making use of this document. DEDEAT should develop their own recycling awareness programme which specifies the number and type of events and sets targets for awareness raising.
	LAs to develop a waste minimisation/ recycling plan by 2013	Incomplete	Not all local municipalities have developed waste minimisation and recycling plans.
Priority 4: Improved Institutional Functioning			
Develop appropriate capacity within DEDEAT to implement PIWMP	DEDEAT to acquire resources for implementation of this PIWMP by 2011	Incomplete	As evident from this review of projects DEDEAT did not have sufficient resources to implement the 2010 IWMP. DEDEAT's organogram was last revised in 2006. A review of the organogram is required to ensure adequate resources are allocated to the implementation of this IWMP.
Designate Waste Management Officers	Provincial Waste Management Officer by 2011	Complete	A Provincial WMO has been designated.
	WMOs to be designated in all applicable LAs by 2012	In progress	Only 47% of local municipalities have formally designated a WMO in terms of the NEM: WA. Neither of the two metropolitan municipalities and have formally designated WMOs.

Objective	Targets	Status	Comment
Institutional capacity building for WMOs	Waste Management Forum for WMOs to be established by 2012.	Complete	DEDEAT hosts quarterly forums with the municipal waste management officers.
Develop/ revise by-laws in line with NEMWA	All local authorities to adopt and enforce waste management by-laws by 2013 which include NEMWA requirements.	In progress	The majority of local municipalities have developed waste management by-laws. The enforcement of waste management by-laws is lacking. The key reasons is due to a lack of peace officers appointed to enforce by-laws.
Priority 5: Improved Financial Management			
Institutional capacity building for waste management financing	Prepare guideline by 2012	In progress	A guideline for institutional capacity building will be developed as part of this IWMP.
Improved waste budgeting process	All LAs to consider requirements of PIWMP in IDP budgeting processes.	Incomplete	The majority of local municipalities have not met targets stipulated in the 2010 PIWMP. The main reason given during interviews with LMs is a lack of budget.
Priority 6: Improved Information Management and Monitoring			
Establish a municipal waste reporting system	Develop an operational Municipal Waste Reporting System	Incomplete	The Eastern Cape does not have a municipal waste information system
	All local authorities to report using Municipal Waste report by 2013	Incomplete	No system has been developed
Improve use of the National WIS	All government organisations to report using National WIS by 2013	In progress	The number of municipalities that report on the SAWIS increased from 3 in 2010 to 16 in 2017.
	DEDEAT to undertake annual audits of government organisations reporting performance	In progress	Annual audits are undertaken of some municipalities with regard to reporting of the SAWIS. Audits are undertaken by DEDEAT and DFFE.
	DEDEAT to undertake annual audits of industry's waste registration and reporting performance.	Complete	DEDEAT and DFFE undertake annual audits of some industry which are reporting on SAWIS.
Improve records management	DEDEAT to develop an appropriate in-house e-filing and documentation management system by 2012.	Incomplete	DEDEAT has not developed an in-house e-filing system.
PIWMP monitoring to meet legal requirements	PIWMP annual performance report to be submitted to MEC and Minister for approval.	Incomplete	No reports on the implementation of the PIWMP have been submitted to DFFE.

5.5 Progress Towards Compliance with National Waste Management Strategy Goals

A review of the progress in the Eastern Cape with regards to the implementation of the NWMS 2011 goals and targets was undertaken as part of the PIWMP. Where information was available, an assessment of the compliance with each of the targets was undertaken and documented.

Table 20: National Waste Management Strategy Objectives

Goal	Targets for 2016	Progress to compliance with targets
1. Promote waste minimisation, re-use, recycling and recovery of waste.	25% of recyclables diverted from landfill sites for re-use, recycling or recovery.	According to SAWIS data 3,935,488 tonnes of general waste was disposed of and 275,395 tonnes of general waste was recycled in the Eastern Cape in 2017. The recycling rate of general waste is therefore only 6.9%.
	All metropolitan municipalities, secondary municipalities, and large towns have initiated separation at source programmes	Neither of the two metropolitan municipalities are currently running separation at source programmes.
2. Ensure the effective and efficient delivery of waste services.	Achievement of waste reduction and recycling targets as set in industry waste management plans for paper and packaging, pesticides, lighting (CFLs) and tyre industries	<ul style="list-style-type: none"> • A call for an IndWMP for the lighting industry and paper and packaging industry was made in December 2017. These plans are not yet finalised. • The REDISA tyre IndWMP has been withdrawn, therefore the targets are no longer applicable.
	<ul style="list-style-type: none"> • 95% of urban households and 75% of rural households have access to adequate levels of waste collection services. • 80% of waste disposal sites have permits. 	<ul style="list-style-type: none"> • Only 41.3% of households in the Eastern Cape have access to a weekly waste collection service • 76.4% of operational landfill sites are permitted
3. Grow the contribution of the waste sector to the green economy	<ul style="list-style-type: none"> • 69,000 new jobs created in the waste sector. • 2,600 additional SMEs and cooperatives participating in waste service delivery and recycling 	<ul style="list-style-type: none"> • 29,833 people employed in the formal waste sector in 2012 (CSIR, 2012).
4. Ensure people are aware of the impact of waste on their health, well-being and the environment.	<ul style="list-style-type: none"> • 80% of municipalities running local awareness campaigns • 80% of schools implementing waste awareness campaigns 	<ul style="list-style-type: none"> • 48% of municipalities are undertaking awareness campaigns • 33% of municipalities are not undertaking waste awareness campaigns • The status of awareness campaigns in 18% of municipalities is to be confirmed.

Goal	Targets for 2016	Progress to compliance with targets
5. Achieve integrated waste management planning.	<ul style="list-style-type: none"> All municipalities have integrated their IWMPs with their IDPs, and have met the targets set in IWMPs All waste management facilities required to report to SAWIS have waste quantification systems that report information to WIS 	<ul style="list-style-type: none"> Waste awareness programmes have been incorporated into the school curriculum Municipalities are not preparing annual performance reports to determine progress with IWMP targets. Not all municipalities have valid IWMPs and not all municipalities have incorporated the IWMP targets into their IDPs. A total of 25 of the 89 operational waste disposal facilities in the Eastern Cape are reporting on the SAWIS. 3 treatment facilities and 12 recovery/ recycling facilities are reporting on the SAWIS (SAWIS data June 2018). There are approximately 95 operational landfill site in the Eastern Cape
6. Ensure sound budgeting and financial management for waste services	<ul style="list-style-type: none"> All municipalities that provide waste services have conducted full-cost accounting for waste services and have implemented cost reflective tariffs 	<ul style="list-style-type: none"> Only 1 municipality has undertaken a full cost account exercise. Most municipalities increase waste tariffs in line with inflation, approximately 6% per year
7. Provide measures to remediate contaminated land.	<ul style="list-style-type: none"> Assessment complete for 80% of sites reported to the contaminated land register Remediation plans approved for 50% of confirmed contaminated sites. 	<ul style="list-style-type: none"> The contaminated land register is not managed by the waste management section at DEDEAT
8. Establish effective compliance with and enforcement of the NEM: WA	<ul style="list-style-type: none"> 50% increase in the number of successful enforcement actions against non-compliant activities. 800 environmental management inspectors (EMIs) appointed in the three spheres of government to enforce the NEM: WA 	<ul style="list-style-type: none"> There were 2,294 EMIs appointed in 2017 (DFFE, 2018)

5.6 Integrated Waste Management Plans

All municipalities are required to develop an integrated waste management plan (IWMP) as per the requirements of the NEM: WA.

A total of 13 of current municipalities have submitted their IWMPs to DEDEAT for endorsement. Nkonkobe and Camdeboo local municipalities' IWMPs were also endorsed by DEDEAT, but these municipalities have since been amalgamated into newly formed local municipalities.

A request to provide IWMPs to GIBB was sent to all municipalities in the Eastern Cape. A total of 26 local municipality IWMPs and two district municipality IWMPs were received in response. An additional three municipalities (Raymond Mhlaba, Walter Sisulu and Dr Beyers Naude) do not currently have IWMPs. Raymond Mhlaba, Walter Sisulu and Dr Beyers Naudé local municipalities were formed in 2016 through the amalgamation of several local municipalities. The first generation IWMP for Walter Sisulu local municipality is currently being drafted. The Enoch Mgijima Local Municipality which was also formed in 2016 is in the process of developing its IWMP. Refer to the table below for details.

Seventeen IWMPs are out of date and are currently being revised.

Only three of the six district municipalities with IWMPs under review or under development, Amathole, Alfred Nzo, Chris Hani and O.R. Tambo District Municipalities. The DFFE has developed an IWMP toolkit and guideline to assist municipalities to develop IWMPs in-house. Feedback from the district municipalities in the Eastern Cape is that the DFFE IWMP tool and toolkit is designed for use by local municipalities and is not suitable for use by district municipalities.

Table 21: Status of Municipality integrated waste management plans

Municipality	IWMP Date	Comments	Endorsed by DEDEAT
Metropolitan Municipalities			
Buffalo City	2017	Under review	No
Nelson Mandela Bay	2016	IWMP out of date	No
Alfred Nzo District Municipality	2015	Under review	No
Matatiele local municipality	2015	Under review	No
Winnie Madikizela Mandela local municipality	2015	Under review	No
Ntabankulu local municipality	2014	Submitted for endorsement	No
Umzimvubu local municipality	2020	Valid	Yes
Amathole District Municipality	2017	Under Review	-
Amahlathi local municipality	2017	Under review	No
Great Kei local municipality	2011	Under review	No
Mbashe local municipality	2015	Under review	No
Mnquma local municipality	2012	Under review	No
Ngqushwa local municipality	-	Under development	-No
Raymond Mhlaba local municipality	-	No IWMP	-No
Chris Hani District Municipality	-	Underdevelopment	-No
Emalahleni local municipality	2016	IWMP out of date	No

Municipality	IWMP Date	Comments	Endorsed by DEDEAT
Engcobo local municipality	2011	Under review	No
Enoch Mgijima local municipality		Under development	No
Inxuba Yethemba	2011	under review	No
Intsika Yethu local municipality	2011	IWMP out of date	No
Sakhisizwe local municipality	2011	under review	No
Joe Gqabi District Municipality	-	No district IWMP	No
Elundini local municipality	2016	IWMP out of date	No
Senqu local municipality	2017	Valid	Yes
Walter Sisulu Local Municipality	-	Under developed	No
O.R. Tambo District Municipality	2015	Under review	No
King Sabata Dalindyebo	2021	Valid	Yes
Mhlontlo local municipality	2014	Under review	Yes
Ingquza Hill local municipality	2022	Valid	-
Nyandeni local municipality	2022	Valid	Yes
Port St Johns local municipality	2013	under review	Yes
Sarah Baartman District Municipality	-	No district IWMP available	No
Blue Crane Route local municipality	2017	IWMP out of date	No
Dr Beyers Naude local municipality	-	Under development	-No
Kouga local municipality	2016	IWMP out of date	No
Kou-Kamma local municipality	2017	IWMP out of date	No
Makana local municipality	2017	Under review	No
Ndlambe local municipality	2017	IWMP out of date	No

5.7 Waste Generation

5.7.1 Domestic Waste

(a) Hypothetical Domestic Waste Generation Rates

The South Africa State of Environmental Report, 2006 (SOER) calculated waste generation volumes per income level as follows:

- Low income 0.41 kg/ person/ day = 149.65 kg/ person/ year.
- Middle income 0.74 kg/ person/ day = 270.1 kg/ person/ year.
- High income 1.29 kg/ person/ day = 470.85 kg/ person/ year.

The SOER figures for waste generation are also used in the Department of Forestry, Fisheries and the Environment Guideline for the Development of Integrated Waste Management Plans (IWMPs). The DFFE IWMP guideline also presents the following income brackets:

- Low income R 0 – R 74,999 per year.
- Middle income R 75,000 – R 999,000 per year.
- High income R 1 million + per year.

The Eastern Cape income profile was determined based on STATs SA records and is presented in the table below.

Table 22: Theoretical calculation of domestic waste produced in the Eastern Cape

Income Group	Income	% of households	No. of households	No. of persons	Total waste generated (kg)
Low	R0	16.0%	280,168	1,117,417	2,420,659
	<R4 800	5.9%	103,367	412,122	
	R5k-R10k	9.9%	173,285	691,301	
	R10k-R20k	22.8%	399,372	1,592,512	
	R20k-R40k	20.2%	354,030	1,411,990	
	R40k-R75k	9.7%	170,144	678,707	
	Total	84.4%	1,480,366	5,904,048	
Middle	R75k-R150k	6.7%	117,986	470,896	788,055
	R150k-R300k	5.1%	88,736	354,047	
	R300k-R600k	2.7%	47,488	189,618	
	R600k-R1.2M	0.7%	12,560	50,378	
	Total	15.2%	266,770	1,064,940	
High	R1.2M-R2.5M	0.2%	4,028	16,093	37,007
	>R2.5M	0.2%	3,164	12,595	
	Total	0.4%	7,192	28,688	
Total		100.0%	1,754,328	6,997,675	3,245,721

Based on the above estimation, a total of 3,245.7 tonnes of domestic waste per day or 1,184,688.4 tonnes per year are generated within the Eastern Cape.

(b) South African Waste Information Centre Disposal Records

According to the South African Waste Information Centre (SAWIC) records 829,784 tonnes of waste (hazardous and general waste) was disposed of to landfill in 2017, in the province. These records are far below the estimated domestic waste generation rates but may be explained by the fact that not all local municipalities are reporting on the SAWIC, but more importantly that more than half the households in the province do not receive a waste collection service. Not all of the landfill sites which are reporting data have weighbridges or weighpads so data reported is based on estimated tonnages. A few landfill sites in the province were provided with weighpads, but most are not functional. Challenges encountered with the weighpads include a lack of electricity at landfill sites and weighpads being damaged.

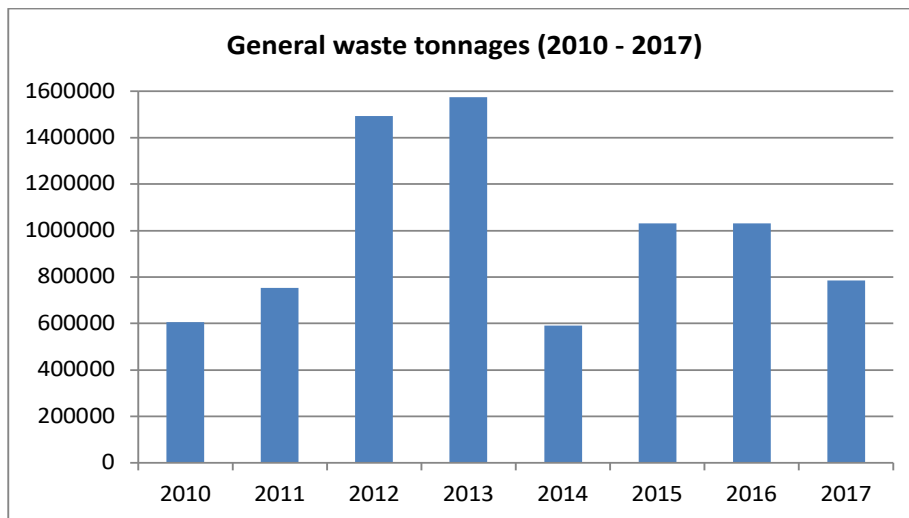


Figure 13: SAWIC waste disposal records (data source, SAWIC 2018)

5.7.2 Estimated Future Generation Quantities

Future domestic waste generation can be estimated based on projected population growth. The Eastern Cape population grew by an estimated 0.8% per year between 2006 and 2016. A 0.8% annual population growth was used to determine the population of the Eastern Cape in 2022.

Table 23: Estimated population and domestic waste stream growth of the Eastern Cape

Year	Population	Domestic waste generation (tonnes/ annum)
2016	6,997,675	1,184,688
2017	7,053,656	1,194,166
2018	7,110,085	1,203,719
2019	7,166,966	1,213,349
2020	7,22,4302	1,223,056
2021	7,282,096	1,232,840
2022	7,536,970	1,275,990

5.7.3 Waste Stream Composition

During the review of IWMPs it was noted that only nine municipalities undertook waste characterisation as part of the development or revision of their IWMPs. A number of IWMPs contained hypothetical data for waste characterisation. It was also noted that the waste categories used for the exercises were not consistent across municipalities. For example Buffalo City Metro and Nkonkobe Local Municipality (now part of Raymond Mhlaba) did not differentiate between green waste (garden waste) and food waste. The results from these waste characterisations are presented below.

Table 24: Summary of domestic waste characterisations

Municipality	Organics - food waste	Organics - green waste	Organics - waste	Paper	Cardboard	Plastic	Glass	Metal	Hazardous	HCRW	Nappies	e-waste	Construction waste	Fines	Other
Enoch Mgijima	18.1	17.6		10.7	6.6	13.7	6.9	2.4	0.1	0.5	3.3	0.6	0.5	14.7	4.1
Elundini	8.7	1.1		3.9	4.3	11.0	10.2	3.2	0.0	0.0	36.8	0.2	1.6	16.0	3.3
Nelson Mandela Bay	25.2	13.9		10.8	4.6	10.5	8.0	2.0	11.0			1.0	1.0	8.0	5.0
Kouga	20.5	11.7		7.3	6.5	10.7	7.4	3.6	0.2	0.1	12.8	0.2	0.1	3.3	15.6
Buffalo City			43.0	18.0	0.0	17.0	10.0	3.0	0.0	0.0	6.0	0.0	0.0	0.0	3.0
Nkonkobe			18.7	15.8		16.4	5.0	3.3	0.1	0.2	16.2	0.6	0.2	4.9	18.7
Emalahleni	17.7	12.7		18.3		29.3	8.0	10.3							3.7
Amahlathi				30.0		24.0	10.0	20.0							16.0
Ntabankulu				30.0		24.0	14.0	20.0							12.0
Average*	18.04	11.4	29.8	15.77		15.5	7.9	4.0	1.9	0.2	10.7	0.4	0.5	6.7	7.6

*the average excludes Amahlathi and Ntabankulu data.

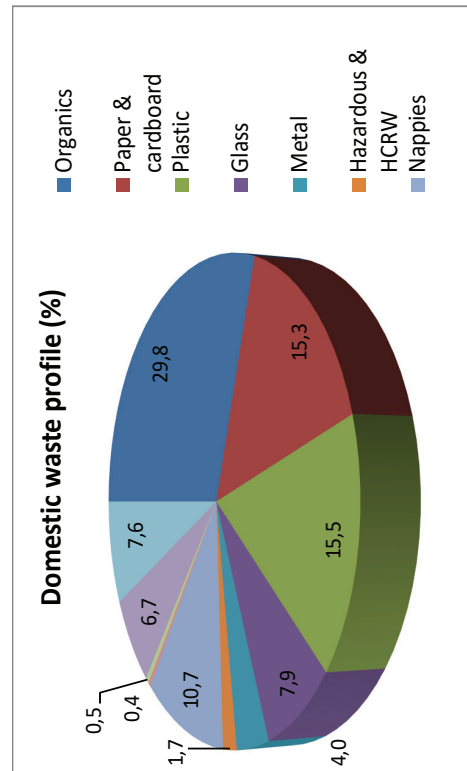


Figure 14: Domestic waste profile of the Eastern Cape* excludes data for Amahlathi and Ntabankulu (data sourced from IWMPs as detailed in the table above)

No organic waste is reported in the waste characterisations for Amahlathi Local Municipality and Ntabankulu Local Municipality. Due to the omission of organic waste the results from these two characterisations have not been included in the above chart which shows average waste composition in the Eastern Cape.

As can be seen from the above table the composition of waste varies between municipalities. An example is organic waste; in Buffalo City Metro 43% of domestic waste stream is composed of organic waste, whereas in Elundini Local Municipality, only 9.9% of the domestic waste stream is composed of organic waste.

Such variances in the domestic waste stream between different municipalities highlights the importance of each municipality undertaking its own waste characterisation instead of relying on generic data. Further analysis of the domestic waste stream is presented below.

(a) Recyclable Materials

Recyclables (paper, cardboard, metal, glass and plastics) were found to make up approximately 43% of the domestic waste stream.

Plastic is the largest contributor to the domestic waste stream followed closely by paper and cardboard.

1. Plastic – 15.5%
2. Paper and cardboard – 15.3%
3. Glass – 7.9%
4. Metal – 4.0%

(b) E-waste

The volume of e-waste in the domestic waste stream was low ranging from 0% to 1%. E-waste may also not be entering the domestic waste stream. It might instead be being diverted to e-waste recycling centres.

(c) Organic Waste

Organic material, which consisted mostly of kitchen and garden waste, which can be composted, made up a further 29.8% of the waste. Based on review of the available IWMPs and discussions with municipalities, there are no municipal owned composting facilities currently in operation in the Eastern Cape.

(d) Nappies

Nappies constitute a significant portion of the domestic waste stream, on average 10.7%, but varied from 36.7% in Elundini Local Municipality to 3.26% in Enoch Mgijima Local Municipality.

The variation in nappies in the two waste characterisations is most likely due to waste being collected from more households with babies or the effects of small sample sizes.

(e) Others

This category “others” covered textiles including clothing and shoes and old furniture. On average other accounted for 7.6% of the domestic waste stream.

5.7.4 Hazardous Waste

The focus of this PIWMP is on general waste. A brief summary of hazardous waste management is however included in the following section.

(a) Hazardous Waste Generation

According to SAWIS records 52,148.7 tonnes of hazardous waste was disposed, treated or recycled in the Eastern Cape in 2017.

Table 25: Summary of hazardous waste management methods in the Eastern Cape

Year	Disposal	Treatment	Recycling	Total
2012	0.0	43,559.6		43,559.6
2013	24,978.2	48,859.4		73,837.6
2014	31,877.6	21,443.9	970.1	54,291.6
2015	36,866.8	49,192.3	51.5	86,110.6
2016	165,596.3	30,157.7		195,754.0
2017	44,791.0	7,085.7	272.0	52,148.7

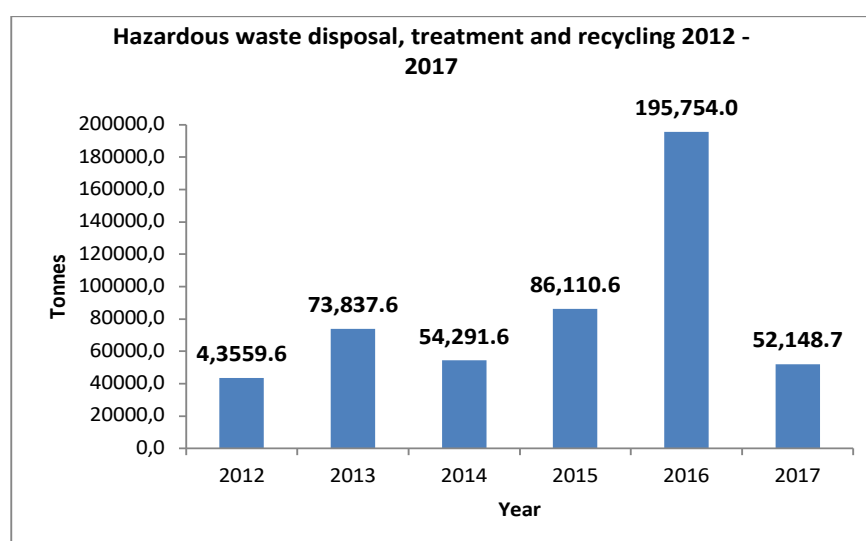


Figure 15: SAWIS hazardous waste disposal, treatment and recycling tonnages 2012 – 2017

(b) Hazardous Waste Stream Composition

The majority of the hazardous waste stream consists of solid inorganic waste (31.4%), followed by liquid and sludge organic waste (22.6%). The category "other" in the chart below consists of the following waste streams:

- Manganese dioxide and alkali batteries – 0.00038%
- Solvents containing halogens and/or sulphur – 0.00038%
- Miscellaneous hazardous waste – 0.52%
- Asbestos containing waste – 0.68%
- HCRW – chemical waste – 0.026%
- Solvents without halogens and sulphur – 0.74%
- Waste oils – 0.96%
- E-waste – 0.0053%

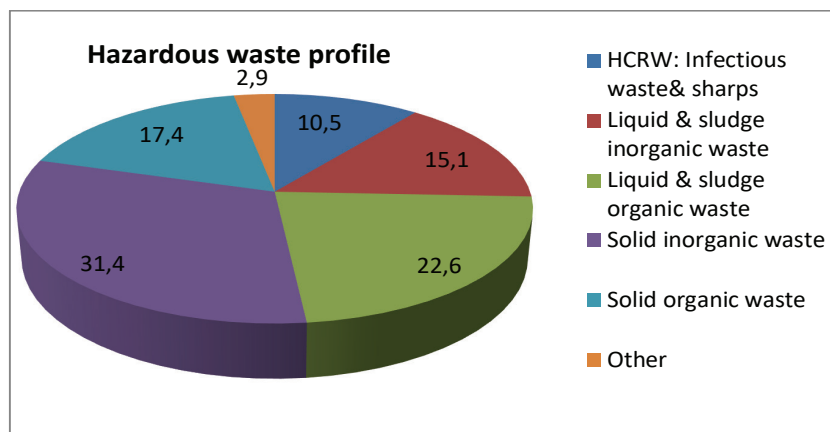


Figure 16: Hazardous waste stream profile (source, SAWIC accessed 26/03/2018)

(c) Hazardous Waste Treatment and Disposal Facilities

The table below presents a summary of hazardous waste treatment and disposal facilities in the Eastern Cape

Table 26: Summary of hazardous waste management facilities in the Eastern Cape (information sourced from SAWIS)

Facility name	Location	Facility Owner	Type of facility
Compass Waste Autoclave	Berlin, East London	Compass Waste	Autoclave (2x Bondtech autoclaves)
Aloes II	Nelson Mandela Bay Metropolitan Municipality	Enviroserv	Treatment of hazardous waste
Aloes II landfill site	Nelson Mandela Bay Metropolitan Municipality	Enviroserv	Disposal of hazardous waste
Koedoeskloof landfill site	Nelson Mandela Bay Metropolitan Municipality	Nelson Mandela Bay Metropolitan Municipality	Disposal of oil waste into ponds

Legal disposal of hazardous waste is limited to the Nelson Mandela Bay Metropolitan Municipality (NMBM). An estimated 44,791 tonnes of hazardous waste is disposed of in the NMBM in 2017 (SAWIC, 2018).

The Coega Development Corporation (CDC) was issued with an environmental authorisation for a regional general and hazardous waste facility in the NMBM (DFFE Ref: 14/12/16/3/3/3/106) in 2017. It is not envisaged that the facility will be constructed in the next 5 years as CDC would need to purchase land for the facility and detailed design would need to be undertaken.

5.7.5 Health Care Risk Waste

The Eastern Cape Department of Health (ECDoH) is responsible for the management of health care risk waste (HCRW) generated in government hospital and clinics.

Table 27: Summary of HCRW generated in the Eastern Cape (tonnes) for government health care facilities (data supplied by ECDoH and sourced from ECDC, 2017)

Waste type	Year		
	2013	2014	2015
Infectious non-anatomical	2,387.7	2,399.7	2,412.7
Anatomical waste	114.6	112.5	108.6
Sharps waste	220.5	231.8	235.3
Pharmaceutical waste	73.3	85.6	67.8
Total	4,809.3	4,843.8	4,839.5

The volume of HCRW has remained fairly constant for the period 2013 – 2015, it is therefore estimated that the tonnage of HCRW generated in 2018 will be approximately 4,840 tonnes. It should be noted that these records are only for government owned facilities, and HCRW generated at private clinics and hospitals is not included in these figures.

5.8 Waste Services

Waste services per municipality were determined based on Census 2016 data and data received from municipalities. According to the 2016 Community Survey only 41.3% of households in the Eastern Cape receive a weekly kerbside collection service.

Comment on Stats SA data sets

The table above presents two different Stats SA data sets.

1. The 2011 Census data
2. The 2016 Community Survey data

The 2011 Census surveyed all South African households. This data is 7 years old but as all households were surveyed it is accurate data for the time period.

The 2016 Community Survey data is more recent (2016), however only a sample (8.1%) of South African households were surveyed. The Community Survey was designed to be a representative sample of South African households. In the Eastern Cape a total of 195,301 households were surveyed (Stats SA, 2016).

The percentage of households receiving a weekly collection service has increased slightly from decreased from 41.0% in 2011 to 41.3% in 2016. A point of concern is that the number of people using their own refuse dump has increased from 41.7% in 2011 to 44.3% in 2016. These refuse dumps are anticipated to be poorly managed or controlled and could be associated with environmental impacts such as contamination of surface and ground water and air pollution through burning of the refuse dumps.

Table 28: Waste collection services in the Eastern Cape (data source Stats SA Census 2001 and 2011 and Community Survey 2016)

Waste Service	2001	2011	2016
Removed by local authority / private company at least once a week	37.0	41.0	41.3
Removed by local authority / private company less often	1.4	2.4	2.2
Communal refuse dump/ collection point	1.2	1.7	4.7
Own refuse dump	43.6	41.7	44.3
No rubbish disposal	16.8	11.3	6.0
Other	No data	1.9	1.5

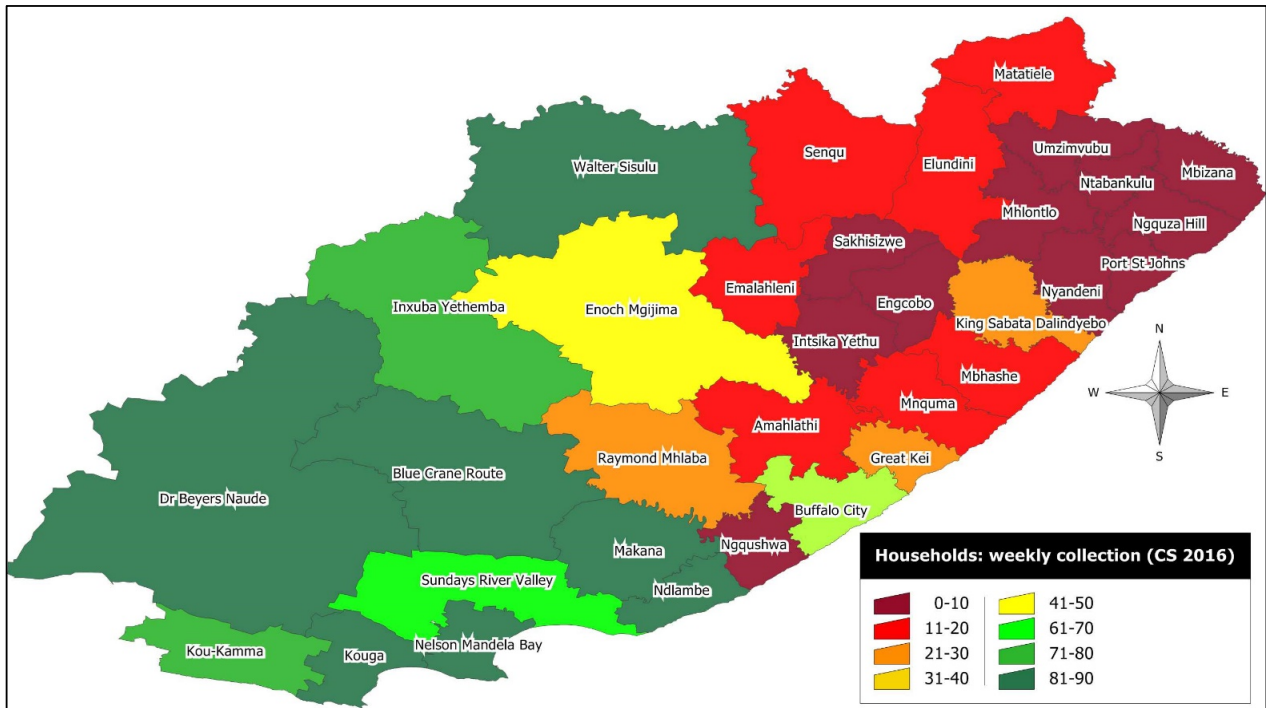


Figure 17: Percentage of households receiving a weekly waste collection service (STATs SA Community Survey 2016 data)

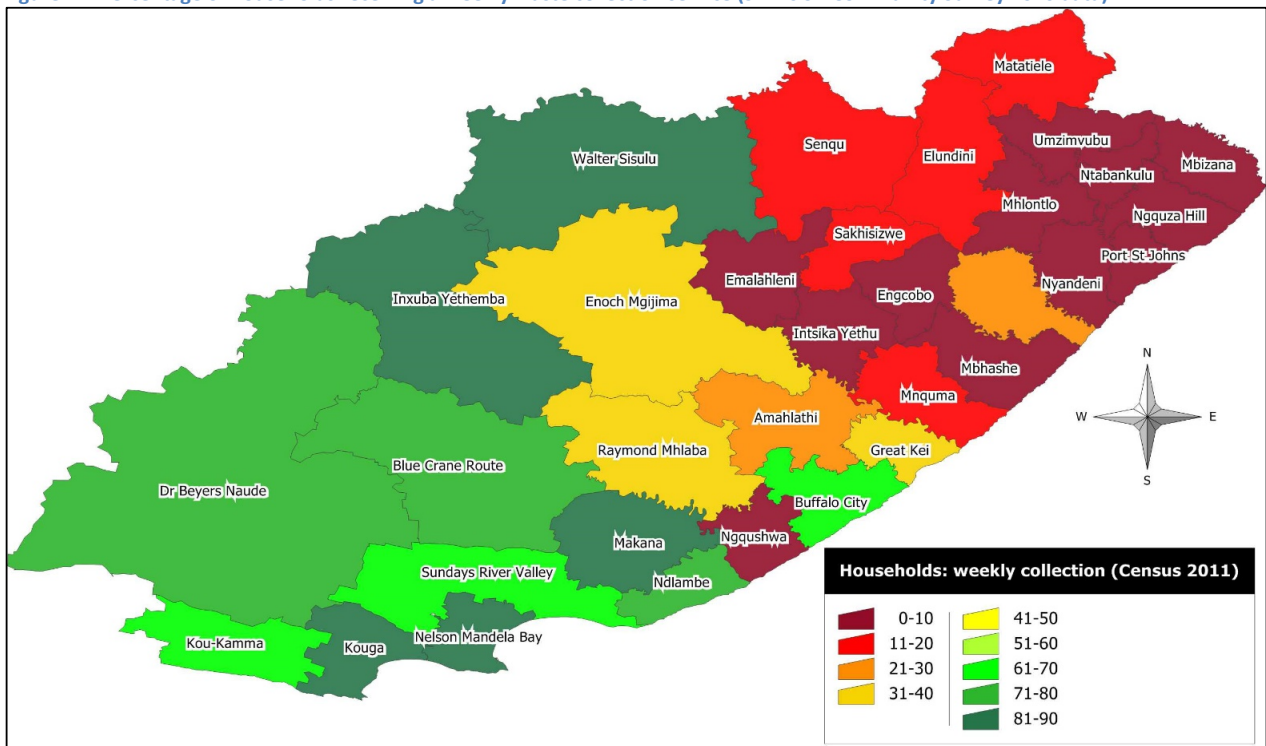


Figure 18: Percentage of households receiving a weekly waste collection service (STATs SA Census 2011 data)

Table 29: Waste service per local municipality (source, Community Survey 2016) municipality with a weekly collection service of less than 50% are shown in red

Municipality	Weekly collection service	Removed less often than weekly	Communal refuse dump	Communal container/central collection point	Own refuse dump	Dump or leave rubbish anywhere (no refuse disposal)	Other
Eastern Cape	41.3	2.2	3.5	1.2	44.3	6.0	1.5
Nelson Mandela Bay	84.8	5.6	2.6	1.4	2.5	2.0	1.1
Buffalo City	57.1	2.7	7.5	2.0	24.6	4.2	2.0
Sarah Baartman	83.0	1.3	3.2	0.7	8.3	2.1	1.4
Dr Beyers Naude	88.3	0.6	2.5		7.2	0.6	0.8
Blue Crane Route	86.1	0.4	4.3		6.4	2.6	0.1
Makana	90.1	1.0	0.5	3.4	2.3	1.5	1.2
Ndlambe	89.1	0.6	1.4	0.3	5.9	2.5	0.3
Sundays River Valley	61.6	2.1	2.1	0.2	25.7	2.3	6.0
Kouga	82.5	2.1	7.1	0.2	4.5	2.4	1.2
Kou-Kamma	79.0	1.5	1.8	0.3	13.9	3.1	0.3
Amathole	17.4	0.8	3.5	1.4	68.3	7.1	1.7
Mbhashe	10.9	0.6	3.4	0.9	73.2	10.8	0.2
Mnquma	18.1	0.1	3.0		68.1	8.5	2.2
Great Kei	26.7	1.2	4.9	0.5	50.9	13.0	2.9
Amahlathi	14.0	1.0	2.0	8.7	70.5	0.9	2.8
Ngqushwa	8.8	0.1	3.6	0.2	83.0	4.0	0.2
Raymond Mhlaba	29.2	2.1	4.8	0.4	57.9	3.1	2.5
Chris Hani	27.0	1.8	2.9	2.1	55.6	8.1	2.5
Inxuba Yethemba	74.1	10.1	1.5	0.4	12.6	0.9	0.3
Intsika Yethu	0.5	0.3	1.7	1.6	87.1	5.8	2.9
Engcobo	0.4	2.8	2.5	0.2	77.0	12.3	4.8
Sakhisizwe	7.1	0.2	3.5	0.1	61.8	23.7	3.6
Enoch Mgijima	49.8	0.9	3.9	4.2	33.3	5.5	2.4
Emalahleni	18.7	0.3	3.1	2.2	66.9	8.6	0.1
Joe Gqabi	28.0	1.1	1.8	46.0	4.1	14.8	4.3
Elundini	19.6	0.2	1.4	0.1	66.5	9.0	3.2
Senqu	10.6	0.9	2.5	0.8	83.7	1.4	0.0
Walter Sisulu	84.8	4.8	0.7	0.1	7.0	2.3	0.3
O.R.Tambo	9.0	0.7	3.0	0.8	75.7	10.4	0.6
Ingquza Hill	2.9	1.5	1.5	0.4	80.8	13.0	0.1
Port St Johns	0.5	0.2	2.3	0.1	75.6	19.2	2.2
Nyandeni	1.0	0.7	2.0	0.3	86.8	9.0	0.3
Mhlontlo	1.8	0.2	4.2	0.1	82.4	10.2	1.1
King Sabata Dalindyebo	21.5	0.6	4.0	1.8	64.7	7.2	0.3
Alfred Nzo	5.3	0.5	2.4	0.1	80.8	9.0	1.8
Matatiele	12.5	0.3	3.0	0.1	72.0	7.9	4.2
Umzimvubu	4.3	1.1	0.6	0.3	87.6	4.9	1.2
Winnie Madikizela	1.4	0.1	3.8	0.1	88.0	6.1	0.5
Ntabankulu	1.0	0.4	1.7	0.1	69.5	26.3	1.0

The two key indicators in the data set are the percentage of households receiving a weekly collection service and the percentage of households using their own refuse dumps. A comparison of the waste services by households in 2011 and 2016 is presented below.

