

OVERSTRAND MUNICIPALITY



INTEGRATED WASTE MANAGEMENT PLAN (5th Generation)

(Draft Report)

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OVERSTRAND MUNICIPALITY

INTEGRATED WASTE MANAGEMENT PLAN (Fifth Generation)

(Draft Report)

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ABBREVIATIONS

CBD	Central Business District
DEADP	The Department: Environmental Affairs and Development Planning
HCGW	Health Care General Waste
HCRW	Health Care Risk Waste
HDPE	High Density Polyethylene
IDP	Integrated Development Plan
IPWIS	Integrated Pollutant and Waste Information System
IWMP	Integrated Waste Management Plan
IWMSA	Institute of Waste Management of South Africa
KPI	Key Performance Indicator
LDPE	Low Density Polyethylene
LM	Local Municipality
MEC	Member of the Executive Council
MRF	Material Recovery Facility
NDP	National Development Plan
NWMS	National Waste Management Strategy
NU	Non-urban
ODM	Overberg District Municipality
PET	Polyethylene terephthalate
PVC	Polyvinyl Chloride
SAWIS	South African Waste Information System
SDF	Spatial Development Framework
SP	Sub-place
WCDM	West Coast District Municipality
WCIWMP	Western Cape Integrated Waste Management Plan
WCPSDF	Western Cape Provincial Spatial Development Framework
WMO	Waste Management Officer
WWTW	Waste Water Treatment Works

OVERSTRAND MUNICIPALITY

INTEGRATED WASTE MANAGEMENT PLAN

FIFTH GENERATION

EXECUTIVE SUMMARY

INTRODUCTION AND GENERAL DESCRIPTION

JPCE (Pty) Ltd has been appointed by the Overstrand Municipality in the Overberg District of the Western Cape Province to assist in developing their fifth generation Integrated Waste Management Plan (IWMP). This fifth generation IWMP will be developed during 2019 and 2020 and will replace the previous generation IWMP after obtaining Council approval.

The development of the IWMP is necessary as it is an integral tool to identify current needs and act as a guide towards sustainable waste management. With regular updates of this document the changing needs as well as progress in the waste management field can be tracked and strategies adapted accordingly. It also provides a framework for budgeting purposes. The IWMP must be incorporated as part of each Municipality's Integrated Development Plan (IDP), but is submitted as a separate document. The IWMP also shows alignment of its goals with the Western Cape IWMP, the District Municipality IWMP and the National Waste Management Strategy (NWMS). This 5th generation IWMP improved upon the previous generation document in that progress has been made with shortcomings identified in the previous plan.

The scope of this local municipal IWMP includes an investigation into the current state of the solid waste management system of the Overstrand Local Municipality and provides the overview thereof. This investigation aims to include all the various aspects of the solid waste management system which ranges from legislation, waste types and generation, waste facilities and infrastructure to financing and all other details as listed under the terms of reference.

The status quo is evaluated in order to determine the gaps and needs of the system. The scope also includes goals and objectives to improve the system where required but is limited to implementation on the local authority level. The implementation items in order to improve the waste management system and to achieve goals are coupled with a monitoring and review programme to ensure that the IWMP is up to date and is implemented.

The primary objective of Integrated Waste Management (IWM) planning is to integrate and optimise waste management, in order to maximise efficiency and minimise the associated environmental impacts and financial costs and to improve the quality of life of all residents within the Overstrand Municipality.

The Plan takes particular note of importance of local authority waste management planning. This document underlines the following principles of the National Waste Management Strategy:

- The prevention of waste generation;
- The recovery of waste of which the generation cannot be prevented, and
- The safe disposal of waste that cannot be recovered.

The Plan will address all areas of waste management – from waste prevention and minimisation (Waste avoidance), to its collection, storage, transport, treatment, recovery and final disposal. It will not only address the practicalities of waste management in context of this Municipality, but also the issues of public education and changing concepts, as these are vital to a successful management system.

POLICY AND LEGISLATION

All applicable waste management legislation is listed and discussed under section 2 of the IWMP. The latest published legislation have been added in the IWMP update, which mainly consists of Norms & Standards published under the Waste Act as well as the Draft Updated National Waste Management Strategy since the previous Overstrand IWMP.

WASTE QUANTITIES AND TYPES

The Overstrand Municipality operates only one landfill facility for the disposal of waste, but also makes use of the Karwyderskraal Regional Landfill, licensed to the Overberg District Municipality. The waste collected in Overstrand West is transported to the Karwyderskraal Landfill and waste from Overstrand East is transported to the Gansbaai Landfill. Collection and transfer is also via transfer stations and drop-offs located at Pringle Bay, Betty's Bay, Kleinmond, Hawston, Hermanus, Voëlklip, Pearly Beach and Stanford.

A waste characterisation study was undertaken by Enviroserv. This is an on-going study and new results will be added and compared in upcoming years. The latest available results have been included in this IWMP. 20 Enviroserv staff members were trained and conducted the separation, categorisation and weighing under supervision. Waste from the completed study was appropriately separated for recycling and the remainder lawfully disposed. Samples from areas throughout the entire Overstrand were collected for the study.

Based on the combined results obtained to date, it is clear that the major fraction of the sampled waste stream consists of organic waste (49.53%). Future studies will further expand on this category in order to determine the percentage food waste, garden waste etc. for the purpose of refined diversion strategies. Other larger fractions are glass (14.05%), recyclable plastic (11.68%), cardboard (6.11%) and paper (5.53%). These fractions have potential for recovery, depending on contamination levels and feasibility of successful sorting. Based on these results alone, the biggest diversion potential lies with the organic waste fraction.

Waste generation rates were determined from the available waste data. Waste disposed, diverted and origin areas are measured and recorded separately. According to the data for February 2019 to January 2020, a total of 91,131.21 tonnes of waste were generated, which includes household waste, builder's rubble, organic and garden waste handled separately from household collection as well as sewage sludge, screenings and asbestos. An average waste generation rate of 1.5kg per person per day was determined for the Overstrand. Total annual waste landfilled in the Overstrand is 47,268tonnes. An average monthly waste diversion rate of 48% is currently achieved by recycling (currently only at Gansbaai MRF), garden waste chipping, building rubble diversion and composting.

Aquila Environmental conducted a Hazardous Waste and Health Care Risk Waste survey in the Overstrand during December 2019.

EXISTING WASTE MANAGEMENT STRUCTURE, SYSTEMS AND PRACTICES

The municipal waste management responsibilities lie with the department of Community Services and Infrastructure and Planning. The Manager: Solid Waste Planning is Mr Craig Mitchell.

Provision must be made for the continuous training and education of the Overstrand waste management employees. Waste management information sharing/capacity-building events such as the Departmental Waste Forum, Waste Khoro and the IWMSA's WasteCon should be attended by waste management employees determined by the Municipality.

The Solid Waste organogram is shown under Section 2.4. The number of vacant posts are shown on the Organogram, with 9 posts shown as vacant. These posts need to be filled as part of the IWMP implementation plan.

The list of municipal waste collection vehicles and their general condition is provided as an Annexure to the report. It is advisable that collection vehicles should ideally not be operated beyond 7 to 8 years in age, since the maintenance costs increases dramatically with age, as well as down-time which also has cost-implications. It is recommended that all vehicles older than 8 years, as well as all vehicles with a condition indicated as "bad", are evaluated to determine the need for replacement. In the event that a vehicle is temporarily out of operation, its function is covered with a vehicle/s from other departments as solid waste collection takes priority.

Overstrand has been divided into collection areas that have a fixed day per week when waste is collected. All residential households receive door-to-door waste collection services and commercial waste is collected as shown in the tables.

As reported in the IDP, 100% of households receive kerb side collection once per week. All the urban and informal areas of Overstrand Municipality have access to at least a basic refuse removal service. No refuse removal service exists in the rural areas and farming communities, but all the rural areas have access to drop-off facilities and landfills, at the applicable tariffs.

The latest records show that 100% of the total 7749 registered indigent households receive free basic waste collection services.

All received complaints regarding solid waste are logged on the internal system. A work order is created when a complaint is received and sent to the appropriate responsible person. This person must then address the complaint and report back in order to complete the order. A grand total of 331 reported and completed faults/complaints from July 2018 to June 2019 were recorded. Complaints can be logged at the following numbers for each area:

Hermanus:	(028) 313 8000
Gansbaai:	(028) 384 8300
Kleinmond:	(028) 271 8400
Stanford:	(028) 341 8500

Recycling currently only takes place at the Gansbaai MRF, contributing to 1% diversion of the generated waste stream on average. Recycling in Hermanus has been temporarily suspended until the new MRF has been constructed. This new development will include a MRF, public drop-off and green waste chipping facility. The recycling market is currently very unfavourable for recyclers, fetching such low prices for recycling materials that many recyclers have closed their businesses. It is estimated that should the market recover, diversion achieved from recycling can be raised to 5% after the Hermanus MRF comes into operation.

Extensive and successful public awareness and education is done in the Overstrand regarding solid waste. Examples include Storyteam Storifactory: A puppet show and theatre teaching learners about nature conservation, waste management and recycling; printed and digital newsletters, website information, social media announcements, media interviews and talks & presentations.

Overstrand Municipality currently operates only one landfill, the Gansbaai Landfill. The latest audit was conducted by JPCE (Pty) LTD in November 2019 and a compliance score of 97.7% was achieved. The remaining disposal airspace at the Gansbaai Landfill is estimated to provide sufficient disposal capacity until 2032. This estimate takes in to account current diversion rates achieved and an estimated waste stream growth rate of 3% per annum.

There are a number of closed landfills located in the Overstrand Municipality. The closure cost estimates are indicated as well as the planned financial years in which each site is planned to be rehabilitated in the IWMP implementation section. The cost estimates are based on issued license requirements and expected requirements for rehabilitation. The costs must be updated at least annually to include latest legislation and/or requirements following final rehabilitation design. The closure licenses for all these closed landfills have been issued.

The Overstrand currently only has one fully operational transfer station at Kleinmond since the Hermanus transfer station was severely damaged. The Hermanus transfer station is temporarily used until the new MRF and drop-off has been constructed. Collection vehicles in the Hermanus area will then travel directly to Karwyderskraal Landfill and not via the transfer station. There are various public drop-offs located throughout the Overstrand. The drop-offs do not require licensing due to their size.

The hazardous waste generated in Overstrand Municipality is transported to the Vissershok Waste Management Facility (VWMF). This is a licenced hazardous waste management facility situated some 800m west of the N7 at Vissershok north west of the City of Cape Town and is operated and audited in terms of its licence conditions.

The latest operational and capital budgets, latest audited financial results and the latest approved solid waste tariffs and billing are shown under section 2.5 of the plan.

GAPS AND NEEDS ASSESSMENT

The main gaps and needs identified for waste management within the Overstrand Municipality are discussed in Chapter 3. They are:

- Legislation – Adherence to hazardous waste and landfill closure legislation. Overstrand integrated waste management by-laws update as part of the 5th generation IWMP implementation;
- Waste generation quantities – Continual accurate recording of waste data and tonnages and continuing the waste characterisation study in greater organic waste detail;
- Waste transfer and disposal needs – Damage to transfer facilities due to civil unrest. Re-establishment of the Hermanus MRF, drop-off and chipping facility is required.
- Waste minimisation recycling and reuse initiatives – New MRF required for Hermanus, increased organic waste diversion to meet future targets (currently on-target);
- Institutional and organisational needs – fill all vacant positions and appoint dedicated waste management personnel;
- Identification of alternatives – Continue to look for ways in which to reduce waste to landfill by beneficiation the waste in innovative ways, with a focus on organic waste and builder's rubble.
- Funding mechanisms – Improvements require funding and new funding mechanisms need to be explored continuously. Capital funding is required in order to successfully rehabilitate all closed landfills as per requirements and stipulated time-frames;
- Public awareness and education – improve on successful public awareness and education campaigns and develop new ones.

IMPLEMENTATION STRATEGY, MONITORING AND REVIEW

Based on the gaps and needs identified, aligned goals of the IWMP, and planned projects by the municipality, an implementation strategy was developed that contains the objectives, timeline and required resources for implementation of the IMWP. These goals are linked to the main goals contained in the Western Cape Provincial IWMP. The main goals and associated strategic objectives are indicated in the tables below. Refer to Section 4: Strategy and Implementation for detailed implementation:

Goal 1: Strengthened education, capacity and advocacy towards Integrated Waste Management	
Objectives	
Strategic Objective 1:	Facilitate consumer and industry responsibility in integrated waste management
Strategic Objective 2:	Promote and ensure awareness and education of integrated waste management
Strategic Objective 3:	Build and strengthen waste management capacity

Goal 2: Improved integrated waste management planning and implementation for efficient waste services and infrastructure	
Objectives	
Strategic Objective 1:	Facilitate municipal waste management planning
Strategic Objective 2:	Promote industry waste management planning
Strategic Objective 3:	Promote the establishment of integrated waste management infrastructure and services
Strategic Objective 4:	Ensure effective and efficient waste information management

Goal 3: Effective and efficient utilisation of resources	
Objectives	
Strategic Objective 1:	Minimise the consumption of natural resources
Strategic Objective 2:	Stimulate job creation within the waste economy
Strategic Objective 3:	Increase waste diversion through reuse, recovery and recycling

Goal 4: Improved compliance with environmental regulatory framework	
Objectives	
Strategic Objective 1:	Strengthen compliance monitoring and enforcement
Strategic Objective 2:	Remediate and rehabilitate contaminated land
Strategic Objective 3:	Facilitate the development of waste policy instruments
Strategic Objective 4:	Promote self/co-regulatory measures

To ensure that the IWMP remains up to date as far as practically possible and stays relevant, it must go through a review process. This process will be initiated and followed by the IWMP advisory committee.

The implementation of the fifth generation IWMP will start following Council approval. Apart from the continuous project implementation and goal tracking, which must be done by each individual project team as and when each project is running and report to Mr Mitchell as the designated Waste Management Officer, an annual IWMP report must be submitted along with the other Municipal annual reports and a copy sent to DEADP as well.

Draft

OVERSTRAND MUNICIPALITY

INTEGRATED WASTE MANAGEMENT PLAN

FIFTH GENERATION

1. INTRODUCTION

1.1 TERMS OF REFERENCE

JPCE (Pty) Ltd has been appointed by the Overstrand Municipality in the Overberg District of the Western Cape Province to assist in developing their fifth generation Integrated Waste Management Plan (IWMP). This fifth generation IWMP will be developed during 2019 and 2020 and will replace the previous generation IWMP after obtaining Council approval.

The terms of reference for this development are to source the required information, interpret the relevant data and plan accordingly in order to complete the IWMP in terms of the requirements as set out in the National Environment Management: Waste Act (Act no. 59 of 2008) and the contents listed below as required by the Western Cape Department of Environmental Affairs and Development Planning (DEADP).

Chapter 3, Section 11 (4) of the Waste Act states that each Municipality must submit its IWMP to the Member of the Executive Council of a province (MEC) for approval and include the approved IWMP in its Integrated Development Plan (IDP) contemplated in Chapter 5 of the Municipal Systems Act.

Chapter 3, Section 12 of the Waste Act further states that the contents of an IWMP must be at least the following:

- (a) A situation analysis that includes
 - i. A description of the population and development profiles of the area to which the plan relates;
 - ii. An assessment of the quantities and types of waste that are generated in the area;
 - iii. A description of the services that are provided, or that are available, for the collection, minimisation, reuse, recycling and recovery, treatment and disposal of waste; and
 - iv. The number of persons in the area who are not receiving waste collection services;
- (b) Within the domain of the Department, provincial department or municipality, set out how that Department, provincial department or municipality intends –
 - i. To give effect, in respect of waste management, to Chapter 3 of the National Environmental Management Act;
 - ii. To give effect to the objects of this Act;
 - iii. To identify and address the negative impact of poor waste management practices on health and the environment;
 - iv. To provide for the implementation of waste minimisation, reuse, recycling and recovery targets and initiatives;
 - v. In the case of a municipal IWMP, to address the delivery of waste management services to residential premises;
 - vi. To implement the Republic's obligations in respect of any relevant international agreements;
 - vii. To give effect to best environmental practice in respect of waste management;
- (c) Within the domain of the Department or provincial department, set out how the Department or provincial department intends to identify the measures that are required and that are to be implemented to support municipalities to give effect to the objects of this Act;
- (d) Set out the priorities and objectives of the Department, provincial department or municipality in respect of waste management;
- (e) Establish targets for the collection, minimisation, re-use and recycling of waste;

- (f) Set out the approach of the Department, provincial department or municipality to the planning of any new facilities for disposal and decommissioning of existing waste disposal facilities;
- (g) Indicate the financial resources that are required to give effect to the plan;
- (h) Describe how the Department, provincial department or municipality intends to give effect to its IWMP; and
- (i) Comply with the requirements prescribed by the Minister.

The IWMP content requirements further detailed by the DEADP IWMP guideline table of contents are as follows. Only the main headings are shown here. This IWMP was developed to contain all the required information, but does not follow the layout of the guideline exactly:

- Introduction and background information to the IWMP
- Status Quo:
 - o Legislation
 - o Demographic profile
 - o Waste management cost and financing
 - o Services and delivery
 - o Compliance and enforcement
 - o Waste generation and composition
 - o Waste avoidance, reduction and recycling
 - o Operational structure and staff capacity
 - o Waste awareness and education
 - o Waste information management
- Gaps and needs analysis
- Objectives and targets
- IWMP implementation
- Monitoring and review

The previous generation draft Overstrand 2014 IWMP by JPCE (Pty) Ltd was reviewed by DEADP in 2015 and received an approval rating of 85%. The DEADP conclusions and recommendations were:

- The IWMP must include waste generation and types for general and hazardous waste from farms and provide quantities for general and hazardous waste generated from health care facilities.
- The Municipality needs to attach proof of all stakeholder engagements within the IWMP once the public participation process is completed.
- The indicated available airspace in volume for the new cell at Karwyderskraal should be converted into estimated remaining lifetime.
- All waste management facilities must register and report their quantities on the Integrated Pollutant and Waste Information System (IPWIS).
- The IWMP needs to reference the latest Provincial Spatial Development Framework
- The IWMP must include the operational and capital budget
- The IWMP must indicate mechanisms to replace vehicles
- The level of compliance of waste management facilities must be indicated
- The HCRW information needs to indicate the date of survey
- The IWMP must indicate whether the IWM By-law meets the objectives of the Waste Act.

This IWMP revision aims to address the requirements listed in the DEADP evaluation report as well.

1.2 **BACKGROUND**

The IWMP is a statutory requirement of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) that has been promulgated and came into effect on 1 July 2009 and has as its goal the transformation of the current methodology of waste management, i.e. mostly collection and disposal, to a sustainable practice focussing on waste avoidance and environmental sustainability. Implementation of this IWMP will be through municipal by-laws and in accordance with an implementation schedule.

The development of the IWMP is necessary as it is an integral tool to identify current needs and act as a guide towards sustainable waste management. With regular updates of this document the changing needs as well as progress in the waste management field can be tracked and strategies adapted accordingly.

It also provides a framework for budgeting purposes. The IWMP must be incorporated as part of each Municipality's Integrated Development Plan (IDP) but is submitted as a separate document. The IWMP also shows alignment of its goals with the Western Cape IWMP, the District Municipality IWMP and the National Waste Management Strategy (NWMS). This generation IWMP improved upon the previous generation document in that progress has been made with shortcomings identified in the previous plan.

There is increasing pressure on government, the public and industry to be more environmentally responsible especially in terms of solid waste generation and management. Making waste disposal priority can be seen as archaic planning and is not sustainable as disposal airspace is becoming limited and the establishment of new disposal facilities are becoming increasingly difficult due to the unavailability of suitable land. Establishing new disposal facilities are also increasingly expensive due to the design and construction requirements in order to safely dispose the waste to land. Although the eradication of the practice of waste disposal is currently not possible, the IWMP aims to identify ways on how to decrease disposal and move towards being an environmentally responsible society.

1.3 SCOPE OF THE IWMP

The scope of this local municipal IWMP includes an investigation into the current state of the solid waste management system of the Overstrand Local Municipality and provides the overview thereof. This investigation aims to include all the various aspects of the solid waste management system which ranges from legislation, waste types and generation, waste facilities and infrastructure to financing and all other details as listed under the terms of reference above.

The status quo is evaluated in order to determine the gaps and needs of the system. The scope also includes goals and objectives to improve the system where required but is limited to implementation on the local authority level. The implementation items in order to improve the waste management system and to achieve goals are coupled with a monitoring and review programme to ensure that the IWMP is up to date and is implemented.

The waste types measured and discussed are the following:

- Domestic waste
- Garden waste
- Building & demolition waste
- Household hazardous waste
- Hazardous waste (including health care risk waste)

The sources of the above waste types are also discussed and include the following:

- Residential areas
- Businesses
- Industry
- Farms
- Waste as a result of illegal dumping
- Street cleansing waste

1.4 METHODOLOGY AND APPROACH TO THE IWMP

The planning phase of the 5th generation IWMP included the following:

JPCE undertakes a number of IWMP documents for municipalities within the Western Cape. This creates an opportunity to be in regular contact with DEADP on what the IWMP requirements are through evaluation reports on other IWMP documents etc. Planning thus included addressing the standard DEADP requirements as well as recently received comments on other municipal IWMP documents in the Western Cape.

Aquila Environmental (Pty) Ltd was appointed as sub-consultant to JPCE in order to conduct the hazardous waste survey in the Overstrand Municipal Area. All the generators of these waste types were identified and interviewed in order to obtain the quantities generated and the treatment and/or disposal methods as follows:

The first step in the hazardous waste survey was a confirmation of the database of possible hazardous waste producing industries as compiled during the last IWMP cycle. A list was compiled based on the physical survey for each town. All the possible industries were listed but not all businesses, as some were regarded as non-hazardous waste producers due to their nature of business, size, physical structure, etc. Each business listed in the hazardous waste survey list was contacted, telephonically and/or via e-mail.

The general waste characterisation information included in this IWMP was obtained from the operational contractor (Enviroserv) of the Karwyderskraal and Gansbaai Landfills. It is part of their contracts to collect characterisation data throughout the duration of their contracts. The latest available data is included in this report and data obtained after the date of IWMP finalisation will be included in future revisions.

SRK Consulting (Pty) Ltd was appointed to conduct the geological and geohydrological study for the Overstrand Municipal area and generate the accompanying maps.

All the acquired information was reworked into the format presented in this report in order to reflect the status quo, draw conclusions and to make recommendations.

Public input will be acquired by feedback from ward committee meetings. A draft copy of the IWMP report will also be made available for public comment by advertising in newspapers and on the Overstrand Municipality's Facebook page. Soft copies will be available on the municipal website and hard copies in the Overstrand libraries.

The IWMP is submitted to the DEADP for evaluation and approval. The IWMP is only finalised after the Overstrand Municipal Council endorses it.

1.5 **OVERALL AIMS AND GOALS OF THE IWMP**

The primary objective of Integrated Waste Management (IWM) planning is to integrate and optimise waste management, in order to maximise efficiency and minimise the associated environmental impacts and financial costs and to improve the quality of life of all residents within the Overstrand Municipality.

The Plan takes particular note of importance of local authority waste management planning. This document underlines the following principles of the National Waste Management Strategy:

- The prevention of waste generation;
- The recovery of waste of which the generation cannot be prevented, and
- The safe disposal of waste that cannot be recovered.

The Plan will address all areas of waste management – from waste prevention and minimisation (Waste avoidance), to its collection, storage, transport, treatment, recovery and final disposal. It will not only address the practicalities of waste management in context of this Municipality, but also the issues of public education and changing concepts, as these are vital to a successful management system.

The main goals of the Overstrand IWMP are aligned with the goals of the Western Cape Provincial IWMP, the NWMS, the municipal Spatial Development Framework (SDF), the municipal Integrated Development Plan (IDP) and the Provincial Spatial Development Framework (SDF). These are shown in **Table 1-1** and these main goals are shown in further detail and sub-goals and implementation items in **Section 5: Implementation and Strategy Plan** of the report.

Table 1-1: National and Provincial Goals and Strategic Linkages

Western Cape IWMP (2017-2022)		*NWMS 2011		NDP 2030		Western Cape SDF (2014)	
Goal 1:	Strengthened education, capacity and advocacy towards Integrated Waste Management						
Strategic Objective 1:	Facilitate consumer and industry responsibility in integrated waste management	Goal 3:	Grow the contribution of the waste sector to the green economy	Chapter 9:	Improving education, training and innovation	Aim 5 (iii):	Seeks to improve the effectiveness of public investment in the Western Cape's built and natural environments by opening-up opportunities for community and business development in targeted areas.
Strategic Objective 2:	Promote and ensure awareness and education of integrated waste management	Goal 4:	Ensure that people are aware of the impact of waste on their health, well-being and the environment				
Strategic Objective 3:	Build and strengthen waste management capacity						
Goal 2:	Improved integrated waste management planning and implementation for efficient waste services and infrastructure						
Strategic Objective 1:	Facilitate municipal waste management planning	Goal 5:	Achieve integrated waste management planning	Chapter 3:	Develop proposals for an acceptable minimum standard of living and proposals on how to achieve this over time.	Aim 3	Supports municipalities to fulfil their municipal planning mandate in line with the national and Provincial agendas.
Strategic Objective 2:	Promote industry waste management planning					Aim 2	Serve as basis for coordinating, integrating and aligning 'on the ground' delivery of national and Provincial departmental programmes.
Strategic Objective 3:	Promote the establishment of integrated waste management infrastructure and services	Goal 2:	Ensure the effective and efficient delivery of waste services			Aim 1	Give spatial expression to the National and Provincial development agendas.
		Goal 1:	Promote waste minimisation, re-use, recycling and recovery of waste			Aim 4	Communicate government's spatial development intentions to the private sector and civil society.
Strategic Objective 4:	Ensure effective and efficient waste information management						

Western Cape IWMP (2017-2022)		*NWMS 2011		NDP 2030		Western Cape SDF (2014)	
Goal 3:	Effective and efficient utilisation of resources						
Strategic Objective 1:	Minimise the consumption of natural resources	Goal 1:	Promote waste minimisation, re-use, recycling and recovery of waste	Chapter 5:	Environmental Sustainability and Resilience: Put in place a regulatory framework for land use to ensure the conservation and restoration of protected areas.		
Strategic Objective 2:	Stimulate job creation within the waste economy	Goal 3:	Grow the contribution of the waste sector to the green economy	Chapter 3:	Economy and Employment	Aim 5 (iii):	- opening-up opportunities for community and business development in targeted areas.
Strategic Objective 3:	Increase waste diversion through reuse, recovery and recycling	Goal 2:	Ensure the effective and efficient delivery of waste services	Chapter 5:	Environmental Sustainability and Resilience: Absolute reductions in the total volume of waste disposed to landfill each year.	Aim 3	Supports municipalities to fulfil their municipal planning mandate in line with the national and Provincial agendas.
Goal 4:	Improved compliance with environmental regulatory framework						
Strategic Objective 1:	Strengthen compliance monitoring and enforcement	Goal 8:	Establish effective compliance with and enforcement of the Waste Act.	Chapter 5:	Environmental Sustainability and Resilience: Put in place a regulatory framework for land use to ensure the conservation and restoration of protected areas.	Aim 4	Communicate government's spatial development intentions to the private sector and civil society.
Strategic Objective 2:	Remediate and rehabilitate contaminated land	Goal 7:	Provide measures to remediate contaminated land.				
Strategic Objective 3:	Facilitate the development of waste policy instruments	Goal 5:	Achieve integrated waste management planning				
Strategic Objective 4:	Promote self/co-regulatory measures	Goal 2:	Ensure the effective and efficient delivery of waste services				

*Note that the goal alignment includes the NWMS 2011 since the updated NWMS 2019 is still in draft form at the time of writing.

The Overstrand Municipality IWMP links with these national and provincial documents in that it will adopt the goals and strategic objectives of the Western Cape Provincial Integrated Waste Management Plan.

The Overstrand Municipality forms part of the Overberg District Municipality (ODM) and the ODM finalised their 3rd generation District IWMP in 2019. The main goals of the ODM IWMP is aligned with the Western Cape Provincial IWMP. The Overstrand IWMP will also be aligned with these main goals:

- Goal 1: Strengthened education, capacity and advocacy towards Integrated Waste Management
- Goal 2: Improved integrated waste management planning and implementation for efficient waste services and infrastructure
- Goal 3: Effective and efficient utilisation of resources
- Goal 4: Improved compliance with environmental regulatory framework

Draft

Table 1-2: Linking the IWMP with the Municipal IDP and SDF

Overstrand IWMP (2020)		Overstrand IDP (final 2019/2020 review)	Overstrand IDF & SDF (2014 towards 2050)
Goal 1:	Strengthened education, capacity and advocacy towards Integrated Waste Management	KPA 2: Good Governance	Memorable and Distinctive Overstrand
Strategic Objective 1:	Facilitate consumer and industry responsibility in integrated waste management	KPA OS 2 (b): Effective Communication and community development	MO 1. The diverse character of Overstrand's rural and natural environment is maintained and enhanced.
Strategic Objective 2:	Promote and ensure awareness and education of integrated waste management	KPA OS 2 (b): Effective Communication and community development	
Strategic Objective 3:	Build and strengthen waste management capacity	KPA OS 2 (c): Sound municipal administration/ institutional development	
Goal 2:	Improved integrated waste management planning and implementation for efficient waste services and infrastructure	KPA 1: Basic Service Delivery KPA 2: Good Governance KPA 5: Social upliftment and Economic Development	A liveable Overstrand An environmentally sustainable and resilient Overstrand
Strategic Objective 1:	Facilitate municipal waste management planning	KPA OS 2 (d): Enhance the involvement of ward committees in public participation	LO 7: The natural and built environments are well integrated, further contributing to the uniqueness and liveability of the Overstrand settlements EO 6. Sustainable integrated waste management is consistently being achieved based on best practice environmental standards.
Strategic Objective 2:	Promote industry waste management planning		
Strategic Objective 3:	Promote the establishment of integrated waste management infrastructure and services	KPA OS 1 (a): Effective development of Municipal Infrastructure KPA OS 1 (e): Replacement of deteriorating fleet items KPA OS 5 (b): Spatial Planning	LO 9: All of the Overstrand's urban and rural settlements are provided with adequate civil services infrastructure
Strategic Objective 4:	Ensure effective and efficient waste information management		

Overstrand IWMP (2020)		Overstrand IDP (final 2019/2020 review)	Overstrand IDF & SDF (2014 towards 2050)
Goal 3:	Effective and efficient utilisation of resources	KPA 3: Optimizing financial resources KPA 5: Social upliftment and Economic Development	An environmentally sustainable and resilient Overstrand An Overstrand that enables a Prosperous and Diverse Economy
Strategic Objective 1:	Minimise the consumption of natural resources	KPA OS 3 (a): Effective Financial Management	EO 1. The resilience of ecosystems is maintained and enhanced. EO 2. Protect Biodiversity and agricultural resources.
Strategic Objective 2:	Stimulate job creation within the waste economy	KPA OS 5 (c): Local Economic Development and Tourism KPA OS 5 (d): Social development in a municipal context	ECO 5. Overstrand consist of a competitive local labour force.
Strategic Objective 3:	Increase waste diversion through reuse, recovery and recycling		EO 4. Threats posed by climate change and natural disasters are reduced.
Goal 4:	Improved compliance with environmental regulatory framework	KPA 4: Safe and Health Environment	A liveable Overstrand
Strategic Objective 1:	Strengthen compliance monitoring and enforcement	KPA OS 4 (b): Law Enforcement	LO 6: The Overstrand's diverse natural environment is in pristine condition, well managed and accessible to all its inhabitants
Strategic Objective 2:	Remediate and rehabilitate contaminated land	KPA OS 4 (d): Environmental Management	LO 1: Overstrand has a resilient and safe water supply
Strategic Objective 3:	Facilitate the development of waste policy instruments		EO 4. Threats posed by climate change and natural disasters are reduced.
Strategic Objective 4:	Promote self/co-regulatory measures		

1.6 **GEOGRAPHIC AREA OF STUDY**

The Overstrand Local Municipality is the south-eastern neighbour of the City of Cape Town, and their jurisdiction covers approximately 1675 km² (Figure 1-1). The following towns are found within the Overstrand Municipal area:

- Rooi Els;
- Pringle Bay;
- Betty's Bay;
- Kleinmond;
- Hawston;
- Hermanus (including Onrus and Vermont);
- Stanford;
- Gansbaai;
- Franskraal;
- Baardskeerdersbos; and
- Pearly Beach.

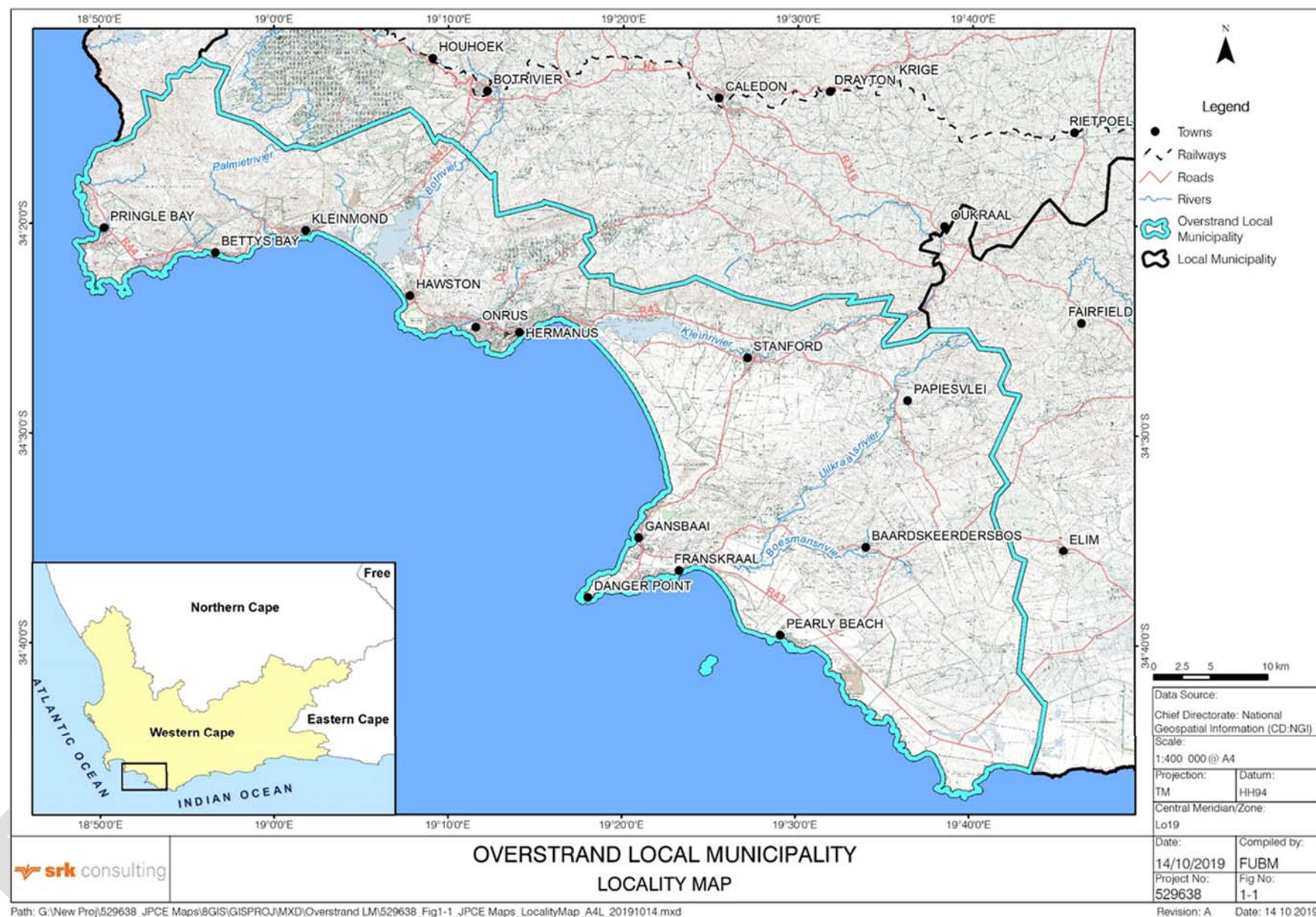


Figure 1-1: Locality Map

1.6.1 **Geology and Geohydrology**

1.6.1.1 **Geology**

The Overstrand Municipal area is underlain by rocks of five main geological formations which are, in chronological order, the Malmesbury, Table Mountain, Bokkeveld and Bredasdorp Groups. The Malmesbury Group rocks are intruded by granites of the Hermanus Pluton.

The Malmesbury Group rocks occupy relatively small areas in the Papiessvlei and Ratel River areas. These rocks are very old, >600 million years, and comprise metasediments such as phyllitic shale characterized by clayey soils. They are intruded by granites of the Cape Granite Suite, which form the Hermanus Pluton. Outcrops are limited to a small fault bounded area inland of Onrus and granites are also known to occur south-east of Pearly Beach.

The Table Mountain Group (TMG) rocks occupy the mountainous topography forming the bulk of the Pringle Bay-Hermanus-Stanford area, a "V" shaped area between Danger Point and Oukraal/Elim and the catchments of the Haelkraal and Ratel Rivers. Two main formations are present, the lower Peninsula Formation and upper Nardouw Subgroup. They predominantly comprise of resistant quartzitic sandstones separated by the Cedarberg Shale Formation. This forms a prominent marker horizon characterized by a smooth green band amongst the otherwise greyish craggy outcrops of quartzitic sandstones.

The Bokkeveld Group consists of alternating shale and subordinate sandstone beds limited to the area between Baardkeedersbos and Elim, and east of Stanford. It is characterized by clayey soils.

The Bredasdorp Group occupies the coastal plain area between the TMG mountains and the coast, and is characterized by wind-blown sand, calc-arenite and calcrete deposits. These deposits are most extensive in the Walker Bay area where they reach thicknesses of over 100 m. They infill palaeochannels in the underlying TMG rocks with coarse sediments that give rise to springs, particularly in the Gansbaai area, e.g. De Kelders.

Alluvial deposits comprising sand, gravel and clay occur in mostly narrow belts following the main rivers, particularly the Uilkraal River (Figure 1-2)

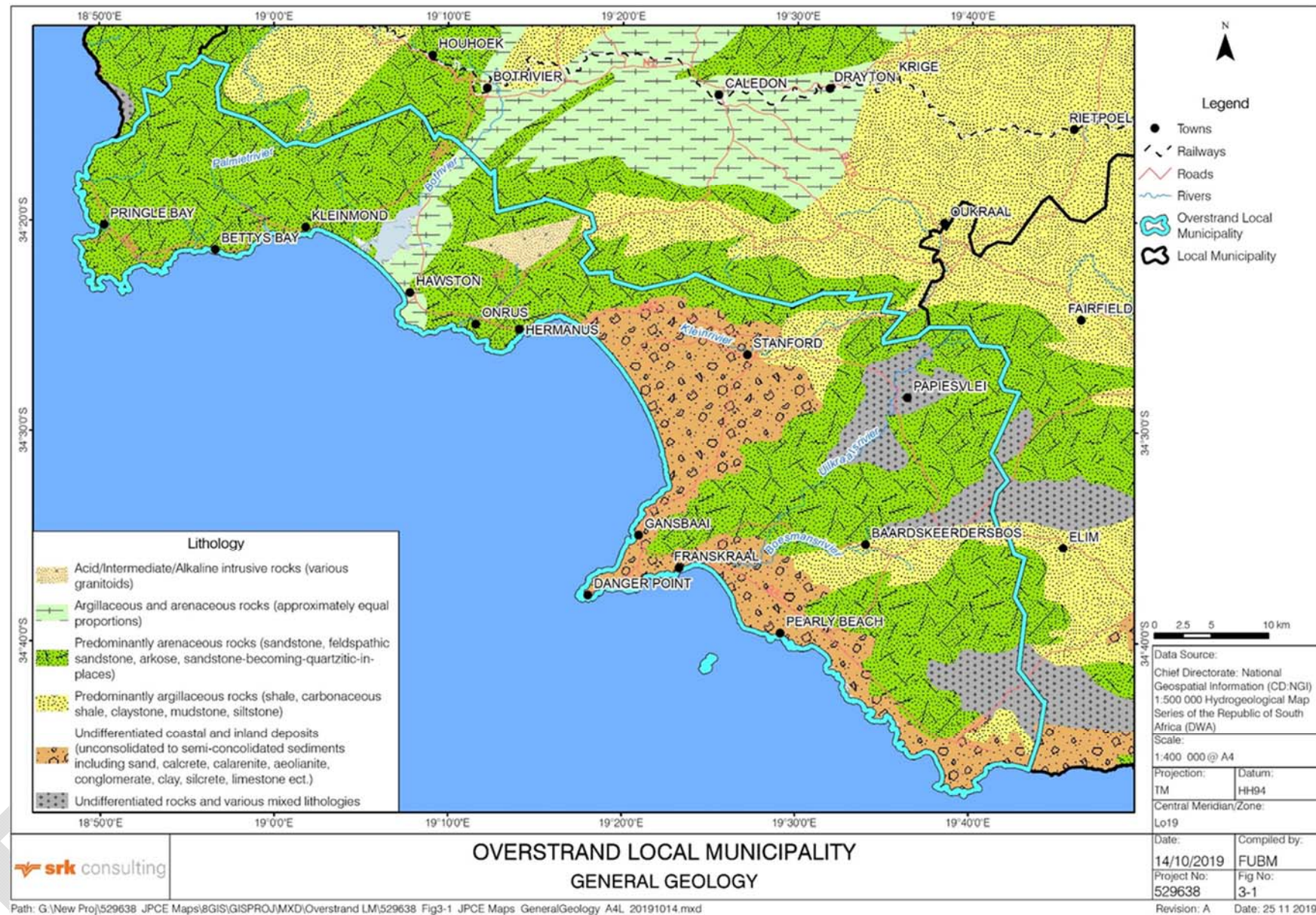


Figure 1-2: General Geology

1.6.2 **Geohydrology**

In broad terms, any aquifers developed in rocks of the Malmesbury, Table Mountain and Bokkeveld Groups will be of the fractured or secondary type, which are shown as shades of green on Figure 1-3. Aquifers developed in the unconsolidated Bredasdorp Group and alluvial deposits will be of the intergranular or primary type and are coloured shades of violet. Aquifers developed in the granites can be of the fractured or intergranular type (weathered zone) and are coloured yellow.

The towns of Hermanus, Gansbaai, Kleinmond, Pearly Beach, Buffeljags, Baardskeerdersbos and Stanford all supplement their water supplies from groundwater sources.

The Malmesbury and Bokkeveld Group rocks are of generally low groundwater potential in the area. The TMG Aquifers have good potential and are recognized as one of the best aquifers in South Africa but are often inaccessible due to the rugged mountainous topography developed because of the resistant quartzitic sandstones. The best potential in this aquifer is found in the coastal plain area around Hermanus and Kleinmond. In the former area the Gateway Wellfield has been developed to supply Hermanus from deep (>150 m) boreholes. The Attakwaskloof Fault in the Hemel en Aarde valley has also been targeted for groundwater supply to Hermanus. In recent years, the secondary aquifers at Baardskeerdersbos and Buffeljags have also been targeted as a groundwater source.

Gansbaai derives part of its water supply from springs emanating from palaeochannels in the TMG bedrock, e.g. at De Kelders and Stanfords Cove on the coast just to the north-east of the town. Springs of a different origin also supply Pearly Beach.

Groundwater circulation in the TMG Aquifer is generally deep-seated and it has been postulated that the major fault zones act as conduits for groundwater flow from the inland mountainous recharge areas to the coast.

The Walker Bay primary aquifer has also been targeted for water supply for Stanford and two production boreholes have been drilled by the Municipality. This aquifer also supplies Stanford with a perennial spring located just outside of the town near the road to Gansbaai.

In terms of groundwater quality (Figure 1-4), most of the area has good to moderate quality groundwater, with electrical conductivity of <70 mS/m in the TMG Aquifer and 70 to 300 mS/m in the Walker Bay and Pearly Beach-Haelkraal-Ratel River areas.

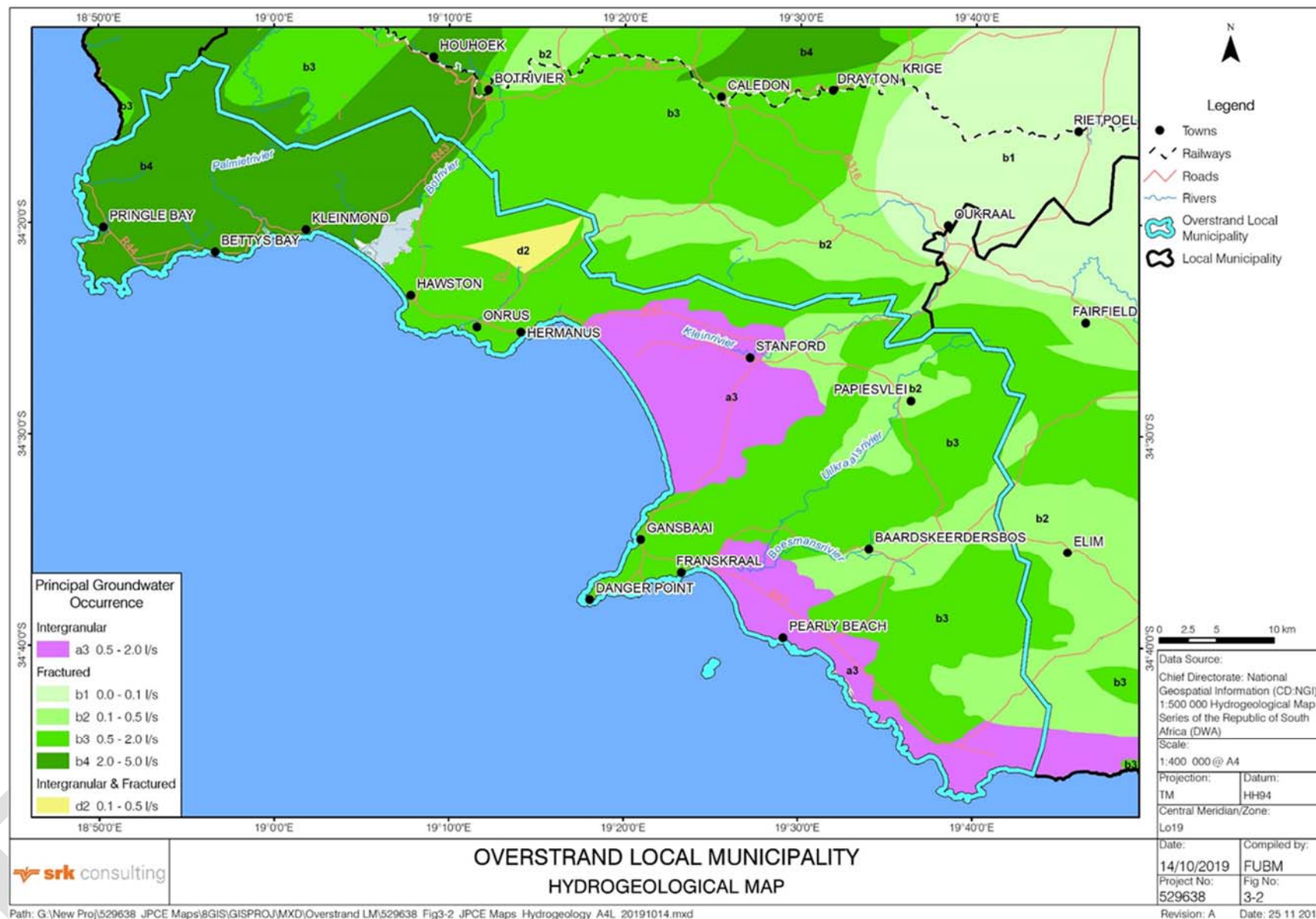


Figure 1-3: Hydrogeological Map

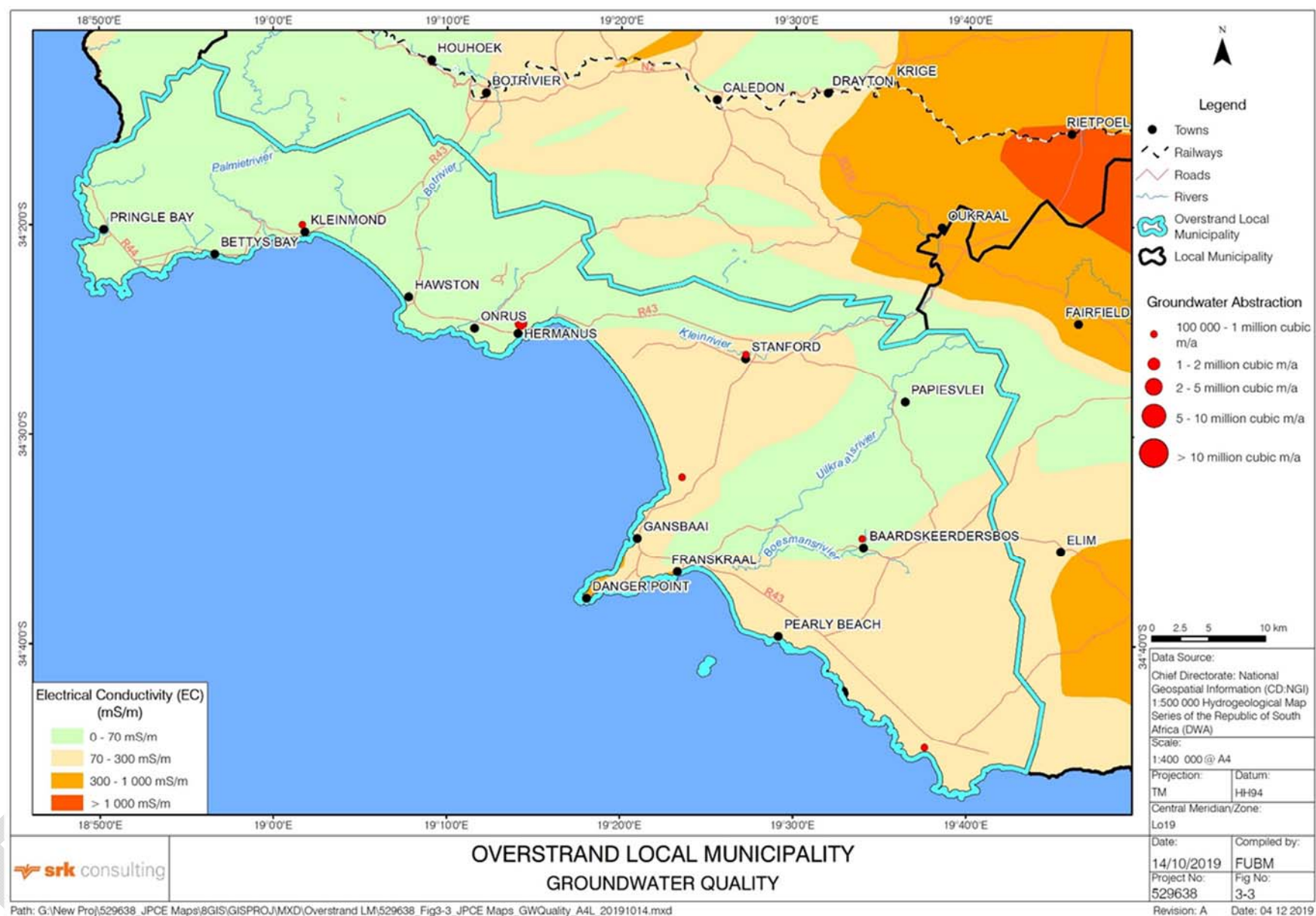


Figure 1-4: Groundwater Quality

1.7 DISTRICT MUNICIPALITY

The Overstrand Municipality is located in the Overberg District Municipality (ODM) in the Western Cape Province. The ODM includes the local municipalities of Cape Agulhas, Overstrand, Swellendam and Theewaterskloof. The seat of the ODM is Bredasdorp and the ODM consists of 29 wards with a total geographical area of 12,128km².

