

# OVERSTRAND MUNICIPALITY



## INTEGRATED WASTE MANAGEMENT PLAN (4th Generation)

***(Final Report)***

**Compiled by:**



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**OVERSTRAND MUNICIPALITY**  
**INTEGRATED WASTE MANAGEMENT PLAN**

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## **ABBREVIATIONS**

DEA	Department of Environment Affairs
D:EA&DP	Department of Environmental Affairs and Development Planning
DWA	Department of Water Affairs
EIA	Environmental Impact Assessment
Haz	Hazardous
HCGW	Health Care General Waste
HCRW	Health Care Risk Waste
HCW	Health Care Waste
HDPE	High Density Polyethylene
kg	kilogram
kℓ	kilolitre
ℓ	litre
m <sup>3</sup> pa	cubic meter per annum
t/a	ton per annum
VWMF	Vissershok Waste Management Facility
WWT	Waste Water Treatment
CNC	Cape Nature Conservation
MRF	Material Recovery Facility
IWMP	Integrated Waste Management Plan
JPCE	Jan Palm Consulting Engineers
IPWIS	Integrated Pollutant and Waste Information System
OM	Overstrand Municipality
EAP	Environmental Assessment Practitioner

# **OVERSTRAND MUNICIPALITY**

## **INTEGRATED WASTE MANAGEMENT PLAN**

### **EXECUTIVE SUMMARY**

#### **INTRODUCTION AND GENERAL DESCRIPTION**

The fourth generation of this Integrated Waste Management Plan (IWMP) has been formulated by Jan Palm Consulting Engineers (JPCE) on behalf of Overstrand Municipality. The third generation IWMP was developed in 2012 and was subsequently commented on and evaluated by the Department: Environmental Affairs and Development Planning (D:EA&DP). This update incorporates the comments and recommendations made on the 2012 IWMP as well as the latest checklist for IWMPs by the D:EA&DP.

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 that has as its goal the transformation of the current methodology of waste management, i.e. 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 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 and the National Waste Management Strategy (NWMS 2011).

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 general topography, geology and hydrogeology of the area is discussed in section 1.3 and the demographic details in section 1.4. The current population estimate of the Overstrand is 93 374 people, based on the Census 2011 population of 80 433 people and an annual growth rate of 3.8%.

#### **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 since the 2012 IWMP.

The Overstrand Municipality has also revised the previous solid waste by-laws into a comprehensive Integrated Waste Management By-law which was published in the Provincial Gazette of 12 July 2013.

#### **EXISTING WASTE MANAGEMENT**

##### **Awareness and Education**

The Municipality distributes solid waste information and news via the Overstrand Bulletin, the Overstrand website and visits to schools. Various advertising boards are erected throughout the Municipal area which promote and encourage responsible waste management and waste minimisation. It is planned that the Youth Jobs In Waste Programme will also be applied to partly conduct solid waste awareness and education campaigns.

## Waste Quantities and Types

The Municipality makes use of weighbridges to record accurate waste quantities. Weighbridges are installed at the Gansbaai and Karwyderskraal landfills with another weighbridge to be installed at the Hermanus transfer station during 2015. The Municipality also reports to the Integrated Pollutant and Waste Information System.

From the recorded waste quantities and the population figures, average waste generation rates per income group in the Overstrand were calculated as well as the future estimated waste quantities.

Income group	kg/person/day
Very Low & Low	0.94
Middle	1.41
High & Very High	2.83

The total waste generated for 2015 was estimated at 59 109 tonnes, with a future total of 66 106 tonnes estimated for 2018.

Waste is recorded in general categories e.g. garden waste, general household, building & demolition waste, etc., but not in specific material streams such as glass, plastic, paper or metal. For this reason the amount of available recyclables calculation was based on the findings of the 2007 study commissioned by D:EA&DP to determine the waste characterisation in the Overberg District. The IWMP further recommends that a new study is conducted over the span of four seasons to acquire an updated reflection of the Overstrand waste stream composition. This will assist in future waste minimisation strategies.

The annual tonnes of each major recyclable category was calculated to be as follows:

PAPER/ CARD (t/a)	PLASTICS (t/a)	GLASS (t/a)	METAL (t/a)
10679	6942	3204	2136

The above calculations indicate that at the current waste stream characterisation and assumptions that 40% of the generated waste stream consists of recyclable materials. Due to at-home waste handling, waste collection methods and handling, the full 40% cannot yet be seen as recyclable due to contamination. Overstrand practises source separation to reduce contamination and maximise waste recovery.

Recycling takes place at the Hermanus MRF, done by Walker Bay Recycling, and at the Gansbaai MRF, done by Enviroserv Waste Management. Overstrand also chips garden waste and composting is done at the Karwyderskraal landfill. The combined effort of recycling and garden waste chipping and composting amounts to an average of 23% of the total generated waste stream being diverted from landfill.

## Waste Collection

The Municipality provides a waste collection service to all formal and informal households and waste is collected in wheelie bins, black bags, clear bags for source separation waste and communal skips. Farmers not located on collection routes do not receive a waste collection service, but bring their own waste to the various drop-offs and transfer stations for disposal. The Municipality delivers free basic services to all registered indigent households in the area. Public cleansing services are also rendered by the Municipality in all towns which includes the cleansing of streets, public open spaces and areas of illegal dumping.

Few vacancies exist in the solid waste management personnel structure and solid waste services are rendered at a good level. The waste collection vehicles and other vehicles in the waste fleet are assessed by the Municipality and replaced where necessary.

## Waste Recovery Systems

The Overstrand Municipality practices source separation (2-bag waste collection system) in order to increase the recovery rate of recyclable materials present in the waste stream. Sources separation reduces contamination of recyclables in the collection bags and during the collection process, allowing for easier recovery. It is also a system that raises awareness as it requires participation from Overstrand residents.

Waste is recovered at the Hermanus and Gansbaai Material recovery facilities by Walker Bay recycling and Enviroserv Waste Management respectively.



Furthermore, garden waste is stockpiled separately at the various waste management facilities in Overstrand in order to divert garden waste disposal from landfill. The garden waste is chipped and also composted at the Karwyderskraal landfill.

Waste diverted from landfill measured 23% on average between June 2013 and July 2014. This is the combined total of recycling and chipping/composting.

### Waste Management Facilities

The Municipality currently operates the Gansbaai landfill, which is permitted in terms of Section 20 of the Environment Conservation Act. The landfill was extended within its permitted boundaries by the construction of a new disposal cell in 2013/2014. Operation is done by Enviroserv and is generally good. The landfill is externally audited as required by the permit. The current available disposal airspace provides an estimated remaining lifetime until 2031.

The Karwyderskraal regional landfill is currently undergoing an extension with a new disposal cell being constructed. The disposal of waste will resume in 2015, no longer necessitating the Overstrand Municipality to transport and dispose all of its waste at the Gansbaai landfill.

The Municipality operates two Solid Waste Transfer Stations at Hermanus and Kleinmond. Both transfer stations are licensed and externally audited. A number of solid waste drop-offs have also been established throughout the Municipal area which act as satellite collection points for general waste. These drop-offs are located at Rooiels, Pringle Bay, Betty's Bay, Hawston, Onrus, Sandbaai, Voëlklip, Stanford and Pearly Beach. The weekend drop-offs allow for weekend visitors to drop off their waste on the weekends if they are not in the Overstrand to put it out for weekly collection.

There are a number of disposal sites in the Overstrand that are no longer operational. All of these sites have been issued with closure licenses as part of the National Outcome 10 project to license all unlicensed waste facilities. The sites that require rehabilitation are located at Onrus, Hermanus, Hawston, Fisherman's Haven, Voëlklip, Stanford and Pearly Beach. The Betty's Bay and Kleinmond closed disposal sites have been rehabilitated.

Provision must be made to rehabilitate the sites not yet rehabilitated. The estimates are currently:

Rehab estimate excl. VAT	Onrus	Hermanus	Hawston	Fishershaven
	R7 152 827.00	R18 431 235.00	R4 052 778.00	R5 904 258.00
	Voëlklip	Stanford	Pearly Beach	
	R9 440 861.00	R4 228 013.00	R2 910 199.00	

### Identified Gaps

- Public Awareness and Education: This is not lacking in Overstrand, but identified as a gap as it is one of the most important aspects of successful integrated waste management and requires continuous input.
- Waste information: A new waste characterisation study in the Overstrand needs to be conducted.
- Collection Fleet: Vehicles operating beyond their economic lifetimes need to be replaced.
- Law enforcement: Stricter law enforcement needs to be applied to perpetrators of illegal dumping.
- Closed disposal sites: A number of disposal sites require rehabilitation.
- Solid waste management departments: Vacancies need to be filled to ensure that the services are rendered effectively.

### Strategic Objectives

The strategic objectives of the IWMP is centred on waste avoidance, waste reduction and waste disposal, wherever each is practical and achievable.

Overstrand Municipality needs to provide a safe, robust, and secure system for the management of wastes generated in its administrative area.

It is essential that this system can respond to changes in socio-economic situation, to changing waste composition and quantities, and to alterations in the public's perception of waste management issues. Overstrand Municipality must adopt, therefore, a combination of options for handling waste, tailored to meet the needs and prevailing circumstances of its particular administrative area. The combinations utilised will undoubtedly vary over time - reflecting the changing needs of local residents and the environment.

The plans formulated by Overstrand Municipality are specific to the area and its resources. They reflect the availability of suitable waste management facilities in the region, as well as local market demand for recovered materials.

## **IMPLEMENTATION**

The IWMP has an implementation plan which is part of 7 main goals. These goals have each been divided into actions and years of implementation with estimated costs in order to achieve the main goals. These goals are:

Goal 1: Awareness and Education

Goal 1: Awareness & Education						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
Educate, strengthen capacity and raise awareness in integrated waste management. The public will be informed and continually made aware of the impacts of waste on the environment. Municipal staff will receive training and attend forums.	Continue waste education as currently done and make use of the Youth Jobs In Waste project. It is planned that nine individuals will be working in waste awareness and education for the duration of the project.					
	Costs to be determined.					
	Overstrand Municipality Solid Waste employees to attend education seminars and waste forums. Capacity training and education conducted within the Municipality where needed.					
	Costs dependent on number of forums attended as well as costs related to internal training provided by Overstrand Municipality.					

Goal 2: Improve Waste Information Management

Goal 2: Improve Waste Information Management						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
Ensure the reporting of all waste management facilities to IPWIS. Waste quantification systems to be in place. Registration of hazardous waste generators (industry & medical) and service providers (e.g. transporters).	Registering of waste generators, transporters and recyclers and reporting to the Municipality.					
	Provision has been made for this in the integrated waste management by-laws.					
		Conduct the Waste Characterisation Study				
		Conducted through the Youth Jobs In Waste Project				
	Install a weighbridge at Hermanus transfer station	Install weighbridge at Kleinmond transfer station	Continual recording of weighbridge readings and reporting to the Waste Information System.			
	Costs not from capital budget: Paid for by Greenest Town prize money	R500 000.00				

Goal 3: Effective Solid Waste Service Delivery

Goal 3: Effective solid waste service delivery						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
Ensure that waste services are provided in an effective and environmentally responsible manner to all residents of the Overstrand Municipality.	Collection Service Review: The Overstrand Municipality must ensure that all residents receive an affordable waste service at an acceptable level. Current service levels are good and it needs to be ensured that this remains the case. Waste collection planning must be reviewed in order to provide services to new developments. The Town Engineers must liaise with the town planning department to stay up to date with new areas that require or will require service. The complaints registry and service requests must be reviewed by the Waste Management Officer at least weekly to ensure that these are properly addressed.					
	Costs determined by the review.					
	Collection Vehicles Review: 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.					
	The review will determine the vehicles which require replacement and provision can be made in the capital budget.					
	Vacant positions need to be filled. In order to provide an effective service, key vacant positions in the solid waste management departments need to be filled.					
	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.					

Goal 4: Promote and Ensure Waste Minimisation

Goal 4: Promote and Ensure Waste Minimisation						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
Maximise waste minimisation in the Overstrand Municipality. The aim is to consistently divert high percentages of waste from landfill.				Expand the source separation service where feasible. Part of the collection service review of Goal 3.		
	Current diversion operations yield good waste diversion and includes recycling and garden waste composting. Continue with this standard of diversion and improve ad the budget allows.					

Goal 5: Improve Regulatory Compliance

Goal 5: Improve Regulatory Compliance						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
Ensure the licensing of all waste management facilities that require licensing. Rehabilitate all closed landfills in Overstrand. Ensure auditing of waste management facilities and compliance with license conditions.	Enforce by-laws and review as is necessary alongside new national and provincial legislation.					
						Acquire closure license for the Gansbaai landfill.
						Not applicable to this IWMP revision. Estimated requirement for 2030.
		Rehabilitate the Onrus, Hermanus, Hawston, Fisherman's Haven, Voëlklip, Stanford and Pearly Beach landfills. Note that the Pearly Beach rehabilitation will be completed under the construction of the new dams at the sewerage works.				
	*Please note that the rehabilitation cost estimates indicated below include professional fees and construction monitoring. The estimate for each site was determined for the end of the 2014 financial year. The costs indicated below have NOT been escalated due to the year of commencement of each rehabilitation is not yet known. However, it is indicated in the issued closure licenses that rehabilitation for each site must start within 5 years from the issue of the license, indicating that rehabilitation should start for each site before 2019. These costs must be redetermined annually. In addition to the rehabilitation costs below, post-closure audits must be conducted once per year and water monitoring twice per year. The annual cost is estimated as R35000.00 per site, which includes water monitoring.					
	Onrus: R7 152 827; Hermanus: R18 431 235; Hawston: R4 052 778; Fisherman's Haven: R5 904 258; Voëlklip: R9 440 861; Stanford: R4 228 013.					
	Conduct annual internal and external audits for waste management facilities. External audit cost estimates indicated below (all facilities that require audits). Costs to fix non-compliant items will be determined by the audit findings.					
	R60 000.00	R63 600.00	R67 416.00	R71 460.96	R75 748.62	

Goal 6: Ensure Safe and Integrated Management of Hazardous Waste

Goal 6: Ensure safe and integrated management of hazardous waste						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
Provide education and management options for hazardous wastes. Ensure legal compliance by hazardous waste generators and transporters. Ensure the monitoring of the incoming waste stream at disposal facilities.	The public must be informed about household hazardous waste and the avoidance, reduction and disposal options available to them regarding these wastes. This forms part of Goal 1 of this plan. Provision has been made at the transfer stations to allow household hazardous waste to be offloaded.					
	As part of Goal 2 of this plan, the registration and reporting of hazardous waste generators at the Municipality will allow the Municipality as the service authority to ensure that the waste is stored, transported, treated or disposed as is legally required.					
	Monitoring of waste: It must be ensured that waste management employees are familiar with the latest legislation regarding hazardous waste, the identification thereof and the disposal options that are legal. Employees at waste management facilities must be able to identify the received waste loads and prohibit the disposal or offloading where required. The incoming waste loads at disposal and waste management facilities must be monitored.					



Goal 7: Ensure Sound Budgeting For Integrated Waste Management

Goal 7: Ensure sound budgeting for integrated waste management						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
Ensure that upcoming implementation actions are in the budget. Explore sources of funding.	The Municipality will ensure that there is sufficient provision in the budget for upcoming projects and action items. This can be done with the annual IWMP implementation programme review and project evaluation.					
	The Municipality will explore other sources of funding.					
	The Municipality will as part of Goal 3 ensure that the service delivered is cost efficient.					

## **MONITORING AND REVIEW**

The IWMP acts as a planning guide and requires regular updates and reviews in order to stay relevant, especially the projects for implementation. Each project must be reviewed to measure its success, shortcomings or reasons for failure. The IWMP must be updated to reflect the progress of projects or to adapt strategies. The review will also assist in budgeting for upcoming waste management projects.

As the IWMP is a sectoral plan of the IDP, the following projects are recommended to be included in the IDP:

- The rehabilitation of the Onrus, Hermanus, Hawston, Fisherman's Haven, Voëlklip and Stanford landfills.
- The construction of a weighbridge at the Kleinmond transfer station.

## OVERSTRAND MUNICIPALITY

### INTEGRATED WASTE MANAGEMENT PLAN

#### 1. PREFACE

##### 1.1 INTRODUCTION

The fourth generation of this Integrated Waste Management Plan (IWMP) has been formulated by Jan Palm Consulting Engineers (JPCE) on behalf of Overstrand Municipality to address the challenge of waste management in Overstrand, home to some 93 374 people (2015 population estimate. Refer Section 1.4). The third generation IWMP was developed in 2012 and was subsequently commented on and evaluated by the Department: Environmental Affairs and Development Planning (D:EA&DP). JPCE was appointed by the Overstrand Municipality to develop the fourth generation IWMP for 2014.

The March 2013 assessment report of the 3<sup>rd</sup> generation, 2012 IWMP is summarised as follows, which identified topics which should be addressed with the new IWMP revision:

- Introduction and general description: Requires reference to recommendations made in the assessment report.
- Strategic linkages: The IWMP must be aligned to the Integrated Development Plan (IDP), Provincial Spatial Development Framework (SDF) as well as the municipal SDF, the Western Cape IWMP and National Waste Management Strategy 2011. Indicate what will be incorporated in the IDP.
- Public participation: Include proof of public participation.
- The latest solid waste legislation must be included in the IWMP, including Municipal by-laws.
- The latest demographic information must be used from Census 2011.
- Budget and capital and operational expenditure should be shown.
- The IWMP must indicate service areas the level of free basic services and tariffs and tariff reviews.
- The IWMP must indicate an updated status of waste management licenses and compliance of waste management facilities.
- The previous IWMP does not include a waste stream characterisation.
- The IWMP must indicate which awareness and education campaigns have been successful to date, the cost of these campaigns and how the Municipality plans to improve on them.
- The IWMP must include a gaps and needs analysis.
- Implementation budget and human resources must be shown.
- There was no monitoring or review programme in the IWMP.

The terms of reference for the development of the Overstrand fourth generation IWMP include a status quo analysis, strategic objectives and an implementation plan.

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 that has as its goal the transformation of the current methodology of waste management, i.e. 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 and the National Waste Management Strategy (NWMS 2011).

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, but also the issues of public education and changing concepts, as these are vital to a successful management system.

## 1.2 IWMP DEVELOPMENT

The planning phase of the fourth generation IWMP included the following:

The scope of the plan follows the D:EA&DP's checklist for Integrated Waste Management Planning. The checklist is attached as **Annexure 1**.

The public participation phase of the development of the IWMP was in the form of advertisements in the local newspapers. The draft document was available at the public libraries, municipal offices and at [www.jpce.co.za](http://www.jpce.co.za) for the public to view and comment on. The draft IWMP served as base on which to provide comment and input. No comments were received during the comment phase from the public. The D:EA&DP provided comments and these comments were addressed where applicable in the IWMP.

The participants in the Overstrand IWMP fourth generation process are Mr J. van Taak (Manager: Solid Waste Planning, Waste Management Officer Overstrand) and Jan Palm Consulting Engineers (Consulting Civil Engineers specializing in Solid Waste Management) with communication and input from the various Municipal officials who provided information contributing to the IWMP development. During the public comment phase, other participants have the opportunity to contribute to the IWMP development before the release of the final document, e.g. NGO's. The IWMP will have to be approved by Council, as it forms part of the IDP.

A project meeting was held at the Overstrand Municipal Offices in Hermanus on the 1<sup>st</sup> of October 2014 which was attended by the project team. The contents of the document, required information and planned way forward were discussed.

The waste streams and quantities discussed in this IWMP include household waste, garden (green) waste, commercial and industrial waste and building & demolition waste. Medical waste and hazardous wastes are also discussed, but accurate quantities are unknown at this stage.

## 1.3 OVERSTRAND MUNICIPALITY GENERAL DESCRIPTION

Overstrand Municipality is located along the south western coastline of the Overberg District Municipal area bordering the City of Cape Town in the west and Cape Agulhas Municipality in the east. Its northern neighbour is Theewaterskloof Municipality.

The area is noted for its floral kingdom as well as whale-watching.

The Overstrand Municipality was established in terms of Provincial Notice 494/2000 published in Provincial Gazette 5591 (Western Cape) dated 22 September 2000. It is an amalgamation of the areas of the earlier municipalities of Hangklip-Kleinmond, Greater Hermanus, Stanford and Greater Gansbaai.

Refer to Figure 1-1 for a Plan of the Study Area.

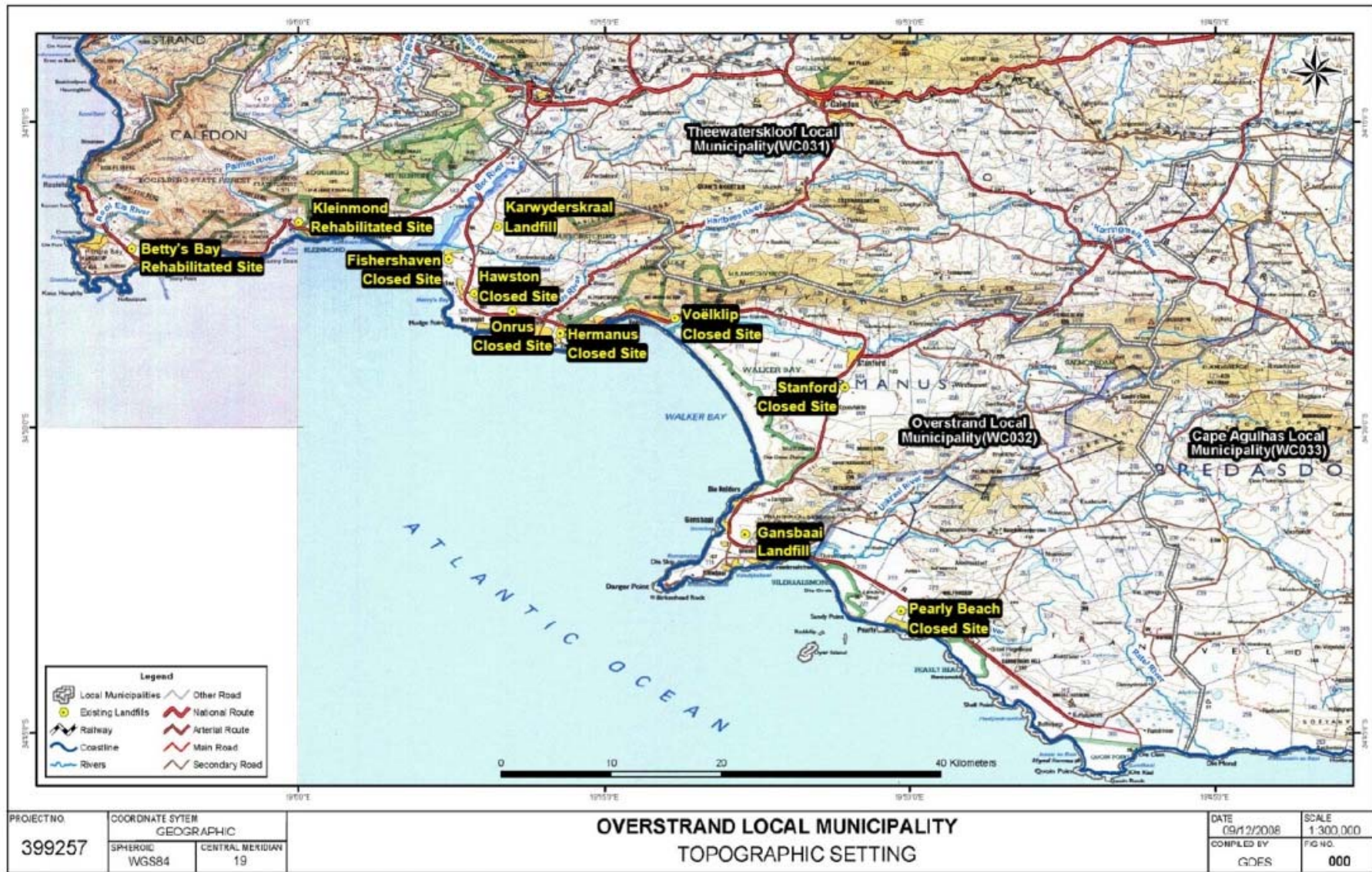


Figure 1:1: Study Area - Overstrand Municipality

### **1.3.1 Geology and Hydrogeology**

#### **1.3.1.1 Geology**

(Refer Figure 1-2)

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 resistant quartzitic sandstones separated by the Cederberg 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 Baardskeerdersbos 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, calcarenite and calcrete deposits. They 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.

A number of regional fault systems cut the area with the main trend being ENE-WSW.

#### **1.3.1.2 Groundwater**

(Refer to Figure 1-3 and Figure 1-4)

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 mauve on Figure 1-3. Aquifers developed in the granites can be of the fractured and intergranular type (weathered zone) and are coloured light red on Figure 1-3.

The towns of Hermanus, Gansbaai, Kleinmond, Pearly Beach, Buffeljags and Stanford all derive part of their water supplies from groundwater sources and as such is it crucial that the Municipality prevent any groundwater contamination by regularly monitoring groundwater quality at the landfill sites.

The Malmesbury and Bokkeveld Group rocks are of generally low 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 on the resistant quartzitic sandstones. The best potential in this aquifer is found in the coastal plain area around Hermanus and the Kleinmond area. In the former area the Gateway Wellfield has been developed for supply to Hermanus from deep (>150 m) boreholes. Further exploratory drilling is taking place in this aquifer in the Hemel-en-Aarde Valley for further supply to Hermanus and also inter alia for the towns of Baardskeerdersbos and Buffeljags.

Gansbaai derives part of its water supply from springs emanating from palaeochannels in the TMG bedrock, e.g. at De Kelders and Stanford's 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 is largely undeveloped and un-characterized but could have good potential given its thickness and storage capacity. This aquifer is tapped to some extent for supply to 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.

Eskom has identified a site about 5 km to the south-east of Pearly Beach, Bantamsklip, as being potentially suitable for establishment of a nuclear power plant and investigations are underway to determine the suitability of the site from an engineering and EIA perspective. Groundwater occurrence at this site has been shown to be minimal and of poor potential.

### **1.3.2 Hydrology**

The Overstrand municipal area has a number of rivers flowing from the northern mountain range towards the coast. Most prominent of these are the Bot River, Klein River and Uilkraal River. All three of these rivers open up into lagoons before discharging into the ocean.







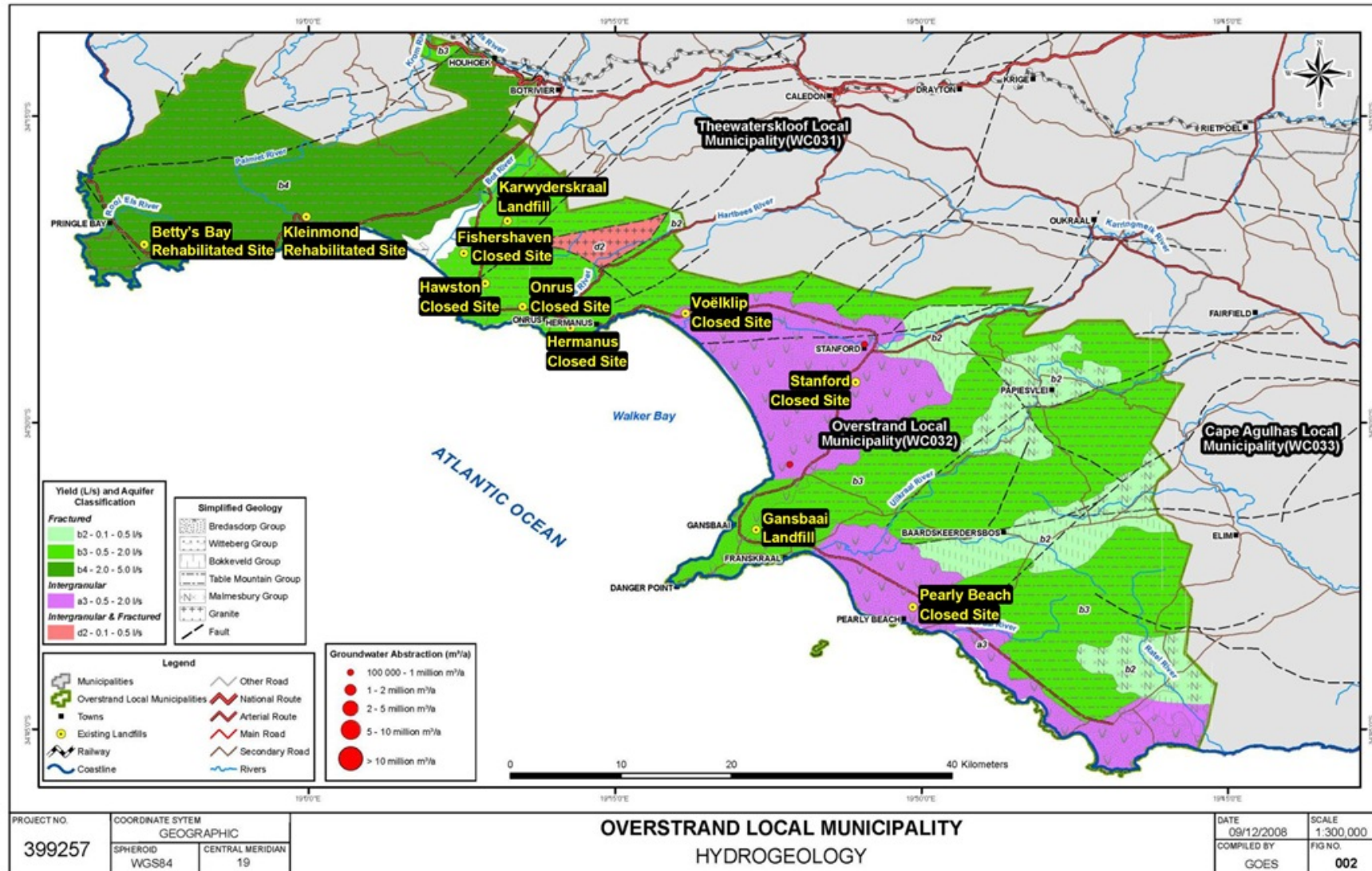
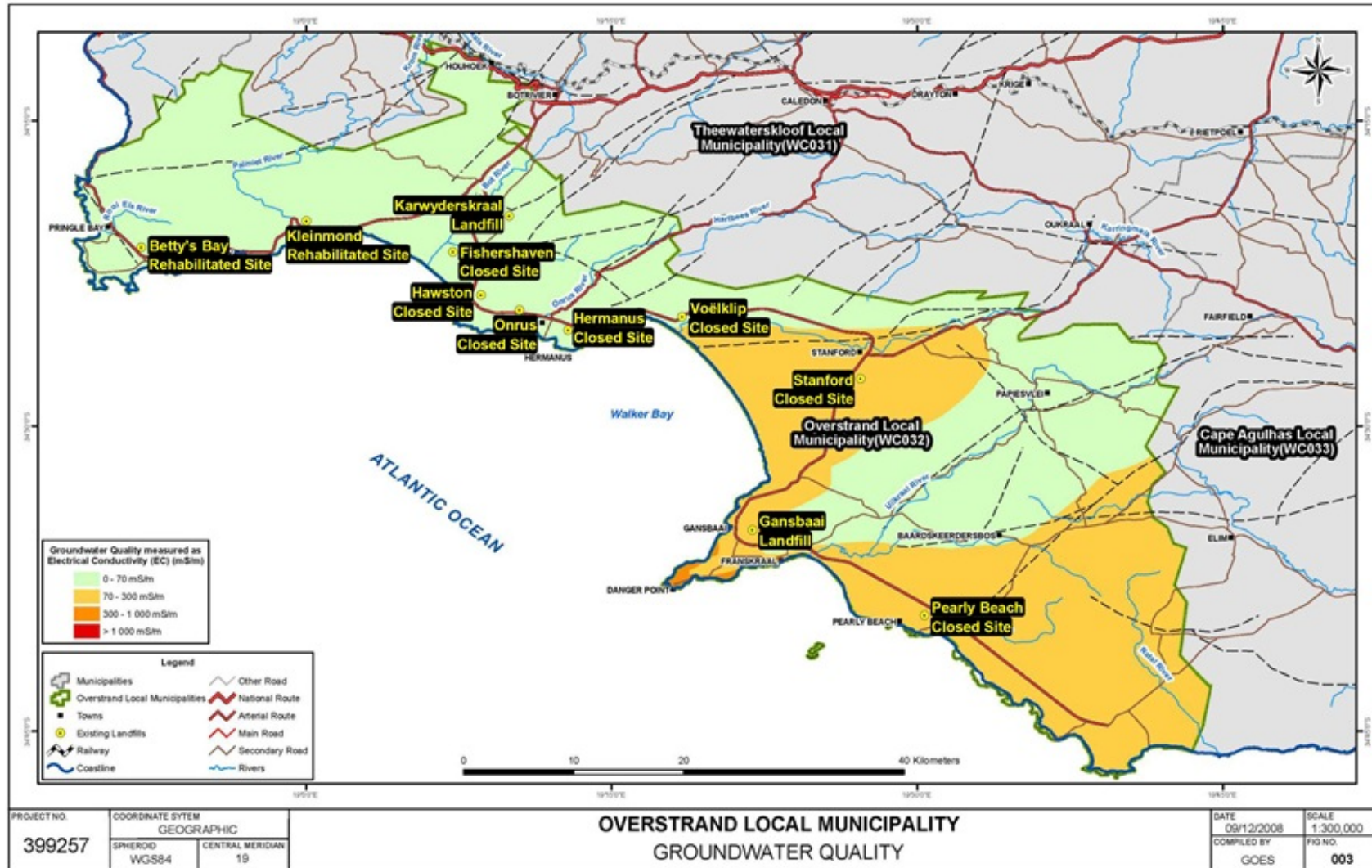


Figure 1:3: Hydrogeology of Overstrand Municipal Area



**Figure 1:4: Groundwater Quality of the Overstrand Municipal Area**

## 1.4 DEMOGRAPHICS

The statistics relating to population were taken from Statistics SA. The latest 2011 Census population figures were used. The 2011 census shows the total Overstrand Municipality population as 80,433 people with an annual growth rate of 3.8% since the 2001 Census. This growth rate was applied to the population figures per sub-area to estimate the 2015 sub-area numbers, 2015 total population and future population projections. These are shown in Table 1-1 below.