Table 30: Changes in waste service per local municipality between 2011 and 2016 (source, STATs SA Census 2011 and Community Survey 2016). Red text indicates a decrease in weekly collection service or an increase in use of own refuse dump between 2011 and 2016

Municipality	Municipality classification	Weekly collection service (2011)	Weekly collection service (2016)	Own refuse dump (2011)	Own refuse dump (2016)
Alfred Nzo C2					
Matatiele	B3	10.9	12.5	70.7	72.0
Winnie Madikizela	B4	2.0	1.4	78.9	88.0
Ntabankulu	B4	4.0	1.0	60.0	69.5
Umzimvubu	B4	7.1	4.3	74.4	87.3
Amathole C2					
Amahlathi	B3	20.5	14.0	71.9	70.5
Great Kei	B3	33.6	26.7	54.8	50.9
Mbhashe	B4	3.1	10.9	55.0	73.2
Mnquma	B4	15.6	18.1	65.0	68.1
Ngqushwa	B4	6.7	8.8	85.1	83.0
Raymond Mhlaba	B3*	31.1	29.2	60.2	57.9
Chris Hani C2					
Emalahleni	B4	8.3	18.7	63.7	66.9
Engcobo	B4	2.9	0.4	62.9	77.0
Intsika Yethu	B4	2.8	0.5	62.9	87.1
Inxuba Yethemba	B3	83.2	74.1	10.1	12.6
Sakhisizwe	B3	14.5	7.1	61.7	61.8
Enoch Mgijima	B3*	34.6	49.8	19.7	33.3
Joe Gqabi C2					
Elundini	B4	12.3	19.6	64.5	66.5
Senqu	B4	12.5	10.6	69.6	83.7
Walter Sisulu	B3*	82.1	84.9	12.7	7.0
O.R. Tambo C2					
King Sabata Dalindyebo	B2	24.6	21.5	60.5	64.7
Mhlontlo	B4	4.8	1.8	61.6	82.4
Ingquza Hill	B4	3.2	2.9	74.5	80.8
Nyandeni	B4	1.8	1.0	68.3	86.8
Port St Johns	B4	3.1	0.5	64.4	75.6
Sarah Baartman C1					
Blue Crane Route	B3	80.3	86.1	14.8	6.4
Kouga	B3	83.5	82.5	10.2	4.5
Kou-Kamma	B3	64.2	79.0	19.6	13.9
Makana	B2	88.9	90.1	6.8	2.3
Ndlambe	B3	78.5	89.1	12.8	5.9

Municipality	Municipality classification	Weekly collection service (2011)	Weekly collection service (2016)	Own refuse dump (2011)	Own refuse dump (2016)
Sundays River Valley	B3	61.2	61.6	24.8	25.7
Dr Beyers Naude	B3*	77.9	91.4	17.2	5.6
Metropolitan Municipalities					
Buffalo City	A	70.4	57.2	21.0	26.2
Nelson Mandela Bay	A	82.9	85.4	3.3	2.5
Eastern Cape	N/A	43.5	36.6	41.7	49.4

* municipal categories were taken from the Community Survey 2016 results, where previous local municipalities were amalgamated the rating of the old municipalities were used to determine the rating of the new local municipality.

Data shown in *italics* is for municipalities formed in 2016, this data was calculated from Census 2011 data for the former local municipalities

In 2016 the Buffalo City Metropolitan Municipality's boundary was adjusted and new areas from the Great Kei, Amahlathi and Ngqushwa local municipalities were incorporated into the metro. The addition of these areas could be one of the contributing factors to a decrease in provision of weekly collection services from 70.4% in 2011 to 57.1% in 2016.

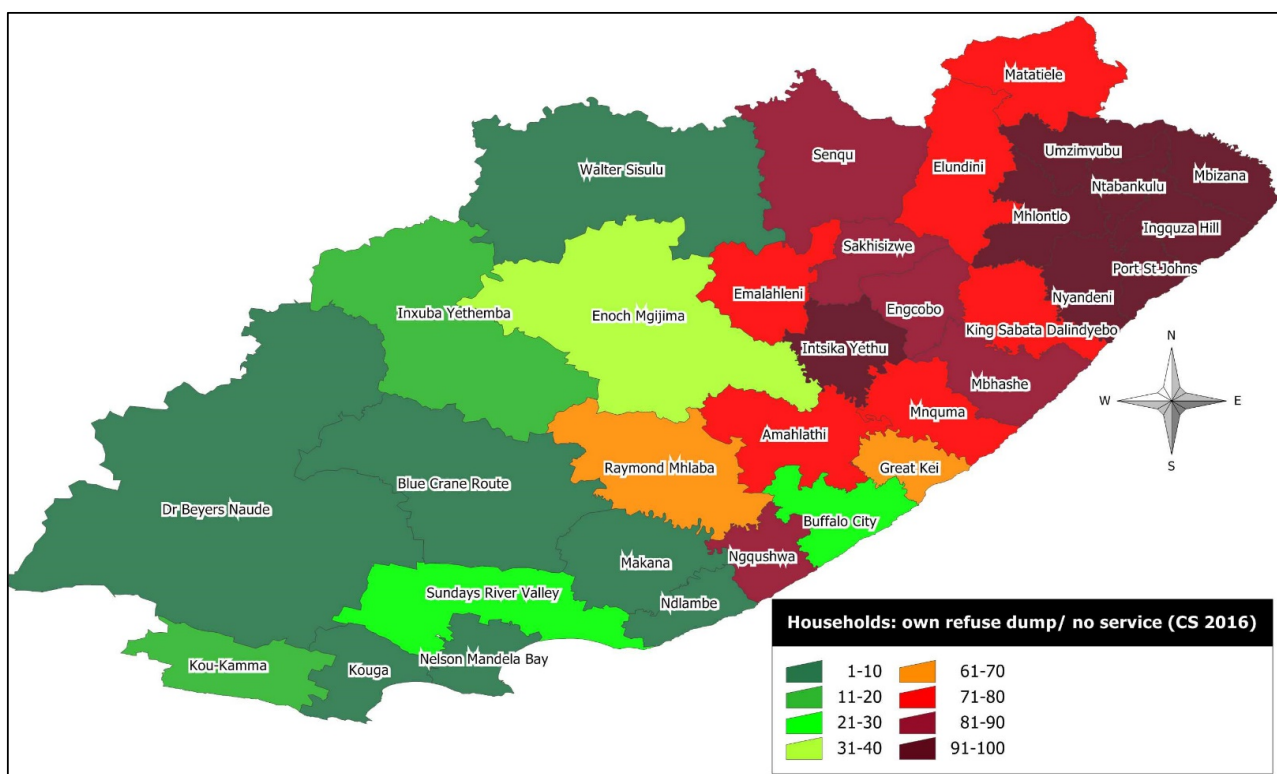


Figure 19: Percentage of households which use their own refuse dump or do not have refuse collection service (data source, Community Survey, 2016)

The map above shows the percentage of households per municipality which are using their own refuse dump or do not have access to refuse collection services. In the eastern region of

the province a high portion of households do not have access to even a basic waste management service.

Comment on Stats SA data sets

The table above presents two different Stats SA data sets.

1. The 2011 Census data
2. The 2016 Community Survey data

The 2011 Census surveyed all South African households, this data is 7 years old but as all households were surveyed it is accurate data for the time period.

The 2016 Community Survey data is more recent (2016), however only a sample (8.1%) of South African households were surveyed. The Community Survey was designed to be a representative sample of South African households. In the Eastern Cape a total of 195,301 households were surveyed (Stats SA, 2016)

When considering the level of refuse collection services in municipalities, the nature of the municipality needs to be considered. The Municipal Infrastructure Investment Framework of 2009 – 2010 (Development Bank of Southern Africa, 2011) divided local municipalities into four sub-categories (B1 – B4), district municipalities into two categories (C1 and C2) and metropolitan municipalities were all given the same classification (A).

The table below gives more details of these categories and presents the number of municipalities in the Eastern Cape per category.

Table 31: Municipality classification (categories and descriptions sourced from DBSA, 2011)

Category	Description	No. municipalities
A	Metropolitan municipalities	2
B1	Secondary cities, local municipalities with the largest budgets	0
B2	Local municipalities with a large town as core	2 (Makana and KSD)
B3	Local municipalities with small towns, with relatively small population and significant proportion of urban population but with no large town as core (e.g. most of the population within several towns)	14
B4	Local municipalities that are mainly rural with communal tenure and with, at more, one or two small towns in there are.	15
C1	District municipalities that are not water services authorities	1 (Sarah Baartman)
C2	District municipalities which are water services authorities	5

Over 48% of the local municipalities in the Eastern Cape are B4 municipalities. The rural nature of these municipalities presents challenges in terms of waste collection. A high percentage of the population will reside in small settlements, villages or towns which may be located far from

the main towns and poor road infrastructure may render some areas inaccessible by traditional refuse collection vehicles.

The below data are sourced from the Stat SA 2016 Community Survey.

It is expected that A, B1 and B2 municipalities should have the highest levels of weekly collection services in the Province. The two metropolitan municipalities Nelson Mandela Bay and Buffalo City Metro provide a weekly refuse collection service to 84.8% and 57.1% of their households respectively. There are no category B1 municipalities in the Eastern Cape. There is a significant difference in waste service provision between the two B2 local municipalities. Makana Local Municipality (88.9%) is the second-best performing municipality in terms of provision of a weekly collection service in the Eastern Cape. The other B2 local municipality, King Sabata Dalindyebo only provides a weekly collection service to 24.6% of households. The high level of service in Makana local municipality is achievable as the 62% of Makana's households are located in Makhanda (previously Grahamstown) and 21% are located in Rhini (web reference 3).

Dr Beyers Naudé Local Municipality is the best performing local municipality in terms of a weekly refuse collection service (91.4%), closely followed by Makana Local Municipality (90.1%), Ndlambe (89.1%) and Blue Crane Route Local Municipality (86.1%). All these municipalities are located within the Sarah Baartman DM.

The top performing B4 municipalities in terms of provision of a weekly collection service are King Sabata Dalindyebo Local Municipality (21.5%), Elundini Local Municipality (19.6%), Emalahleni Local Municipality (18.7%) and Mnquma Local Municipality (18.1%).

5.8.1 Provision of Free Waste Management Services

The number of consumer units in the province which received free basic waste management services decreased from 275,222 households (31.0% of households) in 2016 to 273,365 households in 2017 (30.6% of households) (Stats SA, 2017). On a national basis, an average of 28.3% of households are receiving a free basic waste collection service (Stats SA, 2017).

Table 32: Percentage of households receiving a free solid waste collection service

Province	2016			2017		
	No. consumer units receiving solid waste services	No. consumer units receiving a free waste management service	% of consumer units benefitting	No. consumer units receiving solid waste services	No. consumer units receiving a waste management service	% of consumer units benefitting
Kwa-Zulu Natal	1,531,460	717,472	46.8%	1,645,858	733,824	44.6%
Western Cape	1,209,785	620,399	51.3%	1,243,913	544,498	43.8%
Eastern Cape	887,506	275,222	31.0%	892,166	273,365	30.6%
Northern	239,346	71,503	29.9%	247,068	61,267	24.8%

Cape						
Gauteng	3,307,566	693,632	21.0%	3,344,560	752,068	22.5
Free State	686,382	137,522	20.0%	685,424	143,362	20.6%
North West	563,035	92,404	16.4%	563,632	102,471	18.2%
Mpumalanga	645,051	102,708	15.9%	667,415	96,290	14.4%
Limpopo	466,365	65,393	14.0%	482,650	62,734	13.0%
South Africa	9,536,496	2,776,255	29.1%	9,782,686	2,769,879	28.3%

5.8.2 Level of Satisfaction with Waste Collection Services

The 2016 Community Survey also assessed the satisfaction of households with municipal waste collection services. The Eastern Cape has the highest percentage of households which rate their satisfaction of waste collection services as 'good' (78%), closely followed by the Western Cape (77%). The national average of households rating their waste collection service as good is 49%, significantly lower than the Eastern Cape. This indicates that in the Eastern Cape, a larger percentage of the households which are receiving a waste collection service, are satisfied with the service.

Table 33: Household satisfaction of waste collection services per province

	Eastern Cape	Western Cape	Northern Cape	Free State	KZN	North West	Gauteng	Mpumalanga	Limpopo	SA
Good	78	77	54	51	41	43	61	34	26	49
Average	7	16	15	22	24	23	20	21	20	21
Poor	6	6	12	17	16	15	14	20	17	15
No access	7	1	15	9	16	16	4	22	33	13
Do not use	2	0	3	1	2	3	0	2	4	2
Total	100	100	100	100	100	100	100	100	100	100

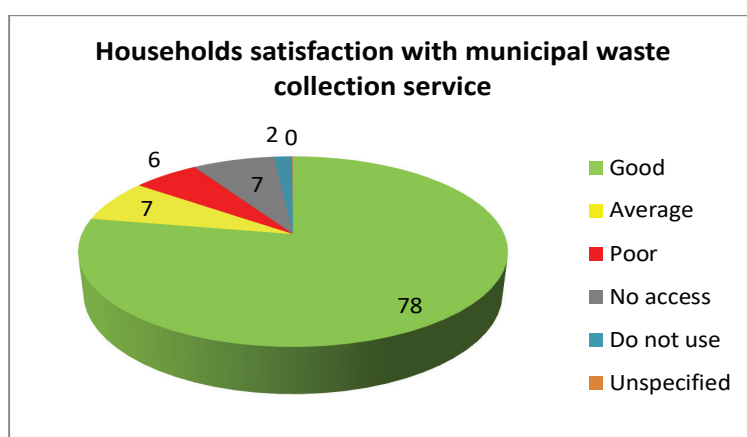


Figure 20: Household satisfaction levels of waste management in the Eastern Cape

5.9 Waste Services per Household across South Africa

The Eastern Cape has the third lowest percentage of households which receive a weekly refuse collection service (41.3%) and second highest percentage of households using their own refuse dump (44.3%). This is shown in the table below.

Table 34: Comparison of waste service provision across South Africa's Provinces (Community Survey, 2016)

Waste Service	South Africa	Eastern Cape	Free State	Gauteng	Kwa-Zulu Natal	Limpopo	Mpumalanga	North West	Northern Cape	Western Cape
Removed at least once a week		41.3	69.7	83.6	47.7	21.9	39.4	54.8	61.8	86.8
Removed less often		2.2	3.8	3.0	3.2	1.4	3.3	3.1	2.8	3.0
Communal refuse dump		3.5	3.6	3.4	2.8	3.2	4.3	3.2	3.6	1.9
Communal collection point		1.2	0.8	1.9	2.1	0.6	1.1	1.2	1.0	4.5
Own refuse dump		44.3	17.5	4.3	38.8	66.1	44.0	32.4	24.1	2.2
No rubbish disposal		6.0	3.9	3.1	4.1	5.6	6.5	3.9	5.0	0.9
Other		1.5	0.7	0.7	1.3	1.1	1.5	1.4	1.7	0.6

5.10 Waste Recycling

5.10.1 South African Waste Information System Records

According to SAWIS records, in 2017 a total of 245,923 tonnes of waste (5.8% of waste generated) was recycled in the Eastern Cape and there are 12 recycling facilities registered on the SAWIC. The table below presents a summary of the waste streams being recycled in the Eastern Cape. The estimated recycling rate of general waste nationally is 11% (DFFE, 2017).

Table 35: Summary of SAWIS recycling data for the Eastern Cape (data source, SAWIS, accessed 16/04/2018)

Waste stream	Tonnage	Percentage of EC total
Bottom ash	11,269.1	4.42
Commercial and industrial waste	648.3	0.25
Metals	8,674.2	3.40
Metals: ferrous	81,557.6	31.99
Metals: non-ferrous	15654	6.14
Paper	874.4	0.34
Paper: brown grades	4735.5	1.86
Plastic	343.4	0.13
Plastic: other	77.7	0.03
Plastic: polypropylene	345	0.14
Plastic: polystyrene	871.9	0.34

Waste stream	Tonnage	Percentage of EC total
Tyres	129,600	50.84
Hazardous: Miscellaneous	272	0.11
Total	254,923.1	100

5.10.2 Waste Separation at Source

Waste separation at source programmes are essential in increasing recycling in the Eastern Cape. Waste separation at source can prevent recyclable material from entering landfill sites and also improve the quality of recyclables through prevention of contamination of recyclables.

Twelve of the 31 local municipalities in the Eastern Cape have waste separation at source programmes in place, although most of these are small pilot programmes. The table below presents details of these programmes.

Table 36: Details of waste separation at source programmes (data collected from IWMPs and through interviews)

Local municipality	District municipality	Details of programme
Umzimvubu	Alfred Nzo	
Amahlath	Amathole	
Great Kei	Amathole	
Amahlath	Amathole	
Ngqushwa	Amathole	
Raymond Mhlaba	Amathole	
Elundini	Joe Gqabi	
Senqu	Joe Gqabi	
Blue Crane Route	Sarah Baartman	Separation at source programmes are in place in Cookhouse, Pearston and Somerset East. Recyclable waste is collected in blue bags and taken to the Somerset East landfill site.
Makana	Sarah Baartman	A voluntary pilot two bag system has been initiated.
Ndlambe	Sarah Baartman	Two wheelie bins are provided to select households in Station Hill township to allow households to separate waste at source. Integrated Waste and Recycling Services manage the pilot programme.
King Sabata Dalinyebo	O.R. Tambo	

The Blue Crane Route Local Municipality has experienced challenges with their separation at source programme as residents expect to be paid for separating their waste at source. In addition the programme experienced a shortage of coloured bags due to budgetary constraints.

5.10.3 Material Recovery Facilities

A material recovery facility (MRF) is a facility where waste is sorted and separated for recycling. The design of MRFs can vary from simple facilities where waste is sorted manually on a concrete slab to fully mechanised facilities with conveyor belts and automatic separating systems.

A further distinction can be made between MRFs based on the type of waste they receive; municipal MRFs can be either dirty MRFs or clean MRFs.

A dirty MRF is a facility which accepts an unsorted waste stream. In terms of the domestic waste stream this would be a mix of organic waste (kitchen) waste and recyclables (glass, paper, metal, plastic etc.). The recyclables separated at a dirty MRF are generally of lower value as they are typically contaminated with organic waste.

A clean MRF processes pre-sorted recyclables, and hence recyclables separated in such a facility have lower levels of contamination and have higher financial value. These pre-sorted recyclables are usually sourced through the use of a two bag system or from facilities where recyclable waste can be dropped off.

The recovery rate of material processed at a clean MRF is significantly higher than a dirty MRF. A dirty MRF typically recovers 10 -25% of recyclables as opposed to a clean MRF where 80% are recovered (DFFE, undated, Anél Blignaut Environmental Consultants cc, 2012).

According to IWMP reviews and interviews undertaken, few municipal MRFs are operational in the province. These are detailed in the table below.

Table 37: Summary of material recovery facilities in the Eastern Cape

Municipality	Location of MRF	Description of MRF	Owner
Elundini	Ugie Landfill site	A mechanised MRF with a raised conveyor belt sorting line and bailer. The MRF is enclosed in a building. The MRF has been vandalised and is not currently operational due to financial constraints	Municipal
Kouga	Humansdorp landfill site - Pending	Mechanised MRF with a sorting line.	Private
Intsika Yethu			Municipal
Nelson Mandela Bay	Port Elizabeth	Mechanised MRF with a raised conveyor belt sorting line and several bailers.	Private
Buffalo City	East London	The Buffalo City Buy-back centre includes an area where waste is stored and bailed.	The building is owned by Buffalo City but the equipment is owned by the service provider
Emalahleni	Lady Frere	A MRF will be constructed using funding from DFFE	Municipal
Walter Sisulu	Aliwal North		Municipal

Municipality	Location of MRF	Description of MRF	Owner
Umzimvubu			Municipal
Port St Johns	Port St Johns landfill site		Municipal
Mhlontlo	Qumbu landfill site		Municipal
Ndlambe	Alexandria	Construction completed but not yet operational	Municipal
Engcobo	Landfill site		Municipal

5.11 Buy Back Centres

Based on IWMP reviews and completed surveys there are four municipal buy-back centres in the Eastern Cape. Details of the buy-back centres are provided in the table below.

Table 38: Summary of buy back facilities in the Eastern Cape

Municipality	Location of buy-back centre	Ownership
Winnie Madikizela Mandela	Flagstaff	
Port St Johns	Port St Johns landfill – in planning	A buy-back centre is planned for the Port St Johns landfill site
Walter Sisulu	Aliwal North	
Buffalo City	East London	The building is owned by Buffalo City but the equipment is owned by the service provider
Nelson Mandela Bay	Seaview	Private



Figure 21: Flagstaff buy-back centre (left), one of the compactors dedicated to the project (right)

5.12 Waste Treatment

Treatment of waste in the Eastern Cape occurs at three facilities. Details of waste treatment in the Eastern Cape are presented below. The majority of waste treated in the Eastern Cape (77%) is health care risk waste (HCRW). Compass Waste operates a HCRW treatment facility near

Berlin in East London and has contracts with the Eastern Cape Department of Health for management of HCRW from Government clinics and hospitals.

Table 39: Summary of SAWIS records for waste treatment (data source, SAWIS, accessed on 16/04/2018)

Waste stream	No. facilities	Tonnes	Percentage of waste stream
HCRW: infectious waste and sharps	1	5,463.5	77.11
Hazardous: Liquid and sludge organic waste	1	1,122.3	15.84
Hazardous: waste oils	1	499.9	7.06
Total	3	7085.7	100

5.13 Waste Composting

Based on interviews with municipalities, a review of IWMPs and a review of SAWIC records, there are only a small number of municipal composting facilities in the Eastern Cape. The Enoch Mgijima local municipality has a small composting facility at the Komai public gardens. The facility consists of several cages for composting of leaves collected from the public gardens and from leafs cleared in public road-ways. The compost is used at the municipality's nursery for growing trees and shrubs, for use in the gardens and for growing trees for the annual harbour day.

Numerous private composting facilities are in operation but at the time of this report, no data was available on the tonnage of organic waste being composted.

Table 40: Composting facilities in the Eastern Cape

Municipality	Location of composting facility	Owner of composting facility
Walter Sisulu	Aliwal North – currently being developed	Municipal
Kouga	Humansdorp	Private
NMBM	Motherwell	Private
Enoch Mgijima	Komani	Municipal
Great Kei	Komga	-
NMBM	Motherwell	Private
NMBM	-	Private

Two composting facilities are included in a list of waste management infrastructure provided by DEDEAT. These are:

- Komga Composting in Great Kei Local Municipality
- Venter Fert Composting and Fertiliser Plant in Nelson Mandela Bay Metropolitan Municipality

As illustrated in waste characterisation exercises, organic waste constitutes on average 29% of the domestic waste stream. Investment in composting facilities could contribute towards a reduction in waste to landfill.

5.13.1 Legal Drivers for the Development of Composting Facilities

The National Norms and Standards for Disposal of Waste to Landfill (GN 636 of 2013) require a 25% reduction of garden waste to landfill by 2018 and a 50% diversion by 2023.

At present none of the municipalities in the Eastern Cape will meet the 25% diversion rate by August 2018. The development of composting facilities is one way to work towards diverting green waste from landfill. Diversion of green waste from landfill site can save landfill site airspace and allow waste beneficiation from the sale of compost.

5.14 Waste Treatment: Anaerobic Digestion

The National Norms and Standards for the Disposal of Waste to Landfill (GN 636 of 2013) prohibits the disposal of infectious animal carcasses and animal waste from being disposed of at landfill. An alternative to the landfill disposal of animal waste (manure) and carcasses is treatment in a biodigester and biogas plant. A biogas plant uses anaerobic digestion to generate gas. This gas can then be burnt in an engine to generate electricity or used as an alternative to diesel. Biodigesters reduce the volume of solid waste and reduces pathogens, worm eggs and flies. Biodigesters also reduce greenhouse gas emissions and odours. The nutrient content of the manure from the biodigester is not greatly reduced and it can be applied to farm land as a fertiliser. Anaerobic digestion typically reduces the mass of solid waste by 75%. The volume of water in the waste is however not reduced.

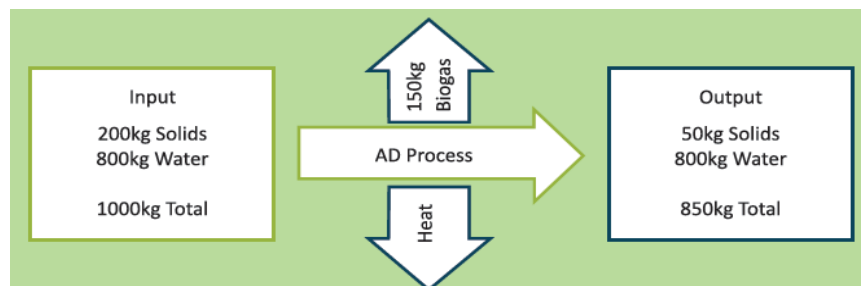


Figure 22: Inputs and outputs of a biodigester (source DFFE, undated)

The Peninsular Piggery in Komani (formerly Queenstown) has a biogas plant which receives 35 tonnes a day of pig manure. The biogas plant generates 190kW of energy per day, which is used to power the farm. The facility was installed for an estimated cost of R 6.3 million (Ibert, 2017).



Figure 23: Peninsular Piggery bio-digester (source ibert, 2017)

The outputs of a biogas facility are biogas (which can be converted into electricity or fuel), heat and fertilizer. The quality of gas produced by a biogas plant is directly linked to the quality of the feedstock.

5.15 Waste Disposal

5.15.1 South African Waste Information Centre Records

The SAWIC has waste disposal records for the Eastern Cape from 2004 to 2017. In 2004 the Nelson Mandela Bay Metropolitan Municipality was the only municipality reporting on the SAWIC. By 2017, the number of municipalities reporting has increased to 14 out of 33 municipalities. The SAWIC records however cannot be considered as an accurate representation of waste disposal in Eastern Cape as not all municipalities are reporting on the SAWIC. The SAWIC is also prone to data capturing errors, for example, the Intsika Yethu Municipality, which has a population of 152,159, has often reported waste tonnages greater than that of the Nelson Mandela Bay Metropolitan Municipality (population of 1,263,051). A comparison is provided in the table below.

Table 41: SAWIC records for general waste disposal tonnages at Intsika Yethu local municipality and Nelson Mandela Bay Metropolitan Municipality

Year	2010	2011	2012	2013	2014	2015	2016
Intsika Yethu LM	3,786,060	234,524	999,470	1,063,306	1,501	1,611	1,501
Nelson Mandela Bay Metro	592,754	512,318	481,429	494,650	568,493	625,975	641,748

5.15.2 Waste Disposal Facilities

Based on a literature review and completed municipal questionnaires there are approximately 144 landfill sites in the Eastern Cape. This includes operation, closed and sites which are in the planning phase. As part of this PIWMP review, a comprehensive database of landfill sites in the Eastern Cape was compiled by reviewing existing IWMPs, licences available on SAWIS and a database provided by DEDEAT. This newly developed database contains the following information for landfill sites:

- Name
- Local municipality
- Classification
- Permit status
- Type of permit
- Site status (operational, closed, rehabilitated)
- Permit number
- Year permitted
- Permit holder
- Co-ordinates of the site

Development of this database was an onerous task for a number of reasons:

- SAWIC does not hold licences for all landfill sites in the Eastern Cape
- Co-ordinates given on a large number of licences are incorrect
- The existing DEDEAT database of licensed landfill sites specifies the name, municipality and type of permit issued. No landfill co-ordinates are given
- No database of unlicensed sites was available
- Old permits do not list co-ordinates of sites, instead they list erf numbers or farm names. Over time land parcels are subdivided and farm names change. This makes locating sites difficult
- Not all IWMPs provide accurate or comprehensive information on landfill sites e.g. license status or co-ordinates are missing

This database is included with this PIWMP as Appendix A.

The database was circulated to all members of the PSC for comment on 12 April 2018, but at the time of this report comment had only been received from the Nelson Mandela Bay Metropolitan Municipality, Amathole District Municipality, Joe Gqabi District Municipality and Alfred Nzo District Municipality.

(a) Status of Landfill Sites

There are 143 landfill sites in the Eastern Cape, including operational sites, closed sites and sites in the planning phase.

The current status of these landfill sites is presented in the table below.

Table 42: Status of Eastern Cape landfill sites

Status	No. sites
Operational	89
Closed	48
In planning phase	3
Under construction	2
Unknown	1
Total	143

**unknown refers to a permitted site which is not mentioned in IWMPs nor could be located on satellite imagery due to co-ordinates not being available in the permit.*

(b) Permit Status of Operational Landfill Sites

The majority (76.4%) of the 89 operational landfill sites in the Eastern Cape are confirmed to be permitted with valid permits. The permit status of 2 sites is unknown, because the permits are not available on SAWIS and the IWMP for the municipality does not specify the permit status of the site. Nine landfill sites are not permitted. Permit applications for an additional two of which are currently underway.




All the permits which were available on SAWIS and provided by local municipalities and DEDEAT (103 permits) were reviewed to determine if the permits were valid. Of the permits which were reviewed, 7 were no longer valid e.g. the permit has been valid for 10 years and this period has passed and the site is still operational. A further 7 permits had requirements for closure and rehabilitation to happen in a specified time. An investigation is needed to determine if closure and rehabilitation did commence within permitted timeframes.



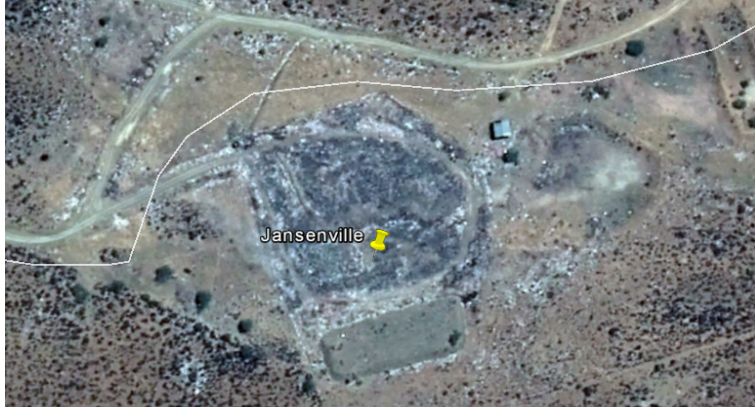
Table 43: Permit Status of Operational Eastern Cape landfill sites



Status	No. sites	% of sites
Permitted	68	76.4
No permit	10	11.2
Permit expired	7	7.9
Permit underway	2	2.2
Unknown	2	2.2
Total	89	100

The 2010 EC PIWMP reported that there were 117 landfill sites in the Eastern Cape and only 38.5% of the landfill sites were permitted. The Eastern Cape has therefore made significant progress with regard to the licensing of unpermitted sites.