The role of the District Municipality does not affect the solid waste functions of the local municipalities. Only when waste from more than one municipality is disposed of at a regional site, does it become a district function and currently this is the case at the Karwyderskraal Regional Landfill, currently used by the Overstrand and Theewaterskloof municipalities with possible future use by additional local municipalities.

The ODM has a District Solid Waste Forum where the local municipalities within the District can discuss waste related matters. This forum allows for the municipalities in the District to work and plan together and achieve the solid waste goals and targets as a District. Further opportunities and solutions can also be further explored between Forums of different Districts.

The ODM's vision and mission is as follows:

Vision – “Overberg – the opportunity gateway to Africa through sustainable services”

Mission – “To render sustainable, customer-directed services and to be the preferred Provider of Shared Services within the Overberg”

1.7.1 District Municipality IWMP

The ODM adopted their 3rd generation IWMP document in 2019. The 2019 ODM IWMP states the following strategic objective, aligned with the IDP, of waste management within the district.

To ensure the health and safety of all in the Overberg through the provision of efficient basic services and infrastructure.

The above strategic objective is to be implemented through adoption of the waste hierarchy and the effective management of waste to ensure minimal waste to landfill. The main IWMP goals are aligned with the Western Cape IWMP and the Overstrand Municipality's IWMP will tie into this overarching objective of the District Municipality.

1.8 LOCAL MUNICIPALITY

The Overstrand Municipality has the following policies, vision and mission:

1.8.1 Vision and Mission

The 2019 review of the 2018/2022 IDP explains the vision, mission, strategic goals and objectives of Overstrand Municipality and it also sets out the development priorities. The municipality's strategic intent and key performance areas for the next five years aims to respond to some of the key challenges experienced by the municipality.

Vision – To be a centre of excellence for the community

Mission – Creation of sustainable communities by delivering optimal services to support economic, social and environmental goals in a politically stable environment

The Strategic Goals are indicated in the IDP as follows:

- The provision of democratic, accountable and ethical governance.
- The provision and maintenance of municipal services.
- The encouragement of structured community participation in the matters of the municipality.
- The creation and maintenance of a safe and healthy environment.
- The promotion of tourism, economic and social development.

1.9 STAKEHOLDER PARTICIPATION

1.9.1 Consultation with Authorities

The Assessment Report of the original 4th Generation IWMP in 2015 formed the first consultation with authorities as it was issued by the DEADP. It served as the first identifier of the issues that needed to be addressed during the IWMP update process to the final IWMP.

JPCE (Pty) Ltd have had meetings with DEADP on the compilation of municipal IWMP documents and have been informed by DEADP of what their requirements for these plans are. Also, JPCE have compiled a number of local and district municipality IWMP documents recently and all of them have been reviewed by DEADP, including the latest ODM IWMP. The recommendations in these review reports were taken into consideration when compiling the IWMP for the Overstrand Municipality.

The DEADP will also review and evaluate this IWMP as per the previous generation report in order to indicate whether it conforms to the latest required standards.

1.9.2 Consultation with the public and other interested and affected parties

The public and other interested and affected parties will be given the opportunity to comment on the IWMP process through advertising in the local newspapers that the draft report would be available to them at the following locations:

- Municipality website (www.overstrand.gov.za);
- Hard copies available at Overstrand libraries;
- Office of Mr. Mitchell (Overstrand Waste Management Officer)

Also, the IWMP will serve as an agenda item at ward committee meetings and comments recorded for use in the compilation of the final document. The public will be given a 30 day period to submit their comments and the responses will be included in the final document.

2. STATUS QUO

This section of the IWMP entails the situational analysis of the Overstrand Municipality, which includes amongst others, the applicable legislation, population description, waste types and quantities generated and waste management services overview.

2.1 LEGISLATION

The applicable legislation is listed here in chronological order and includes the Overstrand municipal waste management by-laws. Where policies or guidelines are linked to a certain piece of legislation, these are discussed under the main heading of the legislation in question.

2.1.1 Environment Conservation Act, 1989 (Act NO. 73 of 1989)

On 1 July 2009 the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) ("the Waste Act") came into effect. The Waste Act repealed Section 20 of the Environment Conservation Act, 1989 (Act No. 73 of 1989) ("ECA") and introduces new provisions regarding the licensing of waste management activities.

The Waste Tyre Regulations (2009) which were published on 13 February 2009 came into effect on 30 June 2009 and makes provision for effective and integrated management of waste tyres in the country. It provides regulations for tyre producers, tyre dealers and waste tyre stockpile owners.

The regulations furthermore require the compilation of industry waste tyre management plans and waste tyre stockpile abatement plans and details the requirements for waste tyre storage areas.

2.1.2 White Paper on Education and Training (1995)

The 1995 *White Paper on Education and Training* states that “environmental education, involving an interdisciplinary, integrated and active approach to learning, must be a vital element of **all levels and programmes of the education and training system**, in order to create environmentally literate and active citizens and ensure that all South Africans, present and future, enjoy a decent quality of life through the sustainable use of resources”.

The White Paper advocates environmental education and training **at all levels**. This would include the local government sphere, particularly when it comes to the environmental education & training of government officials and workers.

The education of the youth is the responsibility of national and provincial government. However, the Constitution does state that where the capacity exists, functions can be delegated to local government, and that the spheres of government, while distinctive, are interdependent and interrelated. Local government should support the other spheres of government (such as the national Department of Education, DoE) in areas of its own focus, such as environmental management and sustainable development.

2.1.3 Constitution of the Republic of South Africa (1996)

In 1996 the new Constitution created the right to the environment as a fundamental right. This fundamental right to the environment ensures everyone's right to an environment that is not harmful to their health or well-being. South African law, the environment and all South Africans have a constitutional right to have the environment protected for present and future generations. This means that there must be reasonable legal and other measures to prevent ecological degradation, promote conservation and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

All legislation has to fall within the stipulations of the Constitution. The following sections are of particular relevance where waste is concerned:

- **Section 24(a)**

Provides everyone the right to an environment that is not harmful to a person's health and well-being.

- **Section 24(b)**

Provides everyone the right to have the environment protected through reasonable legislative and other measures. The implementation of section 21, 22 and 26 of the Environment Conservation Act, 1989 is such a legislative measure to protect the environment.

- **Section 25**

Provides for property rights. The Constitution makes provision for both property rights and the right to a healthy environment. A situation may arise in extreme cases where there is a conflict due to rejecting an application for a listed activity from taking place. In such cases it will be up to the court to decide whether the interest of the community (right to a healthy environment) weighs heavier than the right to the individual.

- **Section 32**

Provides the right to access to information. The lack of information is one of the major obstacles in environmental impact management. Provision has been made in the regulations in terms of section 26 of the Environment Conservation Act, 1989, that any report submitted becomes a public document.

- **Section 38**

Provides *locus standi* or the “right to get involved” to any member of the public. This means that any member of the public has the right to take appropriate action to prevent environmental damage. This may include taking action against the relevant authority for failing to perform its duties in preventing environmental damage or any individual or authority who is in the process of undertaking listed activities in terms of section 21 of the Environment Conservation Act, 1989, without the necessary authorisation to undertake such activities.

- **Section 41**

Provides principles for co-operative governance and intergovernmental relations. The Constitution allocates legislative authority as well as executive and administrative powers to all three levels of government. Schedules 4 and 5 determine the functional areas of government. The environment is a cross-sectorial matter and it is therefore important that co-operation between government on all levels is necessary. Furthermore, Chapter 7 of the Constitution of South Africa (Act 108 of 1996) describes the role and responsibilities of Local Government, which include the objectives in Section 152:

“The objects of local government are:

- to promote social and economic development.
- to promote a safe and healthy environment...”

These principles are further developed in the National Environmental Management Act 1998 (Act 107 of 1998).

The Constitution (Act No. 108 of 1996) is relevant to pollution and waste management for two reasons. Firstly, the Bill of Rights (Chapter Two of the Constitution) contains a number of rights relevant to integrated pollution and waste management, to the extent that an Act or particular statutory provision that does not uphold these rights, is unconstitutional. Secondly, the Constitution provides the legal basis for allocating powers to different spheres of government and is thus relevant to the institutional regulation of integrated pollution and waste management.

Sovereign

The Constitution states that South Africa is a sovereign, democratic state. In terms of environmental management, it is important to recognize that sovereignty includes the ability to limit sovereign powers by entering into international agreements where the need arises.

The Bill of Rights

The most pertinent fundamental right in the context of integrated pollution and waste Management is the Environmental Right (Section 24), which provides that:

“ Everyone has the right

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

The section of the Bill of Rights specifically imposes a duty on the State to promulgate legislation and take other steps to ensure that the right is upheld and that, other things, pollution and ecological degradation are prevented.

2.1.4 **National Water Act (Act no. 36 of 1998)**

The purpose of the Act is to ensure that the Municipality's water resources are protected, used, developed and conserved in ways which take into account the protection of aquatic and associated ecosystems; that addresses basic human needs; that ensures the reduction and prevention of pollution; and that meets international obligations.

Section 19 of the NWA deals with landowners and users involved in any activity or process which causes, has caused or is likely to cause pollution of water resources. Such landowners and users are obliged to take all reasonable measures to prevent any such pollution from occurring, continuing or recurring. This includes measures to comply with any prescribed waste standard or management practice.

Furthermore, the NWA requires anyone who intends undertaking a water use, as defined, to obtain a licence. The water uses that may be relevant to waste management activities are:

- discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit; and
- Disposing of waste in a manner which may detrimentally impact on a water resource.

The applications for permits, licences and exemptions made before the promulgation of this Act could still be dealt with in terms of the Water Act 1956 (Act No. 54 of 1956).

2.1.5 **National Environmental Management Act (1998)**

The NEMA (Act 107 of 1998) provides for co-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; and to provide for matters connected therewith.

As the principal framework act for environmental issues, it has direct relevance to the implementation of the National Waste Management Strategy, one of the key implications being the designation of the DEAT as lead agent for the environment. Chapter 7 of NEMA has important direct implications for the achievement of the NWMS initiative.

The environment as defined in NEMA is the natural environment along with its physical chemical, aesthetic and cultural properties that influence human health and well-being.

NEMA contains the following environmental principles:

- Environmental management must put people and their needs at the forefront and must serve their interest fairly.
- Development must be socially, environmentally and economically sustainable. This means that the following things must be considered before there is development:
 - a) Disturbance of ecosystems and loss of biodiversity
 - b) Pollution and degradation of the environment
 - c) Disturbance of landscapes and sites where the nation's cultural heritage is found
 - d) Non-renewable resources must be used responsibly
 - e) The precautionary principle must be applied
 - f) Negative impacts must be anticipated and prevented and if they can't be prevented, they must be minimized or remedied.
- Environmental management must be integrated. The best practical environmental option must be pursued.
- Environmental justice must be pursued so that there is not unfair discrimination in the way that negative environmental impacts are distributed
- There should be equitable access to environmental resources, benefits and services to meet basic human needs. Special measures may be taken to ensure access for persons disadvantaged by unfair discrimination.
- Responsibility for environmental health and safety of any policy, programme or project must continue throughout the life cycle of a project

- Public participation in environmental decision-making must be promoted. The participation of vulnerable and disadvantaged groups must be ensured
- Decisions must take into account the interests, needs and values of all interested and affected parties. This includes recognizing all forms of knowledge including traditional and ordinary knowledge
- Community well-being and empowerment must be promoted through environmental education
- The social, economic and environmental impacts of the activities must be assessed
- The rights of workers to refuse to do work that is harmful to human health or the environment and to be informed of dangers must be respected
- Decisions must be taken in an open and transparent manner and access to information provided in accordance with the law
- There must be inter government co-ordination and harmonization of policies and laws
- Actual or potential conflicts of interest between organs of state must be resolved through conflict resolution procedures
- Global and international responsibilities relating to the environment must be discharged in the national interest
- The environment is held in a public trust for the people and the use of environmental resources must serve the public interest, and be protected as the people's common heritage
- The polluter must pay for the costs of remedying pollution, environmental degradation and adverse health impacts
- The vital role of youth and women in environmental management must be recognized and their full participation promoted
- Sensitive or stressed ecosystems must receive special attention in planning which might affect them especially when they are subject to significant resource usage and development pressure.

NEMA also stipulates in Section 24 that there must be an environmental impact assessment before any activity or development that needs permission by law and which may significantly affect the environment.

Section 28 places a specific duty of care on every person to prevent, or mitigate and remediate, environmental damage and pollution. Any person, who was responsible for, or directly or indirectly contributed to the pollution, can be held liable. This includes the owner of the land at the time the pollution occurred or their successor in title, a person in control of the land at that time, or any person who negligently failed to prevent the situation.

The public can use NEMA to exercise their rights when they believe that the right procedures were not followed. Therefore it is extremely important to make sure that when there is a proposed development where the municipality is involved e.g. change of land-use – to make sure that the consultant and/or developers follow the right procedures.

2.1.5.1 The NEMA Environmental Impact Assessment Regulations

Sections 24 and 44 of NEMA make provision for the promulgation of regulations that identify activities that may not commence without environmental authorisation or existing activities in respect of which an application for environmental authorisation is required. In this context, EIA Regulations contained in three General Notices in terms of NEMA (GN R385, 386 and 387) (came into force on 3 July 2006.)

The 2006 Regulations were repealed by the June 2010 EIA Regulations (GN R543), and the June 2010 EIA Regulations were repealed and replaced by the 2014 EIA Regulation (GNR 982, GNR 983, GNR 984 and GNR 985.) The purpose of the Regulations is to regulate the procedure and criteria as contemplated in Chapter 5 of the Act relating to the submission, processing and consideration of, and decision on, applications for environmental authorisations for the commencement of activities in order to avoid detrimental impacts on the environment, or where it can be avoided, ensure mitigation and management of impacts to acceptable levels, and to optimise positive environmental impacts, and for matters pertaining thereto.

2.1.5.2 National Environmental Management Act: Fees for consideration and processing of applications for environmental authorisations and amendments thereto (Government Notice 28 February 2014)

These regulations apply to the above applications excluding community based projects funded by government grants or applications made by organs of state. The commencement date is 1 April 2014. Payment details are discussed regarding the different applicable fees which are listed as follows:

Application	Fee
Application for an environmental authorisation for which basic assessment is required in terms of the Environmental Impact Assessment Regulations	R2 000.00
Application for an environmental authorisation, for which a S&EIR is required in terms of the Environmental Impact Assessment Regulations	R10 000.00
Application dealt with in terms of section 24L of the Act	(a) 100% of the most expensive application, namely, R10 000 (Ten Thousand Rand) if S&EIR is triggered and R2000 (Two Thousand Rand) if the basic assessment is triggered;
	(b) 50% of the other application, namely, R5 000 (Five Thousand Rand) if the S&EIR is triggered or R1 000 (One Thousand Rand) if the basic assessment is triggered)
Amendment of an environmental authorisation on application by the holder of an environmental authorisation.	R2 000.00

2.1.6 The Municipal Structures Act, 1998 (Act no. 117 of 1998)

This act makes provision for the establishment of municipalities in accordance with the requirements relating to categories and types of municipality. It establishes criteria for determining the category of municipality to be established in an area and defines the types of municipality that may be established within each category.

The Act furthermore provides for an appropriate division of functions and powers between categories of Municipality and regulates the internal systems, structures and office-bearers of the municipalities. It also provides for appropriate electoral systems for matters in connection therewith.

2.1.7 White paper: policy on pollution prevention, waste minimisation, impact management and remediation (March 2000)

In line with international trends and our national objectives of efficient and effective management of our nation's resources, priority is given to prevention of waste. Unlike previous policies that focused predominantly on so called "end of pipe" treatment, this White Paper underscores the importance of preventing pollution and waste and avoiding environment degradation.

Effective mechanisms to deal with unavoidable waste will remain necessary, but much greater attention must be directed to the introduction of preventative strategies aimed at waste minimisation and pollution prevention. Ever increasing urban and industrial development throughout the world is leading to levels of pollution, which seriously threaten the natural resources upon which humankind depends for its survival.

Although South Africa has extensive environment, pollution and waste management legislation, responsibility for its implementation is scattered over a number of departments and institutions.

The fragmented and uncoordinated way pollution and waste is currently being dealt with, as well as the insufficient resources to implement and monitor existing legislation, contributes largely to the unacceptably high levels of pollution and waste in South Africa.

The White Paper on Integrated Pollution and Waste Management will result in a review of the existing legislation and the preparation of a single piece of legislation dealing with waste and pollution matters.

Pollution and waste management is not the exclusive preserve of government. The private sector and civil society have crucial roles to play. The fostering of partnerships between government and the private sector is a prerequisite for sustainable and effective pollution and waste management to take place. Similarly, the spirit of partnerships and co-operative governance between organs of state is equally important due to the crosscutting nature of pollution and waste management.

Monitoring and collection of information on pollution and waste generation are crucial for the implementation of pollution and waste reduction measures. Moreover, the sharing of such information and creating awareness about the issues will enable all stakeholders, including communities, to gain a better understanding of the relation between pollution, waste management and the quality of life.

The White Paper proposes a number of tools to implement the objectives of the policy it sets out. The most significant of these is a legislative programme that will culminate in new pollution and waste legislation. This proposed legislation, amongst other things, will address current legislative gaps, and clarify and allocate responsibilities within government for pollution and waste management.

The policy presents seven strategic goals, which are as follows:

- Goal 1: Effective Institutional Framework and Legislation
- Goal 2: Pollution Prevention, Waste Minimisation, Impact Management and Remediation
- Goal 3: Holistic and Integrated Planning
- Goal 4: Participation and Partnerships Governance in Integrated Pollution and Waste Management
- Goal 5: Empowerment and Education in Integrated Pollution and waste Management
- Goal 6: Information Management
- Goal 7: International Cooperation

The role of Local Government

Municipalities will be responsible for providing waste management services, and managing waste disposal facilities. Specific functions to be carried out by municipalities will include:

- compiling and implementing general waste management plans, with assistance from provincial government
- implementing public awareness campaigns
- collecting data for the Waste Information System
- providing general waste collection services and managing waste disposal facilities within their areas of jurisdiction
- implementing and enforcing appropriate waste minimisation and recycling initiatives, such as promoting the development of voluntary partnerships with industry, including the introduction of waste minimisation clubs where possible, regional planning, establishment and management of landfill sites, especially for regionally based general waste landfills.

2.1.8 The Municipal Systems Act (Act 32 of 2000)

This policy outlines the role and responsibilities of local governments as to:

- Provide democratic and **accountable** government for local communities;
- Ensure the provision of services to communities in a **sustainable** manner;
- Promote **social** and economic development;
- Promote a safe and healthy **environment**;
- Encourage the **involvement** of communities and community organisation in the matters of local government; and
- Strive, within its financial and administrative capacity, to achieve the objectives above.

These responsibilities indicate a need for an environmentally educated work force (accountable) as well as an environmentally educated public (involvement). The municipal Systems Act (32 of 2000) requires municipalities to promote public participation and to build the capacity of residents, councillors and municipal officials to engage in participatory processes. As a means of tracking progress in this area, the executive of a municipality is obliged to report annually on the level of public participation in municipal matter.

Each Municipality must include in its integrated development plan contemplated in Chapter 5 of the Municipal Systems Act, an integrated waste management plan that is consistent with the relevant provincial integrated waste management plan. The annual performance report which must be prepared in terms of section 46 of the Municipal Systems Act must contain information on the implementation of the municipal integrated waste management plan.

2.1.9 **National Environment Management: Air Quality Act 2004 (Act no. 39 of 2004)**

This Act has been promulgated in order to reform the law regulating air quality in order to protect the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development. It also provides for national norms and standards regulating air quality monitoring, management and control by all spheres of government; for specific air quality measures; and for matters incidental thereto.

The object of this Act is:

- a) to protect the environment by providing reasonable measures for-
 - (i) The protection and enhancement of the quality of air in the Republic;
 - (ii) The prevention of air pollution and ecological degradation; and
 - (iii) Securing ecologically sustainable development while promoting justifiable economic and social development; and
- b) Generally to give effect to section 24(b) of the Constitution in order to enhance the quality of ambient air for the sake of securing an environment that is not harmful to the health and well-being of people.

2.1.10 **National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008) ("The Waste Act")**

On 1 July 2009 the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) ("the Waste Act") came into effect. The Waste Act repealed Section 20 of the Environment Conservation Act, 1989 (Act No. 73 of 1989) ("ECA") and introduces new provisions regarding the licensing of waste management activities.

Provision has been made in the form of legislative and regulatory tools to facilitate and ensure implementation of the Act by all spheres of government.

The Waste Act was published to reform the law regulating waste management in order to protect the health of the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development.

The purpose of this Act is to protect health, well-being and the environment by providing reasonable measures for –

- the minimisation of the consumption of natural resources;
- the avoidance and minimisation of the generation of waste;
- the recovery, re-use and recycling of waste;
- the treatment and safe disposal of waste as a last resort;
- the prevention of 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;
- achieving integrated waste management reporting and planning;

- to ensure that people are aware of the impacts of waste on health and the environment;
- to provide for compliance and generally to give effect to section 24 of the Constitution in order to secure an environment that is not harmful to the health and well-being of people.

The interpretation and application of this Act must be guided by the national environmental management principles set out in section 2 of the National Environmental Management Act.

The Waste Act allows for the compilation of a Waste Management Strategy, national, provincial and local standards.

Municipalities must in terms of their by-laws:

- establish service standards and levels of service for the collection of waste;
- may identify requirements in respect of the separation, compacting and storage of waste;
- may identify requirements for the management of waste, including requirements in respect of the avoidance of the generation of waste and the recovery, reuse and recycling of waste;
- the requirements in respect of the directing of waste to specific treatment and disposal facilities.

Each Municipality must include in its integrated development plan contemplated in Chapter 5 of the Municipal Systems Act, an integrated waste management plan that is consistent with the relevant provincial integrated waste management plan.

The annual performance report which must be prepared in terms of section 46 of the Municipal Systems Act must contain information on the implementation of the municipal integrated waste management plan.

Municipalities must also in terms of the Act:

- conduct municipal activities in accordance with the National Waste Management Strategy and any national or provincial norms and standards;
- compile an integrated waste management plan;
- ensure that waste management services are provided within the municipality in a manner which prioritises the recovery, re-use or recycling of waste and provides for the treatment and safe disposal of waste as a last resort;
- designate a waste management officer;
- ensure that provision is made for the management and collection of litter;
- secure compliance with the objects of this Act that are in the domain of the municipality; and
- Implement any other measures that are necessary for securing the objects of this Act that are within the domain of the municipality.

Duty to provide collection services - Every municipality has an obligation to progressively ensure that efficient, effective and affordable waste collection services are provided in its area.

A municipality may, by notice, require any person making use of the municipal collection service to separate specified types of waste from the general waste for the purposes of recovery, re-use or recycling.

In terms of Section 19(1) of the Waste Act, the Minister may publish a list of waste management activities that have, or are likely to have, a detrimental effect on the environment. In terms of Section 20 of the Waste Act no person may commence, undertake or conduct a waste management activity except in accordance with the following:

- the requirements or standards determined in terms of Section 19(3) of the Waste Act for that activity; or
- a waste management licence issued in respect of that activity, if a license is required.

On 3 July 2009 a list of waste management activities were published. These activities were published in Government Notice 178 in Government Gazette No. 32368 of 3 July 2009. No person may commence with, undertake or conduct these activities unless a waste management licence is issued in respect of the activity.

A person who wishes to commence, undertake or conduct an activity listed under Category A must conduct a Basic Assessment process whilst activities listed under Category B requires a Scoping and EIA process to be undertaken.

In terms of Section 49(2) of the Waste Act a decision to grant a waste management licence in respect of a waste disposal facility is subject to the concurrence of the Minister responsible for Water Affairs. The Waste Act further specifies that the issuing of a waste management licence for a waste disposal facility is subject of the inclusion in the licence of any conditions contained in a Record of Decision issued by the Minister responsible for Water Affairs regarding any measures that the Minister responsible for Water Affairs considers necessary to protect a water resource as defined in the National Water Act, 1998 (Act No. 36 of 1998).

As far as hazardous waste goes, the National Department of Environmental Affairs (DEA) is the regulatory body for the licensing of Hazardous Waste Facilities, according to NEM:WA's Chapter 5. In addition, the management of hazardous waste is included in the concurrent legislative competence of both National and Provincial Government assigned by the South African Constitution with respect to environment and pollution control.

2.1.10.1 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): List of waste management activities that has or is likely to have a detrimental effect on the environment. Government Gazette No. 41175, 11 October 2017

The notice replaces the amended 2013 list of activities that trigger a waste licence requirement and because of its impact on financial budgets and budget scheduling, all the activities, quoted verbatim (except where grammatically corrected) from the notice, are listed below:

“GENERAL

No person may commence, undertake or conduct a waste management activity listed in this schedule unless a licence is issued in respect of that activity.

CATEGORY A

3. A person who wishes to commence, undertake or conduct an activity listed under this Category, must conduct a basic assessment process, as stipulated in the environmental impact assessment regulations made under section 24(5) of the National Environmental management Act, 1998 (Act No. 107 of 1998) as part of a waste management licence application.

Storage of waste

- (1) The storage of general waste in lagoons.

Recycling or recovery of waste

- (2) The recycling of general waste at a facility that has an operation area in excess of 500m², excluding recycling that takes place as an integral part of an internal manufacturing process within the same premises.
- (3) The recycling of hazardous waste in excess of 500kg but less than 1 tonne per day calculated as a monthly average, excluding recycling that takes place as an integral part of an internal manufacturing process within the same premises.
- (4) The recovery of waste including the refining, utilisation, co-processing of the waste in excess of 10 tonnes but less than 100 tonnes of general waste per day or in excess of 500kg but less than 1 tonne of hazardous waste per day, excluding recovery that takes place as an integral part of an internal manufacturing process with in the same premises.

Treatment of waste

- (5) The treatment of general waste using any form of treatment at a facility that has the capacity to process in excess of 10 tonnes but less than 100 tonnes.
- (6) The treatment of hazardous waste using any form of treatment at a facility that has the capacity to process in excess of 500kg but less than 1 tonne per day excluding the treatment of effluent, wastewater or sewage.
- (7) The remediation of contaminated land.

Disposal of waste

- (8) The disposal of inert waste in excess of 25 tonnes and with a total capacity of 25 000 tonnes, excluding the disposal of such waste for the purposes of levelling and building which has been authorised by or under other legislation.
- (9) The disposal of general waste to land covering an area of more than 50m² but less than 200m² and with a total capacity not exceeding 25 000 tonnes.
- (10) The disposal of domestic waste generated on premises in areas not serviced by the municipal service where the waste disposed exceeds 500kg per month.

Construction, expansion or decommissioning of facilities and associated structures and infrastructure

- (11) The construction of facilities for waste management schedule activity listed in Category A of this Schedule (not in isolation to associated activity)
- (12) The expansion of waste management activity listed in Category A or B of this Schedule which does not trigger an additional waste management activity of this Schedule
- (13) The decommissioning of facility for a waste management activity listed in Category A or B of this Schedule.

CATEGORY B

- 4. A person who wishes to commence, undertake or conduct a waste management activity listed under this Category, must conduct a scoping and environmental impact reporting process, set out in the Environmental Impact Assessment Regulations made under section 24(5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as part of a waste management licence application contemplated in section 45 read with section 20(b) of this Act.

Storage of hazardous waste

- (1) The storage of hazardous waste in lagoons excluding storage of effluent, wastewater or sewage.

Reuse, recycling and recovery of waste

- (2) The reuse and recycling of hazardous waste in excess of 1 tonne per day, excluding reuse or. Recycling that takes place as an integral part of an internal manufacturing process within the same premises.
- (3) The recovery of waste including the refining, utilisation or co-processing of waste at a facility with a facility that processes in excess of 100 tonnes of general waste per day or in excess of 1 tonne of hazardous waste per day, excluding recovery that takes place as an integral part of an internal manufacturing process within the same premises.

Treatment of waste

- (4) The treatment of hazardous waste in excess of 1 tonne per day calculated as a monthly average; using any form of treatment excluding the treatment of effluent, wastewater or sewage.
- (5) The treatment of hazardous waste in lagoons, excluding the treatment of effluent, wastewater or sewage.
- (6) The treatment of general waste in excess of 100 tonnes per day calculated as a monthly average, using any form of treatment.

Disposal of waste on land

- (7) The disposal of any quantity of hazardous waste to land.
- (8) The disposal of general waste to land covering an area in excess of 200m² and with a total capacity exceeding 25 000 tonnes.
- (9) The disposal of inert waste to land in excess of 25 000 tonnes, excluding the disposal of such waste for the purposes of levelling and building which has been authorised by or under other legislation.

Construction of facilities and associated structures and infrastructure

- (10) The construction of facilities for a waste management activity listed in Category B of this Schedule (not in isolation to associated waste management activity).

CATEGORY C

5. A person who wishes to commence, undertake or conduct a waste management activity listed under this Category, must comply with the relevant norms or standards determined by the Minister listed below-
- (a) Norms and Standards for Storage of Waste, 2013 or
 - (b) Standards for Extraction, Flaring or recovery of Landfill Gas, 2013; or
 - (c) Standards for Scrapping or Recovery of Motor Vehicles, 2013; or
 - (d) National Norms and Standards for the Sorting, Shredding, Grinding, Crushing, Screening or Baling of General Waste, 2017.

Storage of waste

- (1) The storage of general waste at a facility that has the capacity to store in excess of 100m³ of general waste at any one time, excluding the storage of waste in lagoons or temporary storage of such waste.
- (2) The storage of hazardous waste at a facility that has the capacity to store in excess of 80m³ of hazardous waste at any one time, excluding the storage of hazardous waste in lagoons or temporary storage of such waste.
- (3) The storage of waste tyres in a storage area exceeding 500m².

Recycling or recovery of waste

- (4) The scrapping or recovery of motor vehicles at a facility that has an operational area in excess of 500m².
- (5) The extraction, recovery or flaring of landfill gas.
- (6) The sorting, shredding, grinding, crushing, screening or baling of general waste at a waste facility that has an operational area that is 1000m² and more."

2.1.10.2 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): National Domestic Waste Collection Standards, Government Gazette No. 33935, 21 January 2011

The purpose of this publication is to redress past imbalances in the provision of waste collection services. The provision of waste collection services improves the quality of life of the entire community and ensures a clean and more acceptable place to live and work in. The lack of or poor quality waste collection services can however result in a number of environmental and human health problems.

It is recognised that South Africa is a developing country and the purpose of the setting of standards is to ensure a service to all while complying with health and safety regulations without unnecessarily changing current creative collection processes as long as they function well and deliver a service of acceptable standard to all households. These National Domestic Waste Collection Standards are therefore applicable to all domestic waste collection services throughout the country.

This notice distinguishes between the levels of service relating to waste collection. It further states that equitable waste collection services must be provided to all households within the jurisdiction of the municipality. In areas where travelling distances and the resulting costs may render regular waste collection services impractical, the municipality, through by-laws, must allow for more feasible alternative ways of waste handling, such as on-site disposal.

From here regulations and guidelines on separation at source, collection of recyclable waste, receptacles, bulk containers, communal collection points, and frequency of collection, drop-off centres and collection vehicles are given.

Existing Occupational Health and Safety legislation must be adhered to and the general health of waste collection workers must be addressed by ensuring they receive:

- (i) regular medical check-ups to ensure their health and well-being;
- (ii) appropriate personal protective equipment e.g. gloves, masks, overalls and raincoats, gumboots; and
- (iii) on-going training on health and safety issues.

The role of the Waste Management Officer regarding waste awareness and the handling of complaints are prescribed. The municipality must create awareness amongst households about the following:

- (i) the types of waste collection services provided;
- (ii) Separation at source - the removal of recyclables and re-usable waste from the general household waste;
- (iii) The potential of composting of some of the household waste and the benefit of such to the household;
- (iv) The unacceptability of illegal dumping and littering;
- (v) Measures to be taken against individuals that litter and dump waste illegally;
- (vi) The cost of cleaning up illegal dumping and littering, and the implications on household waste collection rates; and
- (vii) The advantages of reporting illegal dumping activities.

The municipality must provide clear guidelines to households about the following:

- (i) The different types of waste generated in households;
- (ii) separation of non-recyclable and non-reusable household waste from compostable waste and recyclable waste;
- (iii) Appropriate containers for each type of waste;
- (iv) Removal schedules for each type of waste; and
- (v) What to do with waste other than those waste forming part of the regular schedule of waste collection services.

Awareness raising and guideline communications must be done at regular intervals to ensure that all households are well informed about the issues listed above.

The Waste Collection customer service standards for Kerbside collection are described with respect to collection schedule, interruptions, the replacement of bins, collection during holidays and general points.

2.1.10.3 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): National Waste Information Regulations, Government Gazette No. 35583, 13 August 2012

The purpose of the Regulations is to regulate the collection of data and information to fulfil the objectives of the national waste information system set out in section 61 of the Act.

The Regulations apply uniformly to all persons conducting an activity listed in Annexure A of the Regulations. A person who conducts an activity in a province that has an established waste information system in terms of section 62 of the Act and collects the minimum information required by the Regulations must submit the information to the provincial waste information system.

Where a province has developed waste information regulations that are compatible with the Regulations, a person who conducts an activity contemplated in Annexure A to the Regulations must comply with the provincial waste information regulations.

2.1.10.4 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): Waste Classification and Management Regulations, Government Gazette No. 36784, 23 August 2013

The purpose of the Regulations is to regulate the classification and management of waste in a manner which supports and implements the provisions of the Act; to establish a mechanism and procedure for the listing of waste management activities that do not require a Waste Management Licence; to prescribe requirements for the disposal of waste to landfill; to prescribe requirements and timeframes for the management of certain wastes and to prescribe general duties of waste generators, transporters and managers. It is stated in the Regulations that waste transporters and waste managers must not accept waste that has not been classified in terms of regulation 4 unless such a waste is listed in Annexure A of the Regulations.

Chapter 2 of the Notice covers Waste Classification and Safety Data Sheets. This regulation imposes an obligation on waste generators to prepare safety data sheets for all hazardous waste.

Chapter 3 covers Waste Management in General, Waste Treatment and Waste Disposal to Landfill. Waste Transporters and Waste managers must NOT accept waste that has not been classified in terms of Section 4 unless such waste is listed in Annexure A of the Regulations.

Chapter 4 covers Waste Management Activities that do not require a Waste Management Licence. With reference to section 4: Waste classification: Wastes which were not previously classified in terms of the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste, 2nd Edition 1998 must be classified in terms of SANS 10234 within 18 months from the publication of the regulations, thus on or before 23 February 2015. Wastes which were previously classified in terms of the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste, 1998 must be classified in terms of SANS 10234 within 3 years from the publication of the regulations of 23 August 2013 (thus on or before 23 August 2016).

The safety data sheets for wastes listed in item 2(b)(i) of Chapter 7: Annexure A must be prepared (in accordance with SANS 10234) for the product the waste originates from. The safety data sheets for hazardous waste, must be prepared (in accordance with SANS 10234) reflecting the details of the specific hazardous wastes or hazardous chemicals in the waste.

Chapter 5 covers the Record Keeping and Waste Manifest System:

- 10(1) the waste **generators** must keep accurate and up to date records of the management of the waste generated, the records must reflect:-
 - (a) The classification of the waste
 - (b) The quantity of each waste generated in tonnes or cubic metres per month;
 - (c) The quantity of each waste that has been re-used, recycled, recovered, treated or disposed of, and
 - (d) By whom the waste was managed
- 10(2) the sub regulation does not apply to item 2(a) of Annexure A (*general waste*)
- 11(4) Waste **Transporters** must NOT accept waste that has not been classified in terms of Section 4(2) or waste that has been listed in 2(b) of Annexure A of the Regulations for Transport unless the Waste Manifest Document accompanies the Waste
- 11(5) All **transporters** of hazardous waste in terms of Regulation 4(2) or waste that is listed in item 2(b) of Annexure A to the Regulations must:-
 - (a) Complete a waste manifest for each consignment of waste transported
 - (b) Provide information to the generator before the waste is transported from the premises
 - (c) Provide the information to the facility waste manager at the time of delivery.
- 11(8) all waste generators, transporters and managers subjected to the requirements of sub-regulation 1, 2, 4, 5, 6 and 7 must-
 - (a) Retain copies or be able access copies/records, of the waste manifest document for at least (5) years.

Chapter 6 covers General Matters which includes Implementation and Transitional Provisions and Offences and Penalties.

Chapter 7 contains the following Annexures:

Annexure 1: Wastes that do not require Classification or Assessment

- (2) General waste.
 - (i) Domestic Waste;
 - (ii) Business waste not containing hazardous waste or hazardous chemicals;
 - (iv) Non-infectious animal carcasses;
 - (iv) Garden waste;
 - (v) Waste packaging;
 - (vi) Waste tyres;
 - (vii) Building and demolition waste not containing hazardous waste or hazardous chemicals; and
 - (viii) Excavated earth material not containing hazardous waste or hazardous chemicals.

- (3) Hazardous waste
 - (i) Waste Products;
 - Asbestos
 - PCB or PCB containing waste
 - Expired, spoiled or unusable hazardous products
 - (ii) Mixed waste
 - General waste excluding domestic- that may contain hazardous waste or hazardous chemicals.
 - Mixed hazardous chemical wastes from analytical laboratories and laboratories from academic institutions less than 100 litre.
 - (iii) Other:
 - Health Care Risk Waste (HCRW)

Based on physical and chemical characteristics hazardous waste can be grouped according to the South African National Standards 10234 (SANS 10234:2008) into the following classes:

Hazardous Waste Class (SANS 10234:2008)	
Classes	Description
9.1	Explosives
9.2	Flammable gases
9.3	Flammable aerosols
9.4	Oxidising gases
9.5	Gases under pressure
9.6	Flammable liquids
9.7	Flammable solids
9.8	Self-reactive substances and mixtures
9.9	Pyrophoric substances
9.10	Self-heating substances and mixtures
9.11	Substances and mixtures that, on contact with water, emit flammable gases
9.12	Oxidizing substances and mixtures
9.13	Organic peroxides
9.14	Corrosive to metals

Annexure 2: Waste Manifest System Information Requirements

- (1) The information required in (2) must be reflected in the Waste Manifest Document required in terms of Regulation 11.
- (2) (a) Information supplied by the waste generator (consignor):
 - (i) Unique consignment identification number
 - (ii) South African Waste Information Number (SAWIS), if applicable
 - (iii) Generator's contact details
 - (iv) Physical address of site where the waste was generated
 - (v) Contact number
 - (vi) Origin/source of the waste. (process or activity)
 - (vii) Classification of the waste (SANS 10234) and Safety Data Sheet (SDS)
 - (viii) Quantity of waste by volume or tonne
 - (ix) Date of collection/dispatch
 - (x) Intended receiver (waste Manager)
 - (xi) Declaration (content of the assignment is fully and accurately described, classified, packed, marked and labelled, and in all respects in a proper condition for transportation in accordance with the applicable by-laws and applications)
- (b) Information to be supplied to the waste Transporter:
 - (i) Name of transporter
 - (ii) Address and telephone number
 - (iii) Declaration acknowledging receipt of the waste.
- (c) Information supplied by the waste manager (consignee):
 - (i) Name, address and contact details
 - (ii) Receiving facility details
 - (iii) Waste management facility licence number
 - (iv) Date of receipt

- (v) Quantity of waste received
- (vi) Type of waste management applied
- (vii) Any discrepancies in information between the different holders of waste
- (viii) Waste management reporting description and code in terms of the National Waste Information Regulations 2012
- (ix) Details on any waste diverted to another facility
- (x) Certification and declaration of receipt and final management of waste.

2.1.10.5 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): National Norms and Standards for the Assessment of Waste for Landfill Disposal, Government Gazette No. 36784, 23 August 2013

The purpose of the Norms and Standards is to prescribe the requirements for the assessment of waste prior to disposal to landfill in terms of Regulation 8(1) (a) of the Regulations.

The Standard Assessment methodology to assess waste for the purpose of disposal to landfill the following are required:

- Identification of chemical substances present in the waste
- Sampling and analysis to determine the total concentrations (TC) and leachable concentrations (LC) of the elements and chemical substances that have been identified in the waste and that are specified in section 6 of the Norms and Standards.

Within 3 years of the date of commencement of the Regulations, all analyses of the TC and LC must be conducted by labs accredited by SANAS. The TC and LC limits must be compared to the threshold limits specified in section 6 of these Norms and Standards. Based on the TC and LC limits the specific type of waste for disposal to landfill must be determined in terms of section 7.

2.1.10.6 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): National Norms and Standards for Disposal of Waste to Landfill, Government Gazette No. 36784, 23 August 2013

The purpose of the Norms and Standards are to determine the requirements for the disposal of waste to landfill as contemplated in regulation 8(1)(b) and (c) of the Regulations.

Chapter 2 describes and illustrates the Landfill Classification and corresponding minimum engineering design requirements for the Containment Barriers. These are for Class A to Class D landfills. The requirements that are to be included in an application for a waste management license are stipulated.

The waste acceptance criteria for disposal to landfill are summarised as follows:

Waste assess in terms of the Norms and Standards for Assessment of Waste for Landfill Disposal set in terms of section 7(1) of the Act must be disposed to a licensed landfill as follows:

Waste Type	Landfill Disposal Requirements
Type 0	Disposal to landfill not allowed
Type 1	Disposed at Class A landfill or H:h/H:H landfill as specified
Type 2	Disposed at Class B landfill or G:L:B+ landfill as specified
Type 3	Disposed at Class C landfill or G:L:B+ landfill as specified
Type 4	Disposed at Class D landfill or G:L:B- landfill as specified

Waste listed in section 2(a) of Annexure A to the Regulations must be disposed as follows:

Listed Waste	Landfill Disposal Requirements
Domestic waste. Business waste not containing hazardous waste or hazardous chemicals. Non-infectious animal carcasses. Garden waste.	Disposed at Class B landfill or G:L:B+ landfill as specified
Post-consumer packaging. Waste tyres.	Disposed at Class C landfill or G:L:B+ landfill as specified
Building and demolition waste not containing hazardous waste or hazardous chemicals. Excavated earth material not containing hazardous waste or hazardous chemicals.	Disposed at Class D landfill or G:L:B- landfill as specified

Unless assessed in terms of the Norms and Standards for Assessment of Waste for Landfill Disposal set in terms of Section 7(1) of the Act and disposed of in terms of section 4(1) of these Norms and Standards, the following waste included in section 2(b) of Annexure A to the Regulations must be disposed as follows:

Listed Waste	Landfill Disposal Requirements
Asbestos waste; Expired, spoilt or unstable hazardous products; PCBs; General waste, excluding domestic waste, which contains hazardous waste or hazardous chemicals; Mixed, hazardous chemical wastes from analytical labs and labs from academic institutions in containers less than 100 litres.	Disposed at Class A landfill or H:h/H:H landfill as specified

Waste that has been classified in terms of the Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste (2nd Edition, 1998; DWAF) prior to the Regulations coming into operation, may be accepted and disposed of as set out below for a period not exceeding 3 years after the date of coming into operation of the Regulations:

Waste	Landfill Disposal Requirements
Hazardous Waste - Hazard Rating 1 or 2	Disposed at Class A landfill or H:H landfill as specified
Hazardous Waste - Hazard Rating 3 or 4	Disposed at Class A landfill or H:h landfill as specified
Hazardous Waste - Delisted	Disposed at Class B landfill or G:L:B+ landfill as specified
General Waste	Disposed at Class B landfill or G:S/M/L:B-/B+ landfill as specified

The Norms and Standards lists prohibitions and restrictions on the disposal of waste to landfill which comes into effect after the timeframes indicated for each waste and activities from the date of the Regulations coming into operation.

2.1.10.7 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): Fee Structure for Consideration and Processing of Applications for Waste Management Licences, Transfer and Renewal thereof, Government Gazette No. 37383, 28 February 2014

These regulations apply to the above application excluding community based projects funded by government grants or applications made by organs of state. The commencement date is 1 April 2014. Payment details are discussed regarding the different applicable fees which are listed as follows:

Application	Fee
Application for a waste management license for which basic assessment is required in terms of the Act.	R200.00
Application for a waste management license for which S&EIR is required in terms of the Act.	R10 000.00
Application for a transfer of a waste management license in terms of section 52(2) or for the renewal of a waste management license in terms of section 55(2) of the Act.	R2 000.00

2.1.10.8 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): National Norms and standards for the Extraction Flaring or Recovery of Landfill Gas, Government Gazette No. 37086, 29 November 2013

The purpose of these Norms and Standards is to aim at controlling the flaring, extraction or recovery of landfill gas at facilities in order to prevent or minimise the potential negative impacts on the bio-physical and socio-economic environments. It describes how these facilities must be designed, operated, monitored and decommissioned.

2.1.10.9 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): National Norms and Standards for the Scrapping or Recovery of Motor Vehicles, Government Gazette No. 37087, 29 November 2013

These Norms and Standards are applicable to a vehicle scrapping or recovery facility with an operational area exceeding 500m² and describes how such a facility must be designed, operated, monitored and decommissioned.

2.1.10.10 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): National Norms and Standards for the Storage of Waste, Government Gazette No. 37088, 29 November 2013

The purpose of these Norms and Standards is to provide a uniform national approach to the management of waste storage facilities, ensure best practice and to provide minimum standards for the design and operation of new and existing facilities. These Norms and Standards are applicable to waste storage facilities that have the capacity to store in excess of 100m³ general waste continuously or 80m³ of hazardous waste continuously.

2.1.10.11 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): DRAFT National Norms and Standards for Organic Waste composting, Government Gazette No. 37300, 7 February 2014

These draft Norms and Standards are applicable to organic waste composting facilities that have the capacity to process in excess of 10 tonnes but less than 100 tonnes of compostable organic waste per day and describes how such a facility must be designed, operated, monitored and decommissioned.

2.1.10.12 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): National Norms and Standards for the Remediation of Contaminated Land and Soil Quality, Government Gazette No. 37603, 2 May 2014

The purpose of these Norms and Standards is provide a uniform national approach to determine the contamination status of an area and to limit uncertainties about the most appropriate criteria and method to apply in such an assessment. Also provide minimum standards for assessing necessary environmental protection measures for remediation activities.

2.1.10.13 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): National Norms and Standards for the sorting, shredding, grinding, crushing, screening or baling of general waste, Government Gazette No. 41175, 11 October 2017

The purpose of these norms and standards is to provide a uniform national approach relating to the management of waste facilities that sort, shred, grind, crush, screen, chip or bale general waste and applies to a waste facility that has an operational area that is 1000m² and more.

It requires any new facility to register with the competent authority within 90 days prior to construction taking place and it allows for any existing facilities that undertake these activities, and which are already registered in terms of the National Norms and Standards for Storage of waste, to comply with the norms and standards without having to re-register.

A waste facility that is less than 1000m² must register with the competent authority and comply with the principle of duty of care as contained in Section 28 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and Section 16(1) and 16(3) of the National Environmental Management: Waste Act, 2008 (Act 59 of 2008).

2.1.10.14 National Environmental Management: Waste Act, 2008 (Act no. 59 of 2008): List of Waste Management Activities that has or is likely to have a detrimental effect on the Environment Government Gazette No. 37604, 2 May 2014

The Waste Management Activities List under paragraph 2.15 above has been amended by the deletion of Category B activity 3 (8).

2.1.11 **The Western Cape Health Care Waste Management Amendment Act, 2007 (No 6 of 2010)**

Act 7 of 2007 was amended in 2010 so as to align the terminology with that used in the National Environmental Management: Waste Act, 2008; to define or redefine certain expressions; to delete certain unnecessary definitions; to provide for the issuing of compliance notices; to amend the provisions relating to offences and penalties; to make further provision regarding regulations; to effect certain textual changes; and to provide for matters incidental thereto. The Health Care Management Bill provides for the effective handling, storage, collection, transportation, treatment and disposal of health care waste by all persons in the Province of the Western Cape; and provides for matters incidental thereto.

The object of this Act is to promote integrated health care waste management and thereby—

- (a) reduce the risks of health care waste to human health;
- (b) prevent the degradation of the environment;
- (c) prevent the illegal dumping of health care waste;
- (d) promote sustainable development, and
- (e) Ensure responsible management of health care waste within the Province.

Under this Act a Municipality must:

- (a) enforce the relevant provisions of this Act within its area of jurisdiction;
- (b) perform audits of generators, transporters, treaters or disposers of health care waste within its area of jurisdiction to ensure compliance with the provisions of this Act;
- (c) report annually to the Provincial Minister on the number of incidents of illegal dumping of health care risk waste within its area of jurisdiction, the number of incidents of illegal dumping of health care risk waste pursued in a court of law, and the number of incidents of illegal dumping of health care risk waste successfully convicted in a court of law.

Health Care Waste is produced by hospitals, clinics, physicians, offices, dentists, funeral homes, veterinary clinics and medical- and research laboratories.

Currently only 10-15% of medical waste is considered infectious. The enormous volumes of health care waste requiring special handling and disposal for all infectious and pathological waste are responsible for the current re-evaluation of the terminology for health care waste.

The modern trend in infection control is dictated by the risk posed by the procedure and not by the diagnoses. Thus health care waste is divided into Health Care General Waste (HCGW) and Health Care Risk Waste (HCRW). HCRW generally indicates infectious waste, pathological waste, sharps, chemical and pharmaceutical waste, radioactive and cytotoxic waste.

2.1.12 **The Western Cape Health Care Waste Management Amendment Act, 2007: Western Cape Health Care Risk Waste Management Regulations, 2013**

These regulations were published in the Western Cape: Provincial Gazette Extraordinary 15 March 2013. These are the regulations set out in the Schedule under section 14 of the Western Cape Health Care Waste Management Act, 2007.

The regulations address the requirements for packaging, storage, internal transport, external transport, vehicles, drivers, treatment and disposal of health care risk waste. Furthermore the required training, registration of health care risk waste generators, transporters, treaters and disposers, reporting, auditing and record keeping is discussed. Health care waste management plans must be prepared by those who meet the criteria listed. The required actions regarding compliance notices are also listed.

All addressed forms in the regulations are given in the Annexures:

- Annexure A: Minimum Requirements for health care risk waste containers
- Annexure B: Minimum Requirements for storage of health care risk waste in terms of regulation 3
- Annexure C: Form 1, Minimum Requirements for a tracking document
- Annexure 4: Minimum Requirements for information to be contained in a Health Care Waste Management Plan

- Annexure 5: Form 2.1, IPWIS registration form for health care risk waste generators, transporters, treaters and disposers
- Annexure 6: Form 2.2, Registration Certificate; Form 3.1, Monthly record keeping form for generators; Form 3.2 Monthly record keeping form for transporters, treaters and disposers
- Annexure 7: Form 4.1, Compliance Notice; Form 4.2, Compliance certificate.

2.1.13 **National Waste Management Strategy (2011)**

The National Waste Management Strategy (2011) presents Government's strategy for integrated waste management for South Africa and is a legislative requirement of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008). The purpose of the Strategy is to achieve the objectives of the Waste Act.

The National Waste Management Strategy presents a long-term plan (up to the year 2016) for addressing key issues, needs and problems experienced with waste management in South Africa. The strategy gives effect to the Bill of Rights, Constitution of South Africa, Act 107 of 1998, on the basis of which the people of South Africa have the right to an environment that is not detrimental to their health. Furthermore, the strategy translates into action Government's policy on waste as set out in the Draft White Paper on Integrated Pollution and Waste Management for South Africa (published in 1998).

The objective of integrated pollution and waste management is to move away from fragmented and uncoordinated waste management to integrated waste management. Such a holistic and integrated management approach extends over the entire waste cycle from cradle to grave, and covers the prevention, minimisation, generation, collection, transportation, treatment and final disposal of waste. Integrated waste management thus represents a paradigm shift in South Africa's approach to waste management, by moving away from waste management through impact management and remediation and establishing instead a waste management system which focuses on waste prevention and waste minimisation.

The Strategy is built around a framework of eight goals, as listed below, along with specific goals that needed to be reached by 2016, as described below.

Goal 1: Promote waste minimisation, reuse, recycling and recovery of waste.