The population profile according to household income in Table 1-2 below reflects census 2011 distributions. The income groups are divided as following Very Low Income: R0 - R9 600; Low Income: R9601 – R38 200; Middle Income: R 38 201 – R 76 400; High Income: R76 401 – R153 800; Very High Income: R 153 801 and more. The 2001 ratio of Low & Very low income: Mid Income: High & Very high income was 63.2%: 17.8%: 19.3%. (Total average) The average percentage distribution of Low & Very low income: Mid Income: High & Very high income groups from the 2011 Census figures were 52.8%: 15.6%: 31.6% (Total average), showing an overall decline (in percentage) in the Low & Very Low income groups.

Of those aged 20 years and older, 5% have completed primary school, 37.7% have some secondary education, 27.7% have completed matric and 16.8% have some form of higher education. 2.5% of those aged 20 years and older have no form of schooling.

The 2015 number of households in Table 1-2 were estimated from the 2011 figures, with the assumption that the average household size per sub-area would remain constant

**Table 1-1: Population Figures**

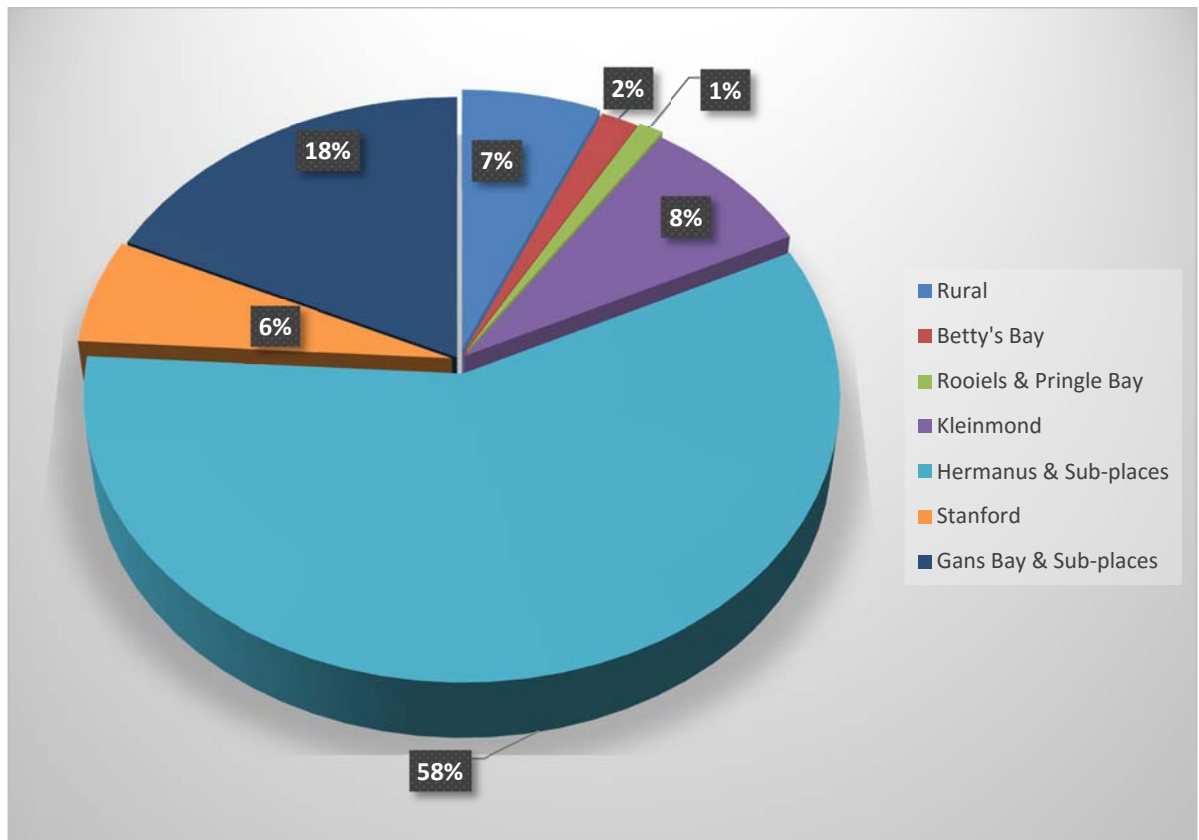
Sub-area	2011	2015	2020
<b>Rural</b>			
Lebanon State Forest	72	84	101
Highlands State Forest	75	87	105
Overstrand NU	5 076	5 893	7 101
Walker Bay State Forest	27	31	38
<b>Betty's Bay</b>			
Betty's Bay SP	1 380	1 602	1 930
<b>Rooi-Els &amp; Pringle Bay</b>			
Rooi-Els SP	126	146	176
Pringle Bay SP	804	933	1 125
<b>Kleinmond</b>			
Arabella Country Estate SP	66	77	92
Kleinmond SP	6 633	7 700	9 279
<b>Hermanus &amp; Surrounds</b>			
Fisherhaven SP	723	839	1 011
Hawston SP	8 214	9 536	11 490
Onrus River SP	3 159	3 667	4 419
Vermont	1 992	2 312	2 787
Fernkloof Estate	114	132	159
Voëlklip	1 155	1 341	1 616
Hermanus SP 2	24	28	34
Hermanus SP	4 314	5 008	6 035
Mount Pleasant	4 848	5 628	6 782
Hemel en Aarde	513	596	718
Sand Bay SP	3 591	4 169	5 023
Zwelihle SP	18 210	21 140	25 473
<b>Stanford</b>			
Stanford SP	4 797	5 569	6 710
<b>Gansbaai &amp; Surrounds</b>			
Die Kelders	1 074	1 247	1 502
Gansbaai SP	10 527	12 221	14 726
Birkenhead SP	54	63	76
Van Dyks Bay SP	501	582	701
Uilenkraalsmond	102	118	143
Franskraalstrand SP	1 068	1 240	1 494
Baardscheeders Bosch SP	105	122	147
Pearly Beach SP	1 041	1 208	1 456
Viljoenshof	48	56	67
<b>Total</b>	<b>80 433</b>	<b>93 374</b>	<b>112 515</b>

The socio-economic profile of the population in 2011, according to annual household income, is displayed in Table 1-2 along with the 2015 estimates per sub-area. Note that rural households are included.

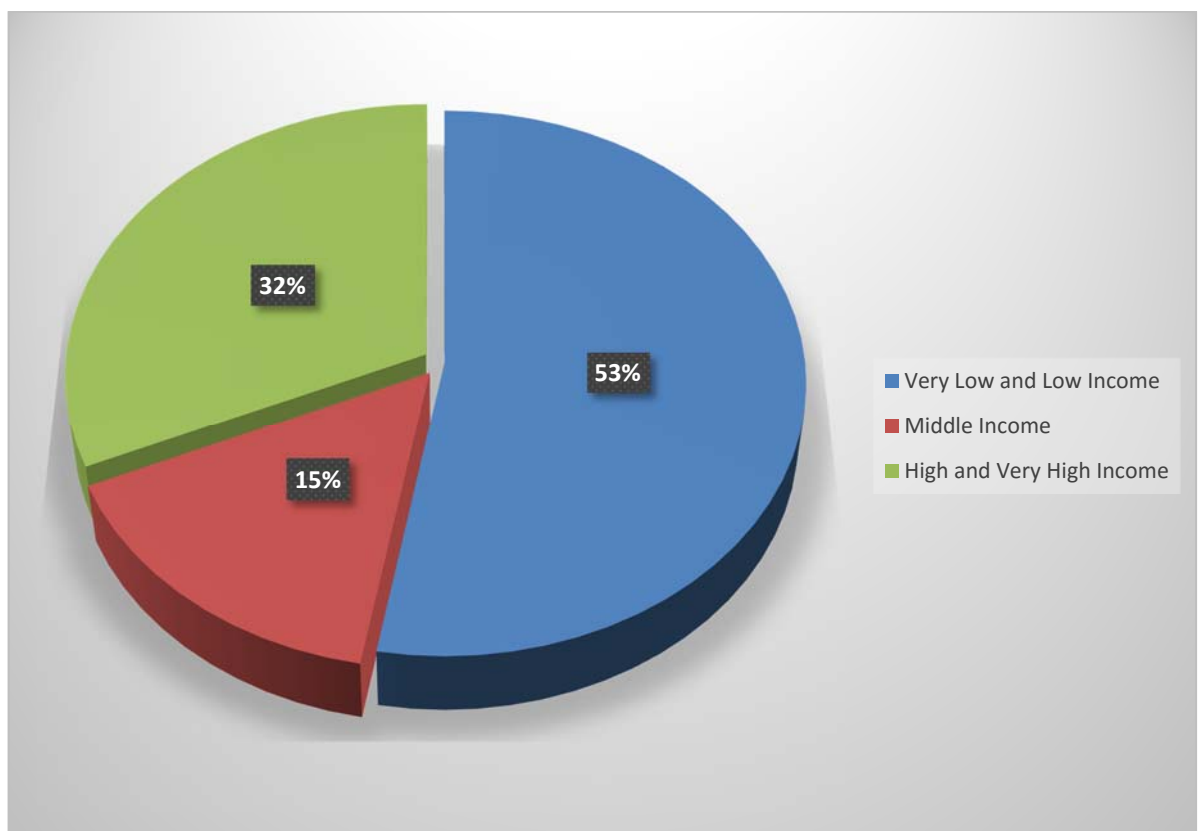
**Table 1-2: Population Profile According to Household Income (2011 & estimated 2015)**

Sub-area	No of Households 2011	Population (2011)	Persons per Household	Very Low and Low Income R0 - R38400	Middle Income R38401 - R76800	High and Very High Income R76801 or more	No of Households 2015	Population (2015)
<b>Rural</b>								
Lebanon State Forest	27	72	2.7	55.6%	22.2%	22.2%	32	84
Highlands State Forest	18	75	4.2	50.0%	16.7%	33.3%	21	87
Overstrand NU	1 713	5 076	3.0	49.9%	18.2%	31.9%	1 989	5 893
Walker Bay State Forest	15	27	1.8	40.0%	20.0%	40.0%	18	31
<b>Betty's Bay</b>								
Betty's Bay SP	660	1 380	2.1	25.5%	16.4%	58.2%	767	1 602
<b>Rooi-Els &amp; Pringle Bay</b>								
Rooi-Els SP	66	126	1.9	13.6%	13.6%	72.7%	77	146
Pringle Bay SP	432	804	1.9	26.4%	19.4%	54.2%	502	933
<b>Kleinmond</b>								
Arabella Country Estate SP	36	66	1.8	25.0%	0.0%	75.0%	42	77
Kleinmond SP	2 733	6 633	2.4	56.2%	12.7%	31.1%	3 173	7 700
<b>Hermanus &amp; Surrounds</b>								
Fisherhaven SP	309	723	2.3	23.3%	21.4%	55.3%	359	839
Hawston SP	1 935	8 214	4.2	53.8%	23.7%	22.5%	2 247	9 536
Onrus River SP	1 440	3 159	2.2	25.6%	12.5%	61.9%	1 672	3 667
Vermont	867	1 992	2.3	20.8%	15.9%	63.3%	1 007	2 312
Fernkloof Estate	54	114	2.1	16.7%	5.6%	77.8%	63	132
Voëlklip	540	1 155	2.1	12.8%	8.3%	78.9%	627	1 341
Hermanus SP 2	9	24	2.7	66.7%	0.0%	33.3%	11	28
Hermanus SP	1 629	4 314	2.6	21.2%	13.6%	65.2%	1 892	5 008
Mount Pleasant	936	4 848	5.2	46.2%	25.3%	28.5%	1 087	5 628
Hemel en Aarde	207	513	2.5	23.2%	7.2%	69.6%	241	596
Sand Bay SP	1 431	3 591	2.5	34.0%	12.6%	53.5%	1 662	4 169
Zwelihle SP	6 282	18 210	2.9	79.8%	12.8%	7.4%	7 293	21 140
<b>Stanford</b>								
Stanford SP	1 488	4 797	3.2	69.8%	15.3%	14.9%	1 728	5 569
<b>Gansbaai &amp; Surrounds</b>								
Die Kelders	495	1 074	2.2	20.6%	18.8%	60.6%	575	1 247
Gansbaai SP	3 294	10 527	3.2	69.4%	15.8%	14.8%	3 824	12 221
Birkenhead SP	12	54	4.5	0.0%	25.0%	75.0%	14	63
Van Dyks Bay SP	261	501	1.9	19.5%	26.4%	54.0%	303	582
Uilenkraalsmond	45	102	2.3	40.0%	40.0%	20.0%	53	118
Franskraalstrand SP	546	1 068	2.0	33.0%	18.7%	48.4%	634	1 240
Baardscheerders Bosch SP	39	105	2.7	38.5%	15.4%	46.2%	46	122
Pearly Beach SP	489	1 041	2.1	63.8%	17.8%	18.4%	568	1 208
Viljoenshof	24	48	2.0	37.5%	25.0%	37.5%	28	56
<b>Total</b>	<b>28 032</b>	<b>80 433</b>	<b>2.9</b>	<b>52.80%</b>	<b>15.55%</b>	<b>31.65%</b>	<b>32 555</b>	<b>93 374</b>





**Figure 1:5: Graphical Display of Population Distribution 2015 (Source data: Census 2011 information extrapolated)**



**Figure 1:6: Graphical Display of Socio-Economic Distribution (2011, Source data Census 2011)**

#### 1.4.1 **Future development**

Future development areas and urban densification strategies are discussed in detail in the Municipal Spatial Development Framework, Integrated Development Framework and Strategic Environmental Framework and is not repeated in this document. The solid waste management departments (Infrastructure & planning and community services) is aware of all new developments which will require solid waste services and plans accordingly.

#### 1.5 **TRANSPORT INFRASTRUCTURE**

The major roads in the Overstrand are the R43 and the R44, which effectively link most of the towns within the Municipal boundary. The R326 links Stanford with the N2 as well as with the R316 road between Caledon and Napier. All waste is transported by road.

#### 1.6 **STRATEGIC LINKAGES**

**Table 1-3: Strategic Linkages**

<b>Western Cape IWMP</b>	<b>NWMS (2011)</b>	<b>Overstrand IWMP</b>	<b>Overstrand SDF</b>	<b>Overstrand IDP</b>
Goal 1: Educate, strengthen capacity and raise awareness in integrated waste management	Goal 4: Ensure that people are aware of the impact of waste on their health, well-being and the environment	Goal 1: Public Awareness & Education		KPA OS 4 (b): Effective communication and community involvement
Goal 2: Improve waste information management	Goal 5: Achieve integrated waste management planning	Goal 2: Waste Quantification & Information		KPA OS 1 (a): Effective Development of Municipal Infrastructure
Goal 3: Promote sound, adequate and equitable waste management	Goal 2: Ensure the effective and efficient delivery of waste services	Goal 3: Effective Solid Waste Service Delivery	6.2.2 Housing Strategy: - ensuring bulk services development and provision is co-ordinated with the housing plan	KPA OS 1 (a): Effective Development of Municipal Infrastructure
			6.2.3 Bulk Service Infrastructure Provision	KPA OS 1 (b): Effective Management, Operation and Maintenance of Municipal Infrastructure
Goal 4: Mainstream Integrated Waste Management Planning in municipalities and industry	Goal 5: Achieve integrated waste management planning	Goal 4: Promote and Ensure Waste Minimisation		KPA OS 5: Safe and healthy environment
	Goal 1: Promote waste minimisation, re-use, recycling and recovery of waste	Goal 1: Public Awareness & Education		
Goal 5: Mainstream sustainable waste management practices	Goal 1: Promote waste minimisation, re-use, recycling and recovery of waste	Goal 4: Promote and Ensure Waste Minimisation	6.2.3 Bulk Service Infrastructure Provision	KPA OS 1 (a): Effective Development of Municipal Infrastructure

Western Cape IWMP	NWMS (2011)	Overstrand IWMP	Overstrand SDF	Overstrand IDP
	Goal 3: Grow the contribution of the waste sector to the green economy	Goal 3: Effective Solid Waste Service Delivery		
Goal 6: Strengthen the waste regulatory system/framework	Goal 8: Establish effective compliance with and enforcement of the Waste Act	Goal 5: Improve Regulatory Compliance		KPA OS 1 (a): Effective Development of Municipal Infrastructure
	Goal 2: Ensure the effective and efficient delivery of waste services			KPA OS 4: Good governance
	Goal 7: Provide measures to remediate contaminated land			
Goal 7: Ensure the safe and integrated management of hazardous waste	Goal 7: Provide measures to remediate contaminated land	Goal 6: Ensure the safe and integrated management of hazardous waste	6.2.5 Priority areas for biodiversity conservation	KPA OS 5: Safe and healthy environment
		Goal 5: Improve Regulatory Compliance		
		Goal 1: Public Awareness & Education		
Goal 8: Facilitate access to funds to implement Integrated Waste Management	Goal 6: Ensure sound budgeting and financial management for waste services	Goal 7: Ensure sound budgeting for integrated waste management	6.2.4 Initiate: place specific key economic development projects/drivers	KPA OS 3: Effective financial management

## 2. **BACKGROUND POLICY AND LEGISLATION**

The fragmented and uncoordinated way pollution and waste has been dealt with, as well as insufficient resources to implement and monitor existing legislation, contributes largely to the unacceptably high levels of pollution and waste in South Africa. Through the promulgation and implementation of various pieces of policies, legislation, standards and guidelines as well as the implementation of co-operative governance as envisaged in the Constitution this situation will be improved. The current fragmentation, duplication and lack of co-ordination will be eliminated.

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.

### 2.1 **CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA 1996 (ACT 108 OF 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 of 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 an 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-sectoral 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. ”***

This 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, among other things, pollution and ecological degradation are prevented.

## **2.2 NATIONAL ENVIRONMENTAL MANAGEMENT ACT 1998 (ACT 107 OF 1998)**

The NEMA 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.

### **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). 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.

## **2.3 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, R5000 (Five Thousand Rand) if the S&EIR is triggered or R1000 (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

### 2.3.1 **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 Environment Conservation Act, 1989 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.

### 2.4 **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 (HEALTH CARE RISK WASTE). Health Care Risk Waste generally indicates infectious waste, pathological waste, sharps, chemical and pharmaceutical waste, radioactive and cytotoxic waste.

## **2.5 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 1: Minimum Requirements for health care risk waste containers
- Annexure 2: Minimum Requirements for storage of health care risk waste in terms of regulation 3
- Annexure 3: 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

## **2.6 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, licenses 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).

## **2.7 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.

## **2.8 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 must be reached by 2016. All listed targets must be reached by 2016:

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

- 25% of recyclables 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 licenses 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.

## **2.9 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.

## **2.10 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 organisations 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 matters.

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.

## **2.11 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.

## **2.12 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 license 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 license 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 license 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 license for a waste disposal facility is subject of the inclusion in the license 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).

## **2.13 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 NOTICE 37083, 29 NOVEMBER 2013**

This notice replaces the 3 July 2009 list of activities that trigger a waste license 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 sorting, shredding, grinding, crushing, screening or baling of general waste at a facility that has an operational area in excess of 1000m<sup>2</sup>.
- (3) The recycling of general waste at a facility that has an operation area in excess of 500m<sup>2</sup>, excluding recycling that takes place as an integral part of an internal manufacturing process within the same premises.
- (4) 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.
- (5) The recovery of waste including the refining, utilisation, or 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**

- (6) 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.
- (7) 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.
- (8) The remediation of contaminated land.

#### **Disposal of waste**

- (9) 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.
- (10) The disposal of general waste to land covering an area of more than 50m<sup>2</sup> but less than 200m<sup>2</sup> and with a total capacity not exceeding 25 000 tonnes.
- (11) 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**

- (12) The construction of facilities for waste management schedule activity listed in Category A of this Schedule (not in isolation to associated activity).
- (13) 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
- (14) 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 200m<sup>2</sup> 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 this Schedule (not in isolation to associated waste management activity).

## **CATEGORY C**

5. A person who wishes to commence, under take or conduct a waste management activity listed under this Category, must comply with the relevant requirements 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.

### **Storage of waste**

- (1) The storage of general waste at a facility that has the capacity to store in excess of 100m<sup>3</sup> 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 80m<sup>3</sup> 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 500m<sup>2</sup>.

### **Recycling or recovery of waste**

- (4) The scrapping or recovery of motor vehicles at a facility that has an operational area in excess of 500m<sup>2</sup>.
- (5) The extraction, recovery or flaring of landfill gas."

## **2.14 NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT NO. 59 OF 2008): NATIONAL DOMESTIC WASTE COLLECTION STANDARDS, GOVERNMENT NOTICE 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.

**2.15 NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT NO. 59 OF 2008): NATIONAL WASTE INFORMATION REGULATIONS, GOVERNMENT NOTICE 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 1 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 1 to the Regulations must comply with the provincial waste information regulations.

**2.16 NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT NO. 59 OF 2008): WASTE CLASSIFICATION AND MANAGEMENT REGULATIONS, GOVERNMENT NOTICE 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 License; 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.

Chapter 2 of the Notice covers Waste Classification and Safety Data Sheets. Chapter 3 covers Waste Management in General, Waste Treatment and Waste Disposal to Landfill. Chapter 4 covers Waste Management Activities that do not require a Waste Management License. Chapter 5 covers the Record Keeping and Waste Manifest System. 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

Annexure 2: Waste Manifest System Information Requirements

**2.17 NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT NO. 59 OF 2008): NATIONAL NORMS AND STANDARDS FOR THE ASSESSMENT OF WASTE FOR LANDFILL DISPOSAL, GOVERNMENT NOTICE 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.

**2.18 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 1 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 1 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 (2<sup>nd</sup> 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.

## 2.19 NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT NO. 59 OF 2008): FEE STRUCTURE FOR CONSIDERATION AND PROCESSING OF APPLICATIONS FOR WASTE MANAGEMENT LICENSES, TRANSFER AND RENEWAL THEREOF, GOVERNMENT GAZETTE NO 37383, 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 a waste management license for which basic assessment is required in terms of the Act.	R2 000.00
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

## 2.20 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

## 2.21 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 is applicable to a vehicle scrapping or recovery facility with an operational area exceeding 500m<sup>2</sup> and describes how such a facility must be designed, operated, monitored and decommissioned.

**2.22 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 100m<sup>3</sup> general waste continuously or 80 m<sup>3</sup> of hazardous waste continuously.

**2.23 NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT NO. 59 OF 2008): NATIONAL NORMS AND STANDARDS FOR ORGANIC WASTE COMPOSTING, GOVERNMENT GAZETTE NO 37300, 7 FEBRUARY 2014**

These Norms and Standards is 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.

**2.24 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 to provide minimum standards for assessing necessary environmental protection measures for remediation activities.

**2.25 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 NOTICE 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).

**2.26 DRAFT VERSION: NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE AMENDMENT ACT, 2014 (ACT NO. 26 OF 2014): IMPLEMENTATION GUIDE**

The purpose of the document is to provide a guideline to the public on how the Department of Environmental Affairs will interpret and implement the National Environmental Management: Waste Amendment Act, 2014 (Act No. 26 of 2014). As the Act is implemented and new issues emerge, the Department will provide further guidance and add to the document.

**2.27 NATIONAL POLICY FOR THE PROVISION OF BASIC REFUSE REMOVAL SERVICES TO INDIGENT HOUSEHOLDS. GOVERNMENT NOTICE 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.

## **2.28 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.

## **2.29 PLANNING DOCUMENTS**

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

The 2014 PSDF replaces the 2009 PSDF. The 2014 PSDF states that new recovery/recycling facilities and related awareness programmes need to be rolled out in order to counter the increasing waste generation and need for new waste disposal sites. Challenges are illegal dumping, shortfalls in hazardous waste facilities, growing informal settlements and a lack of recyclable collection from homes. Emphasis is placed on the “reduce, rethink, recycle” mindset that needs to be established. The following policies address solid waste:

#### **“Provincial Spatial Policies**

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.

#### **Waste**

1. Learning lessons from the City of Cape Town’s recycling programme, mainstream recycling and recovery of waste in the high waste generation areas of the Province to unlock economic opportunities and increase the lifecycle of current disposal sites. Apply the principles of ‘reduce, reuse, 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.”

Under Regional Economic Infrastructure the following is stated for solid waste systems:

- “- Increase waste recycling and reuse by replicating the City of Cape Town’s programme in all settlements.
- Adopt waste to energy in long term.”

## **2.30 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.

### **2.30.1 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.

### **2.30.2 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. These will be gazetted for public comment in 2012.

### **2.30.3 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. Responsible departments will finalise arrangements for banning orders in 2012.

### **2.30.4 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.

A National Implementation Plan has been developed and it will be reviewed in light of the Waste Act and finalised in 2012.

Furthermore, a study has been initiated to investigate the extent of manufacture, use, import and export of new POPs listed in this convention. The study will determine if South Africa should ratify the newly added POPs. This document will be finalised in 2012.

## **2.31 MUNICIPAL BY-LAWS**

The Overstrand Municipality compiled and published their Integrated Waste Management By-law since the previous IWMP revision. This by-law was published in the Provincial Gazette of 12 July 2013. The full by-law is attached as **Annexure 2** or can be downloaded at [www.overstrand.gov.za](http://www.overstrand.gov.za).

As the old by-law has been replaced by the comprehensive Integrated Waste Management By-law, no new revision is planned or recommended in the IWMP. The by-law makes provision to responsibly regulate waste in the Overstrand and is in line with the Waste Act.

### **3. EXISTING WASTE MANAGEMENT IN OVERSTRAND MUNICIPALITY**

#### **3.1 AWARENESS AND EDUCATION**

The lack of public awareness of the gravity of the problem of sustainable waste management has a significant impact on the effectiveness of the management of waste.

Our poor history of waste management in South Africa means that we pay little attention to our lifestyle insofar as how it affects the environment. However, when an environmental problem is noted and the public are made aware of the need for action, there is no stronger lobby. This has been evident with the Eskom power crisis in recent years. This situation has caused that people in South Africa have looked to alternative sources of electricity from small- to large scale. It is now an almost every-day sight to see people applying electricity saving practices at home. For example, solar panels are frequently seen on roofs (and these panels are becoming more efficient) and hot water geysers are fitted with timers so as not to consume electricity throughout the whole day or are simply switched on and off as needed. Creating awareness of the issue of sustainable waste management may have a similar outcome. With landfill airspace becoming more and more restricted, alternative options minimising or avoiding the need for disposal becomes necessary.

The successful implementation of the Overstrand IWMP will require that all persons within the Municipal boundaries are aware of waste issues as an integral part of the creation of a healthy environment. They should be empowered to play their specific role in the development and implementation of the waste management initiatives.

Public participation is closely linked with education and public awareness. The significant difference between awareness programmes and public participation is that public awareness focuses on disseminating information, whereas public participation aims at obtaining participation, comment, input and feedback from the public.