Table 44: Details of unlicensed operational landfill sites

Satellite image	Site details
	<p>Site: Beacon Bay</p> <p>Municipality: Buffalo City Metropolitan Municipality</p> <p>Date of first operation (based on google earth imagery): Pre 2012 (note, there is an imagery gap between 2004 and 2012)</p>
Beacon Bay unlicensed landfill site (image source, Google Earth), image date 29/12/2018	
	<p>Site: Riegerton</p> <p>Municipality: Buffalo City Metropolitan Municipality</p> <p>Date of first operation (based on google earth imagery): Pre 2004 (note, google earth imagery only goes back to 2004)</p>
Riegerton unlicensed landfill site (image source, Google Earth), image date 29/12/2018	
	<p>Site: Kidd's Beach</p> <p>Municipality: Buffalo City Metropolitan Municipality</p> <p>Date of first operation (based on google earth imagery): Pre 2002 (note, google earth imagery only goes back to 2002)</p>
Kidd's Beach unlicensed landfill site (image source, Google Earth), image date 29/12/2018	

Satellite image	Site details
	<p>Site: Kayser Beach</p> <p>Municipality: Buffalo City Metropolitan Municipality</p> <p>Date of first operation (based on google earth imagery): Pre 2000 (note, google earth imagery only goes back to 2000)</p>
Kayser Beach unlicensed landfill site (image source, Google Earth), image date 05/06/2018	
	<p>Site: Seavale</p> <p>Municipality: Buffalo City Metropolitan Municipality</p> <p>Date of first operation (based on google earth imagery): Pre 2011 (note, there is a gap in satellite imagery between 2003 and 2011)</p>
Seavale unlicensed landfill site (image source, Google Earth), image date 04/01/201	
	<p>Site: Jansenville</p> <p>Municipality: Dr Beyers Naude</p> <p>Date of first operation (based on google earth imagery): Pre 2008 (note, google earth imagery only goes back to 2008)</p>
Jansenville unlicensed landfill site (image source, Google Earth), image date 20/12/2018	

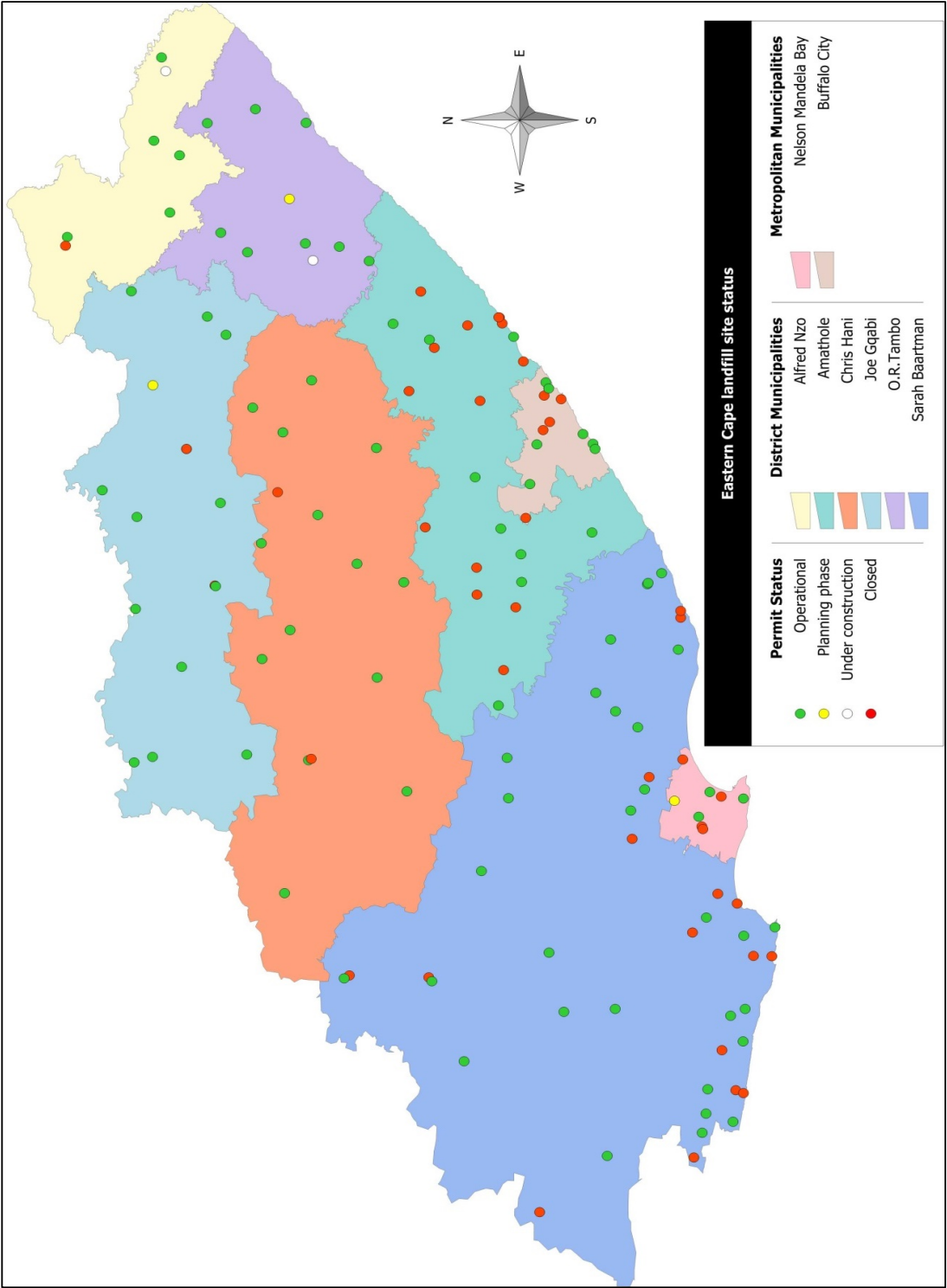
Satellite image	Site details
 <p>A satellite image showing a large, irregularly shaped landfill site. The site is characterized by a mix of brown, grey, and green patches, indicating different stages of waste decomposition and vegetation. A yellow pin is placed on the site, and the label 'Krakeelrivier' is written in black text next to it. The surrounding area appears to be a mix of agricultural land and natural vegetation.</p>	<p>Site: Krakeelrivier Municipality: Kou-Kamma Date of first operation (based on google earth imagery: Pre 2005 (note, google earth imagery only goes back to 2005)</p>
Krakeelrivier unlicensed landfill site (image source, Google Earth), image date 22/01/2019	
 <p>A satellite image showing a large, irregularly shaped landfill site. The site is characterized by a mix of brown, grey, and green patches, indicating different stages of waste decomposition and vegetation. A yellow pin is placed on the site, and the label 'Bizana' is written in black text next to it. The surrounding area appears to be a mix of agricultural land and natural vegetation.</p>	<p>Site: Bizana Municipality: Winnie Madikizela Mandela Date of first operation (based on google earth imagery: Pre 2013 (note, there is a gap in imagery between 2005 - 2013)</p>
Krakeelrivier unlicensed landfill site (image source, Google Earth), image date 22/01/2019	

Satellite image	Site details
	Site: Klipplaat Municipality: Dr Beyers Naude Date of first operation (based on google earth imagery): Pre 2012 (note, satellite imagery only goes back to 2012)
Klipplaat unlicensed landfill site (image source, Google Earth), image date 20/12/2018	
	Site: Willowmore Municipality: Dr Beyers Naude Date of first operation (based on google earth imagery): Pre 2003 (note, satellite imagery only goes back to 2003)
Klipplaat unlicensed landfill site (image source, Google Earth), image date 27/01/2019	

(c) Type of Permits

Of the permits available for review, the majority of operational landfill sites (78.9%) have permits which allow the development or continued operation of site. Only 21.1% of landfill sites have closure permits.

A number of landfill sites are permitted under the Environment Conservation Act (Act 73 of 1989) (ECA). DEDEAT has indicated that it is planning on undertaking a review of all landfill permits which were issued under ECA and, where appropriate, re-issuing permits under the NEM: WA.



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5.16 Planned Landfill Sites

The Ingquza Hill Local Municipality is currently undertaking a site selection process for a new landfill site. Two potential sites for a new landfill site have been identified.

The Coega Development Corporation received a waste management license for a new regional general and hazardous waste landfill site in 2017. The project is currently in the appeals phase.

5.17 Waste Information Management

5.17.1 South African Waste Information Centre

In terms of the National Waste Information Regulations (GN 625 of 2012) all parties which operate a general landfill site in excess of 200m² in area are required to register and report on the South African Waste Information Centre (SAWIC). There are currently only 16 municipalities and 25 waste disposal facilities are reporting on the SAWIC (web reference 4).

5.17.2 Waste Records and Information Management

One of the key issues identified during this situation analysis is a lack of accurate, comprehensive data on the following:

- Waste generation
- Waste recycling records from municipal programmes and details of private recycling programmes
- Landfill site permits, not all municipalities have copies of the permit for their landfill sites

5.18 Monitoring of Waste Management Facilities in Eastern Cape

A number of local municipalities indicated that they do not undertake internal or external audits of their waste facilities. The requirement for audits is a standard condition in most waste licences.

External audits of waste facilities are undertaken by DEDEAT. A sample of eight DEDEAT audit reports were reviewed as part of this IWMP. All of facilities audited were noted as being non-compliant with permit conditions.

The following table summarises the key findings of audits undertaken by DEDEAT.

Table 45: Summary of DEDEAT waste facility audit findings

Key audit findings (DEDEAT)	Shorting comings of audits report and recommendations
<p>The following non-compliance were noted in the audit reports:</p> <ul style="list-style-type: none"> • Burning of waste • Lack of compaction and covering of waste • Dumping of waste outside the waste disposal site • Nuisance odours from the site • Waste volumes not being records • Lack of appropriate signage at the facility • Poor stormwater management systems • Lack of personnel on site • Lack of monitoring on site • Access road in poor condition • Windblown litter present on site 	<ul style="list-style-type: none"> • There is no audit checklist which assess compliance with each permit condition • Facilities are not given a compliance score, a simple scoring system (compliant 2, partially compliant 1, non-compliant 0) should be considered to allow auditor to quantitatively assess the compliance of site. This system would allow DEDEAT to compare compliance between sites • Although all the audit reports use the same template the reporting style, in particular the level of detail provided varies between audit reports. A new audit report template should be developed and all auditors should be trained on the template • Some audit reports do not provide recommendations are included to address non-conformances

5.19 Waste Management Officers

The NEM: WA requires that the province and all municipalities appoint a waste management officer (WMO) from its administration who is responsible for co-ordinating waste management in the municipality.

The Guideline for Designation of Waste Management Officers (WMOs) as provided for in section 10 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (hereafter referred to as DFFE guidelines for designation of WMOs) identifies the following requirements for WMOs:

Provincial WMO:

- Implementing national waste management strategies
- Monitor and enforce waste legislations
- Develop provincial legislation and waste implementation strategies and guidelines
- Monitor compliance with plans
- Coordinate implementation of the Act as provincial level
- Capacity building for local government
- Develop and implement provincial IWMP

Municipal WMO:

- **Policy development and by-laws** – develop appropriate tariffs, debt collection, procurement policy, development of by-laws to give effect to tariff policy
- **Financial planning and management** – determine full cost of provision of waste services, develop waste management series budget, determine tariffs, ensure financial statements for waste management are up to date
- **Integrated waste management plan and reporting** – development of an IWMP which complies with the NEM: WA and identifies infrastructure projects, implementation of the IWMP and preparation of annual reports on the implementation of the IWMP
- **Infrastructure development** – ensure there is a project management unit in place, ensure MIG projects are listed in the IDP, ensure MIG applications are compliant, undertake feasibility assessments for MIG projects, prepare 3 year capital and operational plans for MIG project, submit quarterly MIG reports, ensure implementing agents are in place
- **Waste services provision arrangements** – assist with review of institutional arrangements, hire qualified solid waste management officials, ensure contracts are in place when using service providers
- **Performance management and regulatory capacity** – monitor service providers performance on an annual
- **Health and hygiene protection** – establish a health, hygiene and safety promotion programme
- **Service authority structural and organisation issues (capacity building)** include waste management function in the municipal organogram, waste management authority functional areas addressed in job description

As can be seen from the above roles and responsibilities a WMO officer should be a qualified and experienced individual with an in-depth understanding of the day to day operational requirements of waste infrastructure, an understanding of the financing of waste service and experience in submission of MIG funding applications.

Based on reviews of IWMP and interviews only 47% of municipalities have formally designated a WMO. Neither of the two metropolitan municipalities have formally designed WMOs. The majority of municipalities have an employee fulfilling the WMO role, however this individual typically has not been formally designed as an WMO in terms of the NEM: WA.

The lack of designated WMOs is attributed to:

- A high staff turnover
- A lack of dedicated waste management staff
- Council not signing off on WMO designation due to a lack of understanding of the WMO role

5.20 Skills capital in Waste Departments in LMs

A section of the questionnaire which was given to municipalities requested information on the experience and qualifications of employees in the waste management department. The key findings from the survey are:

- None of the local municipalities have professional engineers (PrEng) as part of the waste team
- Some local municipalities lack dedicated waste management staff. The waste management role is included as a secondary role under other divisions
- The experience of the WMO or the person fulfilling the WMO role ranges from 1 year to 19 years

**Note, these findings are based on the information provided in the 19 completed surveys.*

5.21 Financial management in Waste Departments in Municipalities

In all IWMPs and interviews a lack of waste management budget was raised as a concern. A lack of budget prevents municipalities from complying with legislation and delivery of effective waste management services.

5.21.1 Waste Management Tariffs

One of the causes of a lack of budget in municipalities is the use of waste tariffs which are not cost reflective and a low collection rate on waste management tariffs. The Department of Forestry, Fisheries and the Environment has developed a tool and guideline to assist municipalities to undertake full cost accounting exercises and to develop cost reflective waste management tariffs. The DFFE provided training to Eastern Cape municipalities on the model in 2014 and 2018. Despite the presence of the model and DFFE training sessions, only one of the surveyed municipalities, Intsika Yethu Local Municipality, has undertaken a full costing accounting exercise. The Elundini Local Municipality is currently in the process of undertaking a full costing accounting exercise. The majority of municipalities simply increase their tariffs in-line with inflation or by a fixed percentage annually. The tariff increases range from 4.3% (Umzimvubu Local Municipality) to 8 -10% (Buffalo City Metro).

Typically, most municipal waste tariffs are well below the true cost of the waste management services and, depending on the size of the shortfall, the process of increasing tariffs to better reflect the costs needs to be staggered over a number of years.

Low tariff payment rates is a problem in the province. Payment rates vary between 13% - 80% of customers. Low payment rates are a concern as tariffs are one of the key mechanisms which municipalities use to fund waste management services. One of the reasons stated for a low payment of tariffs is that in some municipalities tariffs are shown on statement as a lump sum. In this case, even if a resident receives a waste collection service, they may not pay the tariffs

because they might not receive water from the municipality and therefore decide not to pay the municipal tariff.

5.21.2 Equitable Share

Equitable share is a grant from national treasury provided to municipalities to provide basic services to poor households and to assist municipalities with limited resources to perform basic core municipal functions.

For the 2018/19 financial year the equitable share is R383.12 per household per month. Of the total allocated equitable share value R80.28 is allocated to waste services; this is split between operations (R72.25) and maintenance (R8.30) (National Treasury, undated).

In practice this funding is not diverted to waste projects or waste service delivery but is instead diverted to fund other basic services such as water, sewage and electricity. Based on feedback from workshops with municipalities the loss of equitable share for waste management services is due to the waste manager or WMO not being aware of the value of equitable share apportioned to waste management, and a lack of commitment from the waste department to hold the municipality accountable for correct allocation of equitable share. Equitable share is calculated based on the number of indigent households per municipality. When indigent registers are out of date municipalities may underestimate the number of indigent households and therefore not receive the full equitable share due to them.

Table 46: Equitable share per Province (source, web reference 5)

Province	2018/19 Allocation	Forward Estimates	
		2019/20	2020/21
	R'000	R'000	R'000
Eastern Cape	65 499 660	69 807 213	74 411 439
Free State	26 178 043	28 071 076	30 108 091
Gauteng	93 384 285	100 923 135	109 092 089
KwaZulu-Natal	99 263 681	106 363 502	113 997 676
Limpopo	55 178 775	59 187 820	63 503 149
Mpumalanga	38 467 686	41 394 597	44 554 600
Northern Cape	12 475 021	13 403 527	14 404 557
North West	32 391 895	34 788 928	37 372 220
Western Cape	47 447 464	51 079 855	55 003 034
TOTAL	470 286 510	505 019 653	542 446 855

5.22 District Support

A rating of district support was included in the IWMP survey which all local municipalities were requested to complete. Local municipalities were requested to rate the level of support received from their relevant district municipality on a scale ranging from excellent to very poor. A total of 16 local municipalities rated their district municipality. The ratings are presented below.

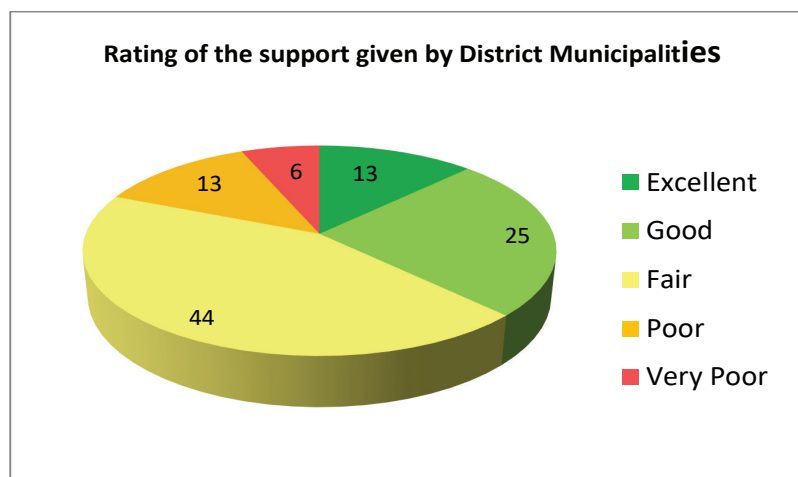


Figure 25: Level of support given by district municipalities, as rated by the local municipalities. Only 16 municipalities responded.

Local municipalities were also requested to identify positive support from district municipalities, shortcoming and areas for improvement with regard to support from district municipalities.

Table 477: Feedback from local municipalities in terms of district support

Positive feedback	Shortcomings	Areas for improvement
<ul style="list-style-type: none"> The district assisted with development of IWMPs 	<ul style="list-style-type: none"> Limited support from the district, their focus is on environmental health issues not waste management 	<ul style="list-style-type: none"> Provide more notice for quarterly forums Be more visible in the local municipalities Assistance with budgets for waste management projects Provide training sessions Increase budget to support waste management activities

5.23 Provincial Support

A rating of provincial support was included in the IWMP survey which all local and district municipalities were requested to complete. Municipalities were requested to rate the support received from the province on a scale ranging from excellent to very poor. A total of 17 municipalities rated the province. The ratings are presented below.

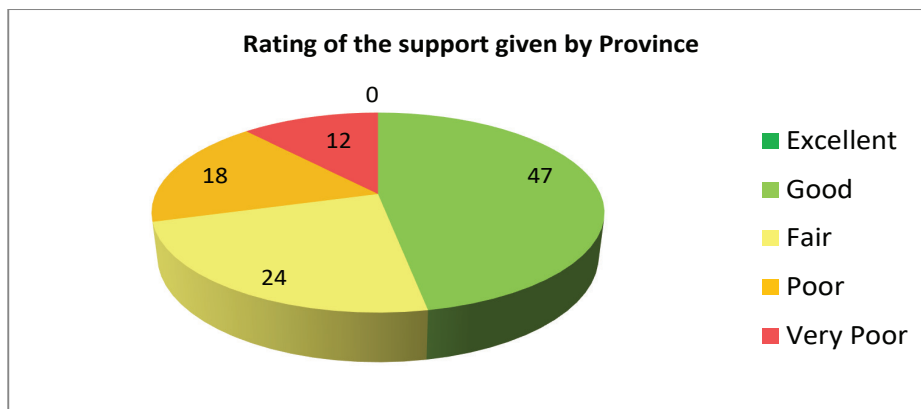


Figure 26: Level of support given by province, as rated by the local and district municipalities. Only 17 municipalities responded.

Municipalities were also requested to identify examples of positive support that had been received from the province and shortcoming and areas for improvement with regard to support from province.

Table 48: Feedback from municipalities in terms of provincial support

Positive feedback	Shortcomings	Areas for improvement
<ul style="list-style-type: none"> DEDEAT provides waste legislation training DEDEAT hosts quarterly meetings with municipalities 	<ul style="list-style-type: none"> No action results from quarterly meetings Poor follow up from DEDEAT when municipalities present challenges DEDEAT focuses on compliance not on supporting municipalities 	<ul style="list-style-type: none"> Stricter reporting requirements for municipalities are required in terms of IWMP performance Regular information sharing sessions are required to build knowledge and capacity DEDEAT should identify municipalities which require funding and assist with funding DEDEAT to provide technical assistance Provide waste management training DEDEAT to assist with funding of waste infrastructure projects

5.23.1 Provincial Waste Management Projects

Between 2013 and 2018 DEDEAT funded waste projects to the value of R 28,577,000. The budget for waste management projects varies year on year, for example R9 million was spend on waste projects in 2016 in seven local municipalities compared to only R 1.6 million in 2015 which was spent on one local municipality.

Table 4949: DEDEAT funded waste projects (data provided by DEDEAT)

Municipality	Project description	Project status	Budget
2018 projects			
Intsika Yethu	(Incentive Grant)		R 2 204 000
Great Kei			R 3 947 000
		Total	R 6 151 000
2017 projects			
Dr Beyers Naude	(Incentive Grant)		R 2 400 000
Intsika Yethu			R 2 554 000
		Total	R 4 954 000
2016 projects			
Mhlontlo			R 1 000 000
Ntabankulu			R 1 000 000
Maletswai			R 1 000 000
Makana			R 1 600 000
Ndlambe	(Incentive Grant)		R 2656 000
Amahlathi			R 770 000
Beyers Naude			R 1 000 000
		Total	R 9 026 000
2015 projects			
Nyandeni			R 1 800 000
2015 projects			
Emalahleni			R 1 623 000
2014 projects			
Emalahleni			R 1 623 000
Amahlathi			R 2 000 000
Camdeboo			R 1 000 000
		Total	R 4 623 000
2013 projects			
Gariep			R 2 023 000
		Total	R 2 023 000

An additional R1 million annual budget is provided by DEDEAT for the annual Greenest Municipality Competition.

5.23.2 Provincial Waste Management Forum

The municipal WMOs are invited to attend provincial waste management officers forums which are held on a quarterly basis.

The forums typically cover the

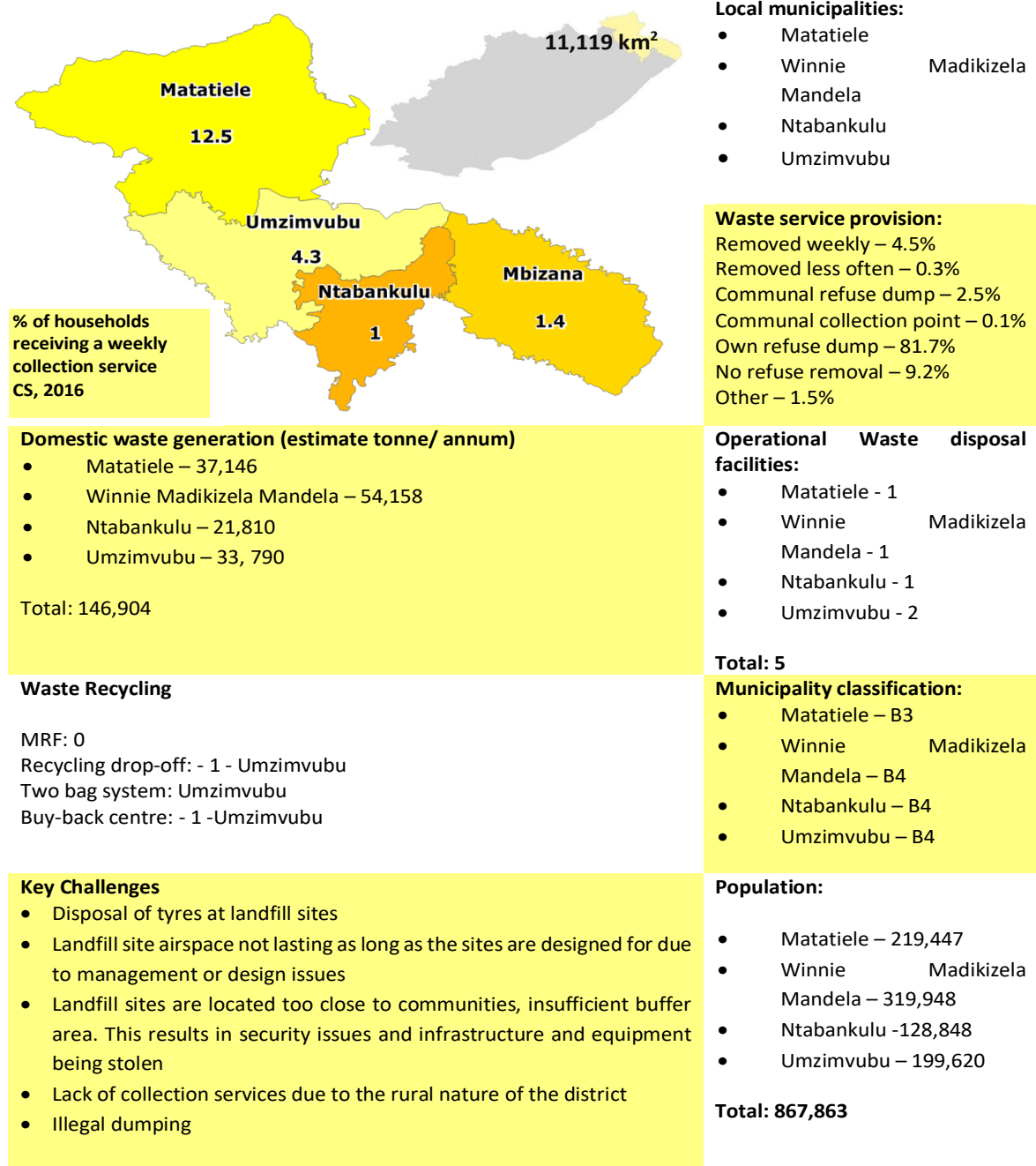
- Updates on policy and legislation
- Reports from local municipalities
- Waste management licensing and waste management facility registrations

There is currently standard presentation or template which WMOs use to provide feedback at these sessions.

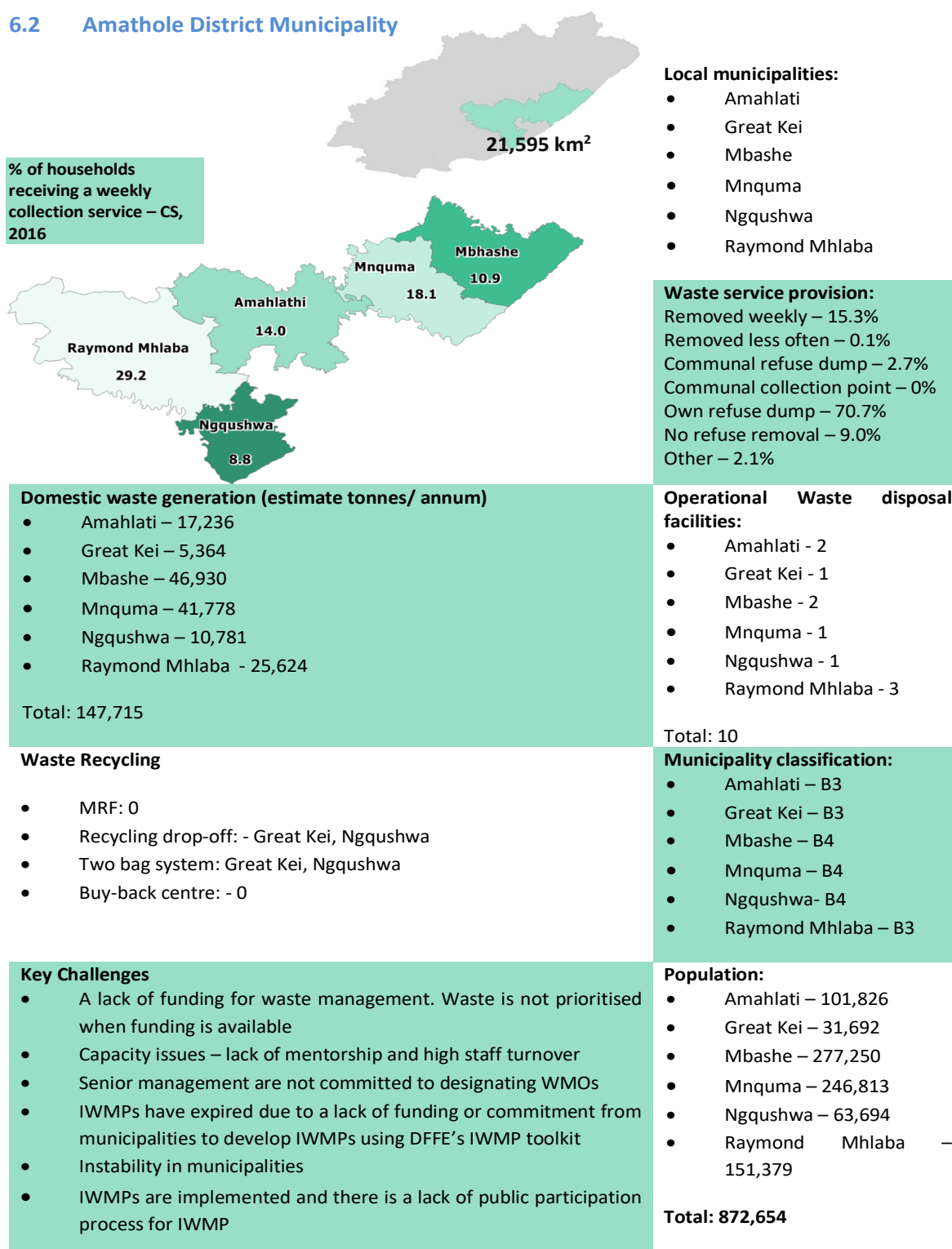
6 District and Metropolitan Municipality Profiles

This section provides one page summaries of the different districts in the Eastern Cape, as far as waste management is concerned.