- 25% of recyclable diverted from landfill sites for re-use, recycling or recovery.
- All Metropolitan Municipalities, secondary cities and large towns have initiated separation at source programmes.

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

- 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.

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

- 69 000 new jobs created in the waste sector.

Goal 4: Ensure that people are aware of the impact of waste on their health, well-being and the environment.

- 80% of municipalities running local awareness campaigns.
- 80% of schools implementing waste awareness programmes.

Goal 5: Achieve integrated waste management planning

- All Municipalities have integrated their IWMPs with their IDPs and have met the targets set in the IWMPs.
- All waste management facilities required to report to SAWIS have waste quantification systems that report information to WIS.

Goal 6: Ensure sound budgeting and financial management for waste services.

- All municipalities that provide waste services have conducted full-cost accounting for waste services and have implemented cost reflective tariffs.

Goal 7: Provide measures to remediate contaminated land.

- Assessment complete for 80% of sites reported to the contaminated land register.
- Remediation plans approved for 50% of confirmed contaminated sites.

Goal 8: Establish effective compliance with and enforcement of the Waste Act.

- 50% increase in the number of successful enforcement actions against non-compliant activities.
- 800 EMIs appointed in the three spheres of government to enforce the Waste Act.

The strategy aims to reduce both the generation and the environmental impact of waste. It presents a plan for ensuring that the socio-economic development of South Africa, the health of its people and the quality of its environmental resources are no longer adversely affected by uncontrolled and uncoordinated waste management. It establishes a waste management system that concentrates on avoiding, preventing and minimising waste and makes provision for waste management services for all by extending an acceptable standard of waste collection, as well as transportation, treatment and disposal services to all communities.

While the long-term objective of the strategy is waste prevention and minimisation, a number of remedial actions such as improved waste collection and waste treatment are required in the shorter term due to prevailing inadequate waste management practices.

The Strategy is an institutionally inclusive strategy because its achievement relies on participation by numerous role-players in the public sector, private sector and civil society.

To implement the Waste Act, government must:

- Draft legislation, regulations, standards and Integrated Waste Management Plans.
- Regulate waste management activities through licences and enforce their conditions.
- Implement the South African Waste Information System (SAWIS)
- Coordinate waste management activities using a system of Waste Management Officers.
- Give effect to multilateral agreements and ensure proper import and export controls.
- Progressively expand access to at least a basic level of waste services and plan for future needs.
- Facilitate the establishment of a national recycling infrastructure.
- Provide the framework for the remediation of contaminated land.
- Work in partnership with the private sector and civil society.

2.1.14 **National Waste Management Strategy: 2019 Revised and Updated National Waste Management Strategy (DRAFT)**

The draft strategy is an update of the 2011 NWMS to be implemented under the Waste Act. It is updated in light of progress, challenges and lessons learned from implementing the 2011 strategy. It was based on a 4-phase approach, which consist of the following:

- The review of the 2011 NWMS
- A situational analysis
- Recommendations
- A draft Revised and Updated NWMS

The latest indications in the Draft 2018 State of Waste Report are that as waste generation continues to grow in South Africa, no significant diversion from disposal is taking place, therefore the depletion of disposal airspace continue at unsustainable rates. Implementation of the waste management hierarchy informed the 2011 NWMS, but progress has been limited. The revised strategy needs to be more specific in terms of objectives, targets and actions in relation to the different levels of the waste management hierarchy and particular waste streams. Progress has been made in terms of recycling as compared to other developing countries. However, with the generated general waste stream consisting of approximately 47% organics (State of Waste Report), this waste stream needs to be prioritised and waste minimisation opportunities above and below recycling in the hierarchy need to be more actively addressed.

The concept of the circular economy is highlighted as being a useful way of understanding the implementation of the waste management hierarchy in terms of its contribution to the green economy and the decoupling of economic activity from harmful environmental impacts. The circular economy consists of closing the loop between resource extraction and waste disposal by the application of waste avoidance, reuse, repair, recycling and recovery throughout the economic cycle to minimise waste and reduce demand for virgin materials.

The updated NWMS is based on two strategic entry points to waste minimisation:

- **Waste prevention:** This includes interventions around the design and packaging of products, cleaner production and industrial symbiosis by reducing the substances, materials and products that become waste. These interventions have the highest priority and should be the first applied to any waste stream.
- **Waste as a resource:** This includes interventions to stimulate secondary resources economy that take place after products or materials have become waste. Examples are recycling and recovery and generating energy from waste.

The 2011 NWMS revolved around 8 goals. This approach has been updated to focus on three overarching goals containing sets of strategic objectives which will be monitored in terms of performance indicators. The three strategic goals correspond to the following implementation themes:

- **Waste Minimisation:** the focus is on waste prevention and building a secondary resources economy. The role of government is to create an enabling environment for the private sector that supports extended producer responsibility and waste beneficiation.
- **Effective and Sustainable Waste Services:** the focus is on government, particularly local government, in ensuring that citizens receive appropriate waste services in a way that contributes to sustainable development.
- **Awareness and Compliance:** the focus is improving behaviour and attitude amongst citizens, businesses and government to lead to a culture of compliance to manage the environmental impact of waste and preventing pollution.

The goals and associated strategic objectives for the updated NWMS are provided in the tables below, which reference the relevant Waste Act goals:

Goal 1	Prevent waste, and where waste cannot be prevented, divert 50% of waste from landfill within 5 years; 65% within 10 years; and at least 80% of waste within 15 years through reuse, recycling and recovery and alternative waste treatment.
Strategic objectives	<u>Waste prevention:</u>
	Prevent waste through cleaner production, industrial symbiosis, and extended producer responsibility
	Prevent food waste by working with agricultural producers, retailers, the hospitality sector and consumers
	<u>Waste as a Resource:</u>
	Divert organic waste from landfill through composting and the recovery of energy
	Divert construction and demolition waste from landfill through beneficiation
	Increase recycling and recovery rates
	Increase technical capacity and innovation for the beneficiation of waste
NEMWA	Minimising the consumption of natural resources
	Avoiding and minimising the generation of waste
	Reducing, reusing, recycling and recovering waste
	Treating and safely disposing waste as a last resort
	Preventing pollution and ecological degradation
	Securing ecologically sustainable development while promoting justifiable economic and social development

Goal 2	All South Africans live in clean communities with waste services that are well managed and financially sustainable.
Strategic objectives	<u>Waste Collection:</u>
	Implementation of the DEA separation at source policy to promote reuse, recycling and recovery of waste
	Safe and environmentally sustainable disposal of hazardous household wastes.
	<u>Integrated Waste Management Planning:</u>
	Provinces provide effective regional guidance and oversight in the development and implementation of metro, district and local municipality IWMPs within the context of overarching Provincial Integrated Waste Management Plans
NEMWA	All local authorities to include provisions for recycling drop-off/buy-back/storage centres in their IWMPs by 2020
	Promoting and ensuring the effective delivery of waste services
	Achieving integrated waste management reporting and planning

Goal 3	South Africans are aware of waste and a culture of compliance with waste management norms and standards exists, resulting in zero tolerance of pollution, litter and illegal dumping.
Strategic objectives	Reduction of littering and illegal dumping due to attitudinal shifts and greater public awareness of the environmental damage caused by waste
	Enhanced capacity to enforce the Waste Act and International Agreements on waste and pollution
	Municipal landfill sites and waste management facilities comply with licensing standards
	All local authorities to include provisions for recycling drop-off/buy-back/storage centres in their IWMPs by 2020
NEMWA	To ensure that people are aware of the impact of waste on their health, well-being and the environment
	To provide for compliance with the measures set out in paragraph (a)
	Generally, to give effect to section 24 of the Constitution in order to secure an environment that is not harmful to health and well-being

The updated strategy further expands on each of the above goals and defines the implementation, monitoring and evaluation framework in the following tables. Note that all objectives are not applicable to local authority level, but the entire framework is shown here to illustrate all role players.

Strategic Objective	Targeted Outcomes:	Socio-Economic and Environmental Impacts:	
<i>Prevent waste through cleaner production, industrial symbiosis, and extended producer responsibility</i>	Reduction in waste disposed to landfill in line with goal statement	Reduced GHG emissions from disposal of waste to landfill and recovery of low carbon energy waste	
	Reduction in the toxicity of waste streams	Reduced marine and terrestrial pollution from plastics packaging	
	80% reduction in the production of single-use plastics not covered by EPR deposit schemes	Reduced requirements for new landfill airspace, resulting in avoided costs for local government	
		GDP growth and job creation in targeted sectors due to improved economic performance	
Action	Implementing Agents	Timeline	Performance Indicators
IndWMPs for priority wastes (WEEE, Paper and Packaging, Lighting and Tyres) to include measures for cleaner production, industrial symbiosis and extended producer responsibility.	NCPC-SA supported by the Waste Bureau (DEA) and in collaboration with industry associations.	Tyres: 2019 WEE, Paper and Packaging, Tyres: 2020	Number of IndWMPs meeting or exceeding performance targets within 5 years
Strengthen the capacity and national reach of the NCPC-SA, with waste symbiosis programs established in all provinces.	NCPS-SA in partnership with the DEA, DST (TIA and Waste RDI Roadmap), Provinces, Industrial Development zones, business chambers and industry associations	W. Cape, Gauteng, KZN - 2019 E.Cape, Mpumalanga, N.West - 2020 Free State, Limpopo, N.Cape - 2021	Number of provinces with well-established Industrial Symbiosis Programmes. Increase in training and technical support provided by the NCPC-SA
Restrict the production and retail of single-use plastics, to be replaced with bio-degradable alternatives.	DEA will work with dti, DST (TIA and waste RDI Roadmap), retail and other affected industry associations	Within 5 years, most single-use plastics to be covered by EPR deposit schemes	Industry agreements to phase out single-use plastics

Strategic Objective	Targeted Outcomes:	Socio-Economic and Environmental Impacts:	
Prevent food waste	50% reduction in food waste within 5 years	Job creation in the farm-to-table value chain	
		Poverty alleviation	
		Improved child nutrition	
Action	Implementing Agents	Timeline	Performance Indicators
Develop and implement a strategy for reducing food losses prior to retail associated with harvesting, processing and transport of foods in collaboration with food producers and retailers.	The DEA will work with the DAFF in collaboration with food producers and retailers.	Strategy developed by 2020 Annual reporting on strategy by DEA	Reduction in food losses prior to retail. Reduction in food waste in the retail sector
Improve consumer awareness and standards for labelling and marketing of perishable foodstuffs and "ugly" fruits and vegetables.	The DEA will work with the DoH, food retailers, the DTI and the National Consumer Commission (NCC) and South African Bureau of Standards (SABS) to promote compliance of food stuffs.	Marketing and labelling standards reviewed/revised by 2021. Consumer awareness campaign launched in 2021.	
Develop guidelines and norms and standards, for redistributing surplus foods and composting of spoilt food.	The DEA will work with the DoH, food retailers, the hospitality sector and NPOs.	Guidelines/Norms and Standards: 2020	

Strategic Objective	Targeted Outcomes:	Socio-Economic and Environmental Impacts:	
Increase reuse, recycling and recovery rates	70% of paper recycled 60% of plastic recycled 90% of glass recycled 90% of metals recycled 40% of fly-ash recycled	Job creation, entrepreneurship and SMME development in the recycling sector. Innovation in remediation of contaminated lands and addressing acid mine drainage using fly ash. Reduced requirements for new landfill airspace, resulting in avoided costs for local government.	
Action	Implementing Agents	Timeline	Performance Indicators
Develop and implement a public procurement framework to support recycling, encompassing requirements for recycled content.	The DEA will work with NT and COGTA.	Gazetting by 2021	Achievement of procurement targets for recycled content in the public sector
Establish Materials Recovery Facilities and recycle processing plants as Public Private Partnerships based on regionally integrated waste management planning.	The DEA will support provinces and local government in engaging with National Treasury (NT)	All new landfills to include MRFs from 2019	Number of new Materials Recovery Facilities and recycle processing plants established
Industry standards to align technology requirements between primary producers and recyclers of plastics by ensuring that the design of products and packaging facilitate reuse and recycling.	The Waste Bureau, dti, and industry associations. The DST and the Innovation Hub will be key partners in generating knowledge and technical capacity to implement the waste RDI roadmap.	Industry standards by 2019	Increased materials recovery rate for plastics.
Norms and standards for the recycling of fly-ash to be gazetted.	The DEA, in collaboration with the DoE, Eskom, and TIA	Norms and Standards gazetted by 2020	Volume of fly ash recycled.

Strategic Objective	Targeted Outcomes:	Socio-Economic and Environmental Impacts:	
<i>Divert organic waste from landfill through composting and the recovery of energy</i>	50% reduction in volume of organic waste disposed to landfill within 5 years	Reduction in GHG emissions as a result of waste to energy projects. Improved resilience of communities with composting projects and/or schools participating in the biogas in schools program. Job creation and SMME development in the biogas and composting industry. Reduced requirements for new landfill airspace, resulting in avoided costs for local government.	
Action	Implementing Agents	Timeline	Performance Indicators
DEA to work with DoE on enabling policy environment to produce biogas through anaerobic bio-digestion of organic waste treating sewage and organic domestic waste.	The DEA will work with stakeholders, including the DoE, DST, DWAS and Biogas Association.	Strategy and Regulatory framework finalised by 2020.	Number of new biogas projects involving organic waste. Volume of biogas produced from waste.
Programme linking National School Nutrition Programme to biogas digester projects	DEA, DBE, DoE	MOU with DBE by 2019	Number of schools with biogas digestors
Local government to include composting in IWMPs	The DEA will work with stakeholders including provinces and local government	All metros by 2019. All districts by 2022. All municipalities by 2023.	Number of new composting projects

Strategic Objective	Targeted Outcomes:	Socio-Economic and Environmental Impacts:	
<i>Divert construction and demolition waste from landfill through beneficiation</i>	Construction and demolition waste only disposed to landfill as cover.	Reduced environmental footprint from construction. Reduced requirements for new landfill airspace, resulting in avoided costs for local government.	
Action	Implementing Agents	Timeline	Performance Indicators
The DEA will work with SANRAL and the South African Bureau of Standards around best practice guidelines and standards for the reuse of C&D waste in roads and other building materials such as bricks.	DEA, SANRAL, construction industry association and SABS.	Publishing of best practice guidelines and guidelines by 2020.	Construction and Demolition waste only disposed to landfill as cover.

Strategic Objective	Targeted Outcomes:	Socio-Economic and Environmental Impacts:	
<i>Increase technical capacity and innovation for the beneficiation of waste</i>	Increased capacity to deliver well-managed and innovative waste services.	Enterprise development and innovation in the waste sector contributing to job creation and economic growth.	
Action	Implementing Agents	Timeline	Performance Indicators
Promote research and innovation in the waste sector and ensure that legislation and regulations are reviewed and updated to keep abreast of technical developments and remove unnecessary regulatory barriers to the uptake of new technologies.	The DEA will work with the DST through the Waste RDI Roadmap and TIA	MOU between DEA and DST by 2019	Number of waste beneficiation projects supported by TIA. Published research in the waste sector.
Increase technical capacity and skills in the waste sector.	The Waste RDI Roadmap will work with tertiary institutions to increase graduates specialising in waste management and ensure mentoring for graduates entering public service.	150 new waste management graduates by 2023	Number of waste management graduates. Number of waste management professionals in public service.

Strategic Objective	Targeted Outcomes:	Socio-Economic and Environmental Impacts:	
<i>Separate waste at source</i>	50% of households to be separating waste	Job creation. Reduction in costs to local government in relation to collection and disposal of waste.	
Action	Implementing Agents	Timeline	Performance Indicators
Integration of waste pickers into municipal collection services.	DEA, Waste RDI Roadmap, Local Government, SALGA, Waste Pickers Association	Guidelines for integrating waste pickers into domestic waste collection published by 2020. All metros to have programs in place for integrating waste pickers by 2021. All secondary cities by 2023.	Number of sustainable jobs/decent livelihoods created in collecting recyclables.
DEA to publish online and annually update guidelines, case studies and planning tools on separation at source for municipal managers.	DEA (Waste Bureau), Waste RDI Roadmap, SALGA	Annual updates	Downloads from online portal
A national awareness campaign around recycling.	DEA, Provinces, Municipalities	Campaign launched in 2019	% of residents separating at source

Strategic Objective	Targeted Outcomes:	Socio-Economic and Environmental Impacts:	
<i>Safe and environmentally sustainable disposal of hazardous household wastes and absorbent hygiene products</i>	Reduction in the toxicity of municipal waste disposed to landfill.	Reduction in risks of leachate at landfill sites and Reduction of hazardous compounds in sewage Reduced risks to human health	
Action	Implementing Agents	Timeline	Performance Indicators
As part of separating waste at source, develop and implement a strategy for the safe disposal of domestic hazardous wastes that includes a communication and awareness strategy and extended producer responsibility as core components.	DEA, DoH, DTI, Industry Associations	Strategy developed by 2020. Implementation of the strategy from 2020 going forward.	Reduced incidence of hazardous waste in general landfill sites.
Develop and implement a strategy and standards relating to the design and disposal of Absorbent Hygiene Products (AHPs) such as baby and adult diapers, feminine care products.	DEA, DoH, Private Sector, DTI, SABS	Strategy developed by 2020. Implementation of the strategy from 2020 going forward.	Reduced disposal of AHPs to landfill.

Strategic Objective	Targeted Outcomes:	Socio-Economic and Environmental Impacts:	
<i>Effective integrated waste management planning</i>	95% of households receive waste collection services in compliance with DWCS. 80% of IWMPs reflected in municipal budgets.	Increased private sector investment in the recycling sector, resulting in job creation. Appropriate and well managed waste services lead to reduced disease and illness, particularly in the young and old and informal settlements.	
Action	Implementing Agents	Timeline	Performance Indicators
All provinces to have 5-year Provincial Integrated Waste Management Plans approved by the Minister	DEA, Provinces, Municipalities	Guidelines and reporting standards for provincial IWMPs to be released in 2019.	All provinces to have updated IWMPs in place by 2020 as per the requirements of the Waste Act, and to be reporting annually, including data from metro, local and district IWMPs. All municipalities with IWMPs reporting on SAWIS.
Waste Bureau and Waste RDI Roadmap to build capacity in integrated waste management planning, provide revised guidelines for IWMPs	DEA (Waste Bureau), Waste RDI Roadmap, SALGA, Provinces and Municipalities	In 2019, Waste Bureau to have a business plan, organisational strategy, CEO appointed.	Number of municipal IWMPs submitted to provinces and approved.
Waste Bureau and Waste RDI Roadmap to build capacity in integrated waste management planning, provide revised guidelines for IWMPs	DEA (Waste Bureau), Waste RDI Roadmap, National Treasury, SALGA, Provinces and Municipalities	Paper and Packaging IndWMPs to be implemented from 2021. MOU with treasury/conditional grant by 2021.	Number of new recycling drop-off/buy-back centres established.

Strategic Objective	Targeted Outcomes:	Socio-Economic and Environmental Impacts:	
<i>Reduce littering and illegal dumping</i>	Reduction in litter and illegal dumping	Reduction in coastal and marine plastics pollution. Culture of compliance and civic responsibility.	
Action	Implementing Agents	Timeline	Performance Indicators
DEA to launch a national awareness campaign around litter and illegal dumping.	DEA, Provinces, local municipalities and the private sector.	National awareness campaign to be launched in 2019.	Media spend - print, television, radio. Social media campaign statistics.
DEA to establish microgrant facility for training and equipment for community-based clean up operations.	DEA (Waste Bureau), civil society, City Improvement Districts, National Treasury	First micro-grants issued by 2020.	Number of microgrants issued. Reports by micro-grant recipients.
Reform and enforce the legal framework for fines and prosecution of litter and illegal dumping and align the Standard Operating Procedures between SAPS and the EMI.	DEA, SAPS, NPA	National workshop on enforcement of the Waste Act in 2019. MOU in 2019.	Annual reports on administrative action and prosecutions undertaken with respect to NEM:WA. Number of training sessions with prosecutors relating to environmental crimes, including the brown issues at national, provincial, district and local level.

Strategic Objective	Targeted Outcomes:	Socio-Economic and Environmental Impacts:	
<i>Enhance capacity to enforce the Waste Act and International Agreements</i>	Compliance with the Waste Act and International Agreements on Chemicals and Waste.	Culture of compliance. Reduction in pollution and associated social and environmental costs.	
Action	Implementing Agents	Timeline	Performance Indicators
Clarify the mandate and duties EMIs in respect of the implementation of NEM:WA (national, provincial and local)	DEA, Provinces, local municipalities	Defined roles and responsibilities in place by 2020.	Reporting on roles and responsibilities in place.
Promulgating regulations on the import and export of waste	DEA, Department of Transport	Regulations in place by 2022.	Enforcement actions in terms of regulations on the import and export of waste.
DEA to strengthen national capacity to prosecute in terms of the Waste Act.	DEA, SAPS, NPA	Annual national workshop on enforcement of the Waste Act, commencing in 2019	Number of administrative actions and criminal prosecutions.

Strategic Objective	Targeted Outcomes:	Socio-Economic and Environmental Impacts:	
Ensure municipal landfill sites and waste management facilities comply with licensing requirements	Local government compliance with the Waste Act	Culture of compliance. Reduction in pollution and associated social and environmental costs. Increased cost of disposing waste to landfill.	
Action	Implementing Agents	Timeline	Performance Indicators
Financial mechanisms such as a landfill tax in place to support compliance and monitoring.	DEA (Waste Bureau), National Treasury, Provinces, local municipalities	Policy recommendations by 2020. Financial mechanisms in place by 2021.	Revenue allocated to monitoring and compliance of licensed waste facilities.
National Action Plan on landfill licensing compliance.	DEA (waste Bureau)	National Action Plan by 2020, implementation from 2021.	80% of municipal landfills comply with licensing conditions by 2023.

Roles and responsibilities are further discussed in the strategy. Specifically for local government, the strategy explains that Metropolitan, district and local municipalities are critical to the implementation of the NWMS as they are responsible for the planning and delivery of waste collection and disposal services and infrastructure. Waste collection and disposal to landfill is typically undertaken by local authorities but may be accomplished by subcontracting waste services companies.

As part of the NWMS implementation, local government needs to shift the focus of waste collection services to incorporate separation at source to promote diversion of waste from landfills through reuse, recycling and recovery. IWMPs need to be updated and augmented to support the required shift in focus. In particular:

- The DEA (Waste Bureau) needs to provide guidance on models for incorporating the informal sector (waste pickers), waste collectives and SMME's into municipal collection services to accomplish separation at source.
- All municipalities should include the provision of drop-off/buy-back centres and storage facilities for recyclables in their IWMPs. The DEA (Waste Bureau) will work with partners and stakeholders such as National Treasury and SALGA to develop models for the financing of this infrastructure that may leverage Industrial Waste Management Plans and/or additional fiscal transfer mechanisms such as conditional grants.
- DEA will work with National Treasury to investigate the feasibility of implementing a landfill tax and prepare policy to assist municipalities in financing monitoring and compliance of landfills as part of a national campaign around compliance with waste management licensing.
- IWMPs should include awareness and enforcement strategies aimed at creating a culture of compliance with the Waste Act and municipal by-laws involving waste collection and disposal, littering and illegal dumping. These will be supported by a national waste awareness campaign.

In accordance with the Waste Act, all district and local authorities must appoint a Waste Management Officer, who should work closely with one or more EMI's to ensure compliance with the Waste Act.

2.1.15 **National Policy for the Provision of Basic Refuse Removal Services to Indigent Households, Government Gazette No. 34385, 22 June 2011**

The main criterion for determining the qualifying recipients of Basic Refuse Removal (BRR) services is registration on a municipality's indigent register as provided for by the indigent policy of the municipality.

The following criteria can be used in the absence of or in addition to the main criterion to determine the qualifying recipients of the BRR services:

- Level of income: Monthly net household income of members of less than or equal to *two old age pensions (including children/individuals who may get state grants)*.
- Residence status: Everybody residing in the municipality provided their indigent status have been verified.
- Special considerations: All child headed households, households headed by pensioners and people with disabilities.
- Value of property (need to note that inherited properties might give false income level status).
- Any other criteria as determined by the specific municipality

A municipality may for practical reasons, declare certain areas or clusters as qualifying recipients of BRR. Examples may include low-income areas and high density, urban informal areas.

- Such declarations have added advantages in terms of administrative feasibility (logistics and costs included) especially where rate collection is challenging.
- A municipality may declare certain low density rural areas as areas where on-site disposal is deemed to be an appropriate waste management option.

If the recipient does not fall under a qualifying indigent area, he/she may register as an indigent at his/her municipality. The municipality must set out certain dates/times for these registrations.

2.1.16 **Planning documents**

2.1.16.1 **The Western Cape Provincial Spatial Development Framework (March 2014)**

The Western Cape Provincial Spatial Development Framework (PSDF) states that if the increasing amounts of waste generated are not minimised, it will give rise to the need for more disposal sites which is not desirable. A mind set of "reduce, rethink, recycle" still needs to be mainstreamed and further challenges are created by illegal dumping, shortfalls in hazardous waste facilities, growing informal settlements and a lack of recyclables collection from homes. The following provincial spatial policies related to waste management are included:

Policy R4: Recycle and recover waste, deliver clean sources of energy to urban consumers, shift from private to public transport, and adapt to and mitigate against climate change.

1. Unlock economic opportunities and increase the lifecycle of current disposal sites and apply the principles of "reduce, reuse, and recycle".
2. Close down illegal sites and locate new regional waste sites adjacent to rail facilities to decrease operational costs and energy requirements associated with the need for road freight.

2.1.16.2 **The OneCape 2040**

OneCape 2010 was developed by the Western Cape Economic Development Partnership (EDP) for the Western Cape Government (WCG) and the City of Cape Town (CCT). The purpose is to encourage and provide a vision for a more inclusive and resilient economic future for the Western Cape. It does not replace any existing statutory plans required of province or municipalities, but is intended as a guideline for stakeholders in order to:

- Promote fresh thinking and critical engagement on the future;
- Provide a common agenda for private, public and civil society collaboration;
- Help align government action and investment decisions;
- Facilitate the necessary changes we need to make to adapt to our (rapidly) changing local and global context;
- Address our development, sustainability, inclusion and competitiveness imperatives.

Under the Ecological transition, the goal is that all people have access to water, energy and waste services that are delivered in a sustainable resource-efficient manner.

2.1.16.3 The Western Cape Provincial Strategic Plan (2014 – 2019)

The Plan is aligned with the NDP, PSDF and also the OneCape2040. The following Provincial Strategic Goals are set out in the document:

- Strategic Goal 1: Create opportunities for growth and jobs.
- Strategic Goal 2: Improve education outcomes and opportunities for youth development.
- Strategic Goal 3: Increase wellness, safety and tackle social ills.
- Strategic Goal 4: Enable a resilient, sustainable, quality and inclusive living environment.
- Strategic Goal 5: Embed good governance and integrated service delivery through partnerships and spatial alignment.

2.1.16.4 The Western Cape Green Economy Strategy Framework

The Green Economy Strategy Framework is about achieving the double dividend of optimising green economic opportunities and enhancing our environmental performance. The framework is for the Western Cape to become the lowest carbon province and leading green economic hub of the African continent.

“Drivers” and “Enablers” are identified in the Framework as listed below:

Drivers:

- Smart living and working
- Smart mobility
- Smart eco-systems
- Smart agri-production
- Smart enterprise

Enablers:

- Finance
- Rules and Regulation
- Knowledge Management
- Capabilities
- Infrastructure

2.1.17 International treaties

This section lists the international agreements to which South Africa has acceded. The following is as described in section 4.10 of the National Waste Management Strategy 2011:

Various international agreements to which South Africa has acceded relate to waste management. A number of non-binding conventions and protocols are also relevant to waste management. This section summarises the main actions in the NWMS related to implementing international agreements.

2.1.17.1 The Basel Convention

The Basel Convention, adopted in 1989, has the greatest bearing on the Waste Act as it addresses the trans-boundary movement of hazardous wastes and their disposal, setting out the categorization of hazardous waste and the policies between member countries.

DEA is developing MOUs with the International Trade Administration Commission (ITAC) and the South African Revenue Service (SARS) that effectively address the provisions of the Basel Convention.

DEA is considering accession to the amendments to the Basel Convention that ban the import and export of hazardous wastes. DEA is also currently developing a policy on imports and exports of waste that will address this.

DEA and DTI are jointly addressing the import and export control aspects of the Basel Convention, together with the chemical conventions. Control will happen through ITAC permits and SARS tariff codes.

2.1.17.2 The Montreal Protocol

The Montreal Protocol Treaty, revised in 1999, protects the ozone layer by phasing out the production of several substances that contribute to ozone depletion, with the aim of ozone layer recovery by 2050. This has relevance for waste management in instances where such obsolete products enter the waste stream. DEA will finalise and publish the National Implementation Plan for the Montreal Protocol. The plan will include the development on an Ozone Depletion Substance (ODS) strategy and regulations will provide for the phasing out of specified substances and their safe disposal.

2.1.17.3 The Rotterdam Convention

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

A study to investigate the extent of manufacture, use, import and export of new chemicals listed in the Rotterdam Convention will determine whether South Africa should ratify the newly added chemicals. This document will be finalised in 2012. A process to identify and ban pesticides and industrial chemicals listed in Annex III (that South Africa has not yet banned) has started.

2.1.17.4 The Stockholm Convention

The Stockholm Convention on Persistent Organic Pollutants (POPs), which entered into force in 2004, requires that member countries phase out POPs and prevent their import or export. Parties to the Convention are also required to undertake the following responsibilities:

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

2.1.18 Municipal By-law

The Overstrand Municipal By-laws relating to solid waste management were reviewed and replaced with their Integrated Waste Management By-law. The Overstrand Municipality enacted their Integrated Waste Management By-law which was published in the Provincial Gazette Western Cape: 7149 on 12 July 2013. A By-law review and update is planned for 2020 after finalisation of the 5th generation IWMP.

The Overstrand Integrated Waste Management by-law is a very comprehensive by-law and is not reflected in this report in its entirety. It contains the following chapters:

Chapter 1: General Provisions

- (1) Definitions and interpretation
- (2) Principles
- (3) Main objectives
- (4) Duties and obligations

Chapter 2: Integrated Waste Management

- (5) Waste management plans
- (6) Waste information system
- (7) Waste minimisation and recycling
- (8) Waste management activities

Chapter 3: Collection of Waste

- (9) Levels of service
- (10) Agreement of service
- (11) Frequency
- (12) Volume
- (13) Receptacles
- (14) Communal collection
- (15) Collection in rural areas
- (16) Recycling
- (17) Accumulation of waste

Chapter 4: Handling Different Types of Waste

Part 1, Garden Waste

- (18) Composting
- (19) Disposal of garden waste

Part 2, Bulky Waste

- (20) Removal and disposal

Part 3, Building Waste

- (21) Plans and inspection
- (22) Generation and storage
- (23) Removal and disposal

Part 4, Special Industrial, Health Care and Hazardous Waste

- (24) Notification and verification
- (25) Storage
- (26) Collection and disposal

Part 5, Industrial Waste and Special Waste

- (27) Storage
- (28) Collection and disposal

Part 6, Tyres, Disused Vehicles or Machinery and Scrap Metal

- (29) Storage and disposal

Part 7, Recyclable Waste

- (30) Storage, collection and disposal

Part 8, Agriculture and Farm Waste

- (31) Disposal

Chapter 5: Transportation and Disposal

Part 1, Transportation of Waste

- (32) Safe transportation
- (33) No wastage or spillage
- (34) Legal Compliance

Part 2, Waste Disposal

- (35) Permitted use
- (36) Liability
- (37) Conduct at facilities
- (38) Accepting waste from others

Chapter 6: Littering and Dumping

- (39) Provision of facilities for litter
- (40) Littering and dumping
- (41) Burning of waste
- (42) Abandoned objects

Chapter 7: External Service Providers

Part 1, Accredited Service Providers of Commercial Services

- (43) Accreditation application
- (44) Terms and conditions of accreditation
- (45) Renewal of accreditation
- (46) Suspension and revocation of accreditation
- (47) Accreditation exemptions
- (48) Consumer responsibilities

Part 2, Municipal Service Providers

- (49) Outsourcing of services
- (50) Consumer charter

Chapter 8: General

- (51) Ownership
- (52) Access to premises

Chapter 9: Compliance and Enforcement

- (53) Compliance with this by-law and other laws
- (54) Authorisation of an official
- (55) Functions and powers of an authorised official
- (56) Service of notices and documents
- (57) Compliance notices
- (58) Power of entry and inspection
- (59) Using force to enter
- (60) Liabilities and compensation
- (61) False statement or information
- (62) Appeal
- (63) Offences
- (64) Penalties
- (65) Application of this by-law
- (66) Repeal of by-laws
- (67) Short title and commencement

The full by-law can be obtained from the Overstrand Municipality's website**.

(**LINK FOR 2013 INTEGRATED WASTE BY-LAW:

<https://www.overstrand.gov.za/en/documents/bylaws/16-integrated-waste-management-by-law/file>)

2.1.19 **Discussion of legislation (effectiveness & implementation)**

The above listed legislation (national, international and local by-laws) provide comprehensive rule-sets by which the solid waste life-cycle and the management thereof are governed. Although there is always room for improvement, it is widely accepted that South African solid waste legislation is of a high standard and is internationally comparable. To what extent the solid waste legislation is being implemented, and how to ensure compliance by all involved is the challenge that municipalities and provincial government in South Africa is currently facing. Without compliance with the above legislation by all involved in waste management in South Africa, there will not be an opportunity for the creation of a sustainable and environmentally friendly future for the diverse natural South African environment. The current draft updated NWMS substantially expands on the different role players and how the aim is to move to a culture of compliance.

In South Africa's history the more comprehensive legislation and knowledge of better waste management practices are relatively "new" and therefore still in the stages of establishing a secure foothold in our society. Past waste management practices have in essence created a "back-log" of acceptable waste management practices and in many ways, the current generations are now required to address the complications created by old methods, poor management or uninformed decisions. A great number of instances of non-compliances to legislation are a direct result of pre-legislation practices that were not addressed, which can be due to various factors, and are still in some places the norm.

Legislation enforcement on a local level will almost definitely be lacking without the willing co-operation from the public and industry. Open spaces between towns restrict the effectiveness of law enforcement regarding illegal dumping.

General

In general, the pressure on law enforcement will be lessened with the continued awareness and education of the public, industry and all generators of waste. All parties MUST realise their part in the waste management cycle and accept accountability, so that the response to legislation and waste management practices is not “why?”, but “how?”. The current draft NWMS summarises this as the culture of compliance. The “how” will have to be continually addressed through education as new technologies, practices, waste types and opportunities emerge. The waste industry cannot afford to get comfortable and settle on “that is how it has always been done”, but must be innovative, up-to-date and achieve co-operation between all spheres of society in order to ensure the sustainable future of our environment.

The legislation is therefore sufficient, but compliance must be improved through awareness and education and improved enforcement. The public must also assist the Municipality and report all instances where the law is not obeyed.

Another aspect to consider is affordability. As mentioned, certain practices were the norm in previous years, but are drastically affected by recent legislation. The DEADP conducted a project in order to estimate the costs of compliance for Western Cape municipalities relating to solid waste infrastructure alone. The estimates are considered unaffordable to local municipalities in the short to medium term. In these cases assistance is required or Municipalities must be given sufficient time in order to be compliant.

All of the Overstrand Municipality's disposal facilities are licensed and therefore in that respect compliant with legislation. The extent of implementation of the licence requirements must be assessed via regular internal and external audits of the facilities. The audit results will determine the requirements for each facility and cost estimates can be made for budget purposes. The Overstrand is also reaching the required diversion targets, which is discussed later in this document.

2.2 DEMOGRAPHICS

The demographics and related statistics were obtained from Statistics SA and were aligned with the figures and projections as presented in the latest Overstrand IDP.

2.2.1 Current and projected population and density

The 2011 Census figures indicate that the Overstrand Municipality had a total population of 80,432 people with a 3.8% annual population growth rate since the 2001 Census. The Overstrand IDP report indicates that the 2020 Overstrand population estimate stands at 106,566 people, which is 32.8% of the total Overberg District 2020 population estimate (324,659).

The Census 2011 statistics are available in terms of sub-places into which the Municipality was divided for the study. The IDP indicates a combination of these places which form the various wards throughout the municipality. However, for the purpose of the IWMP, the sub-places as per StatsSA were used.

For this IWMP report the population and household totals per sub-place of the 2011 Census were reworked in order to align this IWMP with the projected population for each year as per the IDP, with the assumption that the sub-places would grow in proportion to the total population.

The current and projected populations per sub-place based on the above assumptions are shown in **Table 2-1**.

Table 2-1: Current and projected population of Overstrand per sub-area

Sub-area	2011	2020	2021	2022	2023	2024
Rural						
Lebanon State Forest	72	95	97	99	101	103
Highlands State Forest	75	99	101	103	105	107
Overstrand NU	5,076	6,725	6,851	6,974	7,121	7,265
Walker Bay State Forest	27	36	36	37	38	39
Betty's Bay						
Betty's Bay SP	1,380	1,828	1,863	1,896	1,936	1,975
Rooi-Els & Pringle Bay						
Rooi-Els SP	126	167	170	173	177	180
Pringle Bay SP	804	1,065	1,085	1,105	1,128	1,151
Kleinmond						
Arabella Country Estate SP	66	87	89	91	93	94
Kleinmond SP	6,633	8,788	8,952	9,113	9,305	9,494
Hermanus & Surrounds						
Fisherhaven SP	723	958	976	993	1,014	1,035
Hawston SP	8,214	10,883	11,086	11,286	11,523	11,756
Onrus River SP	3,159	4,185	4,264	4,340	4,431	4,521
Vermont	1,992	2,639	2,688	2,737	2,794	2,851
Fernkloof Estate	114	151	154	157	160	163
Voëlklip	1,155	1,530	1,559	1,587	1,620	1,653
Hermanus SP 2	24	32	32	33	34	34
Hermanus SP	4,314	5,716	5,822	5,927	6,052	6,174
Mount Pleasant	4,848	6,423	6,543	6,661	6,801	6,939
Hemel en Aarde	513	680	692	705	720	734
Sand Bay SP	3,591	4,758	4,847	4,934	5,037	5,140
Zwelihle SP	18,210	24,127	24,577	25,019	25,545	26,063
Stanford						
Stanford SP	4,797	6,356	6,474	6,591	6,729	6,866
Gansbaai & Surrounds						
Die Kelders	1,074	1,423	1,450	1,476	1,507	1,537
Gansbaai SP	10,527	13,947	14,208	14,463	14,767	15,067
Birkenhead SP	54	72	73	74	76	77
Van Dyks Bay SP	501	664	676	688	703	717
Uilenkraalsmond	102	135	138	140	143	146
Franskraalstrand SP	1,068	1,415	1,441	1,467	1,498	1,529
Pearly Beach						
Baardscheerders Bosch SP	105	139	142	144	147	150
Pearly Beach SP	1,041	1,379	1,405	1,430	1,460	1,490
Viljoenshof	48	64	65	66	67	69
Total	80,433	106,566	108,556	110,510	112,832	115,121

-SP = Sub-place

-NU = Non-urban

From the above table, the population densities in Overstrand can be graphically displayed as per

Figure 2-1. The vast majority of the population resides in Hermanus & Sub-places (59%), followed by Gansbaai & Sub-places (17%) with 8% of the population residing in the Kleinmond area. The total average population density for the whole of Overstrand is 64 persons per km² (based on total area of 1675km² and 2020 population projection of 106,566 persons).

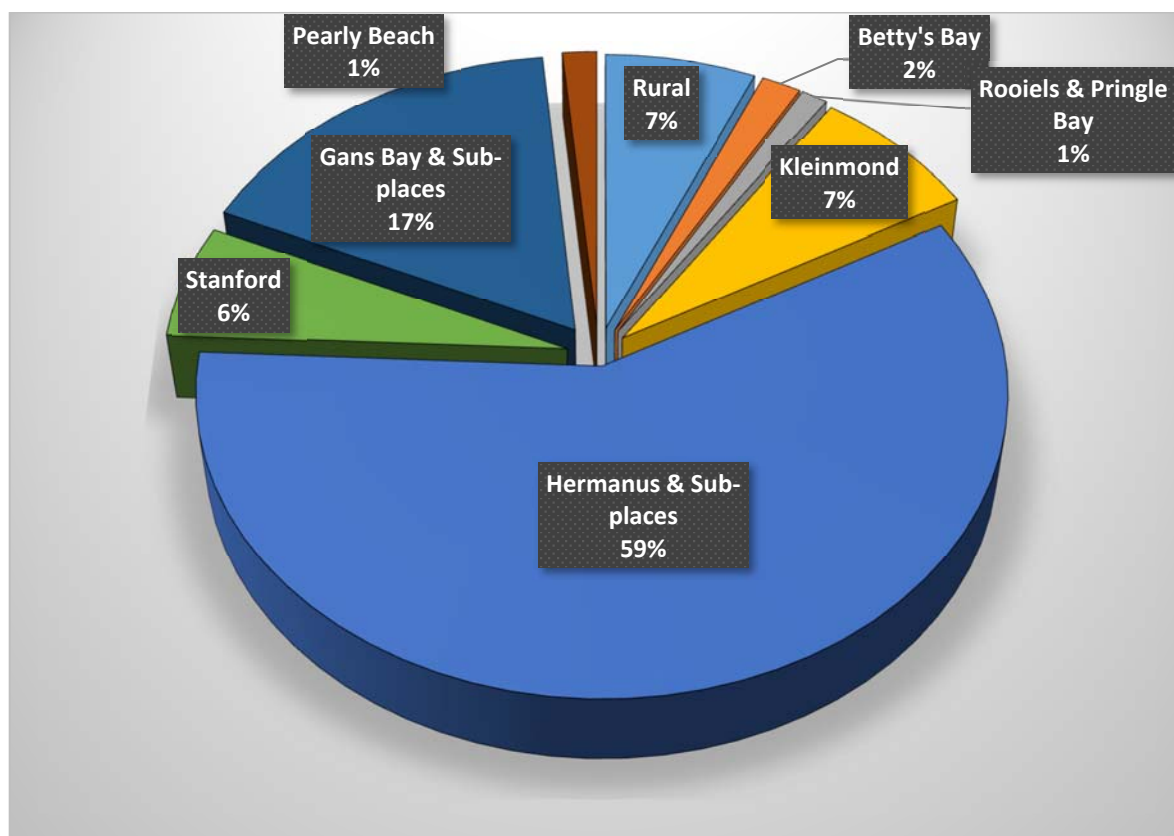


Figure 2-1: 2020 Population density per sub-place

Figure 2-2 below shows the graphical representation of the Overstrand population growth up to 2040 based on the estimates presented in the IDP and assuming an average annual future population growth rate of 2% also indicated in the IDP.

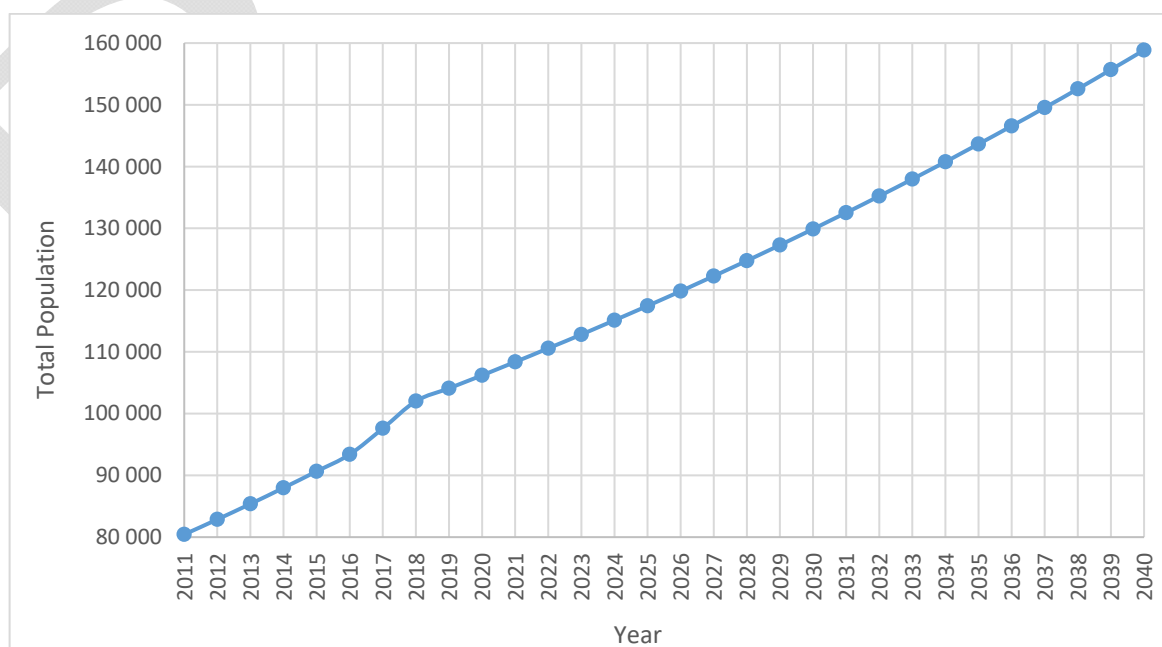


Figure 2-2: Overstrand Projected Population

2.2.2 **Socio-economic profile and education**

Table 2-2 shows the 2011 socio-economic profile of the Overstrand municipality according to annual household income obtained from Census 2011. In order to estimate the current number of households, the recorded number of households for 2018 in the IDP was used along with the estimated population distribution per area to estimate the average number of persons per household for each area. This average was then used with the 2020 population estimate to calculate the 2020 number of households.

The graphical distribution of the socio-economic situation within the Overstrand Municipality is shown on **Figure 2-3** on the following page.

Table 2-2: Population Profile According to Household Income (2011, 2018 & Estimated 2020)

Sub-area	No of Households 2011	Population (2011)	Average Persons per Household (2011)	Very Low and Low Income	Middle Income	High and Very High Income	No of Households 2018 as per IDP	Projected Population (2018) as per IDP	Average Persons per Household (2018)	Estimated No of Households 2020	Projected Population (2020) as per IDP
				R0 - R38400	R38401 - R76800	R76801 or more					
Rural											
Lebanon State Forest	27	72	2.7	55.6%	22.2%	22.2%	32	91	2.9	34	95
Highlands State Forest	18	75	4.2	50.0%	16.7%	33.3%	22	95	4.3	23	99
Overstrand NU	1,713	5,076	3.0	49.9%	18.2%	31.9%	2059	6,439	3.1	2,151	6,725
Walker Bay State Forest	15	27	1.8	40.0%	20.0%	40.0%	18	34	1.9	19	36
Betty's Bay											
Betty's Bay SP	660	1,380	2.1	25.5%	16.4%	58.2%	793	1,750	2.2	829	1,828
Rooi-Els & Pringle Bay											
Rooi-Els SP	66	126	1.9	13.6%	13.6%	72.7%	79	160	2.0	83	167
Pringle Bay SP	432	804	1.9	26.4%	19.4%	54.2%	519	1,020	2.0	543	1,065
Kleinmond											
Arabella Country Estate SP	36	66	1.8	25.0%	0.0%	75.0%	43	84	1.9	45	87
Kleinmond SP	2,733	6,633	2.4	56.2%	12.7%	31.1%	3285	8,414	2.6	3,432	8,788
Hermanus & Surrounds											
Fisherhaven SP	309	723	2.3	23.3%	21.4%	55.3%	371	917	2.5	388	958
Hawston SP	1,935	8,214	4.2	53.8%	23.7%	22.5%	2326	10,419	4.5	2,430	10,883
Onrus River SP	1,440	3,159	2.2	25.6%	12.5%	61.9%	1731	4,007	2.3	1,809	4,185
Vermont	867	1,992	2.3	20.8%	15.9%	63.3%	1042	2,527	2.4	1,089	2,639
Fernkloof Estate	54	114	2.1	16.7%	5.6%	77.8%	65	145	2.2	68	151
Voëlklip	540	1,155	2.1	12.8%	8.3%	78.9%	649	1,465	2.3	678	1,530
Hermanus SP 2	9	24	2.7	66.7%	0.0%	33.3%	11	30	2.8	12	32
Hermanus SP	1,629	4,314	2.6	21.2%	13.6%	65.2%	1958	5,472	2.8	2,046	5,716
Mount Pleasant	936	4,848	5.2	46.2%	25.3%	28.5%	1125	6,149	5.5	1,176	6,423
Hemel en Aarde	207	513	2.5	23.2%	7.2%	69.6%	249	651	2.6	261	680
Sand Bay SP	1,431	3,591	2.5	34.0%	12.6%	53.5%	1720	4,555	2.6	1,797	4,758
Zwelihle SP	6,282	18,210	2.9	79.8%	12.8%	7.4%	7551	23,098	3.1	7,888	24,127
Stanford											
Stanford SP	1,488	4,797	3.2	69.8%	15.3%	14.9%	1788	6,085	3.4	1,868	6,356

Sub-area	No of Households 2011	Population (2011)	Average Persons per Household (2011)	Very Low and Low Income	Middle Income	High and Very High Income	No of Households 2018 as per IDP	Projected Population (2018) as per IDP	Average Persons per Household (2018)	Estimated No of Households 2020	Projected Population (2020) as per IDP
Gansbaai & Surrounds											
Die Kelders	495	1,074	2.2	20.6%	18.8%	60.6%	595	1,362	2.3	622	1,423
Gansbaai SP	3,294	10,527	3.2	69.4%	15.8%	14.8%	3959	13,353	3.4	4,136	13,947
Birkenhead SP	12	54	4.5	0.0%	25.0%	75.0%	14	68	4.9	15	72
Van Dyks Bay SP	261	501	1.9	19.5%	26.4%	54.0%	314	635	2.0	328	664
Uilenkraalsmond	45	102	2.3	40.0%	40.0%	20.0%	54	129	2.4	57	135
Franskraalstrand SP	546	1,068	2.0	33.0%	18.7%	48.4%	656	1,355	2.1	686	1,415
Pearly Beach											
Baardscheerders Bosch SP	39	105	2.7	38.5%	15.4%	46.2%	47	133	2.8	50	139
Pearly Beach SP	489	1,041	2.1	63.8%	17.8%	18.4%	588	1,320	2.2	615	1,379
Viljoenshof	24	48	2.0	37.5%	25.0%	37.5%	29	61	2.1	31	64
Total	28,032	80,433	2.9	52.80%	15.55%	31.65%	33,692	102,024	3.03	35,209	106,566

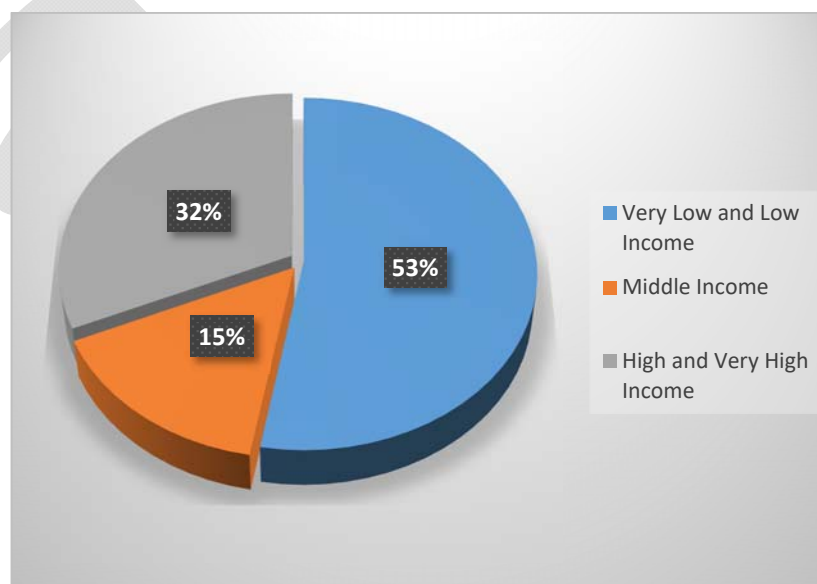


Figure 2-3: Graphical Display of Socio-Economic Distribution

According to Census 2011 the level of education in the Overstrand Municipality is as follows:

Table 2-3: Education levels

Population %	Level of education
3.2%	No schooling
42.6%	Some primary
6.8%	Completed primary
32.9%	Some secondary
11.8%	Completed secondary
1.5%	Higher education
1.2%	Not applicable

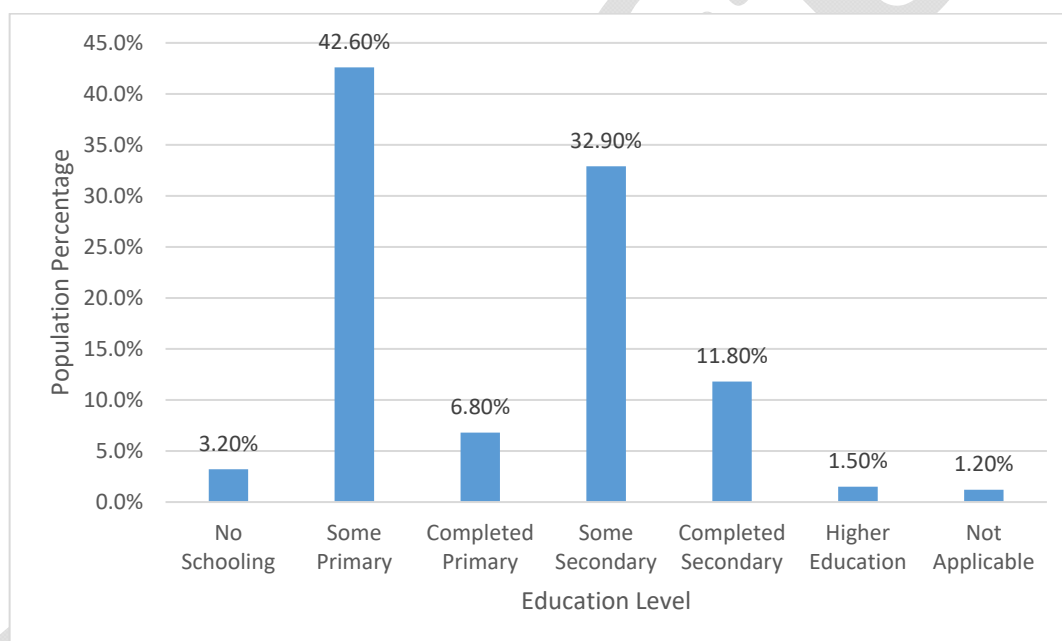


Figure 2-4: Education levels

From the above, it is further stated that education levels according to age of those aged 20 years and above, 5% have completed primary school, 37.7% have some secondary education, 27.7% have completed matric and 16.8% have achieved some form of higher education. 2.5% of those aged 20 years and older have no form of schooling.