##### **3.1.1 Public Awareness and Education in Overstrand Municipality**

The Overstrand Municipality makes use of their official newsletter, the Overstrand Bulletin, to keep the public informed and updated with the latest matters, including solid waste topics. For example, the latest (October 2014) issue discusses the Youth Jobs In Waste programme as follows:

“The Department of Environmental Affairs (National) has launched a project called ‘*Youth Jobs in Waste*’ for all the municipalities in the Western Cape. The key focus of the *Youth Jobs in Waste* projects is employment of young people and to equip them with skills to have a better chance for obtaining permanent employment. They will be utilized in the following categories: Waste management administration, Landfill administration, Environmental Awareness campaigns and general work. Overstrand Municipality is excited about the opportunity to train local youth to do environmental awareness for the upliftment and empowerment of our communities and to contribute to better living conditions for all. The recruitment process has been finalised and residents are requested to give these youngsters their full co-operation with the awareness campaigns. This project will last for one year with a possibility to extend for another year.”

Copies of the Overstrand Bulletin can be downloaded from the Overstrand Municipal Website.

Mr van Taak also visits schools in the Municipal area to educate scholars about waste management.

## 3.2 WASTE QUANTITIES AND TYPES

### 3.2.1 Methodology for General Waste Survey

The waste disposed in the Overstrand is weighed and recorded. The Gansbaai Landfill and Karwyderskraal landfills are equipped with weighbridges and therefore all general waste disposed in the Overstrand are weighed. The Municipality reports the quantities to the IPWIS and the new Integrated Waste Management By-law makes provision for this. The By-law also makes provision for the Municipality to obtain data from other waste management entities located within the municipal boundaries for the purpose of reporting to the IPWIS.

The following table summarises the recorded waste totals for the 2013/2014 financial year. The negative values in the garden waste column shows that more garden waste was chipped than was generated that month, meaning that the stockpile from the previous months was reduced. The diversion quantity is the sum of the recycled waste, chipped garden waste and portion of building and demolition waste that was crushed during the month. This total is divided by the quantity in the first column of Table 3-1 in order to obtain the percentage diversion:

**Table 3-1: Recorded Waste Totals**

	<b>Total Waste (t)</b>	<b>General Waste (t)</b>	<b>Garden Waste (t)</b>	<b>Building and demolition waste (t)</b>	<b>Chipped Greens (t)</b>	<b>Recycling Tailings (t)</b>	<b>Recycled (t)</b>	<b>Total Disposed (t)</b>	<b>Total Diverted (t)</b>	<b>Diversion %</b>
Jul-13	5 139.45	3 111.78	141.18	254.38	1 046.78	314.22	271.11	3 697.80	1 441.65	<b>28%</b>
Aug-13	4 606.12	2 774.06	307.82	497.54	614.24	185.82	226.64	3 391.32	1 214.80	<b>26%</b>
Sep-13	3 749.98	2 594.67	124.24	236.02	419.32	142.18	233.55	2 923.17	826.81	<b>22%</b>
Oct-13	4 463.13	2 956.21	141.78	364.44	531.38	236.92	232.40	3 418.69	1 044.44	<b>23%</b>
Nov-13	4 527.97	2 968.86	108.56	364.20	755.74	95.68	234.93	3 228.58	1 299.39	<b>29%</b>
Dec-13	5 007.39	3 650.77	192.46	358.10	378.80	129.94	297.32	4 013.21	994.18	<b>20%</b>
Jan-14	5 487.96	3 266.53	933.77	657.61	198.99	129.16	301.90	4 649.04	838.92	<b>15%</b>
Feb-14	6 597.96	4 659.92	409.84	510.50	658.96	128.84	229.90	5 380.98	1 216.98	<b>18%</b>
Mar-14	4 913.04	3 161.62	61.03	530.71	912.26	65.10	182.32	3 486.08	1 426.96	<b>29%</b>
Apr-14	6 802.28	4 368.63	1 049.44	957.07	111.30	99.28	216.56	6 208.21	594.07	<b>9%</b>
May-14	5 147.19	3 081.98	- 111.29	927.79	962.81	75.40	210.50	3 567.29	1 579.90	<b>31%</b>
Jun-14	5 291.67	3 008.85	- 119.16	1 215.82	842.38	143.36	200.42	3 724.23	1 567.44	<b>30%</b>
<b>Total</b>	<b>61 734.13</b>	<b>39 603.88</b>	<b>3 239.67</b>	<b>6 874.18</b>	<b>7 432.96</b>	<b>1 745.90</b>	<b>2 837.55</b>	<b>47 688.60</b>	<b>14 045.54</b>	<b>23%</b>

### 3.2.2 Volumes of General Waste generated

The above information and totals were used to determine the average waste generation rates for the different income groups of the Overstrand population and to estimate the quantities generated per sub-area. Note that the quantities in **Table 3-3** do not include building and demolition waste. Building and demolition waste quantities fluctuate monthly and is not dependent on population waste generation, but rather economy related. The high generation rates can be explained by the fact that the Overstrand receives a lot of holiday-goers throughout the year on weekends. They contribute to the waste generated and recorded, but are not part of the Overstrand recorded Census population.

**Table 3-2: Calculated Average Waste Generation Rates**

Income group	kg/person/day
Very Low & Low	0.94
Middle	1.41
High & Very High	2.83

**Table 3-3: Waste Quantities calculated for Overstrand Municipality**

Sub-area	Population (2014)	Waste Generated in Tonnes/year (2014)	Population (2015)	Waste Generated in Tonnes/year (2015)	Population (2016)	Waste Generated in Tonnes/year (2016)	Population (2017)	Waste Generated in Tonnes/year (2017)	Population (2018)	Waste Generated in Tonnes/year (2018)	Average Waste Generation Factor for Area in kg/p/d
<b>Rural</b>											
Lebanon State Forest	84	48	87	50	90	52	93	54	97	56	1.57
Highlands State Forest	87	56	90	58	94	60	97	62	101	65	1.75
Overstrand NU	5 893	3 727	6 117	3 868	6 349	4 015	6 590	4 168	6 841	4 326	1.73
Walker Bay State Forest	31	22	33	22	34	23	35	24	36	25	1.89
<b>Betty's Bay</b>											
Betty's Bay SP	1 602	1 298	1 663	1 347	1 726	1 398	1 792	1 452	1 860	1 507	2.22
<b>Rooi-Els &amp; Pringle Bay</b>											
Rooi-Els SP	146	132	152	137	158	143	164	148	170	154	2.48
Pringle Bay SP	933	735	969	763	1 006	792	1 044	822	1 084	854	2.16
<b>Kleinmond</b>											
Arabella Country Estate SP	77	69	80	71	83	74	86	77	89	80	2.46
Kleinmond SP	7 700	4 754	7 993	4 935	8 296	5 123	8 612	5 317	8 939	5 519	1.69
<b>Hermanus &amp; Surrounds</b>											
Fisherhaven SP	839	671	871	696	904	723	939	750	974	779	2.19
Hawston SP	9 536	5 505	9 898	5 714	10 274	5 931	10 664	6 157	11 070	6 391	1.58
Onrus River SP	3 667	3 040	3 807	3 156	3 951	3 275	4 101	3 400	4 257	3 529	2.27
Vermont	2 312	1 954	2 400	2 028	2 492	2 105	2 586	2 185	2 685	2 268	2.31
Fernkloof Estate	132	123	137	127	143	132	148	137	154	142	2.54
Voëlklip	1 341	1 259	1 392	1 307	1 445	1 356	1 500	1 408	1 557	1 461	2.57
Hermanus SP 2	28	17	29	18	30	18	31	19	32	20	1.67
Hermanus SP	5 008	4 275	5 198	4 438	5 396	4 607	5 601	4 782	5 814	4 963	2.34
Mount Pleasant	5 628	3 499	5 842	3 631	6 064	3 769	6 294	3 913	6 533	4 061	1.70
Hemel en Aarde	596	520	618	540	642	560	666	581	691	603	2.39
Sand Bay SP	4 169	3 215	4 327	3 337	4 492	3 464	4 662	3 596	4 839	3 732	2.11
Zwelihle SP	21 140	9 609	21 943	9 975	22 777	10 354	23 642	10 747	24 541	11 155	1.25
<b>Stanford</b>											
Stanford SP	5 569	2 845	5 780	2 953	6 000	3 065	6 228	3 182	6 465	3 303	1.40

Sub-area	Population (2014)	Waste Generated in Tonnes/year (2014)	Population (2015)	Waste Generated in Tonnes/year (2015)	Population (2016)	Waste Generated in Tonnes/year (2016)	Population (2017)	Waste Generated in Tonnes/year (2017)	Population (2018)	Waste Generated in Tonnes/year (2018)	Average Waste Generation Factor for Area in kg/p/d
<b>Gansbaai &amp; Surrounds</b>											
Die Kelders	1 247	1 036	1 294	1 076	1 343	1 116	1 394	1 159	1 447	1 203	2.28
Gansbaai SP	12 221	6 240	12 685	6 477	13 167	6 723	13 667	6 979	14 187	7 244	1.40
Birkenhead SP	63	59	65	61	68	64	70	66	73	68	2.58
Van Dyks Bay SP	582	465	604	482	627	501	650	520	675	539	2.19
Uilenkraalsmond	118	70	123	72	128	75	132	78	137	81	1.61
Franskraalstrand SP	1 240	926	1 287	961	1 336	997	1 387	1 035	1 439	1 075	2.05
Baardscheerders Bosch SP	122	88	127	92	131	95	136	99	142	103	1.99
Pearly Beach SP	1 208	651	1 254	676	1 302	702	1 352	729	1 403	756	1.48
Viljoenshof	56	38	58	39	60	41	62	43	65	44	1.87
<b>Total</b>	<b>93 374</b>	<b>56 945</b>	<b>96 922</b>	<b>59 109</b>	<b>100 605</b>	<b>61 355</b>	<b>104 428</b>	<b>63 686</b>	<b>108 396</b>	<b>66 106</b>	<b>1.67</b>

### **3.2.3 Commercial and Industrial Waste**

Due to unavailable separate data, commercial and industrial waste is included in the above totals.

### **3.2.4 Garden Waste**

From the above data, the total garden waste generated per annum in the Overstrand is approximately 10 673 tonnes, which is 17% of the generated waste stream.

### **3.2.5 Building and demolition waste**

Building and demolition waste quantities fluctuate significantly per month. The total from the recorded quantities in Table 3-1 for the year from July 2013 to June 2014 is 6874.18 tonnes.

### **3.2.6 Recoverable Material Volumes**

The Department of Environmental Affairs and Development Planning (DEA&DP) commissioned a study in 2007 to determine the characterisation of the disposed waste at various landfills in the Overberg District. From that study, the anticipated average waste composition of the Overstrand Municipality can be derived to include the following recyclable materials (by mass):

Paper and Card board:	20%
Plastics:	13%
Glass:	6%
Metal:	4%

The Sustainable Cities Institute (United States) and California Department of Resources Recycling and Recovery recommend that the American Society for Testing and Materials (ASTM) standards are followed when collecting samples for waste characterisation to be statistically representative. Their proposed method was developed to obtain characterisation from the disposed waste stream. For Disposal Facility type sampling, which was the case in the above study, a minimum total of 30 samples of 90kg each for the residential sector or 40 samples of 90kg each for the non-residential sector should be used. Another requirement is that the samples to be taken are spread over at least two seasons.

To align a new waste characterisation study with the above guidelines in order to obtain data with a high level of confidence, the following is recommended:

- 30 samples of 90kg each are to be sampled randomly at the Hermanus Transfer Station, Kleinmond Transfer Station and Gansbaai Landfill spread over the year. (Total samples split between the facilities)
- The following schedule is proposed to obtain representative samples from the waste stream: One sample per day, Monday to Saturday, for one week of every second month, starting in January as the first month and November as the last. This will amount to a total of 36 samples spread over all four seasons and every day of the week.
- The requirement for this exercise per disposal facility will then be 5 workers to take samples and categorise waste, employed for a total of 36 days throughout the year. They can be employed as part of the Extended Public Works Programme (EPWP) or the Youth Jobs in Waste Project. For EPWP, working with an average of R120 per person per day, this totals R21600.00. The team can be led by the Municipality's waste manager and also be trained by him or someone delegated by him. A total of R5000.00 is estimated if a consultant then reworks the data and reports on the gathered data. This can also be done by the Municipality to limit expenses.

The 2007 characterisation report is still the best available representation of the Overstrand waste stream. To conduct a waste characterisation study that meets the above statistical requirements will require data collected over an entire year. Until such a study is commissioned and completed, the existing report is used for the purposes of this IWMP.

From the waste composition as reflected in the 2007 report, it can be calculated that the total volume of recoverable materials that are theoretically available in the waste stream will be as indicated in Table 3-4. These characterisation percentages were applied to the waste stream of the permanent population.

**Table 3-4: Potential Quantities of Available Recoverable Materials**

Sub-area	PAPER/ CARD (t/a)	PLASTICS (t/a)	GLASS (t/a)	METAL (t/a)
<b>Rural</b>				
Lebanon State Forest	9	6	3	2
Highlands State Forest	10	7	3	2
Overstrand NU	701	455	210	140
Walker Bay State Forest	4	3	1	1
<b>Betty's Bay</b>				
Betty's Bay SP	247	161	74	49
<b>Rooi-Els &amp; Pringle Bay</b>				
Rooi-Els SP	25	16	8	5
Pringle Bay SP	140	91	42	28
<b>Kleinmond</b>				
Arabella Country Estate SP	13	9	4	3
Kleinmond SP	892	580	268	178
<b>Hermanus &amp; Surrounds</b>				
Fisherhaven SP	128	83	38	26
Hawston SP	1029	669	309	206
Onrus River SP	580	377	174	116
Vermont	373	243	112	75
Fernkloof Estate	24	15	7	5
Voëlklip	242	157	72	48
Hermanus SP 2	3	2	1	1
Hermanus SP	817	531	245	163
Mount Pleasant	657	427	197	131
Hemel en Aarde	99	65	30	20
Sand Bay SP	611	397	183	122
Zwelihle SP	1761	1145	528	352
<b>Stanford</b>				
Stanford SP	527	342	158	105
<b>Gansbaai &amp; Surrounds</b>				
Die Kelders	198	129	59	40
Gansbaai SP	1155	751	347	231
Birkenhead SP	11	7	3	2
Van Dyks Bay SP	89	58	27	18
Uilenkraalsmond	13	8	4	3
Franskraalstrand SP	176	114	53	35
Baardscheerders Bosch SP	17	11	5	3
Pearly Beach SP	121	79	36	24
Viljoenshof	7	5	2	1
<b>Total</b>	<b>10679</b>	<b>6942</b>	<b>3204</b>	<b>2136</b>

The above theoretical figures give a total of approximately 22 961 tonnes per annum, which is 40% of the generated waste stream. It should be noted that this reflects the recyclable portion of the waste stream only as the mathematical representation. The full 40% cannot be seen as recoverable in the practical sense, at least not yet.

Due to the methods of collection, i.e. the collection of mixed un-separated household waste, a large amount of deterioration and contamination of potentially recoverable material takes place. Post-collection recovery (as is currently the norm in South Africa) implies that only a part of the above tonnages are available for recovery and recycling, due to contamination. For that reason separation at source is considered to be the preferred methodology to increase the volumes and value of recovered materials. Even with source separation some contamination still takes place, but less than mixed bag waste.

Although experience has shown that participation by the public is largely economy driven, the current trend is that separation at source, which implies that recoverable materials are separated by the home owner and "given" to the municipality (or Service Provider) for free, is mainly supported by the middle and higher income groups, whereas the low and very low income groups support buy-back centres or swap-shops where recoverable materials are bought/traded from the residents.



However, recently acquired data (measured quantities in Drakenstein Municipality over 5 years, Overstrand Municipality over 3 years and Swartland Municipality over 10 years) illustrates that the implementation of source separation only leads to a 1% increase in over-all recovered material volume. This small increase may be attributed to the fact that source separation was only implemented in a certain group of neighbourhoods and not throughout the whole of the area where the data was received. If one looks at the statistics per neighbourhood, the increase in material recovery is reportedly 15%. With these relatively small gains in recovery, the Municipality should evaluate the economic feasibility of implementing a source separation system. It is still the preferred collection method, but expensive to implement and would probably receive lower priority as opposed to alternative strategies and action plans that need to be executed by the Municipality in the upcoming years.

Recent statistics obtained from the Drakenstein Municipality show that participation rates, based on number of households, are as following: The Middle income group participation rates vary between 12-25% and the High income group participation vary between 35-40%. The low and very low income groups participate at an average of 11-15%.

With the assumed strategy of source separation and “clean” Material Recovery Facilities where the source separated materials are sorted into its various groups and sub-groups, and assuming that middle and high income groups participate at a 45% average and low and very low income groups participate at a 15% average, it can be calculated that the current (2015) recovery volumes will be as indicated in **Table 3-5. Note that these quantities represent what can be expected if only the source separated portion of the waste stream is processed at a “clean” MRF.**

**Table 3-5: Calculated Volumes of Recovery of Source Separated Materials**

Sub-area	Participating Waste (t/a)	PAPER/ CARD (t/a)	PLASTICS (t/a)	GLASS (t/a)	METAL (t/a)
<b>Rural</b>					
Lebanon State Forest	15.3	0.6	0.1	0.4	0.1
Highlands State Forest	19.1	0.8	0.1	0.5	0.1
Overstrand NU	1272.8	53.5	9.9	33.6	5.1
Walker Bay State Forest	7.9	0.3	0.1	0.2	0.0
<b>Betty's Bay</b>					
Betty's Bay SP	514.6	21.6	4.0	13.6	2.1
<b>Rooi-Els &amp; Pringle Bay</b>					
Rooi-Els SP	55.0	2.3	0.4	1.5	0.2
Pringle Bay SP	289.5	12.2	2.3	7.6	1.2
<b>Kleinmond</b>					
Arabella Country Estate SP	27.7	1.2	0.2	0.7	0.1
Kleinmond SP	1561.4	65.6	12.2	41.2	6.2
<b>Hermanus &amp; Surrounds</b>					
Fisherhaven SP	267.3	11.2	2.1	7.1	1.1
Hawston SP	1784.9	75.0	13.9	47.1	7.1
Onrus River SP	1208.3	50.8	9.4	31.9	4.8
Vermont	790.0	33.2	6.2	20.9	3.2
Fernkloof Estate	50.6	2.1	0.4	1.3	0.2
Voëlklip	525.8	22.1	4.1	13.9	2.1
Hermanus SP 2	5.3	0.2	0.0	0.1	0.0
Hermanus SP	1728.9	72.6	13.5	45.6	6.9
Mount Pleasant	1210.1	50.8	9.4	31.9	4.8
Hemel en Aarde	209.5	8.8	1.6	5.5	0.8
Sand Bay SP	1229.4	51.6	9.6	32.5	4.9
Zwelihle SP	2222.4	93.3	17.3	58.7	8.9
<b>Stanford</b>					
Stanford SP	784.2	32.9	6.1	20.7	3.1
<b>Gansbaai &amp; Surrounds</b>					
Die Kelders	418.4	17.6	3.3	11.0	1.7
Gansbaai SP	1724.1	72.4	13.4	45.5	6.9
Birkenhead SP	25.5	1.1	0.2	0.7	0.1
Van Dyks Bay SP	187.4	7.9	1.5	4.9	0.7
Uilenkraalsmond	24.4	1.0	0.2	0.6	0.1
Franskraalstrand SP	353.2	14.8	2.8	9.3	1.4
Baardscheerders Bosch SP	32.9	1.4	0.3	0.9	0.1
Pearly Beach SP	192.9	8.1	1.5	5.1	0.8
Viljoenshof	14.0	0.6	0.1	0.4	0.1
<b>Total</b>	<b>18753.0</b>	<b>787.6</b>	<b>146.3</b>	<b>495.1</b>	<b>75.0</b>

<i>Assumptions for Source Separation:</i>	<i>45% participation Mid &amp; High Income groups</i>
	<i>15% participation Low &amp; Very Low Income groups</i>
<i>Recovery % actual data from WastePlan:</i>	<i>21% recovery of available Paper and Cardboard</i>
	<i>6% recovery of available Plastics</i>
	<i>44% recovery of available Glass</i>
	<i>10% recovery of available Metals</i>

### **3.2.7 Paper and Cardboard**

Paper and Cardboard form the foundation for any recovery venture, due to the relative stable demand and numerous recycled products made from recovered paper.

Waste paper is transformed from one type to another during the recycling process. The supply and demand for waste paper, although stable, is cyclical in nature, and therefore marketing patterns have to be adapted accordingly.

Some of the factors that contribute to this cyclical demand for recovered paper are:

- difficulty for mills to carry large stock
- periodic mill shut-downs result in fluctuations in demand
- paper stock is considered perishable and thus hazardous to store
- space for storage of stock is limited and costly

Some materials produced with recycled paper pulp include: newspapers, packaging, bags, tissue and towels, corrugated boxes, shoe boxes and files, egg cartons and fruit packing layers.

If paper and cardboard products are clean and separated into different types, significantly higher prices are fetched for the recovered materials.

### **3.2.8 Glass**

Glass recovery for recycling has had a very erratic history, due to only one recycler having a monopoly in the market. When the capacity of the kilns is full, the price used to drop dramatically due to an over-supply and no demand. Fortunately this situation has stabilized and a constant market for recovered glass is currently prevailing.

The separation of glass is very successful in separation at source activities since it is easy to identify by the home owners. Experience in the City of Cape Town has shown that most home owners whom participate in separation at source also wash their glass products before putting it in the recyclables bag.

### **3.2.9 Plastic**

Several types of plastics are typically recycled, i.e. PET (transparent plastic bottles e.g. 2 litre cool drink bottles), HDPE (milk containers), LDPE and mixed plastics. Recycled PET is used in the manufacture of small moulded products, such as handles, sporting goods and furniture. Recycled HDPE is used for producing flowerpots, dustbins and a variety of other containers. Mixed plastics are normally used for the manufacture of outdoor furniture, pallets, and plastic timber.

The recent introduction of a levy on shopping bags has caused the amounts arriving at the landfill to reduce dramatically. Less plastic bags are disposed of, as they are recovered and are now manufactured of better quality and thicker plastic.

In order to recycle plastics using current traditional methodology, it has to be sorted into the various categories, and washed if contaminated by the other wastes. Alternative technologies are currently being evaluated (also in South Africa) that could eliminate the need for sorting of plastics.

### **3.2.10 Metal**

Metals are the single most recoverable item in the waste stream. Very little degradation takes place during collection. It follows that a relatively small amount ends up in the waste stream, as all types of metal are removed for re-sale at various stages of the waste handling process.

One of the major components of ferrous wastes is the steel can (95% of all cans in the Metropolitan Areas). Non-ferrous metals such as Aluminium and Copper are very scarce in our waste streams, due to its extremely high salvaging value. These are usually removed at source.

### 3.2.11 **Economic Sustainability of Waste Recovery**

Although the recovery of materials of value from the waste stream for recycling or re-use is one of the basic operations in future integrated waste management, the question regarding its financial and economical sustainability should always be asked and answered.

Local experience over the last decade has shown that the South African recycling market, or rather the recycled product market, is very small and very susceptible to unforeseen activities, e.g. if one paper mill burns down, the effect on the waste paper market, and the prices, is significant. The South African “market” is simply too small to absorb these types of set-backs.

But one must consider the economical sustainability and not only the financial sustainability. Economic sustainability considers the whole life-cycle cost and not only the rands and cents of a specific financial year and taking into consideration the avoided costs of airspace saving and also the cost on the environment for the resultant smaller utilisation of virgin resources. An interesting stipulation in the Waste Act, Section 17 (1) (a), is that one may not recover materials from waste if it costs more environmental resources to recover, than it would to dispose of that material – a good example of the total or life-cycle costing principle.

Prices for recovered materials vary greatly from city to city and province to province, from baled to unbaled, from dirty to clean and from material type. External factors also play a significant role such as the oil price, e.g. due to a previous low crude oil price of approximately US\$43 per barrel had caused new plastic to be cheaper than recycled plastic – cheaper, not necessarily more economical. The result was that recyclers at that moment (January 2009) could not even give their LDPE plastic away where only a month before it was sold for R1500/tonne.

The above does not imply or insinuate that recovery should not be supported, but that both recovery AND the establishment of a recycled goods market should be supported. This is an aspect that cannot be addressed on a local authority level, but must be addressed on a Provincial and/or National level to optimise economy of scale.

Benefits must also be shared. For example, if a municipality saves airspace and transport cost due to recovery, a portion of that saving (avoided costs) should be passed on to the recovery effort to ensure that it is sustainable. If not, as was proven in SA previously, the recovery effort closes down and the municipality loses its avoided cost saving.

The January 2015 prices for recovered materials delivered in Cape Town are displayed in Table 3-6.

**Table 3-6: January 2015 Prices of Recovered Materials in Waste Stream**

<b>MATERIAL</b>	<b>PRICE IN RAND/TON FOR BALED MATERIAL</b>
Card board	1000
White Paper	1300
Newsprint	750
Glossy Paper	450
Mixed Paper	580
Metals (Mainly cans)	1300
Glass (All colours, Crushed)	400
Plastic (PET, No 1, White, Blue, Green)	3600
Plastic (PET, No 1, Brown)	1000
Plastic (HDPE, No 2)	3000
Plastic (LDPE, No 4)	2000
Plastic (Polypropylene, No 5)	2500
Plastic (Polystyrene, No 6)	1300

### 3.2.12 **Priority Waste Streams**

#### 3.2.12.1 **Tyres**

In accordance with the recently published Norms and Standards of 23 August 2013, no whole waste tyres may be landfilled, effective from the publication date. Tyres that are landfilled, must be quartered. After five years from the publication date no tyres, quartered or otherwise, may be landfilled. The municipality will have to develop an action plan to manage tyres generated within the municipal area.

#### 3.2.12.2 **Hazardous and Health Care Risk Waste**

All health care waste generators register at the Overberg District Municipality and must make use of a compliant service provider. They are then issued with a certificate from the Municipality. Quantities are not available so the industrial and health care waste survey from the previous IWMPs were included here. The registered generators as received from the District Municipality are as follows:

**Table 3-7: Registered Health Care Waste Generators**

<b>Generator</b>	<b>Cert. No.</b>	<b>Service Provider</b>
Dr HC Barnard	O/M/G/1/06	
Drs Barnard & Fourie	O/M/G/2/06	Millennium
Dr F du Preez	O/M/G/3/06	Canon Hygiene
Gansbaai Apteek	O/M/G/4/06	
Herberg aan See	O/M/G/5/06	Millennium
Dr AG Nel	O/M/G/6/06	Sanumed
EC Buchner	O/M/G/7/11	Canon Hygiene
Anre Begrafnisdienste	O/M/G/8/12	Canon Hygiene
Dr HC Barnard	O/M/G/9/12	Solid Waste Tech.
Gansbaai Medi Praktyk	O/M/G/10/13	Solid Waste Tech.
Gansbaai Kliniek	O/M/G/11/13	Solid Waste Tech.
Whale Coast Animal Consulting Rooms	O/M/G/12/13	Canon Hygiene
Red Inks	O/M/G/13/13	Solid Waste Tech.
Dr O koorts	O/M/S/01/06	Sanumed
Dr. Marianna Steyn	O/M/S/02/06	Sanumed
Stanford Health Cottage	O/M/S/03/06	Sanumed
Dr. W v/d Walt	O/M/S/04/12	Pathcare
Dr. Marianna Steyn	O/M/S/05/13	Sanumed
General Medical Practice	O/M/S/06/13	Pathcare
Albertyn Apteek	O/M/K/1/06	Solid Waste Tech.
Dr JP Duvenage	O/M/K/2/06	Sanumed
Dr F du Plessis & van Niekerk	O/M/K/3/06	Sanumed
Dr J Engelbrecht	O/M/K/4/06	Solid Waste Tech.
Kogelpark Kliniek	O/M/K/5/06	Millennium
Dr TF Malherbe	O/M/K/6/06	Sanumed
Fynbos Seniorsentrum	O/M/K/7/06	Sanumed
Kleinmond Animal Clinic	O/M/K/8/06	Pet Cremation Services
Kleinmond Apteek	O/M/K/9/06	Solid Waste Tech.
Kleinmond Animal Clinic	O/M/K/10/07	Millennium
Kogelpark Kliniek	O/M/K/5/8	Solid Waste Tech.
Dr F du Plessis & van Niekerk	O/M/K/11/8	Steinmed
Albertyn Apteek	O/M/K/12/8	Steinmed
Dr JP Duvenage	O/M/K/13/8	Steinmed
Fynbos Seniorsentrum	O/M/K/14/8	Steinmed
Kleinmond Apteek	O/M/K/15/8	Thermal Plant JHB
Dr EH Moses	O/M/K/16/9	Solid Waste Tech.
Dr HJ Visser	O/M/K/17/10	Solid Waste Tech.
Dr F du Plessis & van Niekerk	O/M/K/18/11	Canon Hygiene
Supersmile Dental Care	O/M/K/19/11	Solid Waste Tech.
Albertyn Apteek	O/M/K/20/12	Solid Waste Tech.

### 3.2.13 Volumes of Hazardous Wastes Generated

#### 3.2.13.1 Industrial Hazardous Waste

Industries were visited physically (2009) and a survey of each possible hazardous waste generator was made per industry/ 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.

**Table 3-8: Quantities of Industrial Hazardous Waste Generated in Overstrand Municipality in kg/a (2009)**

	A: Agriculture, Forestry & Food Production	B: Mineral Extraction & Upgrading	C: Energy	D: Metal Manufacture	E: Manufacture of Non-Metal Mineral Products	F: Chemical & Related Industries	G: Metal Goods, Engineering & Vehicle Industries	H: Textile, Leather & Wood Industries	I: Garages & Workshops	J: Manufacture of Paper Products, Printing & Publishing	K: Medical, Sanitary & other Health Services	L: Commercial & Personal Services
Hermanus	-	-	-	-	-	-	-	261,312	269,079	60	-	-
Gansbaai Area	10,120	-	-	-	-	-	-	35,000	5,630	-	-	-
Kleinmond Area	-	-	-	-	-	-	24,810	-	-	6	-	-
Stanford	-	-	-	-	200	-	-	-	3,120	-	-	-
Sub-totals	10,120	-	-	-	200	-	24,810	296,312	277,829	66	-	-
Total	609,337 kg/a											

##### 3.2.13.1.1 Status Quo: Gansbaai Area

The biggest industrial area is adjacent to Masekhane, towards Franskraal. There are light industries in the area with the highest hazard waste described as empty lead-acid batteries and used oils. Empty metal cans are collected by two recyclers in the industrial area, as well as used oil. There is a used oil collector operating in the industrial area. Nobody knows him by name, but he collects the used oil and he reportedly supplies the chain saw operators with fuel for the clearing of bush.

There are various manufacturers of concrete products of which only one had visible pools of contaminated water standing on his property. This generator admits to the water mixture merely draining into the sub-soils.

A sea bamboo processor is in the industrial area. The bamboo is macerated and exported for use in the beer industry. Initially, dust was generated causing irritation due to the iodine and salt content. The air filters were upgraded and no nuisances are lately caused.

Tyres are usually collected by farmers and boat owners. The remaining tyres are landfilled.