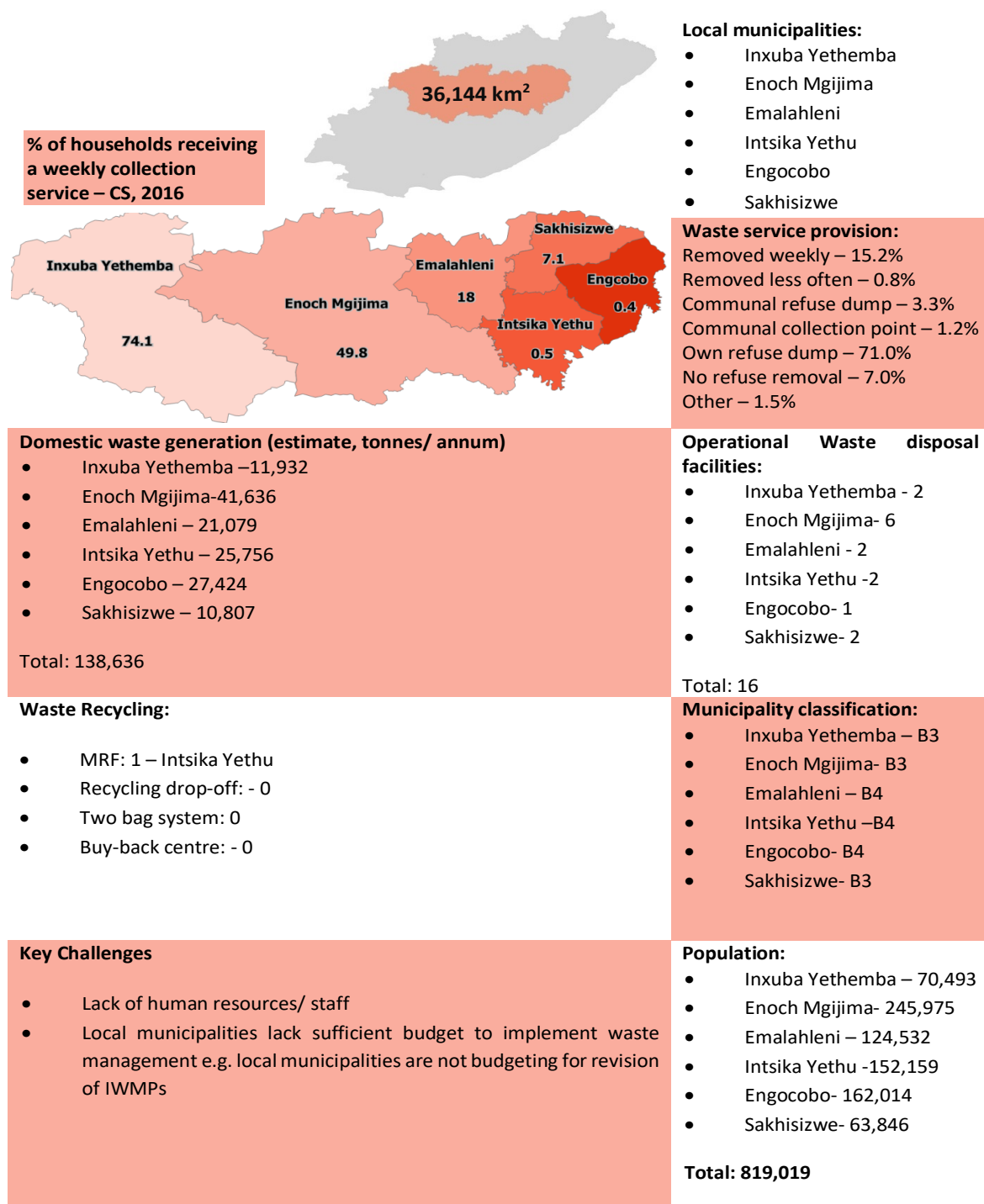
6.1 Alfred Nzo District Municipality



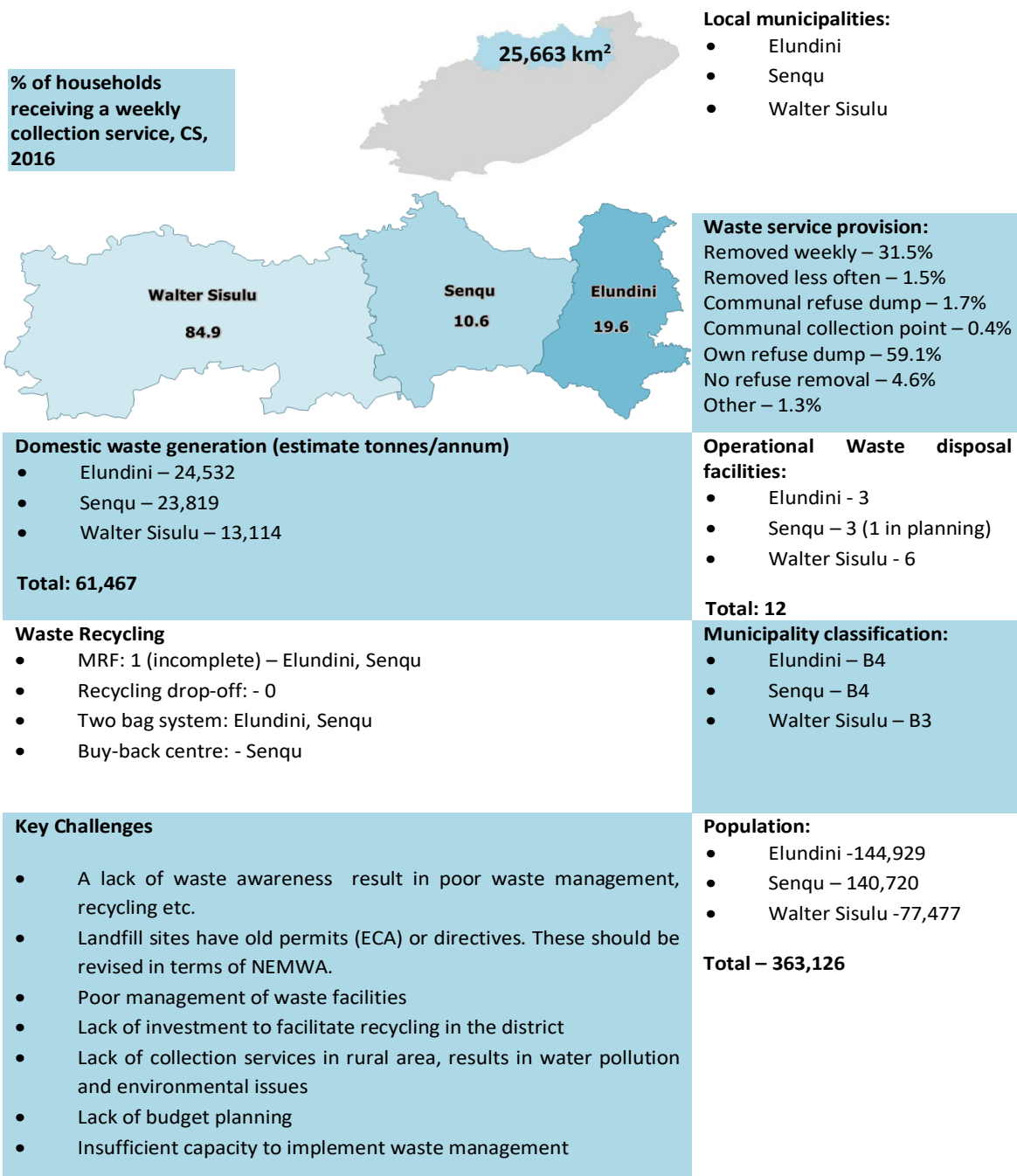
6.2 Amathole District Municipality



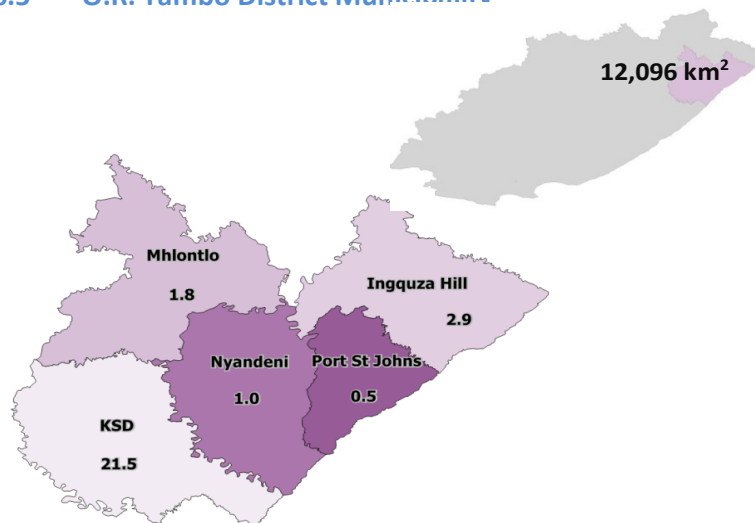
6.3 Chris Hani District Municipality



6.4 Joe Gqabi District Municipality



6.5 O.R. Tambo District Municipality



Local municipalities:

- King Sabata Dalindyebo
- Mhlontlo
- Ingquza Hill
- Nyandeni
- Port St Johns

Waste service provision:

Removed weekly – 5.9%
 Removed less often – 0.6%
 Communal refuse dump – 2.8%
 Communal collection point – 0.8%
 Own refuse dump – 78.3%
 No refuse removal – 11.1%
 Other – 0.6%

Domestic waste generation (estimate tonnes/ annum)

- King Sabata Dalindyebo – 82,664
- Mhlontlo – 32,022
- Ingquza Hill – 51,354
- Nyandeni – 52,424
- Port St Johns – 28,231

Total: 246,694

Operational Waste disposal facilities:

- King Sabata Dalindyebo – 2 (1 status unknown)
- Mhlontlo - 2
- Ingquza Hill - 2
- Nyandeni – 0 (1 in planning)
- Port St Johns - 1

Total: 7

Waste Recycling

Regional recycling programme

- MRF: Mhlontlo, Port St Johns
- Recycling drop-off: - 1 - Umzimvubu
- Two bag system: Umzimvubu
- Buy-back centre: - All local municipalities
- An additional R3.5 million has been allocated for the OR Tambo regional recycling scheme
- Two transfer stations planned in King Sabata Dalindyebo

Municipality classification:

- King Sabata Dalindyebo – B4
- Mhlontlo – B4
- Ingquza Hill – B4
- Nyandeni – B4
- Port St Johns – B4

Key Challenges

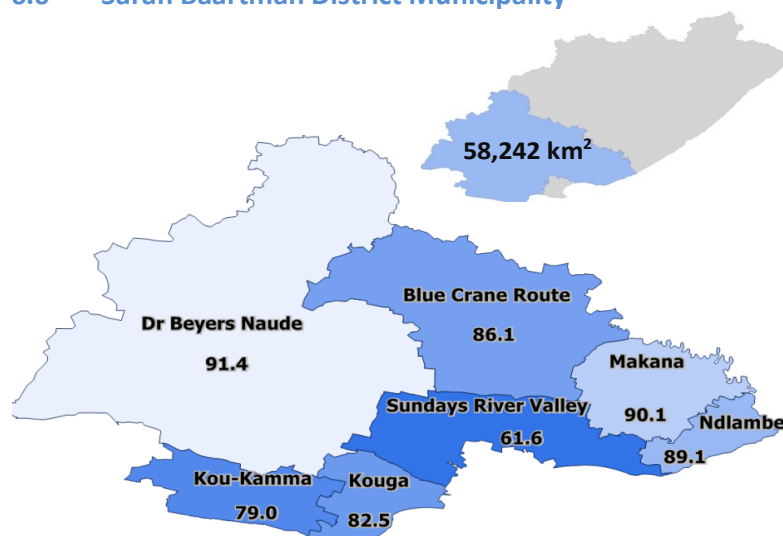
- Rural nature makes service provision difficult
- Lack of waste awareness in communities
- Development is occurring outside the urban edge, these areas should be serviced as they produce large volumes of waste but are not serviced as they are considered as peri-urban areas
- Landfill sites – lack of land available for new landfill sites
- Disposable nappies
- Servicing of indigents – registers are not finalised. Funding allocated in terms of equitable share and other funding streams are not used for waste management.
- WMO not influencing budgeting decisions- budget for waste not ring-fenced

Municipality population:

- King Sabata Dalindyebo – 488,349
- Mhlontlo – 189,176
- Ingquza Hill – 303,379
- Nyandeni – 309,702
- Port St Johns – 166,779

Total: 145,385

6.6 Sarah Baartman District Municipality



Local municipalities:

- Blue Crane Route
- Dr Beyers Naude
- Kouga
- Kou-Kamma
- Makana
- Ndlambe
- Sundays River Valley

Waste service provision:

Removed weekly – 86.2%
 Removed less often – 1.2%
 Communal refuse dump – 2.2%
 Communal collection point – 0.5%
 Own refuse dump – 6.7%
 No refuse removal – 1.8%
 Other – 1.3%

Domestic waste generation (estimate tonnes/annum)

- Blue Crane Route – 6,104
- Dr Beyers Naude – 13,422
- Kouga – 19,118
- Kou-Kamma – 7,395
- Makana – 13,890
- Ndlambe – 10,695
- Sundays River Valley – 10,121

Total: 80,745

Waste Recycling

- MRF: 1 - Ndlambe
- Recycling drop-off: - 0
- Two bag system: Blue Crane Route, Makana, Ndlambe
- Buy-back centre: - 0

Operational Waste disposal facilities:

- Blue Crane Route - 3
- Dr Beyers Naude - 7
- Kouga - 3
- Kou-Kamma - 7
- Makana - 3
- Ndlambe - 4
- Sundays River Valley - 3

Total: 30

Municipality classification:

- Blue Crane Route – B3
- Dr Beyers Naude – B3
- Kouga – B3
- Kou-Kamma – B3
- Makana – B2
- Ndlambe – B3
- Sundays River Valley – B3

Key Challenges

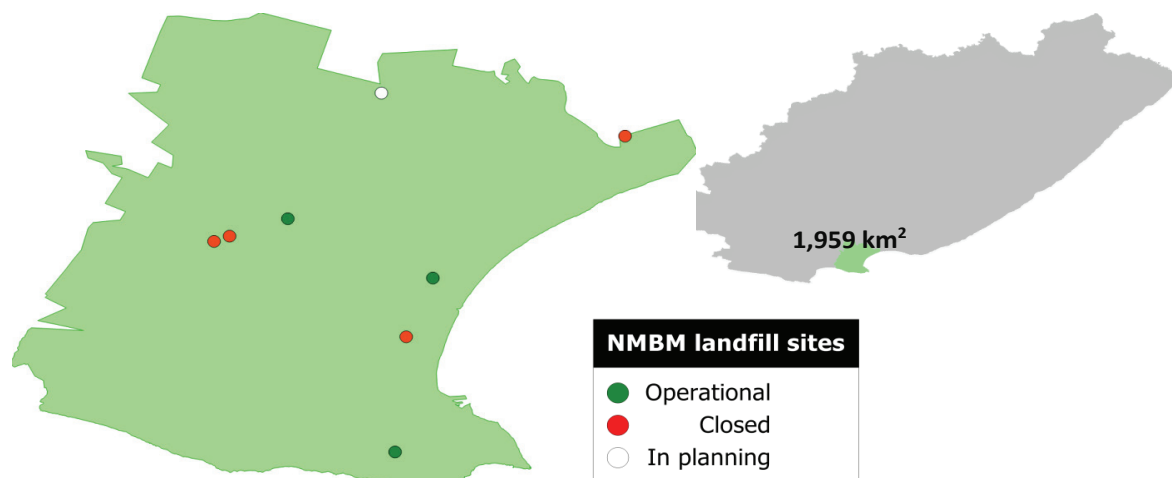
- Lack of funding directed to waste management. MIG funding is not distributed correctly. Waste is not prioritised
- WMOs are not designated, it is unclear who to engage with regarding waste management
- Lack of enforcement of by-laws due a lack of appointed peace officers
- Lack of support for DEDEAT regional offices
- Lack of personnel at landfill sites to issue safe disposal receipts

Population:

- Blue Crane Route – 36,063
- Dr Beyers Naude – 79,291
- Kouga – 112,944
- Kou-Kamma – 43,688
- Makana – 82,060
- Ndlambe – 63,180
- Sundays River Valley – 59,793

Total: 477,016

6.7 Nelson Mandela Bay Metropolitan Municipality



Domestic waste generation (estimate tonnes/ annum): 213,799 tonnes

Waste disposal tonnages

- Arlington – 348,216 (2016/17)
- Koedoeskloof – 309,702 (2016/17)
- Aloes (private) – 79,967 (2013/14)

Waste Recycling

- MRF: 1 – Private MRF in operation, no municipal MRF
- Recycling drop-off: - 2 formal municipal recycling drop-off centres, Kragga Kamma and Blue Horizon Bay
- Two bag system: No municipal system in place
- Buy-back centre: -No municipal buy-backs, private buy-back centres are in operation

Key Challenges

- Lack of funding direction to waste management projects. MIG funding is not correctly distributed and is used for other services
- No designated WMO
- Lack of enforcement of by-laws due to a lack of appointed peace officers
- Lack of support for DFFE Local Government Support
- Lack of implementation of plans such as IWMP
- Lack of technical information available to municipalities

Operational Waste disposal facilities:

- Arlington – general
- Koedoeskloof general & oil ponds
- Aloes – hazardous

Population by main area (Census 2011):

- Port Elizabeth – 312,392
- iBhayi – 237,799
- Bethelsdorp – 182,012
- Motherwell – 140,351
- KwaNobuhule – 107,474
- Uitenhage – 103,639
- Despatch – 39,319

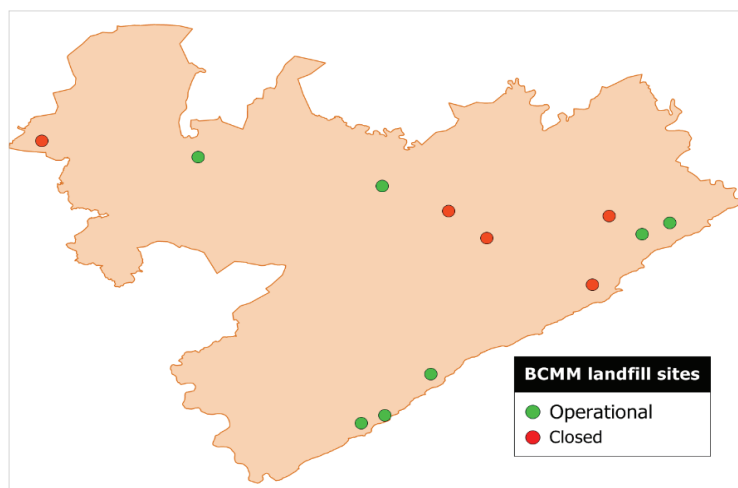
Total population : 1,152,115

Waste service provision:

Removed weekly – 84.8%
 Removed less often – 5.6%
 Communal refuse dump – 2.6%
 Communal collection point – 1.4%
 Own refuse dump – 2.57%
 No refuse removal – 2.0%
 Other – 1.1%

NOTE: NMBM provides a refuse collection service to 100% of formal households within the urban edge

6.8 Buffalo City Metropolitan Municipality



Waste disposal tonnages (BCMM, draft IWMP, 2017)

- Roundhill – 39,600
- King Williams Town – 5,000 – 6,000
- Riegers – 2,500

Operational Waste disposal facilities:

- Beacon Bay
- Kayser's Beach
- Kidd's Beach
- King Williams Town
- Roundhill
- Riegerton (private)
- Seavale

Waste Recycling

- MRF: – No municipal MRF
- Recycling drop-off: 3 converted shipping containers are in place for the public to drop-off recyclable waste (private)
- Two bag system: No municipal system in place
- Buy-back centre: -One municipal buy-back centre operated by a service provider

Population by main area (Census 2011):

- East London – 267,007
- Mdantsane – 156,835
- King Williams Town – 34,019
- Dimbaza – 21,783
- Zwelitsha – 18,189
- Pefferville – 16,380

Total population : 755,200

Key Challenges

- Lack of an IWMP to govern waste management in the metro

Waste service provision:

Removed weekly – 57.1%
 Removed less often – 2.7%
 Communal refuse dump – 7.5%
 Communal collection point – 2.0%
 Own refuse dump – 24.6%
 No refuse removal – 4.2%
 Other – 2.0%

7 *Gap Analysis*

The following section presents key issues which were identified during the situation analysis. These gaps have been used to develop the objectives and targets under section 8.

7.1 Institutional Functioning

Institutional functioning refers to staff, management and operational issues encountered at municipalities and within the province, within their waste management departments. The following key issues have been identified:

- The organogram for DEDEAT was officially revised in 2006. A full review of the organogram is required to ensure the necessary resources are available to implement this PIWMP
- Only 47% of municipalities have an appointed WMO. Without a designated WMO key decisions with regard to waste management are not being made. This is a legal requirement.
- There is a general lack of management and technical skills in the departments.
- There is little waste management planning capacity in municipalities, and very few municipalities have created positions for waste planners.
- Waste management employees lack training and there is no training plan to identify and drive training on a provincial level
- The experience of WMOs ranges from 1 year to 19 years.
- WMOs are not fulfilling all of the functions outlined in the DFFE's guideline for the designation of WMOs
- Local municipality employees lack the skills and experience to submit successful funding applications
- There are insufficient staff at local, district and provincial level to ensure effective waste management is practised in the province
- There are no guidelines for the appointment of key waste management employees at municipalities (WMO, landfill site manager etc.).
- There are a lack of EMIs dedicated to waste management to enforce compliance.

7.2 Waste Facility Compliance

Waste facility compliance refers to compliance issues identified at landfill sites, transfer stations and other waste management facilities.

The following key needs were identified in terms of waste facility compliance:

- Only 68 out of 89 (i.e. 76.4%) of operational landfill sites in the province are permitted with valid permits.
- Of the 89 permitted operational sites 7 of the reviewed waste management licenses have expired.

- The closure and rehabilitation of many landfill sites has not occurred within permitted timeframes, these permits are therefore considered as expired.
- Municipalities have not registered waste transfer stations, materials recovery facilities and recycling facilities in terms of the National Norms and Standards.
- DEDEAT's landfill compliance auditing system is not thorough and comprehensive.
- DEDEAT's landfill compliance auditing process is not exerting sufficient pressure on municipalities to improve performance.
- Many waste management facilities are not compliant with permit conditions.
- Internal and external audits of municipal waste facilities are not being undertaken or, where audit are undertaken, reports are not being submitted to DEDEAT.
- Poor waste management practices such as burning of waste are occurring on landfill sites.
- The majority of landfill sites do not have weighbridges and only a small number of landfill sites are recording vehicles entering the site.
- Landfill sites lack basic infrastructure such as fencing, gates, guard houses, and ablution facilities.
- Landfill sites lack equipment such as landfill compactors, dozers and TLBs to compact and cover waste.
- Uncontrolled informal reclaimers operate on landfill sites in dangerous working conditions.
- Management of waste disposal facilities is generally poor, and municipalities lack qualified and experienced employees to operate landfill sites.
- A lack of access control on landfill sites result in prohibited waste being disposed of.



Figure 27. A) Uncovered waste and burning of the landfill site at Cradock landfill site, B) Burning of waste at the Hofmeyr landfill site, C) Hazardous waste at the Hankey landfill site, D) Informal reclaimers at the Humansdorp landfill site

7.3 Waste Service Provision

- Only 41.3% of households in the province receive a weekly collection service.
- The majority (44.3%) of households use their own refuse dump for disposing of their waste. These dumps are likely associated with negative surface and groundwater impacts as well as windblown litter and the potential burning of waste.
- Municipalities are unable to provide a suitable waste collection service due to unreliable fleet.
- In the Eastern Cape, 30 of the 33 local municipalities are either B2 (14 municipalities) or B3 (16 municipalities). These municipalities present a challenge to service provision as they are generally rural in nature and characterised by a high number of small settlements.

7.4 Financial Management

- Only one municipality has undertaken a full cost accounting exercise to inform waste management tariffs.
- Most municipalities increase tariffs by inflation.
- There is a lack of understanding of the actual value of landfill site airspace in terms of operational costs, rehabilitation costs and the costs associated with the development of new landfill sites.
- Some waste managers/ WMOs are not aware of the portion of Equitable Share which is allocated for waste management
- Indigent registers for some municipalities are not up to date. These municipalities may therefore not be receiving the full Equitable Share grant which is due to them.
- The equitable share allocation for waste management is not being correctly allocated for the provision of waste services

7.5 Waste Minimisation, Reduction and Recycling

- Only 20 municipalities are running waste recycling programmes.
- Only 33% of municipalities have separation at source programme in place, and most of these separation at source programmes are either pilot projects or restricted to certain areas.
- There is a lack of co-operation between municipalities and the private sector to increase recycling in the province.
- There is a complete lack of accurate data on the number of recycling companies in the Eastern Cape and the volumes of materials being reclaimed for recycling.
- Only limited recycling is occurring within the boundary of the Eastern Cape. The markets for the recyclables are generally outside the province's boundaries and this results in high transportations costs and reduces the economic viability of recycling.
- Most recycling companies are not reporting tonnages on the SAWIC or to municipalities.
- Informal reclaimers operate on the majority of Eastern Cape landfill sites in unsafe working conditions.

- Neither of the metropolitan municipalities are running co-ordinated recycling programmes.

7.6 Organic Waste Management

- The National Norms and Standards for Disposal of Waste to Landfill (GN 636 of 2013) require a 25% diversion of green waste from landfill by 2018 and 50% by 2023. There are only a few municipal composting facilities in operation in the Eastern Cape and no meaningful efforts to divert green waste from landfill are being undertaken.
- There is no provincial guideline on the management of green waste or any provincial strategy to outline how the Eastern Cape will comply with these legislated requirements.

7.7 Information Management

- The level of waste information management at municipalities is generally extremely poor, and most municipalities are not gathering even landfill disposal tonnages
- For many municipalities, no regular waste characterisations are being undertaken.
- Most municipalities are not undertaking waste characterisations as part of the IWMP process; only 9 municipality IWMPs included a waste characterisation.
- The level of information available in IWMPs varies between plans and municipalities.
- Some municipalities do not have access to their own IWMPs
- Some District Municipalities do not have copies of the IWMPs for their local municipalities
- Only three district municipalities have IWMPs, one of which is out of date
- Many IWMPs lack basic information such as GPS co-ordinates for landfill sites
- A number of local municipalities have been amalgamated. Not all of the new municipalities have developed IWMPs
- A number of IWMPs have expired
- None of the municipalities are undertaking comprehensive annual reviews of the implementation of IWMPs
- There is a lack of information available on the number of recycling companies operating in the province and volumes of waste being recycled
- Most municipalities do not have skilled staff within the waste department that are capable of planning, executing and monitoring good data management.

7.8 South African Waste Information System

- Only 13 of the 31 municipalities are reporting on SAWIS.
- Reporting on the SAWIS is not accurate.
- Recycling companies have been requested by DFFE to report all waste collection from business and industry as general commercial and industrial waste instead of under individual categories e.g. plastic, paper.
- The database of waste facility licenses on SAWIS is incomplete.

7.9 Public Awareness

- Littering and illegal dumping occur across the Eastern Cape. A lack of public awareness contributes to this.
- Not all municipalities are undertaking public awareness campaigns.
- There is a general lack of public awareness materials and resources available in local municipalities.
- Most municipalities have sufficient designated staff responsible for the undertaking of awareness campaigns.



Figure 28: Examples of illegal dumping in the Eastern Cape

7.10 Strategic Planning

- The waste hierarchy approach (i.e. landfilling as a last resort) has not been embraced by most municipalities.
- There is a lack of staff in municipalities with planning skills, planning experience, and an understanding of the planning implications of changing waste legislation.
- There is a lack of funding available in municipalities to address future planning.
- There is a lack of research projects related to best practice for waste management.
- There is a lack of best practice guidelines to assist municipalities in the day-to-day management of waste facilities and for long term planning.
- There is a lack of integration between IDP planning and IWMP planning, resulting in uncoordinated waste planning.
- There is a lack of information publicly available for business and industry related to waste management.

8 *Desired End State*

8.1 Introduction

The aim of this section of the report is to address issues identified through the situation analysis and the gaps and needs assessment by defining waste management goals and targets. These

goals and targets outline the key achievements and the desired end state that the implementers of this plan would be aiming for through the implementation of this plan. The figure below shows where the “desired end state” occurs within the planning process of an IWMP review.

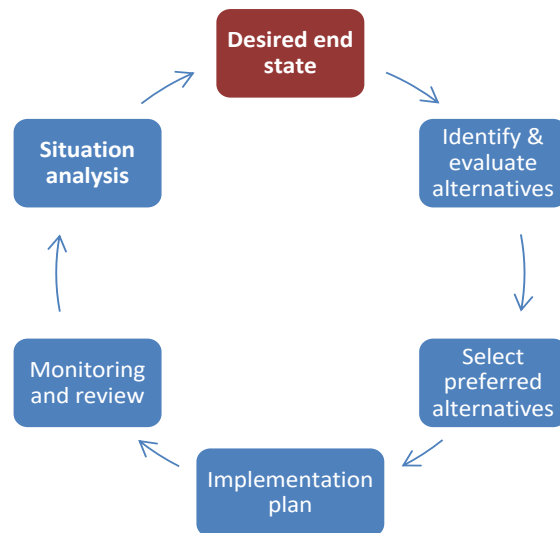


Figure 29: IWMP planning phases – desired end state

8.2 National Waste Management Strategy 2020

The goals of the Eastern Cape Provincial IWMP should be aligned with the goals of the NWMS 2020. This current NWMS 2020, which revises and updates the 2011 strategy, will also achieve three thematic areas. The three outcomes of the NWMS 2020 is a consolidation of the eight (8) goals that were in the 2011 NWMS. Likewise, the actions linked to achieving each outcome in the NWMS 2020 replaces the targets of the 2011 NWMS:

8.2.1 Waste Minimization

The strategic thrust of this pillar is:

- Minimising the impact of waste and especially plastic packaging in our coasts, rivers, wetlands and our human settlement environments, by amongst others, diverting waste away from landfill;
- Increasing re-use, recycling, recovery and alternative waste treatment; and
- Maximising the role of the waste sector in the circular economy.

A critical enabler of this pillar is the building of long-term collaboration and partnership between government and the private sector.

8.2.2 Effective and Sustainable Waste Services

The strategic thrust of this pillar is:

- Recognising and addressing the very different circumstances and waste management challenges that exist between local government authorities;
- Developing and implementing flexible approaches to service delivery that incorporates the informal sector while addressing local needs;
- Guiding public investment and partnerships with the private sector in waste management infrastructure and projects; and
- Ensuring that the delivery of waste services contributes to sustainable development.

A critical enabler of this Pillar is the building of strong co-operative governance relationship between the three spheres of government and specifically local government.

8.2.3 Compliance, Enforcement and Awareness

The strategic thrust of this Pillar is:

- Mitigating and preventing the environmental and social damage caused by waste due to non-compliance;
- Increasing compliance to local, provincial, national and international legislation and standards;
- Mitigating and preventing pollution, littering and illegal dumping of waste; and
- Improving the visibility and awareness of the socio-economic and environmental benefits of compliance, effective waste management and environmentally compliant infrastructure.

8.3 Review of 2010 Priority Areas

Six waste management priority areas were identified in the 2010 PIWMP. A review of these 2010 Priority Areas was undertaken to determine whether these priority areas are still valid. The results of this review are shown in the table below. For this 2018 PIWMP, priority areas have been replaced with objectives, to align the process with the IWMP guidelines.

Table 50: Review of 2010 Priority Areas

2010 Priority Area	Comment
Priority Area 1. Improved Strategic Waste Planning	Strategic waste planning is still lacking in the Eastern Cape. Few municipalities have seriously adopted the waste hierarchy approach to waste management and changed their practices accordingly. Management is largely reactionary and few municipalities have planned for their long-term waste infrastructure needs. There is little available guidance available to municipalities regarding waste minimisation or development of waste management infrastructure. Few LMs have staff within their waste departments with the appropriate skills to do strategic planning of this nature.
Priority Area 2. Improve	Only 36% of households in the Eastern Cape receive a weekly collection service.

2010 Priority Area	Comment
Waste Services and Facilities	Management of waste facilities, in particular landfill sites, remains poor.
Priority Area 3. Improved Recovery and Recycling	Recycling rates in the Eastern Cape are still low and measures are needed to increase the diversion of waste from landfill.
Priority Area 4. Improved Institutional Functioning	Only 47% of municipalities have a designated WMO. A lack of human resources is one of the reasons given for low levels of compliance at landfill sites. General institutional functioning remains poor with regards to waste, especially regarding financial control and skills.
Priority Area 5. Improved Financial Management	A lack of budget is the main reason given by municipalities for poor waste service delivery, non-compliant waste management facilities and a lack of recycling infrastructure.
Priority Area 6. Improved Information Management and Monitoring	Poor waste information management is one of the key issues facing the Eastern Cape.

8.4 Objectives and Targets for 2022 - 2026

Based on the situation analysis review and gap and needs assessment, the following 8 objectives have been defined.

1. Ensure sufficient institutional capacity to implement integrated waste management
2. Improved integrated waste management and future planning
3. Increased waste minimisation, re-use, recycling and recovery
4. Effective waste information management
5. Improved waste facility management
6. Provide effective and financially viable services
7. Improved education, awareness and waste information sharing
8. Effective compliance monitoring and enforcement

These objectives, as listed in the table below, are further broken down into specific targets.

The 2010 PIWMP presented six priority areas which were then further broken down into objectives. The 2022 PIWMP does not designate priority areas but instead identifies eight objectives which are then further broken down into targets.

The following table summarises changes between the 2010 “priority areas” and these latest objectives.

Table 501: Comparison of 2010 and 2022 IWMP objectives and 2020 NWMS Pillars

2010 Priority Area	2010 Objectives	2022 Objectives	2020 NWMS Pillars
1. Improved strategic waste planning	1. Legally compliant IWMP process 2. Provide landfill facilities throughout the province as appropriate	2. Improved integrated waste management and future planning	2. Effective and sustainable waste services
2. Improved waste services and facilities	1. Provide an acceptable minimum waste collection service in all areas Achieve legal compliance of waste facilities	5. Improved waste facility management 6. Provide effective and financially viable services 8. Effective compliance monitoring and	2. Effective and sustainable waste services 3. Compliance, enforcement and

2010 Priority Area	2010 Objectives	2022 Objectives	2020 NWMS Pillars
3. Improved recovery and recycling	1. Legal compliance in terms of recycling 2. Maximise recycling opportunities in the province	3. Increased waste minimisation, re-use, recycling and recovery	1. Waste minimisation
4. Improved institutional functioning	1. Develop appropriate capacity within DEDEAT to implement PIWMP 2. Designate waste management officers 3. Institutional capacity building for WMOs 4. Develop or revise by-laws in line with NEMWA	1. Ensure sufficient institutional capacity to implement integrated waste management. 7. Improved education, awareness and waste information sharing	3. Compliance, enforcement and awareness
5. Improved financial management of waste services	1. Institutional capacity building for waste management financing 2. Improved waste budgeting	6. Provide effective and financially viable services	2. Effective and sustainable waste services
6. Improved information management and monitoring	1. Establish a municipal waste reporting system for the Province 2. Improve use of the National WIS 3. Improve records management 4. PIWMP monitoring to meet legal requirements	4. Effective waste information management	1. Waste minimisation

The below table breaks down each of the eight objectives into different targets.

Table 512: Objectives and targets for the IWMP (as per Implementation Plan)

Objective	Actions and Targets	Comment
1. Ensure sufficient institutional capacity to implement integrated waste management	1.1 All municipalities to have a designated WMO appointed by Year 2 1.2 DEDEAT to develop WMO performance and development plan template based on the requirements of the DFFE Guideline for the designation of WMOs. 1.3 All LMs to review performance of WMOs against the DFFE Guidelines on WMO appointments, using the above DEDEAT template.	WMOs should be designated as per the DFFE guidelines for designation of WMOs DEDEAT should develop a template to outline the duties, powers and profile of WMOs as outlined in the DFFE guideline for designation of WMOs. This may assist in clarifying some of the current confusion regarding this role. All LMs should undertake a review of their WMOs to ensure that the appointed WMO conform with the DFFE guideline for the designation of WMOs. Where an appointed WMO does not meet all the specified criteria an action plan should be developed to address the gaps.

Objective	Actions and Targets	Comment
2. Integrated waste management future planning	1.4 DEDEAT to develop a training guideline for municipalities	DEDEAT to develop and finalise a training guideline for municipalities. The guideline will identify training requirements for employees at different levels e.g.: <ul style="list-style-type: none"> • Street sweeper • Refuse truck driver • Landfill site supervisor • Waste planner • Waste management officer
	1.5 DEDEAT and municipalities to identify extra positions and resources required to implement this provincial PIWMP.	This PIWMP places a requirement on DEDEAT to provide a greater supporting role to municipalities. This PIWMP also includes responsibilities for district, local and metropolitan municipalities. Additional employees may therefore be required to ensure that the projects identified in this PIWMP are implemented.
	2.1 Development of a provincial waste infrastructure masterplan for the Eastern Cape. This plan should cover regional landfill sites, MRFs, public drop-off facilities, composting facilities and construction and demolition waste crushing facilities.	This would involve a review of short, medium- and long-term waste infrastructure needs for all municipalities in the Eastern Cape. The report would: <ul style="list-style-type: none"> • Identify required infrastructure • Contain generic conceptual design for different facilities (composting, MRF, drop-off centre etc.) • Contain high level budget estimates for different facilities to enable municipalities to budget accordingly.
	2.2 Both metros to develop a waste infrastructure masterplan	The waste infrastructure masterplan would: <ul style="list-style-type: none"> • Identify the needs in terms of waste management infrastructure (MRF, composting, recycling drop-off facilities, anaerobic digestion, transfer stations etc.) • Identify priority areas for the development of infrastructure • Estimate budgets for the development of infrastructure • Provide concept designs for infrastructure
	2.3 Development of guidelines for challenging problematic waste streams as needed, for example <ul style="list-style-type: none"> • E-waste • Organic waste • Domestic hazardous waste • Abattoir waste 	The guideline would outline best management practices for the management of problematic waste streams. Specific examples of how these waste streams can be managed in the province is to be provided.
	2.4 All municipalities to have current IWMPs which are endorsed by	All municipal IWMPs should be submitted to DEDEAT for endorsement.

Objective	Actions and Targets	Comment
3. Increased waste minimisation, re-use, recycling and recovery	DEDEAT	Once the IDP and IWMP review timeframes are aligned municipalities will be able to incorporate IWMP projects into the IDP.
	2.5 All municipalities to have integrated IWMP projects into IDPs	DEDEAT to prescribe a reporting format for IWMP progress reports. Municipalities to submit reports on an annual basis.
	2.6 All municipalities to report on IWMP implementation on an annual basis to DEDEAT.	Greater interaction between municipalities and the private sector is required to identify and address waste management issues in the province. DEDEAT currently host quarterly Waste Management Forum meetings.
	3.1 DEDEAT quarterly Waste Management Forum: - All municipal waste managers to attend - Greater involvement of private recycling industry (e.g. PETCO, eWASA) at meetings.	Currently neither of the metros have any municipal separation at source programmes in place. The 2011 NWMS had a target that all metros, secondary municipalities and large towns would have separation at source programmes in place by 2016. The 2020 NWMS, targets related to separation at source will be considered when finalising this PWMP. Operation Phakisa sets a target of 50% of households in metros to be separating waste at source by 2023. Local municipalities also need to move towards separation at source. At present given the rural nature of B3 and B4 municipalities it may not be possible for municipalities to undertake separation at source in-house, however municipalities may be able to form partnerships with the private sector in this regard.
	3.2 50% of urban households in the two metros to have separation at source programmes in place. Local municipalities to create an enabling environment for recycling in the main town in the municipality.	A MRF is required to support as separation at source programme in the metros. It is anticipated that municipalities will run a two bag/bin system with one bin being dedicated to clean recyclables. Use of multiple bags/ bins for each waste stream e.g. plastic, paper. Cardboard, metal is not recommended as it complicates the system. The design of the MRF will be dependent on available land and funding. The design can vary from a mechanised MRF with conveyor belts to a facility where waste is sorted on sorting tables. Currently 9 local municipalities have MRFs in operation. A target has been set to increase this status quo.
3.3 Development of MRFs	- Both metropolitan municipalities to have at least one MRF operational. - 12 local municipalities to have MRFs in operation.	The National Norms and Standards for Disposal of Waste to Landfill (GN 636 of 2013) require a 25% diversion of green waste from landfill in 2018 and a 50% diversion by 2023. There are currently no municipal composting schemes in place in the province to address this requirement. Municipalities could undertake various programmes to reduce green waste to landfill including:
	3.4 Municipalities to create an enabling environment for composting.	