2.2.3 **Age distribution**

The population distribution according to age is shown in **Table 2-4** below as per IDP.

Table 2-4: Gender and Age Distribution

Year	Children: 0-14 years	Working Age: 15-65 years	Aged: 65+	Dependency ratio
2011	17273	52805	10357	52.3%
2019 (estimates)	24243	63442	16739	64.6%
2024 (estimates)	26995	67897	20228	69.6%

2.2.4 Development

The planned and potential development were obtained from the 2014 Western Cape Growth Potential Study of Towns by the DEADP. This study determined the growth potential and socio-economic needs of settlements in the Western Cape outside of the Cape Town metropolitan area using quantitative data (e.g. factors relating to socio-economic, economic, physical-environmental, infrastructure and institutional aspects). The results of the quantitative analyses were combined with qualitative information (e.g. stakeholder engagements) to identify potential interventions that might unlock latent potential within settlements and regions.

Table 2-5: Growth Potential Study Results

Area	Composite Growth Potential	Socio-economic needs index	Human Capital index	Economic index	Physical index	Infra-structure index	Institutional index
Pearly Beach	Low	Very low	Medium	Low	Medium	Low	Medium
Stanford	Medium	Low	Medium	Medium	Medium	Medium	High
Kleinmond	High	Low	Medium	Medium	High	Very High	High
Gansbaai / Franskraal-strand	High	Medium	Medium	Medium	High	High	High
Betty's Bay / Pringle Bay	Very High	Very Low	Very High	Medium	Medium	Very High	High
Hermanus / Onrus / Hawston	Very High	High	High	High	Medium	Very High	Very High

These condensed results of the DEADP study indicate that the Overstrand Municipality has a high growth potential with 81/100 score on the composite index.

The different indexes indicated in the table above are all based on many different factors that was part of the study to determine those indexes but are not discussed in detail here. The summary of what each index indicates are as follows:

- Growth Potential:** Determined by quantitative indicators relating to socio-economic needs, economic, physical-environmental, infrastructure, human capital and institutional aspects combined with qualitative information such as stakeholder engagements.
- Socio-economic needs:** Index determined by evaluating household services, education levels, housing needs and economic characteristics.
- Human Capital index:** Index determined by factors such as education and income.
- Economic index:** Index determined by factors such as per capita income, tourism, economically active population, etc.
- Physical index:** Index determined by factors such as annual rainfall, groundwater availability and quality, grazing capacity and growth of cultivated land, etc.
- Infrastructure index:** Index determined by factors such as household access to water, sanitation, electricity, waste removal and distances to airports and harbours, etc.
- Institutional index:** Index determined by factors such as crime rate, management capacity, qualified audits, etc.

From the above, the Overstrand municipality therefore has a high overall growth potential determined by the contributing factors. However, it remains important for the waste management department to be up to date with new and potential developments in the Municipality to ensure that the solid waste management system will have the required capacity to keep up with the growth.

2.3 WASTE CLASSIFICATION

The waste types and quantities generated in the Overstrand Municipality are discussed in this section.

2.3.1 Waste types and classification

With reference to the Waste Act (Act 59 of 2008) the Waste Amendment Act (Act 14 of 2013) and their associated regulations, the only types of waste allowed for disposal at the Overberg disposal facilities are general wastes (Type 2, 3 and 4 wastes according to the classification regulations). No municipal landfills within the Overberg district are allowed to accept hazardous (or Type 0 and 1 wastes according to the classification regulations) for disposal.

The above legislation divides waste in South Africa into two main categories, being Hazardous and General. The current legislated definitions being:

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

Residue deposits and residue stockpiles refer to mining waste that does not form part of the municipal waste function. **Business waste** means “waste that emanates from premises that are used wholly or mainly for commercial, retail, wholesale, entertainment or government administration purposes”.

General Waste – “means waste that does not pose an immediate hazard or threat to health or to the environment, and includes –

- (a) Domestic waste;
- (b) Building and demolition waste;
- (c) Business waste;
- (d) Inert waste; or
- (e) Any waste classified as non-hazardous waste in terms of the regulations made under section 69,

and includes non-hazardous substances, materials or objects within business, domestic, inert, building and demolition wastes”

Domestic Waste – “means waste, excluding hazardous waste that emanates from premises that are used wholly or mainly for residential, educational, health care, sport or recreation purposes and includes:

- (a) Garden and park wastes;
- (b) Municipal waste;
- (c) Food waste”.

Building and Demolition Waste – “means waste, excluding hazardous waste, produced during the construction, alteration, repair or demolition of any structure, and includes rubble, earth, rock and wood displaced during that construction, alteration, repair or demolition”.

Inert Waste – “means waste that (a) does not undergo any significant physical, chemical or biological transformation after disposal; (b) does not burn, react physically or chemically biodegrade or otherwise adversely affect any other matter or environment with which it may come into contact; and (c) does not impact negatively on the environment, because of its pollutant content and because the toxicity of its leachate is insignificant, and which include:

- (a) Discarded concrete, bricks, tiles and ceramics;
- (b) Discarded glass
- (c) Discarded soil, stones and dredging spoil”.

2.3.2 Methodology

The Overstrand Municipality operates only one landfill facility for the disposal of waste, but also makes use of the Karwyderskraal Regional Landfill operated by the Overberg District Municipality. The waste collected in Overstrand West is transported to the Karwyderskraal Landfill and the waste from Overstrand East is transported to the Gansbaai Landfill.

The latest available waste data and quantities measured with weighbridges at the Karwyderskraal and Gansbaai Landfills were used.

Aquila Environmental was appointed as sub-consultant and conducted the hazardous waste study throughout the Overstrand Municipal area. The general waste characterisation study (on-going) was conducted by Enviroserv as part of their operational contracts at the Gansbaai and Karwyderskraal Landfills.

2.3.3 **General Waste Characterisation**

This is an on-going study and new results will be added and compared in upcoming years. The latest available results have been included in this IWMP. 20 Enviroserv staff members were trained and conducted the separation, categorisation and weighing under supervision. Waste from the completed study was appropriately separated for recycling and the remainder lawfully disposed.

2.3.3.1 **Waste Categories**

The sampled waste was separated into the following categories:

Plastic	Recyclable
	Non-recyclable
Paper	Includes all paper types except cardboard
Cardboard	All cardboard types
Metal	Ferrous and non-ferrous
Glass	All colours
Organic Waste	All organic, includes garden and kitchen waste
E-waste	All types
Hazardous waste	Household hazardous
Inert Waste	All types
Other	All wastes that do not fit in the above categories such as bottles containing unidentified liquids.

2.3.3.2 **Sampling**

Overstrand East

General household waste was collected at the Gansbaai Landfill over the span of one week, with selected loads from collection vehicles being placed in bulk bags and marked as per collection area. Collected and marked bags were transported to the Enviroserv Bellville facility where the characterisation study was done.

Areas disposing at the Gansbaai Landfill

Pearly Beach
Masakhane
De Kelders
Masakhane
Berverly Hills
Stanford North
Franskraal
Gansbaai Industrial
Kleinbaai
Baardskeerdersbos
Stanford South
Gansbaai CBD
Perlemoenbaai
Blompark
Masakhane

Overstrand West

General household waste was collected at the Hermanus and Kleinmond Transfer Stations over the span of one week, with selected loads from collection vehicles being placed in bulk bags and marked as per collection area. Collected and marked bags were transported to the Enviroserv Bellville facility where the characterisation study was done.

Areas disposing at the Karwyderskraal Landfill

Vermont
Fisherhaven
Voelklip
Hermanus CBD
Betties Bay & Kleinmond
Onrus
Chanteclair
Berghof
Sandbaai
Hemel-en-Aarde
Zwelihle
Mount Pleasant
Westcliff
Northcliff
Houses CBD
Hermanus Industrial
Hawston
Eastcliff
Hermanus Heights
Kwaaiwater
Fernkloof

2.3.3.3 Results

Table 2-6: Overstrand East General Waste Characterisation - kg's

Bag label No	Area	Recyclable Plastic	Non-recyclable Plastic	Paper	Card-board	Metal	Glass	Organic Waste	Sanitary Waste	E-Waste	Hazardous Waste	Inert Waste	Other	Total Waste
G1/1	Pearly Beach	23	3	2	20	21	2	20	4	0	0	0	5	100
G1/2	Masakhane	13.75	0.35	5.05	5.65	3.53	9.54	34	6.35	0	0	0	6.03	84.25
G2/1	De Kelders	9.5	3.5	5.05	7.45	2.2	14	63	0	0	0	3.6	2.65	110.95
G2/2	Masakhane	8.8	1.3	4.5	6	2.5	4	43	5	2.5	0	0	14	91.6
G2/3	Berverly Hills	7.4	7.5	3.45	9.3	2	8	11	0	0	0	0	5.4	54.05
G2/4	Stanford North	22	3	2	3	1	0	63	49	0	0	4	3.7	150.7
G3/1	Franskraal	11	34.3	4.65	10	0.6	0.7	34	0	0	0	0	0	95.25
G3/2	Gansbaai Industrial	6.1	4.8	6.1	3.2	0.85	11	66	0	0	0	0	2	100.05
G4/1	Kleinbaai	8.05	7.15	12	3.3	0	4.7	24	0	0	0	0	0.75	59.95
G4/2	Baardskeerders-bos	13	3.2	5.4	7.85	1.55	2.75	42	3.8	0	0	0	2.35	81.9
G4/3	Stanford South	10.55	2.6	0.6	8.1	3.1	4	67	4	2.06	1.65	0	5.67	109.33
G5/1	Gansbaai CBD	7.25	4.95	2.15	8.7	2	5.15	38	14.4	2.15	0	0.5	0.95	86.2
G5/2	Perlemoenbaai	11.4	1.2	2.8	6.7	1.8	13	45	4	0	0	0	0.4	86.3
G5/4	Blompark	7.35	4	3	6.45	1.65	4	89	4.8	0	0	0.5	3.5	124.25
G5/5	Masakhane	7.95	0.65	7.65	5.65	1.6	7	68.55	0	0	0	3.05	0	102.1
TOTALS		167.1	81.5	66.4	111.35	45.38	89.84	707.55	95.35	6.71	1.65	11.65	52.4	1436.88

Table 2-7: Overstrand West General Waste Characterisation - kg's

Bag label No	Area	Recyclable Plastic	Non-recyclable Plastic	Paper	Card-board	Metal	Glass	Organic Waste	Sanitary Waste	E-Waste	Hazardous Waste	Inert Waste	Other	Total Waste
K1/1A	Vermont	12.1	0.75	8.35	7	2.15	17	68	13	0	0	0	0.07	128.42
K1/2B	Fisherhaven	21	2.3	12	9	4	19	61	10	0	0	0	4	142.3
K1/3 E	Voelklip	22	4.75	20	5.55	1	9.1	52	0	1.2	0	0	2	117.6
K1/4D	CBD	12	1	4.25	7	1	16	65	0	0	0	0	1	107.25
K1/5C	Betties Bay & Kleinmond	25.5	20.45	3.4	4.3	2.75	12.7	17.7	2	0	0	15	44.8	148.6
K2/1 S	Onrus	3	0.5	10.45	4.8	1.65	11	73	0.3	0.85	0	0	0.65	106.2
K2/2 T	Chanteclair	14.1	1.2	14.2	6.95	2.25	33.95	36	0	0	0	0	0.22	108.87
K2/3 U	Berghof	8.6	0.7	4	3	3.1	16	65	0.5	0	0	0	0	100.9
K2/4 V	Sandbaai	14	1.15	6.55	12	1.7	22	51	2	0	0	0	0.35	110.75
K2/5 W	Hemel-en-Aarde	11	2.1	21.65	12	1.5	32	31	0	0	0	0	0	111.25
K3/1 P	Zwelihle	20.15	0.75	4.25	6	1	4	52	3.7	0	0	0	5	96.85
K3/2 Q	Mount Pleasant	13.95	1.1	3.3	7	0.65	9.55	95	0	0	0	0	1.55	132.1
K4/1K	Westcliff	14.5	0.55	1.65	5	1.3	35	39	1.6	0	0	0	0.3	98.9
K4/2L	Northcliff	21.35	0.75	7	6	1.75	23	46	0.55	0	0	0	2.9	109.3
K4/3M	Houses CBD	13	0.65	8.3	7	1	9	62	0	0	0	0	1.15	102.1
K4/4 N	Hermanus Industrial	4	1	0	7	2	4	96	0	0	0	0	0	114
K5/1 F	Hawston	14	3	0.5	10	2	8	66	6	0	0	0	7	116.5
K5/2 G	Eastcliff	12	8	0.05	5	2	9	0	83	0	0	0	0	119.05
K5/3 H	Hermanus Heights	8.35	0.65	4	4.8	1.65	12	150	4	0	0	0	6	191.45
K5/4 I	Kwaaiwater	10.9	0.8	3.5	8.7	1.45	31.15	61.5	3.15	0	0	0	0	121.15
K5/5 J	Fernkloof	15	8	0.2	14	2	16	45	0.2	0	0	0	4	104.4
TOTALS		290.5	60.15	137.6	152.1	37.9	349.45	1232.2	130	2.05	0	15	80.99	2487.94

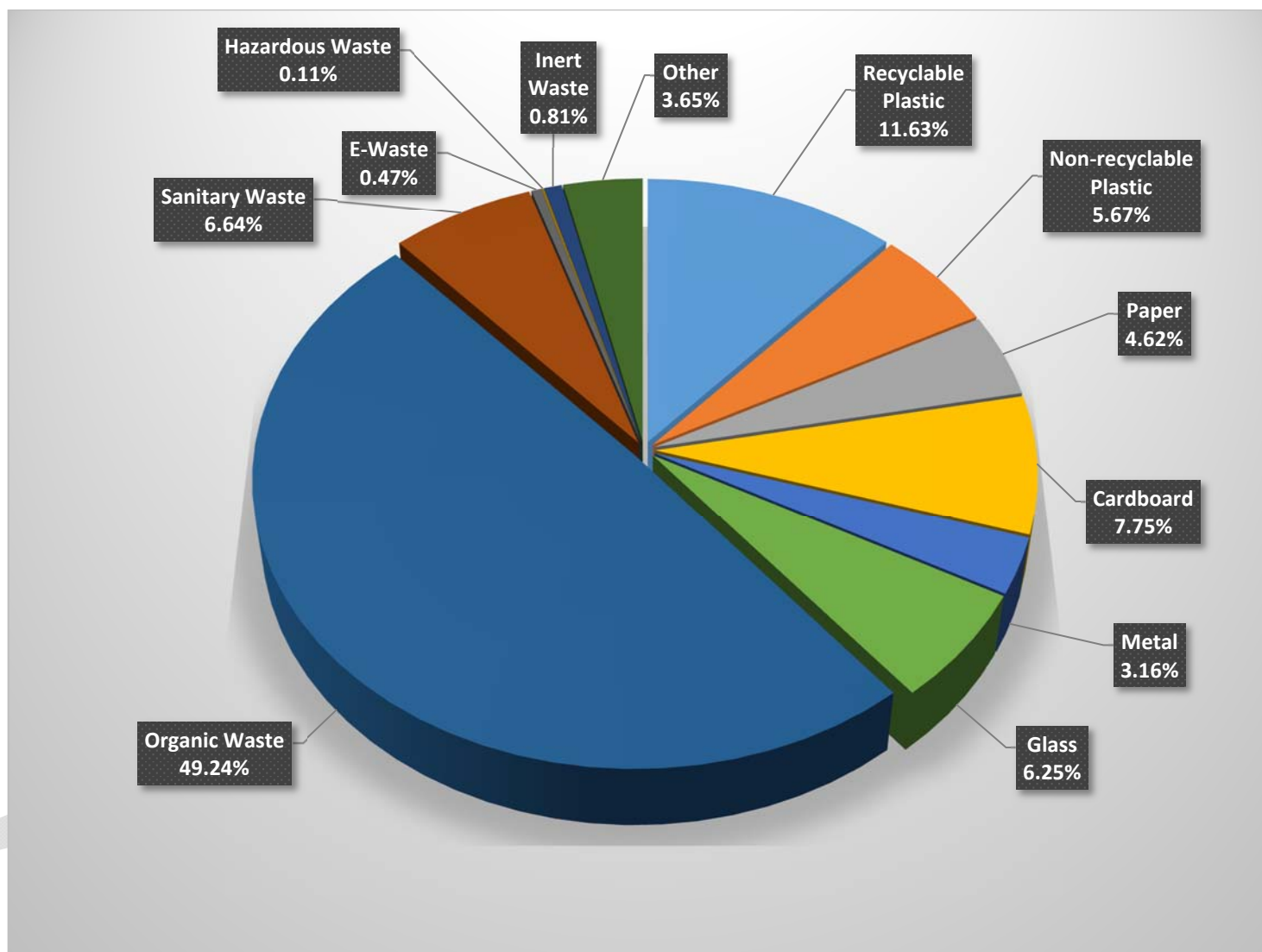


Figure 2-5: Overstrand East General Waste Characterisation

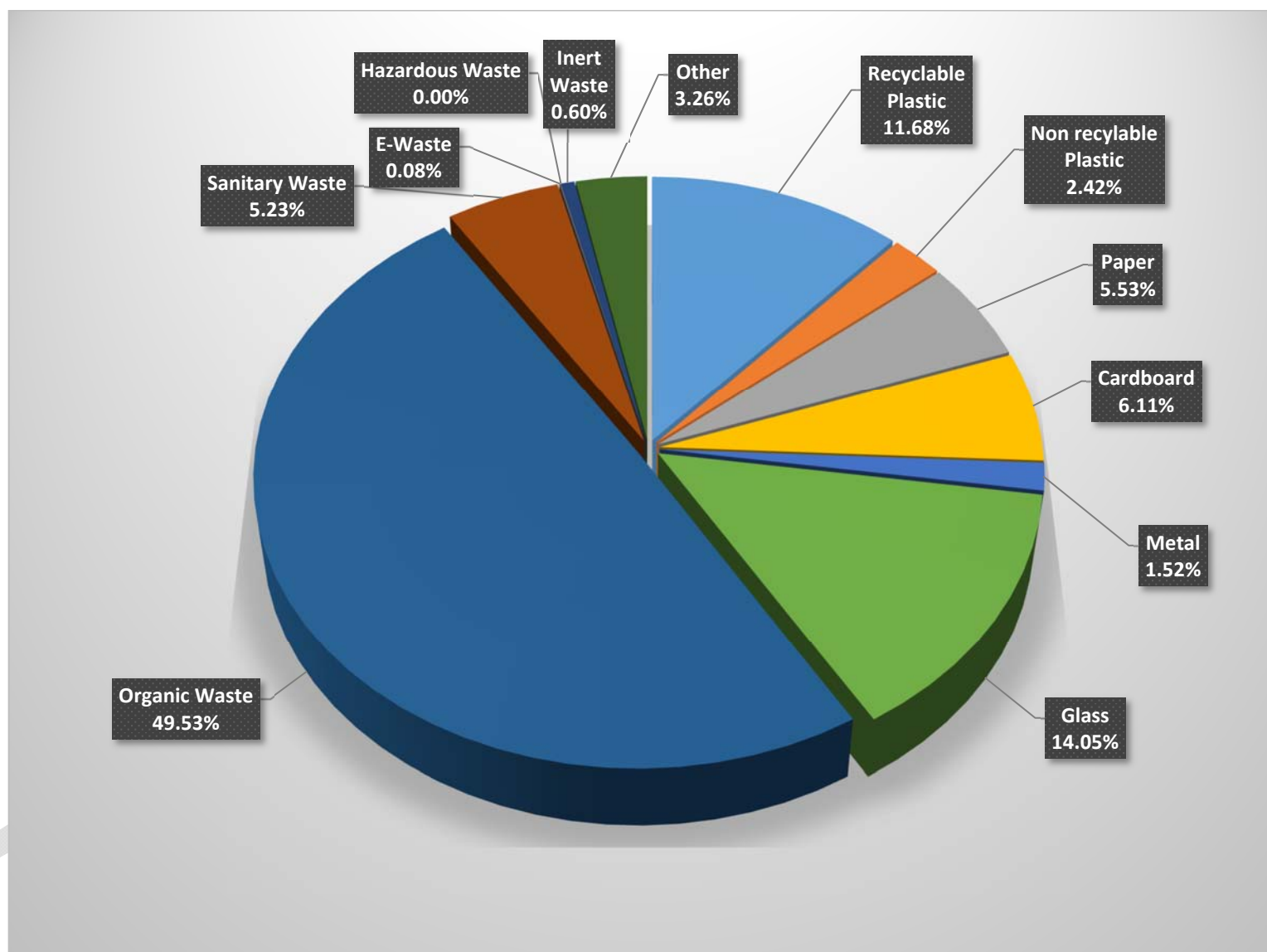


Figure 2-6: Overstrand West General Waste Characterisation

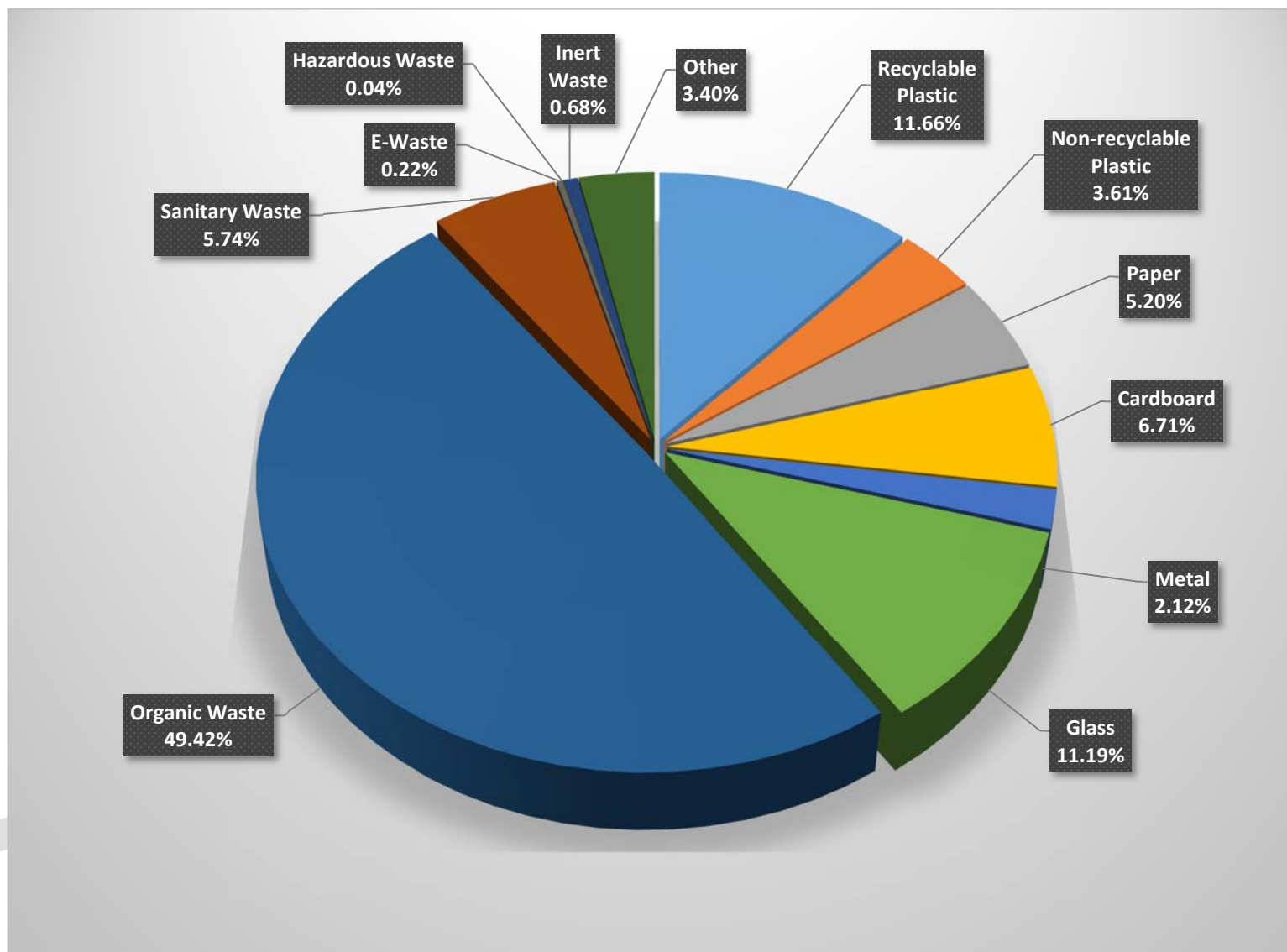


Figure 2-7: Combined Characterisation

2.3.3.4 Waste Characterisation Study Observations

Based on the combined results obtained to date, it is clear that the major fraction of the waste stream consists of organic waste (49.53%). Future studies will further expand on this category in order to determine the percentage food waste, garden waste etc. for the purpose of refined diversion strategies. Other larger fractions are glass (14.05%), recyclable plastic (11.68%), cardboard (6.11%) and paper (5.53%). These fractions have potential for recovery, depending on contamination levels and feasibility of successful sorting. Based on these results alone, the biggest diversion potential lies with the organic waste fraction.

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2.3.4 Waste quantities

2.3.4.1 Waste generated

The total waste generated in the Overstrand was determined from the weighbridge data collected from the Karwyderskraal and Gansbaai Landfills. All waste collected in the Overstrand is eventually weighed either at the Gansbaai or Karwyderskraal Landfill, depending on origin. This includes waste from transfer station and drop-offs, waste from street cleaning as well as collected illegal dumping. Waste from drop-offs and transfer stations include waste that is offloaded by farmers and rural citizens that do not receive a municipal collection service. Record is kept of the waste tonnages arriving at the Gansbaai Landfill as well as at the Karwyderskraal Landfill in terms of origin, therefore data is available on the waste quantities arriving from each transfer station and drop-off. Landfill quantities are reported to IPWIS.

Table 2-8: Generated waste quantities (in tonnes)

Date	Municipal Solid Waste (Including source separated)	Builder's Rubble	Garden & Organic Waste (portion that is handled separately from MSW)	Hazardous (Sludge, screening & asbestos)
Feb-19	3322.95	3399.22	1653.32	84.34
Mar-19	3755.59	2896.12	1274.66	75.68
Apr-19	3621.54	2356.08	1044.48	85.44
May-19	3283.49	2990.18	1231.86	200.08
Jun-19	3270.76	2348.55	809.68	156.17
Jul-19	3297.64	3069.00	854.00	329.22
Aug-19	4335.42	2230.02	746.58	231.14
Sep-19	3500.80	2823.30	866.38	237.42
Oct-19	3947.70	2950.48	1425.38	323.44
Nov-19	3464.45	2395.79	994.04	280.78
Dec-19	4380.38	1663.02	953.50	209.38
Jan-20	5226.56	1426.86	1000.50	107.84
Totals	45407.27	30548.62	12854.38	2320.93
Monthly average	3783.94	2545.72	1071.20	193.41

From the above, the total waste generated from February 2019 to January 2020 is **91 131.21 tonnes**.

To estimate the waste generation rate per capita, the above total was used excluding the builder's rubble, sludge, screening and asbestos portions. The total waste generated without these portions equals **58 261.66 tonnes**. The reason is that very little (if any) of these waste types are generated by citizens at home and are mainly from construction and water treatment activities. Therefore, the waste generation factors per income group were linked to be a factor of the next income group generation rate and applied to the 2020 population determined in 2.2.1 above until the total waste generated across all areas and income groups totalled **58 261.66 tonnes**.

The generation rates per capita for each population group were determined to be:

Very low & Low Income	Middle income	High & Very high income
0.80	1.44	2.51

These generation rates were used to estimate the future waste generation totals in the table below.

Table 2-9: Current and future estimated waste generation

Sub-area	Population (2020)	Waste Generated in Tonnes/ year (2020)	Population (2021)	Waste Generated in Tonnes/ year (2021)	Population (2022)	Waste Generated in Tonnes/ year (2022)	Population (2023)	Waste Generated in Tonnes/ year (2023)	Population (2024)	Waste Generated in Tonnes/ year (2024)	Average Waste Generation Factor for Area in kg/p/d
Rural											
Lebanon State Forest	95	49	97	50	99	51	101	52	103	53	1.42
Highlands State Forest	99	57	101	58	103	59	105	60	107	62	1.57
Overstrand NU	6,725	3,826	6,851	3,898	6,974	3,968	7,121	4,051	7,265	4,133	1.56
Walker Bay State Forest	36	22	36	23	37	23	38	24	39	24	1.71
Betty's Bay											
Betty's Bay SP	1,828	1,333	1,863	1,358	1,896	1,383	1,936	1,412	1,975	1,440	2.00
Rooi-Els & Pringle Bay											
Rooi-Els SP	167	136	170	138	173	141	177	144	180	147	2.23
Pringle Bay SP	1,065	758	1,085	772	1,105	786	1,128	802	1,151	819	1.95
Kleinmond											
Arabella Country Estate SP	87	70	89	71	91	72	93	74	94	75	2.18
Kleinmond SP	8,788	4,842	8,952	4,932	9,113	5,021	9,305	5,127	9,494	5,231	1.51
Hermanus & Surrounds											
Fisherhaven SP	958	693	976	706	993	718	1,014	734	1,035	748	1.98
Hawston SP	10,883	5,692	11,086	5,798	11,286	5,903	11,523	6,027	11,756	6,149	1.43
Onrus River SP	4,185	3,111	4,264	3,169	4,340	3,226	4,431	3,294	4,521	3,361	2.04
Vermont	2,639	2,007	2,688	2,044	2,737	2,081	2,794	2,125	2,851	2,168	2.08
Fernkloof Estate	151	125	154	127	157	129	160	132	163	135	2.26
Voëlklip	1,530	1,286	1,559	1,310	1,587	1,333	1,620	1,361	1,653	1,389	2.30
Hermanus SP 2	32	17	32	17	33	18	34	18	34	18	1.47
Hermanus SP	5,716	4,383	5,822	4,465	5,927	4,545	6,052	4,640	6,174	4,735	2.10
Mount Pleasant	6,423	3,627	6,543	3,694	6,661	3,761	6,801	3,840	6,939	3,918	1.55
Hemel en Aarde	680	530	692	539	705	549	720	561	734	572	2.13
Sand Bay SP	4,758	3,287	4,847	3,348	4,934	3,409	5,037	3,480	5,140	3,551	1.89
Zwelihle SP	24,127	9,717	24,577	9,899	25,019	10,077	25,545	10,289	26,063	10,497	1.10
Stanford											
Stanford SP	6,356	2,898	6,474	2,952	6,591	3,005	6,729	3,068	6,866	3,130	1.25
Gansbaai & Surrounds											
Die Kelders	1,423	1,067	1,450	1,087	1,476	1,107	1,507	1,130	1,537	1,153	2.06
Gansbaai SP	13,947	6,362	14,208	6,481	14,463	6,598	14,767	6,736	15,067	6,873	1.25

Sub-area	Population (2020)	Waste Generated in Tonnes/ year (2020)	Population (2021)	Waste Generated in Tonnes/ year (2021)	Population (2022)	Waste Generated in Tonnes/ year (2022)	Population (2023)	Waste Generated in Tonnes/ year (2023)	Population (2024)	Waste Generated in Tonnes/ year (2024)	Average Waste Generation Factor for Area in kg/p/d
Birkenhead SP	72	61	73	62	74	63	76	65	77	66	2.34
Van Dyks Bay SP	664	483	676	492	688	500	703	511	717	521	1.99
Uilenkraalsmond	135	74	138	75	140	76	143	78	146	80	1.50
Franskraalstrand SP	1,415	953	1,441	970	1,467	988	1,498	1,009	1,529	1,029	1.84
Pearly Beach											
Baardscheerder s Bosch SP	139	91	142	92	144	94	147	96	150	98	1.79
Pearly Beach SP	1,379	667	1,405	679	1,430	692	1,460	706	1,490	721	1.32
Viljoenshof	64	39	65	40	66	41	67	42	69	43	1.70
Total	106,566	58,262	108,556	59,350	110,510	60,418	112,832	61,687	115,121	62,939	1.50

2.3.4.2 Landfilled Waste

The latest available information obtained from weighbridge readings at the Karwyderskraal and Gansbaai Landfills are indicated below.

(February 2019 to January 2020). The totals below indicate only the tonnages that are disposed to landfill and do not include diverted waste as the loads are recorded separately.

Table 2-10: Landfilled waste quantities (in tonnes)

Date	Municipal Solid Waste Disposed at Gansbaai	Sludge Disposed at Gansbaai	Municipal Solid Waste Disposed at Karwyderskraal	Sludge Disposed at Karwyderskraal	Screenings Disposed at Vissershok from Gansbaai	Screenings Disposed at Vissershok from Hermanus	Asbestos Disposed at Vissershok from Gansbaai	Asbestos Disposed at Vissershok from Hermanus	Asbestos Disposed at Vissershok from Kleinmond
Feb-19	682.70	0.00	2595.50	73.42	1.92	3.50	0.00	5.50	0.00
Mar-19	901.02	0.00	2828.96	73.04	0.00	2.64	0.00	0.00	0.00
Apr-19	822.94	0.00	2741.24	73.08	0.00	12.36	0.00	0.00	0.00
May-19	705.24	0.00	2553.06	183.54	2.00	14.54	0.00	0.00	0.00
Jun-19	587.14	0.00	2659.80	151.64	0.00	4.53	0.00	0.00	0.00
Jul-19	812.28	70.54	2443.34	254.10	4.58	0.00	0.00	0.00	0.00
Aug-19	763.02	32.46	3525.80	193.44	0.00	5.24	0.00	0.00	0.00

Date	Municipal Solid Waste Disposed at Gansbaai	Sludge Disposed at Gansbaai	Municipal Solid Waste Disposed at Karwyderskraal	Sludge Disposed at Karwyderskraal	Screenings Disposed at Vissershok from Gansbaai	Screenings Disposed at Vissershok from Hermanus	Asbestos Disposed at Vissershok from Gansbaai	Asbestos Disposed at Vissershok from Hermanus	Asbestos Disposed at Vissershok from Kleinmond
Sep-19	725.14	16.44	2732.84	206.44	4.04	2.64	0.00	0.00	7.86
Oct-19	712.16	97.54	3190.20	211.36	0.00	10.96	0.00	0.00	3.58
Nov-19	674.15	0.00	2747.18	266.14	3.20	11.44	0.00	0.00	0.00
Dec-19	941.80	2.18	3390.70	186.46	1.42	5.72	3.90	4.64	5.06
Jan-20	874.35	12.96	4336.62	91.78	0.00	3.10	0.00	0.00	0.00
TOTAL	9201.93	232.12	35745.24	1964.44	17.16	76.67	3.90	10.14	16.50
Monthly average	766.83	19.34	2978.77	163.70	1.43	6.39	0.33	0.85	1.38

From the above, the grand total tonnes disposed from February 2019 to January 2020 = **47 268.11 tonnes**.

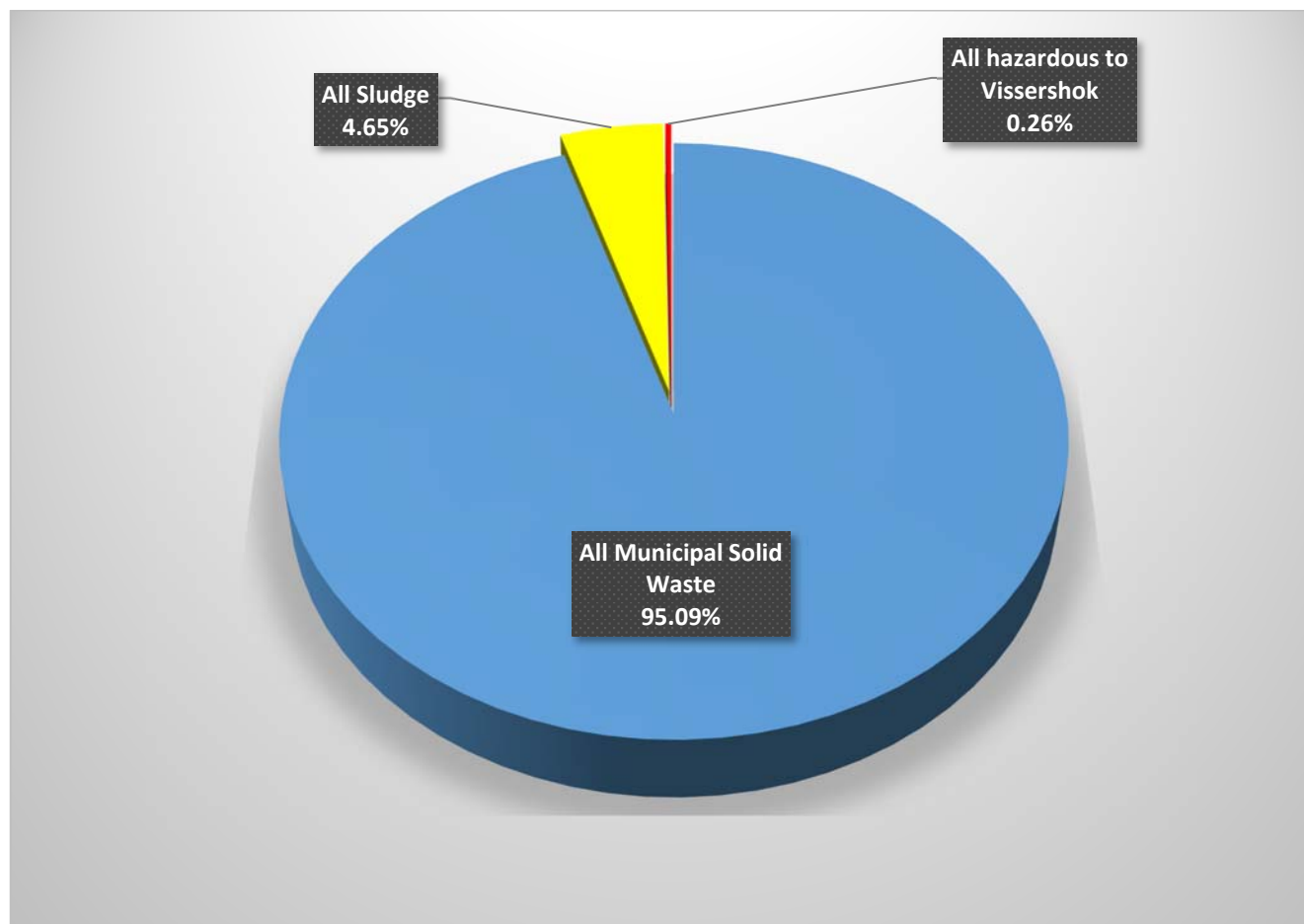


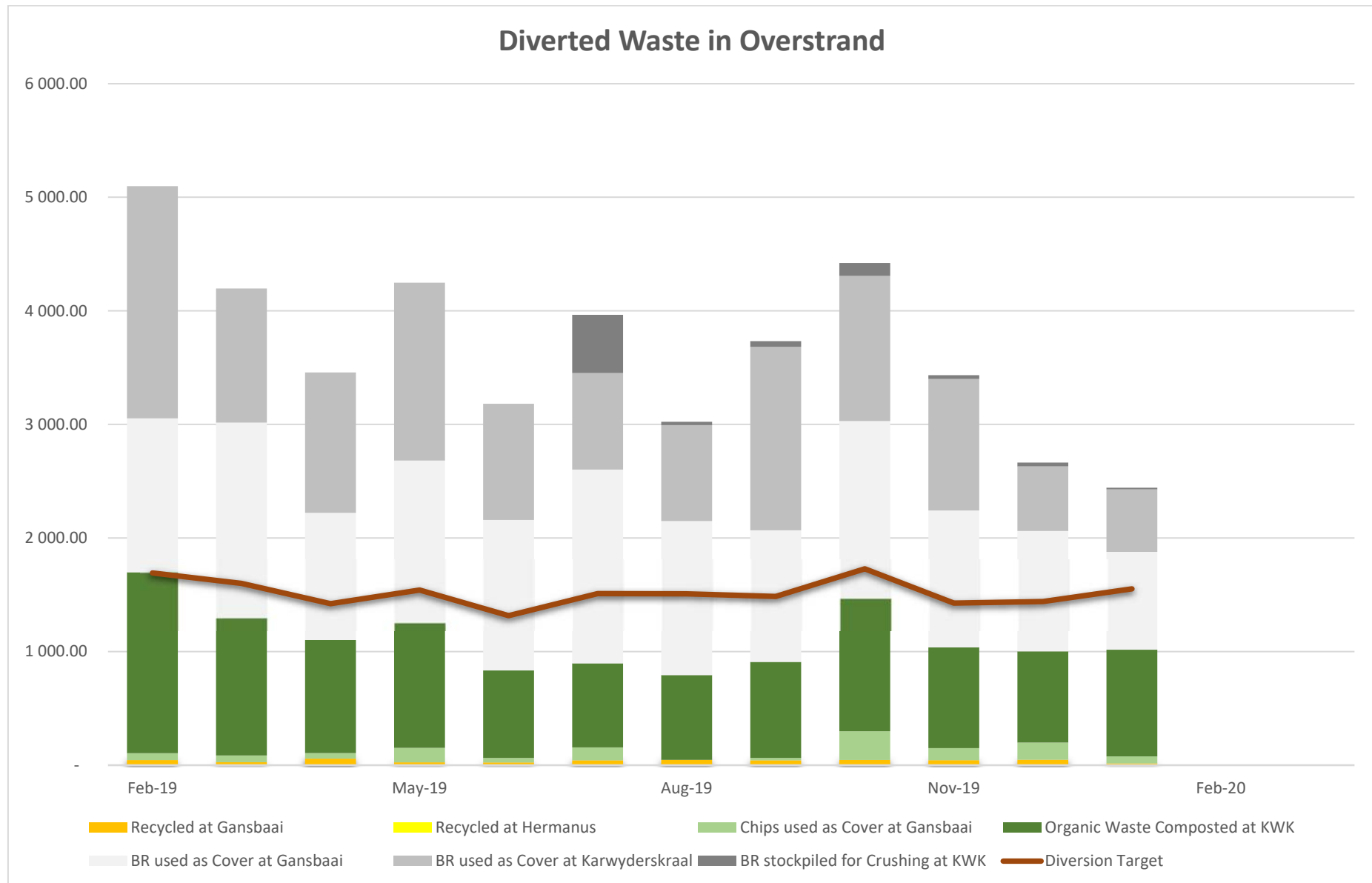
Figure 2-8: Monthly Average Overstrand Disposal Fractions

2.3.4.3 Diverted Waste

Table 2-11: Diverted waste

Date	BR used as Cover at Gansbaai	Chips used as Cover at Gansbaai	Recycled at Gansbaai	BR used as Cover at Karwyderskraal	BR stockpiled for Crushing at KWK	Organic Waste Composted at KWK	Total%
Feb-19	1355.72	60.54	44.75	2043.50		1592.78	60.3%
Mar-19	1715.30	59.50	25.61	1180.82		1215.16	52.4%
Apr-19	1119.10	49.04	57.36	1236.98		995.44	48.7%
May-19	1424.50	127.22	25.19	1565.68		1104.64	55.1%
Jun-19	1325.16	39.48	23.82	1023.39		770.20	48.3%
Jul-19	1706.10	113.86	42.02	849.94	512.96	740.14	52.5%
Aug-19	1355.99	0.26	46.60	844.37	29.66	746.32	40.6%
Sep-19	1158.32	20.88	42.82	1615.08	49.90	845.50	50.2%
Oct-19	1558.12	253.02	45.34	1278.26	114.10	1172.36	51.1%
Nov-19	1205.15	106.58	43.12	1158.02	32.62	887.46	48.1%
Dec-19	1059.96	150.74	47.88	569.46	33.60	802.76	37.0%
Jan-20	862.00	61.48	15.59	549.40	15.46	939.02	31.5%
TOTAL	15845.42	1042.60	460.10	13914.90	788.30	11811.78	
Monthly average	1320.45	86.88	38.34	1159.58	112.61	984.32	48%

From the above it can be seen that the Overstrand is well above the current diversion target of 20% by averaging 48% monthly diversion over the past year, even without recycling taking place in Hermanus since the MRF was destroyed. Based on the waste characterisation study, which is based on household waste put out for disposal, there exists further potential in increasing diversion rates especially in the organic fraction. Refer to the graph below for the visual representation of diversion of the past year:



2.3.5 Hazardous waste

The Hazardous and Health Care Risk Waste Study was undertaken in December 2019. During the previous IWMP cycle, industries were visited physically (2009) and a survey of each possible hazardous waste generator was made per industry or occupant of a unit in an industrial park. Possible generators were evaluated in terms of the process generating waste, waste type, classification, quantity, and disposal venue and through this means a comprehensive database was compiled to include all industries and businesses producing Hazardous and Health Care Risk Waste within Overstrand Municipality. All the possible industries were listed but not all businesses as some were regarded as non-hazardous waste producers due to their nature of business, size and physical structure. This 2019 Hazardous and Health Care Risk Waste Survey made use of the existing database, updated the information where required and added additional businesses to the database that had previously not existed, or not been included.

This study details the findings thereof and discusses Hazardous Waste and Health Care Risk Waste generated within the study area separately.

In order to fully understand the importance of proper handling and disposal of Hazardous Waste in South Africa, the legislative context will first be described.

2.3.5.1 **Legislative context for Hazardous Waste in South Africa**

2.3.5.1.1 The National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)

The first waste specific legislation published in South Africa was the National Environmental Management: Waste Act (NEM:WA). It provided the mechanism to regulate the waste value chain aiming to minimise adverse effects on human health and the environment. The National Department of Environmental Affairs (DEA) is the regulatory body for the licensing of Hazardous Waste Facilities, according to NEM:WA's Chapter 5. In addition, the management of hazardous waste is included in the concurrent legislative competence of both National and Provincial Government assigned by the South African Constitution with respect to environment and pollution control.

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

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

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

For the purposes of this study, Schedule 3, Category A of NEM:WAA was used to determine the various industrial groups potentially generating hazardous waste in the study area and is set out in Table 1 below:

Table 2-12: Schedule 3 of the National Environmental Management: Waste Amendment Act, 2014 Act No. 26 of 2014: Category A: Hazardous Waste

Industrial Group	Waste Fractions
1. Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing	(a) hazardous portion of wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
2. Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard	(a) hazardous portion of wastes from wood processing and the production of panels and furniture (b) hazardous portion of wastes from wood preservation (c) hazardous portion of wastes from pulp, paper and cardboard production and processing
3. Wastes from the leather, fur and textile industries	(a) hazardous portion of wastes from the leather and fur industry (b) hazardous portion of wastes from the textile industry
4. Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal	(a) wastes from petroleum refining (b) wastes from the pyrolytic treatment of coal (c) wastes from natural gas purification and transportation
5. Wastes from inorganic chemical processes	(a) wastes from the manufacture, formulation, supply and use (MFSU) of acids (b) wastes from the MFSU of bases (c) wastes from the MFSU of salts and their solutions and metallic oxides (d) metal-containing wastes (e) wastes from the MFSU of sulphur chemicals, sulphur chemical processes and desulphurisation processes (f) wastes from the MFSU of halogens and halogen chemical processes (g) wastes from the MFSU of silicon and silicon derivatives (h) wastes from the MFSU of phosphorous chemicals and phosphorous chemical processes (i) wastes from the MFSU of nitrogen chemicals, nitrogen chemical processes and fertiliser manufacture (j) wastes from the manufacture of inorganic pigments (k) other wastes from inorganic chemical processes
6. Wastes from organic chemical processes	(a) wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals (b) wastes from the MFSU of plastics, synthetic rubber and man-made fibres (c) wastes from the MFSU of organic dyes and pigments (d) wastes from the MFSU of organic plant protection products, wood preserving agents and other biocides (e) wastes from the MFSU of pharmaceuticals (f) wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics (g) other wastes from the MFSU of fine chemicals and chemical products

7. Wastes from thermal processes	<ul style="list-style-type: none"> (a) hazardous portion of wastes from power stations and other combustion plants (b) hazardous portion of wastes from the iron and steel industry (c) wastes from aluminium thermal metallurgy (d) wastes from lead thermal metallurgy (e) wastes from zinc thermal metallurgy (f) wastes from copper thermal metallurgy (g) wastes from silver, gold and platinum thermal metallurgy (h) wastes from other non-ferrous thermal metallurgy (i) hazardous portion of wastes from casting of ferrous pieces (j) hazardous portion of wastes from casting of non-ferrous pieces (k) hazardous portion of wastes from manufacture of glass and glass products (l) hazardous portion of wastes from manufacture of ceramic goods, bricks, tiles and construction products (m) hazardous portion of wastes from manufacture of cement, lime and plaster and articles and products made from them
8. Waste from the photographic industry	<ul style="list-style-type: none"> (a) hazardous portion of waste from the photographic industry
9. Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks	<ul style="list-style-type: none"> (a) wastes from MFSU and removal of paint and varnish (b) wastes from MFSU of other coatings (including ceramic materials) (c) wastes from MFSU of printing inks (d) wastes from MFSU of adhesives and sealants (including waterproofing products)
10. Wastes from chemical surface treatment and coating of metals and other materials; non-ferrous hydrometallurgy	<ul style="list-style-type: none"> (a) wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising) (b) wastes from non-ferrous hydrometallurgical processes (c) wastes from sludges and solids from tempering processes (d) wastes from hot galvanising processes
11. Wastes from shaping and physical and mechanical surface treatment of metals and plastics	<ul style="list-style-type: none"> (a) hazardous portion of wastes from shaping and physical and mechanical surface treatment of metals and plastics (b) wastes from water and steam degreasing processes
12. Oil wastes and wastes of liquid fuels (except edible oils)	<ul style="list-style-type: none"> (a) waste hydraulic oils (b) waste engine, gear and lubricating oils (c) waste insulating and heat transmission oils (d) oil/water separator contents (e) wastes of liquid fuels (f) hazardous portion of other oil waste
13. Waste organic solvents, refrigerants and propellants	<ul style="list-style-type: none"> (a) waste organic solvents, refrigerants and foam/aerosol propellants
14. Other wastes not specified in the list	<ul style="list-style-type: none"> a) hazardous portion of wastes from end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (b) hazardous portion of wastes from electrical and electronic equipment

	<ul style="list-style-type: none"> (c) hazardous portion of wastes from off-specification batches and unused products (d) wastes from discarded gases in pressure containers and discarded chemicals (e) wastes from discarded batteries and accumulators (f) wastes from transport tank, storage tank and barrel cleaning (g) spent catalysts wastes (h) oxidising substances wastes (i) aqueous liquid wastes destined for off-site treatment (j) waste linings and refractories
15. Construction wastes	<ul style="list-style-type: none"> (a) wastes from bituminous mixtures, coal tar and tarred products (b) discarded metals (including their alloys) (c) waste soil (including excavated soil from contaminated sites), stones and dredging spoil (d) wastes from insulation materials and asbestos-containing construction materials (e) wastes from gypsum-based construction material (f) wastes from other construction and demolition wastes
16. Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)	<ul style="list-style-type: none"> (a) wastes from natal care, diagnosis, treatment (b) wastes from research, diagnosis, treatment or prevention of disease in humans prevention of disease involving animals
17. Wastes from waste management facilities	<ul style="list-style-type: none"> (a) hazardous portion of wastes from incineration or pyrolysis of waste (b) hazardous portion of wastes from physico / chemical treatments of waste (c) hazardous portion of stabilised/solidified wastes (d) hazardous portion of wastes from aerobic treatment of solid wastes (e) hazardous portion of wastes from anaerobic treatment of waste (f) landfill leachate wastes (g) wastes from shredding of metal-containing wastes (h) wastes from oil regeneration (i) wastes from soil remediation

2.3.5.2 Waste Classification and Management Regulations (G.N. No. R. 634 of August 2013)

These regulations support and implement the provisions of the NEM:WA and, amongst others, establishes a procedure and mechanism for the listing of waste management activities that do not require a Waste Management Licence. It also states that waste must be classified according to the South African National Standard Globally Harmonized System of Classification and Labelling of Chemicals (SANS 10234:2008).