Used batteries are recycled by Sabbat and Willard Batteries, collecting the old batteries when supplying new batteries to the dealers.

There are a few panel-beaters and spray painters in the industrial area. Some of the industrial units in which they are based have a lot of petroleum-based soil pollution, probably due to poor management of the waste.

No formal used oil recycling exists. A workshop owner in town has taken his own initiative to collect used oil from a few other workshops in town. He keeps the oil in drums on his premises until collected by the "chainsaw operators". The owner of the two garages in town disposes off all the empty oil cans and plastic containers to the landfill via the normal municipal collection service.

Asbestos sheets are occasionally generated in building & demolition waste. Mr D Crafford (Operational Manager of the Gansbaai and Stanford areas during the 2009 study) noticed sheets in the landfill.

The fishing industry consists of three operators, all operating in the harbour area. Two operators produce occasional fish waste for disposal on the landfill. The rinse water is pumped into the deep sea. The third operator is a sardine canning and fishmeal producer, not generating any hazardous waste.

There is no industry except for two fuel suppliers in all of Pearly Beach, Franskraal, Kleinbaai and De Kelders. Empty oil cans from the fuel suppliers at Pearly Beach and Kleinbaai are handled differently. The number of cans at Pearly Beach is unknown. Cans are collected by the municipality twice a week, with the waste arising from a general dealer. Disposal is at Gansbaai landfill. The Kleinbaai fuel dealer stores all the empty oil cans that are collected by various informal scrap recyclers.

#### 3.2.13.1.2 Status Quo: Stanford

Stanford has a Business Park with many empty units.

Prima Crushers (Afrimat), Stanford Motors and Naude Earth Movers are the only generators of hazardous waste. Prima Crushers is the only concern that uses Oilkol to remove used oil, even if only 1 x 210 liters per year. Empty oil cans and plastic containers are stored in a Caltex container on the garage forecourt. However, the container is emptied by the municipal vehicle and the empty oil containers disposed of at the Gansbaai landfill.

The local brewery is running along international production standards and is very environmentally conscious. The spent grain is used as animal feed while the effluent consisting of diatomaceous earth is contained in a tank until removed by the municipal tanker to the Sewage Works.

Used tyres are used for support of an embankment at the shooting range, otherwise disposed of at the Gansbaai Landfill.

#### 3.2.13.1.3 Status Quo: Hermanus

There are two major industrial areas in Hermanus, i.e. Hermanus industries and Sandbaai industries. The comments are based on both industries.

The fuel suppliers and workshop managers are probably the generators with the most hazardous waste. The waste generally has a hazard rating of 3 to 4 and consists mainly of used oil and/or used oil containers. The larger fuel suppliers are very environmentally conscience and contract either the local recycler (Walker Bar Recycling) or even transport the containers to Cape Town for recycling by Collect-a-Can. Various of the smaller fuel suppliers are simply not concerned and "throw the cans in the bag or wheelie" for collection by the municipality. Although many of the cans will be extracted by recyclers at the municipal Transfer Station, the cans are entering the Transfer Station as part of the mixed general waste stream.

Shell Petroleum is apparently phasing out the 500 ml metal cans and use plastic "bottles" instead. The ratio between plastic and metal containers varies from garage to garage. The annual weight of the containers per generator was calculated according to the ratio in which it is generated. Each 500 ml container is coated with an approximated 20 ml residue that remains in the container when the oil is decanted. The oil weight is not included in the mass of each container.

Used oil is generally collected by Oilkol. However, various private people are collecting from 20 to 210 liter each. They collect the used oil from the used oil generators when they require a fuel for use in chainsaw operations. There is also a private person with a fuel tanker, very similar in colour and size to the Oilkol tanker that collects from used oil generators in the Hermanus area. He arrives with the unlabelled tanker at generators without prior arrangement. He pays the generator per liter that he removes. The name of the person and the end use of the used oil are not known. He issues invoices to the generators where he obtains the used oil. The generators that made use of this contractor have no copies of the invoices available that he issued, or his contact detail.

There is an owner of a piece of earth moving equipment that generates bio fuel. He was not available and is working on an oil drill in Moss gas for extended periods. The secretary mentioned this activity but does not have any further information.

The generation of wood off cuts and saw dust from furniture, trusses and cupboard manufacturers are a concern, even if not hazardous waste. The quantity is vast and very often the wood off-cuts disappear in the general waste stream. The Municipal Transfer Station has a separate area for wood off cuts and sawdust. However, the generators transporting the waste product to the Transfer Station do not consistently agree to off-loading it in the dedicated areas of the Transfer Station.

The re-use of wood and composting of untreated sawdust could contribute to an increase in resource management.

The management of used tyres is a major challenge. The tyres stockpile to a level that even re-use by the farmers becomes a saturated market. All of the tyre suppliers urgently requested alternatives to used tyre disposal.

Used vehicle batteries are returned to the suppliers. Only two units of lead-acid batteries were found to be stored in all of the industries in the area. The recycling of used lead-acid batteries is very efficient.

Used fluorescent tubes are generally taken to the Transfer Station for storage since the placement of the hazardous waste collection containers by the municipality.

The generation of used printer cartridges seems to be a “disposal problem.” Very little awareness exists for the recycling and/or re-use of cartridges. The generators of printing development fluid are far and few. The generator in Hermanus recycles the fluids through the supplier.

The spray painters using thinners are generally returning the spent product to the supplier, Auto Industrial Suppliers (AIS) in the Strand. AIS recycles the thinners.

Various concrete products such as wet decks, bricks and ornaments are made in the industrial area. The empty bags are generally collected by builders for use during casting as a protective wrapping around electrical pipes, etc.

The steel industry mostly manufactures gates, safety bars, furniture and crafts. The process is mostly welding of steel with little hazardous waste generation.

Discharge of hazardous industrial effluents without a permit was not observed during the questioning of generators. This statement was generally supported by the lack of sewer transgressions registered by the municipality.

Walker Bay Recycling is a great asset to the area as it is apparent that the company identifies, source and sort as much of the waste at source as possible. A major fuel supplier mentioned that they do not even know how many oil cans they generate and are not concerned about the recycling as it is done very efficiently on their behalf by Walker Bay Recycling

#### 3.2.13.1.4 Status Quo: Kleinmond Area

The Kleinmond industries generating hazardous waste are mostly in the Harbour Industrial area. Used oil cans from the one fuel supplier are disposed of at the transfer Station with the general waste. A second fuel supplier is opening in the main road during June 2009. Used oil is mainly removed by Oilkol for recycling.

The steel industry is similar but smaller than Hermanus.

The tyre management problem, effective lead-acid battery recycling and the re-use of concrete-cement bags, is similar to the Hermanus status quo.

The villages of Bettie's Bay, Pringle Bay and Rooi-Els do not have industrial hazardous waste generators.

### 3.2.13.2 Health Care Risk Waste

Health Care Waste (HCW) consists of Health Care General Waste (HCGW) from offices, etc as well as Health Care Risk Waste (HCRW) arising from material contaminated with body fluids, etc.

The Overberg District Municipality published a by-law during 2004 (PK6141, 25 June 2004), that allows for all Health Care Risk Waste generators to become listed and receive a Health Care Risk Waste disposal certificate number. New Health Care Risk Waste generators must apply to the ODM for permission to operate in the region and dispose of Health Care Risk Waste in a responsible manner.

There are various Health Care Risk Waste generators in the Overstrand municipality of which the major generators are the two hospitals including the provincial clinics.

Most of the Health Care Risk Waste generators are very responsible in the storage, handling and disposal of the waste.

Types of Health Care Risk Waste:

There are various types of Health Care Risk Waste generated namely:

- Sharps consist of injection needles, blades and often broken glass ampoules.
- Contaminated bandages and materials may contain any material contaminated with body fluids such as plastic gloves, drip tubing, contaminated cotton wool, bandages, etc. Often, syringes are also added to this container.
- Anatomical parts from theater amputations, etc.
- Fetuses and placentas from abortions and births arise in the pediatric wards.
- Blood as Health Care Risk Waste is generated mostly in theater as well as pathological laboratories.
- Expired pharmaceuticals has usually reached the end of its shelf life
- Carcasses are generated at the veterinary institutions such as the SPCA, TEARS and the veterinary consulting rooms. The carcasses are usually euthanised animals.
- Uncontaminated pressurised containers are usually separated and disposed of as general waste.
- Radio-active Health Care Risk Waste is generated by iodine type drips used for analytical purposes or cancer treatment medication. Health Care Risk Waste that may be removed as low radio-active Health Care Risk Waste for treatment and/or disposal must be below 74 Bq/g.

**Table 3-9: Quantities of Health Care Risk Waste in Overstrand Municipality (2009)**

Generator	Health Care Risk Waste Types in kg/a							
	Sharps	Contaminated materials	Blood and blood Health Care Risk Waste products	Fetus & placentas	Anatomical Health Care Risk Waste	DA nappies	Carcasses	Expired pharmaceuticals
General Practitioners and dentists	1,804.11	4,444.00	-	-	-	-	-	-
Forensic Unit	16.5	1,560.00	-	-	-	-	-	-
Pathcare	16.5	-	400.00	-	-	-	-	-
Old Age Homes	38.94	60.0	-	-	-	83,700.00	-	-
Home based Frail Care	6.6	-	-	-	-	-	-	-
Funeral Homes	182.0	-	-	-	-	-	-	-
Medi-city Hospital & pharmacy	918.72	9,480.0	240.00	37.1	-	-	-	8.0
Provincial Hospital	2,195.5	16,972.5		1,820	-	-	-	-
Provincial clinics	1,401.5	4,300.0	-	-	-	-	-	-
Pharmacies & Private clinics	233.64	-	-	-	-	-	-	-
Veterinary	50.25	2,320.0		-	-	-	8,824.0	-
SUB-TOTALS	6,864.28	39,776.5		1,857.1	-	83,700.0	8,824.0	8.0
TOTAL	141,029.88 kg/year							



### 3.2.13.2.1 Health Care Risk Waste Treatment Facilities

There are no Health Care Risk Waste treatment facilities in the Overstrand area. Almost all the Health Care Risk Waste is taken across the municipal border for treatment and disposal at Health Care Risk Waste facilities in Cape Town.

Euthanised pets are mostly incinerated by Greg's Pets in Worcester and/or Somerset West while euthanized animals from the SPCA and TEARS are disposed of at Karwyderskraal landfill.

### 3.2.13.2.2 Health Care Risk Waste Contractors Operating within Overstrand

The major Health Care Risk Waste contractors operating in the area are:

- Canon Hygiene in Milnerton
- Pambhile Wasteman
- BCL in Delft
- Pathcare Laboratories: Pathcare is the only contractor that collects from the doctors and does not treat the Health Care Risk Waste as well. Pathcare employs Canon to collect and treat the Health Care Risk Waste received from private practitioners.
- Psychem in Black Heath
- Millennium Waste in Bellville
- Steinmed in Cape Town
- Solid Waste Technologies (SWT) in Killarney Gardens

All of the contractors incinerate by using the BCL, Enviroserv and Psychem incinerators in Delft, Vissershok and Blackheath except Pambhile Wasteman. Solid Waste Technologies provides a HCRW treatment service to Pambhile Wasteman. SWT operates an Electro-thermal Deactivation Plant (EDP) in Killarney for the destruction of Health Care Risk Waste excluding anatomical, fetuses and pharmaceutical Health Care Risk Waste.

Final disposal takes place in the Vissershok landfill operated by the City of Cape Town.

## 3.3 WASTE AVOIDANCE

### 3.3.1 Waste Avoidance Background

The following diagram illustrates a simplified version of the well-known waste hierarchy with Avoidance being the most favourable and Disposal the least favourable:

Waste avoidance refers to a pro-active approach by industrial as well as domestic waste producers to minimize the volume of waste, by not creating the waste in the first place.

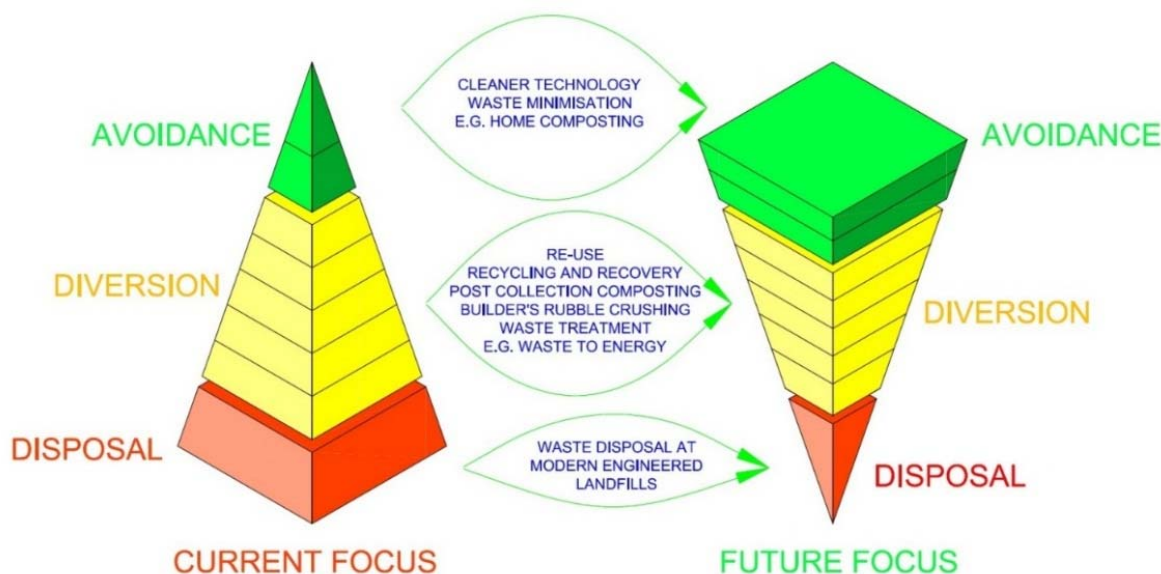


Figure 3-1: Waste Hierarchy

Waste avoidance is a “beginning of the pipe” action that can only work when people understand the full process depicted above.

At the moment waste minimisation through recovery (second tier) is considered a priority in South Africa. Once that can be successfully implemented and the people are educated in the importance of waste reduction, recovery at source (third tier) can be implemented with a reasonable chance of success.

It therefore follows that waste avoidance will be the ultimate and final step in this education process.

On a governmental / legislative level, the introduction of a levy on plastic shopping bags has spurred the production of alternative types of bags, which are re-useable and therefore avoiding the cheap and nasty waste bag that ends up littering our surroundings. However, along with such initiatives must come the required public education surrounding the proper use and impacts of new practices. For example, recent studies have shown that when re-usable bags are used by shoppers, these bags must be regularly washed/cleaned at least once per week. The users of these bags are not in the habit of washing their shopping bags because it was never necessary in the past as the bags were thrown away. Now with the re-usable bags, which are usually left in the car for convenience, that are not cleaned can contain traces of old food and or blood from meat parcels that quickly become breeding grounds for organisms that cause food poisoning. When these unwashed bags are then used to load new groceries into, the food becomes infected by the bag and may cause food poisoning in the persons who eat this food. It is therefore necessary to keep the public aware of such issues to maintain their health while adopting new practices. Along with making the public aware of new issues, new education and continual promotion of waste reduction must be done, as it appears that the majority of shoppers once again rather opt for convenience and buy new plastic bags with each shopping outing than re-using the bags they already own.

In the home, waste avoidance can be practiced by similar efforts where items are used for different purposes than the original intent, possibly suggesting that one purchases alternative products to the norm. Home composting is also considered waste avoidance, as the waste material is converted into a useful gardening resource whilst avoiding the raw product entering the waste stream.

Presently the avoidance of waste in industry has a financial detrimental implication in most cases (e.g. alternative raw products), and only large companies are able to take the leading role through their international experience in this field. Regulatory controls will only be effective if fines result in legal compliance being cheaper than non-compliance. In South Africa, resource and disposal costs are comparatively low, providing no financial incentive to reduce consumption or waste in industry. It follows that regulatory instruments are required for implementation on a Municipal level to govern the avoidance of industrial waste in Overstrand.

Regular audits should be conducted by an independent entity on the avoidance practices, to form a basis for applying incentives / penalties.

An important tool for monitoring purposes is a proper Waste Information System (WIS). The Overstrand Municipality is registered on the Integrated Pollutant and Waste Information System (IPWIS) and reports their waste quantities. The Overstrand Municipality makes use of the weighbridge readings at the Karwyderskraal and Gansbaai landfills as well as the Department Waste Calculator.

Without a doubt, waste avoidance will become a real and enforced issue in South Africa in the near future, and must be addressed in any Municipal Waste Strategy.

### **3.3.2 Existing Waste Avoidance in Overstrand Municipality**

In Overstrand, the best place to expand waste avoidance would be at the well-established industries on a voluntary basis. A joint venture effort between such industries and the Municipality may be mutually beneficial.

The industry will receive positive advertising of these “green” initiatives through the media, whilst the Municipality will be taking a leading role in South Africa through pro-actively spawning waste avoidance to the benefit of the community and the environment.

The Municipality can promote waste avoidance by leading by example. Many opportunities exist where small changes can result in waste avoidance. One example is the option to have paperless meetings. If officials have access to laptops or tablets they need not receive the agenda on paper and can keep track and make notes digitally. Wherever it is not necessary to print and use paper, it can be avoided.

Successful waste avoidance will result in further lowering of the demand on the Overstrand waste management infrastructure and the functions of collection, recovery and disposal will be done more efficiently.

### 3.4 COLLECTION SYSTEMS

#### 3.4.1 Municipal Waste Collection Systems

The details of the Overstrand Municipality solid waste collection fleet are attached as **Annexure 3**.

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 above 8 years are evaluated to determine the need for replacement.

Wheelie bins are used as well as refuse bags where wheelie bins have not yet been introduced. All formal households receive weekly door-to-door waste collection services. All informal settlements receive weekly waste collection services in the form of communal collection points (bins and skips).

Farmers that are not located on collection routes do not receive a service, but offload their household waste themselves at the drop-offs and transfer stations.

There are no formal unserved areas in the Municipality, except rural areas and farms where a collection service is not feasible.

#### Level of Free Basic Service

There are on average 6535 (2013/2014 financial year) registered indigent households as shown in the table below in the Overstrand Municipal area who qualify for free basic services. The Municipality reports 100% service to these households.

**Table 3-10: Indigent households receiving free basic services**

<b>2013</b>	<b>Indigent Households</b>
July	6 427
August	6 446
September	6 514
October	6 558
November	6 576
December	6 596
<b>2014</b>	
January	6 729
February	6 523
March	6 474
April	6 516
May	6 523
June	6 543
<b>Average:</b>	<b>6 535</b>

#### 3.4.2 Public Cleansing

Public Cleansing involves the cleansing of streets (kerbs and gutters), public open spaces (other than parks and storm water ditches) and areas of illegal dumping.

Illegal dumping that is reported by the public is followed up by the cleansing department and the area is cleaned. Illegal dumping is removed once per week as is necessary.

No separate costs for dealing with illegal dumping are available, but is part of the operational budget.

### 3.4.3 **Public Complaints**

The Overstrand Municipality makes use of a formal complaints register. All complaints received are logged on their internal system. The contact numbers for each town are as follows:

- Hermanus: (028) 313 8000
- Gansbaai: (028) 384 8300
- Kleinmond: (028) 271 8400
- Stanford: (021) 341 8500

When a complaint is received a work order is created and communicated to the relevant persons who must follow up.

The summary of complaints received and actions taken to address the complaints provided by the Municipality are as follows:

Complaint: Hours of Solid Waste Transfer Stations. Residents complained that the hours of operation of the Hermanus Transfer Station were not long enough on a Saturday (09:00 to 14:00)

Action: The operational hours of the Hermanus Transfer Station for Saturdays were extended to 09:00 to 16:00.

Complaint: Dust of illegal dumping and chipping at Hermanus Transfer Station.

Action: Measures were taken to keep the garden refuse heap small and to remove the chipped material more often. Collected illegal dumping will go straight to Karwyderskraal instead of temporarily stored at the Transfer Station. The Municipality was required to use the Transfer Station for illegal dumping as the travel distance to Gansbaai landfill did not allow for direct disposal from collection. Now that Karwyderskraal landfill is operational again, direct transport will be possible.

Complaint: Refuse not collected.

Action: In some cases it is not clear whether the refuse was placed in time for collection. Other cases are as a result that the allowed amount of garden waste that was placed for weekly collection was exceeded. The complainants were contacted and informed of the regulations. All cases were dealt with on the same day the complaint was received.

Complaint: Vagrants that are a nuisance at the week-end drop-offs.

Action: Permanent labourers are deployed at each drop-off to eradicate the problem.

Complaint: Complaints about all the waste of the Overstrand is being transported to the Gansbaai landfill.

Action: The Karwyderskraal landfill is operational again and only the waste from Gansbaai and Stanford is transported to the Gansbaai landfill from April 2015.

### 3.5 **WASTE REDUCTION**

The Polokwane Declaration was formulated in 2001 by members of Government, whereby a commitment to waste reduction, re-use and recycling was made towards achieving the following goals:

- 50% reduction in waste generation and 25% reduction in waste disposal by 2012
- A plan for Zero waste by 2022

In the January 2011 draft Provincial IWMP for the Western Cape it is stated:

“Consequently, since they have the power to adapt the targets in the Western Cape IWMP, DEA&DP has adjusted the unrealistic “25% of waste diverted from landfill sites by 2012”, to a more realistic “15% of waste by 2015”.”

The Overstrand Municipality already achieves an average diversion rate of 23%. It is therefore recommended that the Overstrand strives to achieve an average of 30%.

Waste reduction can be divided into three main categories, i.e.

- 1) Separation at source
- 2) Recovery for recycling from post-collected waste, and
- 3) Composting of post collected garden waste.

The efficiency of waste minimisation can only be determined through the implementation of a proper WIS as mentioned above. This is necessary to in turn populate the Provincial IPWIS.

This WIS should provide information on an on-going basis regarding the following:

- The quantity, type, quality and sources of materials recovered
- The quantity and quality of compost produced and garden waste processed
- Industrial waste types and volumes, and possible opportunities for waste exchange
- Public education initiatives and data on available literature at public facilities (e.g. libraries, waste minimisation clubs and projects)
- Household awareness campaigns on recycling opportunities
- Waste education (schools level) and training programmes available for the general public, waste workers and officials

### **3.5.1 Waste Recovery in Overstrand**

Waste recovery in the Overstrand is done by Walker Bay Recycling and Enviroserv Waste Management. Walker Bay Recycling operates at the Hermanus MRF and Enviroserv at the Gansbaai MRF. The recycling statistics are shown in table 3-1 above.

### **3.5.2 Composting**

#### **3.5.2.1 Composting Facilities in Overstrand**

Composting of garden waste at a centralised composting facility requires approximately a minimum 350 tonnes of garden waste per month in order to achieve financial sustainability. From the weighbridge data the average monthly total of garden waste generated in the Overstrand is approximately 890 tonnes. This makes a centralised composting facility a financially sustainable endeavour. Garden waste is chipped at some of the waste facilities discussed under section 3.6 below. The chipped garden waste is then transported to the Karwyderskraal landfill where it is composted.

Organic material that is disposed by landfill and not composted decomposes in the absence of oxygen, that is, anaerobically, and produces methane gas and carbon dioxide while decomposing. These gases are greenhouse gases and must be minimised. Methane is 23 times as effective (bad) as carbon dioxide as a greenhouse gas and all attempts must be made to prevent its generation. During the composting process the decomposition takes place in the presence of oxygen (aerobic) resulting in no methane gas being generated. If the garden waste is simply chipped and used as mulch, it is preferable above disposal by landfill.

#### **3.5.2.2 Home Composting**

Home composting in South Africa has traditionally been practiced for the purpose of having an inexpensive and reliable source of compost for the garden. More recently, the realization that composting is a means of conserving resources, saving landfill airspace and the recycling of organic matter, has become the driving force for composting under individuals as well as clubs / associations.

It has been shown that home composting can reduce the waste stream by 20% to 30% if carried out properly. This is a prime example of “reduction at source” or waste avoidance.

This represents probably the only feasible means of composting kitchen waste, as large-scale post-collection composting has proven ineffective on many occasions in South Africa.

Due to a lack of general information conveyed to the private composter in the past, many perceptions of home composting has become that of a stinking pile somewhere in the corner of the garden.

This (and a change in lifestyles) has led to compost becoming a shopping list item to be bought at the supermarket.

Leaflets or other methods of information should be made available to inform the general public of the advantages and “recipe” for making good quality home compost. This should include:

- Bins / container design
- Raw products
- C:N ratio
- Minimum volume
- Preparation
- Moisture content
- Aeration

- Monitoring
- Trouble-shooting

Home composting bins can be bought at selected nurseries throughout the Western Cape. These are normally one of two types. The first type is a moulded plastic bin which comes in two sizes as follows:

- Small – volume approximately 500 litres
- Medium – volume approximately 1000 litres

The second type is one made from chicken wire around a plastic framework. This one is also of approximately 1000 litre capacity. The disadvantage to the chicken wire model is the possibility of leaching, flies and foul odours.

However, it does allow for good aeration, whereas the plastic model may tend to result in anaerobic conditions (rotting) if not manually aerated by turning.

### **3.5.2.3 Vermicomposting**

Vermicomposting refers to the deliberate introduction of earthworms (typically) during early stages of the composting process. These would appear naturally at an advanced stage of natural composting, which would be after stabilization, where macrofauna use some of the microflora as a substrate.

The earthworms have the following beneficial effects on the composting process:

- Reduction of particle size
- Removal of old bacteria, stimulating the growth of new bacteria
- Enriching the compost by excretions high in Nitrogen
- Promotes penetration of oxygen into the compost
- Increases pathogen control
- Produces worm castings, a good soil amendment

Vermicomposting lends itself well to household-sized ventures, as it requires very careful control, but produces very high quality compost in a relative short period of time.

It is a very clean process which does not attract flies.

This type of composting is typically done inside special bins designed for the purpose.

Most kitchen-type wastes can be composted in this manner, although onions, citrus & other acidic foods should be avoided as they can be toxic to the worms.

The worms are also quite sensitive to extreme temperatures, humidity and rain. Therefore this process does not lend itself to large-scale industrial composting.

Also the ratio of worms: substrate is approximately 1:4; therefore very large amounts of worms are required for the process. The worm mass doubles in approximately 12 weeks.

## **3.6 WASTE DISPOSAL**

### **3.6.1 Operating Landfills**

#### **Gansbaai Landfill**

The Overstrand Municipality currently disposes general waste at the Gansbaai disposal site.

Gansbaai Landfill is permitted in Terms of Section 20 of the Environment Conservation Act (Act 73 of 1989) with license number 16/2/7/G400/D24/Z1/P335 and is classified as G:M:B- (1994 Minimum Requirements). The site is located to the east of Gansbaai (34°35'14.33"S, 19°21'53.65"E)



**Figure 3-2: Gansbaai Landfill**

The Gansbaai disposal facility is externally audited annually. The latest audit was conducted by JPCE in November 2014. The audit found that the site is not compliant with all of its permit conditions. The non-compliances are listed below:

CONDITION	NON/PARTIAL COMPLIANCE	COMMENT
3.4	The existing Masakhane neighbourhood partially falls within the 800m buffer zone.	The neighbourhood has been inside the buffer zone since the permit was issued.
3.5	Drainage structure exists, but without the 500mm freeboard.	Not critical due to the absorbent nature of the natural soil adjacent to the site.
3.6	No visible internal drainage structures.	Not critical due to the absorbent nature of the natural soil adjacent to the workforce.

The Gansbaai landfill is operated by Enviroserv Waste Management. Entrance control is good and all incoming loads are weighed and recorded at the weighbridge. The current average total of waste disposed per day is 157 tonnes. All general waste of the Overstrand Municipality destined for disposal is transported here until the new general waste cell at the Karwyderskraal landfill has been constructed.

Collected source separated waste from the towns of Stanford and Gansbaai is sorted at the Material Recovery Facility (MRF) at the entrance to the site.

From the topographical surveys which are used to determine remaining airspace and usage, it is estimated that the Gansbaai landfill will reach capacity in 2031.

### **Gansbaai Waste Disposal Facility**

#### **Summary Table**

Type of facility	General Waste Disposal Facility
Licensed/Permitted?	Yes
License/Permit Number	16/2/7/G400/D24/Z1/P335
Classification	G:M:B- (1994 Min Req)
Location	34°35'14.33"S, 19°21'53.65"E
Estimated Remaining Lifetime	Currently estimated until 2031
Access Control?	Yes
Externally audited?	Yes
Waste Types Received	General household, commercial and industrial waste, garden waste, building & demolition waste



### **Karwyderskraal Regional Landfill**

The Karwyderskraal regional landfill is permitted in terms of Section 20 of the Environment Conservation Act (Act 73 of 1989) and is classified as G:M:B+. This landfill is located in the Overstrand Municipality (34°19'52.93"S, 19°09'40.31"E), but with the District Council as Permit Holder. The permit was amended in 2005 to allow on-site composting.

The new disposal cell has been constructed and provides approximately 300 000m<sup>3</sup> of disposal airspace. Based on the current disposal scenario where Caledon's waste is still disposed at the Caledon landfill, the waste from Villiersdorp, Grabouw and Botrivier is disposed at Karwyderskraal and the waste from the western portion of Overstrand is disposed at Karwyderskraal, it is estimated that the new cell will have a remaining lifetime of 43 months from April 2015. In other words, capacity is estimated to be reached by end October 2018.