Objective	Actions and Targets	Comment
		<ul style="list-style-type: none"> • Outsourcing of composting • In-house composting of waste generated from municipal parks etc. • Home composting programmes etc.
	3.5 Both metros to investigate the feasibility of facilitating a programme for the crushing of construction and demolition waste (C&DW) and, if feasibility implement a programme.	Construction and demolition waste disposal at landfill can be reduced through crushing C&DW into reusable components for re-use in the construction industry. Crushing equipment can be expensive for the metros to invest in. The metros could outsource crushing of C&DW at landfill sites through a tender process. Crushers typically only require space to operate and a relatively 'clean' source of C&DW. At the next review of the metros IWMP's projects to facilitate C&DW crushing must be included in the implementation plans. In meetings with NMBM raised concerns that they currently use all the C&DW which enters their two landfill sites as cover material.
	3.6 All municipalities to facilitate the development of at least one recycling public drop-off centre in the main town.	Public drop-off centres can be incorporated into existing infrastructure such as transfer stations.
	3.7 All municipalities to implement an in-house waste recycling programme.	Municipalities should lead by example in terms of recycling. Programmes for recycling of office paper, plastic etc. should be implemented. Local recycling companies can be contracted to collect the recyclables.
4. Effective waste information management	4.1 DEDEAT to develop a written template or database to standardise information received from municipalities	DEDEAT to develop a standard template for use by municipalities to ensure uniformity of data received. The template will include: <ul style="list-style-type: none"> • WMO status • No. permitted and unpermitted landfills • Results of waste compliance audits • Recycling programmes • Training programme • Awareness campaigns etc.
	4.2 At all waste facilities without weighbridges, the SAWIS manual system for estimating incoming waste is to be implemented, so as to allow waste disposal tonnages to be estimated.	The National Waste Information Regulations require all landfill sites over 200m ² in size to report tonnages on the SAWIS. At present only 25% of operational landfill sites in the province are reporting. The majority of landfill sites in the province do not have weighbridges. Only 25 landfill sites are reporting on SAWIS. The regulations also require facilities which recycle waste with an operational area in excess of 500m ² to report. At present only 12 recycling facilities are reporting on the SAWIS in the province. DEDEAT should develop a manual system for collecting data waste tonnages and waste types. This system will not be compliant with the National Waste Information Regulations which requires facilities to report actual data but will be an improvement on the current situation.
	4.3 DEDEAT to develop a standard in-house e-filing system to ensure	The filing structure would contain individual files for:

Objective	Actions and Targets	Comment
	correct management of waste information and records. To be developed.	<ul style="list-style-type: none"> • IWMPs • Audit reports • Recycling data • Training materials • Documentation for Provincial WMO forums etc.
	4.4 All municipalities to be reporting on SAWIC/s	With the implementation of a manual system for collecting waste disposal tonnages in place, all municipalities should be able to report at least estimated waste data.
	4.5 Ensure accurate data is reported on SAWIC through training and verification audits	Only 25 operational landfill sites in the province are reporting on SAWIS. In addition errors in SAWIS data were identified during a review of SAWIS data.
	4.6 DEDEAT to develop standard editable waste awareness materials for use by municipalities	Local municipalities often lack the budget or skills to develop waste awareness materials. DEDEAT could develop a standard set of editable waste awareness materials which local municipalities can add their logo to and make minor changes to make the materials specific to their municipality. This would also assist in standardising the waste management message being given to the public in the province.
5. Improved waste facility management	5.1 DEDEAT to develop basic guideline documents for the operation of small waste management facilities which do not trigger the requirement for a waste management license or registration in terms of the National Norms and Standards.	Guideline documents to be developed for the operation of: <ul style="list-style-type: none"> • Drop-off centres/ transfer stations • Material recovery facility
	5.2 100% of landfill sites to be permitted.	All operational landfill sites to be permitted by Year 5. A review of the status of landfill site permits will also be required as a number of permits have expired.
	5.3 All waste facilities to have operational plans in place. Where operational plans are in place these should be reviewed.	All waste management license applications and registration in terms of the National Norms and Standards for the Storage of Waste require an operational plan to be submitted as part of the application. Old landfill sites (permitted before the NEM: WA) may not have operational plans and operational plans for facilities may be out of date to align with changes in legislation,
6. Provide effective and financially viable services	6.1 Development of service delivery guidelines for rural areas	Guidelines will be developed which identify methods for practical and efficient waste service delivery to rural areas.
	6.2 Achieve at least a 10% increase in refuse collection rates or services in all municipalities	Municipalities can use the guidelines under target 6.1 to identify mechanisms to increase service delivery to households. This could be through the use of co-operatives for kerbside collection, provision of central waste drop-off facilities etc. The National Treasury is providing equitable share for provision of basic services. This funding should be directed to provision of waste collection services to rural areas.
	6.3 Full cost accounting exercises to be undertaken by both metropolitan municipalities, and all LMs	The DFFE have developed a Solid Waste Tariff Model. This model can be used by municipalities to assist with full cost accounting exercises.


Objective	Actions and Targets	Comment
7. Improved education, awareness and waste information sharing	7.1 DEDEAT to hold annual technical workshops / engagements with all WMOs or waste managers	<p>A technical workshop/ engagement should be hosted by DEDEAT on an annual basis. The workshop can be used to present:</p> <ul style="list-style-type: none"> • New policy and legislation • New template • New reporting requirements • Waste management solutions e.g. new technology <p>The engagement could also be undertaken as a study tour.</p>
	7.2 DEDEAT to host annual workshops / knowledge updates for small companies involved in the waste industry	National recycling bodies (PETCO, POLYCO, The Glass Recycling Company) could be invited to present to EMEs and small recycling companies. DEDEAT could also present a summary of legislation applicable to small recycling companies such as the National Norms and Standards for Storage of Waste (GN 926 of 2013)
	7.3 DEDEAT to publish an annual waste newsletter	A waste newsletter should be published annually and distributed to the public and stakeholders in the waste management industry electronically. This newsletter could include case studies, contact details for other municipalities who can be considered as leading the way in terms of waste management, legislation updates etc.
	7.4 DEDEAT and municipalities to develop and implement awareness programme.	Awareness campaigns can include print based, radio advertising, road shows at taxi ranks, churches etc. workshops with communities or ward structures, door to door visits and school visits. Municipalities to keep records to allow them to quantify the number of households and schools reached by campaigns.
	8.1 DEDEAT to update their waste facility audit report to ensure all conditions of waste permits are audited and to include a scoring system.	A standard audit report template for the province should be developed. The template would require each permit condition to be audited and scored (compliant, partially compliant, non-compliant, not applicable). A points system would be applied to allow the auditor to determine what percentage of the conditions have been complied with.
8. Effective compliance monitoring and enforcement	8.2 DEDEAT waste officers and municipalities to receive training on performance auditing	An induction training session should be held for all persons who undertake waste facility audits. DEDEAT waste officers to be re-inducted annually. The focus of the training session would be on use of the template under target 8.1
	8.3 DEDEAT regional offices to develop and implement auditing schedules for government and private waste facilities where DEDEAT is the competent authority (industry landfill sites, waste storage facilities and recycling facilities) and undertake audits as per the schedule.	<p>There is a lack of knowledge in both the government and the private sector of the permitting and registration requirements for waste facilities. With the promulgation of the National Norms and Standards for the Storage of Waste (GN 926 of 2013) and the National Norms and Standards for the Sorting, Shredding, Grinding, Crushing, Screening or Bailing of General Waste (GN 1093 of 2017) many facilities may need to be registered. DEDEAT should undertake audits of industry to determine:</p> <ol style="list-style-type: none"> 1. if a registration of WML is in place

Objective	Actions and Targets	Comment
	8.4 All waste facilities to be audited at least annually by DEDEAT	2 if the conditions of the norms and standards or WML are being complied with
	8.5 All municipal landfill facilities are to be audited internally by municipalities at least once per annum (or more frequently if required by license conditions).	This includes municipal and private waste facilities.
	8.6 DEDEAT to determine the baseline of enforcement actions taken against non-compliant waste facilities and increase the number of enforcement actions by 5% a year. Fines to be issued for all repeat non-compliances.	Municipalities to audit using the audit template developed by DEDEAT.
		DEDEAT is currently not focusing on enforcement. Municipalities are issued with non-conformance reports but no action or limited action is taken by the municipality to remedy the non-comp

9 Case Studies

A review of several waste management case studies was undertaken to determine the most effective solutions to achieve the objectives of the PIWMP.

9.1 Waste Collection

Case study name	Mandeni Local Municipality, domestic waste collection in rural areas
Location	Mandeni Local Municipality, Kwa-Zulu Natal
Objectives	To provide refuse removal services in rural areas
Brief description of project	The Mandeni Local Municipality did not provide a door-to-door collection service to rural areas within the municipality. The municipality placed approximately 80 (7m ³) skips in low density and rural areas. Houses were requested to place their domestic waste in the skips. Skips were emptied by a rear end loaded with a hook and winch system, this allowed the skips to be emptied into the compactors and saved on transportation costs.
Success	The provision of the skips allowed the municipality to provide a basic service to previously unserved areas.
Lessons learnt	Skips can work in rural areas, however they must be used with caution as if they are not emptied frequently they can result in odour issues.
Photos	

9.2 Organic Waste Diversion from Landfill

Organic waste (kitchen waste and garden waste) comprises approximately 30% of the domestic waste stream in the Eastern Cape, based on hypothetical domestic waste generation rates in the province approximately 353,037 tonnes of organic waste is generated by households per year.

The City of Cape Town (CCT) initiated a two phased organic waste diversion programme in 2013 to divert organic waste from landfill. Details of the project are presented in the table below.

Case study name	The value of organic waste to households: A case study from Cape Town (2013) Phase 1: Individual Home Composting Research
Location	City of Cape Town
Objectives	1. To determine whether organic waste diversion from landfill can be increased by providing households with composting containers and information as to why composting is beneficial. 2. To determine, based on feedback from participating households whether this project would be sustainable for mass roll-out.
Brief description of project	In 2013 700 households in the City of Cape Town were provided with composting containers for organic household and garden waste. Households were chosen in four representative areas of Cape Town, two low- and two middle-income areas. Participants were given training and various other information resources in order to make the project most effective.
Success	A total of 616 of the 700 households reported data back during the course of the project, however not all households reported data each month. Site visits confirmed that all 616 households were actively using the composting bins. On average on 41% of households reports data on a monthly basis. The study ran for a period of 9 months, at the end of the study home composting bins were left with the households. A follow up survey was undertaken one year after the project. Of those who responded to the survey 78% stated that they were still diverting organic waste from landfill via home composting. It was determined that by using the home composting method approximately 20% (3.98kg/household/week) of weekly household generated general waste could be diverted from landfill.
Lessons learnt	Home composting (along with information packs) could significantly reduce the tonnage of organic waste sent to landfill, as well as change the perceptions of participants in regard to organic waste. Careful consideration should be made when deciding what geographic areas to include as well as the scale of such a project. Public awareness and education programs should accompany the introduction of a home composting initiative. The composting container utilised in this study was not suitable for cooked foods,


	used oils and similar substances. This means further investigation into additional technologies is required to include more household organic waste for composting.
Reference	Johannessen & Davison (2014). The value of organic waste to households: A case study from Cape Town. The 20 th Waste Con Conference and Exhibition. Somerset West, Cape Town.

Case study name	The value of organic waste to households: A case study from Cape Town (2013) Phase 2: Organic Waste Drop-Off Points
Location	City of Cape Town
Objectives	To determine whether the provision of centrally located or community based organic waste drop off centres could assist in organic waste diversion from landfill.
Brief description of project	Two organic waste drop-off centres were developed at schools. Each school centre was provided with 20 compost containers, one set of scales and books and information packs. Both schools only used 12 of the 20 containers. Note: 20 containers were also issued to a non-governmental organisation, these containers were given to individual households. These containers have not been considered as part of this case study.
Success	On average 157.2kg of organic waste was received at each school per month.
Lessons learnt	The composting container utilised in this study was not suitable for cooked foods, used oils and similar substances. This means further investigation into additional technologies is required to include more household organic waste for composting.
Reference	Johannessen & Davison (2014). The value of organic waste to households: A case study from Cape Town. The 20 th Waste Con Conference and Exhibition. Somerset West, Cape Town.


Case study name	Waste to Food Creating economic opportunities by recycling food waste
Location	Philippi, Cape Town
Objectives	Develop a combination of technologies to overcome the widespread disposal of organic waste to landfills in South Africa, while at the same time contributing to employment and food security.
Brief description of project	Collect food waste from retailers and recycle into commercial high-quality vermicompost, which is sold to clients such as garden centres, seedling producers and farmers. Also applied to community gardens and W2F greenhouses to increase growth of vegetables for reselling to retailers. Founded in 2012
Success	<p><u>Social:</u> Samarpan Foundation formed to train unemployed people of the area to recycle plastic while W2F provided food security. 12 jobs created through Samarpan Foundation, 4 through W2F. Created 25 jobs through CWP (Community Work Programme), which is programme to employ unemployed people to manage greenhouses and W2F premises. Trained 10 micro-entrepreneurs in vermicomposting and business management</p> <p><u>Economic:</u> 3-4 tonnes of food waste processed per day, which reduces annual municipal waste management costs by R1.8 million. Sells 2,5 tonnes of vermicompost per day. Income for over 170 people in Philippi.</p> <p><u>Environmental:</u> 1,400 tons of food waste diverted from landfill annually. CO₂ emissions reduced by 3,000 tons per year. Replaces 900 tons of non-organic fertilizer yearly. 500 units of 100%</p>

	biodegradable packaging sold.
Lessons learnt	A thorough separation at source programme is needed to avoid contaminants such as plastic in the organic waste.
Photos (if any)	
Reference	SEED (2016). Waste to Food – Creating economic opportunities by recycling food waste. SEED Case Study Series. Berlin, Germany.

9.3 Domestic Hazardous Waste Management

Case study name	Mossel Bay domestic hazardous waste management
Location	Mossel Bay, Western Cape
Objectives	To provide drop-off facilities for domestic hazardous waste.
Brief description of project	In order to address domestic hazardous waste the Mossel Bay local municipality installed drop-off facilities for used oil and e-waste at two transfer stations. The container for used oil is provided by the ROSE Foundation.
Success	The drop-off facilities are well and used and in addition the municipality runs an annual e-waste awareness day.
Lessons learnt	If drop-off facilities for domestic hazardous waste are provided and awareness campaigns are run then the public will make use of such facilities.
Photographs	

9.4 Construction and Demolition Waste Recycling

Case study name	Stellenbosch construction and demolition waste crushing
Location	Stellenbosch Local Municipality, Western Cape
Objectives	To increase the lifespan of the Stellenbosch landfill site and divert construction and demolition waste away from landfill.
Brief description of project	<p>The Stellenbosch Landfill site was established in 1960's. There are currently only 17 months left of airspace at the landfill site. If an additional cell is constructed at the landfill an additional 18 years of airspace can be created, however the realignment of a powerline would be required to allow the new cell to be constructed.</p> <p>Approximately 3,845 tonnes of construction and demolition waste is disposed of at the site per month. The municipality appointed a service provider for on-site crushing of construction and demolition waste in January 2018.</p>
Success	<p>Between January and June 2018 a total of 18,200 tonnes of construction and demolition waste has been crushed. The material has been tested and is suitable for use for construction purposes.</p> <p>The crusher is crushing incoming material and historic material which results in increased landfill airspace.</p>
Lessons learnt	<p>The crusher can only utilise clean construction and demolition waste. The municipality charges a tipping fee of R450 per tonne for contaminated construction and demolition waste but clean material is accepted free of charge. Since the differentiated tariff system has been introduced contractors have been bring clean construction and demolition waste to the site.</p> <p>In order for a construction and demolition waste tender to be successful it should be set up so it is easy for the contractor and limits risk to the contractor. A differentiated tariff system should be employed to encourage the disposal of clean construction and demolition waste.</p>
	
Reference	Stellenbosch Local Municipality, 2017. Utter Rubbish, Newspaper of the Solid Waste Management Department, June 2017

9.5 Waste Diversion and Recycling

Case study name	Klapmuts Swop Shop
Location	Klapmuts and Kayamandi, Stellenbosch Local Municipality
Objectives	To address littering in Klapmuts and Kayamandi
Brief description of project	A swop shop was set up in Klapmuts and Kayamandi. Community members exchange bags full of recyclable materials for coupons. Coupons can be exchanged for items at the swop shop. Items at the swop shop include food products, second clothing, stationary, kitchen utensils, magazine etc.
Success	Community members approved of the swop shops and were more than willing to participate. Swop shops are held on a weekly basis. The total recyclables collected at the first swop shops in May 2016 was 280 kg, this increased to 2,400 kg at the latest swop shop in June 2017. The project resulted in a saving in landfill airspace and reduced littering and illegal dumping which results in financial savings to the municipality.
Lessons learnt	The swop-shop method of gathering recyclables appears very effective
Reference	Stellenbosch Local Municipality, 2017. Utter Rubbish, Newspaper of the Solid Waste Management Department, June 2017

Case study name	Polyco – Packa-Ching
Location	Langa, Cape Town
Objectives	“To increase household recycling rates and simultaneously uplift communities in South African informal settlements and lower-income areas by incentivising a change in behaviour. By tapping into a stream of recyclable material that is largely untouched, the project is educating consumers about recycling and showing them that waste has value”
Brief description of project	Mobile buy-back centre launched on the 21st of August 2017 that travels to 2 specific sites within a community weekly and either buys recyclables from community members or makes a trade, recyclables for items. Community members can register for a Kilorands card, which they need a cell phone for. Money is uploaded to the card for recyclables received at the mobile buy-back centre. The card can then be used at any MasterCard-accepting outlet. Community members bring already separated waste to the kiosk where it is weighed and money is then loaded onto their Kilorands card. The waste is then sold to WastePlan who recycle the material. Ethnographic research study also conducted to determine how community responds to project. Showed that stigma attached where people feel that recycling is “a dirty and poverty-associated activity”, but since the project started there seems to be a better understanding of recycling and more of a willingness to interact.
Success	In just six months over 100 tonnes of waste was bought from the community and R100 000 was paid back to them.
Lessons learnt	Training and public awareness is key in recycling as people have the wrong views of what waste recycling is and the benefits thereof.

Photographs	
Reference	Plastics-SA. (2018). News from Polyco: Packa-Ching. Retrieved on 23 July 2018 from Plastics-SA: http://www.plasticsinfo.co.za/tag/polyco/

Case study name	Kragga Kamma Drop-Off Centre, Nelson Mandela Bay Municipality
Location	Nelson Mandela Bay Municipality
Objectives	To provide recycling drop-off facilities for the public and increase waste diversion from landfill
Brief description of project	During the upgrade of the Kragga Kamma drop-off centre the NMBM incorporated facilities to drop off recyclable waste. The project was run as a pilot project by a service provider
Success	An average of 59.4 tonnes of recyclable material has been collected to date per month in 2018.
Lessons learnt	The model of a municipality providing a facility and outsourcing the management to the private sector can work successfully.
Photographs	

10 Implementation Plan

This section presents a plan by which DEDEAT aims to meet the objectives defined in the previous section of this report. The plan consists of a number of projects and initiatives which, if appropriately executed, should move DEDEAT and the Eastern Cape towards realising these objectives. An implementation programme is presented in the table below. It is however acknowledged that DEDEAT and municipalities in the Eastern Cape may face numerous challenges in the implementation of these projects including financial and human resource limitations. It is therefore expected that the implementation programme will be modified during the next 5-year period as resource allocation changes.

Table 523: Implementation Plan

No.	Actions	Priority Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Budget	Funding source	Responsibility for implementation
Objective 1. Ensure sufficient institutional capacity to implement integrated waste management										
1.1	All municipalities to have a designated WMO appointed by	HIGH						Nil if a current employee designated as WMO	N/A	Municipalities
1.2	DEDEAT to develop WMO performance and development plan template based on the requirements of the DFFE Guideline for the designation of WMOs.	MEDIUM						Nil if undertaken internally by DEDEAT.	N/A	DEDEAT
1.3	All LMs to review performance of WMOs against the DFFE Guidelines on WMO appointments, using the above DEDEAT template.	MEDIUM						Nil if undertaken internally by LM	N/A	Municipalities
1.4	DEDEAT to develop a training guideline for municipalities	MEDIUM						Nil if undertake internally by DEDEAT	N/A	DEDEAT
1.5	DEDEAT and municipalities to identify extra positions and resources required to implement this provincial PIWMP.	HIGH						Nil to identify positions. Salary costs will be determined based on the number and type of new positions required.	N/A	DEDEAT
Objective 2. Improved integrated waste management future planning										
2.1	Both metros to develop a waste infrastructure masterplan for provision of public drop off facilities for recyclable material..	MEDIUM						R 500,000 per plan	TBC	Metros
2.2	DEDEAT to develop a provincial waste infrastructure masterplan for the Eastern Cape. This plan should cover regional landfill sites, MRFs, public drop-off facilities, composting	MEDIUM						R 2 million	TBC	DEDEAT

No.	Actions	Priority Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Budget	Funding: source	Responsibility for implementation
	facilities and construction and demolition waste crushing facilities. This plan should address short, medium- and long-term infrastructure needs.									
2.3	Development of guidelines for challenging/ opportunistic waste streams (e.g. abattoir waste, nappies)	MEDIUM						Nil if undertaken internally, approximately, R 300,000 if outsourced	TBC	DEDEAT
2.4	All municipalities to have IWMPs which are current and endorsed by DEDEAT	HIGH						R 250,000/IWMP if undertaken externally. Nil if undertaken internally	TBC	Municipalities & DEDEAT
2.5	All municipalities to have integrated IWMP projects into IDPs	HIGH						Nil, internal process	N/A	Municipalities
2.6	All municipalities to report on IWMP implementation on an annual basis to DEDEAT.	MEDIUM						Nil, internal process	N/A	Municipalities
3. Increased waste minimisation, re-use, recycling and recovery										
3.1	DEDEAT quarterly Waste Management Forum: <ul style="list-style-type: none"> - All municipal waste managers to attend - Greater involvement of private recycling industry (e.g. PETCO, eWASA) at meetings. 	MEDIUM						No cost. Existing initiative.	N/A	DEDEAT & Municipalities
3.2	50% of urban households in the two metros to have separation at source programmes in place Local municipalities to create an enabling environment for recycling in the main town in the municipality.	MEDIUM						TBC. The cost will be programme dependant	Municipal budgets	Municipalities
3.3	Development of MRFs <ul style="list-style-type: none"> - Both metropolitan municipalities to have at least one MRF operational - 12 local municipalities to have MRFs in operation. 	MEDIUM						R 20M for a large MRF for a metro, R 8M for a small MRF for a local municipality	Municipal budgets /funding applications	Metros
3.4	Municipalities to create an enabling environment for composting	HIGH						Programme dependant	TBC	Municipalities
3.5	Both metros to investigate the feasibility of facilitating a programme for the crushing of construction and demolition waste (C&DW) and, if feasibility implement a programme by the following year.	MEDIUM						Nil, metros to undertake feasibility assessment in house. The crushing service can be put out on tender. Municipality to	N/A	Metros

No.	Actions	Priority Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Budget	Funding source	Responsibility for implementation
								provide land and material free of charge to crushers.		
3.6	All municipalities to facilitate the development of at least one recycling public drop-off centre in the main town	MEDIUM						Programme dependant.	Municipal budgets /funding applications	Municipalities
3.7	All municipalities to implement an in-house waste recycling programme by.	LOW						Nil, municipalities to arrange with a local recycler to collect recyclable free of charge	N/A	Municipalities
4. Effective Waste Information Management										
4.1	DEDEAT to develop a written template or database to standardise information received from municipalities	MEDIUM						Nil if undertaken internally. R20,000 if outsourced	TBC	DEDEAT
4.2	At all waste facilities without weighbridges, the SAWIS manual system for estimating incoming waste is to be implemented, so as to allow waste disposal tonnages to be estimated.	HIGH						This cost should be nil as all landfill sites should be manned and completing of a manual register could be added to the responsibilities of landfill staff. In the event that landfill sites are not manned there would be an increased labour cost through appointing a site supervisor.	N/A	Municipalities
4.3	DEDEAT to develop a standard in-house e-filing system to ensure correct management of waste information and records. To be developed..	HIGH						Nil if undertaken internally. R15,000 if outsourced	N/A	DEDEAT
4.4	All municipalities to be reporting on SAWIC/s	HIGH						Nil	N/A	Municipalities
4.5	DEDEAT to ensure accurate data is reported on SAWIC through training and verification audits	MEDIUM						TBC, additional employees may be required at DEDEAT to fulfil this role	TBC	DEDEAT
4.6	DEDEAT to develop standard editable waste awareness materials for use by municipalities	LOW						Nil if undertaken internally. R100,000 if outsourced	TBC	DEDEAT

No.	Actions	Priority Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Budget (excluding publishing)	Funding source	Responsibility for implementation
5. Improved waste facility management										
5.1	DEDEAT to develop basic guideline documents for the operation of small waste management facilities which do not trigger the requirement for a waste management license or registration in terms of the National Norms and Standards.	MEDIUM						Nil if undertaken internally. R100,000 if outsourced	N/A	DEDEAT
5.2	100% of landfill sites to be permitted	MEDIUM						R 350,000/ application. Cost will vary depending on required specialist studies and engineering design work.	Municipal budgets /funding applications	Municipalities & DEDEAT
5.3	All waste facilities to have operational plans in place. Where operational plans are in place these should be reviewed. DEDEAT to develop a generic template for each waste facility type e.g. landfill site, MRF, transfer station.	MEDIUM						Nil, plans to be developed in-house by municipalities	N/A	Municipalities & DEDEAT
6. Provide effective and financially viable services										
6.1	Development of service delivery guidelines for rural areas	MEDIUM						Nil, appointment has already been made for the development of these guidelines	N/A	DEDEAT
6.2	Achieve at least a 10% increase in refuse collection (% of households serviced) in all municipalities by Year 5	HIGH						TBC – all municipalities will need to calculate the costs individually.	Municipal budgets /funding applications	Municipalities
6.3	Revision of waste tariffs to be informed by full cost accounting exercises to be undertaken by both metropolitan municipalities by Year 2, and all LMs.	HIGH						Nil if undertaken internally. R130,000/ study if outsourced	N/A	Municipalities
7. Improved education, awareness and waste information sharing										
7.1	DEDEAT to hold annual technical workshops / engagements with all WMOs or waste managers	MEDIUM						R 20,000 per workshop for venue hire and catering	DEDEAT budget	DEDEAT
7.2	DEDEAT to host annual workshops / knowledge updates for small companies involved in the waste industry	MEDIUM						R 20,000 per workshop for venue hire and catering	DEDEAT budget	DEDEAT
7.3	DEDEAT to publish an annual waste newsletter (electronic).	LOW						R20,000 for outsourcing graphic design and publishing.	DEDEAT budget	DEDEAT

No.	Actions	Priority Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Budget	Funding source	Responsibility for implementation
7.4	DEDEAT and all municipalities to develop and implement awareness programme.	HIGH						Nil to develop awareness programmes if undertaken in house. The cost will be programme dependant.	DEDEAT budget and municipal budget	DEDEAT & municipalities
8. Effective compliance monitoring										
8.1	DEDEAT to update their waste facility audit report template by Year 1 to ensure all conditions of waste permits are audited and to include a scoring system.	MEDIUM						Nil if undertaken internally	N/A	DEDEAT
8.2	DEDEAT waste officers and municipalities to receive training on performance auditing	LOW						Nil if undertaken as part of the annual technical workshop under 7.2.	N/A	DEDEAT
8.3	DEDEAT regional offices to develop and implement auditing schedules for government and private waste facilities where DEDEAT is the competent authority (industry landfill sites, waste storage facilities and recycling facilities) and undertake audits as per the schedule.	MEDIUM						Nil if regional offices currently have sufficient staff to implement	N/A	DEDEAT
8.4	All waste facilities to be audited at least annually by DEDEAT	HIGH						Nil if DEDEAT have sufficient resources to undertake audits	N/A	DEDEAT
8.5	All municipal landfill facilities are to be audited internally by municipalities at least once per annum (or more frequently if required by license conditions), and audit reports to be submitted to DEDEAT.	HIGH						Nil, internal audits	N/A	Municipalities
8.6	DEDEAT to determine the baseline of enforcement actions taken against non-compliant waste facilities and increase the number of enforcement actions by 5% a year. Fines to be issued for all repeat non-compliances by Year 5.	HIGH						Nil	N/A	DEDEAT

CONTINUES ON PAGE 130 OF BOOK 2

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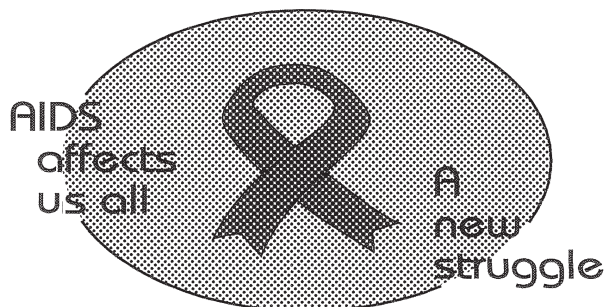
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11 Way Forward

11.1 Public Participation Process

A public participation process (PPP) of the final draft of the PIWMP will be undertaken by DEDEAT. Once the PPP is complete the PIWMP will be submitted to DFFE for endorsement.

11.2 Endorsement of Eastern Cape Provincial Integrated Waste Management Plan

Once this provincial IWMP is finalised it will be submitted to the MEC for endorsement. Following the endorsement of the plan it will go through another series of reviews. The endorsement process will following the below stages.

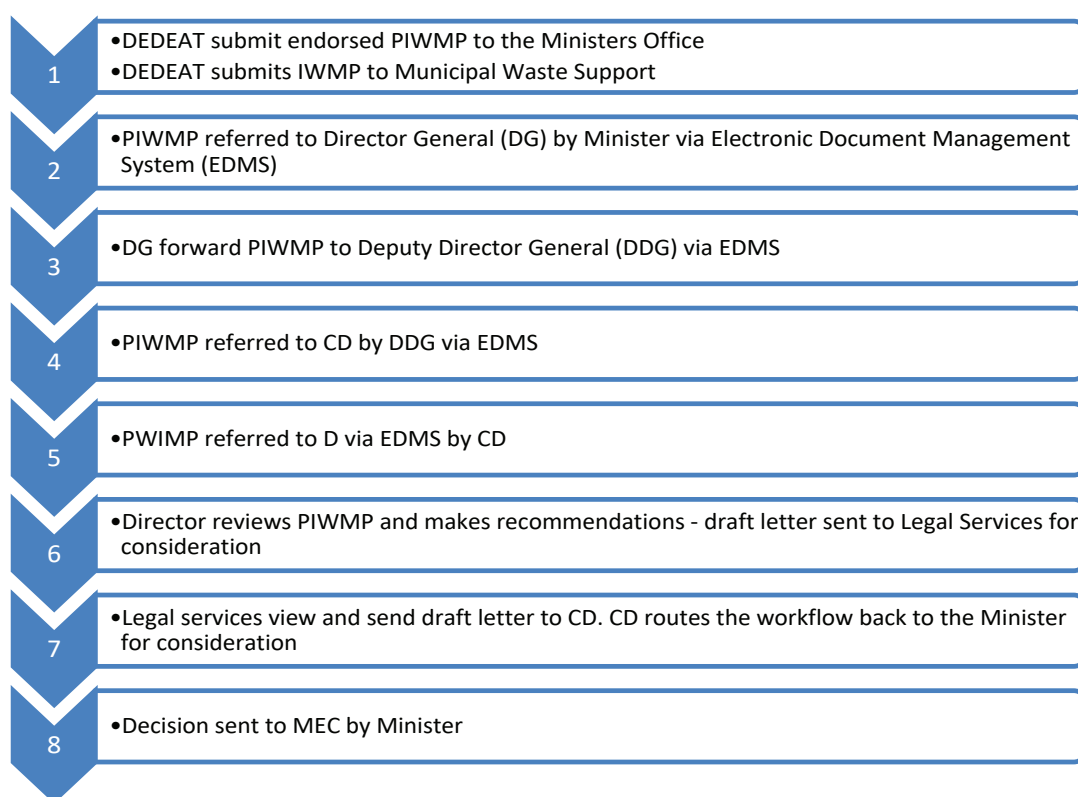


Figure 30: IWMP endorsement process

The above process should take approximately 30 days.

11.3 Implementation of Eastern Cape Provincial Integrated Waste Management Plan

Once the IWMP is a finalised DEDEAT and the municipalities in the Eastern Cape will be responsible for its implementation.

The finalised Provincial IWMP can also be incorporated into relevant provincial plans by DEDEAT.

11.4 Monitoring of Eastern Cape Provincial Integrated Waste Management Plan

In terms of section 13 of the NEM: WA DEDEAT must prepare and submit annual performance reports to the MEC for approval and the Minister for endorsement.

The annual performance report must detail the following:

- The extent to which the plan has been implemented during the period
- The waste management initiatives that have been undertaken during the reporting period
- The delivery of waste management services and measures taken to secure the efficient delivery of waste management services
- The measures taken to secure compliance with waste management standards
- The waste management monitoring activities
- The actual budget expended on implementing the plan
- The measures that have been taken to make any necessary amendments to the plan
- The extent to which municipalities comply with the plans and, in the event of non-compliance with the plan, the reasons for such non-compliance
- Any other requirements as may be prescribed by the minister

11.5 Review of Eastern Cape Provincial Integrated Waste Management Plan

This provincial IWMP covers a five-year period from 2022 – 2026, the plan needs to be revised every 5 years to ensure it remains current. It is recommended that the revision of the PIWMP commences at least 6 months prior to the PIWMP's lifespan being complete to minimise the gap between the 2022 – 2026 IWMP and the 2027 – 2031 IWMP.

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Introduction

South Africa has a host of legislated acts, policies and guidelines relating to waste management, the most significant of these being the newly promulgated National Environmental Management: Waste Act (58 of 2008) which is now the country's central piece of legislation dealing with waste management. There are also certain relevant international conventions to which South Africa subscribes. This section discusses these acts, policies, guidelines and conventions thereby providing a context to waste policy and legislation. Where applicable it highlights aspects of these acts and policies which apply specifically to the local government authorities.

This section is not exhaustive but presents the broader legislative framework and highlights the more important aspects thereof.

International conventions

Basel Convention on the control of trans-boundary movement of hazardous wastes and their disposal

The Basel Convention (1989) is a global agreement which seeks to address the trans-boundary movement of hazardous waste. The convention is centred on the reduction of the production of hazardous waste and the restriction of trans-boundary movement and disposal of such waste. It also aims to ensure that strict controls are in place when any trans-boundary movement and disposal of hazardous waste does occur, and ensures that it is undertaken in an environmentally sound and responsible manner.