SANS 10234:2008 is a standard that classifies waste according to the physical and health hazards specific substances could potentially pose (including hazards to the aquatic environment).

GN. No. R. 634 also talks to the requirements for disposal, record keeping and re-classification. For example, it is stated that:

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

Based on physical and chemical characteristics hazardous waste can be grouped according to the South African National Standards 10234 (SANS 10234:2008) into the following classes:

Table 2-13: Hazardous Waste Classes

Hazardous Waste Class (SANS 10234:2008)	
Classes	Description
9.1	Explosives
9.2	Flammable gases
9.3	Flammable aerosols
9.4	Oxidising gases
9.5	Gases under pressure
9.6	Flammable liquids
9.7	Flammable solids
9.8	Self-reactive substances and mixtures
9.9	Pyrophoric substances
9.10	Self-heating substances and mixtures
9.11	Substances and mixtures that, on contact with water, emit flammable gases
9.12	Oxidizing substances and mixtures
9.13	Organic peroxides
9.14	Corrosive to metals

2.3.5.3 Norms & Standard for the Assessment of Waste for Landfill Disposal (G.N. No. R. 635 of August 2013)

This piece of legislation covers the assessment of waste prior to landfilling and prescribes limits relating to chemical composition of waste from laboratory testing such as Leachable Concentration Threshold (LCT).

2.3.5.4 Hazardous Waste produced in the Overstrand Municipal Area

For the purposes of this study, Schedule 3 of NEM:WAA was used to determine the various industrial groups potentially generating hazardous waste. Schedule 3 identifies 17 industrial groups, sub-divided into 86 waste fractions, as per Table 2-9. This study has determined that businesses and industry in Overstrand Municipality generate hazardous waste categorised under 6 out of the potential 17 industrial groups listed in Schedule 3. These are:

- Industrial Group 1: Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing
- Industrial Group 2: Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
- Industrial Group 3: Wastes from the leather, fur and textile industries
- Industrial Group 9: Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks
- Industrial Group 11: Wastes from shaping and physical and mechanical surface treatment of metals and plastics
- Industrial Group 16: Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care) (to be discussed under Section 3).

2.3.5.5 Hazardous waste data collation summary

Table 2-14: **Hazardous waste quantitative data collation summary** below indicates a summary of all quantitative information gathered during the research period on hazardous waste produced in the study area.

Table 2-14: Hazardous waste quantitative data collation summary

Major Constituent per Waste Stream	m ³ /annum	tons/annum	litres/annum
1. Solvents and cleaning chemicals from washing of equipment			1 385
2. Machine oil			2 000
3. Used oil			750
4. Fluorescent tubes		4	
5. Off-spec fruit requiring safe disposal		12	
6. Wet-blue bovine trimming and shavings		210	
7. Wet-blue bovine leather rinse effluent	2 750		
8. Leather offcuts, buffing dust, etc.		2	
9. Tan and dye effluent with trivalent chrome and sulphate	20 430		
10. Lime effluent with trivalent chromium	30		
11. Trivalent chrome waste	120		
12. Ink containers (Rejects removed for safe disposal) Rags contaminated with ink		2	
13. Chemical residues and waste consisting of ethyl acetate, oils, rags, etc.		6	
14. Caustic soda (30 %) rinse water and soluble lubricating oil			1 000
TOTALS	23 330	236	5 135

2.3.6 **Health Care Risk Waste**

2.3.6.1 **Legislative context for Health Care Risk Waste in South Africa**

2.3.6.1.1 The National Health Act, 2003 (Act No. 61 of 2003) as amended

This Act regulates national health and provides uniformity in respect of health services. This is done by aiming to establish a national health system which encompasses public and private providers of health services. It further aims to provide the population of South Africa with the best possible health services that available resources can afford. It sets out the rights and duties of healthcare providers, health workers, health establishments and users.

2.3.6.1.2 Regulations Relating to Health Care Waste Management in Health Establishments (G.N. No. R. 375 of May 2014)

The following section highlights key principles contained within these Regulations, relevant to this study:

Section (3)(1) maintains that all health establishments that generate Health Care Waste:

- (a) have a duty to dispose of the waste safely;
- (b) are legally and financially responsible for the safe handling and environment sound disposal of the waste they produce;
- (c) must always assume that the waste is hazardous until shown to be safe; and
- (d) have a responsibility of the waste from the point of generation until its final treatment and disposal.

Section (4) further indicates that the Scope of the Regulations are applicable to all private and public health establishments; that the regulations shall regulate the handling, storage, collection, transportation, treatment and disposal of health care waste; and that it does not apply to radioactive, electronic and animal wastes.

These Regulations also provide a formal definition of "Health Care Risk Waste". It refers to waste "capable of producing any disease". It includes, but is not limited to, the following:

- (i) Chemical waste:
Means solid, liquid and gaseous products that are to be discarded and that contain dangerous or polluting chemicals that pose a threat to humans, animals or the environment, when improperly disposed of.
- (ii) Cytotoxic waste:
Means waste that is toxic to cells and that can lead to cell death.
- (iii) Genotoxic waste:
Means waste capable of interacting with living cells and causing genetic damage.
- (iv) Infectious waste:
Means materials suspected to contain pathogens (bacteria, viruses, parasites or fungi) in sufficient concentrations or quantity to cause disease in susceptible hosts.
- (v) Isolation waste:
Means waste containing discarded materials contaminated with excretion, exudates, or secretions from humans or animals who or which are required to be isolated in order to protect others from highly communicable or zoonotic diseases.
- (vi) Laboratory waste:
Means human or animal specimen cultures from healthcare and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; wastes from the production of bacteria, viruses, or the use of spores, discarded, live and attenuated vaccines, and culture dishes and devices used to transfer, inoculate and mix cultures; and waste containing any microbiological specimen sent to a laboratory for analysis.
- (vii) Pathological waste:
Means tissues, organs, body parts, blood, body fluids, human foetuses, infected animal carcasses and other waste from surgery and autopsies on patients with infectious diseases.
- (viii) Pharmaceutical waste:
Means unused medicines, medications and residues of medicines that are no longer usable as medication.
- (ix) Radioactive waste:
Means liquid, solid or gaseous materials that contain, or are contaminated with, radionuclides at concentrations or activities greater than the clearance levels and for which no use is foreseen.
- (x) Sharps waste:
Means items that could cause cuts or puncture wounds, including needles, hypodermic needles, scalpels and other blades, knives, infusion sets, saws, broken glass and pipettes.

2.3.6.2 Health Care Risk Waste produced in the Overstrand Municipal Area

Although a formal classification of Health Care Risk Waste exists, as defined above, the terms used in practice is far more simplified. Within the Overstrand Municipal area, Health Care Risk Waste is basically referred to the waste types listed below, namely:

- (i) Sharps
- (ii) Pathological waste (including mainly medical disposables and anatomical waste)
- (iii) Carcasses
- (iv) Pharmaceutical waste

2.3.6.3 Health Care Risk Waste generators in the study area

The Health Care Risk Waste generated varies according to the type of generator. A brief discussion of the types of health care waste per generator is given below:

Medical Practitioners in Private Practice:

General practitioners have mainly two types of Health Care Risk Waste namely sharps and pathological waste.

Sharps consist mostly of blades and needles. The use of blades is selective and far less than the use of needles. The estimated weight of a needle is between 5.0 to 8.0 grams.

Pathological waste consists of waste from small surgeries and procedures which includes Medical Disposables such as cotton swabs, used bandages, gauze, plaster and syringes and could also include anatomical waste.

Dentists in Private Practice:

Sharps consist mostly of blades and needles. Needles weigh 3.0 to 5.0 gram per needle.

Pathological waste / Medical Disposables consist mostly of cotton plugs, gauze contaminated by body fluids and blood as well as extracted teeth.

Veterinary Surgeons:

The animal hospitals give rise to three main types of Health Care Risk Waste, namely sharps, medical disposables and carcasses.

Sharps consist of mostly of blades and needles, with the weight of the needle slightly heavier than that of general practitioners, ca. 8.0 – 10.0 gram per needle.

Pathological waste including removed organs, tissues and body parts from animals as well as medical disposables consisting of used cotton swabs, bandages, etc.

Carcasses vary from small animals weighing less than 5 kg to big breeds weighing 40 kg+. Horses typically weigh 500 – 600 kg per carcass.

Old Age Homes / Frail Care Units:

Sharps consist mostly of needles. The estimated weight of a needle is between 5.0 to 8.0 grams.

Pathological waste includes mostly medical disposables such as cotton swabs, used bandages, gauze, plaster and syringes and could also include anatomical waste.

Diapers are also provided by the frail care unit but is disposed by utilising the routine municipal solid waste collection system and sent to landfill as general waste.

Mortuaries/funeral homes:

Various forms of Health Care Risk Waste arise from mortuaries and funeral homes such as body bags, sharps (which include blades and sewing needles used in the cosmetic preparation of the body) and sheets (with or without body fluid contamination). Some funeral homes place the contaminated items inside the casket with the body for burial or cremation.

Private and Provincial Hospitals:

Sharps consist mostly of blades and needles. The estimated weight of a needle is between 5.0 to 8.0 grams.

Pathological waste consists of waste from surgeries and procedures which includes medical disposables such as cotton swabs, used bandages, gauze, plaster and syringes as well as include anatomical waste.

Pharmacies:

Expired and redundant pharmaceuticals are returned to the suppliers.

Some pharmacies have their own clinic generating sharps and disposable medical waste.

The average standard weights and volume-weight conversions used are given in **Table 2-15** below was compiled to include all industries and businesses producing Hazardous and Health Care Risk Waste in Overstrand Municipality.

Table 2-15: Standard Weights for Health Care Risk Waste

NEEDLES:
<ul style="list-style-type: none"> General Practitioner needle: $\pm 5.0 - 8.0$ gram per needle Dental needle: $\pm 3.0 - 5.0$ gram per needle Veterinary needle: $\pm 8.0 - 10.0$ gram per needle
BLADES:
<ul style="list-style-type: none"> General medical blade: $\pm 20.0 - 30.0$ gram per blade
CARCASSES:
<ul style="list-style-type: none"> Carcasses: Cats: $\pm 1.0 - 10.0$ kg Dogs: $\pm 5.0 - 50.0$ kg Horses: $\pm 500.00 - 600.00$ kg
CONTAINERS:
<ul style="list-style-type: none"> 1 x "50 kg box" for disposables: ± 8.0 kg per box when holding medical disposables. Thus: Medical disposables: 1.0 "kg" volume = 1.0 l and weighs ± 0.16 kg. 1 x 7.6 l sharps container: ± 2.5 kg per container. Thus: 1.0 l sharps = ± 0.33 kg

The survey data and calculated conversion of container weights indicate the following health care data for Overstrand Municipality as set out in **Table 2-16** below:

Table 2-16: Health Care Risk Waste quantitative data collation summary

Generator	Number of Generators	Sharps (kg/a*)	Pathological waste (kg/a)	Carcasses (kg/a)
Medical & dental practitioners	34	476.57	876.41	-
Industrial Occupational Health Clinics	2	8.33	26.67	-
Old Age Homes with Frail Care Centres	15	275	130	-
Funeral Parlours/Mortuaries	9	45	288	-
Hospitals & Clinics	15	9 226.5	483 490.5	-
Veterinary Surgeons	8	193.33	1 024	25 955.55
TOTALS	83	10 224.73	485 835.57	25 955.55

It is estimated that medical facilities located within Overstrand Municipality produces approximately 10 tons of "sharps" waste per annum; 486 tons of "pathological waste" such as cotton swabs, used bandages, gauze, plaster and syringes and anatomical waste per annum; and 26 tons of animal carcasses per annum.

2.3.6.4 Hazardous and Health Care Risk Waste quantitative data summary

As a conclusion to this study, Table 2-17: **Data summary** below provides a summary of all quantitative data available for both Hazardous and Health Care Risk Waste generated within the study area. Depending on the waste stream, waste is reported in either cubic meters per annum (m^3/annum), tons per annum (t/annum) or litres per annum (l/annum).

Table 2-17: Data summary

Major Constituent per Waste Stream	m ³ /annum	tons/annum	litres/annum
1. Solvents and cleaning chemicals from washing of equipment			1 385
2. Machine oil			2 000
3. Used oil			750
4. Fluorescent tubes		4	
5. Off-spec fruit requiring safe disposal		12	
6. Wet-blue bovine trimming and shavings		210	
7. Wet-blue bovine leather rinse effluent	2 750		
8. Leather offcuts, buffing dust, etc		2	
9. Tan and dye effluent with trivalent chrome and sulphate	20 430		
10. Lime effluent with trivalent chromium	30		
11. Trivalent chrome waste	120		
12. Ink containers (Rejects removed for safe disposal) Rags contaminated with ink		2	
13. Chemical residues and waste consisting of ethyl acetate, oils, rags, etc.		6	
14. Caustic soda (30 %) rinse water and soluble lubricating oil			1 000
15. Sharps		10	
16. Pathological Waste		486	
17. Carcasses		26	
TOTALS	23 330	758	5 135

2.3.6.5 Sewage sludge

The Overstrand Municipality has classified their sewage sludge in terms of the Waste Act Norms and Standards: Assessment of Waste for Landfill Disposal. The sludge was classified as Type 3 waste according to the Norms & Standards parameters, excluding it as hazardous waste. Its disposal at Karwyderskraal is however restricted due to its moisture content being above 40%. It is recommended that due to its classification as Type 3 waste, options for beneficial use is explored as opposed to transporting and disposing it at a Class A Landfill.

2.4 EXISTING WASTE MANAGEMENT STRUCTURE, SYSTEMS AND PRACTICES

This section discusses the current solid waste management system in the Overstrand Municipality. This includes the organisational structure of the Municipality, solid waste collection methods and vehicles, collection schedules, diversion, treatment and disposal.

2.4.1 Organisational structure

The municipal waste management responsibilities lie with the department of Community Services and Infrastructure and Planning. The Manager: Solid Waste Planning is Mr Craig Mitchell.

Chapter 3 of the Waste Act states that:

- “10.(3) Each municipality authorised to carry out waste management services by the Municipal Structures Act, 1998 (Act No. 117 of 1998), must designate in writing a waste management officer from its administration to be responsible for co-ordinating matters pertaining to waste management in that municipality.
- (4) A power delegated or a duty assigned to a waste management officer by virtue of subsection (3) may be sub-delegated or further assigned by that officer to another official in the service of the same administration, subject to such limitations or conditions as may be determined by the municipality.

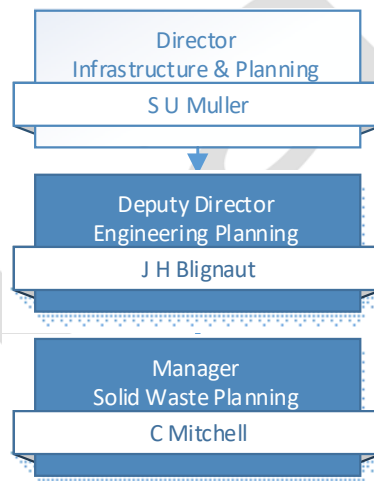
- (5) Waste management officers must co-ordinate their activities with other waste management activities in the manner set out in the national waste management strategy established in terms of section 6 or determined by the Minister by notice in the Gazette.”

The designated Waste Management Officer for Overstrand Municipality is Mr Craig Mitchell who was appointed as required by the Waste Act.

Provision must be made for the continuous training and education of the Overstrand waste management employees. Waste management information sharing/capacity-building events such as the Departmental Waste Forum, Waste Khoro and the IWMSA's WasteCon should be attended by waste management employees determined by the Municipality.

The Overstrand staff organograms responsible for the various levels of waste management are displayed below. There are 8 vacancies that require to be filled at various levels of responsibility as can be seen from the organograms. 1 Vacancy is at superintendent level, 2 at supervisor/driver level and the rest at general worker/assistant level.

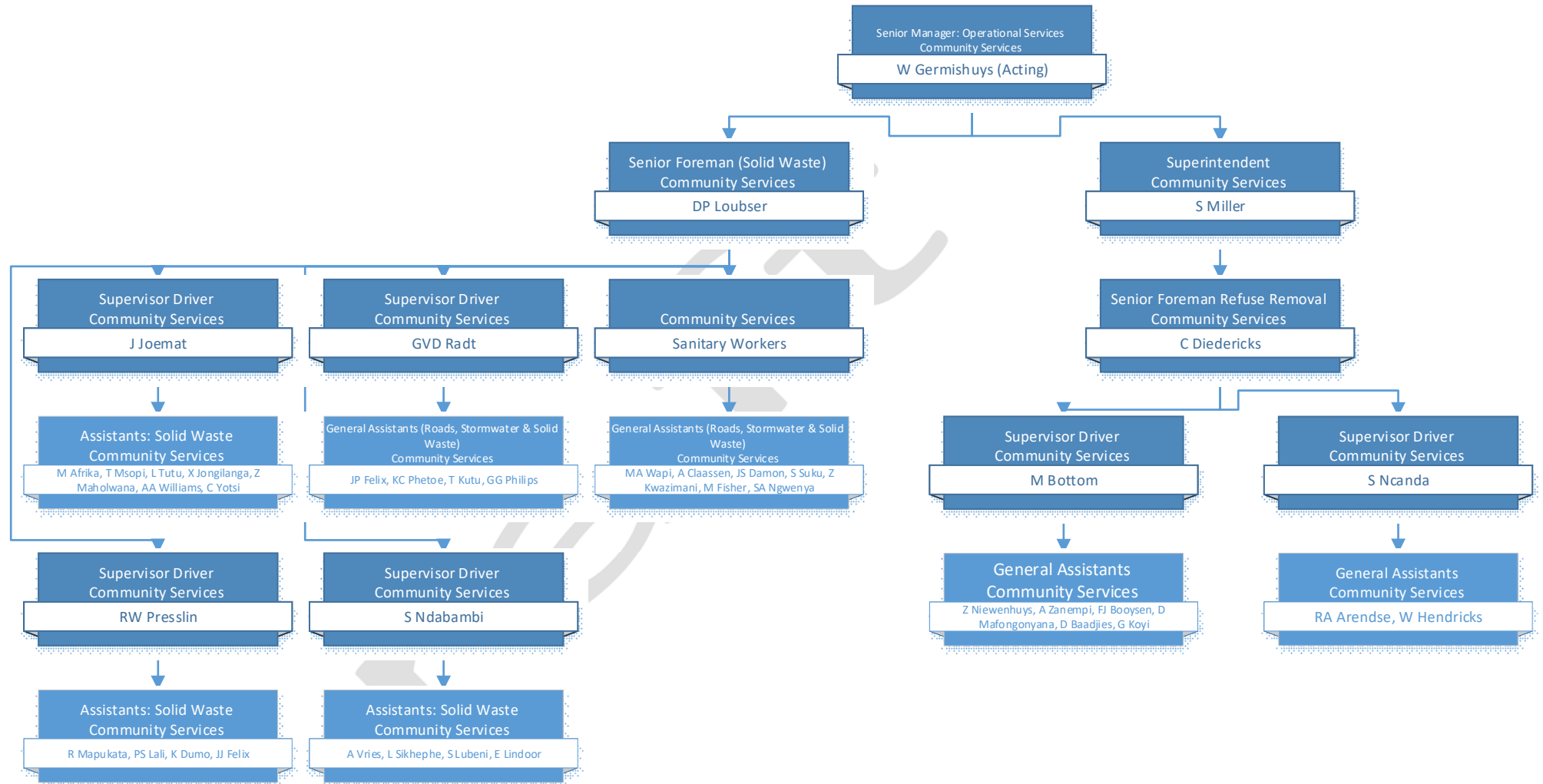
OVERSTRAND INFRASTRUCTURE AND PLANNING



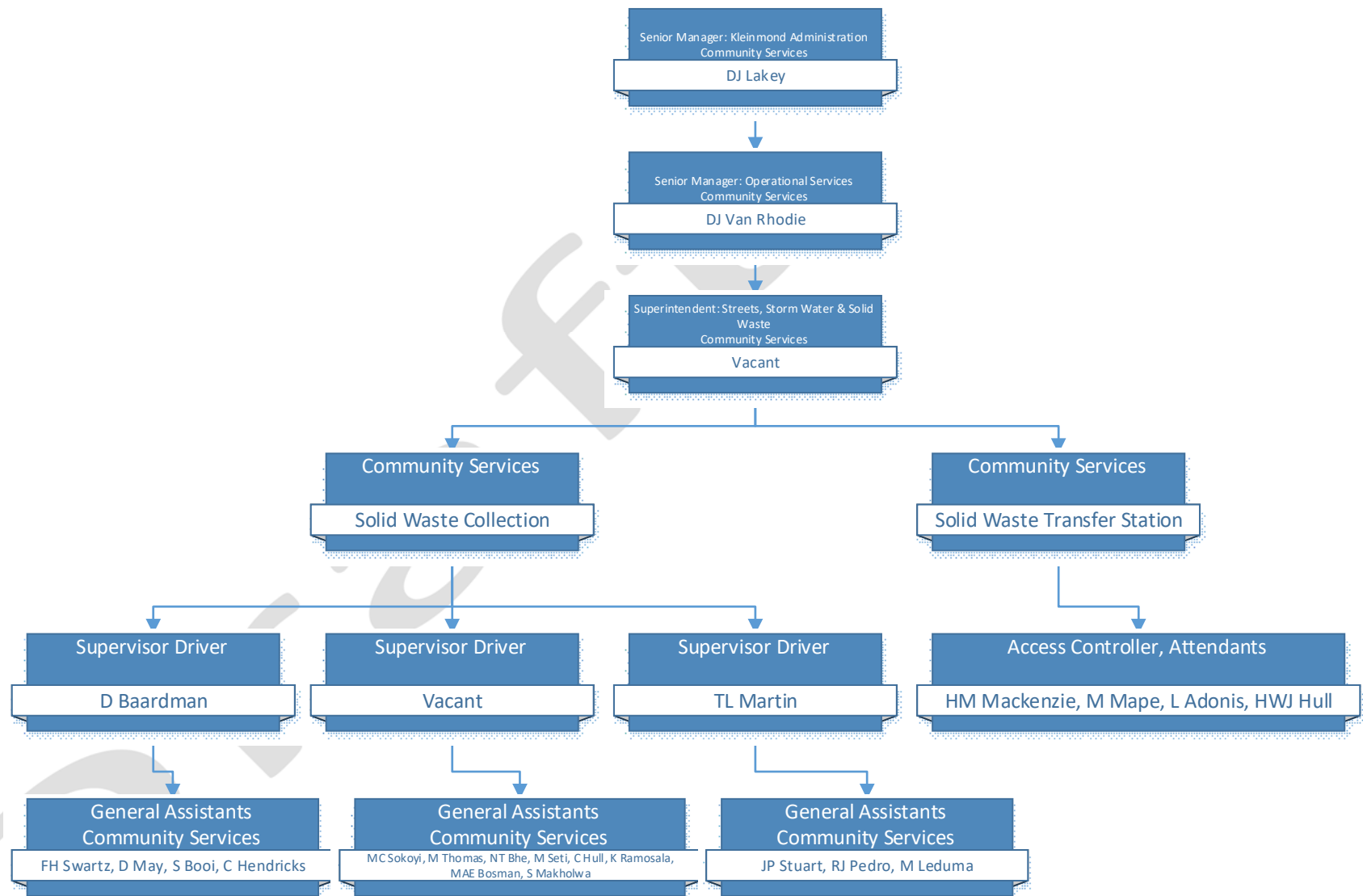
HERMANUS & SURROUNDS



GANSBAAI & SURROUNDS



KLEINMOND & SURROUNDS



2.4.2 Collection and cleansing services

The Overstrand solid waste collection fleet is attached as **Annexure A**. All vehicle information as well as collection schedules are shown in the annexure.

It is advisable that collection vehicles should ideally not be operated beyond 7 to 8 years in age since the maintenance costs increase dramatically with age as well as down-time which also has cost-implications. It is recommended that all vehicles older than 8 years, are evaluated to determine the need for replacement. In the event that a vehicle is temporarily out of operation, its function is covered with a vehicle/s from other departments as solid waste collection takes priority.

2.4.3 Levels of service

As reported in the IDP, 100% of households receive kerb side collection once per week. All the urban and informal areas of Overstrand Municipality have access to at least a basic refuse removal service. No refuse removal service exists in the rural areas and farming communities, but all the rural areas have access to drop-off facilities and landfills, at the applicable tariffs.

The latest records show that 100% of the total 7749 registered indigent households receive free basic waste collection services.

2.4.4 Waste related complaints

All received complaints regarding solid waste are logged on the internal system. A work order is created when a complaint is received and sent to the appropriate responsible person. This person must then address the complaint and report back in order to complete the order.

Complaints can be logged at the following numbers for each area:

Hermanus: (028) 313 8000
 Gansbaai: (028) 384 8300
 Kleinmond: (028) 271 8400
 Stanford: (028) 341 8500

The summarised received and completed complaints for the latest full financial year (July 2018 to June 2019) is shown in the table below.

Table 2-18: Summary of complaints

Fault reported	Sub-area	No. of reports during period
Gansbaai Areas		
Builder's Rubble	Gansbaai	1
Call backs/Special requests	Blompark	2
	De Kelders	19
	Franskraal	14
	Gansbaai	22
	Industry Park	1
	Kleinbaai	12
	Klipfonteyn	1
	Pearly Beach	6
	Perlemoenbaai	4
Illegal dumping - Clean up investigate	Kleinbaai	2
	Rural area	1
	Pearly Beach	1
Other - refuse removal	All areas Gansbaai	52
	Gansbaai	52
	Pearly Beach	1
Total completed reports for area		191

Fault reported	Sub-area	No. of reports during period
Hermanus Areas		
Builder's Rubble	Hawston	1
Illegal dumping - Clean up investigate	Industrial Hermanus	1
	Onrusrivier	1
	Hawston	1
	Vermont	1
	Zwelihle	2
Other - refuse removal	East Cliff	1
	Fernkloof	1
	Fisherhaven	3
	Hawston	9
	Hermanus	80
	Mount Pleasant	1
	Northcliff	2
	Onrusrivier	2
	Sandbaai	1
	Vermont	1
	Voëlklip	8
	Zwelihle	6
Total completed reports for area		122
Kleinmond Areas		
Illegal dumping - Clean up investigate	Kleinmond	1
	Pringle Bay	1
Other - refuse removal	Kleinmond	3
	Overhills	2
	Pringle Bay	1
Total completed reports for area		8
Stanford Areas		
Other - refuse removal	Stanford North	3
	Stanford South	2
	Stanford	5
Total completed reports for area		10
Grand total completed faults		331

2.4.5 Waste minimisation, re-use, recycling initiatives

2.4.5.1 Recycling

Currently, the only recycling operation in the Overstrand takes place at the Gansbaai MRF. Since the Hermanus MRF was destroyed in June 2018, the recycling contractor there has ceased operations.

In terms of future recycling, the municipality is in the process of relocating and reconstructing the Hermanus MRF, after which recycling in the Hermanus area will resume.

A further note on the current status of recycling in general: The recycling market in South Africa is heavily dependent on exporting recyclable materials as there are no large-scale manufacturers that can use the material here, especially plastics. Since importers of recyclables like China and India have diminished or ceased imports, the South African recycling market has slowed down severely. This has drastically decreased the price per ton recyclers receive for materials, to the point that some recyclers cannot continue operations. For the past year, recycling (currently only at Gansbaai), accounts for only 1% diversion of the generated household waste stream on average. Based on historic data, with favourable market conditions, the diversion rate via recycling can be increased to 5% on average should the new Hermanus MRF start operations.

This does not imply that recycling will be stopped and hopefully the market will recover. Recycling is part of the (current draft) NWMS 2019 and source separated collection part of the requirements for municipalities outlined in the strategy. It must however be noted that the collection service and recovery at a MRF will most likely not generate revenue for the municipality and will require operational funding over and above the capital funding to establish the operation. Refer to the table below for the latest prices of recovered materials. The table indicates prices for material that is delivered. Much lower prices can be expected for collected materials, due to transport costs.

Table 2-19: January 2020 Prices of Recovered Materials Delivered to Cape Town

MATERIAL	PRICE IN RAND/TONNE FOR BALED MATERIAL
Cardboard	600
White Paper	2 500
Newsprint	100
Mixed Paper	100
Metals (Mainly cans)	1 400
Glass (All colours, Crushed)	400
Plastic (PET, No 1, White, Blue)	3 800
Green PET	2 800
Plastic (PET, No 1, Brown & other colours)	2 000
Plastic (HDPE, No 2)	4 500
Plastic (LDPE)	Unwashed: 1 450 Washed: 3 200
Plastic (Polypropylene, No 5)	3 300
Plastic (Polystyrene, No 6)	575

The latest prices for cardboard, newsprint and mixed paper have dropped significantly, even forcing some recyclers to close their businesses due to becoming financially unsustainable as paper is the bulk of revenue for most recyclers.

Even though recycling is part of the road to minimise disposal to landfill, the actual reduction in the waste stream via recycling alone is minimal. In order to support diversion in the temporary absence of recycling, there are still many actions and decisions each of us can make. Examples include:

- Rethink and avoid: Eliminate the need to recycle by making better buying decisions. Refuse single-use bags, cups, straws, etc. and make use of washable containers that can be used repetitively.
- Fix and repair household items or clothing before replacing.
- Start composting organics such as food and garden waste at home or deliver your organics to a nearby composter.
- Go paperless: Switch to e-billing wherever possible and print only when necessary.

2.4.5.2 Organic diversion

Much potential for diversion exists within the organic fraction of the waste stream with reference to the characterisation results thus far, indicating close to 50% organics present in the household waste stream. This study must be further refined in order to indicate the breakdown of these organics and what the diversion potential with each is and the appropriate treatment/re-use methods.

The DEADP has also recognised the importance of organic diversion and stipulated the requirement in the latest issued landfill licences that each landfill must dispose according to its Organic Waste Diversion Plan. The targets for these diversion plans are that 50% organic diversion is achieved by 2022 and 100% diversion by 2027.

The Overstrand currently diverts organic waste via chipping and composting. Chipping takes place at the Gansbaai Landfill, Betty's Bay Drop-off, Kleinmond RTS, Hermanus RTS and composting at the Karwyderskraal Landfill with a new chipping facility planned for Hermanus.

If the organic fraction (49.5%) as per the waste characterisation study is applied to the generated average household waste, combined with the current recorded totals of composting and chipping, the current average diversion rate of the organic waste stream is 34.3%.

The Overstrand is therefore on track to achieve 50% organic diversion by 2022.

2.4.5.3 Building rubble diversion

The main option with building rubble diversion is crushing the clean rubble and using it as road building material (or other appropriate uses depending on material quality) or using it as cover material in landfilling, eliminating the need to use natural materials such as soil.

No building rubble received is directly disposed. Oversized rubble is stockpiled separately until sufficient volumes are reached for crushing operations. Manageable rubble is used as cover material.

2.4.6 Awareness & Education

The Overstrand Municipality conducts comprehensive awareness and education campaigns with continual involvement with the public in terms of solid waste management and the promotion of better waste management practices. Residents are informed and given feedback through the means of newsletters, pamphlets, social media and the municipal website. Schools are visited to educate learners about solid waste and recycling.

The following summarised examples indicate the latest actions. Further details are attached as **Annexure B**.

- Storyteam Storifactori: This is a team conducting an educational theatre project in collaboration with the Overstrand Municipality. They visit schools and community centres throughout Overstrand and perform environmentally themed puppet theatre productions with an interactive nature to teach learners about the importance of nature conservation and proper waste management and recycling. Their target audience is from grade R to grade 3. Productions are presented in Afrikaans, English and isiXhosa.
- The Village News newsletter: Poor disposal practices are addressed and the proper ways to dispose and where to dispose are explained.
- Press releases, website and pamphlets: Planning regarding re-establishing recycling in the Hermanus areas following violent protests and the destruction of the Hermanus Material Recovery Facility.
- Recycling at restaurants: Information and guidance pamphlet promoting recycling at restaurants.
- Multi-lingual notices: Warning and information distributed after specialist gas testing that the old Hermanus Landfill is not suitable for informal housing.
- Information pamphlets: Discouraging illegal dumping and information of all facilities where the public can take deliver their waste for disposal.
- Media interview: Question and answer session with Mr Van Taak regarding the separation at source programme.
- Cub Scouts Hermanus: Engagement and presentation to members by municipal officials which included recycling.
- Talks and presentations: Presentations were delivered to the public, the Overberg District and at events with the D:EA&DP, which included presentations on recycling, Municipal Waste Management Best Practices: The road to success with waste awareness.
- Municipal newsletter ("BULLETIN"): Solid waste events and information.
- Social Media: Announcements, public interaction, useful information

The Overstrand should continue with their awareness and education campaign which contributes to the Municipality's successful waste management practices and public support and involvement. This is also included as an ongoing action item in the IWMP's implementation.

2.4.7 **Waste disposal facilities**

The operational and closed waste disposal facilities in the Overstrand Municipal area are discussed in this section.

2.4.7.1 **Landfills**

2.4.7.1.1 **Operating Landfills**

The Overstrand Municipality currently disposes waste at the Gansbaai Landfill as well as the Karwyderskraal Landfill. The Gansbaai Landfill is operated by the Overstrand Municipality via a private contractor and the Overstrand Municipality is the permit holder. The Karwyderskraal Landfill is operated by the Overberg District Municipality via a private contractor and the Overberg District Municipality is the permit holder.

Gansbaai Landfill

The Gansbaai Landfill is permitted and a variation was issued on 30-07-2018 in Terms of the National Environmental Management Waste Act of 2008 (Waste Act) with number 19/2/5/4/E2/10/WL0100/17 and is classified as G:M:B- (1998 Minimum Requirements). The site is located to the east of Gansbaai (34°35'16.30"S, 19°21'54.37"E).

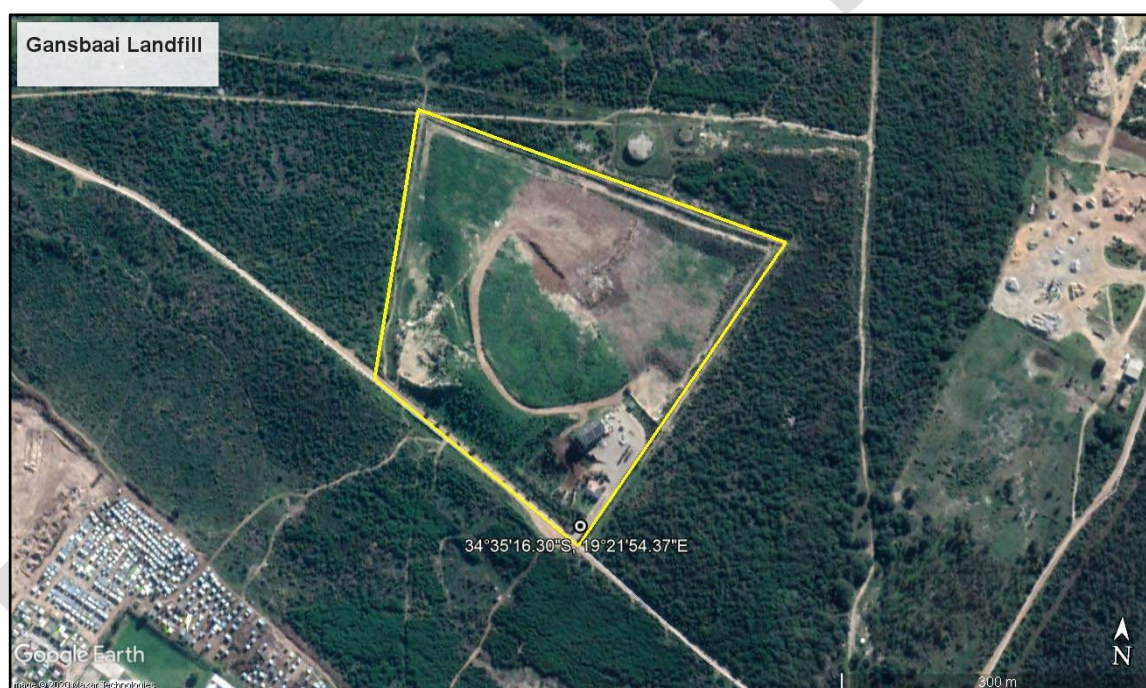


Figure 2-9: Gansbaai Landfill

The Gansbaai disposal facility is externally audited annually. The latest audit was conducted by JPCE (Pty) LTD in November 2019 and a compliance score of 97.7% was achieved with the following conditions identified to be addressed:

CONDITION	NON/PARTIAL COMPLIANCE	ACTION
5.2	The site must be fenced.	Although the site was fenced, a significant portion of the perimeter fence has been stolen. The Municipality is awaiting quotations for repairing the stolen portions.
6.7	Interim cover of 300mm	Although this permit condition makes perfect sense the situation at Gansbaai landfill with its sandy cover material and continuous windy conditions is that the waste gets exposed regardless of the thickness of the interim cover. Chipped bush waste has been used as interim cover and although it is not necessarily 300mm thick it is successful in covering the waste, which is the aim of this permit condition. No further action is recommended except adding chipped bush waste where waste is exposed.
7.7.2	The annual monitoring of ambient air quality.	This condition requires the annual monitoring of the ambient air at four locations on the boundary of the site. This monitoring requires the placement of four passive samplers for a period not exceeding one month at location on the boundary and then to have the samplers – if not stolen - analysed in a lab.
16.4	Organic Waste Diversion Plan	The Municipality still have to include the development of this Plan in their budget.

Entrance control is good and all incoming loads are weighed and recorded at the weighbridge. Weighbridge data is certified by a third party (JPCE) on a monthly basis and reported to IPWIS by the licence holder. Collected source separated waste from the towns of Stanford and Gansbaai as well as the local Swop Shop is sorted at the Material Recovery Facility (MRF) at the entrance to the site. Garden waste is chipped on site.

Excluding garden waste and builder's rubble a total of 9,469 tonnes of general waste was received at the Gansbaai Landfill during 2019. Of this volume, 473 tonnes were recycled and the rest disposed.

The total diversion, recovery, chipping and the use of builder's rubble as cover, amounts to 17,980 tonnes per year compared to 8,995 tonnes disposed. Thus a diversion rate of 66.7% at the Gansbaai landfill was achieved during 2019.

The site was topographically surveyed in December 2019 and the survey indicated an available volume of airspace of 507,239m³ which at current disposal and diversion volumes and a 3% growth in waste volumes, would be sufficient capacity up to 2032.

Gansbaai Waste Disposal Facility Summary Table

Type of facility	General Waste Disposal Facility, Material Recovery Facility, Public Drop-off
Licensed/Permitted?	Yes
License/Permit Number	19/2/5/4/E2/10/WL0100/17
Classification	G:M:B- (Class B)
Location	34°35'16.30"S, 19°21'54.37"E
Estimated Remaining Lifetime	Currently estimated until 2032
Access Control?	Yes
Externally audited?	Yes
Waste Types Received	General household, source separated recyclables, commercial and industrial waste, garden waste, building & demolition waste

The Gansbaai Landfill is registered on and monthly reporting to IPWIS takes place.

Karwyderskraal Regional Landfill

The Karwyderskraal regional landfill is permitted and a variation was issued on 12-02-2018 in terms of the Waste Act. This landfill is located in the Overstrand Municipality (34°19'52.93"S, 19°09'40.31"E), but with the Overberg District Municipality as Permit Holder, therefore only discussed here briefly as this is the Overstrand IWMP.

The calculated maximum total airspace for the KWK landfill using the licensed footprint and height limit is 10,415,185m³ (assuming 4m deep landfill Cells and 1:4 external slopes). This value includes the approximately 714,500m³ of airspace already consumed by Cells 1, 2 and 3 resulting in a remaining airspace (from Cell 4 onwards) of 9,700,685m³.

The current operational cell (Cell 4) is estimated to be full by end 2024. Future development of the licensed footprint is estimated to provide airspace until 2076. (Source – Karwyderskraal Master Plan Report, JPCE 2019)



Figure 2-10: Karwyderskraal Landfill

2.4.7.1.2 Closed Landfills

The following closed disposal sites are located in the Overstrand Municipal area. They no longer receive any waste:

Onrus

This site is located to the north of Onrus (34°24'21.25"S, 19°10'33.81"E) and no longer receives any waste. It was issued with a licence for closure in terms of NEMWA on 10 December 2014. A variation Licence was issued on 25 October 2018. Licence ref. nr: 19/2/5/4/E2/25/WL0165/18. This site must still be rehabilitated and the required commencement date of rehabilitation is 25 October 2023 as per the licence.

This landfill is internally audited. The licence requires that it must be externally audited by independent auditors after rehabilitation has been completed at a frequency of every 2 years.



Figure 2-11: Onrus Closed Disposal Site

Hermanus

The site is located at 34°25'25.50\"S, 19°12'53.10\"E and no longer receives any waste. It was licensed for closure in terms of NEMWA on 31 March 2014 and a variation licence was issued on 25 October 2018. Licence ref. nr: 19/2/5/4/E2/14/WL0167/18. This site must still be rehabilitated and the required commencement date of rehabilitation is 25 October 2023 as per the licence.

The two separate closed and temporarily covered waste bodies were recently occupied by informal residences. The municipality installed gas monitoring wells and informed the occupants that the areas directly on the waste bodies are not safe for occupation, based on the readings obtained in the monitoring wells.

The site is internally audited and the licence requires that independent auditors conduct annual external audits before the site is rehabilitated and audit every 2 years after completion of rehabilitation. The latest external audit was conducted in January 2019 and a compliance score of 85.7% was achieved. The main non-compliances were the required security fencing not being installed and monitoring not taking place at the required frequency. However, the monitoring requirement was altered with the variation and is no longer a non-compliance. The site is due for an external audit.



Figure 2-12: Hermanus Closed Disposal Site

Hawston

The site is located to the east of Hawston (34°23'17.65"S, 19°08'25.61"E) and no longer receives any waste. It was issued with a closure license on 31/03/2014.

(License number 19/2/5/1/E2/13/WL0088/12). A new residential development is under construction directly adjacent to the landfill. The waste body is planned to be excavated, hauled and disposed at the Karwyderskraal Landfill and the affected area remediated.

The site is internally audited and the licence requires it to be externally audited twice per year. The latest external audit was conducted in January 2019 with a score of 84% achieved, and no audits since, due to the imminent removal of the waste body and remediation of the impacted area. Non-compliances were the absence of fencing (now unnecessary due to removal of the waste body) and monitoring frequency.



Figure 2-13: Hawston Closed Disposal Site

Fisherhaven

The site is located to the south of Fisherhaven (34°21'57.16\"S, 19°07'31.79\"E) and no longer receives any waste. It was issued with a closure license on 10/12/2014. A variation licence was issued on 25 October 2018. Licence ref. nr: 19/2/5/4/E2/8/WL0166/18. It is also planned to excavate, haul and dispose the waste body at the Karwyderskraal Landfill and remediate the affected area. The required commencement date for rehabilitation is stipulated as 25 October 2023 in the licence.

The site is internally audited and the licence requires that independent auditors conduct annual external audits after completion of rehabilitation.



Figure 2-14: Fisherhaven Closed Disposal Site

Voëlklip

The site is located to the east of Voëlklip ($34^{\circ}24'38.81''\text{S}$, $19^{\circ}18'26.40''\text{E}$) and no longer receives any waste. It was issued with a closure license on 07/11/2014. A variation licence was issued on 25 October 2018. Licence ref. nr: 19/2/5/4/E2/40/WL0164/18. This site must still be rehabilitated, with the required rehabilitation commencement date stipulated as 25 October 2023.

The site is internally audited and the licence requires that independent auditors conduct annual external audits before the site is rehabilitated and audit every 2 years after completion of rehabilitation. The latest external audit was conducted in January 2019 and a score of 93.1% was achieved. The non-compliances were the absence of fencing and a notice board.



Figure 2-15: Voëlklip Closed Disposal Site

Stanford

The site is located to the south-east of Stanford ($34^{\circ}28'02.40''\text{S}$, $19^{\circ}26'46.53''\text{E}$) and no longer receives any waste. It was issued with a closure license on 31/03/2014. A variation licence was issued on 25 October 2018. Licence ref. nr: 19/2/5/4/E2/36/WL0163/18. This site must still be rehabilitated, with the required rehabilitation commencement date stipulated as 25 October 2023.

The site is internally audited and the licence requires that independent auditors conduct external audits every 2 years. The last external audit was conducted in December 2017 with a score of 76.3% achieved. The non-compliances were the absence of fencing and the frequency of monitoring and audits.

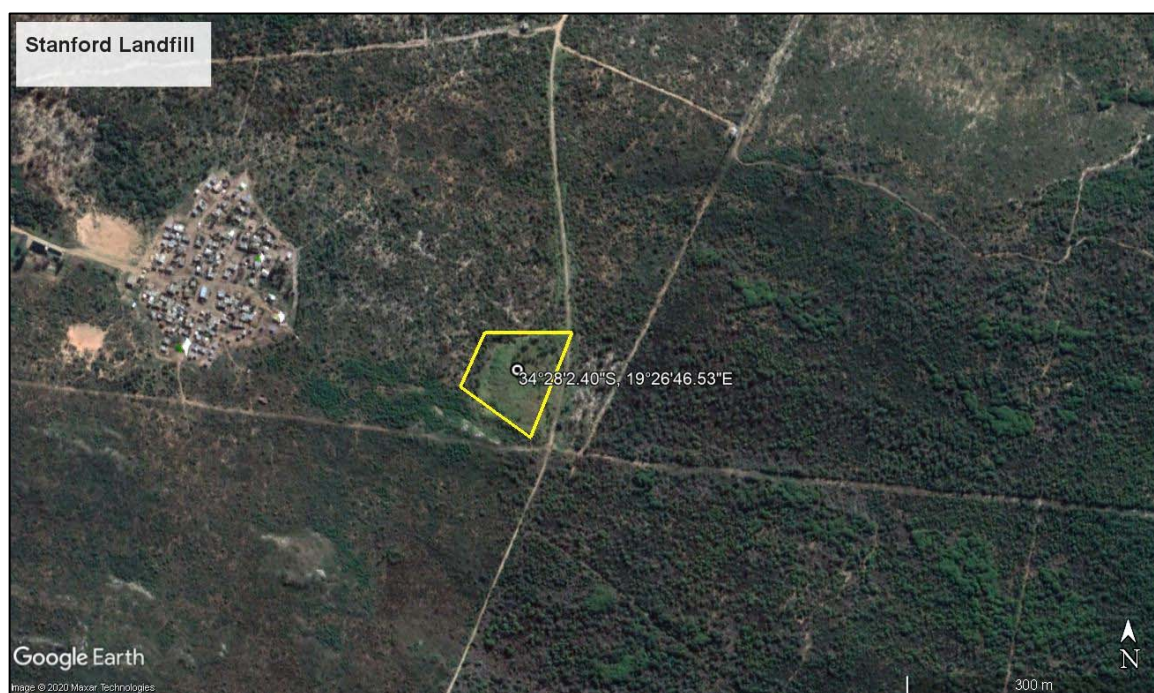


Figure 2-16: Stanford Closed Disposal Site

Pearly Beach

The site is located to the north of Pearly Beach (34°39'01.21\"S, 19°29'34.18\"E) and no longer receives any waste. It was issued with a closure license on 29/09/2014. A variation licence issued on 16 May 2019. Licence ref. nr: 19/2/5/4/E2/29/WL0021/19. The waste body was partially removed as part of the construction of the waste-water treatment works. The remainder has been removed and disposed at the Gansbaai Landfill. The original licence required external audits only after the rehabilitation phase. The varied licence now requires annual external audits, but with the waste body already removed, it would be a fruitless exercise.



Figure 2-17: Pearly Beach Closed Disposal Site

Betty's Bay & Kleinmond

The Betty's Bay and Kleinmond closed disposal sites have both been issued with closure permits. Betty's Bay permit number: 12/9/11/P18 and Kleinmond permit number: 12/9/11/L17/9. The permits of these sites only require internal audits to be conducted. The Kleinmond Landfill was repurposed to create a sporting facility.



Figure 2-18: Betty's Bay Rehabilitated Disposal Site



Figure 2-19: Kleinmond Rehabilitated Disposal Site

The municipality appoints an external service provider annually in order to evaluate the waste disposal facilities and calculate cost estimates in order to rehabilitate each facility. This is done in accordance with the relevant accounting standards (GRAP19). The evaluation date of the annual report is at the municipal financial year-end, 30 June.

These costs need to be recalculated annually to provide the best estimate due to changes in legislation, rehabilitation requirements, expected year of rehabilitation and changing site conditions. A summary of the latest cost estimate (30 June 2019) for each site that would require future rehabilitation is provided below:

Site Name:	Onrus Landfill	Hermanus Landfill	Hawston Landfill	Fisherhaven Landfill
Total (Excl. VAT)	R12,065,950.30	R14,368,220.53	R4,444,737.05	R10,040,571.57
Site Name:	Voëlklip Landfill	Stanford Landfill	Pearly Beach Landfill	Gansbaai Landfill
Total (Excl. VAT)	R15,908,887.13	R4,460,219.53	R4,983,990.10	R34,137,572.24

2.4.8 Garden Waste & Builder's Rubble Sites

There are no dedicated garden waste or building & demolition waste sites in Overstrand. Garden waste and building & demolition waste are accepted at the landfills, transfer stations and drop-offs. A new garden waste chipping facility is planned as part of the new Hermanus MRF project.