**Figure 3-3: Karwyderskraal Landfill**

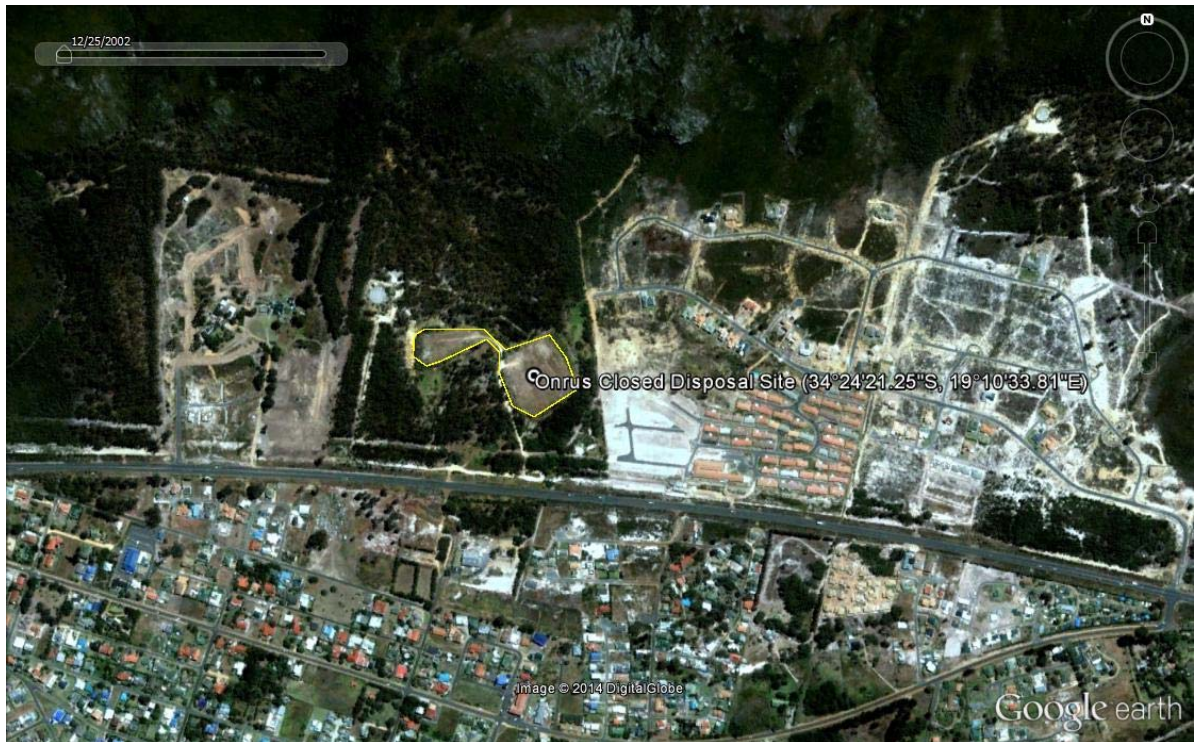
### **3.6.2 Closed Landfills**

The following closed disposal sites are located in the Overstrand Municipal area:

#### **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 closure license on 10/12/2014. (License number 19/2/5/1/E2/26/WL0034/14).





**Figure 3-4: Onrus Closed Disposal Site**

### **Hermanus**

The site is located to the west of the Hermanus solid waste transfer station (34°25'25.50\"S, 19°12'53.10\"E) and no longer receives any waste. It was issued with a closure license on 31/03/2014. (License number 19/2/5/1/E2/14/WL0089/12).

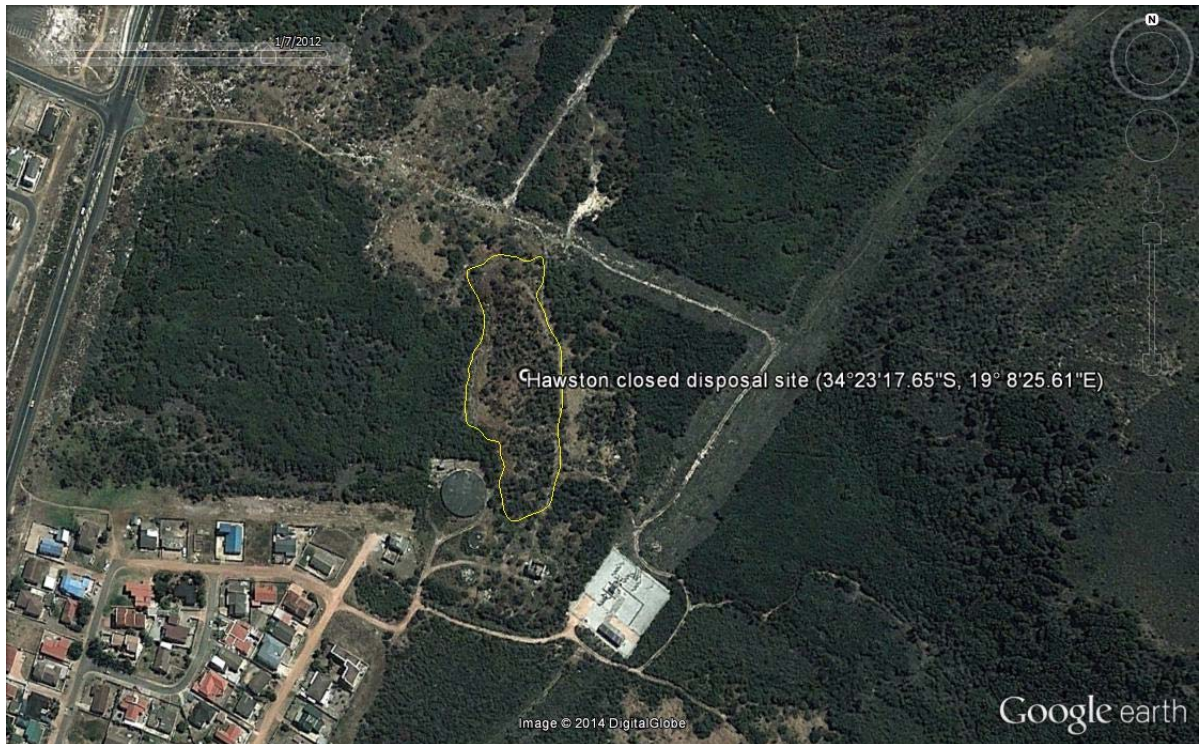


**Figure 3-5: Hermanus Closed Disposal Site**



### **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)



**Figure 3-6: Hawston Closed Disposal Site**

### **Fisherman's Haven**

The site is located to the south of Fishershaven (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. (License number 19/2/5/1/E2/8/WL0035/14).



**Figure 3-7: Fisherman's Haven Closed Disposal Site**



### **Voëlklip**

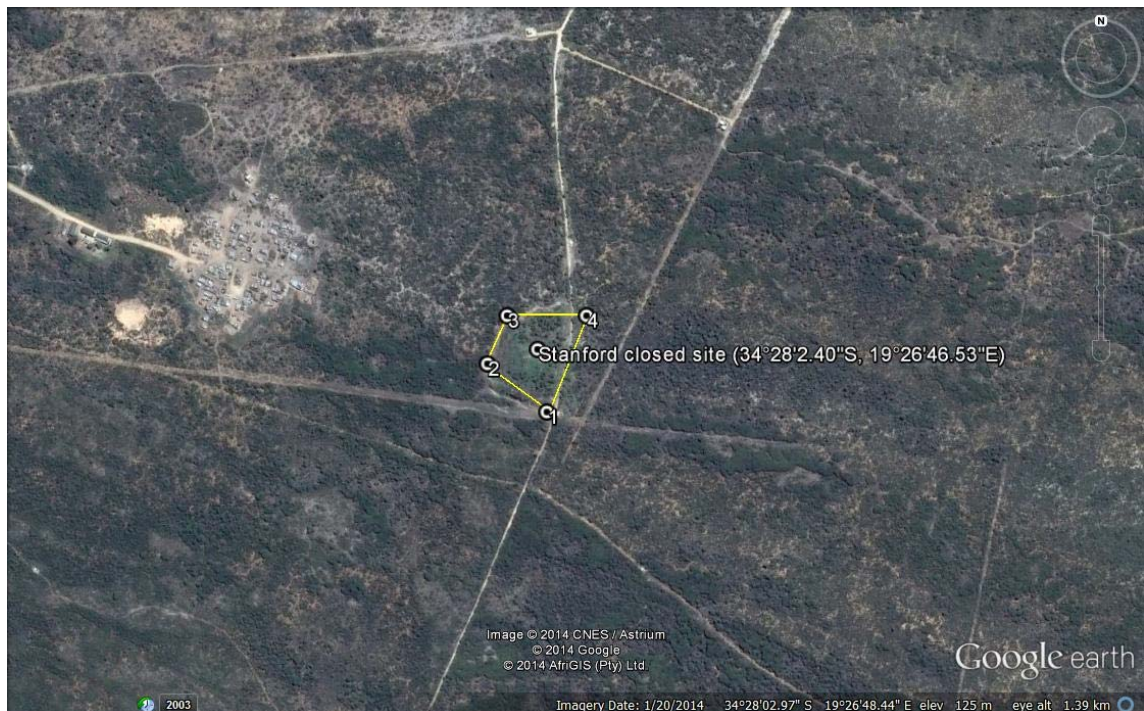
The site is located to the east of Voëlklip ( $34^{\circ}24'38.81''\text{S}$ ,  $19^{\circ}18'26.40''\text{E}$ ) and no longer receives any waste. It was issued with a closure license on 07/11/2014. (License number 19/2/5/1/E2/40/WL0049/14).



**Figure 3-8: 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. (License number 19/2/5/1/E2/36/WL0087/12)



**Figure 3-9: Stanford Closed Disposal Site**



### **Pearly Beach**

The site is located to the north of Pearly Beach ( $34^{\circ}39'01.21''\text{S}$ ,  $19^{\circ}29'34.18''\text{E}$ ) and no longer receives any waste. It was issued with a closure license on 29/09/2014. (License number 19/2/5/1/E2/29/WL0089/14). A new Waste Water Treatment Works (WWTW) is planned at this location and rehabilitation will take place simultaneously with the construction of the new stabilisation ponds.



**Figure 3-10: Pearly Beach Closed Disposal Site**

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. Both of these sites have already been rehabilitated and are externally audited and monitored.



**Figure 3-11: Betty's Bay Rehabilitated Disposal Site**



**Figure 3-12: Kleinmond Rehabilitated Disposal Site**

The following table shows the rehabilitation cost estimates as at January 2015 with new closure license requirements.

**Table 3-11: Estimated Rehabilitation Costs**

	<b>Onrus</b>	<b>Hermanus</b>	<b>Hawston</b>	<b>Fishershaven</b>
<b>Rehab estimate excl. VAT</b>	<b>R7 152 827.00</b>	<b>R18 431 235.00</b>	<b>R4 052 778.00</b>	<b>R5 904 258.00</b>
	<b>Voëlklip</b>	<b>Stanford</b>	<b>Pearly Beach</b>	
	<b>R9 440 861.00</b>	<b>R4 228 013.00</b>	<b>R2 910 199.00</b>	

Provision must be made in order to rehabilitate the abovementioned sites, except Pearly Beach which will be part of the new WWTW construction (MIG funding).

### **3.6.3 Garden Waste and Building & Demolition Waste Sites**

There are no dedicated garden waste or building & demolition waste sites in Overstrand. Garden waste and building & demolition waste are accepted at the transfer stations and drop-offs.

### **3.6.4 Waste Transfer Stations and Public Drop-offs**

The Overstrand Municipality operates two Solid Waste Transfer Stations at Hermanus (34°25'29.31"S, 19°13'03.98"E) and Kleinmond (34°20'11.92"S, 19°00'16.43"E). Both transfer stations are licensed. A number of solid waste drop-offs have also been established throughout the Municipal area which act as satellite collection points for general waste. The weekend drop-offs allow for weekend visitors to drop off their waste on the weekends if they are not in the Overstrand to put it out for weekly collection.





**Figure 3-13: Hermanus Solid Waste Transfer Station & Material Recovery Facility (MRF)**

The Hermanus transfer station is externally audited annually. The latest audit was conducted by JPCE in November 2014. The audit found that the site is compliant with all of its permit conditions.

The transfer station functions as a “clean” and “dirty” MRF as well where source separated collected materials (clear bags) are recycled alongside recyclables from mixed waste in black bags. The clear bags originate from middle and high income neighbourhoods in Hermanus, Kleinmond, Bettiesbaai, Hangklip, Pringle Bay and Rooi-Els and the black bags are from the same neighbourhoods in Hermanus that also have source separation.

Clean garden waste is delivered to the transfer station by the public from where it is transported to the Karwyderskraal landfill for chipping and composting. The public may also deliver small loads of clean building & demolition waste. This is also transported to the Karwyderskraal landfill and used there as cover material.

The public has the opportunity to bring their household hazardous waste to the transfer station where it is stored in dedicated locked bins inside a locked shipping container for later removal to the Vissershok Hazardous waste Facility in Cape Town. A second locked shipping container has been placed for household e-waste.

Non-recoverable general waste, tailings from the MRF and contaminated garden waste is hauled from the transfer station to the Gansbaai Landfill for disposal, but will be transported to the Karwyderskraal landfill after from April 2015.

#### **Hermanus Transfer Station Summary Table**

Type of facility	Waste Transfer Station/ Public Drop-off / Material Recovery Facility
Licensed/Permitted?	Yes
License/Permit Number	16/2/7/G403/D2/Z2/P457
Classification	G:M:B+
Location	34°25'29.31"S, 19°13'03.98"E
Estimated Remaining Lifetime	Indefinite (transfer station)
Access Control?	Yes
Operating Hours	Monday to Friday: 08:00 – 18:00; Saturday: 09:00 – 14:00; Sunday closed
Externally audited?	Yes
Waste Types Received	General Waste, Garden Waste, Building & Demolition Waste, Household hazardous and e-waste



**Figure 3-14: Kleinmond Solid Waste Transfer Station**

The Kleinmond transfer station is externally audited annually. The latest audit was conducted by JPCE in November 2013. The audit found that the site is compliant with all of its permit conditions.

Waste is not recovered at the Kleinmond transfer station, but collected clear bags are transported to the Hermanus MRF for recovery.

Collected general waste is offloaded onto the apron floor and pushed into containers for haulage to the Gansbaai landfill for disposal, but will be transported to the Karwyderskraal landfill from April 2015. The public off-loads garden waste and clean building & demolition waste at the drop-off area. The garden waste is chipped and transported to the Karwyderskraal landfill for composting. The building & demolition waste is also transported to the Karwyderskraal landfill to use as cover material.

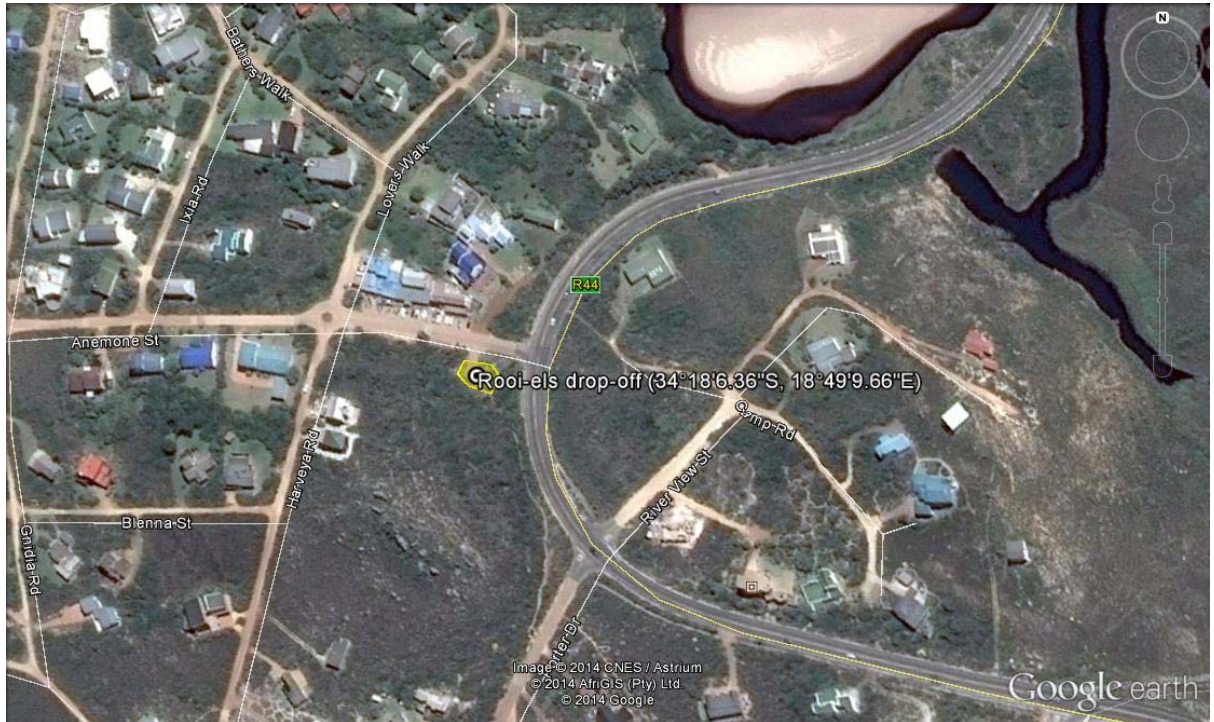
The public can also bring their household hazardous waste which is stored in dedicated containers which are locked in a shipping container and transported to the Vissershok Hazardous waste disposal site. A locked shipping container has been provided for e-waste as well.

#### **Kleinmond Transfer Station Summary Table**

Type of facility	Waste Transfer Station, Public Drop-off
Licensed/Permitted?	Yes
License/Permit Number	16/2/7/G401/D21/Z2/P458
Classification	G:S:B+
Location	34°20'11.92"S, 19°00'16.43"E
Estimated Remaining Lifetime	Indefinite (transfer station)
Access Control?	Yes
Operating Hours	Monday to Friday: 07:30 to 18:00; Saturday and Sunday: 07:30 to 16:30
Externally audited?	Yes
Waste Types Received	General waste, Garden Waste, Building & Demolition Waste, Household Hazardous and e-waste



### Rooi-Els



**Figure 3-15: Rooi-Els Drop-off**

The Rooi-Els public drop-off is located off the R44 as you enter Rooi-Els (34°18'06.36"S, 18°49'09.66"E). The facility does not require licensing as the storage capacity is less than 100m<sup>3</sup>. Waste is transported to the Kleinmond Transfer Station.

### Pringle Bay



**Figure 3-16: Pringle Bay (Hangklip) Drop-off**

The Pringle Bay public drop-off is located off the R44 (34°20'34.02"S, 18°50'38.10"E). The facility does not require licensing as the storage capacity is less than 100m<sup>3</sup>. Waste is transported to the Kleinmond Transfer Station.



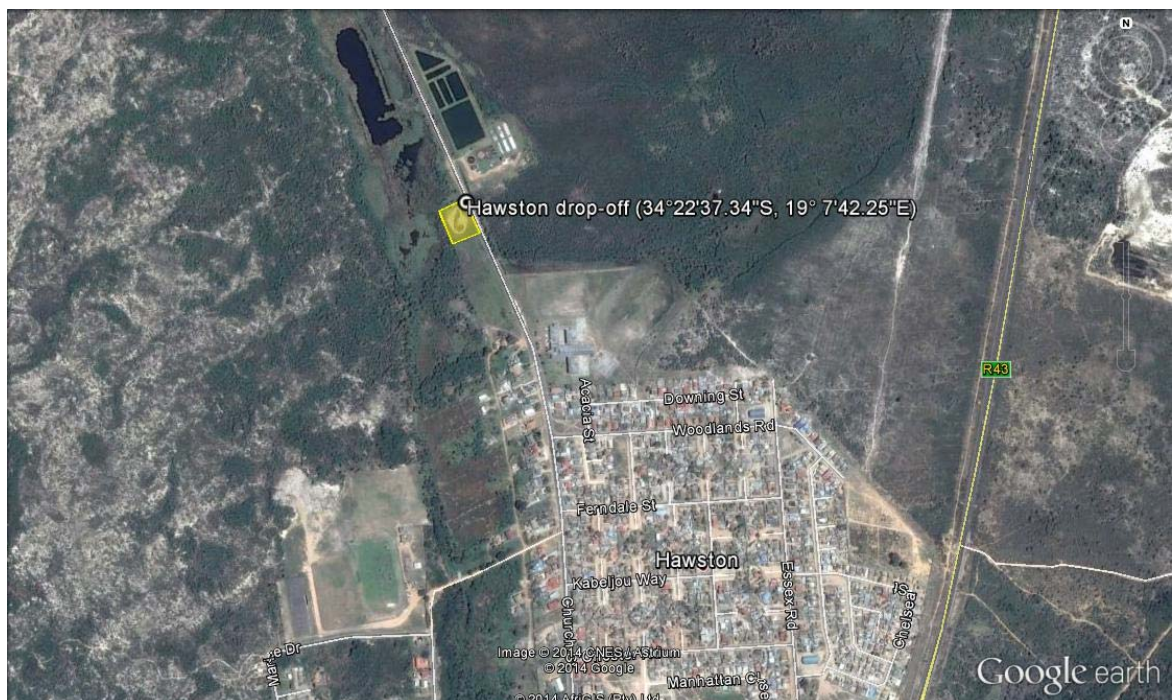
### **Betty's Bay**



**Figure 3-17: Betty's Bay Drop-off**

The Betty's Bay public drop-off is located off the R44 (34°21'12.62"S, 18°51'32.54"E). The facility does not require licensing as the storage capacity is less than 100m<sup>3</sup>. Chipped garden waste is transported to the Karwyderskraal landfill for composting and household waste is transported to the Kleinmond Transfer Station. The facility is open to the public Monday to Sunday from 08:00 to 16:00.

### **Hawston**



**Figure 3-18: Hawston Drop-off**

The Hawston public drop-off is located to the north of Hawston (34°22'37.34"S, 19°07'42.25"E). The facility does not require licensing as the storage capacity is less than 100m<sup>3</sup>. Waste is transported to the Hermanus Transfer Station.

### Onrus



**Figure 3-19: Onrus Weekend Drop-off**

The Onrus weekend drop-off is located in Onrus (34°24'28.93"S, 19°09'50.43"E). The facility does not require licensing as the storage capacity is less than 100m<sup>3</sup>. Waste is transported to the Hermanus Transfer Station.



### **Sandbaai**



**Figure 3-20: Sandbaai Weekend Drop-off**

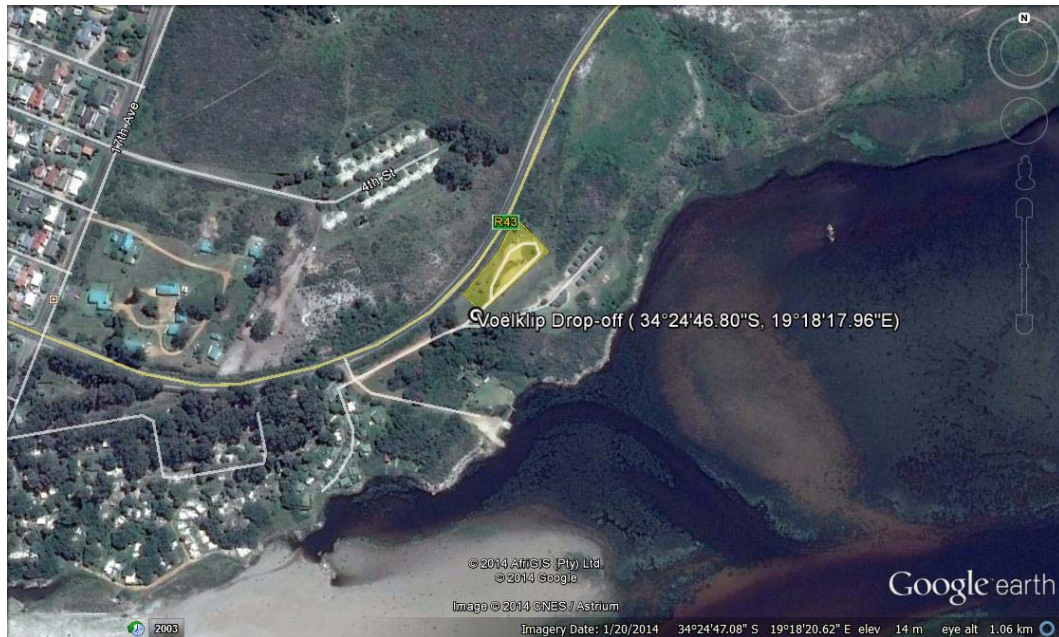
The Sandbaai weekend drop-off is located in Sandbaai (34°25'18.52"S, 19°11'53.51"E). The facility does not require licensing as the storage capacity is less than 100m<sup>3</sup>. Waste is transported to the Hermanus Transfer Station.

### **Voëlklip**



**Figure 3-21: Voëlklip Weekend Drop-off**

The Voëlklip weekend drop-off is located in Voëlklip (34°24'22.10"S, 19°16'42.49"E). The facility does not require licensing as the storage capacity is less than 100m<sup>3</sup>. Waste is transported to the Hermanus Transfer Station.



**Figure 3-22: Voëlklip Drop-off**

The Voëlklip drop-off is located to the east of Voëlklip (34°24'22.10"S, 19°16'42.49"E). The facility does not require licensing as the storage capacity is less than 100m<sup>3</sup>. Waste is transported to the Gansbaai landfill currently and will be transported to the Karwyderskraal landfill from April 2015.

### **Stanford**



**Figure 3-23: Stanford Drop-off**

The Stanford public drop-off is located east of Stanford (34°26'50.28"S, 19°27'21.42"E). The facility does not require licensing as the storage capacity is less than 100m<sup>3</sup>. Separate containers are available for recyclables and household hazardous waste. Waste is transported to the Gansbaai landfill.



## **Pearly Beach**



**Figure 3-24: Pearly Beach Drop-off**

The Pearly Beach public drop-off is located in the north-eastern part of Pearly Beach (34°39'51.69"S, 19°30'14.41"E). The facility does not require licensing as the storage capacity is less than 100m<sup>3</sup>. Waste is transported to the Gansbaai landfill.

### **3.6.5 Disposal Facilities used outside the Overstrand Municipality Boundaries**

The hazardous waste generated in Overstrand Municipality will be transported to the Vissershok Waste Management Facility (VWMF). It has a H:H operating permit from DWAF. The site is situated some 800m west of the N7 at Vissershok and is operated and audited in terms of its permit conditions.

### **3.6.6 Contaminated Land**

There are no known contaminated land or unpermitted landfills prior to ECA 1989 in Overstrand Municipality. All contaminated land is discussed under "3.6.2 Closed Landfills".

### **3.6.7 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.

### 3.7 COSTS OF EXISTING WASTE MANAGEMENT SYSTEM

#### 3.7.1 Financial Summary of Waste Management Services of Overstrand Municipality

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 3-12: Solid Waste Tariffs**

	2014/2015		2013/2014	
	Excl. VAT	Incl. VAT	Excl. VAT	Incl. VAT
<b>Refuse Removal (1 removal per week of 4 bags or 1x240l Bin)</b>	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b><u>Domestic Waste</u></b>				
Residential (All registered erven/unit with approved building plan) 1 x removal per week (R/month)	130.18	148.40	122.81	140.00
Residential Indigent (All registered erven/unit with approved building plan) 1 x removal per week (R/month)	130.18	148.40	122.81	140.00
<b><u>Business Waste</u></b>				
Commercial/Businesses (Hostels, Old Age Homes, Caravan Sites, Semi-permanent Resorts etc) (R/month)	130.18	148.40	122.81	140.00
Bulk Container 240l (Wheelie bin) (R/month) 1 x per week (if available)	130.18	148.40	122.81	140.00
Bulk Container 240l (Wheelie bin) (R/month) 2 x per week (if available)	260.35	296.80	245.61	280.00
Bulk Container 240l (Wheelie bin) (R/month) 3 x per week CBD (if available)	390.53	445.20	368.42	420.00
Bulk Container 240l (Wheelie bin) (R/month) 4 x per week CBD (if available)	520.70	593.60	491.23	560.00
Bulk Container 240l (Wheelie bin) (R/month) 5 x per week CBD (if available)	650.88	742.00	614.04	700.00
Camphill Route (R/month) (If available)	1022.80	1166.00	964.91	1100.00
Additional Removals per week on Saturday per Bin (R/month) Peak Time per removal	195.26	222.60	184.21	210.00
Additional Removals on request Central Town (CBD) per bin (R/month) Peak Time per removal	260.35	296.80	245.61	280.00
Caravan Sites, Chalets, Semi-permanent & Resorts (R/month) (Uilenkraalsmond Vakansieoord; Franskraal Vakansieoord; Pearly Beach Camp; Michael Fuchs Guesthouse) NO REMOVAL (per unit/site)	41.84	47.70	39.47	45.00
Departmental Consumption (Municipal Consumption per removal site per month)	111.58	127.20	105.26	120.00
Schools (R/month)	130.18	148.40	122.81	140.00
Removal outside service area (per removal per hour) (If available)	976.31	1113.00	921.05	1050.00
Single Quarters & Transit Camps per unit	41.84	47.70	39.47	45.00
Guesthouses, Bed & Breakfast (R/month)	130.18	148.40	122.81	140.00
<b><u>Self Dumping Transfer Stations &amp; Dumping Sites</u></b>				
Vehicles >1 & up to 2 Ton per load	149.12	170.00	140.35	160.00
Vehicles >2 & up to 3 Ton per load	223.68	255.00	210.53	240.00
Vehicles >3 & up to 4 Ton per load	298.25	340.00	280.70	320.00
Vehicles >4 & up to 5 Ton per load	371.93	424.00	350.88	400.00

	2014/2015		2013/2014	
	Excl. VAT	Incl. VAT	Excl. VAT	Incl. VAT
<b>Refuse Removal (1 removal per week of 4 bags or 1x240l Bin)</b>	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>
Vehicles >5 & up to 6 Ton per load (no admission to transfer station, only to dumping sites)	446.49	509.00	421.05	480.00
Vehicles >6 & up to 7 Ton per load (no admission to transfer station, only to dumping sites)	521.05	594.00	491.23	560.00
Vehicles >7 & up to 8 Ton per load (no admission to transfer station, only to dumping sites)	585.97	668.00	552.63	630.00
Vehicles >8 & up to 9 Ton per load (no admission to transfer station, only to dumping sites)	660.53	753.00	622.81	710.00
Vehicles >9 & up to 10 Ton per load (no admission to transfer station, only to dumping sites)	735.09	838.00	692.98	790.00
Vehicles >10 Ton per load (no admission to transfer station, only to dumping sites)	883.33	1007.00	833.33	950.00
<b>Basic Fee Refuse Service (Erven without approved building plans)</b>				
All registered erven without building plans (R/month)	65.08	74.20	61.40	70.00
<b>Sundries</b>				
Rental of Bulk Container per day (including disposal)	68.86	78.50	64.91	74.00
Deposit - rental of bulk containers per 4 bins or less	530.00	no VAT	500.00	no VAT
Asbestos Sheet - per unit	49.30	56.20	46.49	53.00
Baboon Resistant 240l Wheelie Bin with lock delivered to homes on programme	771.75	879.80	728.07	830.00

**Table 3-13: Solid Waste Budget**

	WASTE MANAGEMENT							
	DEPARTMENTS							
	3400 Solid Waste Disposal: B/Bay	3410 Solid Waste Disposal: Hawston	3420 Solid Waste Disposal: Voelklip	3430 Solid Waste Disposal: Stanford	3440 Refuse Disposal: P/Beach (Trfst)	3510 Solid Waste Disposal: Hermanus	3620 Waste Disposal Site: Gansbaai	3640 Overstrand: Solid Waste Disp.
SALARIES	R136 181.00	R115 376.00	R150 139.00	R260 806.00	R268 180.00	R1 369 610.00	R 439 390.00	R -
OPERATIONAL COST	R -	R 2 500.00	R -	R -	R -	R 42 100.00	R -	R -
CONTRACTED SERVICES	R -	R -	R -	R -	R 68 326.00	R 144 500.00	R 54 337.00	R16 115 000.00
INVENTORY	R 7 555.00	R 1 500.00	R 1 400.00	R 12 500.00	R 25 841.00	R 23 180.00	R 251 112.00	R -
DEPRECIATION & AMORTISATION	R 12 534.00	R 40 006.00	R -	R 98 929.00	R 95 814.00	R2 040 130.00	R1 825 923.00	R 534.00
TOTALS	R156 270.00	R159 382.00	R151 539.00	R372 235.00	R 458 161.00	R3 619 520.00	R2 570 762.00	R16 115 534.00

**Note that the detail of the above budget summary has been attached as Annexure 6 and there is no capital budget currently available relating to solid waste management.**

### 3.8 STAFF COMPLIMENT OF EXISTING WASTE MANAGEMENT SYSTEM

The organograms below indicate the staff compliment of the solid waste management departments (Infrastructure & planning and community services).