The Basel Convention, held on 22 March 1989, came into effect during May 1992 after ratification by the prerequisite number of countries. South Africa ratified the Convention in 1994, with DFFE being the focal point for the convention.

Whilst South Africa subsequently acceded to this Convention, no legislation was passed at the time to give effect to it. The second Basel convention, held on 8 October 2005, set standards for the control of trans-boundary movements of hazardous wastes and their disposal, setting out the categorization of hazardous wastes and the policies for their disposal between member countries. South Africa accedes to this convention and implements its provisions.

The key objectives of the Basel Convention are:

- To minimise the generation of hazardous wastes in terms of quantity and hazardousness.
- To dispose of hazardous waste as close to the source of generation as possible.
- To reduce the movement of hazardous wastes.
- Locally, draft regulations are being prepared in an effort to control the movement of such waste.

The most significant provisions of the Convention relate to the ban on certain importations and exportations; illegal traffic, bilateral, multilateral and regional agreements and the control system of the Convention.

The Basel Convention contains specific provisions for the monitoring of implementation and compliance. A number of articles in the Convention oblige parties (national governments which have acceded to the Convention) to take appropriate measures to implement and enforce its provisions, including measures to prevent and punish conduct in contravention of the Convention.

Rotterdam Convention

The Rotterdam Convention was held in September 1998 to promote shared responsibilities in relation to importation of hazardous chemicals. One of the key provisions is the Prior Informed Consent procedure, which lists information on hazardous chemicals in Annex III. It became legally binding for its parties in 2004. The convention promotes open exchange of information and calls on exporters of hazardous chemicals to use proper labelling, include directions on safe handling, and inform purchasers of any known restrictions or bans. Parties can decide whether to allow or ban the importation of chemicals listed in the treaty, and exporting countries are obliged to make sure that producers within their jurisdiction comply. From this convention a PIC circular is distributed every

six months giving updated information on the listed chemicals, member compliance and sources of supporting information.

Stockholm Convention

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

The 12 POPs that have been identified under the convention are aldrin, chlordane, dieldrin, dichloride-diphenyl-trichloroethane (DDT), endrin, Hexachlorobenzene (HCB), heptachlor, mirex, polychlorinated biphenyls (PCBs), toxaphene, dioxins, and furans. Of the aforementioned substances, two are still used in South Africa today (DDT and PCBs), although their use is restricted under the 'Fertiliser Act' as administered by the Department of Agriculture. The above list of chemicals is relevant, especially where there is any management of obsolete and banned pesticides.

South Africa negotiated the continued use of DDT, as it has proved critical in the fight against malaria, and PCBs will be phased out as the electrical appliances that contain them become obsolete.

In 2005 South Africa, at the Reduce, Reuse and Recycle Ministerial Conference, became one of 7 countries to sign an agreement for the African Stockpile Programme, a project aimed at recovering and the appropriate disposal of obsolete pesticides. With funding (\$1,7million) from the World Bank, government began implementing the programme.

The country is also developing guidelines for the implementation of the Globally Harmonised System of Classification and Labelling of Chemicals. The funding was for the disposal of obsolete pesticides as part of the African Stockpile Programme. The department has begun implementing this programme throughout the country. Further work on training workers to handle chemicals was rolled out.

By mid-2007, a pilot project for the collection of all obsolete pesticides possessed by farmers in the Limpopo Province had begun, and this involved, amongst others, identification of collection points and collection of obsolete pesticides within the province. These stocks were further consolidated from various collection points to a central collection point and ultimately safeguarded and shipped to Holfontein Waste Disposal Site for temporary storage. The inventory of pilot project stocks has been undertaken. About 100 tons of labelled and unlabeled stocks of obsolete pesticides have been collected through this pilot project. The pilot project is expected to serve as a benchmark for the roll-out of projects in other provinces.

However, as the amount of obsolete pesticide stocks collected from the Limpopo pilot project is significantly higher than what was anticipated, it has become apparent that the remaining funds in the World Bank African Stockpile Programme budget will not be sufficient for national rollout of the programme. The African Stockpile Programme Project Management Unit has had numerous deliberations in an effort to come up with a sustainable solution for management of pesticides in the country.

London Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matters

The London Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter, 1972, aims to prevent marine pollution by preventing the dumping of wastes such as industrial waste, sewage sludge, dredged material and radioactive waste at sea, as well as incineration at sea. South Africa is a signatory to the convention and the associated 1996 Protocol.

This convention and its various protocols were incorporated into the following South African legislation:

- Prevention of Pollution from Ships Act (Act 2 of 1986), and the regulations concerning the Prevention of Pollution by Garbage from Ships Regulations (GN R1490, published in Government Gazette No. 14000, dated 29 May 1992).
- The Dumping at Sea Control Act (Act 73 of 1980).

The primary responsible agency is the DFFE Sub Directorate of Marine and Coastal Pollution Management who issue permits for dredge spoils and sinking of old vessels. It occasionally issues permits for ships in trouble, typically grounded, to release their cargo into the sea.

Local Agenda 21

Agenda 21 is a comprehensive document for global action on the environment and sustainable development, to take the world into a more sustainable 21st century. It is probably the most important document to be adopted by the UN Conference on the Environment and Development (UNCED) at the Rio de Janeiro Summit in June 1992. The 40 chapters covered a wide range of issues including the atmosphere, oceans, land resources, poverty, etc.

It was important for each nation to develop its own local Agenda 21, in order to translate and interpret the principles of sustainable development to local areas. Local Agenda 21 focuses on developing partnerships involving the public, private and community sectors that together can resolve urban environmental management problems and strategically plan for long term sustainable environmental management.

One of the key features of sustainable development is the requirement to integrate economic and environmental factors into all decision-making processes. Applications of these criteria to waste management require a new emphasis on resource and energy conservation, ensuring that supplies of raw materials, sources of energy and the quality of the physical environment can be maintained. Agenda 21 initiatives are considered to be an essential vehicle for the implementation of various aspects of the IWMP.

The key goals of Agenda 21 are:

- Sustainable development.
- Eradication of poverty.
- Elimination of threats to the environment.
- To ensure a sustainable environment.
- Creation of sustainable job opportunities.

The focus of the IWMP is to strive to attain the above goals in all facets thereof. The following seven key activities require attention in order to satisfy Local Agenda 21.

(a) Activities within the Local Authority

(i) Garnering local political support

- Information sessions and workshops.
- Reports and presentation to committees.
- Physical involvements in projects.

(ii) Managing and improving local authorities own environmental performance.

- Corporate commitment.
- Staff training and creating awareness.
- Environmental management systems.
- Budgeting for environmental processes.
- Policy integration across all sectors.

(iii) Integrating sustainable development aims within local authorities' policies and activities

- Economic development.
- Tendering and purchasing.
- Tourism and visitor strategies.
- Health strategies.

- Welfare, equal opportunities and poverty strategy.
- Focused environmental services.

(a) Activities within the wider community

(i) Awareness raising and education

- Support for environmental education.
- Awareness-raising events.
- Visits and talks.
- Support for voluntary groups.
- Publication of local information.
- Press releases.
- Initiatives to encourage behavioural change and practical actions.

(ii) Consulting and involving general public

- Public consultation processes.
- Interaction with NGO's/forums.
- Focus groups.
- Feedback mechanisms

(iii) Forging partnerships with other interest groups and activities, such as:

- Meetings, workshops and conferences.
- Working groups/advisory groups.
- Round table discussions.
- Comprehensive Urban Plan.
- International and regional partnerships.

(iv) Measuring, monitoring and reporting on progress toward sustainability

- Environmental monitoring.
- Sustainability indicators.
- Targets.
- Environmental Impact Assessments.
- Strategic Environmental Assessment.

South African Legislation

Constitution of the Republic of South Africa

The Constitution of the Republic of South African (referred to as the Constitution) is the supreme law of South Africa. Any law or conduct that is inconsistent with it, is invalid, and the obligations imposed by it must be fulfilled. Therefore, as such, all law, including environmental and waste management planning must consider compliance with the Constitution.

The Constitution contains a Bill of Rights, set out in Sections 7 to 39. The Bill of Rights applies to all law and binds the legislature, the executive, the judiciary and all organs of state. A provision of the Bill of Rights binds a natural or a juristic person if, and to the extent that it is applicable, taking into account the nature of the right and the nature of the duty imposed by the right.

Section 24 of the Constitution guarantees everyone the right to:

An environment that is not harmful to their health or wellbeing; and to have an environment protected for the benefit of present and future generations, through reasonable legislative and other measures that:

- Prevent pollution and ecological degradation.
- Promote conservation. and

- Secure ecologically sustainable development and use of natural resources while promoting justifiable economic or social development.

The environmental rights (section 24), is strengthened by other relevant fundamental rights, such as the rights of access to information and administrative justice.

(b) National and Provincial authority competence

General obligations imposed by the constitution on national and provincial government institutions are adjudicated, as the Constitution establishes an administrative framework for all organs of state. The national and provincial governments are concurrently entitled to legislate on matters stipulated in Schedule 4 of the Constitution. Both spheres of government have legislative competence over areas that will impact on management in the natural/urban interface, like environment, disaster management, nature conservation and pollution control, and would therefore also frame related matters such as waste management. It should also be noted that the Constitution contemplates the assignment, from national Government to the provinces, of functions that would normally be the exclusive preserve of the former.

Subsection 24(b) of the Constitution relates to the constitutional imperative requiring government to enact appropriate environmental law reform legislation. This led to the promulgation of the National Environmental Management Act (Act 107 of 1998 and the National Water Act (Act 36 of 1998)¹ amongst others. More specifically to the objective of this framework is the National Environmental Management: Waste Act, which was recently enacted².

Important to the development of a local integrated waste management strategy and plan is that in accordance with Section 155(6) of the Constitution each provincial government must establish municipalities in its province and, by legislative or other measures, must –

- (1) provide for the monitoring and support of local government in the province; and
- (2) promote the development of local government capacity to enable municipalities to perform their functions and manage their own affairs.

Furthermore in according to Section 155(7) the national government and the provincial governments have the legislative and executive authority to see to the effective performance by municipalities of their functions in respect of matters listed in Schedules 4 and 5, by regulating the exercise by municipalities of their executive authority referred to in section 156 (1).

(c) Local authority competence

National and provincial government are both obliged, by legislative and other measures, to support and strengthen the capacity of municipalities to manage their affairs, to exercise their powers and perform their functions within the individual municipal jurisdiction. This responsibility is covered in Chapter 7:

In terms of section 152 of the Constitution the objects of local government are to:

- Provide democratic and accountable government for the local community.
- Ensure the provision of services to communities in a sustainable manner.
- Promote social and economic development.
- Promote a safe and healthy environment. and
- Encourage the involvement of communities and community organisations in the matters of local government.

A municipality must in terms of section 153 structure and manage its administration and budgeting and planning processes to give priority to the basic needs of the community and participate in national provincial development programmes.

National and provincial government are also obliged to assign to a municipality, by agreement and subject to any conditions, the administration of matters listed in the relevant parts of Schedules 4 and 5 and any other matter which would be most effectively administered locally, provided that the municipality has the capacity to administer it. A municipality has the right to exercise any power concerning a matter reasonably necessary for, or incidental to, the effective performance of its functions.

Those areas of the urban/natural interface zone that fall within the legislative and jurisdictional competence of provincial or local authorities (for example a road reserve or urban areas that border a park) fall to be regulated by those authorities. The Constitution aims to co-ordinate the different levels of government and the management of the issues which the public institutions constituted or confirmed by them are charged with governing. This requires co-operation on the part of different organs of state. The above statements become pertinent to waste management as it sets the context of the administrative activities convened at the Local government level. In addition, related to local government in terms of section 152(1)(d) of the constitution, one of the objectives of local government is “to promote a safe and healthy environment”.

Municipalities are further charged with making, administering and enforcing by-laws for the effective administration of the matters of which they have the right to administer. Any bylaw that conflicts with national or provincial legislation is deemed invalid. In accordance with Section 160(4) no bylaw may be passed by a Municipal Council unless all the members of the Council have been given reasonable notice; and the proposed by-law has been published for public comment. Furthermore, in accordance with Section 162 no bylaw may be enforced unless it has been published in the relevant official provincial gazette and the bylaw must be accessible to the public.

National Environmental Management Act

The National Environmental Management Act (Act 107 of 1998) commonly known as “NEMA” gives effect to the “Environmental Right” of the Constitution and is South Africa’s overarching framework for environmental legislation. The objective of NEMA is to provide for operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance, and procedures for co-ordinating environmental functions exercised by organs of state. An important function of the Act is to serve as an enabling Act for the promulgation of legislation to effectively address integrated environmental management.

NEMA sets out a number of principles that aim to implement the environmental policy of South Africa. These principles are designed to serve as a framework for environmental planning, as guidelines by which organs of state must exercise their functions and to guide other laws concerned with the protection or management of the environment.

The principles include a number of internationally recognized environmental law norms and some principles specific to South Africa. These core principles include:

- Accountability.
- Affordability.
- Cradle to Grave Management.
- Equity.
- Integration.
- Open Information.
- Polluter Pays.
- Subsidiary.
- Waste Avoidance and Minimisation.
- Co-operative Governance.
- Sustainable Development.
- Environmental Protection and Justice.

Chapter 2: Sections 3 to 6 of NEMA, make provision for the establishment of the Committee for Environmental Co-ordination. The objective of the committee is to promote the integration and co-ordination of environmental functions by the relevant organs of state and in particular to promote the achievement of the purpose and objectives of environmental implementation plans and environmental management plans.

Chapter 5: Sections 23 to 24 of NEMA is designed to promote integrated environmental management and provide tools for integrating environmental activities. Environmental management must place people and their needs at the forefront of its concerns, and serve their physical, psychological, developmental, cultural and social interests equitably. This chapter of NEMA requires any activity that can potentially impact on the environment, socio-economic conditions and cultural heritage require authorisation or permission by law and which may significantly affect the environment, must be considered, investigated and assessed prior to their implementation and reported to the organ of state charged by the law with authorising, permitting or otherwise allowing the implementation of an activity. Development must be socially, environmentally and economically sustainable. Sustainable development therefore requires the consideration of all relevant factors, some of which include the following:

- The disturbance of ecosystems and loss of biological diversity is to be avoided, or, minimised and remedied.
- The pollution and degradation of the environment are to be avoided, or, minimised and remedied.
- Waste is to be avoided, or, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner.
- A risk-averse and cautious approach is to be applied.
- Negative impacts on the environment and on the people's environmental rights must be anticipated and prevented, and where they cannot be altogether prevented, must be minimised and remedied.

Section 24(5) of NEMA was enacted through the promulgation of the Environmental Impact Assessment (EIA) Regulations published in 2006 and revised in 2010. The construction of facilities or infrastructure including associated structures or infrastructure for the recycling, re-use, handling, temporary storage or treatment of general waste and hazardous waste, were originally listed in these regulations and therefore required either a Basic Assessment or a Scoping and EIA Process to be followed depending on specific listed criteria. However, the above mentioned waste activities have now been repealed and instead require a license application under the NEM: WA.

Chapter 7: Sections 28 to 30, imposes a duty of care in respect of pollution and environmental degradation. Any person who has caused significant pollution or degradation of the environment must take steps to stop or minimise the pollution. Where an incident occurs that is potentially detrimental to the environment, the person who is responsible for the incident or the employer must, within 14 days of the incident, report to the Director-General, provincial head of department and municipality. The relevant authority may specify measures to address the problem and remediate the area within 7 days. The Acts also attach consequences for breaching the duty of care, namely that government authorities are empowered to issue directions and to remediate the situation and recover costs where the directions are not complied with.

Chapter 8: Sections 35, provides that the Minister and every MEC and municipality may enter into an environmental management co-operation agreement with any person or community for the purpose of promoting compliance with the principals laid down in NEMA. Environmental Co-operation Agreements may contain an undertaking by the person or community concerned to improve the standards laid down by law for the protection of the environment and a set of measurable targets and a timeframe for fulfilling the undertaking.

Chapter 9 allows the Minister to make model By-Laws aimed at establishing measures for the management of environmental impacts of any development within the jurisdiction of the municipality, which may be adopted by the municipality as By-Laws. Any municipality may request the Director-General to assist it with its preparation of By-Laws on matters affecting the environment and the Director-General may not unreasonably refuse such a request. The Director-General may institute programmes to assist municipalities with the preparation of By-Laws for the purposes of implementing this Act.

Environment Conservation Act

The Environment Conservation Act (Act 73 of 1989) (ECA) predates the Constitution and, although many sections have already been repealed, certain sections are still in place.

The objectives of the ECA are to provide for the effective protection and controlled utilisation of the environment. Several sections of the ECA were repealed through the enactment of NEMA and certain responsibilities were assigned to the provinces.

The NEM: WA has repealed sections of the ECA dealing with waste management. More specifically these repealed sections are:

- 19: Prohibition of littering. This is now dealt with under Section 27 of the NEM: WA.
- 19A: Removal of litter.
- 20: Waste Management. This section dealt with permitting of waste facilities, but is now replaced by Chapter 5 (Sections 43 – 59) of the NEM: WA.

Waste management, more specifically with regard to landfill disposal site permitting and related matters, was until its recent repeal through the NEM: WA, coordinated and controlled under Section 20 of the ECA, as follows.

In order to implement section 20 of the ECA, DWS previously issued the above mention permits subject to specified conditions stipulated in the DWS Minimum Requirements: Waste Management Series3.

- 24: This section provided the framework for waste regulations to be formulated. This issue is now covered by Chapter 8, Part 1 (Regulations) (Sections 69 – 71) of the NEM: WA.
- 24A, 24B and 24C: Similarly, these sections which dealt with regulations regarding littering, products, and procedures for making regulations respectively are now addressed by Chapter 8, Part 1 of the NEM: WA.
- 29: Sections (3) and (4), which deal with Offences and Penalties have been substituted by the NEM: WA.

Despite the fact that the NEM: WA repeals section 19, 19A, 20, 24, 24A, 24B, and 24C of the ECA, it should be noted that in accordance with Section 80(2) of the NEM: WA, any regulations or directions made in terms of these repealed sections of the ECA, remain in force and are considered to have been made under the NEM: WA.

National Environmental Management: Waste Act, 2008

(a) Overview

The National Environmental Management: Waste Act (Act 59 of 2008) (NEMWA) was promulgated on 01 July 2009, marking a new era in waste management in South Africa (with the exception of a number of sections which will be brought into effect at dates still to be gazetted). The act covers a wide spectrum of issues including requirements for a National Waste Management Strategy, IWMPs, definition of priority wastes, waste minimisation, treatment and disposal of waste, Industry Waste Management Plans, licensing of activities, waste information management, as well as addressing contaminated land.

However, South African waste management legislation is still fragmented. Mining; radio-active waste; disposal of explosives; and disposal of animal carcasses, which are covered by specific other regulations is not addressed by the act. The NEM: WA does however constitute South Africa's overarching primary waste legislation.

(b) Objectives of the NEM: WA

The National Environmental Management: NEM: WA's objectives are -

To protect health, well-being and the environment by providing reasonable measures to -

- Minimising the consumption of natural resources.
- Avoiding and minimising the generation of waste.
- Reducing, re-using, recycling and recovering waste.
- Treating and safely disposing of waste as a last resort.
- Preventing pollution and ecological degradation.
- Securing ecologically sustainable development while promoting justifiable economic and social development.
- Promoting and ensuring the effective delivery of waste services.

- Remediating land where contamination presents, or may present a significant risk of harm to health or the environment. and
- Achieving integrated waste management reporting and planning.
- To ensure that people are aware of the impact of waste on their health well-being and the environment.
- To provide for compliance with the measures set out in paragraph (a) and
- Generally, to give effect to section 24 of the Constitution in order to secure an environment that is not harmful to health and well-being.

The Chapters and topics of the NEM: WA are as follows:

Chapter 1 - Interpretation and Principles

Chapter 2 - National Waste Management Strategy, Norms and Standards

Chapter 3 - Institutional and Planning Matters

Chapter 4 - Waste Management Measures

Chapter 5 - Licensing of Waste Management Activities

Chapter 6 - Waste Information

Chapter 7 - Compliance and Enforcement

Chapter 8 - General Matters.

(c) Roles and Responsibility

The Act establishes a national framework for waste planning, regulation and management with roles for all spheres of government, specifically:

- National government is tasked with establishing a national waste management strategy, including norms, standards and targets. National norms and standards may cover all aspects of the waste value chain, from planning to service delivery. Of particular importance from an intergovernmental perspective are the powers of national government with respect to norms and standards for:
- The regionalization of waste management services.
- Tariffs for waste services provided by municipalities, including providing for tariffs to be imposed to provide for waste management infrastructure or facilities and ensuring that funds obtained from the provision of waste services are used for the delivery of these services.
- Provincial governments are tasked with the implementation of the national waste management strategy and national norms and standards, and may set additional, complementary provincial norms and standards. The NEM: WA notes that these norms and standards must amongst other things facilitate and advance regionalization of waste management services.
- Local governments are required to ensure the universal and sustainable delivery of services, subject to national and provincial regulation. In particular, they are required to maintain separate financial statements, including a balance sheet of the services provided.

The table below lists sections of the act which make specific demands on Local (municipal) government: Tasks falling under sections of the act which have yet to be enacted have not been listed. While certain sections of the text are taken verbatim from the Act, interpretation has been added.

Figure 31: Tasks required by governmental entities in terms of NEM:WA.

TOPIC	SECTION	REQUIREMENT
General duty	3	The state must put in place measures that seek to reduce the amount of waste generated, and where waste is generated, ensure that it is re-used, recycled and recovered in an environmentally sound manner.
Waste service standards	9 (1) & (2)	The municipality must deliver waste management services, including waste removal, storage and disposal services in adherence to the national and provincial norms and standards (section 7 and 8 of the Act); whilst: <ul style="list-style-type: none"> • Integrating the IWMP and IDP • Ensuring access to services • Ensuring affordable service delivery • Ensure effective and efficient Sustainable and Financial management

TOPIC	SECTION	REQUIREMENT
	9 (3)	The Municipality may furthermore set local standards: <ul style="list-style-type: none"> • For separating, compacting and storing waste • Management of solid waste, i.e.: Avoidance, Minimisation, Recycling • Coordination of waste to relevant treatment or disposal facilities • Litter control
Designation of Waste Management Officers	10(3)	The Municipality must designate in writing a waste management officer from its administration to be responsible for coordinating matters pertaining to waste management in that municipality
Integrated Waste Management Plans	11 (4) & (7)	<ul style="list-style-type: none"> • The Municipality must submit an IWMP to the MEC for approval (response from the MEC must be given within 30 days) • Include the approved IWMP into its IDP • Follow the consultative process in section 29 of the Municipal Systems Act (separately or as part of IDP)
	12	Contents for IWMP's, includes: <ul style="list-style-type: none"> • A situational analysis • a plan of how to give effect to the NEM: WA • municipal waste management and services obligations • prioritisation of objectives • setting of targets • planning approach to any new disposal facilities; and • Financial resourcing.
	13	An annual performance report prepared in terms of section 46 of the Municipal Systems Act must contain information on the implementation of the municipal IWMP.

(d) Industry Waste Management Plans

For industries, the NEM: WA states that either the Minister or the relevant provincial MEC may under certain conditions and by written notice or by notice in the Gazette require a person or industry to prepare and submit an Industry Waste Management Plan.

(e) Waste Licensing for listed Activities

The Minister has subsequently gazetted (on 03 July 2009) GN No. 718 (Gazette No. 32368) and 719 (Gazette No. 32369) which present a Waste Management Activity Lists describing those waste activities, and thresholds, which require authorisation before they are undertaken. This list was amended in 2013 (Gazette No 921 of 2013) and again in 2017 (Gazette No, 1094 of 2017). The NEM: WA Schedule 1 (Section 19) identifies activities which require a waste management licence. Activities include:

- Recycling and recovery.
- Treatment of waste.
- Disposal of waste on land.
- Construction, expansion or decommissioning of facilities and associated structures and infrastructure.

Either a Basic Assessment or Scoping and Environmental Impact Assessment (EIA) process is to be carried out with regards to acquiring a licence as stipulated in the environmental impact assessment regulations made under section 24 (5) of the NEM: WA).

(f) Integrated Waste Management Planning

The NEM: WA also places considerable emphasis on the development of an integrated waste planning system, through the development of interlocking Integrated

Waste Management Plans (IWMPs) by all spheres of government and specified waste generators. This planning system is the primary tool for cooperative governance within the sector. While the requirement for these plans is new for national and provincial governments, and for waste generators, this is not the case for local governments who had been able to voluntarily prepare such plans within their Integrated Development Plans (IDPs). IWMPs are mandatory for national and provincial government and specified waste generators, but the situation for local government is made a little more ambiguous by the Constitutional assignment of concurrent powers to provincial and local governments in this respect, with only limited authority assigned to national government.

(g) Norms, standards, tariffs and financial Management Systems

Other focal areas of the NEM: WA include provisions for the development of norms and standards, tariffs and financial management systems. These powers all largely repeat existing national or provincial powers that are provided for in other legislation. The key change is that the Minister of Environmental Affairs now assumes these powers in terms of the Act, although concurrently with other authorised Ministers notably in Local Government and Finance portfolios.

Certain sections of the act have yet to be enacted, including the following:

- Section 28 (7), which makes allowance for a person, category of person or industry to compile and submit an industry waste management plan for approval to the MEC, without being required to do so by the MEC. Section 46, which allows the licensing authority to require an applicant seeking a waste management licence to appoint an independent and qualified person to manage the application.

National Environmental Management: Air Quality Act

The National Environmental Management: Air Quality Act (39 of 2004) requires that appropriate consideration must be given to the emissions arising from waste management practices, processes and procedures. Many facets of waste management are associated with atmospheric emissions, for example, waste transportation is associated with carbon dioxide released from vehicles, and methane and carbon dioxide which are released from landfill sites.

The Air Quality Act was published in the Government Gazette on 24 February 2005 and came into effect in September 2005. This Act, amongst others, provides for the implementation of a National Framework, of national, provincial and local ambient air quality and emission standards and air quality management plans. These implementations are currently in progress.

Atmospheric Pollution Prevention Act

Prior to the Air Quality Act coming into full effect, the control of atmospheric emissions of noxious, hazardous and nuisance causing materials was controlled by the Atmospheric Pollution Prevention Act (APPA) (Act 45 of 1965) and its amendments. The administration of the APPA has been assigned to the Air Pollution Control Department under the Department of Forestry, Fisheries and the Environment.

Those sections addressing the management of dust are of importance for landfill site management. Sections 27 – 35 state that industries should adopt the “best practicable means” for preventing dust from becoming dispersed or causing a nuisance. The act also empowers owners or occupiers present in the vicinity of the source of dust/nuisance to take or adopt necessary steps or precautions against the nuisance. Where steps have not been prescribed, owners must adopt the “best practicable means” for the abatement of the nuisance. Should any person/s such as for example, waste management service providers, not comply with the necessary steps to prevent owners/occupiers from the effects of dust, the person/s may be liable to pay a dust control levy to the minister.

National Water Act

The National Water Act (Act 36 of 1998) is South Africa’s overarching piece of legislation dealing with water resource management. It contains a number of provisions that impact on waste management, including:

- Ensuring the disposal of waste in a manner, which does not detrimentally impact on water resources.
- Managing the discharge of waste into water resources.

The Act allows the Minister to make regulations for:

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

Occupational Health and Safety Act

The purpose of the Occupational Health and Safety Act (OHSA) (Act 85 of 1993) and associated regulations is to provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

A sound waste management strategy and planning must take into account the safety of persons involved in the practical implementation thereof, with reference in particular to any waste services carried out by municipal officials; and waste service providers and their employees.

Core to OHSA are the principles and core duties of employers and employees as legislated in Sections 8, 9 and 14 thereof.

Section 8(1) stipulates that "Every employer shall provide and maintain, as far as is reasonable practicable, a working environment that is safe and without risk to the health of his employees".

Section 9(1) stipulates that "Every employer shall conduct his undertaking in such a manner as to ensure, as far as is reasonably practicable, that persons other than those in his employment who may be directly affected by his activities are not thereby exposed to hazards to their health or safety." Subsection (2) imposes a similar duty on every self-employed person.

Section 14(a) imposes a duty on every employee at work to take reasonable care for the health and safety of himself and of other person who may be affected by his acts or omissions. An employee is also required to co-operate with his employer concerning his duties in terms of the Act and to obey health and safety rules and procedures laid down by his employer.

In addition the OHSA further protects workers with regard to Hazardous Chemical Substances through specific regulations. Asbestos regulations deal with specific asbestos containing waste management.

It is likely that the OSHA also places an obligation on the Municipality, to ensure that service providers maintain compliant Health and Safety procedures. This would be relevant in the case of outsourced, waste management functions.

Health Act

The Health Act (Act 63 of 1977) focuses on the promotion of the health of the people and the provision of processes to enable this objective to be achieved. Sections 20, 34 and 38 of the Act are relevant to waste management.

Section 20, requires authorities to take lawful and reasonable practical measures to maintain their areas in a hygienic and clean condition to prevent an unhealthy environment for people.

Sections 34 and 38 of the act authorise the National Minister of Health to make regulations, which may directly impact on waste management.

Hazardous Substances Act

The Hazardous Substances Act (Act 15 of 1973) governs the control of substances that may cause ill health or death in humans by reason of their toxic, corrosive, irritant, flammability or pressure effects. The Act provides for the regulation of the storage, handling, labelling and sale of Group I, II, and III hazardous substances. A license is required for an operation that stores, handles and sells Group I substances. Section 29(1) of the Act regulates the disposal of the empty containers, which previously held Group I substances.

No national, local provincial or local municipal regulations have been promulgated under the Act for the on-site management of Group II hazardous substances.

The relevance of the Act with regard to waste management is captured as certain waste types may be categorised into the various groupings under the Act as noted above.

National Road Traffic Act

The United Nations (UN) recommendations on the transport of dangerous goods have been used to produce sections of the National Road Traffic Act (Act 93 of 1996). In addition, and in terms of other regulations published under the Act, certain South African Bureau of Standards (SABS) Codes of Practice have been incorporated as standard specifications into the National Road Traffic Regulations (GNR 1249 of 13 November 2001). These codes have been based on the UN recommendations, also known as “The Orange Book” and the associated European Agreement concerning the International Carriage of Dangerous Goods by Road Regulations.

The codes of practice so incorporated include e.g. the following:

- SANS 10228:2006 Edition 4.00: The identification and classification of dangerous goods for transport.
- SANS 10229-1:2005 Edition 1.00: Transport of dangerous goods - Packaging and large packaging for road and rail transport Part 1: Packaging.
- SANS 10229-2:2007 Edition 1.00: Transport of dangerous goods - Packaging and large packaging for road and rail transport Part 2: Large packaging.
- SANS 10232-1:2007 Edition 3.00: Transport of dangerous goods - Emergency information systems Part 1: Emergency information system for road transport.
- SANS 10232-2:1997 Edition 1.00: Transportation of dangerous goods - Emergency information systems Part 2: Emergency information system for rail transportation.
- SANS 10232-3:2007 Edition 3.00: Transport of dangerous goods - Emergency information systems Part 3: Emergency response guides.
- SANS 10232-4:2007 Edition 1.01: Transport of dangerous goods - Emergency information systems Part 4: Transport emergency card.
- SANS 10233:2001 Edition 2.00: Transportation of dangerous goods - Intermediate bulk containers.

The transportation of all waste products should adhere to the above where applicable, noting that certain waste/refuse may be categorised as dangerous goods.

Advertising on Roads and Ribbon Development Act

The Advertising on Roads and Ribbon Development Act (Act 21 of 1940) regulates, amongst other things, the depositing or discarding of waste near certain public roads, and the access to certain land from such roads. To the extent as outlined in Proclamation 23 in Government Gazette 16340 of 31 March 1995, the administration of this Act has been assigned to the provinces. In terms of section 8 of the Act, no person shall within a distance of 200 metres of the centre line of a public road deposit or leave outside an urban area, so as to be visible from that road, a disused vehicle or machine or a disused part of a vehicle or machine or any rubbish or any other refuse, except in accordance with the permission in writing granted by the controlling authority concerned. The

controlling authority may remove any object or substance referred to found on a public road and may recover the cost of the removal from the person who deposited or left such object or substance there.

When any person has deposited or has left any object or substance in contravention of the above, but not on a public road, the controlling authority concerned may direct the person in writing to remove or destroy that object or substance within such period as may be specified in the direction. If the person fails to comply with that direction, the controlling authority may cause the object or substance to be removed or destroyed and may recover from the said person the cost of the removal or destruction. The preceding provision do not apply to any object or material which has been or is being used for or in connection with farming, or to soil excavated in the course of alluvial digging: provided that this sub-section shall not permit the deposit or leaving of any article or material on a road.

Waste Tyre Regulations

The Waste Tyre Regulations were first published as Government Notice R.149 on 13 February 2009 and came into effect on 30 June 2009. These regulations were amended in 2016 in General Notice R. 1493 of 2016. The latest Waste Tyre Regulations (R1064 of 2017) were published on 29 September 2017 and came into effect immediately. The purpose of the legislation is to regulate the management of waste tyres by providing for the regulatory mechanisms. The regulations apply uniformly in all provinces in South Africa and affect waste tyre producers, waste tyre dealers, waste tyre stockpile owners, landfill site owners and tyre recyclers.

In summary, the regulation:

- Defines a waste tyre as a new, used, re-treaded, or un-roadworthy tyre, not suitable to be re-treaded, repaired or sold as a part worn tyre and not fit for the original intended use.
- Prohibits management, recycling, recovery or disposal of a waste tyre at any facility or on any site, unless such an activity is authorised by law.
- Prohibits recovery or disposal of a waste tyre in a manner that may or may potentially cause pollution or harm to health.
- Prohibits purchase, sale or export of waste tyres unless authorised.
- Prohibits disposal of a waste tyre at a waste disposal facility, two years from the gazetted date, unless such a waste tyre has been cut into quarters; and prohibits disposal of tyres in five years; unless these are shredded.
- Provides regulations in terms of tyre producers, tyre dealers and tyre stockpile owners, particularly regarding waste stockpile abatement and waste tyre storage.

Asbestos Regulations

On 28 March 2008, the Minister of Environmental Affairs and Tourism published as Government Notice R.341 of 2008 entitled "Regulations for the prohibition of the use, manufacturing, import and export of asbestos and asbestos containing materials" under Section 24B of ECA (thus now the NEM: WA). This would have implication for phasing out of asbestos containing material, which may therefore result in higher quantities of asbestos waste.

Mineral and Petroleum resources Development Act

The objective of the Mineral and Petroleum resources Development Act (No. 28 of 2002), amongst others, is to give effect to section 24 of the Constitution by ensuring that the nation's mineral and petroleum resources are developed in an orderly and ecologically sustainable manner while promoting justifiable social and economic development.

Municipal Structures Act

The main objective of Local Government: Municipal structures Act (Act 117 of 1998) is to provide for the establishment of municipalities in accordance with the requirements relating to categories and types of municipality, to provide for an appropriate division of functions and powers between categories of municipality, to provide appropriate electoral systems and to provide for matters connected therewith.