2.4.9 Waste Transfer Stations and public drop-offs

The Overstrand currently only has one fully operational transfer station at Kleinmond since the Hermanus transfer station was severely damaged. The Hermanus transfer station is temporarily used until the new MRF and drop-off has been constructed. Collection vehicles in the Hermanus area will then travel directly to Karwyderskraal Landfill and not via the transfer station. There are various public drop-offs located throughout the Overstrand. The drop-offs do not require licensing due to their size.

Betty's Bay Drop-off

This drop-off only receives garden waste and is located between Pringle Bay and Betty's Bay. Loads are transported to the Karwyderskraal Landfill. Chipping also takes place at this drop-off.



Figure 2-20: Betty's Bay Drop-off

Betty's Bay Mini Drop-off

This drop-off is located within Betty's Bay. The municipality is investigating the possibility of relocating this mini drop-off. Loads are transported to the Kleinmond Transfer Station.



Figure 2-21: Betty's Bay Mini Drop-off

Hawston Drop-off

The Hawston drop-off is located to the north of Hawston opposite the wastewater treatment works. Loads are transported to the Karwyderskraal Landfill.

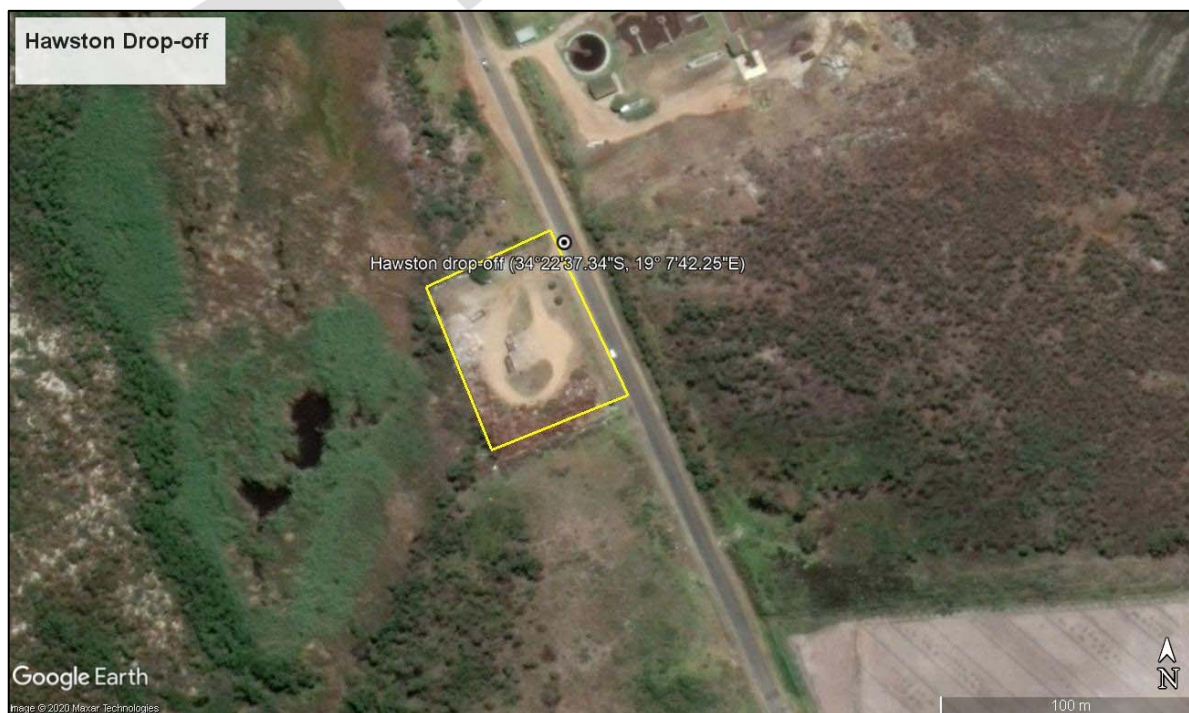


Figure 2-22: Hawston Public Drop-off

Kleinmond Transfer Station

The Kleinmond Transfer Station and public drop-off is located to the west of the town of Kleinmond. A permit was issued on 8 January 2002, with nr. 16/2/7/G401/D21/Z2/P458. It was damaged during protests and the damage has been repaired. Loads are transported to the Karwyderskraal Landfill.

The transfer station is internally and externally audited with the latest external audit conducted in November 2019. A score of 97% was achieved with the non-compliances being operational issues due to fire damage, membership of the monitoring committee and committee meeting frequency.



Figure 2-23: Kleinmond Refuse Transfer Station and Public Drop-off

Pearly Beach Drop-off

The Pearly Beach drop-off is located in Pearly Beach towards the north. Loads are transported to the Gansbaai Landfill.



Figure 2-24: Pearly Beach Drop-off

Pringle Bay Mini Drop-off

The Pringle Bay mini-drop-off is located to the north-east of Pringle Bay. Loads are transported to the Kleinmond Transfer Station.



Figure 2-25: Pringle Bay Mini Drop-off

Stanford Drop-off

The Stanford drop-off is located to the east of Stanford. Loads are transported to the Gansbaai Landfill.



Figure 2-26: Stanford Drop-off

Voëlklip Drop-off

The Voëlklip drop-off is located to the east of Hermanus. General and mixed waste is transported to the Karwyderskraal Landfill and clean garden waste to Hermanus for chipping.

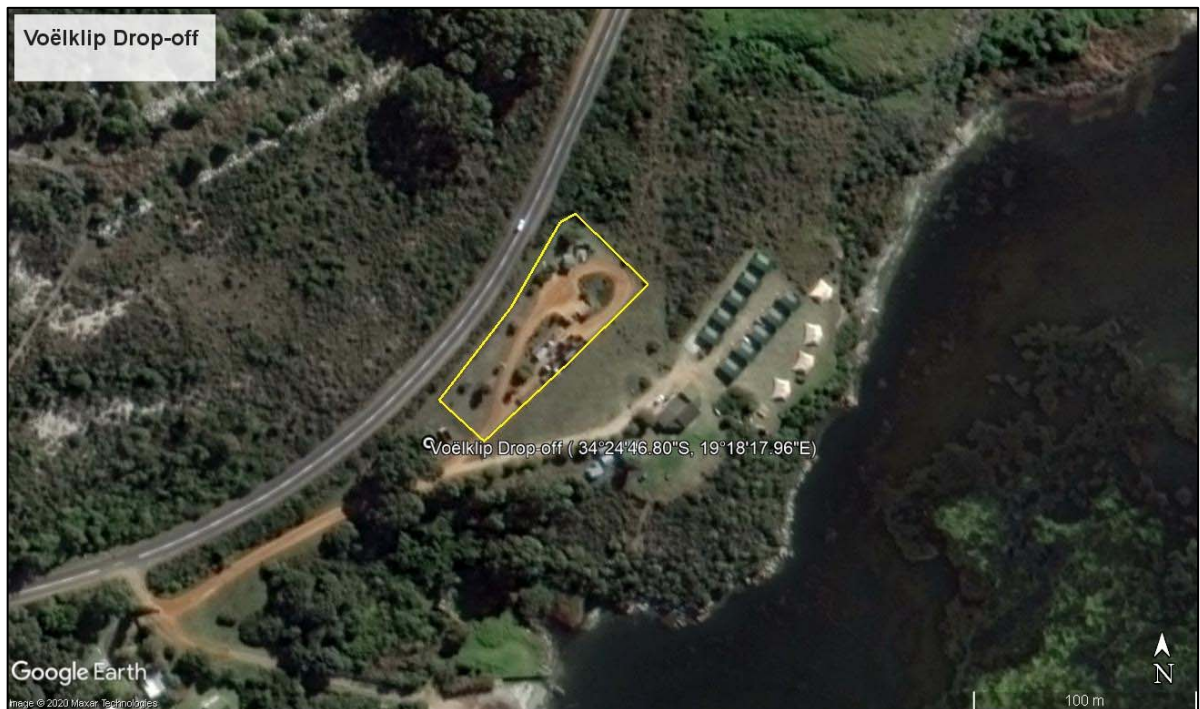


Figure 2-27: Voëlklip Drop-off

Voëlklip Mini Drop-off

The Voëlklip mini drop-off is located to the east of Hermanus, north of Voëlklip. Loads are currently transported to the Hermanus Transfer Station and will be transported directly to the Karwyderskraal Landfill in the future.

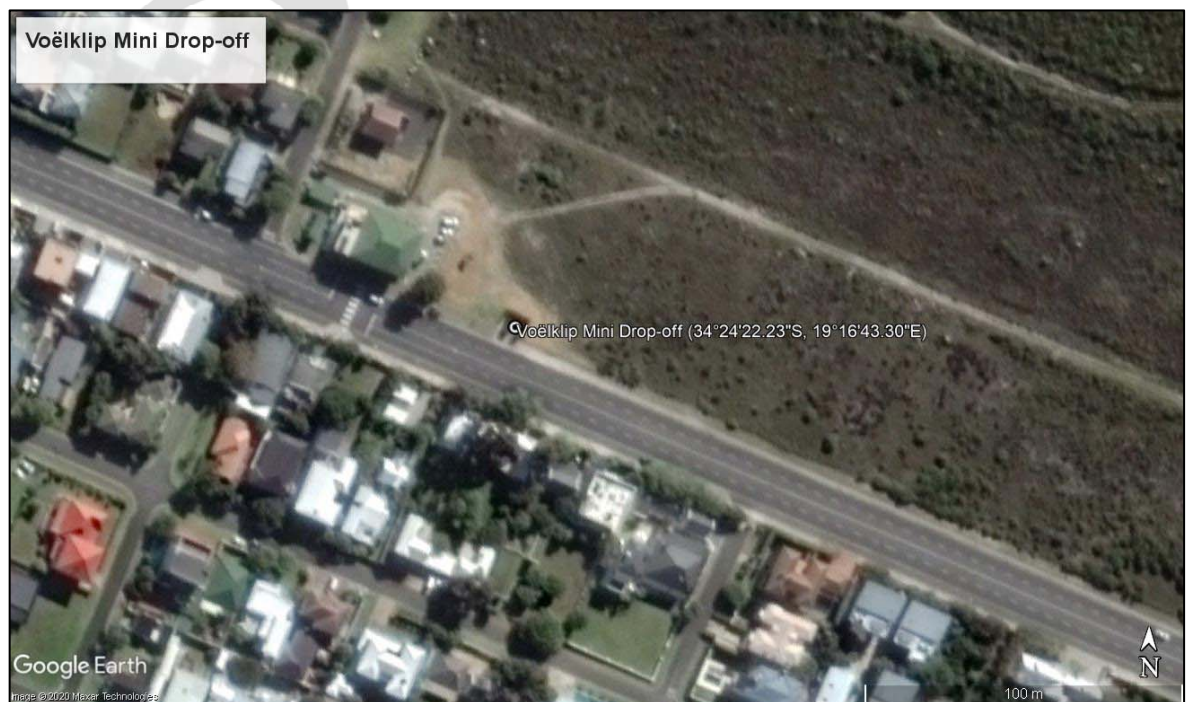


Figure 2-28: Voëlklip Drop-off

2.4.10 **Disposal Facilities used outside the Overstrand Municipality Boundaries**

The hazardous waste generated in Overstrand Municipality is transported to the Vissershok Waste Management Facility (VWMF). It has a Class A (previously H:H) classification operating licence from the Department: Environmental Affairs. The site is situated some 800m west of the N7 at Vissershok and is operated and audited in terms of its licence conditions.

2.4.11 **Contaminated Land**

There are no known contaminated land or unpermitted landfills prior to ECA 1989 in Overstrand Municipality. All contaminated land is discussed under "Closed Landfills".

2.4.12 **Informal Salvaging**

Informal salvaging has not been reported as a concern in the Overstrand as the facilities where salvaging can take place are fenced and access controlled. The main "salvagers" are baboons, but baboon-proof bins are available for purchase from the Municipality to limit this nuisance.

2.5 ECONOMICS AND FINANCING OF SOLID WASTE MANAGEMENT PRACTICES

2.5.1 Current Solid Waste Management System Costs & Budget

The tables below show the totals for the Capital Budget and the Operating Budget for the solid waste management departments of the Overstrand Municipality. Income for the Municipality is derived from service charges related to collection from domestic and business refuse removal as well as sales. The tariffs are also indicated below.

Table 2-20: Overstrand Waste Management Capital Budget

2019/20 BUDGET						
Area	Project Description		Project Manager	Council Funded	External (Grants)	Total
	WASTE MANAGEMENT			16,931,122.00		16,931,122.00
Overstrand	VEHICLES-WASTE MANAGEMENT	New	T Steenberg	5,931,122.00	0.00	5,931,122.00
Kleinmond	HIGH RISK FENCING SOLID WASTE TRANSFER STATION	Upgrading	D van Rhodie	1,000,000.00	0.00	1,000,000.00
Overstrand	HERMANUS NEW WASTE MANAGEMENT FACILITY	New	C Mitchell	10,000,000.00	0.00	10,000,000.00

Table 2-21: Overstrand Municipality Waste Management Operational Budget (Latest actual income & expenditure, July 2018-June2019 Audited)

	Expenditure	Revenue
	R	R
OPERATING REVENUE		
Service Charges		61,788,413.00
Fines		0.00
Transfers Recognised - Operating		14,931,526.00
Transfers Recognised - Capital		0.00
Other Revenue		56,611.00
Total Direct Operating Revenue		76,776,550.00
OPERATING EXPENDITURE		
Employee Related Costs - Wages & Salaries	26,944,043.00	
Employee Related Costs - Social Contributions	3,753,319.00	
Debt Impairment	365,059.00	
Depreciation and Asset Impairment	3,856,536.00	
Interest Expense - External Borrowings	746,354.00	
Other Materials	2,597,928.00	
Contracted Services	24,565,623.00	
Other Expenses	737,801.00	
Contributions To/(From) Provisions	6,587,366.00	70,154,030.00
Financial Results Plus the following Expenditure:		
SURPLUS / DEFICIT		
Operating Surplus: Total revenue less Total Expenditure		6,622,520.00
Change to Unappropriated Surplus / (Accumulated Deficit)		6,622,520.00
Less: Expenditure		
Departmental charges	10,015,410.00	10,015,410.00
DEFICIT		-3,392,890.00

2.5.2 **Tariffs and billing****Table 2-22: Latest versus previous approved Overstrand Disposal Tariffs**

	2019/2020		2018/2019	
	Excl. VAT	Incl. VAT	Excl. VAT	Incl. VAT
Refuse Removal (1 removal per week of 4 bags or 1 x 240ℓ Bin)	R	R	R	R
Domestic Waste				
Residential (All registered erven/unit with approved building plan) 1 x removal per week (R/month)	185.49	213.31	164.35	189.00
Residential Indigent as per paragraph A of the Indigent Policy (All registered erven/unit with approved building plan) 1 x removal per week (R/month)	185.49	213.31	164.35	189.00
Residential Indigent as per paragraph B, C & D of the Indigent Policy (All registered erven/unit with approved building plan) 1 x removal per week (R/month)	185.49	213.31	164.35	189.00
Business Waste				
Commercial/Businesses (Hostels, Old Age Homes, Caravan Sites, Semi-permanent Resorts etc) (R/month)	185.49	213.31	164.35	189.00
Bulk Container 240ℓ (Wheely bin) (R/month) 1 x per week (if available)	185.49	213.31	164.35	189.00
Bulk Container 240ℓ (Wheely bin) (R/month) 2 x per week (if available)	370.97	426.62	328.70	378.01
Bulk Container 240ℓ (Wheely bin) (R/month) 3 x per week CBD (if available)	556.44	639.91	493.04	567.00
Bulk Container 240ℓ (Wheely bin) (R/month) 4 x per week CBD (if available)	741.93	853.22	657.39	756.00
Bulk Container 240ℓ (Wheely bin) (R/month) 5 x per week CBD (if available)	927.42	1066.53	821.74	945.00
Camphill Route (R/month) (If available)	1457.36	1675.96	1291.30	1485.00
Additional Removals per week on Saturday per Bin (R/month) Peak Time per removal	278.22	319.95	246.52	283.50
Additional Removals on request Central Town (CBD) per bin (R/month) (Sunday or Public Holidays) per removal	370.97	426.62	328.7	378.01
All CBD's additional Removal during normal working week, per Bin, per removal	42.89	49.32	38.00	43.70
All CBD's additional Removal on Saturday, per Bin per removal	64.33	73.98	57.00	65.55
All CBD's additional Removal during Sunday or Public Holidays, per Bin per removal	85.77	98.64	76.00	87.40
Caravan Sites, Chalets, Semi-permanent & Resorts (R/month) (Uilenkraalsmond Vakansieoord; Franskraal Vakansieoord; Pearly Beach Camp; Michael Fuchs Guesthouse) NO REMOVAL (per unit/site)	59.67	68.62	52.87	60.80
Departmental Consumption (Municipal Consumption per removal site per month)	185.49	213.31	140.87	162.00
Schools (R/month)	185.49	213.31	164.35	189.00
Removal outside service area (per removal per hour) (If available)	1391.12	1599.79	1232.61	1417.50
Single Quarters & Transit Camps per unit	59.62	68.56	52.83	60.75
Guesthouses, Bed & Breakfast (R/month)	185.49	213.31	164.35	189.00
Removal of food waste for safe disposal (R/per collection)	369.30	424.70	327.22	376.30

Self Dumping Transfer Stations & Drop off: Sand and clean builders rubble (rounding applicable)				
Vehicles up to 1 ton load capacity: clean builders rubble (<250mm) and sand: only at Kleinmond Transfer Station, Stanford Drop Off, Pearly Beach Drop Off and Hawston Drop Off (no admission to Hermanus Transfer Station). (All vehicles above 1 ton load capacity only to landfills)	No Charge	No VAT	No Charge	No VAT
Self Dumping Transfer Stations & Drop off: General and Garden Refuse				
Vehicles up to 1 Ton per vehicle load capacity (maximum volume of 5m ³)	No Charge	No VAT	No Charge	No VAT
Vehicles >1 & up to 2 Ton per vehicle load capacity	426.64	490.64	238.61	274.40
Vehicles >2 & up to 3 Ton per vehicle load capacity	639.96	735.95	357.91	411.60
Vehicles >3 & up to 4 Ton per vehicle load capacity	853.28	981.27	477.22	548.80
Vehicles >4 & up to 5 Ton per vehicle load capacity	1066.60	1226.59	596.52	686.00
Weigh bridge - Gansbaai Landfill (rounding applicable)				
Up to 1 ton load weighed	No Charge	No VAT	No Charge	No VAT
Above 1 ton load weighed per ton load weighed	213.32	245.32	119.31	137.21
Clean builders rubble (<250mm) and sand	No Charge	No VAT	New	New
Mixed builders rubble per ton weighed	213.32	245.32	New	New
Basic Fee Refuse Service (Erven without approved building plans)				
All registered erven without building plans (R/month)	92.74	106.65	82.17	94.50
Sundries				
Rental of Bulk Container per day (including disposal)	99.02	113.88	87.74	100.90
Deposit - rental of bulk containers per 4 bins or less	750.52	No VAT	665.00	No VAT
Asbestos Sheet - per unit (Limited to max 10 sheets)	70.27	80.81	62.26	71.60
Baboon Resistant 240l Wheely Bin with lock delivered to homes - projects	1182.00	1359.30	887.74	1020.90
Replacement lock on baboon resistant wheelie bin	367.34	422.44	325.48	374.30
Selling of Chipped Organic Material				
Per ton	395.99	455.39	350.87	403.50
Per cubic (m ³)	89.11	102.48	78.96	90.80

3. GAPS AND NEEDS ASSESSMENT

From the status quo evaluation the gaps and needs were identified and are discussed below. The methodology used to determine these gaps and needs were through a combination of the following methods and processes:

- Gaps and Needs specifically identified by the municipality's waste management officer during the meetings between JPCE and the municipality;
- Complaints, comments and suggestions made by members of the public during the public consultation process of the IDP and IWMP (to be included after receipt thereof);
- Shortcomings of municipal infrastructure and/or systems to adhere to the national and provincial requirements of waste volume recording and reporting and management;
- Processes and practices identified that could assist the municipality to adhere to the principles of the National Waste Management Strategy and the NEMA Waste Act and its regulations.

3.1 LEGISLATION

In terms of local municipal legislation, the by-laws will be updated during the next IWMP generation and is considered adequate and up-to-date for now.

The general awareness of the latest legislation has been identified as a gap. Various waste generators (especially hazardous waste) are unaware of the requirements listed in legislation pertaining to the transport and disposal of waste.

The non-compliances (where applicable) at municipal solid waste facilities need to be comprehensively assessed through internal and external audits. These findings must be communicated to the DEADP. This is not considered a gap at the moment as it is being done, however, due to the requirement that it is continually done, it is mentioned here in order to include in upcoming implementation items.

Disposal facilities that have been issued with closure licences require rehabilitation to commence before the dates specified in the licences in order to achieve compliance. Recent variations to the closure licences of the Overstrand's closed landfills have postponed the required commencement dates to be more feasible in terms of funding.

3.2 WASTE GENERATION QUANTITIES

Excellent data is available for the generated waste quantities in the Overstrand. The gap identified is in the on-going waste characterisation study. The study should include more sub-categories of waste types, especially in organics in order to inform more refined diversion strategies and the potential for alternative waste treatment options.

3.3 WASTE TRANSFER, TRANSPORT AND DISPOSAL NEEDS

Damage to transfer stations and drop-offs due to civil unrest and protest actions have had an impact on efficient waste transfer and transport.

Disposal airspace in the Overstrand is currently not as severely restricted as in other municipalities, however efforts to increase diversion as per the NWMS should be continued to extend landfill lifetimes as far as possible.

3.4 WASTE MINIMISATION, RECYCLING AND RE-USE INITIATIVES

A new MRF and garden waste chipping facility for the Hermanus area is required in order for recycling to continue and increase organic waste diversion. After MRF establishment, source separated collection is required.

3.5 INSTITUTIONAL AND ORGANISATIONAL NEEDS

There are vacancies in a few key positions in the solid waste management staff complement. Appropriate persons should be appointed for these positions and receive adequate training.

3.6 IDENTIFICATION OF ALTERNATIVES

Current organic diversion rates achieved are good, but needs to improve in order to achieve 50% diversion by 2022. The waste characterisation study needs give additional detail (as mentioned previously) in order to identify effective alternatives for diverting the remainder of the organic waste fraction. Possible additional treatment could include Mechanical Biological Treatment (MBT) in order to separate the organic fraction from the collected waste stream.

3.7 FUNDING MECHANISMS

Funding mechanisms need to be explored. The capital cost requirements of required infrastructure and possible alternatives in order to achieve the required diversion rates are too high to be funded by the solid waste department itself. This is particularly true for the costs of landfill closure and rehabilitation.

Waste minimisation, including recycling, composting and crushing of builder's rubble, will require financial support and continual public awareness and education (which is on-going and very important) is also a continuous expense.

The Municipality must make provision for the rehabilitation of closed landfills. With the requirements set in the latest issued licences (which take into account that sites were not constructed with impermeable base liners), the rehabilitation costs have become unaffordable in the short to medium term. It would be most beneficial if the funding allocation for landfill rehabilitation would come through, or be sourced by, the Provincial government systems.

3.8 PUBLIC AWARENESS AND EDUCATION

Public awareness and education must always be a continual requirement and the current work done by the Overstrand must continue and expanded wherever possible.

4. STRATEGY AND IMPLEMENTATION

Based on the gaps and needs identified, aligned goals of the IWMP and planned projects by the municipality, this section contains the objectives, timeline and required resources for implementation of the IMWP. These gaps and needs are linked to the main goals contained in the Western Cape Provincial IWMP.

Goal 1: Strengthened education, capacity and advocacy towards Integrated Waste Management						
Objectives		2020	2021	2022	2023	2024 and on
Strategic Objective 1:	Facilitate consumer and industry responsibility in integrated waste management	<p>The Manager: Solid Waste Planning must address and co-ordinate the requirements of awareness and general waste management either by himself or an appointed person. This person will co-ordinate and/or delegate the follow-up visits to the special and hazardous waste generators in the Overstrand municipality to ensure that all these generators are aware of applicable legislation and are following steps to become compliant if required. This person will also oversee the information gathering as per legislation, in other words, ensure that generators and transporters report to the municipality as required. General public awareness and feedback on recycling issues and information will also fall under the duties of this person, including maintaining and improving upon the diversion statistics information provided to the public. Continue to support the educational Puppet Show & Theatre.</p>				
Strategic Objective 2:	Promote and ensure awareness and education of integrated waste management					
Strategic Objective 3:	Build and strengthen waste management capacity	<p>Fill all vacant posts as soon as possible.</p> <p>Municipal solid waste employees to attend education seminars and waste forums as is appropriate for their specific responsibility levels. Capacity training and education must be conducted within the municipality where needed. It must be ensured that the solid waste management employees are informed regarding the latest legislation and how to appropriately handle and identify various waste types. Law enforcement departments must also be approached and receive education in solid waste legislation and management to enable them to identify issues and act when required.</p> <p>The South African Institute of Waste Management (www.iwmsa.co.za) is a voluntary organization that provides training on the management of waste. The Overstrand Municipality is encouraged to have their staff become members of this institute and to attend the training sessions that is available on their website.</p> <p>The Waste Management Officer attends the Overberg Provincial Waste Forum, The Western Cape Recycling Action Group as well as District Forums.</p>				
		<p>Costs to be determined (OPEX). One to two persons in the municipality required, or a consultant can be appointed for public awareness and education. Additional costs are dependent on the number of employees attending educational and capacity building events.</p>				
	Costs & Human Resources	Puppet show & Theatre	Puppet show & Theatre	Puppet show & Theatre		
		R100,000.00	R105,000.00	R110,000.00	TBD	TBD

Goal 2: Improved integrated waste management planning and implementation for efficient waste services and infrastructure							
Objectives		2020	2021	2022	2023	2024 and on	Priority
Strategic Objective 1:	Facilitate municipal waste management planning	Finalise 5th generation IWMP	Review IWMP and submit IWMP annual report along with implementation projects update.	Review IWMP and submit IWMP annual report along with implementation projects update.	Review IWMP and submit IWMP annual report along with implementation projects update.	Start IWMP 6th generation development.	High and already under way.
	Costs & Human Resources	R200,000.00. Appointed consultants, Waste Management Officer.	Can be done in-house by the solid waste manager. Cost estimate for consultant: R40 000.00 per report.			To be determined.	
Strategic Objective 2:	Promote industry waste management planning	This objective is coupled with Goal 1, where the appointed persons will liaise with industry to ensure that they are aware of the relevant legislation. Follow-up meetings and on-going communication will ensure that industry sufficiently plans and implements actions in order to be compliant and reduce waste generation along with responsible handling/treatment/transport/disposal.					High
Strategic Objective 3:	Promote the establishment of integrated waste management infrastructure and services	Continued Collection Service Review: The municipality must ensure that all residents receive an affordable waste service at an acceptable level at all times. The Solid Waste departments must liaise with the town planning department to stay up to date with new areas that require or will require services. The complaints registry and service requests must be reviewed monthly by the Waste Management Officer. The older Municipal collection vehicles currently in the Municipal fleet aged above 7 to 8 years, must be assessed in terms of running cost and effectivity. Where vehicles are operating beyond their effective economic lifetimes or are not the most efficient vehicles for their functions, they must be replaced. It must also be ensured that each vehicle's function is thoroughly assessed in order to replace the old vehicles with the most efficient and cost-effective ones. The Waste Management Officer will be responsible for planning and coordinating with the Operations department, who will be responsible for vehicle assessment.					Medium
	Costs & Human Resources	Review and replace collection vehicles where required. 15m³ REL approx. R2.2 Million; 19m³ REL approx. R2.5 Million; 4 Tonne Truck approx. R0.6 Million					
	Promote the establishment of integrated waste management infrastructure and services	Construction of a new MRF, drop-off and garden waste chipping facility for Hermanus.		To be determined in light of diversion studies and annual IWMP implementation reviews. Possible MBT facility to increase organic waste diversion.			High and already under way.
	Costs & Human Resources	R20,000,000.00. Appointed consultants, Municipality. Appoint contractors via public tender.		To be determined.			
	Promote the establishment of integrated waste management infrastructure and services	Vacant positions need to be filled and the Waste Department expanded in order to keep up with growth and service needs. In order to provide an effective service, key vacant positions in the solid waste department need to be filled.					Medium
	Costs & Human Resources	The number of and type of position will determine the additional costs to the municipality. Competent employees need to be appointed and training provided as necessary.					
Strategic Objective 4:	Ensure effective and efficient waste information management	Improve the detail with which the waste characterisation study is done. The study should include sub-categories for the current included waste types in order for refined planning and diversion option identification. Continue recording at weighbridges and reporting to IPWIS by the Waste Management Officer.					High

Goal 3: Effective and efficient utilisation of resources							
Objectives		2020	2021	2022	2023	2024 and on	Priority
Strategic Objective 1:	Minimise the consumption of natural resources	This also ties in with Goal 1 to promote waste minimisation and recycling, which will in turn reduce pressure on natural resources by re-using materials efficiently. New facility designs must take cognisance of natural resource protection. For example, a rehabilitated disposal site must be covered with indigenous vegetation suited to the climate so as not to require additional watering to thrive. Awareness and education should place additional focus on waste avoidance, reducing the need for diversion methods and disposal.					High
Strategic Objective 2:	Stimulate job creation within the waste economy		Appoint contractor(s) for MRF and chipping operations at the new Hermanus MRF.	Assess job creation opportunities, both permanent and temporary in the waste management field and upcoming projects. Job creation remains a top need in the community.			High
Strategic Objective 3:	Increase waste diversion through reuse, recovery and recycling		Appoint contractor(s) for MRF and chipping operations at the new Hermanus MRF.	Investigate alternatives in order to improve organic waste diversion rates in order to achieve 50% organic diversion by 2022.	Apply identified strategies/infrastructure to increase diversion.	Continue with investigations and applying methods to improve diversion rates.	High
	Costs & Human Resources		TBD	TBD	TBD	TBD	

Goal 4: Improved compliance with environmental regulatory framework							
Objectives		2020	2021	2022	2023	2024 and on	Priority
Strategic Objective 1:	Strengthen compliance monitoring and enforcement	Conduct internal and external compliance audits at all waste management facilities as required according to licences and legislation. Findings must be communicated to the DEADP.					High
	Costs & Human Resources	External auditors to be appointed. Waste management officer to conduct internal audits. Between R20,000 and R40,000 per Audit depending on the requirements.					
	Strengthen compliance monitoring and enforcement	Cooperate with the public and law enforcement to reduce instances of illegal dumping. Enforce legislation on perpetrators.					
Strategic Objective 2:	Remediate and rehabilitate contaminated land	Remove and remediate the Hawston Landfill	Conclude investigation to verify that all waste has been removed at the Pearly Beach Landfill.	Remove and remediate the Fisherhaven Landfill	Close and rehabilitate the Hermanus, Onrus, Stanford and Voëlklip Landfills. Considering the estimated costs and limited time, apply to postpone the required rehabilitation of the sites for which funding cannot be sourced.		Medium
	Costs & Human Resources	R2,900,000.00. Appoint a contractor via public tender.	TBD. Specialist consultants.	R4,500,000.00. Appoint a contractor via public tender.	Note that these are the 2019 estimates which include professional and construction fees. These costs must be updated annually: Onrus: R12,065,950.30; Hermanus: R14,368,220.53; Voëlklip: R15,908,887.13, Stanford: R4,460,219.53.		
Strategic Objective 3:	Facilitate the development of waste policy instruments		Update integrated waste management by-laws in terms of latest national legislation and 5th Gen IWMP.				Low
	Costs & Human Resources		Solid waste manager and his appointed consultants. R120,000				
Strategic Objective 4:	Promote self/co-regulatory measures	Ties in with Goal 1. Person responsible to liaise with industry should promote the implementation of these measure e.g. through reviewing industry waste management plans. Ensure annual IWMP review and reporting.					Medium

5. MONITORING AND REVIEW

5.1 ESTABLISHMENT OF AN IWMP MONITORING ADVISORY COMMITTEE

To ensure that the IWMP remains up to date as far as practically possible and stays relevant, it must go through a review process. This process will be initiated and followed by the IWMP advisory committee.

The committee will review the proposed projects and implementation items contained in the IWMP. The committee should consist of at least the following persons:

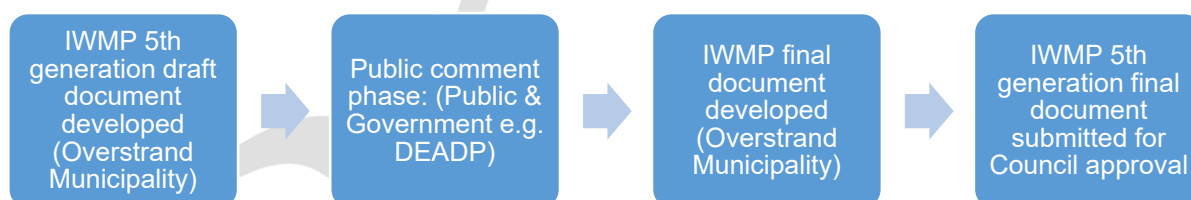
- The Overstrand Waste Management Officer with assistance from the Civil Engineering Services Department's Supervisors and Foremen.
- The Overstrand Development and Town Planning Director
- The Overstrand Community Services Director
- The Overstrand Municipality's appointed consultant, but only if required.

The members of the Committee, responsible for their separate tasks, will ensure that projects are followed, reported on and the IWMP and its schedule are up to date.

5.2 MONITORING SCHEDULE OR PROGRAMME

For the IWMP to be an effective and relevant tool and guide for integrated waste management in the Overstrand Municipality, it will need to be monitored and reviewed. Monitoring relates to the goals and targets set out in the IWMP and whether they are being achieved or pursued. Reviewing relates to the document and the projects themselves which will require regular updates to stay up-to-date, specifically the implementation items of Section 5. The proposed implementation schedule as well as allocated budget may change at any time and these changes, if any, need to be reflected in the reviewed IWMP to avoid confusion.

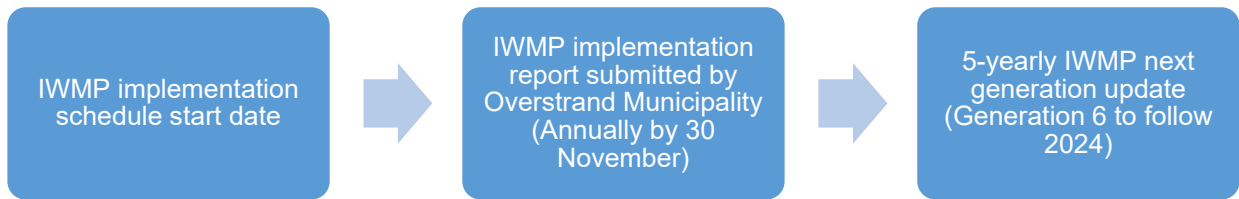
The following diagram illustrates the initial review cycle when a new IWMP is developed:



The implementation of the fifth generation IWMP will start following Council approval. Apart from the continuous project implementation and goal tracking, which must be done by each individual project team as and when each project is running and report to Mr Mitchell (Waste Management Officer), an annual IWMP report must be submitted along with the other Municipal annual reports and a copy sent to DEADP as well.

As per the Waste Act, the IWMP annual report must reflect the following:

- a. the extent to which the plan has been implemented during the period;
- b. the waste management initiatives that have been undertaken during the reporting period;
- c. the delivery of waste management services and measures taken to secure the efficient delivery of waste management services, if applicable;
- d. the level of compliance with the plan and any applicable waste management standards;
- e. the measures taken to secure compliance with waste management standards;
- f. the waste management monitoring activities;
- g. the actual budget expended on implementing the plan;
- h. the measures that have been taken to make any necessary amendments to the plan;
- i. in the case of a province, the extent to which municipalities comply with the plan and, in the event of any non-compliance with the plan, the reasons for such non-compliance: and
- j. any other requirements as may be prescribed by the Minister.



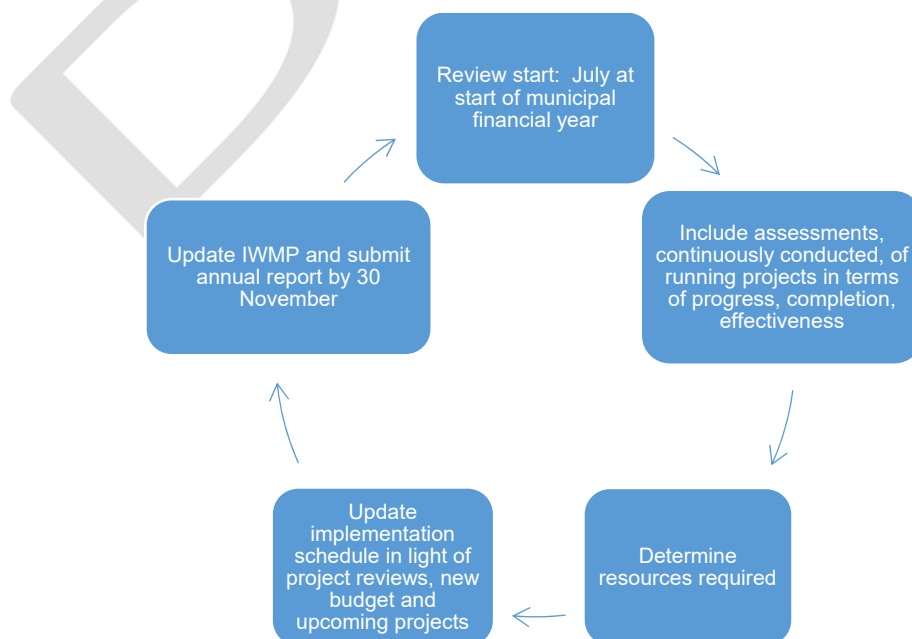
The annual implementation reports will be submitted by the Overstrand Municipality and will be compiled by Mr Mitchell, or to whom the task is delegated by him. The annual report must contain the approved implementation items and dates of the IWMP and the progress thereof of the past year. Based on the progress and possible new budget allocations, the implementation schedule of the IWMP must be updated and included in the annual report. This new implementation schedule must provide for 3 upcoming years from the report date.

The progress of each task on the implementation schedule, if under way according to the schedule for that year, must be summarised and the estimated completion date must be updated. The reasons for the lack of progress or practical difficulties must be stated along with a summarised action plan to adhere to the schedule as close as possible. This does not infer that the implementation items themselves are only reviewed once per year. Each item and progress must be continually evaluated by the persons responsible. This will allow the information, whether a project has been completed or is on-going, to be included in the annual report and allow for the implementation schedule of the IWMP to be updated as part of the IWMP annual review process.

The report must further discuss the effectiveness of completed projects. For example, when a new drop-off has been commissioned, the collected data must be reported on and added to the IPWIS. Also the participation rates of source separation can be monitored along with the public awareness and education campaign. The way in which projects are tracked for review are not prescribed, as long as it is done in order to measure the success of addressing the identified gaps and requirements and to identify and plan for new gaps and needs.

Wherever issues are reported or identified in the projects, these issues must also be evaluated in terms of the relevant legislation and by-laws. It must be stated if there is relevant legislation applicable to the issue and if so, was it the lack of enforcement, for example, that caused the issue. If no relevant legislation exists, it must be noted to adapt the by-laws accordingly in future revisions.

Below is the proposed review cycle and amendment procedure of the IWMP and its projects:



6. CONCLUSIONS AND RECOMMENDATIONS

Through this 5th generation IWMP development, the current solid waste management system of the Overstrand Municipality has been assessed in order to determine the adequacy, shortcomings and possible improvements.

Damage to transfer stations and drop-offs due to civil unrest have halted and in the case of recycling in Hermanus reversed progress achieved in integrated waste management, despite careful planning and hard work. The only option is to rebuild and continue to improve upon the current system. Waste diversion needs to be continually improved upon in order to meet diversion targets. This is being addressed by the upcoming establishment of a new MRF, drop-off and garden waste chipping facility for Hermanus.

During the process of the implementation of the municipality's IWMP, and arising from the public consultation process, further input and/or corrections to the report may come to light that will then be added as a revision to the report.

The strategic objectives for integrated waste management in Overstrand Municipality can be summarised as follows:

- To ensure that Waste Management in the Overstrand Municipal Area complies with South African and International environmental standards so that it is beneficial to industrial and agricultural growth and the public's right to a clean and healthy environment.
- To minimise the entrance of material of value into the waste stream.
- To reduce all waste so that nothing of value nor anything that can decompose, gets disposed.
- To store, dispose or treat all waste that cannot be avoided nor reduced at licensed facilities with regular operational and environmental monitoring and in accordance with regulatory requirements.

For these strategic objectives to be met, a series of implementation instruments (action plans) will need to be implemented. These implementation instruments as well as time framework within which it should be addressed are described in this report but need to be fully detailed at a later stage as projects are approved and acquires funding. The instruments are the following:

- Strengthened education, capacity and advocacy towards Integrated Waste Management;
- Improved integrated waste management planning and implementation for efficient waste services and infrastructure;
- Effective and efficient utilisation of resources;
- Improved compliance with environmental regulatory framework;

The above instruments, through implementation via their action plans, will ensure that waste management in Overstrand focusses on avoidance and reduction rather than collection and disposal, but simultaneously maintaining the practical balance between the various waste management functions.

The analyses of the current waste management system has led to the identification of gaps and needs (**Chapter 3**) and these are addressed with the overarching goals and implementation (**Chapter 4**).

ANNEXURE A

WASTE COLLECTION FLEET

COLLECTION GANSBAAI							
REGISTRATION NUMBER	CEM 30749						
DRIVER	S NDAMBAMBI						
NO OF LABOURERS	6						
FABRICATE	Nissan Diesel UD 90						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	2008						
CURRENT ODO READING	222785	km					
VOLUME CAPACITY	18	m3					
PAYLOAD	8	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	MASAKHANE INFORMAL SETTLEMENTS, BUFFELJAAG & PEARLY BEACH	MASAKHANE SUBSIDY & DEKELDERS	INDUSTRIAL, MASAKHANE, FRANSKRAAL	BBOS & KLEINBAAI	MASAKHANE GANSBAAI		
LOADS	1	1	1	1	1		
HOURS	6	6	6	6	6		
TOTAL M3	18	18	18	18	18		
IN SEASON							
	MASAKHANE INFORMAL SETTLEMENTS, BUFFELJAAG & PEARLY BEACH	MASAKHANE SUBSIDY & DEKELDERS	INDUSTRIAL, MASAKHANE, FRANSKRAAL	BBOS & KLEINBAAI	MASAKHANE GANSBAAI		
LOADS	2	2	2	2	2		
HOURS	7	7	7	7	7		
TOTAL M3	36	36	36	36	36		
COLLECTION GANSBAAI							
REGISTRATION NUMBER	CEM 23347						
DRIVER	PRESSLIN						
NO OF LABOURERS	6						
FABRICATE	Nissan Diesel UD 90						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	2007						
CURRENT ODO READING	22241	km					
VOLUME CAPACITY	18	m3					
PAYLOAD	8	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	PEARLY BEACH, BUFFELJAGS, ELUXOLWENI	DE KELDERS	FRANSKRAAL	KLEINBAAI	BLOMPARK & PERLEMOENBAAI		
LOADS	1	1	1	1	2		
HOURS	6	6	6	6	6		
TOTAL M3	18	18	18	18	36	0	0
IN SEASON							
	PEARLY BEACH, BUFFELJAGS, ELUXOLWENI	DE KELDERS	FRANSKRAAL	KLEINBAAI	GANSBAAI		
LOADS	2	2	2	2	2		
HOURS	6	6	6	6	7		
TOTAL M3	36	36	36	36	36		

COLLECTION GANSBAAI							
REGISTRATION NUMBER	CEM 17013						
DRIVER	JOEMAT						
NO OF LABOURERS	6						
FABRICATE	Nissan Diesel UD 90						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	2000						
CURRENT ODO READING	222785	km					
VOLUME CAPACITY	18	m3					
PAYLOAD	8	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	HELPS IN BUSINESS PLACES	HELPS IN BUSINESS PLACES	HELPS IN BUSINESS PLACES	HELPS IN BUSINESS PLACES	HELPS IN BUSINESS PLACES		
LOADS	1	1	1	1	1		
HOURS	6h30min	6h30min	6h30min	6h30min	6h30min		
TOTAL M3	18	18	18	18	18		
IN SEASON							
	GANSBAAI BUSINESS	DE KELDERS	FRANSKRAAL	KLEINBAAI, BAARDSKEERDERSB OS	MASAKHANE, BEVERLY HILLS, GANSBAAI		
LOADS	2	2	2	2	2		
HOURS	7h30min	7h30min	7h30min	7h30min	7h30min		
TOTAL M3	36	36	36	36	36		
COLLECTION GANSBAAI							
REGISTRATION NUMBER	CEM 30681						
DRIVER	G VD RADT						
NO OF LABOURERS	6						
FABRICATE	NISSAN UD 35						
DESCRIPTION	TIPPER						
YEAR OF MANUFACTURE	2013						
CURRENT ODO READING	83903	km					
VOLUME CAPACITY	25	m3					
PAYLOAD	3	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	HELPS RECYCLE, DRUMS & OTHER ODD JOBS	HELPS RECYCLE, DRUMS & OTHER ODD JOBS	HELPS RECYCLE, DRUMS & OTHER ODD JOBS	HELPS RECYCLE, DRUMS & OTHER ODD JOBS	HELPS RECYCLE, DRUMS & OTHER ODD JOBS		
LOADS	1	1	1	1	1		
HOURS	6	6	6	6	6		
TOTAL M3	25	25	25	25	25		
IN SEASON							
	2	2	2	2	1		
LOADS	7	7	7	7	7		
HOURS	50	50	50	50	50		
TOTAL M3							

COLLECTION GANSBAAI							
REGISTRATION NUMBER	CEM 5748						
DRIVER	J.JOEMAT						
NO OF LABOURERS	6						
FABRICATE	NISSAN UD 40						
DESCRIPTION	CAGED TIPPER: COLLECTION OF RECYCLABLES						
YEAR OF MANUFACTURE	2011						
CURRENT ODO READING	115186	km					
VOLUME CAPACITY	25	m3					
PAYLOAD	3	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	PEARLY BEACH	DE KELDERS	FRANSKRAAL	KLEINBAAI	GANSBAAI & PERLEMOENBAAI		
LOADS	2	2	2	2	2		
HOURS	6h30min	6h30min	6h30min	6h30min	6h30min		
TOTAL M3	50	50	50	50	50		
IN SEASON							
	PEARLY BEACH	DE KELDERS	FRANSKRAAL	KLEINBAAI	GANSBAAI		
LOADS	3	3	3	3	3		
HOURS	7h30min	7h30min	7h30min	7h30min	7h30min		
TOTAL M3	75	75	75	75	75		
COLLECTION GANSBAAI							
REGISTRATION NUMBER	CEM30619						
DRIVER	G VD RADT						
NO OF LABOURERS	9						
FABRICATE	NISSAN HARDBODY B						
DESCRIPTION	BAKKIE						
YEAR OF MANUFACTURE	2007						
CURRENT ODO READING	236554	km					
VOLUME CAPACITY	3	m3					
PAYLOAD	1	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	HANDLES COMPLAINTS & CLEANING PROJECT	HANDLES COMPLAINTS & CLEANING PROJECT	HANDLES COMPLAINTS & CLEANING PROJECT	HANDLES COMPLAINTS & CLEANING PROJECT	HANDLES COMPLAINTS & CLEANING PROJECT		
LOADS	4	4	4	4	4		
HOURS	6	6	6	6	6		
TOTAL M3	12	12	12	12	12		
IN SEASON							
	HANDLES COMPLAINTS & CLEANING PROJECT	HANDLES COMPLAINTS & CLEANING PROJECT	HANDLES COMPLAINTS & CLEANING PROJECT	HANDLES COMPLAINTS & CLEANING PROJECT	HANDLES COMPLAINTS & CLEANING PROJECT		
LOADS	6	6	6	6	6		
HOURS	7	7	7	7	7		
TOTAL M3	18	18	18	18	18		

COLLECTION HERMANUS							
REGISTRATION NUMBER	CEM 15911						
DRIVER	A SCHUMANE						
NO OF LABOURERS	6						
FABRICATE	ISUZU FTR850						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	2018						
CURRENT ODO READING	17101	km					
VOLUME CAPACITY	18	m3					
PAYLOAD	8	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	VERMONT	ONRUS	ZWELIHLE	NORTHCLIFF	KWAAIWATER GOLF ESTATE		
LOADS	1	2	2	1	1		
HOURS	5	5	8	5	5		
TOTAL M3	18	18	36	18	18	0	0
	VERMONT	ONRUS	ZWELIHLE	NORTHCLIFF	KWAAIWATER GOLF ESTATE		
LOADS	2	2	2	2	2		
HOURS	8	8	8	8	8		
TOTAL M3	36	36	36	36	36	0	0
COLLECTION HERMANUS							
REGISTRATION NUMBER	CEM 31896						
DRIVER	D PLAATJIES						
NO OF LABOURERS	6						
FABRICATE	Nissan Diesel CM 90						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	2009						
CURRENT ODO READING	220800	km					
VOLUME CAPACITY	18	m3					
PAYLOAD	8	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	RESTAURANTE, SANDBAAI VOELKLIP	SANDBAAI, HEMEL-EN-AARDE, NEW SANDBAAI INDUSTRIES	MNT PLEASANT	PLASE HERMANUS INDUSTRIAL	HAWSTON		
LOADS	2	2	2	2	2		
HOURS	8	8	8	8	8		
TOTAL M3	36	36	36	36	36	0	0
IN SEASON							
	RESTAURANTE, SANDBAAI VOELKLIP	SANDBAAI, HEMEL-EN-AARDE, NEW SANDBAAI INDUSTRIES	MNT PLEASANT	PLASE HERMANUS INDUSTRIAL	HAWSTON		
LOADS	3	3	2	2	2		
HOURS	8	8	8	8	8		
TOTAL M3	54	54	36	36	36	0	0

COLLECTION HERMANUS							
REGISTRATION NUMBER	CEM 23618						
DRIVER	E SEPTEMBER						
NO OF LABOURERS	6						
FABRICATE	NISSAN DIESEL UD80						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	2003						
CURRENT ODO READING	85854	km					
VOLUME CAPACITY	18	m3					
PAYLOAD	8	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	VERMONT, FISHERSHAVEN	ONRUS	ZWELIHLE	WESTCLIFF	HERMANUS HEIGHTS EASTCLIFF		
LOADS	1	2	2	1	1		
HOURS	8	8	3	8	8		
TOTAL M3	18	36	36	18	18	0	0
IN SEASON							
	VERMONT, FISHERSHAVEN	ONRUS	ZWELIHLE	WESTCLIFF	HERMANUS HEIGHTS EASTCLIFF		
LOADS	3	3	2.5	2	2		
HOURS	8	8	8	8	8		
TOTAL M3	54	54	45	36	36	0	0
COLLECTION HERMANUS							
REGISTRATION NUMBER	CEM 6932						
DRIVER	H HUMAN						
NO OF LABOURERS	6						
FABRICATE	NISSAN UD80						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	1998						
CURRENT ODO READING	359800	km					
VOLUME CAPACITY	18	m3					
PAYLOAD	8	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	SWING BINS ZWELIHLE	SWING BINS ZWELIHLE	SWING BINS ZWELIHLE	SWING BINS ZWELIHLE	SWING BINS ZWELIHLE		
LOADS	1	1	1	1	1	1	
HOURS	8	8	8	8	8	5	
TOTAL M3	18	18	18	18	18	18	0
IN SEASON							
LOADS	1	1	1	1	1	1	
HOURS	8	8	8	8	8	5	
TOTAL M3	18	18	18	18	18	18	0