#### **Waste Management Officer:**

Chapter 3 of the Waste Act states that:

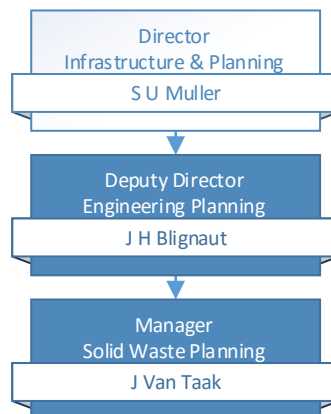
- “10.(3) Each municipality authorised to carry out waste management services by the Municipal Structures Act, 1998 (Act No. 117 of 1998), must designate in writing a waste management officer from its administration to be responsible for co-ordinating matter pertaining to waste management in that municipality.
- (4) A power delegated or a duty assigned to a waste management officer by virtue of subsection (3) may be sub-delegated of 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 Waste Management Officer for Overstrand Municipality is Mr J van Taak.

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 Wastecon should be attended by waste management employees determined by the Municipality.

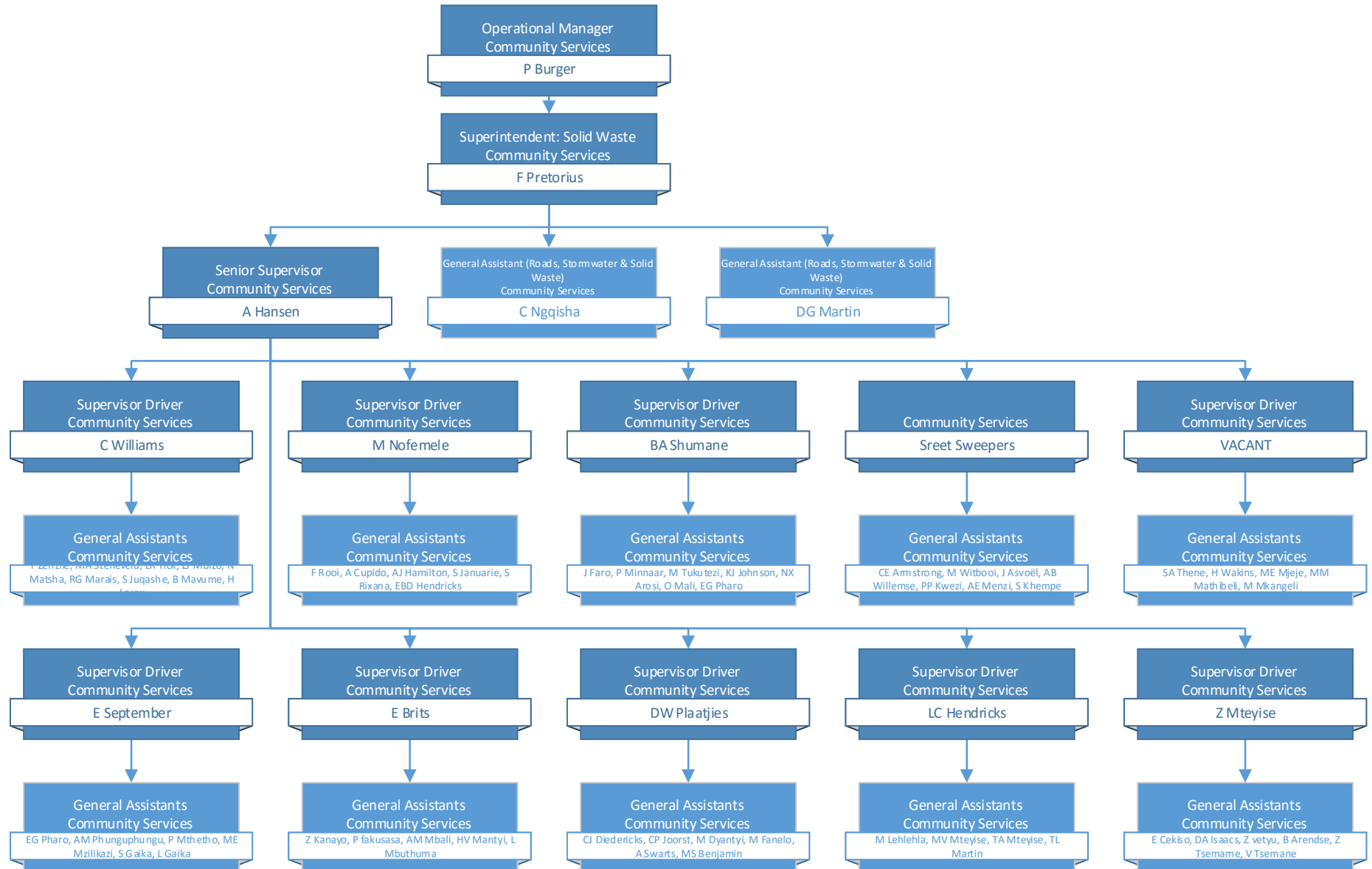
The staff compliment is provided in the Organograms below.

#### OVERSTRAND INFRASTRUCTURE AND PLANNING

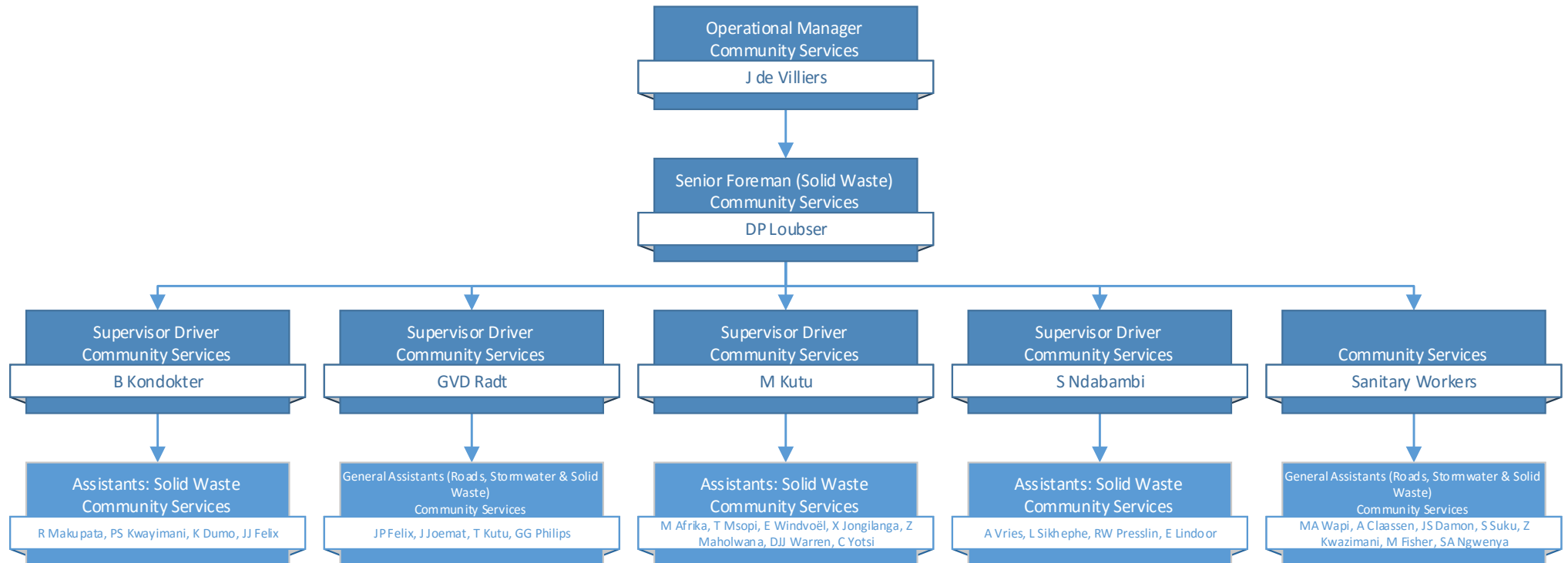




## HERMANUS & SURROUNDS



## GANSBAAI & SURROUNDS



## KLEINMOND & SURROUNDS

KLEINMOND PERSONNEL: STREETS, STORM WATER AND SOLID WASTE					
	D VAN RHODIE		OPERATIONAL MANAGER		
19004	AJ REICHERT		SUPERINTENDENT		
19016	J APLOON	CEM 31789	MACHINE OPERATOR AT TRANSFER STATION		
53032	W HARTNICK	CAM 13541	MACHINE OPERATOR AT TRANSFER STATION		
19052	E OCTOBER		GATE CONTROLLER AT KLEINMOND		
54002	H HULL		TRANSFER STATION KLEINMOND		
53037	L ADONIS		TRANSFER STATION KLEINMOND		
19010	M L MNTUYEDWA		MANS DROP-OFF PRINGLE BAY		
19049	M MAPE		TRANSFER STATION BETTY'S BAY		
53026	S MAKHOLWA		MANS DROP-OFF BETTY'S BAY		
ROOI ELS BLACK AND WHITE BAGS					
19053	A FLORIS	CEM 26897	ROOI ELS	WHITE BAGS	BLACK BAGS
19039	E NOTSHOKOVU				
19028	D MAFENUKA				
PRINGLE BAY WHITE BAGS					
54003	S MADO	CAM 15874	PRINGLE BAY	WHITE BAGS	
19023	A MGOQI				
19041	G SWARTZ				
54047	A BOSMAN				
53048	B COERT				
PRINGLE BAY BLACK BAGS					
21007	D BAARDMAN	CEM 17431	PRINGLE BAY		BLACK BAGS
53045	D MAY				
53044	C HENDRICKS				
53042	S BOOI				
53043	S DYONKILE				
BETTY'S BAY BLACK AND WHITE BAGS HARBOUR AREA					
19047	J THEUNISSEN	CAM 20080	BETTY'S BAY	WHITE BAGS	BLACK BAGS
21025	DEVAN MAKKA				
19011	Z BANGENI				
53035	W J A GRIFFITHS				
19066	RANDALL DUDLEY				
53028	J H HARTOG				
19061	J S ROSSOUW				
BETTY'S BAY BLACK AND WHITE BAGS MOOI UITSIG AREA					
19058	B BOOYSEN	CEM 5372	BETTY'S BAY	WHITE BAGS	BLACK BAGS
53039	M C SOKOYI				
19056	EH MAY				
19033	G CAROLUS				
KLEINMOND GERMAN TOWN AND BETTY'S BAY SUNNY SEAS BLACK BAGS					
19021	D CRONJE	CEM 14080	KLEINMOND		BLACK BAGS
19015	M H GUDU				
19007	J DANIELS				
19030	J NYANGIWE				

KLEINMOND GERMAN TOWN AND BETTY'S BAY SUNNY SEAS WHITE BAGS					
19009	P GALANT	CEM 33776	KLEINMOND	WIT SAKKE	
19006	D SEPTEMBER				
19031	Z MXHOSA				
KLEINMOND ABOVE MAIN ROAD AND EXTENSION THREE BLACK BAGS					
54046	M THOMAS	CEM 11377	KLEINMOND		BLACK BAGS
19065	G BRINKHUIS				
19060	K RAMOSALA				
19012	D NYANGIWE				
19063	V MZIM				
KLEINMOND ABOVE MAIN ROAD AND EXTENSION THREE WHITE BAGS					
19046	R APPEL	CEM 5139	KLEINMOND		
19036	A E ARENDSE				
53047	E.E OCTOBER				
KLEINMOND ABOVE MAIN ROAD AND EXTENSION THREE WHITE BAGS/ BLACK BAGS					
21006	P LITOLI	CEM 33775	KLEINMOND		BLACK BAGS
EPWP	S NDYAMBO				
KLEINMOND BUSINESSES					
19057	BE HOFFMAN	CAM 9879	KLEINMOND	BUSINESSES	
53046	NEO NKETU				
53049	HOMBISILE NCEDANA				
53033	M RASI				
19040	M H JOHNSON				
53041	M SETI				
STREET BINS, LITTER COLLECTION AND STREET SWEEPING					
19062	M MITCHELL	CEM 28619	KLEINMOND	STREET BINS / SWEEP	
53036	JJ PLAATJIES				
19020	B GWENZANI				
EPWP	N MNQODOLO				
EPWP	N XHASHIMA				
EPWP	O GWADISO				
EPWP	N SIYANGA				
ANDREW THEUNISSEN PARKS' PERSONNEL SERVICES BELOW MAIN ROAD / LAGOON AND PALMIET AREAS					
KLEINMOND BELOW MAIN ROAD BLACK BAGS					
19045	J MOJAKI				
17005	M PIETERSEN				
19042	S SIMON				
19055	J AFRIKA				
21022	G OCTOBER				
21028	S MAVAMBO				
21030	A JOLIN				
31033	J ROUX				

KLEINMOND BELOW MAIN ROAD WHITE BAGS					
19044	C MITCHELL				
21008	J JOHANNES				
75003	S ABRAHAMS				
KLEINMOND PALMIET BLACK BAGS					
19048	W KARELSE				
21017	D OLIVIER				
21020	D DE BRUIN				
21026	D KOLI				
21029	N NKUMANDA				
KLEINMOND PALMIET WHITE BAGS					
19043	R DANIELS				
21031	E MATHUNJIWA				
31032	N HARTOGH				
MONDAYS AND FRIDAYS HARBOUR AND SEA BINS AND TOILETS					
17002	J REX				
21015	M SAKHULO				
DAY CAMPS AND LAGOON EVERY DAY TOILETS AND BINS					
21004	O SAMEULS				
21023	B PHIRI				

### 3.9 CURRENT WASTE MANAGEMENT IDENTIFIED GAPS

The following gaps were identified from the status quo of solid waste management in the Overstrand Municipality:

- Public Awareness and Education.
  - The Municipality is very visible in terms of promoting recycling and waste minimisation through billboards, advertising, school visits, etc. This has only been mentioned as a gap as awareness and education is crucial for integrated waste management success and is an on-going endeavour without an end date.
- Lack of information regarding waste generation types and volumes.
  - A new study regarding the waste stream characterisation must be done, preferably when the use of weighbridges are available. Following the proposed installation of weighbridges at the Hermanus transfer station and Kleinmond transfer station, the characterisation study can be done there. As the Gansbaai landfill is equipped with a weighbridge, the study can commence there.
  - The Youth Jobs in Waste Project can be utilised in order to conduct a survey and obtain new health care and hazardous waste quantities generated by the health care sector and industrial sector.
- Collection Fleet – Age, Condition, Aesthetics, Type.
  - Some vehicles are likely operating beyond their effective lifetimes. These vehicles need to be evaluated to ensure that they are still cost effective and efficient. If not, they need to be replaced. Collection vehicles help in creating the public's perception of waste management and need to be aesthetically pleasing.
- Law enforcement.
  - The levels of illegal dumping need to be reduced by stricter law enforcement on the perpetrators.

- Closed and unlicensed disposal sites.
  - A number of closed disposal facilities in the Overstrand require rehabilitation.
- Solid waste management departments Employees
  - Vacant positions in the departments must be filled.

Possible negative impacts of identified gaps on health and the environment

- With lack of public awareness and education, the understanding of a sustainable waste management system will be lacking and public littering will increase. With no realisation of the actual impact of waste on the environment, there would be no reason to be environmentally responsible. The environment will be poisoned by uncontrolled waste which will affect the public at large. An uninformed public will also not participate in waste avoidance and recycling efforts, causing pressure on landfill airspace requirements, hence more landfills need to be constructed to the detriment of the environment.
- With lack of information regarding waste generation types and volumes, no control can be exercised over the generators of these wastes and where it is disposed, possibly illegally.
- If the vehicles in the collection fleet are used past their useful lifetimes, they become a financial liability

### **3.10 WASTE MANAGEMENT STRATEGIC OBJECTIVES**

With the Status Quo of waste management as listed in the previous chapters and the current problems that are experienced by waste management, the way forward is to state the strategic objectives of the Municipality and then to develop action plans or implementation instruments how to achieve the strategic objectives.

Overstrand Municipality is committed to a system of waste management that will see the least possible amount of waste going to modern engineered landfills. This will be achieved through the use of education, law enforcement and material recovery. New and emerging technologies, where applicable and affordable, will also play a part in overall waste management.

The Waste Management Strategic Objectives for Overstrand Municipality on which this Plan is based, commits the municipality to:

- Create an atmosphere in which the environment and natural resources of the region are conserved and protected.
- Develop a communication/information/education strategy to help ensure acceptance of 'ownership' of the strategic objectives among members of the public and industry throughout the municipality and to promote co-operative community action.
- Provide a framework to address the municipality's growing problem of waste management in accordance with best prevailing norms, financial capacity and best environmental practice.
- Provide solutions for the three main objectives:
  - The avoidance of waste generation
  - The reduction of waste volumes
  - The safe disposal of waste

#### **3.10.1 Strategic Objectives**

##### **3.10.1.1 General**

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.

##### **3.10.1.2 Waste Avoidance**

To promote the minimisation of the generation of waste.

##### **3.10.1.3 Waste Reduction**

To promote the reduction of all waste so that nothing of neither value, nor anything that can decompose, gets disposed.

#### 3.10.1.4 Waste Disposal

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.

#### 3.10.1.5 Definitions

**WASTE AVOIDANCE** is to avoid material entering the waste stream, e.g. when the generator of the material either re-uses it or gives the material to somebody else as product or raw material. Composting at home is regarded as waste avoidance.

**WASTE REDUCTION** is to reduce the quantity of waste that has been discarded by its generator, e.g. when recyclable materials are recovered at the sidewalk or at a transfer station, materials recovery facility or landfill. Composting of garden waste at a composting facility is regarded as reduction.

**WASTE DISPOSAL** is defined as the storage, treatment or disposal of waste at licensed facilities.

#### 3.10.2 Role of Overstrand Municipality

The role of the local authority in waste management is of vital importance. Overstrand Municipality needs to provide a safe, robust, and secure system for the management of wastes generated in its administrative area.

It is essential that this system can respond to changes in socio-economic situation, to changing waste composition and quantities, and to alterations in the public's perception of waste management issues. Overstrand Municipality must adopt, therefore, a combination of options for handling waste, tailored to meet the needs and prevailing circumstances of its particular administrative area. The combinations utilised will undoubtedly vary over time - reflecting the changing needs of local residents and the environment.

The plans formulated by Overstrand Municipality are specific to the area and its resources. They reflect the availability of suitable waste management facilities in the region, as well as local market demand for recovered materials. Special care must be taken to cater for the volatility of markets for recovered materials by ensuring that there are other suitable options to fall back on, if required. It is, therefore, highly desirable to be able to switch between waste management methods - further emphasising the hazards of relying too heavily on a single policy option instead of a combination of policies.

The Integrated Waste Management Plan of Overstrand Municipality is a requirement of the Waste Act and this plan will be carried out through the upcoming years. This plan takes into account the Municipality's legal obligations regarding waste avoidance, recovery, disposal and general management.

**4. OVERSTRAND MUNICIPALITY'S IWMP IMPLEMENTATION ACTIONS, SCHEDULE AND COST ESTIMATES**

**4.1 IWMP GOAL 1: PUBLIC AWARENESS AND EDUCATION**

Goal 1: Awareness & Education						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
Educate, strengthen capacity and raise awareness in integrated waste management. The public will be informed and continually made aware of the impacts of waste on the environment. Municipal staff will receive training and attend forums.	Continue waste education as currently done and make use of the Youth Jobs In Waste project. It is planned that nine individuals will be working in waste awareness and education for the duration of the project.					
	Costs to be determined.					
	Overstrand Municipality Solid Waste employees to attend education seminars and waste forums. Capacity training and education conducted within the Municipality where needed.					
	Costs dependent on number of forums attended as well as costs related to internal training provided by Overstrand Municipality.					



#### 4.2 IMWP GOAL 2: IMPROVE WASTE INFORMATION MANAGEMENT

Goal 2: Improve Waste Information Management						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
Ensure the reporting of all waste management facilities to IPWIS. Waste quantification systems to be in place. Registration of hazardous waste generators (industry & medical) and service providers (e.g. transporters).	Registering of waste generators, transporters and recyclers and reporting to the Municipality.					
	Provision has been made for this in the integrated waste management by-laws.					
		Conduct the Waste Characterisation Study				
		Conducted through the Youth Jobs In Waste Project				
	Install a weighbridge at Hermanus transfer station	Install weighbridge at Kleinmond transfer station	Continual recording of weighbridge readings and reporting to the Waste Information System.			
	Costs not from capital budget: Paid for by Greenest Town prize money	R500 000.00				

#### 4.3 IMWP GOAL 3: EFFECTIVE SOLID WASTE SERVICE DELIVERY

Goal 3: Effective solid waste service delivery						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
Ensure that waste services are provided in an effective and environmentally responsible manner to all residents of the Overstrand Municipality.	Collection Service Review: The Overstrand Municipality must ensure that all residents receive an affordable waste service at an acceptable level. Current service levels are good and it needs to be ensured that this remains the case. Waste collection planning must be reviewed in order to provide services to new developments. The Town Engineers must liaise with the town planning department to stay up to date with new areas that require or will require service. The complaints registry and service requests must be reviewed by the Waste Management Officer at least weekly to ensure that these are properly addressed.					
	Costs determined by the review.					
	Collection Vehicles Review: 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.					
	The review will determine the vehicles which require replacement and provision can be made in the capital budget.					
	Vacant positions need to be filled. In order to provide an effective service, key vacant positions in the solid waste management departments need to be filled.					
	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.					

#### 4.4 IMWP GOAL 4: PROMOTE AND ENSURE WASTE MINIMISATION

Goal 4: Promote and Ensure Waste Minimisation						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
Maximise waste minimisation in the Overstrand Municipality. The aim is to consistently divert high percentages of waste from landfill.				Expand the source separation service where feasible. Part of the collection service review of Goal 3.		
	Current diversion operations yield good waste diversion and includes recycling and garden waste composting. Continue with this standard of diversion and improve ad the budget allows.					

#### 4.5 IMWP GOAL 5: IMPROVE REGULATORY COMPLIANCE

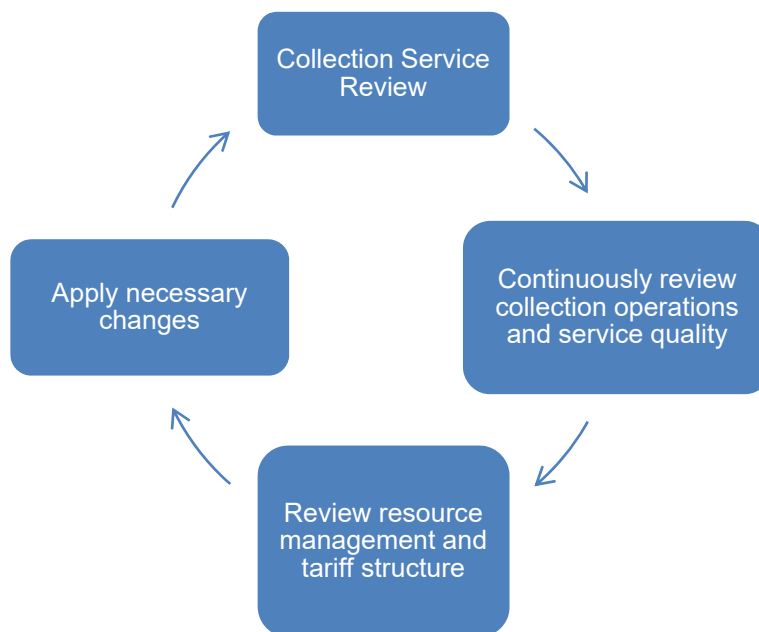
Goal 5: Improve Regulatory Compliance						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
Ensure the licensing of all waste management facilities that require licensing. Rehabilitate all closed landfills in Overstrand. Ensure auditing of waste management facilities and compliance with license conditions.	Enforce by-laws and review as is necessary alongside new national and provincial legislation.					
						Acquire closure license for the Gansbaai landfill.
						Not applicable to this IWMP revision. Estimated requirement for 2030.
		Rehabilitate the Onrus, Hermanus, Hawston, Fisherman's Haven, Voëlklip, Stanford and Pearly Beach landfills. Note that the Pearly Beach rehabilitation will be completed under the construction of the new dams at the sewerage works.				
	*Please note that the rehabilitation cost estimates indicated below include professional fees and construction monitoring. The estimate for each site was determined for the end of the 2014 financial year. The costs indicated below have NOT been escalated due to the year of commencement of each rehabilitation is not yet known. However, it is indicated in the issued closure licenses that rehabilitation for each site must start within 5 years from the issue of the license, indicating that rehabilitation should start for each site before 2019. These costs must be redetermined annually. In addition to the rehabilitation costs below, post-closure audits must be conducted once per year and water monitoring twice per year. The annual cost is estimated as R35000.00 per site, which includes water monitoring.					
	Onrus: R7 152 827; Hermanus: R18 431 235; Hawston: R4 052 778; Fisherman's Haven: R5 904 258; Voëlklip: R9 440 861; Stanford: R4 228 013.					
	Conduct annual internal and external audits for waste management facilities. External audit cost estimates indicated below (all facilities that require audits). Costs to fix non-compliant items will be determined by the audit findings.					
	R60 000.00	R63 600.00	R67 416.00	R71 460.96	R75 748.62	

#### 4.6 IMWP GOAL 6: ENSURE SAFE AND INTEGRATED MANAGEMENT OF HAZARDOUS WASTE

Goal 6: Ensure safe and integrated management of hazardous waste						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
<p>Provide education and management options for hazardous wastes. Ensure legal compliance by hazardous waste generators and transporters. Ensure the monitoring of the incoming waste stream at disposal facilities.</p>	<p>The public must be informed about household hazardous waste and the avoidance, reduction and disposal options available to them regarding these wastes. This forms part of Goal 1 of this plan. Provision has been made at the transfer stations to allow household hazardous waste to be offloaded.</p>					
	<p>As part of Goal 2 of this plan, the registration and reporting of hazardous waste generators at the Municipality will allow the Municipality as the service authority to ensure that the waste is stored, transported, treated or disposed as is legally required.</p>					
	<p>Monitoring of waste: It must be ensured that waste management employees are familiar with the latest legislation regarding hazardous waste, the identification thereof and the disposal options that are legal. Employees at waste management facilities must be able to identify the received waste loads and prohibit the disposal or offloading where required. The incoming waste loads at disposal and waste management facilities must be monitored.</p>					

**4.7 IMWP GOAL 7: ENSURE SOUND BUDGETING FOR INTEGRATED WASTE MANAGEMENT**

Goal 7: Ensure sound budgeting for integrated waste management						
Objectives/Targets	Actions/Cost Estimates					
	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019 AND ON
Ensure that upcoming implementation actions are in the budget. Explore sources of funding.	The Municipality will ensure that there is sufficient provision in the budget for upcoming projects and action items. This can be done with the annual IWMP implementation programme review and project evaluation.					
	The Municipality will explore other sources of funding.					
	The Municipality will as part of Goal 3 ensure that the service delivered is cost efficient.					



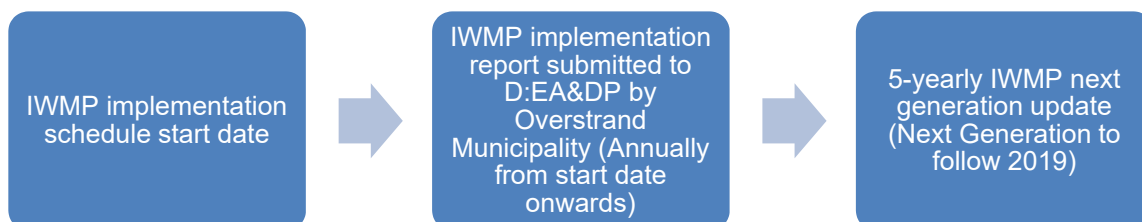
## 5. IWMP MONITORING AND REVIEW

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 4. 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 date on which the final IWMP document is approved, must be recorded and will serve as the base date on which further monitoring and review dates are based. This is also the start date of the approved implementation schedule. The following diagram illustrates the review steps that must be followed after the final IWMP is published.



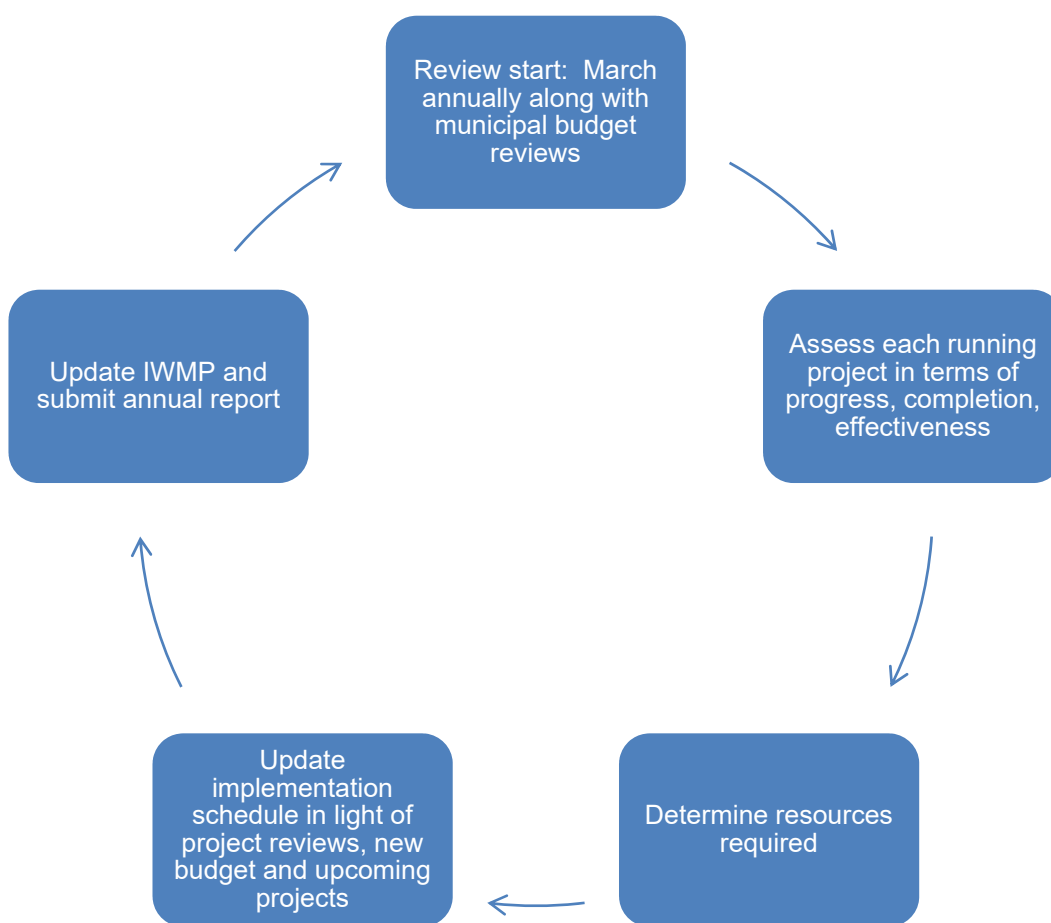
The annual implementation reports will be submitted by the Overstrand Municipality and will be compiled by the Waste Management Officer, or to whom the task is delegated by him. The annual report must contain the approved implementation items and dates of the IWMP and the progress thereof of the past 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.