The functions and powers of municipalities are set out in Chapter 5 of the Act, with a municipality having the functions and power assigned to it in terms of sections 156 and 229 (dealing with fiscal powers and functions) of the constitution.

Municipal Systems Act

As intended by the Constitution, Waste management services such as refuse collection, removal, transportation and disposal is generally the responsibility of local municipalities⁴.

Municipal Systems Act (Act 32 of 2000) with respect to the Local Government Municipal Systems Act (MSA) defines a municipal service as follows:

“A serviced that a municipality in terms of its powers and functions provides or may provide for the benefit of the local community irrespective of whether

- (a) Such a service is provided, or to be provided, by the municipality through an internal mechanism contemplated in section 76 or by engaging an external mechanism contemplate in section 76; and
- (b) fees, charges or tariffs are levied in respect of such a service or not.”

Chapter 8 Section 73 - 82 outlines certain general duties on municipalities in relation to the municipal service as highlighted below.

In terms of section 75(1), a municipality must give effect to the provisions of the Constitution and must:

- Give priority to the basic needs of the local community.
- Promote the development of the local community.

Ensure that all members of the local community have access to at least the minimum level of available resources and the improvement of standards of quality over time.

In terms of section 75(2), municipal services must – be equitable and accessible; be provided in a way, which promotes the prudent, efficient and effective use of available resources and the improvement of standards of quality over time; be financially sustainable; be environmentally sustainable, and be regularly reviewed with a view to upgrading, extension and improvement.

Section 74 regulates tariff policy in respect of municipal services. A municipality is obliged to adopt and implement a tariff policy on levying fees for municipal services. A municipality’s tariff policy must reflect at least the following principles:

- People who use municipal services must be treated equitably in the application of tariffs.
- In general terms, what individual users pay for services should be in proportion to their use of the services.
- Poor households must have access to at least basic services. Different ways of providing for this are suggested, for example lifeline tariffs and subsidisation.
- Tariffs must reflect the costs reasonable associated with providing the service for example capital, operating, maintenance, administration and replacement costs and interest charges.
- Tariffs must be set at levels which allow the service to be financially sustainable.
- In appropriate circumstances, surcharges on tariffs may be allowed.
- Special tariffs may be set for categories of commercial and industrial users in order to promote local economic development.
- The economical, efficient and effective use of resources must be promoted, as well as the recycling of waste and other appropriate environmental objectives
- Any subsidisation of tariffs should be fully disclosed.

Section 78 prescribes the process which municipalities must follow when they decide through which mechanism to provide a municipal service in their areas. There are particular provisions, which a municipality must comply with when it provides a municipal service through a service delivery agreement with what the MSA terms “external mechanisms”.

The MSA contains extensive provisions pertaining to public participation. In particular, the community has the right to contribute to decision-making processes by its municipality. A municipal council must establish appropriate mechanisms, processes and procedures to enable residents, communities and stakeholders in the municipality to participate in the local affairs. It is pertinent to reiterate that waste management services as provided by the municipality is an integral part of local affairs.

As such municipalities' mechanisms must provide for:

- The receipt, processing and consideration of petitions and complaints lodged by residents, communities and stakeholders in the municipality.
- The receipt, processing and consideration of written objections and representations with regard to any matter to which it is required to invite public comment.
- Public meetings of residents, on a ward or any other basis.
- Public hearings by the council and its committees when appropriate.
- Surveys among residents when appropriate and the processing and publication of the results.

Development Facilitation Act

The Development Facilitation Act (Act 67 of 1995) provides specific principles for:

- Land development and conflict resolution.
- Controls on land occupation.
- Recognition of informal land-development practices.

These principles are set out in sections 3 and 4 of the Development Facilitation Act and form the basis for most of the integrated development plan. Chapter one of the Development Facilitation Act sets out principles which affect all decisions relating to the development of land.

This means that whenever a municipality, a development tribunal, a Member of the Executive Council (MEC) or any other authority is considering an application for the development of land, they must make sure that their decision is consistent with these principles. Any integrated development plan must, in terms of the Local Government Transition Act, be based on these principles too.

The Development Facilitation Act's principles form the basis of integrated development planning - in particular the land-development objectives. In terms of section 2 of the Act, the general principles which are set out in section 3 of the Act include:

- Policy, administrative practice and the law should promote efficient and integrated land development in that they:
 - Promote the integration of the social, economic, institutional and physical aspects of land development.
 - Promote integrated land development in rural and urban areas in support of each other.
 - Encourage environmental sustainable land development practices and processes.
 - Members of communities affected by land development should actively participate in the process of land development.
- Policy, administrative practice and laws should encourage and optimize the contributions of all sectors of the economy (government and non-government) to land development so as to maximize the Republic's capacity to undertake land development.
- Laws, procedures and administrative practice relating to land development should:
 - Be clear and generally available to those likely to be affected thereby.
 - In addition to serving as regulatory measures, also provide guidance and information to those affected thereby.
 - Be calculated to promote trust and acceptance on the part of those likely to be affected thereby.
 - Give further content to the fundamental right set out in the constitution.
- Policy, administrative practice and laws should promote sustainable land development at the required scale, in that they should, inter alia, promote sustained protection of the environment.
- Policy, administrative practice and law should promote speedy land development.

- Each proposed land development area should be judged on its own merits and no particular use of land, such as residential, commercial, conservation, industrial, community facility, mining, agricultural or public use, should in advance or in general, be regarded as being less important or desirable than any other use of land.
- A competent authority at national, provincial and local government level should co-ordinate the interests of the various sectors involved in or affected by land development so as to minimize conflicting demands on scarce resources.

The Physical Planning Act

The objective of the Physical Planning Act 125 of 1991 is to provide for the division of the country into regions and to promote regional development. Policy plans consist of broad guidelines for the future physical development of the area and restrictions are placed on the use of land in the area to which the plan relates. Local authorities are required to develop urban structure plans for their areas of jurisdiction.

Promotion of Administrative Justice

The purpose of the Promotion of Administrative Justice Act ("PAJA") (Act 3 of 2000) is principally to give effect to the right to administrative action that is lawful, reasonable and procedurally fair; and to the right to written reasons for administrative action as contemplated in section 33 of the Constitution; and to provide for matters incidental thereto.

Administrative law governs the relationships between public bodies, and between public and private bodies and/or individuals. Many activities which affect the environment, including certain waste management activities, require authorisation from a public body. Because environmental conflicts may arise during the authorisation process from the exercise of administrative decision-making powers, administrative law principles are of particular relevance to environmental law generally, and specifically in the context of the environmental authorisation requirements stipulated by the provisions of section 24 of the NEMA read with its subordinate legislation regulating environmental impact assessment (or "EIA").

Promotion of Access to Information

Promotion of Access to Information, (Act 2 of 2000) is closely linked to the notion of administrative justice is the right of access to information. Without access to information, a person may be unable to determine whether or not his or her right to just administrative action (or to an environment not harmful to human health or well-being or, for that matter, any other Constitutional right) has been infringed. The purpose of the Promotion of Access to Information Act ("PAIA") is to give effect to the Constitutional right of access to any information held by the State and any information that is held by another person and that is required for the exercise or protection of any rights, and to provide for matters connected therewith.

National Policies and Guidelines

White Paper on Environmental Waste Management

The White Paper on Environmental Management was published in 1998. This policy sets out government's objectives in relation to environmental management, how it intends to achieve its objectives, and to guide government agencies and organs of state in developing strategies to meet their objectives.

The policy document is an overarching policy framework that refers to all government institutions and to all activities that impact on the environment. The policy states that government will allocate functions to the institutions and spheres of government that can most effectively achieve the objectives of sustainable development and integrated environmental management. This would include the allocation of certain functions to the municipal sphere of government. Where appropriate, provincial and local governments are to develop their own legislation and implementation strategies in order to address their specific needs and conditions within the framework of the policy.

White Paper on Integrated Pollution and Waste Management

The White Paper on Integrated Pollution and Waste Management (1999) is a subsidiary policy of the overarching environmental management and constitutes South Africa's first policy document focused on integrated waste management. This national policy set out Government's vision for integrated pollution and waste management in the country and applies to all government institutions and to society at large and to all activities that impact on pollution and waste management.

Integrated pollution and waste management is defined as a holistic and integrated system and process of management aimed at pollution prevention and minimisation at source, managing the impact of pollution and waste on the receiving environment and remediating damaged environments. Waste management is to be implemented in a holistic and integrated manner and extend over the entire waste cycle from cradle-to-grave and will include the generation, storage, collection, transportation, treatment and the final disposal of waste.

The overarching goal reflected in the policy, is integrated pollution and waste management. The intention is to move away from fragmented and uncoordinated pollution control and waste management, towards an approach that incorporates pollution and waste management as well as waste minimisation.

Within this framework, the following strategic goals apply:

- Effective institutional framework and legislation.
- Pollution and waste minimisation, impact management and remediation.
- Holistic and integrated planning – the intention is to develop mechanisms to ensure that integrated pollution and waste management considerations are integrated into the development of government policies, strategies and programmes as well as all spatial and economic development planning processes and in all economic activity.

The strategic mechanisms include the following:

- The incorporation of integrated environmental management principles and methodologies in spatial development planning as it relates to pollution and waste management.
- Making timeous and appropriate provision for adequate waste disposal facilities.
- Developing management instruments and mechanisms for the integration of pollution and waste management concerns in development planning and land allocation.
- Developing appropriate and agreed indicators to measure performance for inclusion in Environmental Implementation Plans and Environmental Management Plans as provided for in the National Environmental Management Act.
- Participation and partnerships in integrated pollution and waste management governance.
- Empowerment and education in integrated pollution and waste management.
- Information management.
- International co-operation.

National Waste Management Strategy

The first NWMS was published in 1999 by DFFE and DWS. It was the first strategy for addressing South Africa's waste management challenges. The strategy effectively defines South Africa's vision for waste management highlighting themes such as "cradle to grave" management of waste products and the waste management hierarchy which encourages waste disposal only as a last resort.

The NWMS was revised in 2011 in line with Chapter 2, Part 1, of the Act which required the establishment of a NWMS within two years of the Act coming into effect. Significant changes included the addition of "remediation" to the waste management hierarchy, and the consolidation of what was previously many different action plans into a single action plan.

This NWMS 2020 is also responding to pollution, waste management practices and the legacy relating to the socio-economic conditions of the people of South Africa. The following are expected outcomes that will be achieved through effective and efficient implementation of the NWMS 2020 by all stakeholders from all sector of society:

- Prevent waste, and where waste cannot be prevented ensure – 40% of waste from diverted from landfill within 5 years; 55% within 10 years; and at least 70% within 15 years leading to Zero-Waste going to landfill;
- All South Africans live in clean communities with waste services that are well managed and financially sustainable; and
- Mainstreaming of waste awareness and a culture of compliance resulting in zero tolerance of pollution, litter and illegal dumping

The key interventions that will be implemented in respect of each of the three (3) Outcomes are provided for in the figure below:

Figure 32: Pillars, Outcomes and Interventions

STRATEGIC PILLAR	OUTCOME	KEY INTERVENTIONS
Waste Minimisation	40% of waste from diverted from landfill within 5 years; 55% within 10 years; and at least 70% within 15 years leading to Zero Waste going to landfill	<ul style="list-style-type: none"> • Prevent waste generation through cleaner production, industrial symbiosis and extended producer responsibility; • Prevent Food Waste; • Increase re-use, recycling and recovery rates; • Divert organic waste from landfill through composting and the recovery of energy; • Divert construction and demolition waste from landfill through beneficiation; and • Increase technical capacity and innovation for beneficiation of waste.
Effective and Sustainable Services	All South Africans live in clean communities with waste services that are well managed and financially sustainable	<ul style="list-style-type: none"> • Separate waste at source; • Safe and environmentally sustainable disposal of hazardous household waste; • Cities Support Programme Implementation; and • Effective integrated waste management planning.
Compliance, Enforcement and Awareness	Mainstreaming of waste awareness and a culture of compliance resulting in zero tolerance of pollution, litter and illegal dumping	<ul style="list-style-type: none"> • Reduce Pollution, littering and illegal dumping; • Enhance capacity to monitor compliance and enforce the Waste Act and International Agreements; and • Ensure municipal landfill sites and waste management facilities comply with licensing requirements.

The overall objective of this strategy is to reduce the generation of waste and the environmental impact of all forms of waste and thereby ensure that the socioeconomic development of South Africa, the health of the people and the quality of its environmental resources are no longer adversely affected by uncontrolled and uncoordinated waste management.

The internationally accepted waste hierarchical approach was adopted of waste prevention/minimization, recycle/reuse, treatment and finally disposal. The strategy outlines the functions and responsibilities of the three levels of government and where possible, firm plans and targets are specified.

Action plans have been developed for reaching all of the eight goals.

Polokwane Waste Summit Declaration

During September 2001 a national waste summit was held at Polokwane, in the Northern Province. It was attended by key stakeholder groupings in the waste field in order to jointly chart a way forward in terms of national waste management. The resultant Polokwane Declaration includes a vision and goal for the management of all waste, i.e. domestic, commercial and industrial:

Vision – To implement a waste management system that contributes to sustainable development and a measurable improvement in the quality of life, by harnessing the energy and commitment of all South Africans for the effective reduction of waste.

Goals - To reduce waste generation and disposal by 50% and 25% respectively by 2012 and develop a plan for zero waste by 2022

Key actions in the Polokwane Declaration include the following:

- Implement the National Waste Management Strategy.
- Develop and implement legislative and regulatory framework.
- Waste reduction and recycling.
- Develop waste information and monitoring systems.

Local Government Turnaround Strategy

Cabinet approved the Local Government Turnaround Strategy (LGTAS) on the 3 December 2009 in Pretoria. The LGTAS recognised that each municipality faces different social and economic conditions and has different performance levels and support needs. Thus a more segmented and differentiated approach was required to address the various challenges of municipalities. In addition cabinet recognised that the problems in Local Government are both a result of internal factors within the direct control of municipalities as well as external factors over which municipalities do not have much control. (Department of Cooperative Governance and Traditional Affairs, Dec 2009.)

The LGTAS identifies the internal factors related to for example the following:

- Quality of decision-making by Councillors.
- Quality of appointments.
- Transparency of tender and procurement systems and levels of financial management and accountability.
- Levels of financial management and accountability.

The external factors relate to:

- Revenue base and income generation potential.
- Inappropriate legislation and regulation.
- Demographic patterns and trends.
- Macro and micro-economic conditions.
- Undue interference by political parties and weaknesses in national policy.
- Oversight and Inter-Governmental Relations.

Ultimately the aim of the LGTAS is to:

- Restore the confidence of the majority of our people in our municipalities, as the primary delivery machine of the developmental state at a local level.
- Re-build and improve the basic requirements for a functional, responsive, accountable, effective, and efficient developmental local government.

The LGTAS sets out five strategic objectives with associated key interventions. Probably most relevant in the context of waste management is the first objective, i.e. to *“Ensure that municipalities meet basic needs of communities. This implies that an environment is created, support provided and systems built to accelerate quality service delivery within the context of each municipality’s conditions and needs”*.

Interventions to achieve the various objectives include better organisation by National Government and improved support and oversight from provinces in relation to Local Government. Furthermore municipalities are to reflect on their own performance and tailor-made turnaround strategies, while all three spheres of governments should improve inter-governmental relations. Also, political parties are to promote and enhance institutional integrity of municipalities and a social compact on Local Government where all citizens are guided in their actions and involvement by a common set of governance values.

In terms of the LGTAS an immediate task is for agreements to be reached with each province on the roll-out programme to establish different provincial needs and capacities, which will guide how municipalities are to be supported to prepare and implement their own tailor-made turnaround strategies that must be incorporated into their IDPs and budgets (by March 2010). Key stakeholders and ward committees were to be mobilised early in 2010. By July 2010, all municipalities were to be in full implementation mode of the national and their own Turn-around Strategies. (Department of Cooperative Governance and Traditional Affairs, Dec 2009.)

Minimum Requirements Documents; Department of Water Affairs and Forestry

The DWS Minimum Requirements: Waste Management Series were formulated in the form of guideline documents as a joint venture between DWS and the Department of Forestry, Fisheries and the Environment (DFFE).

The objective of the Minimum Requirements is to establish a framework for standards for waste management in South Africa. The former DWS published the second edition of the Minimum Requirements series in 1998, consisting of the following three documents:

- Document 1: Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste.
- Document 2: Minimum Requirements for Waste Disposal by Landfill.
- Document 3: Minimum Requirements for Monitoring at Waste Management Facilities.

The third edition was released in draft form in 2005, but only Document 1 (DFFE, 2005) has been finalised.

The Minimum Requirements provide applicable waste management standards or specifications that should be met, as well as providing a point of departure against which environmentally acceptable waste disposal practices can be assessed. The objectives of setting Minimum Requirements are to:

- Prevent water pollution and to ensure sustained fitness for use of South Africa's water resources.
- Attain and maintain minimum waste management standards in order to protect human health and the environment from the possible harmful effects caused by the handling, treatment, storage and disposal of waste.
- Effectively administer and provide a systematic and nationally uniform approach to the waste disposal process.
- Endeavour to make South African waste management practices internationally acceptable.
- Ensure adherence to the Minimum Requirement conditions from the permit applicant, before a waste disposal site permit is issued.
- Promote the hierarchical approach to waste management, as well as a holistic approach to the environment.

The series formed the basis for the permitting process that had been required in terms of Section 20 of the ECA. The requirements, standards and procedures covered in the series had generally been included as permit conditions, thereby becoming legally binding on the permit holder. In addition to requirements for the establishment and operation of a landfill site, the permit holder was generally required to operate, maintain and attend to the closure of a waste disposal site in compliance with the permit conditions, as well as in accordance with the guidelines set out in the Minimum Requirements documents. Note that an EIA must be conducted prior to the establishment of waste disposal facilities. However, the above mentioned waste activity has now been repealed and instead requires a license application under tNEM: WA.

The third edition was released in draft form in 2005, but only Document 1 (DFFE, 2005) has been finalised.

National Policy for Basic Refuse Removal Services to Indigent Households

The National Policy for the Provision of Basic Refuse Removal Services to Indigent Households (GN No. 34385) was published in the Government Gazette in June 2011.

The purpose of this policy is to ensure that indigent households have access to at least a basic refuse removal (BRR) service.

This Policy aligns to existing relevant legislation, as in accordance to 74 (2)(c) of the Municipal Systems Act, 2000 (Act No. 32 of 2000) poor households must have access to at least basic services and section 9 (2) of NEMWA (Act

59 of 2008) which stipulates that each municipality must exercise its executive authority and perform its duty in relation to waste services, including waste collection, waste storage and waste disposal, by (c) ensuring access for all to such services.

The objectives of the policy are to identify households that can be enrolled for the BRR service, establish bylaws to enforce tariff policies that will support the BRR service and to raise awareness within the municipality with regard to correct handling of domestic waste for BRR and the need to minimize waste and recycle.

Implementation plans include each municipality:

- declaring specific localities as the recipients of basic refuse removal services;
- maintaining “accurate and updated” registers of indigent people;
- taking action in the event of malpractice;
- integrating basic refuse removal into “basic indigent policies”;
- designating the administration of the policy to the “most appropriate department”; and
- raising awareness.

The policy includes a “grid of responsibilities” for each sphere of government and a policy monitoring and evaluation plan. According to the grid of responsibilities, national government will take responsibility for building capacity at provincial and municipal level, with provincial government determining municipal capacity and assisting district municipalities in “drawing up guidelines”.

National Policy in Thermal Treatment of General and Hazardous Waste

The Thermal Waste Treatment of General and Hazardous Waste Policy was gazetted (GN No. 32439) for public comment on 30 January 2009 and published under the NEM: WA on 24 July 2009. The policy presents the Government’s position on thermal waste treatment as an acceptable waste management option in South Africa. It also provides the framework within which incineration and co-processing treatment technologies of general and hazardous waste should be implemented in the country.

All Government Departments across the different spheres of government must consider this policy in their decision making on matters pertaining to thermal treatment of waste.

The policy presents objectives which vary thematically. These consider the integration of thermal waste treatment into the integrated waste management system. Schedules one to four provide guidelines on the following:

(a) Air Emission Standards – Waste Incineration

Listed air emission standards for general and hazardous waste incinerators, brought into operation subsequent to the final gazetting of this policy, to be complied with until the formalisation of The Minimum Emission Standards in terms of Section 21 of the National Environmental Management: Air Quality Act of 2004.

(b) Air Emission Standards – AFR Co-Processing

The Minimum Emission Standards for Alternative Fuels and Raw Materials (AFR) co-processing is currently in the process of being formalised in terms of Section 21 of the National Environmental Management: Air Quality Act of 2004. In the interim this policy constitutes the air emission standards for all cement kilns co-processing AFR.

(c) Waste Excluded from Co-Processing

Listed types of waste that are not allowed to be received, stored, handled or co-processed in cement kilns.

(d) Conditions of Environmental Authorisation

Any cement plant co-processing general or hazardous waste as alternative fuels and/or raw materials, and any dedicated general and/or hazardous waste incinerator must have the relevant approvals from the competent

authority. This schedule includes notes on operational management, air quality management, waste management and monitoring and reporting.

National Waste Information Regulations

The National Waste Information Regulations came into effect on 01 January 2013.

These cover registration of persons who conduct certain waste management activities and their duty to keep records. Annexure 1 of the regulations lists activities including recovery and recycling, treatment and disposal of waste for which the person conducting the activity must register in terms of GR 625 of 2012. The municipality has a duty in terms of waste disposal to land (as well as operating waste recycling or treatment facilities) to report waste types and quantities in accordance with these regulations to SAWIC on a quarterly basis. Amendments to the National Waste Information Regulations were released for public comment in July 2018 (GN 701 of 2018), the major change in the regulations was the requirement for waste transporters to register. Other proposed changes to the regulations were a decrease in the allowable reporting timeframes from the closure of a reporting period from 60 days to 30 days and registration and reporting thresholds recovery of hazardous waste being decreased from 500kg to 100kg a day.

National Policy for the provision of basic refuse removal services to indigent households

The National Policy for the provision of basic refuse removal services to indigent households as published for general information in notice 413 of Government Gazette No. 34385 on 22 June 2011 was developed in response to the constitutional requirement that all households should have access to basic services regardless of their income level, as well as the adoption of a free basic services in 2001.

This Policy aligns to existing relevant legislation, as in accordance to 74 (2)(c) of the Municipal Systems Act, 2000 (Act No. 32 of 2000) poor households must have access to at least basic services and section 9 (2) of NEMWA (Act 59 of 2008) which stipulates that each municipality must exercise its executive authority and perform its duty in relation to waste services, including waste collection, waste storage and waste disposal, by (c) ensuring access for all to such services.

Implementation plans include each municipality:

- Declaring specific localities as the recipients of basic refuse removal services.
- Maintaining “accurate and updated” registers of indigent people taking action in the event of malpractice.
- Integrating basic refuse removal into “basic indigent policies.”
- Designating the administration of the policy to the “most appropriate department.”
- Raising awareness.

The policy includes:

- A “grid of responsibilities” for each sphere of government.
- A policy monitoring and evaluation plan.

According to the grid of responsibilities, national government will take responsibility for building capacity at provincial and municipal level, with provincial government determining municipal capacity and assisting district municipalities in “drawing up guidelines”.

National Domestic Waste Collection Standards

The National Domestic Waste Collection Standards (notice 21 of Government Gazette 33935, 21 January 2011) published under the National Environmental Management: Waste Act (Act No. 59 of 2008) came into effect on Tuesday, 1 February 2011.

This standard aims to provide a uniform framework within which domestic waste should be collected in South Africa. This comes after a consultative process with provinces, municipalities and the general public in order to redresses the past imbalances in the provision of waste collection services. The standards aim to guide municipalities on how to provide acceptable, affordable and sustainable waste collection service to the human health and the environment.

The standards covers the levels of service, separation at source (between recyclable and non-recyclable materials), collection vehicles, receptacles, collection of waste in communal collection points, and most importantly the frequency of collection. Non-recyclable material such as perishable food waste must be collected at least once a week and recyclable material such as paper, plastic, glass etc. must be collected once every two weeks. Municipalities have a choice to provide different types of bins taking into consideration the type of vehicles they use; however, they must be rigid and durable to prevent spillage and leakage.

The development of the standards took into consideration the existing innovative practices at local government level across the country and seeks to build on what has already been achieved whilst emphasizing a need to separate recyclable and non-recyclable domestic waste and the protection of human health and the environment.

National Norms and Standards for Assessment of Waste for Landfill Disposal

The National Norms and Standards for Assessment of Waste for Landfill Disposal (GR635, 23 Aug 2013) require the assessment of waste prior to disposal at landfill. The assessment of waste before disposal must include identification of the total and leachable concentrations of different chemicals. The concentration of chemicals determines the classification of the waste which in turn dictates the type of disposal site where the waste can be disposed of.

Waste Classification and Management Regulations

The Waste Classification and Management Regulation (GR635, 23 Aug 2013) aims to address the management of different waste categories. The regulations stipulate the requirements for the transport storage and treatment of different waste types. A list of requirements for record keeping by waste generators is also included in the regulations with the aim of improving and standardising record keeping. The regulations also detail the process to be followed when motivating why a listed waste management activity does not require a waste management license.

National Norms and Standards for Disposal of Waste to Landfill

The National Norms and Standards for Disposal of Waste to Landfill (GR636, 23 Aug 2013) specify minimum engineering design requirements for landfill sites. The design requirements vary depending on the type of waste to be disposed of at the site.

Landfill sites are designed to comply with one of four designs (Class A – Class D). The landfill design classes vary in the types of liner used. Class A landfill sites require multiple linings and leachate collection systems whereas a Class D landfill site is much simpler in design requiring only a 150 mm base preparation layer. Different classes of landfill are required for different types of waste.

National Norms and Standards for the Storage of Waste

The National Norms and Standards for the Storage of Waste (GN 926, Nov 2013) specify the minimum requirements for waste storage facilities in the interest of protection of public health and the environment. The standards aim to ensure that waste storage facilities are managed according to best practise and to provide a minimum standard for the design and operation of new and existing waste storage facilities.

Hazardous waste storage facilities should be located in areas zoned as industrial, where waste storage facilities are located in residential areas a buffer of at least 100 m must be assigned to the site. General waste storage facilities must be located in an area that is easily accessible by the public.

The standards also specify design requirements for waste storage facilities, these include:

- Access roads
- Signage at the entrance of the facility in at least three official languages applicable to the areas the facility is located in. The sign must indicate:
 - The risk associated with entering the site.
 - Hour of operation.

- Name, address and telephone number of the person responsible for the operation of the facility.

The standards also require that waste is separated at source into recyclables and non-recyclables.

A new condition for the management of waste storage facilities is the requirement for bi-annual internal audits and biennial external audits

National standards for the extraction, flaring or recovery of landfill gas

The National standards for the extraction, flaring or recovery of landfill gas (GN 924 of 2013) aims to control the extraction, flaring and recovery of gas at landfills or recovery facilities to minimise harmful impacts to people and the surrounding environment. The standards require, in planning phase, that an assessment of environmental risks and impacts that are associated with the proposed activities is complied, and that Environmental Management Plan is compiled to mitigate these risks. The standard contains a set of standard procedures for handling and maintaining of equipment for construction, operational and decommissioning phase. The standard also covers training, emergency response, monitoring and reporting, general requirements and transitional arrangements.

National standards for scrapping or recovery of motor vehicles

The National standards for scrapping or recovery of motor vehicles (GN 925 of 2013) puts forth minimum requirements for the design, construction and upgrading of a motor scrapping facility. The design must consider: sensitive environments; drainage systems; storage and operational areas for off-loading, dismantling, liquid waste, shredding, dispatching parts and recyclables. Specific design requirements are set out for different operational areas. Minimum requirements are given for the operational phase including vehicle dismantling, solid waste management, and liquid waste management. Minimum requirements in the decommissioning phase focus on the compilation of a rehabilitation plan for the facility and disposal of contaminated wastes. The standard also covers training, emergency response, monitoring and reporting, general requirements and transitional arrangements.

National norms and standards for sorting, shredding, grinding, crushing, screening of waste

The National norms and standards for sorting, shredding, grinding, crushing, screening of waste (GN 1093 of 2017) require all waste facilities (used for sorting, shredding, grinding, crushing, screening of waste) less than 100m² in size to register with the competent authority and provide details including the location, types of waste processed, and civil design drawings of the facility as set out in Section 4 of the standard.

The standards require all waste facilities (used for sorting, shredding, grinding, crushing, screening of waste) more than 100m² in size register with the competent authority as set out in Section 4 of the standard, as well as comply with requirements for the location, design, construction, access control and signage. Operational requirements in Section 8 of the standard address management of operational impacts such as control of hazardous substances, air emissions, discharging of wastewater, noise and odour emissions. The standard also covers training, emergency response, monitoring and reporting, general requirements, requirements during the decommissioning phase and transitional provisions.

Local Strategy and Policies

Municipal By-laws

Chapter 7 of the South African constitution: Section 156 provides that a municipality may make and administer by-laws for the effective administration of matters which it has the right to administer and that (section 151) it shall not be in conflict with national or provincial legislation.

This is further supported in the municipal systems act (Act 32 of 2000), Chapter 3: section 11 for a municipality to exercise executive authority within its boundaries to implement applicable by-laws. Section 75 of the MSA provides for the municipal council to adopt by-laws to give effect and enforce its tariff policy.

The Draft Municipal Sector Plan (Notice 182 of Government Gazette 34167) was published by the Minister for public comment on the 30 March 2011. Section 3.3.9.5 motivates that the enforcement of municipal waste by-laws is required to address ineffective collection systems through the enforcement of available resource-based controls which will improve the situation at community level. Enforcement should further be placed with a dedicated section with trained Environmental Management Inspectors in line with Chapter 7 of the National Environmental Management Act, 1998 (Act107 of 1998).

District	Chris Hani District Municipality
Venue	DEDEAT Regional Office, Chris Hani District Municipality, Komani Office Park, Makhanda
Date and time	15 October, 2018. 12.30 – 15.30
Stakeholders in attendance	DEDEAT, Chris Hani DM, DFFE LGS, Emalahleni LM, Sakhisizwe LM, Inxuba Yethemba LM, GIBB
ITEM	
1	WELCOME / INTRO
1.1	Lulama Daniels (LD): opened and did welcome
1.2	Kate Flood (KF): NMBM have tendered their apologies
2	PRESENTATION
2.1	KF: Presented the draft IWMP
3	SUMMARY OF DISCUSSION
3.1	Some landfill sites listed as operational in the presentation are no longer operational. The presentation will be circulated to all attendees for corrections.
3.2	How was the information for the IWMP collated? <i>KF: The latest IWMPs were used and surveys and information requests were sent out to all municipalities. Unfortunately not all municipalities responded to the information requests.</i>
3.3	Top issues with regard to waste management in the Chris Hani District Municipality: 1. Understaffing at the LMs. Not enough human resources/personnel in municipalities 2. Lack of budget in municipalities. Local municipalities are reliant on the district municipality for budget. <i>Response from LD. District municipalities are not responsible for budget provisions to local municipalities. Treasury has made budget available to all local municipalities for waste management in terms of Equitable Share. Local municipalities are still using the excuse of lack of budget to cover up for lack of waste management service and non-expenditure for waste management.</i>
3.4	Waste management is not a priority in the local municipalities. At a managerial level in local municipalities the waste department and municipal management should engage with COGTA to inform management of the importance of waste management and the need for budget. <i>Response from LD. A meeting was held with COGTA. Waste managers are not vocal enough for waste management, e.g. MIG funding only goes to roads and other departments, but not to waste.</i>
3.5	Is poor service delivery is not an issue in Chris Hani District Municipality? <i>Response from LMs. Waste planning and combining IWMP projects into IDPs is problematic. Budgetary decision are made on a senior level and waste managers do not have input into these decision.</i>
3.6	What is the strategy of the Province to deal with strategic planning for landfill sites, other provinces are taking a regional approach to landfill sites. <i>Response LD: Each Province is to manage waste to landfill sites based on waste generation, landscape and population density.</i> Follow on question: The problem it can be difficult to implement regional sites, for example at the Ibika landfill site. This was supposed to be a regional landfill site, but it is not used as a regional landfill site.
3.7	People don't litter because they are not aware of the negatives of littering, but because there are not enough bins, waste drop-off facilities or an adequate waste collection service.
3.8	Public awareness should include recycling and management of hazardous substances and waste. Waste awareness is undertaken by municipalities, but the consequences of poor waste management are not communicated. The link between the actions and consequence must be communicated. <i>Response from LD: The only way to achieve this is through a behavioural change, for example, the Cape Town drought. Water consumption dropped significantly when there was no water and awareness campaigns were run. It must be communicated that because of our own doing (poor waste management) people can get sick, this will stimulate change.</i>
3.9	An abattoir in town dumps waste at the landfill site, the community takes condemned meat from the landfill site. The negative impact and risks of consuming contaminated meat this must be communicated to the community.
3.10	Is a MRF sustainable or is there a return on investment for a MRF? <i>Response from KF: There are hidden cost savings for a MRF for example less waste being disposed of at landfill, reduced transportation costs. The development of a MRF can help to facilitate recycling.</i>
3.11	A waste facility needs to make business sense for a municipality to implement it. A business plan or feasibility assessment would need needed to determine if a MRF is feasible. <i>Response from KF: To understand the true cost of waste management services to a municipal, a cost accounting exercise</i>

	<i>must be done.</i>
3.12	Why is the waste collection so high in Intsika Yethu local municipality compared to the other local municipalities? Response from Intsika Yethu Local Municipality: Waste management staff are pro-active in this municipality.
4	WAY FORWARD
4.1	KF noted that comment period ends 24 October.
4.2	KF to circulate presentation and attendance register.
4.3	LD: Once plan is complete, it will get gazetted for public comment. And then gazetted for implementation.
District	Joe Gqabi District Municipality
Venue	DEDEAT Regional Office, Joe Gqabi District Municipality, No. 27 Queens Terrace, Aliwal North, 9750
Date and time	16 October, 2018. 08.30 – 11.30
Stakeholders in attendance	DEDEAT, Joe Gqabi DM, DFFE LGS, Walter Sisulu LM, GIBB
	ITEM
1	WELCOME / INTRODUCTION
1.1	Lyndon Mardon (LM): Opened the meeting and welcomed attendees
2	PRESENTATION
2.1	KF presented the draft IWMP
3	SUMMARY OF DISCUSSION
3.1	Feedback provided on the status on Landfill sites in the DM. Updated information list to be sent to KF from respective LMs. <ul style="list-style-type: none"> • Jamestown operational landfill site issued in 2014 • Jamestown old landfill site is unknown • Burgersdorp landfill site details to be issued • Venterstad landfill site details to be issued • Oviston no landfill site (TBC as shows on google earth) • Lady Grey landfill site is operational • Rhodes landfill site permit is underway (to be issued)
3.2	The DFFE IWMP toolkit does not cater for the development of district IWMPs. This is a gap and should be raised at national forums/meetings.
3.3	The date of the Senqu IWMP is questioned and is to be confirmed. It was requested that a copy of the IWMP be submitted to KF.
3.4	According to the objectives for the 2010 IWMP, all LMS were to have appointed a WMO. Seeing that 32% of LMs have an appointed WMO, the status for the objective should be "work in progress" and not incomplete as per the draft IWMP. KF: Noted, this will be amended in the final IWMP.
3.5	Top 5 issues of waste management in the Joe Gqabi District Municipality <ol style="list-style-type: none"> 1. The permits for the landfill sites do not speak to NEMWA and there is a need it to be amended, for example, Lady Grey and Walter Sisulu have an incinerator that is working every day, Aliwal North, Jamestown, Steynsburg have incinerators, but that are not working. This is not allowed according to NEMWA but the old permits allow. Maclear is the only landfill site which has a permit in terms of NEMWA, all facilities have directives. 2. Joe Gqabi District Municipality is a poor district and needs more income and investment from recycling. Can a cumulative effect/monetary (economic) value be provided in the status quo of the IWMP for recyclable waste for different waste types to persuade communities to recycle. 3. The District is very rural, waste collection is not undertaken in rural areas. The landfill sites and waste collection service mainly focus on servicing the towns. As a result burning of waste occurs. 4. Insufficient budget planning done in the local municipalities. For example waste collection and management is not a priority therefore there no provision is made for fleet etc. 5. Waste awareness is insufficient with regard to informing the public of the need for quality recyclable waste from the waste stream. 6. Lack of resources and capacity to implement the IWMP
3.6	Can the air quality emissions (hypothetical emission gases and volumes) and consequences of waste burning be included to the IWMP. <i>Response from KF: A 1- page summary can be included.</i> Lyndon Mardon (LM) advised that draft state of air report has data that can be used. Waste burning is 2 nd biggest response item for the fire department. The lack of waste collection leads to burning of waste in rural areas. The solution is to collect the waste.
3.8	Not all district municipalities have IWMPs. The DFFE IWMP toolkit does not allow for the development of district IWMPs. Can DEDEAT to develop a district IWMP toolkit as a project so that each district can have an IWMP?
3.9	Is the WMO guideline development and performance plan needed as a goal? <i>Response from KF: A project or target is needed around empowerment of WMOs, WMOs are responsible for waste management in municipalities.</i>
3.10	Due to the lack of ownership of an MRF in Ugie by the municipality and community and financial constraints the MRF is not operational.