COLLECTION HERMANUS							
REGISTRATION NUMBER	CEM 26262						
DRIVER	Z MTEYISE						
NO OF LABOURERS	5						
FABRICATE	NISSAN DIESEL CABSTAR 3.5						
DESCRIPTION	CAGED TIPPER						
YEAR OF MANUFACTURE	2004						
CURRENT ODO READING	172808	km					
VOLUME CAPACITY	25	m3					
PAYLOAD	3	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	SWING BINS (ZWELIHLE, MNT PLEASANT), 4 DROP- OFF, GARDEN WASTE	SWING BINS (ZWELIHLE, MNT PLEASANT), 4 DROP- OFF, GARDEN WASTE	SWING BINS (ZWELIHLE, MNT PLEASANT), 4 DROP- OFF, GARDEN WASTE	SWING BINS (ZWELIHLE, MNT PLEASANT), 4 DROP- OFF, GARDEN WASTE	SWING BINS (ZWELIHLE, MNT PLEASANT), 4 DROP- OFF, GARDEN WASTE	CBD AND BEACHES	CBD AND BEACHES
LOADS	5	4	4	4	4	1	1
HOURS	8	8	8	8	8	4	4
TOTAL M3	125	100	100	100	100	25	25
IN SEASON							
	SWING BINS (ZWELIHLE, MNT PLEASANT), 4 DROP- OFF, GARDEN WASTE	SWING BINS (ZWELIHLE, MNT PLEASANT), 4 DROP- OFF, GARDEN WASTE	SWING BINS (ZWELIHLE, MNT PLEASANT), 4 DROP- OFF, GARDEN WASTE	SWING BINS (ZWELIHLE, MNT PLEASANT), 4 DROP- OFF, GARDEN WASTE	SWING BINS (ZWELIHLE, MNT PLEASANT), 4 DROP- OFF, GARDEN WASTE	CBD AND BEACHES	CBD AND BEACHES
LOADS	5	4	4	4	4	2	2
HOURS	8	8	8	8	8	6.5	6.5
TOTAL M3	125	100	100	100	100	50	50
COLLECTION HERMANUS							
REGISTRATION NUMBER	CEM 13034						
DRIVER	E BRITS						
NO OF LABOURERS	5						
FABRICATE	NISSAN DIESEL CABSTAR 3.5						
DESCRIPTION	CAGED TIPPER						
YEAR OF MANUFACTURE	1995						
CURRENT ODO READING	401560	km					
VOLUME CAPACITY	25	m3					
PAYLOAD	3	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	VOELKLIP SANDBAAI	ONRUS VERMONT FISHERHAVEN	VOELKLIP SANDBAAI	ONRUS VERMONT FISHERHAVEN	VOELKLIP SANDBAAI	CBD STREET LITTER BINS	CBD STREET LITTER BINS
LOADS	2	2	2	2	2	1	1
HOURS	8	8	8	8	8	4	4
TOTAL M3	50	50	50	50	50	25	25
IN SEASON							
	VOELKLIP SANDBAAI	ONRUS VERMONT FISHERHAVEN	VOELKLIP SANDBAAI	ONRUS VERMONT FISHERHAVEN	VOELKLIP SANDBAAI	CBD STREET LITTER BINS	CBD STREET LITTER BINS
LOADS	3	3	3	3	3	2	2
HOURS	8	8	8	8	8	6.5	6.5
TOTAL M3	75	75	75	75	75	50	50

COLLECTION HERMANUS							
REGISTRATION NUMBER	CEM 17727						
DRIVER	A HANSEN	SUPERVISOR					
NO OF LABOURERS	0						
FABRICATE	NISSAN HARDBODY 1600						
DESCRIPTION	LDV						
YEAR OF MANUFACTURE	2000						
CURRENT ODO READING	287832	km					
VOLUME CAPACITY		m3					
PAYLOAD	1	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS							
HOURS							
TOTAL M3	0	0	0	0	0	0	0
IN SEASON							
LOADS							
HOURS							
TOTAL M3	0	0	0	0	0	0	0
COLLECTION HERMANUS							
REGISTRATION NUMBER	CEM 37562						
DRIVER	M NOFEMELE						
NO OF LABOURERS	6						
FABRICATE	NISSAN UD85						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	2014						
CURRENT ODO READING	92576	km					
VOLUME CAPACITY	18	m3					
PAYLOAD	8	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	CBD, VOëLKLIP	CBD,SANDBAAI	ZWELIHLE	CBD, CBD RESIDENTIAL	CBD, HAWSTON		
LOADS	2	2	2	2	2		
HOURS	8	8	8	8	8		
TOTAL M3	36	36	36	36	36	0	0
IN SEASON							
	CBD, VOëLKLIP	CBD,SANDBAAI	ZWELIHLE	CBD, CBD RESIDENTIAL	CBD, HAWSTON		
LOADS	3	3	3	2	2		
HOURS	8	8	8	8	8		
TOTAL M3	54	54	54	36	36	0	0

COLLECTION HERMANUS							
REGISTRATION NUMBER	CEM34453						
DRIVER	L C HENDRICKS						
NO OF LABOURERS	28 (EPWP) 8(SWEEPERS)						
FABRICATE	IOSUZU NLR150						
DESCRIPTION	2 TON FLATBED						
YEAR OF MANUFACTURE	2012						
CURRENT ODO READING	146617	km					
VOLUME CAPACITY	2	m3					
PAYLOAD	2	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	VOëLKLIPO TO FISHERHAVEN	VOëLKLIPO TO FISHERHAVEN	VOëLKLIPO TO FISHERHAVEN	VOëLKLIPO TO FISHERHAVEN	VOëLKLIPO TO FISHERHAVEN	VOëLKLIPO TO FISHERHAVEN	
LOADS	2	2	2	2	2	1	
HOURS	8	8	8	8	8	5	
TOTAL M3	4	4	4	4	4	2	0
IN SEASON							
	VOëLKLIPO TO FISHERHAVEN	VOëLKLIPO TO FISHERHAVEN	VOëLKLIPO TO FISHERHAVEN	VOëLKLIPO TO FISHERHAVEN	VOëLKLIPO TO FISHERHAVEN	VOëLKLIPO TO FISHERHAVEN	
LOADS	2	2	2	2	2	1	
HOURS	8	8	8	8	8	5	
TOTAL M3	4	4	4	4	4	2	0
COLLECTION HERMANUS							
REGISTRATION NUMBER	CEM 44453						
DRIVER	C WILLIAMS	SUPERVISOR					
NO OF LABOURERS	0						
FABRICATE	FORD RANGER						
DESCRIPTION	LDV						
YEAR OF MANUFACTURE	2018						
CURRENT ODO READING	40529	km					
VOLUME CAPACITY		m3					
PAYLOAD	1	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS							
HOURS							
TOTAL M3	0	0	0	0	0	0	0
IN SEASON							
LOADS							
HOURS							
TOTAL M3	0	0	0	0	0	0	0

COLLECTION HERMANUS							
REGISTRATION NUMBER	CEM 11377						
DRIVER	VACANT						
NO OF LABOURERS	4						
FABRICATE	NISSAN UD 80						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	1998						
CURRENT ODO READING	223372	km					
VOLUME CAPACITY	18	m3					
PAYLOAD	8	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	VERMONT, FISHERSHAVEN	ONRUS	ZWELIHLE	PLASE HERMANUS INDUSTRIAL	HAWSTON		
LOADS	1	1	1	1	1		
HOURS	8	8	3	8	8		
TOTAL M3	18	18	18	18	18	0	0
IN SEASON							
	VERMONT, FISHERSHAVEN	ONRUS	ZWELIHLE	PLASE HERMANUS INDUSTRIAL	HAWSTON		
LOADS	2	2	2.5	1	2		
HOURS	8	8	8	8	8		
TOTAL M3	36	36	45	18	36	0	0

COLLECTION KLEINMOND BUSINESS							
REGISTRATION NUMBER:	CEM45117					TRAILORS:	NONE
DRIVER:	VACANT						
NO. OF LABOURERS:	4						
FABRICATE:	ISUZU						
DESCRIPTION:	COMPACTOR						
YEAR OF MANUFACTURE:	2018						
CURRENT ODO:	42442 KM		16/01/2020				
VOLUME CAPACITY:	N/A m3						
PAYLOAD:	6 TON						
OUT OF SEASON							
BUSINESS BLACK BAGS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS		
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5		3	3	3		
HOURS:	8		8	8	8		
TOTAL M3							
RESIDENTIAL BLACK BAGS	KM RESIDENTIAL	KM RESIDENTIAL / PROTEA / BEV. HILLS & RIEMVASMAAK	KM RESIDENTIAL	KM RESIDENTIAL	KM RESIDENTIAL	DROP OFF POINTS PB & BB	DROP OFF POINTS PB & BB
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:		3				0.5	1
HOURS:		8				2	4
TOTAL M3							
IN SEASON							
BUSINESS BLACK BAGS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	3	3	3	3	3	1	1
HOURS:	8	8	8	8	8	5	5
TOTAL M3							

NOTES: VEHICLE IS USED TO REPLACE CEM9879 IN THE SAME PRESCRIBED AREAS AND EMPLOYEES DESIGNATED.

COLLECTION KLEINMOND EXTENSION 3, ABOVE MAIN ROAD & OVERHILLS							
REGISTRATION NUMBER:	CEM2746					TRAILORS:	NONE
DRIVER:	T MARTIN						
NO. OF LABOURERS:	4						
FABRICATE:	NISSAN						
DESCRIPTION:	COMPACTOR						
YEAR OF MANUFACTURE:	1996						
CURRENT ODO:	327115 KM		23/01/2020				
VOLUME CAPACITY:	15.4 m3						
PAYLOAD:	5 TON						
OUT OF SEASON							
RESIDENTIAL BLACK BAGS	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	OVERHILLS	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	OVERHILLS		
WEEK DAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	3	2			2		
HOURS:	8	8			8		
TOTAL M3	46.2	30.8			30.8		
IN SEASON							
RESIDENTIAL BLACK BAGS	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	RESIDENTIAL / ETX.3 / ABOVE MAIN RD		
WEEK DAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	3	3	3	3	3		
HOURS:	8	8	8	8	8		
TOTAL M3	46.2	46.2	46.2	46.2	46.2		

NOTES: HELP OUT IN OTHER AREAS, WHEN NEEDED ON WEDNESDAYS AND THURSDAYS, DURING OUT OF SEASON PERIOD.

COLLECTION KLEINMOND BUSINESS & PRINGLE BAY RESIDENTIAL							
REGISTRATION NUMBER:	CEM17431					TRAILORS:	NONE
DRIVER:	D BAARDMAN						
NO. OF LABOURERS:	4						
FABRICATE:	NISSAN						
DESCRIPTION:	COMPACTOR						
YEAR OF MANUFACTURE:	2011						
CURRENT ODO:	221250 KM		23/01/2020				
VOLUME CAPACITY:	15.4 m3						
PAYLOAD:	5 TON						
OUT OF SEASON							
BUSINESS BLACK BAGS	BB / PB / RE BUSINESS	BB / PB / RE BUSINESS	BB / PB / RE DROP OFFS	BB / PB / RE BUSINESS	BB / PB / RE DROP OFFS		
WEEK DAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	1	1	3	3	3		
HOURS:	3	4.5	8	8	8		
TOTAL M3	15.4	15.4	46.2	46.2	46.2		
RESIDENTIAL BLACK BAGS	PB RESIDENTIAL ABOVE HANGKLIP RD	POPPEDORP / EXT.1 PROTEADORP & RIEN	PB RESIDENTIAL	PB RESIDENTIAL	PB RESIDENTIAL	DROP OFF POINTS PB & BB	DROP OFF POINTS PB & BB
WEEK DAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	3.5	1				1	1
HOURS:	5	3.5				2	4
TOTAL M3	53.9	15.4				15.4	15.4
IN SEASON							
RESIDENTIAL BLACK BAGS	PB RESIDENTIAL ABOVE HANGKLIP RD	PB RESIDENTIAL ABOVE HANGKLIP RD	PB RESIDENTIAL ABOVE HANGKLIP RD	PB RESIDENTIAL ABOVE HANGKLIP RD	PB RESIDENTIAL ABOVE HANGKLIP RD	BB / PB / RE BUSINESS	BB / PB / RE BUSINESS
WEEK DAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	4	3	3	3	3	2	2
HOURS:	8	8	8	8	8	5	5
TOTAL M3	61.6	46.2	46.2	46.2	46.2	30.8	30.8

NOTES: ASSIST WITH RESIDENTIAL AREAS IN PROTEADORP / EXT.13 / RIEMVAS MAAK & POPPEDORP, WHEN FINISHED IN PRINGLE BAY, TUESDAY MORNING.

COLLECTION KLEINMOND GERMAN TOWN / PUBLIC AREAS							
REGISTRATION NUMBER:	CEM33776					TRAILORS:	N/A
DRIVER:	P GALANT						
NO. OF LABOURERS:	2						
FABRICATE:	NISSAN						
DESCRIPTION:	BAKKIE						
YEAR OF MANUFACTURE:	2013						
CURRENT ODO:	204686 KM		23/01/2020				
VOLUME CAPACITY:	2.7 m3						
PAYLOAD:	1 TON						
OUT OF SEASON							
RESIDENTIAL BLACK BAGS	GERMAIN TOWN	BUILDING	BUILDING	BUILDING	BUILDING		
WEEK DAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5						
HOURS:	8						
TOTAL M3	63.85						
PUBLIC AREAS	BB / PB / RE SEA DRUMS & PUBLIC AREAS	BB / PB / RE SEA DRUMS & PUBLIC AREAS	BB / PB / RE SEA DRUMS & PUBLIC AREAS	BB / PB / RE SEA DRUMS & PUBLIC AREAS	BB / PB / RE SEA DRUMS & PUBLIC AREAS		
WEEK DAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:					3		
HOURS:					8		
TOTAL M3					8.1		
IN SEASON							
RESIDENTIAL BLACK BAGS	GERMAIN TOWN	GERMAIN TOWN	GERMAIN TOWN	GERMAIN TOWN	GERMAIN TOWN		
WEEK DAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5	4	4	4	4		
HOURS:	8	8	8	8	8		
TOTAL M3	63.85	10.8	10.8	10.8	10.8		

NOTES: DESIGNATED AT BUILDING TEAM IN KM/BB/PB/RE. VEHICLE IS ONLY USED MONDAYS FOR REFUSE REMOVAL IN AREA PRESCRIBED.

COLLECTION KLEINMOND STREET SWEEPERS							
REGISTRATION NUMBER:	CEM28619					TRAILORS:	YES
DRIVER:	M. MITCHELL						
NO. OF LABOURERS:	2						
FABRICATE:	NISSAN BAKKIE						
DESCRIPTION:	LDV						
YEAR OF MANUFACTURE:	2013						
CURRENT ODO:	239691	KM	23/01/2020				
VOLUME CAPACITY:	2.7	m3					
PAYLOAD:	1	TON					
OUT OF SEASON							
KLEINMOND MAIN RD BLACK BAGS	KLEINMOND MAIN RD	KLEINMOND MAIN RD	KLEINMOND MAIN RD	KLEINMOND MAIN RD	BEACHES - TOILETES RE / PB / BB		
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5	3	3	3	3		
HOURS:	8	8	8	8	8		
TOTAL M3	13.5	8.1	8.1	8.1	8.1		
IN SEASON							
KLEINMOND MAIN RD BLACK BAGS	KLEINMOND MAIN RD	KLEINMOND MAIN RD	KLEINMOND MAIN RD	KLEINMOND MAIN RD	KLEINMOND MAIN RD	KLEINMOND MAIN RD	KLEINMOND MAIN RD
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	3	3	3	3	3	2	2
HOURS:	8	8	8	8	8	5	5
TOTAL M3	8.1	8.1	8.1	8.1	8.1	5.4	5.4

NOTES: DO NOT REMOVE RECYCLING ANYMORE. VEHICLE USED AT STREET SWEEPERS TEAM. REMOVE BLACK BAGS OF BINS ON KLEINMOND MAIN ROAD.

COLLECTION ROOI ELS							
REGISTRATION NUMBER:	CEM36935					TRAILORS:	NONE
DRIVER:	A FLORIS						
NO. OF LABOURERS:	2						
FABRICATE:	NISSAN BAKKIE						
DESCRIPTION:	LVD						
YEAR OF MANUFACTURE:	2013						
CURRENT ODO:	215404	KM	23/01/2020				
VOLUME CAPACITY:	2.7	m3					
PAYLOAD:	1	TON					
OUT OF SEASON							
RESIDENTIAL BLACK BAGS	ROOI ELS	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE	BB & PB DROP OFF POINTS	BB & PB DROP OFF POINTS
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	4					0	0
HOURS:	8					8	8
TOTAL M3	10.8					0	0
IN SEASON							
RESIDENTIAL BLACK BAGS	ROOI ELS	ROOI ELS	ROOI ELS	ROOI ELS	ROOI ELS	BB & PB DROP OFF POINTS	BB & PB DROP OFF POINTS
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5	4	4	4	4	0	0
HOURS:	8	8	8	8	8	8	8
TOTAL M3	13.5	10.8	10.8	10.8	10.8	0	0

NOTES: DESIGNATED FOR ROAD SIGNS & MARKING IN KM/BB/PB/RE. VEHICLE IS ONLY USED MONDAYS FOR REFUSE REMOVAL IN AREA PRESCRIBED. ALSO USED FOR EMPLOYEES THAT ARE WORKING AT BETTIESBAY TRANSFERSTATION TO TRANSPORT EMPLOYEES TO DROP OFF POINTS ON SATURDAY AND SUNDAY.

COLLECTION BETTIESBAY SUNNY SEAS & MALKOPSVLEI							
REGISTRATION NUMBER:	CEM14080					TRAILORS:	NONE
DRIVER:	D CRONJE						
NO. OF LABOURERS:	4						
FABRICATE:	ISUZU NPR 300						
DESCRIPTION:	CAGED TIPPER						
YEAR OF MANUFACTURE:	2006						
CURRENT ODO:	165297	KM	23/01/2020				
VOLUME CAPACITY:	12.77	m3					
PAYLOAD:	3	TON					
OUT OF SEASON							
RESIDENTIAL BLACK BAGS	BB SUNNY SEAS / MALKOPSVLEI	TAR PATCHING ROADS	TAR PATCHING ROADS	TAR PATCHING ROADS	TAR PATCHING ROADS		
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5						
HOURS:	8						
TOTAL M3	63.85						
IN SEASON							
RESIDENTIAL BLACK BAGS	BB SUNNY SEAS / MALKOPSVLEI	BB SUNNY SEAS / MALKOPSVLEI	BB SUNNY SEAS / MALKOPSVLEI	BB SUNNY SEAS / MALKOPSVLEI	BB SUNNY SEAS / MALKOPSVLEI		
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5	3	3	3	3		
HOURS:	8	8	8	8	8		
TOTAL M3	63.85	38.31	38.31	38.31	38.31		

NOTES: THE VEHICLE IS DESIGNATED AT TAR TEAM FOR PATCHING OF TAR ROADS IN KM/BB/PB/RE. VEHICLE IS ONLY USED MONDAYS FOR REFUSE REMOVAL IN AREA PRESCRIBED.

COLLECTION BETTIESBAY BUSINESS CENTRE & BLESBERG AND HARBOUR AREA RESIDENTIAL							
REGISTRATION NUMBER:	CAM20080			TOTAL		TRAILORS:	CAM6607
DRIVER:	J THEUNISSEN					6.84	m3
NO. OF LABOURERS:	7					0.5	TON
FABRICATE:	NISSAN CABSTAR	UD 35					
DESCRIPTION:	CAGED TIPPER						
YEAR OF MANUFACTURE:	2004						
CURRENT ODO:	352181	KM	23/01/2020				
VOLUME CAPACITY:	12.77	m3		19.61m3			
PAYLOAD:	3	TON					
OUT OF SEASON							
BUSINESS BLACK BAGS	BETTIES BAY BUSINESS CENTRE	BETTIES BAY BUSINESS CENTRE	BETTIES BAY BUSINESS CENTRE	BETTIES BAY BUSINESS CENTRE	BETTIES BAY BUSINESS CENTRE		
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	0.5						
HOURS:	2						
TOTAL M3	6.38						
RESIDENTIAL BLACK BAGS	BLESBERG / HARBOUR AREA	STORMWATER MAINTENANCE	STORMWATER MAINTENANCE	STORMWATER MAINTENANCE	STORMWATER MAINTENANCE		
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5						
HOURS:	6						
TOTAL M3	63.85						
IN SEASON							
RESIDENTIAL BLACK BAGS	BLESBERG / HARBOUR AREA	BLESBERG / HARBOUR AREA	BLESBERG / HARBOUR AREA	BLESBERG / HARBOUR AREA	BLESBERG / HARBOUR AREA		
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5	3	3	3	3		
HOURS:	8	8	8	8	8		
TOTAL M3	63.85	38.31	38.31	38.31	38.31		

NOTES: DESIGNATED FOR MAINTENANCE OF STORMWATER IN BETTIES BAY. VEHICLE IS ONLY USED MONDAYS FOR REFUSE REMOVAL IN AREA PRESCRIBED.

COLLECTION KLEINMOND BUSINESS							
REGISTRATION NUMBER:	CAM15874					TRAILORS:	
DRIVER:	S MADO						
NO. OF LABOURERS:	5						
FABRICATE:	NISSAN CABSTAR	UD 35					
DESCRIPTION:	CAGED TIPPER						
YEAR OF MANUFACTURE:	2003						
CURRENT ODO:	363481	KM	23/01/2020				
VOLUME CAPACITY:	12.77	m3					
PAYLOAD:	3	TON					
OUT OF SEASON							
RESIDENTIAL BLACK BAGS	PRINGLE BAY BELOW HANGKLIP RD	STORMWATER MAINTENANCE	STORMWATER MAINTENANCE	STORMWATER MAINTENANCE	STORMWATER MAINTENANCE		
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	4						
HOURS:	8						
TOTAL M3	51.08						
IN SEASON							
RESIDENTIAL BLACK BAGS	PRINGLE BAY BELOW HANGKLIP RD	PRINGLE BAY BELOW HANGKLIP RD	PRINGLE BAY BELOW HANGKLIP RD	PRINGLE BAY BELOW HANGKLIP RD	PRINGLE BAY BELOW HANGKLIP RD		
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5	4	4	4	4		
HOURS:	8	8	8	8	8		
TOTAL M3	63.85	51.08	51.08	51.08	51.08		

NOTES: DESIGNATED FOR MAINTENANCE OF STORMWATER IN KLEINMOND, PRINGLE BAY & ROOI ELS. VERCHILE IS ONLY USED MONDAYS FOR REFUSE REMOVAL IN AREA PRESCRIBED.

COLLECTION VLEI AREA / DIE STOOR / MOOI UITSIG & BASS RD							
REGISTRATION NUMBER:	CEM5372					TRAILORS:	
DRIVER:	N NKETU					6.84	m3
NO. OF LABOURERS:	5					0.5	TON
FABRICATE:	NISSAN CABSTAR	UD 35					
DESCRIPTION:	FLATBED						
YEAR OF MANUFACTURE:	2012						
CURRENT ODO:	171708	KM	23/01/2020				
VOLUME CAPACITY:	12.27	m3					
PAYLOAD:	3	TON					
OUT OF SEASON							
RESIDENTIAL BLACK BAGS	VLEI AREA / DIE STOOR / MOOI- UITSIG & BASS RD	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE		
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5						
HOURS:	8						
TOTAL M3	61.35						
IN SEASON							
RESIDENTIAL BLACK BAGS	VLEI AREA / DIE STOOR / MOOI- UITSIG & BASS RD	VLEI AREA / DIE STOOR / MOOI- UITSIG & BASS RD	VLEI AREA / DIE STOOR / MOOI- UITSIG & BASS RD	VLEI AREA / DIE STOOR / MOOI- UITSIG & BASS RD	VLEI AREA / DIE STOOR / MOOI- UITSIG & BASS RD		
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5	4	4	4	4		
HOURS:	8	8	8	8	8		
TOTAL M3	61.35	49.08	49.08	49.08	49.08		

NOTES: DESIGNATED FOR MAINTENANCE OF GRAVEL ROADS IN KM/BB/PB/RE. VEHICLE IS ONLY USED MONDAYS FOR REFUSE REMOVAL IN AREA PRESCRIBED.

COLLECTION KLEINMOND EXTENSION 3, ABOVE MAIN ROAD & OVERHILLS							
REGISTRATION NUMBER:	CEM28243					TRAILORS:	NONE
DRIVER:	T MARTIN						
NO. OF LABOURERS:	4						
FABRICATE:	NISSAN CABSTAR	UD 35					
DESCRIPTION:	FLATBED						
YEAR OF MANUFACTURE:	N/A						
CURRENT ODO:	183944	KM	17/01/2020				
VOLUME CAPACITY:	12.27	m3					
PAYLOAD:	3	TON					
OUT OF SEASON							
RESIDENTIAL BLACK BAGS	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	OVERHILLS	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	OVERHILLS		
WEEK DAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5	4			4		
HOURS:	8	8			8		
TOTAL M3	61.35	49.08			49.08		
IN SEASON							
RESIDENTIAL BLACK BAGS	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	RESIDENTIAL / ETX.3 / ABOVE MAIN RD	RESIDENTIAL / ETX.3 / ABOVE MAIN RD		
WEEK DAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:	5	5	5	5	5		
HOURS:	8	8	8	8	8		
TOTAL M3	61.35	61.35	61.35	61.35	61.35		

NOTES: HELP OUT IN OTHER AREAS, WHEN NEEDED ON WEDNESDAYS AND THURSDAYS, DURING OUT OF SEASON PERIOD.

INSPECTION - ALL AREAS							
REGISTRATION NUMBER:	CEM33775					TRAILORS:	NONE
DRIVER:	P LITOLI						
NO. OF LABOURERS:							
FABRICATE:	NISSAN BAKKIE						
DESCRIPTION:	LDV						
YEAR OF MANUFACTURE:	2013						
CURRENT ODO:	281995	KM	24/01/2020				
VOLUME CAPACITY:	2.7	m3					
PAYLOAD:	1	TON					
OUT OF SEASON							
RESIDENTIAL	INSPECTIONS ALL AREAS	INSPECTIONS ALL AREAS	INSPECTIONS ALL AREAS	INSPECTIONS ALL AREAS	INSPECTIONS ALL AREAS		
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:							
HOURS:							
TOTAL M3							
IN SEASON							
RESIDENTIAL	INSPECTIONS ALL AREAS	INSPECTIONS ALL AREAS	INSPECTIONS ALL AREAS	INSPECTIONS ALL AREAS	INSPECTIONS ALL AREAS		
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:							
HOURS:							
TOTAL M3							

NOTES: VEHICLE OF FOREMAN, USED FOR INSPECTIONS. NOT BEING USED FOR REFUSE REMOVAL PURPOSES ANYMORE.

COLLECTION KLEINMOND BUSINESS							
REGISTRATION NUMBER:	CAM 9879	HERMANUS WORKSHOP		(MECHANICAL -OUT OF ORDER)			
DRIVER:	N/A					TRAILORS:	NONE
NO. OF LABOURERS:	N/A						
FABRICATE:	MERCEDES ATEGO 1517						
DESCRIPTION:	COMPACTOR						
YEAR OF MANUFACTURE:	1999						
CURRENT ODO:	N/A KM						
VOLUME CAPACITY:	15.4 m3						
PAYLOAD:	5 TON						
OUT OF SEASON							
BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS		
WEEK DAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:							
HOURS:							
TOTAL M3							
RESIDENTIAL	KM RESIDENTIAL	KM RESIDENTIAL / PROTEA / BEV. HILLS & RIEMVASMAAK	KM RESIDENTIAL	KM RESIDENTIAL	KM RESIDENTIAL	DROP OFF POINTS PB & BB	DROP OFF POINTS PB & BB
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:							
HOURS:							
TOTAL M3							
IN SEASON							
BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS
WEEK DAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS
LOADS:							
HOURS:							
TOTAL M3							

NOTES: VEHICLE IS NOT IN USE. PARKED AT HERMANUS WORKSHOP CURRENTLY.

COLLECTION KLEINMOND BUSINESS							
REGISTRATION NUMBER:	CEM26897			TOTAAL		TRAILORS:	NONE
DRIVER:	A FLORIS						
NO. OF LABOURERS:	2						
FABRICATE:	NISSAN HARDBODY 2.0						
DESCRIPTION:	WITH CANOPY						
YEAR OF MANUFACTURE:	2012						
CURRENT ODO:	KM						
VOLUME CAPACITY:	3.86 m3			3.86			
PAYLOAD:	1 TON						
OUT OF SEASON							
RESIDENTIAL BLACK BAGS							
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:							
HOURS:							
TOTAL M3							
IN SEASON							
RESIDENTIAL BLACK BAGS							
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SATURDAY
LOADS:							
HOURS:							
TOTAL M3							

NOTES: VEHICLE NOT AT THE DEPARTMENT ANYMORE.

COLLECTION KLEINMOND GERMAN TOWN / PUBLIC AREAS							
REGISTRATION NUMBER:	CAM25938					TRAILORS:	CEM631
DRIVER:	VACANT						
NO. OF LABOURERS:	0						
FABRICATE:	NISSAN						
DESCRIPTION:	TIPPER						
YEAR OF MANUFACTURE:	N/A						
CURRENT ODO:	244795	KM	23/01/2020				
VOLUME CAPACITY:	12.43	m3					
PAYLOAD:	6	TON					
OUT OF SEASON							
MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:							
HOURS:							
TOTAL M3							
IN SEASON							
MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE	ROADS MAINTENANCE
WEEKDAYS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS:							
HOURS:							
TOTAL M3							

NOTES: THE VEHICLE IS NOT USED FOR REFUSE REMOVAL ANYMORE. THE VEHICLE IS USED FOR ROAD MAINTENANCE AND STANDBY AFTER HOURS.

COLLECTION STANFORD							
REGISTRATION NUMBER	CEM 36773						
DRIVER	E VAN TONDER						
NO OF LABOURERS							
FABRICATE	FLATBED						
DESCRIPTION	3 TON TRUCK						
YEAR OF MANUFACTURE	2019						
CURRENT ODO READING	13112	km					
VOLUME CAPACITY	3	m3					
PAYLOAD		ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
RECYCLING FROM DROP OFF TO GANSBAAI		DROP OFF					
LOADS		3					
HOURS		6					
TOTAL M3		9					
STANFORD DOMESTIC		STANFORD SOUTH DOMESTIC		STANFORD NORTH DOMESTIC			
LOADS		0		0			
HOURS							
TOTAL M3							
IN SEASON							
RECYCLING FROM DROP OFF TO GANSBAAI		DROP OFF					
LOADS		3					
HOURS		6					
TOTAL M3		9					
STANFORD DOMESTIC		STANFORD SOUTH DOMESTIC		STANFORD NORTH DOMESTIC			
LOADS		1		1			
HOURS		3		3			
TOTAL M3		3		3			

ANNEXURE B

PUBLIC AWARENESS



Educational Theatre . Workshops . Scripts . Products



PLAY

PARTICIPATE

EMPOWER

Rommella de Mors / Amaxumbulu



Blou/Ibali-Lamanzi



Boeboes die Breker en die Vleilande (Wetlands)



Vuur en Vlam (Fire awareness)



Iekie Plastiek - Plastiek maak die see siek (Marine Conservation)





JUNE 2019

REPORT: ENVIRONMENTAL PUPPET THEATRE

Story Team started the educational theatre project with the Overstrand Municipality in the second half of 2017. The project entails:

Environmentally themed puppet theatre productions that Story Team performs at schools and community centres throughout the Overstrand District. The aim is to create both awareness, and to educate youngsters about the effect littering and the wasting of water has on the environment. Concepts like recycling and water preservation are introduced and explained through interactive theatre.

The two current productions we do in collaboration with the Overstrand Municipality include:

1. Rommella de Mors/Amxumbululu
2. Blou/Ibali Lamanzi

The productions' target market is learners from grade R to grade 3. Performances are done in Afrikaans, English or a combination of English and isiXhosa.

Within the three-year cycle, we have rotated the schools to make sure that all the learners have seen each production once.

When a new cycle begins, the productions will be relevant for a new bunch of learners once again.

Because of the interactive nature of Story Team's productions, and the specific style of theatre presentation, it is possible for the actors to determine if the necessary information is successfully transferred to the learners during each performance. If not, to make adjustments to the content of the production to insure that the message is successfully communicated to the learners.

Some positive feedback:

"Thank you for bringing this important message in such a fun, visual way!"

"It connects perfectly with the work we're doing in class!"

"We constantly hear these songs on the playground afterwards..."

"Thank you for letting our learners experience this, it's a first for them..."

"We love the characters just as much as the learners!"

Measuring the success of this method of information sharing, is evident from the teachers' comments. Even more so in the number of learners, and teachers, who have been reached. (9 962 learners from mid-2017 until now.)

Please find attached detailed numbers of all the schools and learners reached from 2017 – 2019, as well as a photo sheet of productions.

We are looking forward to continuing making a positive change in our community, doing what we love!

Other environmentally themed productions are:

- Boeboes die Breker en die Vleilande (Wetlands)
- Vuur en Vlam (Fire awareness)
- Iekie Plastiek – Plastiek maak die see siek (Marine conservation)

Yours in education,

Marhette van Huyssteen en Celeste Loriston
Directors





Educational Theatre . Workshops . Scripts . Products

2017: POPPEKAS - Rommella (Herwinning)

Skole	Datum & Tyd	Grade	Taalvoorkeur	Plek	Getalle
Gansbaai Primer	15/9 @ 08:45	Gr 1-3	Afr/eng	Skoolsaal	239
Die Bron Primer	18/9 @ 09:00	Gr R-3	Afr/eng	Gemeenskapsaal Stanford	235
Hawston Primer	19/9 @ 09:00	GrR - 1	Afrikaans	Skoolsaal	264
Hawston Primer	19/9 @ 10:30	Gr 2 & R	Afrikaans	Skoolsaal	270
Kleinmond Laerskool	20/0 @ 09:00	Gr 1-3	Afr/eng	Dorpsaal Kleinmond	146
Mount Pleasant	22/09 @ 09:00	Gr 1-3	Afr/eng	Moffat saal	350
Zwelihle pre-primary Educare centre	01/12 @ 09:00	Gr R	Xhosa	Gemeenskapsaal Zwelihle	110

*Nota 1

Nota 1: Eerste Xhosa poppekas sou by Zwelihle gewees het vir hulle Gr 1 leerders, hulle kon ons nie akkommodeer nie.

2018

POPPEKAS - BLOU (Waterbesparing) - 5 x afr/eng & 3 x Xhosa

Skole	Datum & Tyd	Grade	Taalvoorkeur	Plek	Getalle
Gansbaai Laerskool	19/3 @ 09:00	GrR & Gr 1	Afr & Eng	Skoolsaal	190
Hawston Primary	20/03 @ 09:00	Gr R & 1	Afr & Eng	Skoolsaal	269
Hawston Primary	20/03 @ 10:30	Gr 2 & 3	Afr & Eng	Skoolsaal	287
Kleinmond primer	22/3 @ 09:00	Gr 1 & 2	Afr & Eng	Kleimond gemeenskapsaal	225
Mount Pleasant	23/3 @ 09:00	Gr 1 & 2	Afr & Eng	Moffatsaal	238
Masakhane primary	30/5 @ 09:00	Gr 1 & 2	Xhosa/Eng	Skoolsaal	235
Zwelihle primary	31/5 @ 09:00	Gr 1	Xhosa/Eng	Skoolsaal	202
Zwelihle primary	31/5 @ 11:00	Gr 2	Xhosa/Eng	Skoolsaal	196

POPPEKAS - ROMMELLA (Herwinning) x 11 Xhosa

Skole	Datum & Tyd	Grade	Taalvoorkeur	Plek	Getalle
Zwelihle primary	13/6 @ 08:30	Gr R	Xhosa/english	Skoolsaal	180
Zwelihle primary	13/6 @ 09:20	Gr 1	Xhosa/english	Skoolsaal	202
Lukhanyo primary	14/6 @ 08:20	Gr R & 1	Xhosa/english	Skoolsaal	275
Lukhanyo primary	14/6 @ 09:20	Gr 2	Xhosa/english	Skoolsaal	195
Lukhanyo primary	14/6 @ 11:00	Gr 3	Xhosa/english	Skoolsaal	187
Masakhane primary	15/6 @ 09:00	Gr R & 1	Xhosa/english	Skoolsaal	195
Masakhane primary	15/6 @ 10:45	Gr 2 & 3	Xhosa/english	Skoolsaal	235
Kleinmond Primary	18/6 @ 11:00	Gr R-4	Xhosa/english	Kleinmond gemeenskapsaal	155
Hermanus Waldorf School	18/6 @ 08:30	Hele skool	Xhosa/english	Skoolsaal	155
Maskakhane primary	6/9 @ 08:30	Gr R & 1	Xhosa/english	Skoolsaal	195
Masakhane primary	6/9 @ 09:15	Gr 2 & 3	Xhosa/english	Skoolsaal	235

* Nota 1

* Nota 2

Nota 1: Sou nog 2 x poppekaste gedoen het vir Zwelihle primary se gr 2 & 3, maar agv die riots was hulle agter met skoolwerk. Kon ons later ook nie akkommodeer nie, toe besluit om dit weer te doen by Masakhane, want hulle was min gewees met 15/6 vertoning agv slegte weer

Nota 2: Bywoning deur Masakhane se kinders was nie baie goed nie, was toe geskryf aan weersomstandighede en kinders wat wegbly as klaar is met assesserings

Nota 3: Hawston primary het ook Rommella poppekas gesien op 05/06/2018, het geval onder Liezl de Villiers (Omgewings kantoor)



Educational Theatre . Workshops . Scripts . Products

2019: POPPEKAS - BLOU (Waterbesparing) x 8

Skole	Datum & Tyd	Grade	Taalvoorkeur	Plek	Getalle
Gansbaai Primary	09/04 @ 09:00	GrR & Gr 1	Afr & Eng	Skoolsaal	172
Gansbaai Primary	09/04 @ 10:30	Gr 2 & 3	Afr & Eng	Skoolsaal	157
Okkie Smuts	10/04 @ 09:00	Gr 1-3	Afr & Eng	Gemeenskapsaal Stanford	145
Hoopland Akademie	10/04 @ 09:00	Gr 1-3	Afr & Eng	Gemeenskapsaal Stanford	30
Die Bron Primer	10/04 @ 11:00	Gr 1-3	Afr & Eng	Gemeenskapsaal Stanford	220
Laerskool Kleinmond	11/04 @ 09:00	Gr 1-3	Afr & Eng	Laerskool Kleinmond	151
Krappies & Krefies Kleuterskool	11/04 @ 09:00	Gr R	Afr & Eng	Laerskool Kleinmond	27
Lukhanyo Primary	11/04 @ 12:15	Gr 1	Xhosa & Eng	Skoolsaal	237
Laerskool Hermanus	12/04 @ 10:00	Gr 1-3	Afrikaans	Skoolsaal	277
Laerskool Hermanus	12/04 @ 11:00	Gr 1-3	Engels	Skoolsaal	177

POPPEKAS - ROMMELLA (Herwinning) x 13

Skole	Datum & Tyd	Grade	Taalvoorkeur	Plek	Getalle
Kleinmond Primary	30/05 @ 09:00	Gr 1 & 2	Afr & english	Kleinmond Gemeenskapsaal	220
Kleinmond Laerskool	30/05 @ 11:30	Gr 1-3	Afr & english	Kleinmond Dorpsaal	151
Mountpleasant Primary School	31/05 @ 09:00	Gr 1 & 2	Afr & english	Moffat saal	237
Curro Private School	04/06 @ 08:30	GrR-3	Afr & english	Skoolsaal	183
Hermanus Primary	04/06 @ 11:10	Gr1-3	Afrikaans	Skoolsaal	277
Hermanus Primary	04/06 @ 12:00	Gr 1-3	English	Skoolsaal	177
Okkie Smuts Primary School	11/06 @ 09:00	Gr1-3	Afr & English	Stanford gemeenskapsaal	145
Hoopland Akademie	11/06 @ 09:00	Gr R - 3	Afri & English	Stanford gemeenskapsaal	30
Die Bron Primary School	11/06 @ 10:30	Gr R-3	Afr & English	Stanford gemeenskapsaal	220
Gansbaai Laerskool	06/06 @ 08:45	Gr 1-3	Afrikaans	Skoolsaal	192
Masakhane Primary (Gansbaai)	06/06 @ 11:15	Gr R & 1	Xhosa & english	Skoolsaal	210
Masakhane Primary (Gansbaai)	06/06 @ 12:10	Gr 2 & 3	Xhosa & english	Skoolsaal	180
Lukhanyo Primary	07/06 @ 08:30	Gr 1	Xhosa & english	Skoolsaal	237
Lukhanyo Primary	07/06 @ 09:30	Gr R & Gr 2	Xhosa & english	Skoolsaal	245

Nota 1: Slegte opgekoms by Masakhane agv kinders wat klaar is met assesserings voor skole sluit. 1ste vertoning omtrent 62 kinders en 2 de vertoning 168

(gr 4 kids en dramakinders ook laat kom)

Nota 2: Het vir Zwelihle primary ook gevra vir 2 vertonings, kon ons nie akkommodeer nie, agv van eksamen wat geskryf word in saal. In hul plek vir Lukhanyo genooi

Make your waste disposal a priority

April 2, 2019

Sewerage blockages can to a large extent be attributed to objects such as stones, pieces of iron, plastic, branches, grease and household garbage that enter the system and form an obstruction.

In a press release, the [Overstrand Municipality](#) again appealed to residents not to dispose of materials such as used cooking oil, motor oil, yard and pet waste, paint, concrete slurry and construction materials or any other household hazardous chemicals into the storm water infrastructure.

Preventive measures:

- Do not dispose of used cooking oil and grease by dumping it into the storm drain. Allow fat (from fatty foods when cooking) to cool and congeal or solidify. Once it is solid, wrap it in newspaper or put it in a bag before placing in the refuse bin which is emptied weekly.
- Rags, paper, tampons and disposable nappies should be disposed of in the normal household bin or sanitary bins provided by businesses.
- Keep yard clippings out of the street.
- Recycle used motor oil.
- Sweep driveways clean instead of hosing them down.
- Keep litter, pet waste, leaves, grass clippings and debris out of street gutters and storm drains. Outlets blocked by excessive debris, such as leaves and grass clippings, could lead to flooding of your street.
- Most building materials enter the sewer system when contractors/builders dump these materials into the sewer through manholes. This causes unnecessary stress on the system.

Please keep the manholes and drains clean and continue to report sewerage blockages at the municipal control room 028 313 8000/8111. Alternatively, phone Kleinmond on 028 271 8400, Hermanus on 028 313 8090, Gansbaai on 028 384 8300 and Stanford on 028 341 8500 to request service.

Where to dump?

There is no excuse for dumping waste illegally in our neighbourhoods or next to the roads as the municipality provides a highly reliable refuse collection service and drop-off facilities across Overstrand.

Hermanus:

- Hermanus Transfer Station in Mbeki Street (general waste and garden refuse only). Mondays – Fridays 08:00 – 18:00, Saturdays 09:00 – 16:00, Public Holidays 09:00 – 14:00;
- Voëlklip Weekend Drop-Off in 7th Street (household waste, black bags only). Mondays to Fridays 08:00 – 18:00, Saturdays 09:00 – 16:00, Public Holidays 09:00 – 14:00;
- Voëlklip Prawn Flats Drop-Off (garden and general household waste). Mondays to Fridays 08:00 – 18:00, Saturdays 09:00 – 16:00, Public Holidays 09:00 – 14:00;
- Hawston Drop-Off in Church Street (garden and general household waste). Mondays to Fridays 08:00 – 18:00, Saturdays 09:00 – 16:00, Public Holidays 09:00 – 14:00;
- Karwyderskraal Landfill (builders' rubble, garden waste and general household waste). Mondays to Fridays 08:00 – 16:30.

Kleinmond:

- Pringle Bay and Betty's Bay weekend drop-off for household refuse and Betty's Bay drop-off for general and garden refuse. Mondays to Fridays 08:00 – 16:00, Saturdays 09:00 – 16:00, Public Holidays 09:00 – 14:00.
- Kleinmond Transfer Station for household, general and garden refuse and small quantities of builders' rubble (bakkie builders) up to 1 ton. Mondays to Fridays 08:00 – 16:00, Saturdays 09:00 – 16:00, Public Holidays 09:00 – 14:00
- Karwyderskraal Landfill for all your builders' rubble of more than 1 ton.

Stanford:

- Stanford Transfer Station for general and garden refuse and small quantities of building rubble. More than 1 ton should be taken to Gansbaai Landfill.

Gansbaai:

- Gansbaai Landfill for building rubble and general and garden refuse; and
- Pearly Beach drop-off for general and garden refuse and small quantities of building rubble (bakkie builders).

PERSVERKLARING / PRESS RELEASE

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Overstrand Municipality

Social Media & Media Co-ordinator

Riana Steenekamp

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12 September 2018

THE FUTURE OF OVERSTRAND WASTE RECYCLING BEING REVIEWED

Many residents are rightfully concerned about the abrupt halt to waste recycling activities in the Overstrand since the riots in Hermanus in July 2018.

Unfortunately the fact is that the material recovery facility in Hermanus, including all the equipment, has been destroyed during the riots, to such an extent that the repair and re-commissioning thereof may take years to complete.

There is no alternative facility available in the area where sorting and bailing of such volumes of recycled waste can take place in the interim.

The transport of material which has not been sorted and bailed is very expensive, and therefore not attractive to potential buyers in neighbouring towns or the city.

The current situation is however presenting an opportunity to eventually move to a higher level of recycling and improved diversion of waste from landfill.

Overstrand Municipality immediately commenced with a feasibility study to investigate the possibility of relocating the recycling facility to the Karwyderskraal Landfill site, to be operated as a regional facility by the Overberg District Municipality, thereby handling larger volumes, also including waste from neighbouring towns in other municipalities. The report should be completed by the end of September 2018.

Should the relocation option prove to be feasible, the planning and budgeting process will commence, and it is possible that the reinstatement of the damaged facility at its current location be abandoned, especially in view of the need for land for housing in the specific area, and the perceived risks associated with the previous operating arrangements.

The possibility of temporarily transporting all recycled material from the Kleinmond/Bettiesbaai/Pringle Bay/Rooi-Els areas to Gordon's Bay has also been investigated.

Challenges include that official approval of the City of Cape Town Municipality will have to be obtained, an extended procurement process for the transport of the material will have to be completed, which will take several months, and the issue of “donation” of municipal property (i.e. collected waste) to a single receiving “beneficiary” without an open tender process will be especially challenging to address in terms of legislation. Indications are that the transport will be expensive, considering the only routes available for large trucks between Kleinmond and Gordon’s Bay.

Many residents enquire about the possibility of transporting all the recycling to our material recovery facility in Gansbaai for sorting and bailing. Unfortunately that is not an option as the facility is too small to handle such a large volume of recycling and even further for transporting the recycling to the markets in Cape Town.

Overstrand Municipality will keep residents informed of progress made in reaching a solution. It is a high priority for the municipality to find the best possible solution as soon as possible, to ensure the long term sustainability of efficient waste management.

EINDE / END

Recycling at restaurants.

Background.

Waste management is becoming more and more complicated because of the norms and standards and legislation that becomes more and stricter. A cell at the landfill is becoming more and more expensive. To save the landfill we must separate our waste by taking out the recycling saving the air space on the landfill.

The following aspects must be in place to manage your waste in an effective manner.

- 1 Educate your staff to separate the recycling from the wet waste.
- 2 One staff member must be the waste management champion.
- 3 Owner or manager must be hands on and check the progress of the process and see if proper waste management and recycling do take place.
- 4 Penalty system must be in place to force the staff to recycle, although voluntary cooperation must be the first choice.
- 5 Meetings about the handling of waste must take place because if the owner or manager does not take responsibility it will not happen.
- 6 Bins for wet waste and recycling waste must be clearly marked and champion must do spot checks if staff adhere to the rules.

Advantages of separation at source is:

- 1 Restaurant can have a saving on bins that are removed by municipality.
- 2 Recycling bins are removed free of charge.
- 3 Restaurants will be more appealing to the clients who are more and more looking for environmental friendly business.
- 4 Restaurants that gives there cooperation will be awarded by publishing of a list of environmental friendly places.
- 5 More recycling will come from the restaurants saving the cell at the landfill.



Notice to informal residents on old Hermanus dumpsite

This notice is to inform the *community regarding the potential risks of landfill (dumpsite) gas and the methods to avoid these and the danger of constructing temporary housing on an un rehabilitated dumpsite.*

The Old Hermanus Dumpsite received general waste (rubbish). General waste consists of, for example, waste from households and businesses such as old food, paper, plastic, garden waste (grass cuttings and branches), etc.

Landfill gas is generated when the organic portion (food and garden waste) of the waste starts to rot. This rotting process releases a gas that is mainly made up of carbon dioxide and methane. Carbon dioxide is colourless, odourless and non-flammable. Methane is also colourless and odourless, but is flammable.

Landfill gases are potentially dangerous when trapped so that it cannot mix with natural airflow. The most likely places where this can happen are inside trenches, excavations, manholes, informal structures, etc. close to the landfill.

Landfill gas can typically migrate up to 100m from the landfill through the soil.

The community was requested by notice during October 2018 to take note of this danger and not to construct structures on the landfill site.

The results of gas sampling and testing by gas specialists indicate that there is a definite risk of dangerous gases which can potentially harm the community.

The Overstrand Municipality therefore reiterates the fact that the area is not suitable for residential use.

S. MÜLLER
DIRECTOR: INFRASTRUCTURE AND PLANNING

We need your help to stop illegal dumping on commonages and open erven in the Overstrand.

Please see the below list of facilities where domestic waste is accepted at no charge to the public. Note, small quantities of building rubble (bakkie builders) 0 to 1 ton, general and garden refuse as well as industrial waste can also be disposed of here. However, a disposal fee may apply, depending on the volume and type of waste. Builder's rubble of more than one ton can be dropped off at Karwyderskraal Landfill.

Weekend visitors are also urged to make use of one of the following transfer sites for the disposal of house hold refuse.

For your convenience, the transfer stations are also open during weekdays from 08:00 - 18:00 and Saturdays from 09:00 - 16:00.

As a reminder of where and when you can dispose of general waste

• **KLEINMOND: Kleinmond Transfer Station, Main Road**

Kleinmond Transfer Station	Monday – Friday	07:30 - 18:00
	Weekends & public holidays	07:30 - 16:30
Betty's Bay Drop-off Station	Monday – Saturday	08:00 - 16:00

• **HERMANUS: Hermanus Transfer Station, Swartdam Road**

Hermanus Transfer Station	Monday – Friday	08:00 - 18:00
	Saturdays & public holidays	09:00 - 14:00
Voëlklip Drop-off Station	Mondays	08:00 - 16:00
	Tuesday – Friday	08:00 - 18:00
	Saturdays & public holidays	09:00 - 16:00
Hawston Drop-off	Monday – Friday	08:00– 18: 00
	Saturdays	09:00 –16:00

• **STANFORD: Stanford Drop-off, Rivier Street, Industrial Area**

Stanford Drop-off Station	Monday – Friday	08:00 - 17:00
	Saturdays & public holidays	09:00 - 14:00

• **GANSBAAI: Gansbaai Landfill, Voortrekker Street**

As part of a trial run, additional bulk waste skip bins were placed at strategic positions in Franskraal (Rossouw Street), Kleinbaai (Perlemoen Street), Blompark (Kampeeweg) and Masakhane. This was to address the need of holidaymakers who are unable to dispose of their DOMESTIC refuse on the scheduled collection days in the areas concerned.

Gansbaai Landfill	Monday – Friday	08:00 - 18:00
	Saturdays & public holidays	08:00 - 16:00
Pearly Beach	Monday – Friday	08:00 - 17:00
	Saturdays & public holidays	9:00 - 14:00

Interview Questions for Johan van Taak

1. When did you start your S@S programme in the Overstrand and what was the motivation for starting it?

We started the S@S in 2002 when the old Hermanus Landfill closed and the new regional landfill opened at Karwyderskraal. The motivation of this project was started through public demand for this action and Overstrand Municipality thought it was a wonderful idea to make the residents part of our solid waste action.

2. How does your S@S programme work?

- a. How does the contract work from notifications to residences, giving out of bags, collection of bags, sorting etc.