The report must further discuss the effectiveness of completed projects. For example, when a new weighbridge 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. See **Annexure 4** for an example of a project review form which can be used to track the success and effectiveness of the waste management projects and added to the annual report.

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 of the IWMP and its projects:



## 6. **CONCLUSIONS AND RECOMMENDATIONS**

### 6.1 **CONCLUSIONS**

The Project Team, with the assistance of Municipal Officials and private entities, has undertaken an analysis of the current municipal solid waste management activities within Overstrand Municipality.

The analysis has shown that the Overstrand Municipality has through the years committed themselves to the delivery of a collection and disposal service for all its residents. In recent years the more sustainable approach with regard to waste minimisation and reduction, especially in the private sector, has been adopted and is to be expanded in the upcoming years.



The chapters of this Integrated Waste Management Plan describe the way in which the municipality is currently conducting solid waste management and how to strategically move towards a sustainable waste management system whereby the focus will shift to the avoidance and reduction of waste rather than to the disposal thereof. It also lists the strategies of the municipality in terms of waste avoidance, waste reduction and waste disposal.

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

The analysis of the current waste management system has shown the following:

- all formal and informal residential erven are receiving weekly waste collection services
- waste collection services are not available to farms; the farmers offload their waste at the drop-offs, landfills and transfer stations
- collected municipal waste is disposed at the Gansbaai landfill directly or via the various transfer stations and drop-offs. Chipped garden waste is composted at the Karwyderskraal landfill. The Karwyderskraal landfill will receive municipal waste after construction of the new cell in 2015.
- most healthcare risk wastes are managed by private contractors
- recycling is done by private recyclers at the Hermanus and Gansbaai MRFs and source separation is practiced.

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. The instruments are the following:

- Public Awareness and Education
- Improving Waste Information Management
- Effective Solid Waste Service Delivery
- Promoting and Ensuring Waste Minimisation
- Improving Regulatory Compliance
- Integrated Management of Hazardous Waste
- Ensuring Sound Budgeting for Integrated Waste Management

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

Since the highest priority for transforming the current management system is undoubtedly depending on public acceptance and ownership, the Public Awareness and Education instrument will receive preference in the implementing framework.

## **6.2 RECOMMENDATIONS**

A comprehensive analysis and assessment of solid waste management in the Overstrand Municipal area has been done and key strategies have been determined to aim the municipality towards sustainable and integrated waste management.

It is therefore recommended that the next stage of the process of implementing the Integrated Waste Management Plan be proceeded with, that entails the consultation process with the public and the

development of detail action plans and key performance indicators for future monitoring of the municipality's successes in waste management service delivery.

### **Public Awareness**

The first step in educating the public about waste is to make them aware of any new waste management procedures and facilities available to them.

Another reason to focus on educating the public will cause a greater awareness of waste minimisation. This will reduce waste generation rates which will in turn reduce transport volumes and costs. It is important to also provide feedback to the public of the success of their efforts, for example publishing month to month volumes of waste diverted from being landfilled.

To reduce the contamination of recyclables, the source separation strategy can be expanded where feasible.

### **Waste Collection and Transport**

The current collection service and its composition should be reviewed. Part of the Overstrand collection fleet is due for replacement and it must be ensured that the appropriate vehicles are acquired. This can be done by reviewing the function and route of each vehicle. It has been shown that where an appropriate vehicle is used, it can replace several inappropriate vehicles used for the same function.

This possible reduction in fleet size can ultimately reduce labour and transport costs by vast amounts per annum as well as improve efficiency.

### **Waste reduction**

Waste reduction in the Overstrand is very good and diversion rates of over 30% have been achieved. When the required funds are available, this rate can be maintained.

### **Waste Disposal**

It must be ensured that all waste management facilities are regularly audited as stipulated in each waste License. Regular audits will ensure that these facilities are operated correctly and efficiently. Ensuring the correct operations will maximise the results of efforts of waste reduction and recovery and therefore the benefits thereof.

### **The following items must be included in the Overstrand Municipality IDP:**

- The rehabilitation of the Onrus, Hermanus, Hawston, Fisherman's Haven, Voëlklip and Stanford landfills
- The construction of a weighbridge at the Kleinmond transfer station

# **ANNEXURE 1**

## **D:EA&DP INTEGRATED WASTE MANAGEMENT PLANNING CHECKLIST**



## INTERGRATED WASTE MANAGEMENT PLANNING

### CHECKLIST FOR THE .....LOCAL MUNICIPALITY

**FEBRUARY**

**2014**



SECTION 1: GENERIC INFORMATION			
Category of the municipality		A	B
Date of Submission			
Name of the municipality			
Section or Department within the municipality responsible for drafting the IWMP			
Contact details of "Responsible Person" in the Municipal Department		Contact details of Alternate contact person from Municipality	
Name:		Name:	
Tel:		Tel:	
Fax:		Fax:	
Cell:		Cell:	
Email:		Email:	

### **Integrated Waste Management Plan Review Form (IWMP) / Checklist**

Please answer the following questions by placing a (X) in the appropriate block. Only submit your IWMP for approval once you have answered YES to all the questions below.

CHECKLIST QUESTIONS	YES	NO
<b>SECTION 1 INTRODUCTION AND GENERAL DESCRIPTION</b>		
1.1) Does the Intro and general description includes overall aim, strategic goals and scope, of the IWMP?		
1.2) Does the IWMP indicate the geographical coverage of the plan?		
1.3) Does the IWMP indicate the Geo-physical and Geo-hydrological conditions in the municipality?		
<b>SECTION 2 STRATEGIC LINKAGES</b>		
2.1) Does the IWMP show linkages with the WC IWMP?		
2.2) Does the IWMP show linkages with the SDF?		
2.3) Does the IWMP show linkages with the IDP?		
<b>SECTION 3 PUBLIC PARTICIPATION</b>		
3.1) Is there a detailed public participation program included in the IWMP? (i.e. date, location and amount, number of PP session's, type of PP(newspapers, meetings), (participants)		
3.2) Does the IWMP provide proof of PP i.e. attendance registers, comments received and response given?		
<b>SECTION 4 IWMP STATUS QUO OR SITUATION ANALYSIS</b>		
<b>4.1 LEGISLATION</b>		
4.1.1) Does the IWMP identify all existing legislation and policies, which is applicable to integrated waste management including the local municipal by-laws?		

4.1.2)	Does the IWMP indicate which existing local government by-laws that influence waste management practices are currently being reviewed or in the process of being reviewed?		
4.1.3)	Does the Status Quo identify any international agreements		
<b>4.2 DEMOGRAPHIC PROFILE</b>			
4.2.1)	Does the Status Quo indicate the existing demographic profile of the municipality w.r.t total population of the area,		
4.2.2)	Does the Status Quo indicate the existing demographic profile of the municipality w.r.t projected population and growth rate of the area,		
4.2.3)	Does the Status Quo indicate the existing demographic profile of the municipality w.r.t population distribution		
4.2.4)	Does the Status Quo indicate the existing demographic profile of the municipality w.r.t socio-economic categories including income levels		
4.2.5)	Does the Status Quo indicate the existing demographic profile of the municipality w.r.t development profiles		
<b>4.3 WASTE MANAGEMENT COST AND FINANCING</b>			
4.3.1)	Does the IWMP include a detailed breakdown of current operational and capital budget?		
4.3.2)	Does the IWMP include a detailed breakdown of current operational and capital expenditure?		



4.3.3) Does the IWMP indicate the current breakdown of income (e.g. tariffs, fines for waste management)		
<b>4.4 SERVICES AND SERVICE DELIVERY</b>		
4.4.1) Does the IWMP indicate the level of free basic services		
4.4.2) Does the IWMP indicate the level of services to Formal residential houses		
4.4.3) Does the IWMP indicate the level of services to informal settlements.		
4.4.4) Does the IWMP indicate the level of services to farms		
4.4.5) Does the IWMP indicate unserved areas		
<b>4.5 COMPLIANCE AND ENFORCEMENT</b>		
4.5.1) Does the Status Quo identify licensed and unlicensed waste management facilities and has provision been made for the licensing, closure and rehabilitation of these facilities in the IWMP.		
4.5.2) Does the IWMP indicate if landfill sites, recycling, drop-off and buy-back centers are in compliance with license conditions?		

4.5.3) Does the Status Quo provide a summary of waste related complaints (i.e. number and type)		
4.5.4) Does the Status Quo indicate the available annual air space and remaining life expectancy of the waste management facilities.		
4.5.5) Does the Status Quo identify contaminated land (unpermitted landfills prior to ECA) and indicate remediation measures to reduce the risk of harm to health or the environment.		
4.5.6) Does the IWMP address how informal salvaging, if any, on existing landfill facilities are going to be formalized, controlled or eliminated and does the permit/license or environmental authorization make provision for it, or do they indicate if the existing authorizations are to be amended.		
<b>4.6 WASTE CHARACTERISATION</b>		
4.6.1) Does the IWMP include waste generation quantities and types for general and hazardous waste from households		
4.6.2) Does the IWMP include waste generation quantities and types for general and hazardous waste from industry		
4.6.3) Does the IWMP include waste generation quantities and types for general and hazardous waste from business		
4.6.4) Does the IWMP include waste generation quantities and types for general and hazardous waste from Farms		
4.6.5) Does the IWMP include waste generation quantities and types for general and hazardous waste from Other institutions e.g. health care facilities		

4.6.6) Does the IWMP include projected waste generation quantities?		
<b>4.7. WASTE MINIMISATION</b>		
4.7.1) Does the Status Quo indicate any waste minimisation (reuse, recycling, recovery, treatment) initiatives as mandated in the NEM: WA within your municipal area including private sector initiatives?		
4.7.2) Does the IWMP include waste minimisation quantities and types for general and hazardous waste?		
<b>4.8. ORGANISATIONAL STRUCTURE AND STAFF CAPACITY</b>		
4.8.1) In accordance with Chapter 3 of NEMWA has a waste management officer been designated in writing to be responsible for coordinating matters pertaining to waste management in the municipality?		
4.8.2) Does the IWMP indicate the entire waste staff (management, supervisor and labourers) complement including any staff vacancies and plans to fill vacant posts.		
<b>4.9. WASTE AWARENESS AND EDUCATION</b>		
4.9.1) Does the IWMP provide information(campaigns) on waste awareness and education		
<b>4.10 WASTE INFORMATION MANAGEMENT</b>		

4.10.1) Does the IWMP indicate the Status of registration and reporting of waste management facilities on IPWIS.		
4.10.2) Does the IWMP indicate the use of a waste quantification system?		
<b>5. GAP AND NEED ANALYSIS</b>		
5.1) Does the IWMP indicate a gap analysis (analysis and identification of issues, problems or shortcomings or challenges within the municipality w.r.t waste management.		
<b>6. OBJECTIVES AND TARGETS</b>		
6.1) Does the IWMP set short, medium and long-term objectives and targets? If yes, are these objectives specific/measurable/achievable/realistic/time-based (SMART)?		
<b>7. IWMP IMPLEMENTATION</b>		
7.1) Is there a detailed implementation plan identifying activities together with both human and financial resources and timeframes.		
7.2) Does the Implementation plan address how the IWMP will be integrated with the Integrated Development Plan (IDP)?		
<b>8. MONITORING AND REVIEW</b>		
8.1) Does the IWMP introduce mechanisms to monitor the effectiveness of the implementation of the IWMP and to take corrective actions if the targets are not met?		

**Score:**

**Percentage:**

# **ANNEXURE 2**

## **OVERSTRAND SOLID WASTE BY-LAWS**

## **OVERSTRAND MUNICIPALITY**

### **INTEGRATED WASTE MANAGEMENT BY-LAW, 2013**

**To regulate the provision of solid waste services in the area of jurisdiction of the Overstrand Municipality and to provide for matters connected therewith.**

Be it enacted by the Municipal Council of the Overstrand Municipality, in terms of Section 156(2) of the National Constitution read with Section 11(3)(m) of the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000), as follows:-

#### **CHAPTER 1 GENERAL PROVISIONS**

1. Definitions and interpretation
2. Principles
3. Main objects
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 REFUSE**

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. Liabilities
- 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**  
**ENFORCEMENT AND LEGAL SERVICES**

- 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. Appeals
63. Offences
64. Penalties
65. Application of this by-law
66. Repeal of by-laws
67. Short title and commencement

**SCHEDULE:**

By-laws repealed (*Schedule "A"*)

## CHAPTER 1 GENERAL PROVISIONS

### Definitions and interpretation

1. In this By-law and the Schedule thereto, words used in the masculine gender include the feminine, the singular includes the plural and vice versa; in the event of a conflict between the English and Afrikaans versions of this By-law, the English version shall be decisive; and unless the context otherwise indicates:

**“accredited service provider”** means a person or entity accredited by and registered with the Municipality and having obtained an authorisation to collect and transport specified types of waste in the municipal area;

**“agricultural and farm waste”** means all waste generated on farms as part of agricultural processes or through ordinary domestic and business activities and may include different types of waste;

**“animal proof container”** means an approved waste container which protects the contents from problem animals, as required by the Municipality in specific areas;

**“applicable charge”** means the rate, charge, tariff, flat rate, subsidy or any other cost prescribed by the Municipality from time to time;

**“approved”** in the context of bins, bin liners, refuse bags, containers, receptacles and wrappers, means approved by the Municipality or an accredited service provider for the collection and storage of waste;

**“approved business waste container”** means a receptacle with a storage capacity of 240 litre or any other approved container prescribed by the Municipality;

**“approved domestic waste container”** means a receptacle with a storage capacity of 240 litres or any other approved container prescribed by the Municipality including a refuse bag until 30 June 2015;

**“authorised official”** means a waste management officer or other person in the employ of the Municipality, authorised by the Municipality for the purposes of this By-law, or if the Municipality has appointed a municipal service provider to perform municipal services, an employee of such service provider, authorised by it as an authorised official in terms of this By-law and acting within the scope of the powers, functions and duties assigned to that municipal service provider by the Municipality in terms of section 81(2) of the Systems Act or another applicable law;

**“building waste”** means waste produced during the construction, alteration, repair or demolition of any structure both manmade or natural, and includes rubble, earth, vegetation, wood and rock displaced during such construction, alteration, repair or demolition but excludes hazardous waste and garden waste;

**“bulky waste”** means waste which can be classified as domestic or business waste but which, by virtue of its mass, shape, size or quantity, cannot easily be accumulated in or removed from an approved container;

**“business waste”** means waste, other than hazardous waste, health care waste, building waste, industrial waste, garden waste, bulky waste, special waste and special industrial waste generated on

premises used for non-residential purposes and at residential premises where commercial activities are being conducted;

**“by-product”** means a substance that is produced as part of a process that is primarily intended to produce another substance or product and that has the characteristics of an equivalent virgin product or material;

**“clean building waste”** means the inert waste produced during the construction, alteration, repair or demolition of any structure both manmade or natural thus including rubble but excluding building materials such as cement bags, paint holders, window frames, carpets as well as earth, vegetation, wood and rock that are displaced during such construction, alteration, repair or demolition processes;

**“collection”** means the act of collecting domestic or business waste at the place of generation or storage by the Municipality or an accredited service provider and removal has a similar meaning;

**“commercial services”** means any waste management service, relating or connected to accumulating, collecting, managing, recycling, sorting, storing, treating, transporting, disposing, buying or selling of waste or any other manner of handling waste excluding municipal services rendered by the Municipality;

**“dailies”** means putrescible business waste generated by hotels, restaurants, food shops, hospitals and canteens that must be collected on a more frequent basis, often a daily basis, to prevent the waste from decomposing and presenting a nuisance, environmental or health risk;

**“damage to the environment”** means any pollution, degradation or harm to the environment whether visible or not;

**“DEA”** means the national Department of Environmental Affairs;

**“DEA&DP”** means the provincial Department of Environmental Affairs and Development Planning;

**“domestic hazardous waste”** means hazardous waste generated in a household in minimum quantities consistent with the home use of materials such as paints and solvents, automotive wastes, pesticides, electronics, aerosols, cleaning agents, batteries, fluorescent lamps and refrigerant containing appliances;

**“domestic health care waste”** means health care waste generated in a household in minimum quantities consistent with the home use of materials for medical purposes and includes waste such as syringes, unused medicines and pills, used bandages, that could cause a health hazard when not appropriately disposed of;

**“domestic waste”** means waste that emanates from premises used wholly or mainly for--

- (a) residential purposes, such as a dwelling house, flat, boarding house, old age home or group development;
- (b) educational, sport or recreational purposes;
- (c) purposes of public worship, including a hall or other building used for religious purposes, and includes domestic health care waste and domestic hazardous waste but excludes hazardous waste, business waste, building waste, garden waste, bulky waste, special waste, liquid matter or night soil;

**“dump”** means placing waste anywhere other than in an approved receptacle or a place designated as a waste handling facility or waste disposal facility by the Municipality;

**“DWA”** means the National Department of Water Affairs;

**"ECA"** means the Environment Conservation Act, 1989 (Act 73 of 1989) and any regulations made in terms thereof, or any superseding legislation;

**"EIA"** means an environmental impact assessment as contemplated in NEMA, and/or the ECA and the EIA Regulations as published in Government Notice R 1183 on 5 September 1997, as amended from time to time;

**"enforcement notice"** means any notice issued by an authorised official under this By-law which instructs the person to whom it is issued to comply with the terms of the notice, and includes a compliance notice contemplated in section 57;

**"environment"** means the individual parts and total sum of all elements, properties, conditions and the like making up the surroundings within which living organisms exist and any part or combination of the interrelationships among and between them;

**"environmental emergency"** means any situation that has caused or may cause serious harm to human health or damage to the environment, irrespective of whether the potential for harm or damage is immediate or delayed;

**"environmental restoration cost"** means the full cost of all measures necessary to restore the environment to its condition prior to an incident which caused damage to it, and in the event of this not being possible the value of the cost benefit that has been lost through the damage to or destruction of the environment;

**"event waste"** means waste that originates from the activities related to an event that is held in the municipal area;

**"e-waste"** means electric and electronic equipment waste such as lighting equipment, circuit boards, mobile phones, computers, television sets and audio visual equipment that are still mainly treated as domestic or business waste but with a high need and potential for recycling;

**"garden services activities"** means the provision of gardening services including the cutting of grass, pruning of trees or any other horticultural activity including landscaping, to any domestic, business, commercial, education and training, recreational, institutional or industrial premises;

**"garden waste"** means organic waste which emanates from domestic gardening activities, including grass cuttings, leaves, plants, flowers, branches, tree stumps and other similar waste;

**"general waste"** means waste that does not pose an immediate hazard or threat to health or to the environment, and includes domestic waste; business waste; building waste; inert waste and garden waste;

**"group development"** means a high density residential development with common property and/or facilities and which is managed by a home owners' association, body corporate or other managing body;

**"hazardous chemical substance"** means any toxic, harmful, corrosive, irritant or asphyxiant substance, or a mixture of such substances for which-

- (a) an occupational exposure limit is prescribed;
- (b) an occupational exposure limit is not prescribed but which creates a hazard to health and the environment;

**“hazardous waste”** means any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics thereof, have a detrimental impact on health and the environment;

**“health care risk waste”** means all hazardous waste generated at any health care facility such as a frail care centre, hospital, clinic, laboratory, medical research institution, dental or medical practitioner or veterinarian including but not limited to infectious waste, pathological waste, sharp waste, pharmaceutical waste, genotoxic waste, chemical waste, pressurized container waste, waste with heavy metals, radio-active waste, or any waste that has been in contact with blood, bodily fluids or tissues from humans or infected animals from veterinary practices;

**“health care waste”** means all waste generated by or derived from medical care or medical research including but not limited to infectious waste, pathological waste, sharp waste, pharmaceutical waste, genotoxic waste, chemical waste, pressurized container waste, waste with heavy metals, radio-active waste, or any waste that has been in contact with blood, bodily fluids or tissues from humans or infected animals from veterinary practices;

**“holder of waste”** means any person or entity that imports, generates, collects, handles, accumulates, stores, transports, transfers, processes, treats, trades, exports, recovers, recycles, re-uses or disposes of waste including sorters of waste such as recycling or waste minimisation groups, scrap dealers and buy-back centres;

**“industrial waste”** means waste generated as a result of manufacturing, industrial, fabricating, processing, dismantling or maintenance activities and may include waste generated by commercial agricultural, mining or power plant activities but does not include any other category of waste;

**“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;

**“infectious waste”** means waste which is generated during diagnosis, treatment or immunization of humans or animals, in the research pertaining to this, in the manufacturing or testing of biological agents including blood products, cultures, pathological waste, sharp objects, human and animal anatomical waste and isolation waste that contain or may contain infectious substances;

**“integrated waste management plan”** means an integrated waste management plan required by the Municipality in terms of this By-law or that is required in terms of any other applicable legislation;

**“interest”** means a levy with the same legal property as service fees and calculated in terms of this By-law on all amounts in arrears in respect of prescribed fees for waste management services at a standard rate equal to an interest rate as determined by the Customer Care, Credit Control and Debt Collection Policy of the Municipality;

**“IPWIS”** means the Integrated Pollutant and Waste Information System of the Western Cape Government as established in accordance with the national and provincial legislative and policy framework including NEM:WA;

**“level of service”** means the frequency of municipal service and the type of service point;

**“litter”** means any object or matter which is discarded by a person in any place except in an approved receptacle provided for that purpose or at a waste disposal facility or a waste handling facility;

**“material recovery”** means any process where material is removed from the waste stream with the purpose to re-use, recycle or treat the material so removed;

**“minimisation”** means the steps that are taken by the Municipality, residents, businesses and industries to avoid and reduce the amount and toxicity of waste generated and disposed of;

**“Minister”** means the Minister of the Department of Environmental Affairs;

**“Municipality”** means –

- (a) the Overstrand Municipality established in terms of Section 12 of the Structures Act by Provincial Notice No. P.N. 488/2000 or its successors in title, and includes a structure or person exercising a delegated power or carrying out an instruction in terms of this By-law and legislation applicable to local government; or
- (b) a municipal service provider fulfilling a responsibility under this By-law, assigned to it in terms of section 81(2) of the Systems Act or any other law, as the case may be;

**“municipal service”** means the municipal service relating to the collection of waste, including domestic waste, business waste and dairies and related waste activities provided by the Municipality or a municipal service provider on behalf of the Municipality, in accordance with this By-law;

**“NEMA”** means the National Environmental Management Act, 1998 (Act 107 of 1998);

**“NEM:WA”** means the National Environmental Management: Waste Act, 2008 (Act 59 of 2008);

**“nuisance”** means any injury, harm, damage, inconvenience or annoyance to any person which is caused in any way whatsoever by the improper handling or management of waste, including but not limited to, the storage, placement, collection, transport or disposal of waste or by littering;

**“occupier”** means a person who occupies any premises or part thereof, without regard to the title under which he or she so occupies, and includes:

- (a) any person in actual occupation of those premises;
- (b) any person legally entitled to occupy those premises;
- (c) in the case of those premises being subdivided and let to lodgers or various tenants, the person receiving the rent payable by such lodgers or tenants whether on the person's own account or as agent for any person entitled thereto or interested therein;
- (d) any person having the charge of or management of those premises, and includes the agent of any such person when the person is absent from the Republic of South Africa or his or her whereabouts are unknown; or
- (e) the owner of those premises;

**“owner”** includes:

- (a) the person in whom is vested the legal title to premises, including, but not limited to, the registered owner according to the title deed;
- (b) where the person in whom the legal title to the premises is vested is insolvent or dead, or is under any form of legal disability whatsoever, the person in whom the administration and control of such premises is vested as curator, trustee, executor, administrator, judicial manager, liquidator or other legal representative;
- (c) in any case where the Municipality is unable to determine the identity of such person, a person who is entitled to the benefit of the use of such premises or a building or buildings thereon; and

- (d) in the case of premises for which a lease agreement of ten years or longer has been entered into and registered in the Deeds Office, the lessee thereof;
- (e) in relation to
  - (i) a piece of land delineated on a sectional plan registered in terms of the Sectional Titles Act, 1986 (Act 95 of 1986), the developer or the body corporate in respect of the common property; or
  - (ii) a section as defined in the Sectional Titles Act, the person in whose name such section is registered under a sectional title deed, and includes the lawfully appointed agent of such a person;
- (f) the person who has purchased immovable property from the Municipality, in terms of a scheme that allows for the purchase price to be paid in instalments and who has not received transfer from the Municipality;

**"person"** means any natural person, local government body or like authority, a company incorporated under any law, a body of persons whether incorporated or not, a statutory body, public utility body, voluntary association or trust;

**"pollution"** means any change in the environment caused by –

- (a) substances; or
- (b) radioactive or other waves; or
- (c) noise, odours, dust or heat, emitted from any activity, including the storage or treatment of waste or substances, construction and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition, resilience and productivity of natural or managed ecosystems, or on materials useful to people, or will have such an effect in the future;

**"premises"** means an erf or any other portion of land, including any building thereon or any other structure utilised for business, industrial or residential purposes;

**"prescribed"** means, determined by resolution of the Municipal Council from time to time;

**"prescribed fee"** means a fee including a tariff or charge determined by the Municipal Council by resolution;

**"prescribed tariff"** means a schedule of prescribed fees as entailed in the Municipality's Tariff By-laws;

**"priority waste"** means waste declared to be such by the Municipality or in terms of national or provincial legislation and may call for emergency measures to be taken by the Municipality;

**"problem animal areas"** means areas identified from time to time by the Municipality where animals behave in a way that creates problems;

**"public notice"** means notice to the public in a manner determined by the Municipality;

**"public place"** includes any public building, public road, overhead bridge, subway, foot pavement, footpath, sidewalk, lane square, open space, garden, park, sports ground, enclosed space vested in a Municipality, and any road, place or thoroughfare however created which is in the undisturbed use of the public or which the public has the right to use or the right to access;

**"public road"** means any road, street or thoroughfare or any other place (whether a thoroughfare or not) which is commonly used by the public or any section thereof or to which the public or any section thereof has a right of access and includes—

- (a) the verge of any such road, street or thoroughfare;
- (b) any bridge, ferry or drift traversed by any such road, street or thoroughfare; and
- (c) any other work or object forming part of or connected with or belonging to such road, street or thoroughfare;

**“receptacle”** means an approved container for the purpose of temporary storage of domestic waste or business waste until removal thereof by the Municipality or an accredited service provider;

**“recovery”** means a process where waste is reclaimed, which process could involve the separation of waste from a waste stream for further use;

**“recyclable waste”** means waste that could be separated from the waste stream and set aside for purposes of re-use or recycling;

**“recycling”** means a process where recovered waste is further processed as a product or raw material;

**“refuse”** means domestic waste and business waste which is of such a size and form that it could be deposited in an approved domestic waste container or an approved business waste container or any other matter which in the opinion of the Municipality constitutes refuse;

**“refuse bag”** means a plastic bag at least 22 micron thick with dimensions of 750mm x 950mm or as otherwise prescribed by the Municipality and the same applies to a bin liner;

**“safety data sheet”** means the information sheet to be completed by all generators of hazardous waste in accordance with relevant regulations and the latest edition of SANS 10234 – Globally Harmonised System of Classification and Labelling of Chemicals GHS and to be in the possession of all holders of waste that handles such hazardous waste;

**“SANS”** means South African National Standard;

**“special industrial waste”** means waste consisting of a liquid, sludge or solid substance, resulting from a manufacturing process, industrial treatment or the pre-treatment for disposal purposes of any industrial or mining liquid waste;

**“special waste”** means a non-hazardous industrial waste that may include a number of waste types which has physical or chemical characteristics, or both, that requires special handling at a waste disposal facility such as contaminated soil, raw animal manure, dead animals and any other material determined to be special waste by the Municipality;

**“storage”** means the accumulation of waste in a manner that does not constitute treatment or disposal of that waste;

**“Structures Act”** means the Local Government: Municipal Structures Act, 1998 (Act 117 of 1998);

**“sustainable development”** means the integration of social, economic and environmental factors into planning, implementation and decision-making so as to ensure that development serves present and future generations;

**“Systems Act”** means the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000);

**“tariff”** means the annually revised user charge for the provision of the municipal service, determined and promulgated by the Municipality through its Tariff By-laws in terms of the Systems Act;



**“transport”** means the movement of waste from one place to another;

**“waste”** means any substance, whether or not that substance can be reduced, re-used, recycled and recovered—

- (a) that is surplus, unwanted, rejected, discarded, abandoned or disposed of;
- (b) which the generator has no further use of for the purposes of production
- (c) that must be treated or disposed of; or
- (d) that is identified as a waste by the Minister by notice in the Gazette, and includes waste generated by the mining, medical or other sectors, but—
  - (i) a by-product is not considered waste; and
  - (ii) any portion of waste, once re-used, recycled and recovered ceases to be waste;

**“waste disposal facility”** means any site or premise which receives waste for treatment or disposal thereof, and which is operated in terms of a license obtained from a statutory regulatory authority;

**“waste handling facility”** means any site or premise that receives, accumulates, handles, recycles, sorts and temporarily stores or treats waste prior to its transfer for final disposal and is operated in terms of a license obtained from a statutory regulatory authority;

**“waste information system”** means IPWIS ;

**“waste management activity”** means any one or more of the activities, as listed in and from time to time amended by NEM:WA, that a holder of waste may be involved in;

**“waste management officer”** means a person designated by the Municipality to be responsible for co-ordinating matters pertaining to waste management for the Municipality;

**“waste management plan”** means a waste management plan required by the Municipality in terms of this By-law and NEM:WA;

**“waste management services”** means services that relate to any one or more of the waste management activities;

**“waste manifest documents”** means the control documents containing information as legally prescribed and maintained by the holders of waste involved; which documents must accompany each load of hazardous waste from point of generation to final management of it;

**“waste removal system”** means a system by means of which refuse is removed and disposed of by the Municipality;

**“waste tyre”** means a new, used, retreaded, or un-roadworthy tyre, not suitable to be retreaded, repaired or sold as a part worn tyre and not fit for its original intended use and the storage, stockpiling and disposal;

**“working day”** means a day other than a Saturday, Sunday or public holiday but in the context of the Municipality’s waste handling and waste disposal facilities it includes all calendar days except Sundays, religious public holidays and New Year’s Day or as determined by the Municipality.