	<i>Response from KF: the IWMP will be updated to reflect this.</i>
3.11	Separation at source is important to local municipalities. Some local municipalities are already undertaking separation at source programmes. This target (target 3.2) should not be limited to Metros. The IWMP should be inclusive and not exclude anyone, local municipalities also have responsibilities in terms of separation at source. If there is a target for separation at source in the Provincial IWMP it can be put forward as a case to politicians and municipal management. If Local municipalities are receiving equitable share therefore separation at source can be driven by local municipalities.
3.12	Has DEDEAT considered the development of a Provincial WIS? <i>Response from TM: DEDEAT has not considered provincial waste management system as yet. The province can continue to use the national SAWIS, the province is able monitor information submitted to the SAWIS by Eastern Cape registered facilities.</i>
3.13	How can DEDEAT be more involved in waste awareness and assist LMs with waste awareness? <i>Response from TM: DEDEATs awareness covers a wide range of environmental issues including waste management awareness. The local municipalities are undertaking a lot of waste awareness campaigns as well even though they are not all reported to DEDEAT.</i>
3.14	Is information on waste awareness campaigns shared with DEDEAT? <i>Response from TM: This is shared in the quarterly waste forums by some of the municipalities. The development and improving of reporting templates by DEDEAT will assist in the reporting on all the waste activities in the Province</i>
4	WAY FORWARD
4.1	KF noted that comment period ends 24 October.
4.2	KF to circulate presentation and attendance register.
4.3	TM: Once the plan is complete, it will be released for public comment, thereafter it will be gazetted for implementation.

District	Alfred Nzo District Municipality
Venue	DEDEAT Regional Office, Alfred Nzo District Municipality, erf 206, Magistrate Street, Maluti, 47400
Date and time	17 October, 2018. 08.30 – 11.30
Stakeholders in attendance	DEDEAT, Alfred Nzo DM, Matatiele LM, Ntabankulu LM, Umzimvubu LM, UmAfrica Recyclers, GIBB
	ITEM
1	WELCOME / INTRODUCTION
1.1	Lyndon Mardon Tembela Mapukata (TM): Opened the meeting and welcomed attendees
2	PRESENTATION
2.1	KF presented the draft IWMP
3	SUMMARY OF DISCUSSION
3.1	Use the waste hierarchy to speak to climate change in the IWMP. KF: A 1 pager will be added to the IWMP which discuss climate change impacts associated with waste management
3.2	Include waste oil facilities that are treating used oil in the IWMP. There is 1 facility in East London and 1 large facility in Port Elizabeth.
3.3	Comments on waste facilities in the district: <ul style="list-style-type: none"> • Umzumvubu LM has a MRF • Bizana landfill is still under construction • Cedarville landfill/dump site in Matatiele is closed. Has been closed in 2008. • Ntabankulu landfill licence issued in 2014. Response from KF: The IWMP will be updated to reflect these comments
3.4	Only Ntabankulu LM IWMP was sent for endorsement.
3.5	Top 5 issues of waste management in the Alfred Nzo District Municipality <ol style="list-style-type: none"> 1. Disposal of tyres on landfill sites 2. Disposal of nappies on landfill sites 3. Landfill sites airspace not lasting as long as they were designed for. For example Matatiele landfill was supposed to have airspace for 19 years, but currently looks as if it will only have airspace for 9 years (half of the life landfill lifespan). <i>TM responded: The local municipality is not implementing waste hierarchy which could be the problem.</i> 4. The landfill sites are too close to the community leading to vandalism of infrastructure and theft of equipment. 5. Illegal dumping mainly builders rubble but differs per local municipality.
3.6	WMOs were designated in all Alfred Nzo local municipalities in 2017.
3.8	Waste collection services are seen as a liability to the municipality as most customers are indigent. Equitable share is insufficient to service all indigents.
3.9	TM: In response to a lack of municipalities undertaking full cost accounting exercises. Two sessions on the DFFE waste tariff model were conducted in the district by national DFFE, in 2014 and 2018.
3.10	What will the WMO performance and development plan be based (target 1.2 and 1.3)?

	<i>KF response: The template will be based on the DFFE guidelines for designation of waste management officers.</i>
3.11	Can DEDEAT assist to develop a template for operational plans for waste facilities.
3.12	Target 6.2 achieve a 10% waste collection increase is not feasible due to a lack of budget, waste tariff increases cannot be undertaken and low payment of tariffs. <i>TM response: Is equitable share filtering down to waste collection? Budget is available for waste collection based on the indigent grants.</i> Local municipality response: There is a lack of influence in the waste management dept. <i>TM: Also the indigent household lists are not updated so the volumes for waste collection cannot be quantified.</i> Local municipality: The issue of politicians in LM not listening to waste management staff should be raised with the internal auditors (auditor general).
3.13	People within the local municipality do not pay for waste collection service even though they are receiving the service as the "services" are billed on a lump sum basis and are not split per service. The community therefore refuses to pay any waste collection service. LM: this is a concern for the LM finance department and not the waste collection dept.
3.14	Should DEDEAT solely champion recycling? (Target 7.2). The Alfred Nzo district municipality has had 2 workshops to date with private companies. Private companies have also presented recycling initiatives and waste to energy to the district.
3.15	Can DEDEAT to investigate a penalty system when local municipalities are not implementing their responsibility in terms of waste management and management of landfill sites. This will assist the WMOs to fulfil their role. KF: Should a target around enforcement be added to the implementation plan?
3.16	Why are wastewater and effluent is not included in the IWMP? <i>Response from TM: The management of wastewater treatment works and management of sludge is the responsibility of the Department of Water and Sanitation. The treatment of wastewater and sewage sludge are no longer listed activities in terms of the NEM: WA.</i>
3.17	What is the requirement for review of permits issued under the Environment Conservation Act for landfill sites? <i>TM response: For now the focus is to licence all unlicensed landfill sites. Municipalities can commence the process of reviewing ECA licenses</i>
4	WAY FORWARD
4.1	KF noted that comment period ends 24 October.
4.2	KF to circulate presentation and attendance register.
4.3	TM: Once the plan is complete, it will be released for public comment, thereafter it will be gazetted for implementation.

District	O.R. Tambo District Municipality
Venue	DEDEAT Regional Office, O.R. Tambo District Municipality, 5th Floor Botha Sigacawu Building, Cnr Leeds Road and Owen Street, Mthatha
Date and time	18 October, 2018. 08.30 – 11.30
Stakeholders in attendance	DEDEAT, DFFE, O.R. Tambo DM, Nyandeni LM, Ingquza Hill LM, GIBB
	ITEM
1	WELCOME / INTRODUCTION
1.1	Tembela Mapukata (TM): Opened the meeting and welcomed attendees
2	PRESENTATION
2.1	KF presented the draft IWMP
3	SUMMARY OF DISCUSSION
3.1	The maps showing waste collection service should have more intervals so differences between local municipalities can be seen KF response: It is not possible to show all the different levels of collection service, the number of categories could maybe be increased to 10 e.g. 1-10%, 11-20%. There are tables in the report which give a breakdown of waste collection services per local municipality. Maps will be added to the district summary page to show waste collection per local municipality.
3.2	Comments on recycling programmes King Sabata Dalindyebo LM is running a waste separation at source programme Mhlontlo LM has a MRF. Port St Johns LM has a dirty MRF at the landfill site. <u>Data of a buy-back centres and MRFs will be provided by O.R. Tambo DM to KF.</u>
3.3	All OR Tambo landfill sites permits are showing on the SAWIS site. A password has been received from national DFFE which now allows the upload of permits.
3.4	Comments on the status of IWMP King Sabata Dalindyebo LM has a 2018 IWMP which has been endorsed by DEDEAT. <u>The IWMP is to be sent to KF.</u> Nyandeni IWMP was endorsed in 2014.
3.5	All LMs in the district have an appointed WMO. <u>Information to be submitted to KF.</u>
3.6	With regards to the data presented on the satisfaction of waste collection service, was this survey only of people receiving a waste collection service.

	KF response: yes the survey was limited to those receiving a collection service.
3.8	Top issues of waste management in the O.R. Tambo District Municipality <ol style="list-style-type: none"> 1. The municipalities are rural in nature and therefore cannot target all households for waste collection services 2. Lack of waste awareness in communities 3. There is lots of development outside the urban edge which creates peri-urban environments. These areas do not then receive a waste collection service. 4. Lack of available land for new landfill sites 5. Disposable nappies 6. Servicing of indigents is an issue. Indigent registers are not finalised. Funding in terms of equitable share is not used for waste management 7. WMO is no influencing budgetary decisions, budget for waste is not ring fenced.
3.9	Infrastructure development and provision of equipment and fleet for waste management is not a priority. TM response: WMOs are not well equipped to handle waste management issues in the local municipalities. Municipalities are not aware of the percentage of funds designated for waste management.
3.10	Target 1.5 of the implementation should also require municipalities to determine additional resources needed to implement the PIWMP. KF response: target will be amended.
3.11	Recycling should be formalised, and local municipalities should collect data on recyclables from waste collectors. This can be dealt with in the by-laws.
3.12	WMO training requirements should include training on NEMWA, EMI training, waste management, etc. Training will assist the enforcement of waste management.
3.13	By-laws are enforced by traffic officers, but the traffic officer focus on traffic violations. Fines are not being issued for illegal dumping. The entire exercise of developing by-laws was in vain as they are not enforced.
4	WAY FORWARD
4.1	KF noted that comment period ends 24 October.
4.2	KF to circulate presentation and attendance register.
4.3	TM: Once the plan is complete, it will be released for public comment, thereafter it will be gazetted for implementation.

District	Sarah Baartman District Municipality
Venue	DEDEAT Regional Office, Sarah Baartman District Municipality, Collegiate House, Cnr Belmont Terrace and Castle Hill, Central, Port Elizabeth
Date and time	22 October, 2018. 08.30 – 11.30
Stakeholders in attendance	DEDEAT, Sarah Baartman DM, Blue Crane Route LM, SANRAL, GIBB
	ITEM
1	WELCOME / INTRODUCTION
1.1	Tembela Mapukata (TM): Opened the meeting and welcomed attendees
2	PRESENTATION
2.1	KF presented the draft IWMP
3	SUMMARY OF DISCUSSION
3.1	Jeff Govender (JG): Can SAWIS give you the details of waste generation split between LM and private industry? KF: No, SAWIS only presents rolled up data
3.2	JG: Has the appeal process for the Coega SEZ hazardous landfill approval been concluded yet? KF: No, the appeal process is still underway.
3.3	JG: Koukamma LM have started using (for last few years) an illegal landfill on private land. JG to provide details to KF.
3.4	JG: Humansdorp MRF. Kouga LM have put out a tender for a private-public partnership to establish and run a facility at the Humansdorp landfill. Kouga LM spent R25M on weighbridges, fencing, guard-houses etc. at Humansdorp and Hankey landfills. At Hankey landfill guardroom has been stripped. At Humansdorp, fencing has been stripped. Neither weighbridges are working because electronics at guardhouses have been removed.
3.5	JG: Beyers Naude. Challenge is that with amalgamation, waste has not been allocated any budget. Will only be funded in 2021. Needing approx. R40M. DEDEAT encouraged them to look at recycling to reduce waste to landfill. DEDEAT will engage Coke and Petco to assist. Suggested that they do an in-house assessment of their landfills to rank compliance. Also asked them to get the volumes of waste generated per town. LM thinking about appointing small transporters (bakkies) per town to do collection.
3.6	Masixole Ntongana (MN): A MRF at Alexandria has been completed but not yet handed over for operations
3.8	MN: Graaf Reinet: Has a transfer station. Intention was to do separating of waste here and upgrade it, but nothing has happened, and it continues just to be used as a transfer station.
3.9	KF: We were not able to meet with Dr Beyers Naude. JG: this is because directors and senior people in community services have been suspended or fired
3.10	TM: not sure if Bathurst garden and Canon Rocks sites are still in existence. KF GIBB audited the sites a few years back.. KF: to issue previous Sarah Baartman (Cacadu) landfill audit report to JG TM
3.11	JG: Need to qualify the fact that Dr Beyers does not have its own IWMP. Explain IWMP history of previous constituting

	LMs.
3.12	TM: Need to differentiate between municipalities having just completed their IWMP and those which have been endorsed by MEC. Only NMBM has completed the endorsement process.
3.13	<p>Top issues in the Sarah Baartman District Municipality</p> <ul style="list-style-type: none"> - Nomsa Mgicpe (NM): There is no funding for waste management in Blue Crane. All the funding is diverted to housing and roads. There is no capital budget in the IDP for waste management. - JG: MIG funding is not being apportioned correctly. The split is specified but not adhered to. - Chris Julius (CJ): The LMs do not action any of the findings in the landfill performance audits. - NM: There is no feedback from the DEDEAT. They are not supporting LMs. - JG: Acknowledges that DEDEAT is not responding to LMs quickly but DEDEAT is not getting the feedback needed from DFFE. They have submitted reports to DFFE but no response or site visit. - Nene Songxaba (NS): It is hard for SANRAL to comply because there is no database of licensed sites, and sites are not manned so no one can sign to prove you dumped there correctly. - NM: There are no trained peace officers in LMs hence no enforcement of bylaws is being done. - JG: Integration of provincial and national competencies.
	Separation at source: NM: Have tried to do separation at source in Blue Crane. Did not work because residents say that they want to be paid to do separation at source. Also private recyclers are taking the bags and reselling them. There is also a higher cost for the municipality to supply a 2-bag system but there are no funds.
	JG: Suggests that before we commit Sarah Baartman District Municipality to doing a waste infrastructure masterplan, we need to get formal correspondence from SBDM to confirm if they would access this. SBDM lady to get confirmation. JG then called the SBDM and they said they would not be able to assist with this unless DEDEAT funds the plan. JG to request SBDM to send this in writing.
	JM: Kate to add to implementation plan that DEDEAT approval processes for housing / residential developments that they must include recycling drop off facilities.
	NM: Blue Crane established a waste management forum. They coordinate awareness campaigns. They report the number and extent of the campaigns to the district. For example, they invite members of the community to dumpsites when they clean it up.
	KF: Is it reasonable to say that DEDEAT should audit all facilities annually. CJ: In metro, there are currently 5 facilities registered to N&S and 3 waste licenses. KF: Should be reasonable to keep this as a target.
	JG: when talking about fining LMs, must remember that there is a process to the Intergovernmental Relations Act, in which they would have to prove that they have engaged the LMs properly.
4	WAY FORWARD
4.1	KF noted that comment period ends 24 October.
4.2	KF to circulate presentation and attendance register.
4.3	TM: Once the plan is complete, it will be released for public comment, thereafter it will be gazetted for implementation.

District	Amathole District Municipality
Venue	DEDEAT Head Office, Beacon Hill, Hockley Close, King Williams Town
Date and time	23 October, 2018. 10.00 – 13.00
Stakeholders in attendance	DEDEAT, DFFE, Amathole DM, Raymond Mhlaba LM, Great Kei LM, Eastern Cape Parks and Tourism Agency, GIBB
	ITEM
1	WELCOME / INTRODUCTION
1.1	Lulama Daniels (LD): Opened the meeting and welcomed attendees
2	PRESENTATION
2.1	KF presented the draft IWMP
3	SUMMARY OF DISCUSSION
3.1	There is a landfill at Morgan's bay for garden waste with licence for closure – Kei Mouth also has a site with closure licence
3.2	No landfill in Hamburg, transfer station at Peddie
3.3	Seymour landfill non operational
3.4	LD: Rieger's is not landfill site, rather garden refuse transfer station
3.5	LD: No KWT Tannery, became illegal dumpsite
3.6	LD: KF to review handover documents from Department of Water Affairs to Department of Forestry, Fisheries and the Environment. Buffalo City Metro IWMP is not finalised and should not be used as an information source for PWIMP
3.8	<p>Top 5 issues specific to waste management in Amathole DM and BCMM</p> <ul style="list-style-type: none"> • Funding for waste management activities lacking • ADM: Difficulty in designating/approving a WMO due to commitment issues

	<ul style="list-style-type: none"> • IWMPs are expiring, lack of action in municipalities to review in-house or appoint a service provider • Instability within municipalities • Lack of capacity in municipalities (inexperience)
3.9	LD: funding should not be a problem because national treasury specifies the allocation of equitable share for waste management, but municipalities use this budget in other areas
3.10	LD: IWMPs cannot be implemented or funded for if they do not make it to the IDP process. Not a financial problem but a problem of developing IWMPs that have shortcomings like no public participation process that render them non credible and therefore no implementation of IWMPs
3.11	LD: Budgets are supplied when implementing IWMPs to fund waste management in rural areas, but are used rather on urban areas (areas of focus) rather than where it should be used
3.12	Target 1.1, it might not be viable to have WMOs in place by Year 2. If this requirement does not filter down into local municipality IWMPs or the IWMPs are not implemented
3.13	LD: is mandate of municipality to collect waste. Municipalities are still accountable for implementation of separation at source and should monitor this to allow enabling environment for separation source. Responsibility of Municipality
3.14	KF and LD: Municipalities should review the effectiveness of operational plans for waste management facilities
3.15	LD: Owner of facility must contact EAP for facility licence to get the operational plans for facilities, it is owned by the owner who paid for the plan. Facility owner must sign operational plan for it to be credible. KF: Owner of licence to review the operational plan internally
3.16	LD: Target 8.6 DEDEAT should serve more of a support role than an enforcement role. Municipalities should address non-compliance internally. If DEDEAT issues fines this will result in money being spent on the fine instead of addressing the issues. When DEDEAT tries to fine municipalities, they appeal the fines and say that they don't have funding. KP: DEDEAT should give municipalities an opportunity to address findings before issuing fines.
3.17	LD: Fines should be for individuals and not for municipality. The official/staff member that is conducting the discrepancy should be fined rather the municipality itself. Municipalities need to be able to issue fines internally for their staff that are non-compliant
3.18	Municipal managers do not react to DEDEAT when they issue non-compliance reports. If DEDEAT issued fines, it would make municipal managers take compliance issues raised by DEDEAT more seriously
3.19	LD: There should be a protocol to follow with court involvement around fining for non-compliance
4	WAY FORWARD
4.1	KF noted that comment period ends 24 October, the deadline has been extended to 26 October for Amathole District Municipality
4.2	KF to circulate presentation and attendance register.
4.3	TM: Once the plan is complete, it will be released for public comment, thereafter it will be gazetted for implementation.

District	Nelson Mandela Bay Metropolitan Municipality
Venue	GIBB Office, Greyville House, Cnr Cape & Greyville Roads, Greenacres, Port Elizabeth
Date and time	25 October 2018. 11.30 – 13.30
Stakeholders in attendance	NMBM, GIBB
	ITEM
1	WELCOME / INTRODUCTION
1.1	KF (KF): Opened the meeting and welcomed attendees
2	PRESENTATION
2.1	KF presented the draft IWMP
3	SUMMARY OF DISCUSSION
3.1	Top issues in the NMBM <ul style="list-style-type: none"> • Lack of funding direction to waste management projects. MIG funding is not correctly distributed and is used for other services • No designated WMO • Lack of enforcement of by-laws due to a lack of appointed peace officers • Lack of support for DFFE Local Government Support • Lack of implementation of plans such as IWMP • Lack of technical information available to municipalities
3.2	Can DEDEAT develop a database which lists successful municipal waste initiatives e.g. street bins and provide contact details so other municipalities know who to contact for advice?
3.3	Target 3.5, all the construction and demolition waste (C&DW) brought onto the metros two landfill sites is used for cover material. It would not be viable to crush and sell C&DW.
3.4	Landfill airspace is a concern in the metro, there are plans to expand Koedoeskloof
3.5	Lack of intergovernmental communication e.g. the metro were not involved with the EIA for the proposed Coega regional general and hazardous landfill site.

3.6	Lack of support from DFFE Local Government Support, there is a DFFE representative in the metro but they haven't engaged with the waste department.
3.8	The province should develop a set of editable public participation materials, local municipalities often lack the budget or skills to develop materials in-house.
4	WAY FORWARD
4.1	KF noted that comment period ends 24 October, the deadline has been extended to 26 October for NMBM
4.2	KF to circulate presentation and attendance register.
4.3	KF: Once the plan is complete, it will be released for public comment, thereafter it will be gazetted for implementation.

Appendix E: Summary of Funding Agencies Applicable to Waste Management

There are various South Africa and international agencies as well as governmental organisations which provide funding for waste management projects. A summary of some of these agencies is provided below. This list should not be considered as exhaustive and is included for information purposes.

Table 534: Details of funding agents

Fund Name	Funding Agency	Qualifying Recipients	Purpose and type of projects funded (waste specific)	What is funded/ not funded	Funding cycle
South Africa					
The Green Fund	DFFE with DBSA as implementing agent	Municipalities	Sustainable waste management and recycling	Project development and / or investment in green projects and programmes; Capacity building. All funded.	
The Cooperative Incentive Scheme (CIS)	Department of Trade & Industry	Primary co-operatives	Feasibility assessments, business, manufacturing etc. project up to a maximum value of R350,000	Business Development; Technology improvements, Machinery, commercial vehicles, infrastructure (electricity, boreholes etc.)	
DBSA Development Fund	DBSA	Municipalities, state-owned enterprises, public-private partnerships, public-public partnerships and private sectors	Physical, social and economic infrastructure projects. DBSA's goal is to improve the quality of life of the people of the region.	Municipal operations, maintenance and capacity building.	
The Jobs Fund	Government Technical Advisory Committee (GTAC)	Public, private and non-governmental organisations	Activities that significantly contribute to job creation. Minimum funding requests are R10 million	<ul style="list-style-type: none"> Enterprise development Infrastructure investment Support for work seekers Institutional capacity building	
Expanded Public Works (EPWP) Incentive Grants.	National Department Public Works (DPW)	Municipalities	Labour intensive work, including waste and environmental projects.	Salary payments for temporary workers. Workers must not be paid less than R50/day	Annual
Municipal Infrastructure Grant (MIG)	National Treasury	Municipalities	All infrastructure related needs	Physical infrastructure	
Infrastructure Finance Corporation Limited (INCA)	Corporate Investment (CSI)	Municipalities	All infrastructure related needs	Capacity building, socioeconomic development and infrastructure projects	
Small Enterprise Finance Agency (SEFA)	Department of Small Business Development	Qualifying SMMEs and Co-operatives	For social development and to advance the human rights of women	Financial products and services provide to the following sectors: <ul style="list-style-type: none"> Services Manufacturing 	Ongoing

					<ul style="list-style-type: none"> • Agriculture • Construction • Mining • Green industries 	
National Empowerment Fund (NEF)	National Empowerment Fund (NEF)	Black entrepreneurs		Support Broad-Based Black Economic Empowerment (BB-BEE)	Various	Ongoing
National Youth Development Agency (NYDA)	National Development Agency (NYDA)	Youth Agency	Formal and informal businesses, co-operatives	Youth development	Individual grants awarded to formal and informal businesses that are in start-up or development phase of their business	Ongoing
International						
Austrian Development Coordination	Austrian Embassy		Civic, community government structures	Capacity building of civil, community and local government structures.	Empowerment of civil society, poverty reduction needs of children and people with disabilities	Ongoing
British Foreign & Commonwealth Office Global Opportunity Fund (FCO Global Opportunity Fund)	British Embassy		Partners from civil society, NGO's and others.	Support of the country's specific developmental needs. Government affiliated social development initiatives.	Depends on nature and merit of application	Ongoing
French Development Aid	French Agency for Development		Various, including municipalities	Development of basic infrastructures and essential services	Infrastructure, water connections, sanitation.	
Development cooperation	German Technical Cooperation (GTZ)			Rural development, social development, environment and climate change.	Various. Depends on nature and merit of application	Ongoing
Tirelo Boscha, Public Service Improvement Facility	Belgium Development Agency (BTC South Africa)		All government departments, their implementing agencies and non-state actors involved in public service delivery.	Any public service delivery related projects, particularly research and pilot projects focusing on public service delivery.	Implementation costs including fees, travel costs, supplies. Infrastructure costs are not funded.	Application open windows approximately annually.
Overseas Development Assistance	Japan International Cooperation Agency (JICA)		Governments and their agencies.	Various including community development, environment, infrastructure projects	Various	Ongoing
Development cooperation	Swedish International Development Cooperation Agency (SIDA)		Municipalities	Various including economic and environmental partnerships.	Grants, training and technical assistance.	Ongoing
Turkish International	Turkish Embassy		Municipalities	Economic and social	Grants for various needs, including	Ongoing

Cooperation and Development Agency (TIKA)				development	financing infrastructure and construction projects.	
Abu Dhabi Fund for Development	UAE Embassy	Municipalities	Economic and social development in developing countries. Financing for development projects.	Various	Ongoing	
UNDP Small Grants Programme and other UNDP and partner funds.	United Nations Development Programme.	Municipalities	Enhancing service delivery, economic development, and sustainable development, and enhancing social services.	Various	Ongoing	
USAID	US Agency for International Development	Municipalities	To develop health, economic growth, education and democracy.	Various	Ongoing	
European Investment Bank (EIB)	Social Investment (CSI)	Public and private sector investments, and mixed public-private ventures	Under an agreement with the South African Government, it finances: <ul style="list-style-type: none"> • Productive investment • Infrastructure, including municipal infrastructure Assisting development in South Africa	Provides finance and expertise for projects supporting innovation, SMEs, infrastructure and climate action	Ongoing	

LOCAL AUTHORITY NOTICES • PLAASLIKE OWERHEIDS KENNISGEWINGS**LOCAL AUTHORITY NOTICE 663 OF 2023****Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013
(Act 16 of 2013)****ERF 8, MOUNT ROAD, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that conditions B. (a-d) and (f) in Deed of Transfer No. T25992/2013 and any subsequent deed applicable to Erf 8, Mount Road is hereby removed.

LOCAL AUTHORITY NOTICE 664 OF 2023**Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013
(Act 16 of 2013)****ERF 76, SUMMERSTRAND, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that conditions B. 6. (a-d); C. and D.6. in Deed of Transfer No. T1358/88 and any subsequent deed applicable to Erf 76, Summerstrand is hereby removed.

LOCAL AUTHORITY NOTICE 665 OF 2023**Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013
(Act 16 of 2013)****ERF 186, FRAMESBY, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that conditions B. 5. and B. 6. (a-d) in Deed of Transfer No. T14720/2021 and any subsequent deed applicable to Erf 186, Framesby is hereby removed.

LOCAL AUTHORITY NOTICE 666 OF 2023**Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013
(Act 16 of 2013)****ERF 258, CLARENDON MARINE, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that conditions B. 6. and B. 7. (a-b) in Deed of Transfer No. T7142/2021 and any subsequent deed applicable to Erf 258, Clarendon Marine is hereby removed.

LOCAL AUTHORITY NOTICE 667 OF 2023**Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013
(Act 16 of 2013)****ERF 684, KABEGA, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that conditions B. 5. (a-d) in Deed of Transfer No. T14492/2021 and any subsequent deed applicable to Erf 684, Kabega is hereby removed.

LOCAL AUTHORITY NOTICE 668 OF 2023**Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013
(Act 16 of 2013)****ERF 749, MILL PARK, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that conditions B. 1. – 3. in Deed of Transfer No. T7976/2020 and any subsequent deed applicable to Erf 749, Mill Park is hereby removed.

LOCAL AUTHORITY NOTICE 669 OF 2023**Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013
(Act 16 of 2013)****ERF 780, SUMMERSTRAND, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that conditions C. 5. (a-c) in Deed of Transfer No. T397/2021 and any subsequent deed applicable to Erf 780, Summerstrand is hereby removed.

LOCAL AUTHORITY NOTICE 670 OF 2023**Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013
(Act 16 of 2013)****ERF 928, NEWTON PARK, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that conditions C. 4. (a-d) in Deed of Transfer No. T45145/2013 and any subsequent deed applicable to Erf 928, Newton Park is hereby removed.

LOCAL AUTHORITY NOTICE 671 OF 2023**Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013
(Act 16 of 2013)****ERF 946, FAIRVIEW, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that conditions B. 21. (b) in Deed of Transfer No. T21461/2008 and any subsequent deed applicable to Erf 946, Fairview is hereby removed.

LOCAL AUTHORITY NOTICE 672 OF 2023**Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013
(Act 16 of 2013)****ERF 982, NEWTON PARK, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that conditions C. 4. (a-d) in Deed of Transfer No. T13514/2021 and any subsequent deed applicable to Erf 982, Newton Park is hereby removed.

LOCAL AUTHORITY NOTICE 673 OF 2023**Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013
(Act 16 of 2013)****ERF 1100, KABEGA, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that conditions C. 5. (a-d) in Deed of Transfer No. T61254/2015 and any subsequent deed applicable to Erf 1100, Kabega is hereby removed.

LOCAL AUTHORITY NOTICE 674 OF 2023**Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013
(Act 16 of 2013)****ERF 1226, MILL PARK, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that conditions I.C. (d); D. (d); II.C. (a) and (d); D.(d) and E. (1) in Deed of Transfer No. T16496/2014 and any subsequent deed applicable to Erf 1226, Mill Park is hereby removed.

LOCAL AUTHORITY NOTICE 675 OF 2023**Nelson Mandela Bay Municipality (EASTERN CAPE)****Removal of Restrictions in terms of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013)****ERF 384, Charlo, PORT ELIZABETH, EASTERN CAPE**

Under Section 47 of the Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) and upon instructions by the Local Authority, a notice is hereby given that condition/s B.7(a), (b) and (d) in Deed of Transfer No. T84490/2000 applicable to Erf 384, Charlo is/are hereby removed.

Closing times for **ORDINARY WEEKLY** **2023** **EASTERN CAPE PROVINCIAL GAZETTE**

*The closing time is **15:00** sharp on the following days:*

- **23 December**, Friday for the issue of Monday **02 January 2023**
- **30 December**, Friday for the issue of Monday **09 January 2023**
- **09 January**, Monday for the issue of Monday **16 January 2023**
- **16 January**, Monday for the issue of Monday **23 January 2023**
- **23 January**, Monday for the issue of Monday **30 January 2023**
- **30 January**, Monday for the issue of Monday **06 February 2023**
- **06 February**, Monday for the issue of Monday **13 February 2023**
- **13 February**, Monday for the issue of Monday **20 February 2023**
- **20 February**, Monday for the issue of Monday **27 February 2023**
- **27 February**, Monday for the issue of Monday **06 March 2023**
- **06 March**, Monday for the issue of Monday **13 March 2023**
- **13 March**, Monday for the issue of Monday **20 March 2023**
- **17 March**, Friday for the issue of Monday **27 March 2023**
- **27 March**, Monday for the issue of Monday **03 April 2023**
- **31 March**, Friday for the issue of Monday **10 April 2023**
- **06 April**, Thursday for the issue of Monday **17 April 2023**
- **17 April**, Monday for the issue of Monday **24 April 2023**
- **21 April**, Friday for the issue of Monday **01 May 2023**
- **28 April**, Friday for the issue of Monday **08 May 2023**
- **08 May**, Monday for the issue of Monday **15 May 2023**
- **15 May**, Monday for the issue of Monday **22 May 2023**
- **22 May**, Monday for the issue of Monday **29 May 2023**
- **29 May**, Monday for the issue of Monday **05 June 2023**
- **05 June**, Monday for the issue of Monday **12 June 2023**
- **09 June**, Friday for the issue of Monday **19 June 2023**
- **19 June**, Monday for the issue of Monday **26 June 2023**
- **26 June**, Monday for the issue of Monday **03 July 2023**
- **03 July**, Monday for the issue of Monday **10 July 2023**
- **10 July**, Monday for the issue of Monday **17 July 2023**
- **17 July**, Monday, for the issue of Monday **24 July 2023**
- **24 July**, Monday for the issue of Monday **31 July 2023**
- **31 July**, Monday for the issue of Monday **07 August 2023**
- **04 August**, Friday for the issue of Monday **14 August 2023**
- **14 August**, Monday for the issue of Monday **21 August 2023**
- **21 August**, Monday for the issue of Monday **28 August 2023**
- **28 August**, Monday for the issue of Monday **04 September 2023**
- **04 September**, Monday for the issue of Monday **11 September 2023**
- **11 September**, Monday for the issue of Monday **18 September 2023**
- **18 September**, Monday for the issue of Monday **25 September 2023**
- **22 September**, Friday for the issue of Monday **02 October 2023**
- **02 October**, Monday for the issue of Monday **09 October 2023**
- **09 October**, Monday for the issue of Monday **16 October 2023**
- **16 October**, Monday for the issue of Monday **23 October 2023**
- **23 October**, Monday for the issue of Monday **30 October 2023**
- **30 October**, Monday for the issue of Monday **06 November 2023**
- **06 November**, Monday for the issue of Monday **13 November 2023**
- **13 November**, Monday for the issue of Monday **20 November 2023**
- **20 November**, Monday for the issue of Monday **27 November 2023**
- **27 November**, Monday for the issue of Monday **04 December 2022**
- **04 December**, Monday for the issue of Monday **11 December 2023**
- **11 December**, Monday for the issue of Monday **18 December 2023**
- **18 December**, Monday for the issue of Monday **25 December 2023**

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