Our material recovery facility is outsourced to a private company. The reason for that is that municipal labor is expensive and a private company can employ more people for the same money. Overstrand Municipality is responsible for all the notifications and awareness for all the solid waste and recycling projects. We hand out the bags and collect all the bags and take it to the MRF where it is sorted and bailed.

- b. What are the responsibilities of the contractor?

Contractor managed the MRF and his responsibility is sorting, bailing and selling the product to the markets.

- c. What are the responsibilities of the Municipality?

Municipality hand out the clear bags and collect the recycling and take it to the material recovery facility. We do all the awareness and keep the public posted about all our recycling initiatives.

- d. How do you track and monitor performance of the contract?

Contractor must provide us with weighbridge figures of how many recycling was done each month. We also weigh the clear bags before delivering it at the MRF so the municipality is more or less aware how much recycling is supposed to be generated. Monthly meetings are held with contractor to discuss his performance and problems.

3. How do you monitor and increase participation rates?

- a) How do you create waste awareness and the S@S system within the Municipality?

Awareness is done via newspapers, monthly municipal newsletter, municipal Facebook and Twitter. Power point presentations are done at organizations, schools etc. Puppet shows are held at schools.

- b) How do you get poorer communities to separate their waste at source given that split bags do not always work in these communities?

In poorer communities buy back centers help and also swap shops. Private people is running the Swap Shops and we help by collecting the recycling and take it to the recycling facility.

- c) How do you manage a S@S system with seasonal tourists? How do you get the tourists involved?

We notify all our residents and businesses. We hand out a pamphlet throughout the whole of Overstrand Municipality just before the season start explains exactly how the recycling works and what can be recycled and the days of removal in each area. The pamphlet stays in the house or flat so tourists knows exactly what they must do and also when to put their garbage and recycling out.

4. Which waste streams are covered by your S@S system?

Paper, carton, glass plastic and metal.

5. How much do you budget for S@S and what is the cost per ton?

6. Our total budget for solid waste is R73 234 004.00 per annum. If you take the collection, running of the MRF and the establishment of infra structure it work out at about 1800 to 2000 rand per ton but you must compare that with building a new cell of R27 000 000 when you do not have a recycling program in place.

7. What was the challenges of the S@S system and how have you addressed them?

Challenges are the awareness must be done continuously. To motivate people to use the two bags. Motivate municipal workers to pick up clear and black bags separately.

8. What are the benefits of your separation at source program.

Although recycling at source is more expensive the educational value for your residents you cannot compare with money. Residents through our awareness program knows the value that the system has for the environment, its job creation value and saving valuable air space at the landfill.

9. Final note: Based on all your years of experience and lessons learnt, can you give any advice to municipalities who need to start or improve on their S@S programme?

Awareness, awareness, awareness. It must be continuously and residents needs to be reminded all the time. I find that because our residents knows how expensive a cell at the landfill is and all the benefits like job creation, saving on haulage cost, saving of raw material they appreciate it and does not complain for paying for refuse removal.

Lastly through this system residents is proud of our initiatives and positive public toward waste management and municipality you cannot compare with money.

Cub Scouts Hermanus -Citizenship badge

Programme for the day (30 November 2018 at 15:00)

1. All meet in the Auditorium at 15:00
2. Welcome by
3. The purpose of the day by:.....

15:10 Proceed to meet fire team : (Chief Lester & Angelo Aplon)

at the parking lot adjacent to
court for demonstration and
presentation, after the demonstration,
all go back to Auditorium.

4. Followed by presentations from the follows Departments:

15:25 Water and Recycling : (Johan Van Taak)

15:35 Road Safety measures (Traffic) : (Xen Titus)

15:40 JTC : (Gerhard Smith)

15:50 SAPS : (Captain September)

5. Closing: All rise and proceed to Zwelihle.

6. Visit to Zwelihle, accompanied by Thozamile tours : (Thozamile tours)

7. Law enforcement to accompany all. You all welcome to go with.

Join hands and help keep Overstrand's streets clean

Overstrand Municipality had to cease their recycling programme in the Hermanus and Kleinmond areas after the Hermanus Transfer Station was destroyed during the unrest in town earlier in this year. And sadly all recyclables collected, has to be dumped together with household refuse at Karwyderskraal landfill site. Despite no active recycling, Overstrand Municipality is making an appeal to all residents to continue to recycle as we cannot afford for this recycling culture to be lost. **It is therefore recommended to take the recycling to Walker Bay Recycling in 2 Argon Street.**

Privately-owned Walker Bay Recycling was also destroyed by fire during the unrest but recently resumed its work. They invite residents to drop off their recyclables (cardboard, paper, glass and plastic) at the new sorting depot in Argon Street, Sandbaai Industrial. Phone the new owner, Jacques van Niekerk, for more information on 083 452 7465.

Rest assured that the Municipality is going ahead with the planning of a new recycling facility so that the full 'clear plastic bag' service for recyclable refuse, as well as a drop-off site for garden refuse and household waste will, yet again, be made available to residents in the not too distant future.

Hermanus Administration:

The Municipality received complaints regarding the state of the Prawn Flats drop-off in Voëlklip as it is overfull and not as neat as it used to be. The Municipal Solid Waste team is as frustrated as most residents that are making use of this facility. This drop-off point has become five times busier than before and refuse there can only be collected once a day and taken to the Karwyderskraal landfill site. **We are happy to announce that the Hermanus Transfer Station is operational again.**

- VOËLKLIP Weekend Drop-Off in 7th Street (household waste, black bags only)

Mondays – Fridays 08:00 – 18:00, Saturdays 09:00 – 16:00, Public Holidays 09:00 – 14:00

- VOËLKLIP PRAWN FLATS Drop-Off (garden refuse only)

Mondays – Fridays 08:00 – 18:00, Saturdays 09:00 – 16:00, Public Holidays 09:00 – 14:00

- HAWSTON Drop-Off in Church Street (garden and general waste)

Mondays – Fridays 08:00 – 18:00, Saturdays 09:00 – 16:00, Public Holidays 09:00 – 14:00

- KARWYDERSKRAAL Landfill (builders' rubble, garden waste and general household waste)

Mondays – Fridays 08:00 – 18:00

Kleinmond Administration:

- Pringle Bay weekend drop-off for household refuse;
- Betty's Bay weekend drop-off for household refuse;
- Betty's Bay drop-off for general and garden refuse; and
- Kleinmond Transfer Station for household, general and garden refuse and small quantities of builders' rubble (bakkie builders) 0 to 1 ton.
- Karwyderskraal Landfill for all your builders' rubble of more than 1 ton.

Stanford Administration:

- Stanford Transfer Station for general and garden refuse and small quantities of building rubble. More than one ton should be taken to Gansbaai Landfill.

Gansbaai Administration:

- Gansbaai dumping site for building rubble and general and garden refuse; and
- Pearly Beach drop-off for general and garden refuse and small quantities of building rubble (bakkie builders).

THE REFUSE COLLECTION SCHEDULE IS AS FOLLOWS:

Residents are encouraged to stick to the regular days and arrangements for the collection of household waste.

HERMANUS ADMINISTRATION: MONDAY: Vermont, Fisherhaven, Voëlklip • TUESDAY: Onrus, Chanteclair, Berghof, Sandbaai, Hemel-en-Aarde • WEDNESDAY: Zwelihle, Mount Pleasant • THURSDAY: Westcliff, Northcliff, houses in the CBD and Hermanus Industrial Area • FRIDAY: Hawston, Eastcliff, Hermanus Heights, Kwaiwater.

GANSBAAI ADMINISTRATION: MONDAY: Pearly Beach • TUESDAY: De Kelders, Masakhane, Beverly Hills • WEDNESDAY: Franskraal • THURSDAY: Kleinbaai, Baardskeerdersbos • FRIDAY: Gansbaai, Perlemoen Bay, Masakhane, Beverly Hills

[Masakhane, Beverly Hills appear on Tuesday AND Friday – is that correct?]

STANFORD ADMINISTRATION: TUESDAY: North of De Bruyn Street • THURSDAY: South of De Bruyn Street

KLEINMOND ADMINISTRATION: MONDAY: Betty's Bay, Pringle Bay, Rooi-Els, Kleinmond • TUESDAY: Proteadorp, Extension 6, Overhills, Mountain View

JUNE 2019

24-hour Emergency Fire Brigade 028 313 8000/8111
028 312 2400

Bulletin

Official newsletter of the Overstrand Municipality

KARWYDERSKRAAL LANDFILL RIBBON-CUTTING CEREMONY



The event was attended by a long list of dignitaries, including Overstrand Executive Mayor Dudley Coetzee, Overstrand Municipal Manager Coenie Groenewald, Overberg District Mayor Sakkie Franken, Overberg District Deputy Mayor Archie Klaas, Overberg District Municipal Manager David Beretti, Overstrand Cllr Kari Brice and Overberg Cllr Steven Fourie.

A ribbon-cutting ceremony for the ceremonial opening of Cell 4, constructed at the regional landfill facility in Karwyderskraal, was held on Friday, 29 March 2019.

This terrain was designed and developed to provide for the long-term landfilling of regular household waste and to divert organic waste, which is composted on site.

The Karwyderskraal landfill site is the property of the Overberg District Municipality and has been functional since 2002.

Covering an area of ± 4.5 hectares, the construction of Cell 4 commenced in June 2018 and required the excavation of 130 000 m³ of clay. The new cell is approximately 3 to 4 metres deep and will have an airspace capacity to accommodate 524 000 m³ of solid waste, which means the cell will have a lifespan of approximately eight years based on current disposal rates.

With a life expectancy of 57 years, it is anticipated that the Karwyderskraal landfill site will provide airspace to its user municipalities for many years to come.

Cell 4, and the facility, complies with stringent conditions set by national and provincial government. Amongst other precautions, a high-density, polyethylene plastic liner has been installed to prevent the pollution of ground water. Given that Cell 3 is rapidly nearing the end of its lifetime, Cell 4 is now fully operational.

New netball court for Stanford

On Monday, 6 May 2019, Overstrand Executive Mayor Dudley Coetzee, along with Monday's Rotary Club, launched phase 3 of a dedicated netball court during a sod-turning ceremony held in Stanford.

Phase 3 was preceded by two earlier phases during which several schools and netball clubs from the area attended workshops on how to coach netball and to reinforce the benefits that can be derived from participating in sports in general.

Given that South Africa is to host the 2023 Netball World Cup in Cape Town, it is quite understandable why municipal officials and Rotarians alike are so pleased with the progress that has been made to date. Equally pleased are the Rotary Club of Knoxville, Tennessee in the USA and the Rotary Foundation who have raised funds to build this court in Stanford.

It is anticipated that the new netball court, adjacent to the existing soccer field in Bezuidenhout Street, will be completed by August this year.



Recently pictured at the sod-turning ceremony to mark the construction of the new Stanford netball court are (from left to right) Rotarian Sharmen de Gale, Rotarian Malcolm Bury, netball coach Anshelle Damon, Rotarian Stephen Stocks, Area Manager for Gansbaai and Stanford Francois Myburgh, Rotarian Annie Ranger, Rotarian Lana Coates and, of course, Mayor Dudley Coetzee wielding the spade.

Progress with regards to housing needs in Kleinmond / upgrading of Overhills

Studies with regards to utilising developable land in Kleinmond, upgrading the Overhills informal settlement and looking into the needs of backyard dwellers in Proteadorp are well underway.

Near the end of 2018, the team of professionals appointed to look into this matter submitted their report to the project steering committee and all officials involved.

Once this report and the reported housing needs in Kleinmond have been verified, it will serve as a basis to provide important social and economic information that is necessary to approach planning in Kleinmond and to determine, holistically, whether those who wish to reside in Kleinmond would, typically, prefer owning or renting a home, or to make use of GAP housing, or to have access to a serviced stand. Some may even prefer to live elsewhere.

Following on a rather protracted procurement process, the provincial Department of Human Settlements appointed VPUU (Violence Prevention through Urban Upgrades) in the course of March 2019 to undertake the survey at all informal and backyard structures in Overhills and Proteadorp.

Following on two recent engagements with the project steering committee and the general public, VPUU indicated that field workers have been recruited and trained and confirmed that the survey commenced at the end of May 2019. According to VPUU, fieldwork and data capturing will be completed by end August 2019, and it is anticipated that the findings will be presented to the steering committee at that time, where after those findings will be presented to the broader Kleinmond community for consideration.

Meanwhile, whilst awaiting the outcome of this report, Overstrand's housing department has launched a project in November 2018 whereby all residents are afforded the opportunity to complete an application for subsidised housing and to be registered on a potential beneficiary list.

Note, though, that the investigation conducted by the VPUU is totally separate and will have no bearing on housing applications submitted to Overstrand.

FynArts
HERMANUS

Enjoy a bumper festival programme of visual and performing arts, music, cookery demonstrations, wine tastings and a wide range of interesting speakers and workshops.

Included in the line-up from 7 to 17 June are 10 demonstrations by renowned chefs who, in the company of television personalities, will share their skills, recipes and anecdotes, complete with a wine-tasting on the side. Each demonstration will be projected simultaneously onto a television screen. For a detailed programme, visit hermanusfynarts.co.za. Tickets can be purchased online from webtickets.co.za, from the tourism office in the station building or by calling 060 957 5371. Also remember to sign up for the FynArts newsletter, Facebook and twitter (@hermanusfynarts).



REDUCED BUILDING PLAN FEES FOR FIRE VICTIMS

The Overstrand Council has approved the request from the Building Control Department to assist property owners across the Overstrand, whose houses were destroyed or badly damaged during the devastating fires at the beginning of the year.

Residents, who have been affected by disasters and who are in the process of rebuilding their homes, will be charged a fixed amount of R500 (excluding VAT) for building plan fees. Normally, the 2018/19 tariff of charges for Building Plan Applications for a house of 250m² is R10 000.

The municipality took this decision in an effort to assist residents who suffered great financial losses. The period for reduced building plan fees for buildings destroyed or badly damaged during disasters, will be until 30 June 2021.

Should you require further information and/or advice in this regard, please feel free to contact us on enquiries@overstrand.gov.za or visit

HERMANUS ADMINISTRATION

16 Paterson Street, House no. 2

Tel: 028 313 8089

GANSBAAI ADMINISTRATION

1 Kapokblom Street

Tel 028 384 8321

STANFORD ADMINISTRATION

17 Queen Victoria Street

Tel: 028 341 8500

KLEINMOND ADMINISTRATION

37 Fifth Avenue

Tel: 028 271 8427

CAMPBILL FIRE - PROGRESS REPORT

The process of tackling the smouldering underground fires in sections of the Onrus River peat wetland area, which is situated on the property of the Camphill School and Farm Community, has finally begun.

Characterised as the only remaining piece of palmiet vegetation wetland, this peat land is of considerable ecological importance since it plays a critical role in the functioning of the Onrus River and the Onrus Estuary and must, therefore, be protected. The peat land covers an extensive area of 33 hectares and is estimated to be 12 000 years old.

The sub-surface fire is burning in a 9 hectare area which is covered with invasive alien species and is eroded. This section of the Onrus River has been burning since 11 January 2019.

Because of the intensity of the fire, it is practically impossible to douse it in a conventional manner.

Unfortunately, the recent rains have not had an effect in filling up the water table, which is what is needed to extinguish the fires. Interesting to note is that the previous time the peat land burnt, it took eight months, without intervention, before the fire was extinguished by a wet rainy season.

Temperatures towards the centre have been recorded at 330°C.

The depth of the fire varies because of the eroded state of that part of the wetland: One of the peat ore sites measured heat at 3.9 m under the ground. In some parts, the peat is 7.25 m deep, although it is even deeper in the central channel.

In addition, the ground is fractured into honeycomb cracks through which strong smelling gas consisting of sulphates, carbon dioxide and methane emanating from these hot spots is seeping. The fire is creating a substantial amount of smoke that is affecting the air quality in the area significantly and has a detrimental effect on the health of individuals within the community and the school, necessitating the temporary relocation of the learners to alternative accommodation. (The learners are still not able to move back to the farm, and the school is accommodated in the Fernkloof Nature Reserve hall.)

The solution

- In a joint effort between Overstrand Municipality, the Department of Environmental Affairs, the Department of Agriculture, Forestry and Fisheries, Working on Fire (WoF), Rob Erasmus (a wildfire investigator), landowners, the Breede-Gouritz Catchment Management Agency and various other experts from across the country, it was agreed that a Working on Fire team, consisting of 25 members, will set up a base camp at Camphill farm and use the unique SPIKE TOOL developed in Indonesia.
- Focusing on an area of 800 m², a series of nine holes per square metre will be drilled with the intention to flood the fire from the bottom up.
- The WoF team will be working seven days a week, and it is anticipated that they will need at least three months to fully extinguish the fire.

We urge the public to please avoid the area. This challenging fire has resulted in the ground becoming soft and unstable, and there are places where it simply sinks away. Motorists are also advised not to stop along the road to watch the WoF team at work.

UPGRADES TO THE GANSBAAI LIBRARIES



Pictured here are the Gansbaai library personnel: Sharman Geldenhuys (librarian), Ronette Dreyer, Edna van der Linde and Busisiwe Mtatase (front).



Overstrand Municipality is upgrading two of the libraries in the Gansbaai area.

The Gansbaai library will remain open and operational throughout the renovation project, even though the work may get a little noisy at times.

Gansbaai library personnel appreciate the community's continued patience and support and encourage residents to make use of the facility and services. "We believe the improvements will be meaningful for the community and would have long-lasting benefits for current and future generations," librarian Sharman Geldenhuys said.

The Eloxulweni library will be closed to the public until June 2019, if everything goes according to plan.

Upgrades are expected to be completed in June 2019.

Contact the Gansbaai library for further information on 028 384 8346.

OFFICIAL INAUGURATION OF SPEED HUMPS IN WESTCLIFF DRIVE A 'JOYOUS' OCCASION

Two traffic-calming 'speed tables' (or speed humps) have been constructed along Westcliff Drive to deter motorists from racing down the street.

These traffic-calming measures were built at the Westcliff Drive and Arundel Street intersection and at the pedestrian crossing at the intersection of Westcliff Drive and Orothamnus Avenue.

"It's the first time I have officially opened a speed hump," Executive Mayor Dudley Coetzee said tongue in the cheek.

He thanked the ward committee members for their valuable input in making Overstrand's roads

better and safer. "It pleases me to know that our ward committee system is working."

Ward 4 Councillor, Anton Coetsee, was justifiably pleased with the Westcliff residents' achievements and thanked Jan Cilliers for his relentless efforts in driving this project over many, many years. "The speed at which people drive down this road creates a dangerous situation and Jan refused to take 'no' for an answer, thank you."



Pictured at the jubilant occasion to mark the official inauguration of the speed humps in Westcliff Drive are Mayor Dudley Coetzee, Ward 4 Councillor Anton Coetsee, Ward 4 committee member Jan Cilliers who spearheaded the project and some of his fellow committee members as well as Westcliff residents.



Overstrand Arts / Kunste (OAK) will host James Oesi (Double Bass) and Collaborative Pianist Andrea Vasi, from the Netherlands, in concert on Sunday

afternoon, 28 July. The concert will commence at 15h30 in the Civic Auditorium. These two artists are bound to wow the audience in more ways than one!

Tickets are R150 (R60 for students) and available from the Tourism Office (028 312 2629) in Mitchell Street, Hermanus. Enquiries to René du Plooy on 082 940 4238.



James Oesi

Transfer station, waste drop fixed

The Overstrand Municipality recently announced that the Kleinmond Transfer Station and Garden Waste drop-off is in full operation.

Kleinmond's transfer station and garden waste drop-off area are now fully repaired and ready for business from 07:30 to 16:00 on weekdays and from 07:30 to 16:30 on weekends and public holidays.

GENERAL AND GARDEN WASTE
Members of the public are welcome to



General and garden waste as well as builders' rubble under one ton can be disposed of free of charge.

make use of these facilities to dispose of general and garden waste, provided the load does not exceed five tons.

Loads of under one ton can be disposed of free of charge, but take note that a fixed charge will be levied for loads between one and five tons.

Loads of general and garden waste in excess of five tons must be disposed of at the Karwyderskraal Regional Landfill site. Registration forms are available from Ingrid Marti at imarti@odm.org.za or at the Karwyderskraal weighbriidge office.

BUILDERS' RUBBLE

Small loads of builders' rubble of less than one ton will also be accepted at the Kleinmond Transfer Station. Any loads larger than 1 ton will need to be disposed of at the Karwyderskraal Regional Landfill site.

Note that the Karwyderskraal Landfill site is operated by the Overberg District Municipality (ODM), and anyone who wishes to dispose of waste or rubble there must first register with this entity before loads will be accepted.

• Download the fixed charges for disposal of general waste and garden



Rickus Appel, Patrick Ltfoli, Louis Adonis, Herschel Mackenzie and Hilton Hui of the Kleinmond Administration ready to welcome customers at the Transfer Station and Garden Waste drop-off.

waste as mentioned above from www.overstrand.gov.za, click on strategic documents, click on budget

2019/'20, scroll down to "Tariff list 2019/'20" and go to page 15 and 16 (Refuse - solid waste tariffs).

Wheelie bins for Stanford, Buffeljagsbaai

The Executive Mayor Dudley Coetzee handed over 700 wheelie bins to home owners of the previously disadvantaged areas of Stanford and Buffeljagsbaai. This took place on Thursday 16 January.

The initiative forms part of the Municipality's ward committee system



as the roll-out of these wheelie bins was funded from money allocated to ward specific projects. Each ward is provided with a budget of R500 000 per financial year for allocation to ward projects and suggestions received from residents.

When handing over the wheelie bins to residents, Coetzee (who is also the

Ward Councillor of Ward 11) implored residents to make use of the wheelie bins and do their bit to assist the municipality in keeping the town clean. According to Francois Myburgh, the area manager, this initiative demonstrates the pro-active role that ward committees can play in realising the community needs in the IDP.

The provision of the 140 litre green wheelie bins came after years of hard work and planning before the request was put forward in the municipal budget via the Ward Committee. Ward 11 agreed on a phased approach in that the majority of the annual R500 000 allocation to ward projects may be used to purchase wheelie bins for Stanford and Buffeljagsbaai.

The other towns within Ward 11 conceded that next financial year's allocation of ward money (2020/'21) will be directed to the needs registered for other areas within Ward 11.

Each bin has a unique number painted on it and the number is allocated to the registered home owner. Home owners will be liable for the replacement of the bin if it is stolen, damaged or lost in future. Persons

collecting bins on behalf of registered home owners were requested to bring their identity documents and their Overstrand municipal rates and taxes account for identification.

The Municipality appeals to residents to use the wheelie bins for their refuse and to take responsibility for keeping their community clean. Not only will it look neat, but it will prevent paper and cartons from blowing around in the wind. "In this way the public will assist us greatly in our environmental conservation and waste management efforts," Coetzee said.

The use of wheelie bins will also help to prevent problems experienced with stray cats and dogs ripping open black bags on the streets.

It was recommended to beneficiaries in the project to regularly wash out the bin, especially if there are any fluids that spilled by accident. That will allow the bin to remain relatively odour-free.

• Those who could not collect their brand new wheelie bins, can collect their bins from the municipal offices in Stanford.

Remember to bring supporting documents with you.

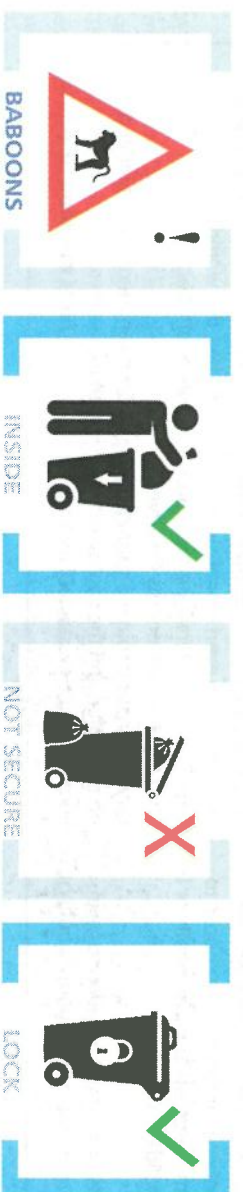
Stanford residents Rosaline Booysen, Agnes Hansen and Eva Klaasen at the handover ceremony.

Stay baboon-proof this season

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With the summer season in full swing it is important for residents and visitors alike to ensure that none of the baboon troops living on our urban edges are drawn to the suburbs by the potential food sources left behind in household rubbish.

Over the past few years residents in the affected areas in Hermanus especially have experienced constant home invasions and extensive damage has been caused by the large Voelklip troop. The troop has become increasingly habituated to suburbia and troop size has increased significantly over the past three years, said Pat Redford, Hermanus Baboon Action Group spokesperson.

Easy access to human-derived food has caused the troop to spend most of their waking hours in high density suburbia, a pattern of behaviour not previously witnessed. Foraging in the Fernkloof Nature Reserve on the abundant natural bounty is what would be "normal behaviour" for these wild animals. The growth in permanent residents and the increased use of holiday homes has multiplied the amount of refuse and the availability of human-derived food.

However, the virtual fence programme managed by Human Wildlife Solutions (HWS) has started. The virtual fence is made up of a sophisticated radio transmitter system that relays the movements of a troop to a cellular phone. If a troop moves too close to a residential area an alert is sent out and baboon monitors deploy sound boxes that emit sounds of predators roaring, animals dying and other frightening sound effects, including bear bangers that makes a loud banging noise. The baboons are tracked via collars attached to the troop leaders.

But huge quantities of household rubbish will always remain a drawcard to these animals.

The consequence of baboons having access to human food has led to their becoming addicted to starch and sugary foods, and their behaviour has changed over time. As this happens so the youngsters in the troop mimic the elders, and an unfortunate habituation to suburbia has developed over just a few generations.

Scientific evidence indicates changes to the genetics of some troops over time, as a consequence of the dependency on refined starch or high sugar contents in their daily diets. Aggressive, unpredictable behaviour can be a consequence.

The declared problem-animal areas are Kleinmond, Betty's Bay, Rooiels, Pringle Bay, Onrus, Voelklip, Fernkloof (including the Golf Estate), Hermanus Heights, Kwaaiwater and Eastcliff. The municipality's solid waste by-law stipulates that each homeowner or tenant must use baboon-proof containers in these areas.

The by-law states:

- Bins must be secured with baboon-proof locking devices
- Do not leave black bags on top or outside bin
- No black bags may be left on pavement or sidewalk

Please remember: Only put refuse bins out before 07:30 on the day of collection, not the day before. Each household is permitted one bin with four bags of household waste (which may include one bag of garden refuse). Garden waste should preferably be taken to the Hermanus Transfer Station for chipping and compost-

ing; alternatively it can be taken to the Prawn Flats drop-off point for disposal.

Refuse collection days in affected areas, irrespective of public holidays:

MONDAYS: Voelklip

FRIDAYS: Kwaaiwater, Fernkloof, Eastcliff, Hermanus Heights

Refuse bags can be dropped off at the Voelklip Drop-off near OK Supermarket in 7th Street

Baboon facts:

- Always set your house alarm when you leave. Close all windows;
- Young baboons can access a gap 5cm or larger;
- Baboons can open sliding doors and turn handles;
- If baboons enter your house, make way so that they exit can unhindered;
- Keep pets away in a locked room until all baboons have left;
- Never threaten baboons or take food items from them;
- Warn children to drop food items and move away, if approached by a baboon;
- Remove baboon poop using gloves and detergent as soon as possible; poop may carry disease;
- Avoid leaving domestic pets outside for extended periods when you are out;
- Keep fruit bowls and food items out of sight, away from windows;
- Pick ripe fruit from fruiting trees daily. Vegetable gardens, bird feeders, dog food bowls attract baboons.

For more information, visit

hermanusbaboons.co.za or email info@hermanusbaboons.co.za

WHALE COAST THEATRE

13 - 19 DECEMBER

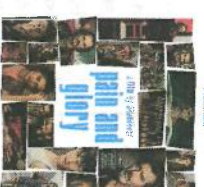
MAIN THEATRE

PAIN AND GLORY

16 DLN

FROZEN II

PG V



12:30

ALSO IN BEANBAG
AT 10:00 | 15:15

JUMANJI:
NEXT LEVEL

10 - 12 PG LV

OFFICIAL SECRETS

16 L



15:00 | 20:15

17:45

BEANBAG THEATRE

PLAYING WITH FIRE LAST CHRISTMAS

PG

13 LP



12:45 | 17:45

20:00

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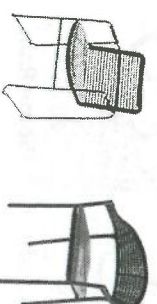


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HT 28/11/2019

Killer gas from landfill a threat to illegal occupants

Noluvu Ludidi

A number of residents from Marikana informal settlement in Zwelihle gathered at the Overstrand municipality on Wednesday 13 November demanding answers.

The group raised their grievances with regard to limited sanitation blocks, water issues and the lack of electricity. A small group of women told *Hermanus Times* that they have all had enough of struggling.

"We make due with what we have, but it is extremely difficult.

"Using paraffine and gas increases a high risk of our shacks burning down, it is a struggle to cook, wash our babies and do our household duties," one woman explained.

The municipality has recorded an estimate of 1 035 informal structures in Marikana at the end of June 2019.

According to municipal manager Coenie Groenewald, the Marikana informal settlement has not been supplied with electricity. "No electricity

will be installed there and the illegal occupants have been warned about the danger of staying on an un-rehabilitated landfill site. It is not safe to reside on this old landfill site," he says.

Groenewald says that the municipality has provided access to water, sanitation and refuse removal services to mitigate health risks. He adds that a total of 70 toilets and 42 taps are positioned along the periphery of the informal settlement. "Lighting to the ablution blocks were installed but unfortunately vandalised."

Groenewald says that the Overstrand Municipality needs to emphasise that hydrogen sulphide gas, present at Marikana due to it being situated on a decommissioned landfill site, is toxic and also flammable and residents are advised, in their own interest, to move away from the site.

Groenewald says the rehabilitation of the landfill site will have to take place. "However, it can only be considered once the people staying on the land have been relocated."

MEDIAVERKLARING / PRESS RELEASE

CONTACT:

Municipal Manager: Coenie Groenewald

Tel: 028 313 8003 | cgroenewald@overstrand.gov.za

Overstrand Municipality



Media Liaison & Social Media Officer

Riana Steenekamp

Tel: 028 313 8043 | rsteenekamp@overstrand.gov.za

2 December 2019

The Municipality has received numerous questions from residents regarding the closure of Walker Bay Recycling and the lack of recycling facilities.

These are the facts:

Overstrand Municipality has been unable to offer any sort of assistance to Walker Bay Recycling, due to the fact that they are a private company operating from private property, and do not have any contract or agreement with the Municipality for the recycling of waste.

Walker Bay Recycling was informed from our first meeting with them that Overstrand Municipality is unable to offer any sort of support to them due to legislative constraints. They would have to wait until the new municipal Material Recovery Facility (MRF) has been constructed, and then they could tender along with everyone else for the operation of the facility, should they wish to enter into a recycling contract with the Overstrand Municipality.

It is the drop in the rate per ton paid for recyclables that has now had a major effect on the financial viability of the Walker Bay Operation as well as all other waste recyclers in South Africa. The paper industry is in a very bad place at the moment.

Take the market value of K4 (Cardboard) for example:

Beginning of the year	+/-R1500.00/ton
Beginning November 2019	+/- R400.00/ton
Mid November 2019	+/-R200.00/ton
Now	+/-R100.00/ton

At the Western Cape Recycling Action Group meeting held in November 2019 in Kraaifontein, attendees were informed that 35 small recycling contractors were on the brink of closing down due to unfavourable market conditions. In addition, Mpact Recycling announced that they would stop recycling polyethylene terephthalate (PET) at their Wadeville plant.

Update on progress with new Materials Recovery Facility (MRF), Public drop-off and garden waste chipping area

The consent use applications for the MRF and public drop-off facilities, as well as the chipping site have been submitted to Town Planning and the public has until 24 January 2020 to comment on the applications. The building plans have been submitted for approval.

The MRF and drop-off facilities will be situated in Schulphoek Road, next to the Hermanus Sewerage Treatment Works and the chipping facility will be situated next to the law enforcement premises in Hemel-en-Aarde along the Camphill Road.

The tender preparation for the construction of the facilities is almost complete and the tender will be advertised in January 2020.

It is envisaged that the construction should be completed by December 2020 if no unforeseen delays occur.

Only once the facility is operational will the Municipality be in a position to resume the supply and collection of the clear bags and delivery of such to the new MRF operator.

Comments on meetings and interactions with Walker Bay Recycling (WBR)

During the course of the year numerous meetings have been held with WBR. The Municipality discussed the following issues that they had during the year:

- The construction of the new municipal MRF and the proposed tender that will follow for an operator of the MRF.
- The reasons why a short term tender could not be invited for the collection and recycling of the clear bags.
- Access to municipal clear bags (residential recycling waste) and why we cannot collect and deliver the recyclables to them, as well as why they cannot collect from the curbside in terms of the waste bylaw.
- The fact that we cannot offer them any financial assistance or incentive for recycling the waste as we have no contract with them to provide the service on behalf of the municipality.
- The representatives of WBR appeared to have a good understanding of the municipality's point of view during all deliberations between the parties.

Reduce your carbon footprint

Regardless of all the negative comments and complaints, residents can rest assured that Overstrand Municipality remains committed to the recycling process which is an effective way to save natural resources and lowers waste products sent to landfill sites.

We appeal to residents to think carefully before simply throwing items into the rubbish bin. Please reduce and re-use household waste and try to leave as small a carbon footprint as possible - even though all waste collected, is being dropped off at the Karwyderskraal Landfill Site.

Each household is allowed to place either one wheelie bin or four black bags with domestic refuse on the sidewalk for removal, with the proviso that only one bag may contain garden waste. Please remember that refuse may only be placed on the sidewalk on the day of collection.

END/EINDE

HT 10/10/2019

Repairs to station nearly completed

Repairs to the Kleinmond Transfer Station are almost complete, and it is expected that the facility will be fully operational once again before the end of the year.

The transfer station was among the municipal infrastructure facilities that were damaged and partly destroyed during violent protests in Kleinmond at the beginning of September 2017.

Overstrand Municipality reports that work to repair the Kleinmond Transfer Station is progressing well and stated it anticipates repairs to the main building and access control building will be completed by the end of October.

The municipality says repair work to the damaged wooden retaining wall



Repairs to the Kleinmond Transfer Station are almost done.

the garden waste drop-off area will start later this week. "The wooden pole retaining structure is going to be replaced with a concrete retaining block structure," the municipality added.

"If all go according to plan, this section of the work would be finished

18 SEPTEMBER 2019

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New recycling centre on its way

Writer
De Waal Steyn

Residents in Hermanus will be able to resume their recycling efforts soon, after it was announced that a brand-new recycling centre will be built and completed next year.

According to municipal Director of Infrastructure and Planning, Stephen Müller, a total of R20 million has been budgeted for the replacement of the recycling centre that was gutted last year during the violent riots that rocked Hermanus.

"We are finalising the planning phase

of the project, which will consist of three different facilities. Firstly, there will be a transfer station where all the household waste that was picked up from homes will be taken to. This waste will be put into large containers before being moved in bulk to the Karwyderskraal Dumpsite.

"Secondly, there will be a material recycling facility (MRF), much the same as the facility that was run by Walkerbay Recycling at the old transfer station. At the MRF the clear bags that were put out for recycling by residents will be opened and the

contents sorted for recycling purposes," said Müller. The third facility will be a garden refuse area where garden refuse will be chipped before being moved to the Karwyderskraal Dumpsite.

According to Müller a final decision as to where the new recycling centre will be built will be taken in the next few weeks. "We have two options as to where to position the facility, both with its own pros and cons. The first site is next to the sewerage works at the bottom end of Schulphoek Street. This is a central position for Herma-

nus and will be easily accessible for residents and businesses wanting to drop off refuse at the MRF or garden refuse area. This location is also close to home for most of the staff who work at the MRF.

"The problem, however, is that this site is located next to a school and in between two suburbs. As with any big business, there will be an increase in traffic, noise and, especially dust in the area. We have commissioned a traffic impact study to ensure that normal traffic will not be impeded by an influx of garbage trucks to the

area," he said.

Although the Karwyderskraal Dumpsite is located further out of town and staff will need to be transported to and from work, it will offer an opportunity to create a regional recycling centre in conjunction with the Overberg District Municipality.

"This means that all the other towns in the region will also have access to a recycling facility and more money can be generated through recycling because of the increase in volume of refuse," said Müller.

AUGUST 2019

24-hour Emergency Fire Brigade 028 313 8000/8111
028 312 2400

Bulletin

Official newsletter of the Overstrand Municipality

OVERSTRAND SWITCHED BANKS

Avoid undue hassles: Make sure you deposit your payment in the correct bank account.

Legislation compels municipalities to renew tenders for banking every five years. Recently, Nedbank was awarded the tender for Overstrand since it met all tender requirements, including banking fees. Consequently, all municipal banking accounts have now been switched from ABSA to Nedbank.

Although the old ABSA account will still remain active for a while, Overstrand Municipality appeals to all ratepayers to make sure they switch their payment details from the old ABSA account to the new Nedbank account.

HERE ARE OVERSTRAND'S NEW UNIVERSAL BANKING DETAILS

Nedbank

Type of account: Current

Branch Code: 198765

Branch: Inland Garden Route

SWIFT Code: NEDSZAJJ



AND HERE ARE THE NUMBERS OF THE ACCOUNTS PAYMENTS SHOULD BE MADE TO

Monthly municipal accounts: Nedbank Account Number 1190136899

Clients who pay accounts via the internet are requested to update their beneficiary details in this regard. This account is solely for the payment of monthly municipal accounts, and the payment must reflect the 12-digit account number as reference.

Traffic fines: Nedbank Account Number 1190137186

This account is solely for the payment of traffic fines issued by Overstrand Municipality, and the payment must reflect the 10 to 16 alpha-numerical digit reference number indicated on the fine. Please note that the "/" must not be included in the reference number.

Overstrand primary account: Nedbank Account Number 1190136678

This account is for the payment of fees related to licence renewals, building plans, new water and electricity connections, boat launching, town planning, etc. Clients are requested to obtain a reference number from the municipality before depositing money in these instances.

Onrus Caravan Park: Nedbank Account Number 1190137674:

This account is solely for the payment of camping fees for the Onrus Caravan Park and the payment reference must include the booking number.

WHAT IF YOU TRANSFERRED MONEY TO THE WRONG (OLD) BANK ACCOUNT?

If you accidentally made a payment to the wrong recipient (old ABSA account), be sure to notify the municipality's Client Services at enquiries@overstrand.gov.za. Remember to provide all relevant information, including your account number and contact details.

New rates and rules for disposal at Karwyderskraal now apply

The Overberg District Municipality (ODM), who owns and operates the Karwyderskraal landfill site, recently published new rates and rules pertaining to the use of this facility, effective 1 July 2019.

Overstrand residents who make use of this site to dispose of builders' rubble, garden refuse (chipped) and general household waste are urged to take note of the following.

Registration compulsory

In order to make use of the Karwyderskraal landfill site, residents, contractors or anyone who transports building rubble, chipped garden refuse or any domestic waste to the site must first register with the Overberg District Municipality as a site user. Failure to do so would result in dumping being denied. In short, unless your name appears on the database, you will not be allowed to dispose of any waste - even if you show up at the landfill site for the first time. Registration forms are available from Ingrid Marti at imarti@odm.org.za or at the Karwyderskraal weighbridge office.

Garden refuse

No unchipped garden refuse will be accepted. Refuse of this nature should be disposed of at the transfer stations in Kleinmond, Hermanus or the Stanford Drop off and Gansbaai Landfill site, all of which have been equipped with chipping facilities.

Builders' rubble

As from 1 July 2019, builders' rubble will be classified as either "sorted/clean" or "unsorted/contaminated", and the rates to dispose thereof will be adjusted accordingly.

■ **UNSORTED/CONTAMINATED BUILDERS' RUBBLE** implies that the rubble has not been sorted - in other words contains planks, cement bags, general waste and the likes - and probably originated from a construction or demolition site.

■ **CLEAN BUILDERS' RUBBLE**, implies that the load to be disposed of is clean and contains no items larger than a standard brick.

■ **OVERSIZE CLEAN BUILDERS' RUBBLE**, on the other hand, implies that the load to be disposed of is clean and contains concrete or rubble larger than a standard brick size.



An example of clean builders' rubble...



and this is what oversized builders' rubble looks like.

Disposal tariffs

From 1 July 2019 till 30 June 2020, the following tariffs (VAT excluded) will apply for disposals at the Karwyderskraal landfill site:

Description	Tariff per ton, or part thereof
Cover material and clean builders' rubble containing nothing larger than the size of a brick	No charge
Oversized clean builders' rubble (any of the load larger than brick size)	R100.00
Mixed, contaminated or unsorted builders' rubble (contains wood, paper, steel, etc.)	R220.00
Domestic waste	R217.45

Operating hours

The Karwyderskraal regional landfill facility is open between 08:00 and 17:00 from Monday to Friday. It is closed on weekends, but will be accessible should a public holiday fall on a weekday.

Enquiries

Should you have any queries regarding the above, please contact Craig Mitchell, Manager: Solid Waste Planning at 028 313 5045 or send an e-mail to cmitchell@overstrand.gov.za or enquiries@overstrand.gov.za

PUT A SOCK IN IT!

Latest invention to prevent debris from entering waterways now being tested in Overstrand



In partnership with the Dyer Island Conservation Trust, Overstrand's Environmental Management Services Department recently fitted the first storm-water filter sock in Gansbaai.

Made of net, this sock is fitted over storm-water outlets in an attempt to catch any litter and debris (especially plastic) before it washes out to sea following on a heavy downpour.

If successful, the municipality intends to employ this measure as a means to prevent those items humans so thoughtlessly discard from spoiling our oceans, rivers and estuaries. With the assistance of representatives from the Dyer Island Conservation Trust, municipal workers recently fitted the first storm-water filter sock under supervision of Environmental Officer Benjamin Kondokter.

HOW TO REPORT A FAULT OR EMERGENCY

In the interest of responding quickly and efficiently to faults and emergencies, Overstrand Municipality urges all residents to adhere to the following steps.

➤ **Step 1:** Call the switchboard/customer-care helpdesk during office hours, or the Emergency Control Room after hours.

➤ **Step 2:** Log the complaint/problem and remember to give all the necessary information.

➤ **Step 3:** Ask for and make a note of the reference number or, in the case of infrastructure issues, the works order number that will be issued.

➤ **Step 4:** Follow up if necessary by quoting the number referred to above.

Especially in the case of issues with municipal infrastructure (burst water pipes, stolen or vandalised electrical cables or water metres, broken streetlights, etc.), do not take it for granted that someone else already called. Please make sure that the issue has, in fact, been reported.

HERE ARE THE NUMBERS TO CALL:

Overstrand Switchboard

❖ 028 313 8000 for general enquiries (municipal accounts, progress with the approval of building plans, etc.)

Customer-care Helpdesks

❖ Gansbaai Administration 028 384 8300 or 8328

❖ Hermanus Administration 028 313 8196 or 8090

❖ Kleinmond Administration 028 271 8400 or 8435

❖ Stanford Administration 028 341 8500 or 8516

Emergency Control Room

❖ 028 313 8111 (for emergencies relating to municipal infrastructure - burst water pipes, stolen or vandalised electrical cables, etc)

Fire & Rescue

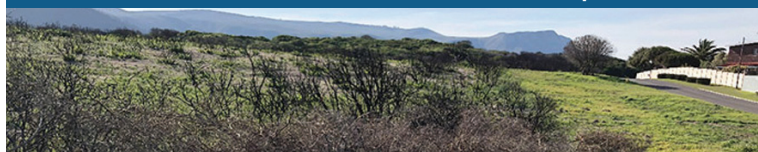
❖ 028 312 2400 in case of a fire, flood or distress call

Law Enforcement

❖ 028 313 8980 or nearest police station for day-to-day complaints regarding law enforcement

BURNT VEGETATION

To remove or not to remove? That is the question.



After the devastating fires we endured in the Overstrand during January 2019, the roar and whiff of a fire are bound to evoke different images for different people. Surprisingly, fire is one of the best tools for biodiversity conservation and fuel management, but as we as a community know but all too well, it is also one of nature's most destructive forces.

About 70% of the ecosystems that cover South Africa are fire-adapted. They need to burn in order to maintain their ecological integrity. But because of human activity, there is a need to manage fire in a manner that is appropriate for land use and land type, while maintaining natural processes and patterns as far as possible.

Nevertheless, when managed and controlled, fire benefits our natural areas and is actually vital for the survival of several living species. It removes low-growing underbrush and cleans the floor of debris which opens it up to sunlight that nourishes the soil. By reducing the need to compete for nutrients, established vegetation can grow stronger and healthier.

Many people have asked if they can remove the burnt standing trees and shrubs that remain after a fire because they look ugly and spoil the beauty of the new regenerating species. This question will be answered in the next issue.

Attached are two photos taken in Franskraal in June 2019 where members of the community cut down the burnt vegetation after the January 2019 fire. We would like to urge all residents throughout the Overstrand to please refrain from continuing with this activity. Your actions can be even more devastating to the rehabilitation of the veld than you realise.

Call Overstrand's Environmental Management Services Department on 028 316 3724 or 028 313 8000 for guidance so that we can tackle this issue in a responsible manner or send an email to the Senior Environmental Manager, Liezl de Villiers, at ldvilliers@overstrand.gov.za or enquiries@overstrand.gov.za for advice.

Don't miss out on this recital!



Overstrand's music lovers will be pleased to learn that the CONCERT PIANIST JAN HUGO, currently residing in France, will be visiting his country of origin, South Africa, later this year. OVERSTRAND ARTS/ KUNSTE is especially pleased to announce that this virtuoso has agreed to a recital in the Hermanus Civic Auditorium on Sunday afternoon, 22 September, at 15:30. Be sure to get your tickets from the Tourism Office in Mitchell Street, Hermanus (tel. 028 312 2629) right away. For more information, call René du Plooy on 082 940 4238.

Minor changes to water usage can make a major difference!



To save water, we need to think not just about the water we use directly for drinking and cleaning in our homes but also to become more aware of how water is used to make the food we eat, the products we use and to generate the power for our lights and stoves.

One of the best ways to prevent your household from using extra water is to re-use grey water.

WHAT IS GREY WATER?

Grey water is defined as untreated household wastewater that has not come into contact with sewerage.

Grey water comes from baths, showers and bathroom hand basins. Laundry water from washing machines can also be re-used if environmentally friendly detergents have been used.

Grey water from the kitchen and dishwasher must not be re-used since this water may be damaging to plant life because of the heavy loads of organic material, fats, oils and caustic additives.

Depending on the source, grey water can contain the following: bacteria, pathogens, organic material, oil, grease, soap, detergents, pesticides, dirt, lint, sodium, nitrates, phosphates and bleach as well as hair and skin particles. It can also have high salt / pH levels.

Water from toilets is considered black water and must not be re-used.

CAN GREY WATER BE USED FOR ALL TYPES OF PLANTS?

Grey water can be used for almost all types of plants. Everything from the lawn to vegetables will benefit from grey water, as it contains plant nutrients. However, grey water with a high phosphate level should be avoided in a fynbos garden, and always remember to wash your vegetables before using them.

WON'T SOAP IN GREY WATER BE HARMFUL TO PLANTS?

Not all soaps are harmful. Good quality soaps are actually good for the garden. Only soaps and soap powders with a high phosphate level should be avoided. Plants need phosphate to grow, but too much can be harmful in the long run.

Most new soap powders and biodegradable soaps will not harm your plants, but try to avoid introducing bleach and harmful detergents into your grey-water tank.

GREY WATER RE-USE SYSTEMS

Grey water differs from fresh water and requires a whole new set of guidelines if it is to be re-used safely. Here are some guidelines you need to keep in mind:

1. Don't store grey water for longer than 24 hours:
 - If you store grey water, the nutrients it contains will start to break down, resulting in bad odours.
2. Don't allow grey water to pool or run-off:
 - To begin with, human or animal contact with grey water should be avoided. Secondly, if grey water is allowed to pool, it will create breeding grounds for mosquitoes.
 - For this reason, grey-water systems should be designed in such a way that the water is allowed to sink into/infiltrate the soil without forming pools or causing a run-off.
3. Don't re-use water in which nappies have been washed.
4. If a member of your household is ill, don't use grey water.
5. Keep your grey-water system as simple as possible:
 - Simple systems last longer, require less maintenance, require less energy and cost less money.
6. Install a valve for easy switching between the grey-water system and the sewer/septic system.

Note, too, that consumers use grey water entirely at their own risk. Overstrand Municipality cannot be held liable for any consequential damage or loss arising directly or indirectly from the use thereof.

MEDIAVERKLARING / PRESS RELEASE

CONTACT:

Municipal Manager: Coenie Groenewald

Tel: 028 313 8003 | cgroenewald@overstrand.gov.za

Overstrand Municipality



Media Liaison & Social Media Officer

Riana Steenekamp

Tel: 028 313 8043 | rsteenekamp@overstrand.gov.za

4 December 2019

In a press release earlier in the week regarding waste removal, the following sentence may have been interpreted incorrectly:

Each household is allowed to place either one wheelie bin or four black bags with domestic refuse on the sidewalk for removal, with the proviso that only one bag may contain garden waste. Please remember that refuse may only be placed on the sidewalk on the day of collection.

THE SENTENCE SHOULD READ AS FOLLOWS:

Each household is allowed to place one wheelie bin or four black bags with domestic refuse on the sidewalk for removal where baboons are not an issue. Containers must be secured with baboon proof locking devices in all areas that the Municipality has identified as problem animal areas. No refuse bags may be left on pavements in baboon problem areas.

The declared problem animal areas are Kleinmond, Betty's Bay, Rooiels, Pringle Bay, Onrus, Voëlklip, Fernkloof (including the Golf Estate), Hermanus Heights, Eastcliff and Kwaaiwater.

It is essential that home owners take heed and for landlords and agents to convey the information to tenants and holidaymakers as well. Weekend visitors are urged to make use of the drop-off points that are available in their areas to get rid of their household refuse. For your convenience, the transfer stations are also open during weekdays and Saturdays. Overberg Karwyderskraal Landfill site is open every week day and closed on weekends.

Baboon-resistant 240-litre Wheelie bins with locks can be purchased at the municipal offices and will be delivered to your home. Alternatively, baboon proof locks can be fitted at an additional charge on your existing bin.

We need your continued co-operation to minimise the baboon problem.

The Integrated Solid Waste Management by-law also stipulates that refuse is only allowed to be put out on the pavement on the day of collection as it is not advisable to leave bags outside for days on end as stray animals rip open rubbish bags and litter is strewn around.

REFUSE COLLECTION

The municipal solid waste team work to a set schedule and visit different areas at different times of the week, picking up household rubbish and waste.

Refuse removal will continue throughout the festive season and will not be affected by public holidays.

The refuse collection schedule is as follows:

HERMANUS ADMINISTRATION

MONDAY: Vermont, Fisherhaven, Voëlklip • TUESDAY: Onrus, Chanteclair, Berghof, Sandbaai, Hemel-en-Aarde • WEDNESDAY: Zwelihle, Mount Pleasant • THURSDAY: Westcliff, Northcliff, houses in the CBD and Hermanus Industrial Area • FRIDAY: Hawston, Eastcliff, Hermanus Heights, Kwaiwater.

HANGKLIP-KLEINMOND ADMINISTRATION:

MONDAY: Betty's Bay, Pringle Bay, Rooi-Els, Kleinmond • TUESDAY: Proteadorp, Extension 6, Overhills, Mountain View

STANFORD ADMINISTRATION:

TUESDAY: North of De Bruyn Street • THURSDAY: South of De Bruyn Street

GANSBAAI ADMINISTRATION:

MONDAY: Pearly Beach • TUESDAY: De Kelders, Masakhane, Beverly Hills • WEDNESDAY: Franskraal • THURSDAY: Kleinbaai, Baardskeerdersbos • FRIDAY: Gansbaai, Perlemoen Bay, Masakhane, Beverly Hills

END/EINDE