## Principles

2. (1) The Municipality has the responsibility to ensure that all waste generated within the municipal area is—
  - (a) collected, disposed of or recovered in accordance with this By-law; and

- (b) such collection, disposal or recovery takes account of the waste management hierarchy outlined in subsection (2).
- (2) The principle underpinning this By-law is the establishment of a waste management hierarchy in the following order of priority—
  - (a) avoidance, minimisation and reduction of waste;
  - (b) re-use of waste;
  - (c) recycling, re-claiming, reprocessing and treatment of waste; and
  - (d) disposal of waste.
- (3) An official authorised in terms of this By-law must as is reasonably possible, take the hierarchy specified in subsection (2) into account.

### **Main objects**

- 3. (1) The main objects of this By-law are—
  - (a) to regulate the collection, handling, storage, transport, recycling, treatment and disposal of waste;
  - (b) to regulate the pursuance of an integrated waste management approach;
  - (c) to regulate the provision of municipal services by a municipal service provider and commercial services by accredited service providers; and
  - (d) to enhance sustainable development.
- (2) In pursuing the main objects of this By-law, the Municipality shall, within its financial and administrative capacity—
  - (a) endeavour to ensure local community involvement in local waste planning;
  - (b) endeavour to minimise the consumption of natural resources;
  - (c) promote the recycling and re-use of waste;
  - (d) encourage waste separation to facilitate re-use and recycling;
  - (e) promote the effective resourcing, planning and delivery of municipal services and commercial services;
  - (f) endeavour to achieve integrated waste management, planning and services in a local context;
  - (g) promote and ensure environmentally responsible municipal services and commercial services; and
  - (h) endeavour to ensure compliance with the provisions of this By-law.

### **Duties and obligations**

- 4. (1) A holder of waste must take all reasonable measures to:
  - (a) reduce or avoid waste generation and minimise the toxicity of waste generated;
  - (b) re-use, recycle and recover waste;
  - (c) dispose waste in an environmentally sound manner;
  - (d) manage waste in a manner not endangering health or the environment and cause no nuisance related to sight, noise or odour;
  - (e) prevent waste from being used for an unauthorised purpose including the prevention of persons under his supervision from contravening this By-law;
- (2) A person who sells a product which may be used by the public and is likely to result in the generation of hazardous waste must take all reasonable steps to inform the public of the impact of that waste on health and the environment.
- (3) Any person subject to the duties and obligations imposed in subsections (1) and (2) may be required by the Municipality or an authorised official to take measures to ensure compliance

with these duties and obligations, which measures may be to—

- (a) investigate, assess and evaluate the impact on the environment;
- (b) inform and educate employees about the environmental risks of their work and the manner in which their tasks must be performed in order to avoid causing significant pollution or degradation of the environment;
- (c) cease, modify or control any act, activity or process causing the pollution or degradation;
- (d) contain or prevent the movement of pollutants or the cause of degradation;
- (e) eliminate any source of the pollution or degradation;
- (f) remedy the effects of the pollution or degradation.

## CHAPTER 2

### INTEGRATED WASTE MANAGEMENT

#### Waste management plans

5. (1) The Municipality shall—
- (a) establish, review and revise its integrated waste management plan in accordance with the prescriptions of national legislation;
  - (b) annually report on the implementation of its integrated waste management plan; and
  - (c) follow prescribed processes of community consultation in terms of subsections (1)(a) and (b).
- (2) All events organised and hosted in the municipal area must at least one month prior to the event taking place submit to the Municipality a waste management plan that includes the waste management services to be provided and such other information as required by the Municipality.
- (3) The Municipality may grant conditional exemption in terms of subsection (2) depending on the size, nature and duration of the event;
- (4) An owner or occupier or any other person responsible for a new development must submit to the Municipality an integrated waste management plan including such information as the Municipality requires prior to the start of the development and also during the development, if so requested by the Municipality.
- (5) The Municipality shall require a holder of waste involved in a waste management activity listed in terms of section 19 of NEM:WA to submit its integrated waste management plan to the Municipality within a specified time and thereafter at intervals coinciding with the requirements of national and provincial legislation or standards.
- (6) The Municipality may require from any other holder of waste excluding domestic waste to submit within a reasonable time and thereafter at intervals determined by the Municipality an integrated waste management plan containing such information as the Municipality deems necessary or, if applicable, a copy of its industry waste management plan as required by national legislation.
- (7) If an integrated waste management plan as referred to in subsections (4), (5) or (6) is in any way changed or amended, the holder of waste must submit such changed or amended plan to the Municipality immediately after the amendment has been made.

### **Waste information system**

6. (1) The Municipality shall establish and maintain a waste information system including information on the levels and extent of waste management services provided by it and enter such information on the IPWIS as and when required.
- (2) The Municipality may require from a holder of waste or any person to furnish the Municipality within a reasonable time or on a regular basis with such data, documents, information, samples or materials and the verification of information reasonably required by the Municipality to discharge its responsibilities in terms of subsection (1).
- (3) The Municipality may request a person or holder of waste that it reasonably believe should be registered on the IPWIS and/or the national waste information system to effect such registration and submit proof thereof to the Municipality or to submit proof of not conducting a waste management activity obligating such registration within a time that the Municipality regards as reasonable.

### **Waste minimisation and recycling**

7. (1) The Municipality shall in accordance with its responsibilities and its resources progressively implement measures to reduce waste and promote the recovery, re-use and recycling of waste including waste separation at source in respect of appropriate levels of services.
- (2) The Municipality may on a regular basis and in a manner it deems suitable acknowledge outstanding achievements in respect of waste avoidance, waste minimisation, recycling or other waste management practices advancing environmentally responsible integrated waste management.

### **Waste management activities**

8. (1) The Municipality may require a holder of waste in possession of or responsible for waste that must be classified, recorded, labelled or in any way assessed or re-assessed, to submit proof of compliance with the relevant prescriptions of national and provincial legislation and standards as applicable thereto and the Municipality will strictly adhere to any such legislation and/or standards in respect of its own waste management activities.
- (2) The Municipality's approval, inspection and monitoring of waste storage facilities, vehicle scrapping or recovery facilities and any other facilities where materials suitable for re-use or recycling are recovered shall be in accordance with national and provincial legislation and standards and the Municipality's by-laws and will require the owners or occupiers of these premises to submit such information, plans and records as the Municipality deems necessary to fulfil its duties as a waste management authority.

## **CHAPTER 3**

### **COLLECTION OF REFUSE**

#### **Levels of service**

9. (1) The levels of refuse collection may differ between areas based on the practicality and cost-efficiency of delivering the service. Service levels in areas may vary between:
- (a) on-site appropriate and regularly supervised or monitored disposal;
  - (b) community transfer to a central collection point;

- (c) organised transfer to a central collection point and kerbside collection; and
  - (d) a combination or hybrid of (b) and (c).
- (2) Before affecting changes to the existing refuse removal system the Municipality will consult the affected communities or areas and give adequate notice of the commencement of new arrangements.

### **Agreement of service**

- 10.**
- (1) The Municipality shall render a service for the collection of business and domestic refuse from built upon premises at a prescribed fee and the owner or occupier of such premises shall make use of the refuse collection service provided by the Municipality.
  - (2) The occupier of premises or, in the case of premises being occupied by more than one occupier, the owner of such premises on which business or domestic waste is generated, shall where a collection service is available, within seven days of such occupation or changes in such occupation notify the Municipality in writing—
    - (a) that the premises is being occupied by one or more occupier; and
    - (b) whether the collection service is for business or domestic purposes.
  - (3) If the applicant for services in terms of subsection (2) is not the owner, the Municipality shall require any owner to be bound jointly and severally as surety and co-principal debtor with the consumer, for the payment of any prescribed fees payable to the Municipality in terms of this By-law.
  - (4) The refuse collection service rendered in terms of subsection (1) shall be in accordance with the agreement for services concluded with the Municipality; which agreement shall, subject to the terms, conditions and prescribed fees determined by the Municipality, be amended in writing to make provision for an increase in the frequency and/or volume of the refuse removal service rendered should it be required by the Municipality in giving effect to this By-law or in response to a request by the owner or occupier of residential or business premises.
  - (5) An owner or occupier of premises may contract with an accredited service provider to collect its refuse but shall not be entitled to exemption from or a reduction in the prescribed fee determined by the Municipality merely on the grounds that no or limited use is made of the service rendered by the Municipality.
  - (6) An owner or occupier of premises is liable to pay the Municipality the prescribed fee for the provision of refuse collection services on the due date for payment stipulated in the account, failing which the Municipality will deal with the matter in accordance with its Customer Care, Credit Control and Debt Collection By-laws.
  - (7) Availability tariffs may be charged on vacant plots, as determined by the Municipality from time to time.
  - (8) The Municipality will determine which waste items are unsuitable for collection because they do not constitute domestic waste or business waste or could be classified as bulky waste, and if waste is determined to be unsuitable for collection, a process for removal and disposal of such waste shall be recommended by the Municipality to the owner of the waste or occupier of the premises.
  - (9) If the Municipality's scheduled refuse collection services are interrupted for whatever reason, the Municipality will resume the service as soon as reasonably possible and address backlogs as a matter of priority.

- (10) Complaints about the refuse collection service will be dealt with in accordance with the Municipality's Consumer Care Charter for Solid Waste Services.
- (11) The owner or occupier of premises must notify the Municipality in writing when the removal of refuse is no longer required in which case the prescribed fees shall be payable until the end of the calendar month following after the month in which the notice is received unless subsection 10(5) applies.

### **Frequency**

- 11.**
- (1) The Municipality shall collect domestic waste and business waste at least once per week on scheduled dates for different areas. Occupiers or owners of premises will be informed of revised collection arrangements reasonably in advance by one or more appropriate methods.
  - (2) The Municipality will determine which business premises generate waste that can be regarded as dailies and may instruct an increase in the frequency of refuse collection from such premises as provided for in section 10(4).
  - (3) If the Municipality is of the opinion that a business creates a nuisance, health risk, odour or danger to public health due to the fact that refuse is not removed during weekends, the Municipality may instruct the owner or occupier to make use of an additional refuse collection service rendered at a prescribed fee by the Municipality.
  - (4) An owner or occupier of a business premises that receives a refuse removal service once per week may apply to the Municipality in writing to increase the number of refuse removals to multiple times per week including Saturdays, Sundays or public holidays if a service is available on these days in its area and as further provided for in section 10(4).
  - (5) Visitors that leave before collection day must place their refuse in containers supplied in the area for that purpose or take their refuse to the nearest waste handling facility as directed by the Municipality.

### **Volume**

- 12.**
- (1) The Municipality shall determine—
    - (a) the number of receptacles to be collected from each residential premises per collection;
    - (b) the number of receptacles to be collected from each business premises per collection based on an inspection of the waste volumes with the owner or occupier; and
    - (c) the maximum amount of business waste that may be placed for collection without the provision of an additional service or the payment of an additional prescribed fee.
  - (2) Should the Municipality require the provision of an additional service to a residential or business premises or the owner or occupier of a residential or business premises apply to the Municipality in writing to increase the number of receptacles to be collected per collection from its premises, these changes will be effected as provided for in section 10(4).

### **Receptacles**

- 13.**
- (1) The Municipality will collect domestic waste placed in approved domestic waste containers and business waste placed in approved business waste containers from a location and in a condition as determined in this By-law or any notice in terms of this By-law. Waste placed in a

location not meeting the prescriptions of the Municipality or a receptacle not approved by the Municipality will not be collected.

- (2) The owner or occupier of residential or business premises shall be responsible for marking his receptacle/s with the stand number to ensure easy identification thereof and to assist the municipal employees to return it to the correct stand.
- (3) Receptacles for the temporary storage of waste at business and residential premises must be intact, not corroded or worn out and fit for the safe storage of waste; such that damage to the environment and harm to health are prevented.
- (4) No person may allow an animal in his or her control to interfere with, overturn or damage a receptacle which has been placed for collection.
- (5) The owner or occupier of business or residential premises must ensure that—
  - (a) a receptacle contains no hot ash, unwrapped glass or other domestic waste, business waste including dailies which may cause injury to the municipal employees while carrying out their duties in terms of this By-law or damage to the receptacle;
  - (b) no material, including any liquid, which by reason of its mass or other characteristics is likely to render a receptacle unreasonably difficult for the municipal employees to handle or carry, is placed in such receptacle;
  - (c) receptacles are kept closed to avoid animal and insect interference and wind-blown litter and in a clean and hygienic condition;
  - (d) receptacles are placed outside the entrance to the premises before 07:00 on the day of the week specified by the Municipality for waste removal and taken back inside before sunset on the same day or such other location or times as required by the Municipality in terms of a written notice to the owner or occupier of the premises;
  - (e) in accordance with the Municipality's specifications, whether contained in approved building plans or a Municipal Council notice, a designated space and any other facility deemed necessary by the Municipality are provided on the premises for the storage of receptacles without these been visible from a public road or public place and the designated space so allowed permitting convenient access to and egress for the Municipality's waste collection vehicles;
  - (f) the pavement in front of or abutting the premises is kept clean and free of refuse.
- (6) If dailies are generated, the owner or occupier must ensure that—
  - (a) the dailies are not placed in a receptacle where they could contaminate another waste stream;
  - (b) the receptacles are placed in a designated area easily accessible from the entrance of the premises from where the waste is collected by the Municipality.
- (7) Notwithstanding anything to the contrary contained in this By-law, the Municipality may, having regard to the avoidance of a nuisance and the convenience of collection of waste, indicate a specific position within or outside the premises concerned where approved receptacles must be placed for the collection and removal of waste and such receptacles must then be placed in that position at such times and for such period as the Municipality may require.
- (8) No owner or occupier of premises is allowed to place any refuse bags or other receptacles containing waste other than domestic or business waste outside the premises unless approved by the Municipality for a specific purpose and subject to conditions as the Municipality may impose.

- (9) The Municipality will not collect refuse that are not in bags or damaged receptacles including refuse bags which are torn and no liability will be accepted for lost or damaged containers.
- (10) Only animal proof containers may be used by residents in areas which the Municipality has declared as problem animal areas and these containers are at cost obtainable from the Municipality.
- (11) If an owner or occupier of premises in a problem animal area is using a receptacle that does not comply with the requirements of the Municipality, he will be instructed to obtain an animal proof container from the Municipality and, in cases where the Municipality is of the opinion that more than one animal proof container is needed due to the volume of waste, the owner or occupier will be compelled to purchase such from the Municipality.
- (12) Nothing that may cause damage to the refuse compactor of the Municipality may be deposited in approved domestic and business waste containers or animal proof containers and where such care is not taken and damage of municipal equipment takes place, the Municipality will hold the owner or occupier liable for the full cost of such damages.

### **Communal collection**

- 14.
- (1) The Municipality shall in high density areas where a sustainable, formalised domestic waste collection service can be rendered, collect the refuse of individual households on a weekly basis.
  - (2) The Municipality shall place appropriate bulk receptacles at central communal collection points determined by the Municipality as suitable for communal collection.
  - (3) Communal collection points will be clearly demarcated areas.
  - (4) The bulk receptacles will be in accordance with the Municipality's specifications and its location will as far as reasonably possible—
    - (a) allow secure and easy access to the community;
    - (b) prevent windblown litter;
    - (c) enable easy access for the Municipality's waste collection vehicles.
  - (5) The waste will as far as reasonably possible be collected once per week or within 24 hours of a bulk receptacle being reported full to the Municipality.
  - (6) Waste separation at source will be encouraged in respect of communal collection by providing separate bulk receptacles for non-recyclable and recyclable waste at the communal collection points should the Municipality determine it to be viable.

### **Collection in rural areas**

- 15.
- (1) Where it is not economically viable for the Municipality to provide bulk waste containers or any other form of collection of waste in its rural areas, communities and farmers are encouraged to dispose of waste at designated municipal waste handling or waste disposal facilities.
  - (2) Notwithstanding the above, the Municipality will in co-operation with rural communities work to find cost-effective ways to expand waste collection practices to the rural areas.
  - (3) The Municipality is in accordance with national legislation not in favour of on-site disposal of



waste but may allow on-site waste disposal in rural areas if no other feasible alternatives could be made available; in which case, the Municipality will supervise or monitor such practices and exercise control over it in so far as it is reasonably possible.

### **Recycling**

- 16.** (1) Any owner or occupier of a business or residential premises or any other holders of waste as determined by the Municipality and in areas as determined by the Municipality may be required to—
- (a) separate their waste in recyclable, e.g. e-waste; plastics, paper and glass and non-recyclable waste in accordance with the directives of the Municipality;
  - (b) use different receptacles for waste so separated as directed and/or provided by the Municipality;
  - (c) place receptacles containing the recyclable waste outside the entrance to the premises before 07:00 on the day of the week specified by the Municipality for waste removal or, if so requested, drop these recyclable waste receptacles off at places as directed by the Municipality; and
  - (d) follow any other reasonable prescribed procedures.
- (2) The Municipality or its service provider may, in areas where such services are necessary and viable, collect recyclable waste from business premises multiple times per week.
- (3) The Municipality has provided drop-off centres for recyclables in all its administrations at places ensuring easy and safe access for the public.

### **Accumulation of waste**

- 17.** (1) The owner or occupier of a business or residential premises must ensure that all domestic or business waste generated on the premises be placed for collection and not be accumulated on-site.
- (2) Where a type or quantity of waste is not collected by the Municipality or regularly removed by an accredited service provider, the owner or occupier of the premises and/or holder of the waste must arrange for the removal, transport and disposal of the waste at a waste handling or waste disposal facility, as often as may be necessary to prevent undue accumulation and any nuisance or detrimental impact on human health or the environment arising from the waste.
- (3) The Municipality may enter any premises where it suspects waste of any type is accumulated and may instruct the person generating the waste or the owner or the occupier of the premises where it is so accumulated to remove the waste immediately or the Municipality may proceed to do so at the cost of the owner or occupier of the premises where the waste is accumulated.

## **CHAPTER 4**

### **Handling Different Waste Types**

#### **Part 1 Garden Waste**

##### **Composting**

18. The owner or occupier of premises on which garden waste is generated may compost garden waste on the property, provided that such composting does not cause a nuisance nor has a detrimental impact on human and environmental health and adheres to any relevant legal requirements including obtaining any authorisations from a competent authority should such be required.

##### **Removal and disposal of garden waste**

19. The owner or occupier of premises on which garden waste is generated must remove and dispose of it within a reasonable time after generation of the waste at a waste handling and/or waste disposal facility determined by the Municipality.

#### **Part 2 Bulky Waste**

##### **Removal and disposal**

20. The owner or occupier of premises on which bulky waste is generated, shall ensure that such waste is removed and disposed of in terms of this By-law within fourteen days after generation thereof at a waste handling and/or waste disposal facility determined by the Municipality.

#### **Part 3 Building Waste**

##### **Plans and inspection**

21. (1) An owner or occupier or any person responsible for the submission of building plans for a new building or an alteration to an existing building must include therein the manner in which building waste will be handled.
- (2) An authorised official of the Municipality must inspect and verify that the waste arrangements contemplated in subsection (1) were followed and all building waste appropriately disposed of as part of the final municipal sign-off of the building activities.

##### **Generation and storage**

22. (1) Notwithstanding the waste arrangements contemplated in section 21, the owner or occupier of premises on which building waste is generated and/or the person engaged in any activity which causes such waste to be generated, must ensure that—
- (a) all building waste and the containers used for the storage thereof is kept on the premises on which the building waste is generated;
  - (b) the premises on which the building waste is generated does not become unsightly or cause a nuisance as a result of accumulated building waste;
  - (c) any building waste which is blown off the premises, is promptly retrieved.

- (2) Upon written request and subject to conditions as it may determine the Municipality may approve the use of a bulk receptacle placed on a verge for a specified duration.
- (3) The Municipality may instruct an owner or occupier of premises on which building waste is generated and/or the person engaged in any activity which causes such waste to be generated to make use of special containers to dispose of it.
- (4) The owner or occupier of the premises on which building waste is generated must endeavour to separate clean building waste from the rest of the building waste and also dispose of it separately as contemplated in section 23(2).

### **Removal and disposal**

- 23.** (1) The owner or occupier of premises on which building waste is generated and/or the person engaged in any activity which causes such waste to be generated, must ensure that all building waste is weekly removed and disposed of and the premises completely cleared of building waste before final sign-off by the Municipality's building inspector will be done.
- (2) Building waste must be disposed of at a waste handling and/or waste disposal facility determined by the Municipality.

### **Part 4**

### **Special Industrial, Health Care and Hazardous Waste**

### **Notification and verification**

- 24.** (1) Any person that will engage in activities which will generate special industrial, hazardous or health care waste must prior to the generation of such waste, notify the Municipality in writing of the expected or known composition of such waste and the quantity to be generated, how and where it will be stored, how it will be collected and disposed of and the identity of the accredited service provider who will be responsible for its removal, transportation and disposal.
- (2) Any person engaged in waste activities as referred to in subsection (1) which were established and in operation prior to the commencement of this By-law, must notify the Municipality as contemplated in subsection (1) within ninety days of the commencement of this By-law.
- (3) If so required by the Municipality, a notification referred to in subsection (1) or (2) must be substantiated by—
- (a) an assessment and analysis of the waste composition certified by an appropriately qualified industrial chemist;
  - (b) safety data sheets or completed waste manifest document/s; and
  - (c) such other records required to verify compliance with applicable legislation, national standards and the latest edition of the relevant SANS Code of Practice.
- (4) The person referred to in subsection (1) or (2) must when changes occur and annually before or on the 30<sup>th</sup> of June submit to the Municipality a written report containing the information stipulated in subsection (1), if so required by the Municipality, the substantiating documents referred to in subsection (3) and any other information which the Municipality may reasonably require.
- (5) An authorised official may enter premises at any reasonable time to ascertain whether waste

referred to in subsection (1) is generated or stored on such premises and may take samples and test any waste found on such premises to ascertain its composition.

- (6) Sampling as contemplated in subsection (5) will be, as reasonably possible, done in the presence of the owner, occupier or person apparently in control of the premises and waste samples will be taken in duplicate in order to provide the owner, occupier or person apparently in control with a set of waste samples identical to that of the Municipality which he/she could also test at own cost provided that the same tests be done as the Municipality; it be done at the nearest laboratory accredited by the South African National Accreditation System (SANAS) and the samples be delivered to this laboratory by the Municipality.

### **Storage**

25. (1) Special industrial, health care and hazardous waste generated on premises must be stored not creating a nuisance or causing harm to human health or polluting the environment and in accordance with applicable legislation, national standards and the latest edition of the relevant SANS Code of thereon in an approved container until it is collected from the premises and it must be stored in a manner Practice.
- (2) If the waste referred to in subsection (1) is not stored as stipulated, the Municipality may require a full record of the waste content, date of containment and quantity and if such a record is not available the Municipality may instruct the person generating the waste or the owner or the occupier of the premises where it is stored to remove the waste immediately or the Municipality may proceed to do so at the cost of the owner or occupier of the premises where the waste is stored.

### **Collection and disposal**

26. (1) Only an accredited service provider may collect special industrial, health care and hazardous waste from premises where it is stored and transport it to and dispose of it at a waste disposal facility designated by the Municipality to receive such waste.
- (2) An accredited service provider must collect, transport and dispose of the waste referred to in subsection (1) in accordance with its accreditation terms and conditions and in compliance with applicable legislation, national standards and the latest edition of the relevant SANS Code of Practice.

## **Part 5 Industrial Waste and Special Waste**

### **Storage**

27. (1) The owner or occupier of premises on which industrial waste or special waste is generated must ensure that until such time as the waste is collected by an accredited service provider from the premises on which it was generated—
- (a) the waste is stored in accordance with applicable legislation, national standards and the latest edition of the relevant SANS Code of Practice in approved containers which are not kept in a public place; and
- (b) no nuisance, health risk or environmental damage is caused by the waste in the course of its generation or storage.

**Collection and disposal**

- 28.** (1) Only an accredited service provider may collect industrial or special waste from premises where it is stored and transport and dispose of it at a waste disposal facility designated by the Municipality to receive such waste.
- (2) An accredited service provider must collect, transport and dispose of the waste referred to in subsection (1) in accordance with its accreditation terms and conditions and subject to the requirements of any applicable legislation, national standards and the latest edition of the relevant SANS Code of Practice.
- (3) The Municipality may determine specific times for acceptance of special waste at the site referred to in subsection (1).

**Part 6****Tyres, Disused Vehicles or Machinery and Scrap Metal****Storage and disposal**

- 29.** (1) No owner or occupier of premises with an operational area in excess of the statutory determined limit may temporary accumulate, store or stockpile waste tyres, disused, scrapped, dismantled or recovered vehicles or machinery or scrap metal unless the waste management activity is managed in accordance with national standards or licensed in terms of national legislation, whichever is applicable.
- (2) Waste tyres, disused, scrapped or dismantled vehicles or machinery and scrap metal are not accepted at any of the Municipality's own waste handling or waste disposal facilities. Any person having to dispose of any of these materials must dispose thereof at a waste disposal facility as directed by the Municipality and in terms of conditions determined for such waste disposal facility.
- (3) The Municipality may enter the premises of any person involved in the storage or stockpiling of waste tyres, disused vehicles or machinery or scrap metal and request proof of any plans including its integrated waste management plan, licenses or other applicable documents to verify compliance with applicable legislation.

**Part 7****Recyclable Waste****Storage, collection and disposal**

- 30.** (1) No owner or occupier of premises or any other person may temporary accumulate, sort, store or stockpile recyclable waste on any premises within the municipal area unless acting in accordance with subsection (2).
- (2) An owner or occupier of premises or any other person must prior to commencing an activity involving the re-use, reclamation or recycling of waste, comply with national and provincial legislation and standards and the latest edition of the relevant SANS Code of Practice for such activity and provide the Municipality with a copy of his integrated waste management plan and such other information as the Municipality may require.
- (3) Only an accredited service provider may collect recyclable waste from premises where it is generated and/or separated from other waste and transport and dispose of it at a waste

handling facility or a waste disposal facility designated by the Municipality to receive such waste.

## **Part 8 Agricultural and Farm Waste**

### **Disposal**

- 31.** (1) An owner or occupier of farm land may subject to subsections (2) and (3) use on-site disposal of waste but, as also indicated in section 41, the burning of waste is strictly prohibited.
- (2) An owner or occupier of farm land may not dispose any quantity of hazardous waste, which may be present in agricultural waste, to the land unless in possession of the applicable waste management license in terms of national legislation, and if applicable, provincial legislation.
- (3) An owner or occupier of farm land may dispose of general waste, which may include agricultural and farm waste, to the land provided this is done in accordance with applicable legislation, national standards and the latest edition of the relevant SANS Code of Practice and, if the quantity of waste requires it, authorisation thereof by a valid waste management license.
- (4) An authorised official of the Municipality may request an owner or occupier of farm land who he suspects is disposing hazardous waste and/or general waste exceeding the quantity allowed for disposal to provide proof of the licences referred to in subsections (2) and/or (3) and, irrespective of the composition and/or quantity of the waste disposed of to land by the owner or occupier, the Municipality may request the owner or occupier to submit an integrated waste management plan to the Municipality within a time frame determined by the Municipality.
- (5) An owner or occupier of farm land may dispose of domestic waste excluding hazardous and health care waste at waste handling or waste disposal facilities as directed by the Municipality.

## **CHAPTER 5**

### **Transportation and Disposal**

#### **Part 1 Transportation of Waste**

### **Safe transportation**

- 32.** (1) A transporter of waste must ensure that—
- (a) vehicles used for the conveyance of waste upon a public road are of adequate size and construction for the type of waste being transported; and
  - (b) he/she maintains the vehicles used for the conveyance of waste in a clean, sanitary and roadworthy condition at all times.

### **No wastage or spillage**

- 33.** (1) A person transporting waste through the municipal area must ensure that—
- (a) loose waste on an open vehicle is covered with a tarpaulin or suitable net; and
  - (b) no waste become detached, leak or fall from the vehicle transporting it.

**Legal compliance**

34. A transporter of waste, specifically hazardous waste, must ensure he or she operates in compliance with all relevant national and provincial legislation, national standards and the latest edition of the relevant SANS Code of Practice.

**Part 2  
Waste Disposal****Permitted use**

35. (1) The Municipality may prescribe which types of waste may be disposed of at a particular waste handling or waste disposal facility as permitted in terms of the license stipulations of each facility and further in compliance with national legislation and standards.
- (2) Different tariffs for the disposal of different waste types and volumes are applicable but residents are allowed disposal of general waste at the waste handling and waste disposal facilities determined by the Municipality.

**Liabilities**

36. (1) No person may dispose of waste at a waste disposal facility which is not licensed for such use. Any person who acts in contravention of any prescriptions of the Municipality as contemplated in section 35(1) will be liable for all reasonable costs incurred by the Municipality in removing or otherwise dealing with the waste improperly disposed.
- (2) The Municipality shall not be liable for any claim resulting from access to any waste handling or waste disposal facility and any person who enters any of the sites of these facilities does so at own risk.

**Conduct at facilities**

37. (1) No person may enter a waste handling or a waste disposal facility for any purpose other than the disposal of waste in terms of this By-law and only at such times and between such hours as the Municipality may determine and display on a clearly visible notice board at the entrance of the waste handling or waste disposal facility.
- (2) Every person who, for the purpose of disposing waste enters a waste handling or a waste disposal facility must—
- (a) enter and leave the facility at the designated entrance and exit points;
  - (b) supply all the particulars required regarding the source and composition of the waste, which waste may be inspected by the Municipality;
  - (c) follow all instructions with regard to access to the actual disposal, transfer or recycling point and the place where and the manner in which the waste should be deposited.
- (3) No person may bring any intoxicating liquor or narcotic substances into any waste handling or waste disposal facility.
- (4) The Municipality may prescribe the maximum size of a vehicle allowed to enter a waste handling or waste disposal facility.

**Accepting waste from others**

38. (1) The Municipality may consider an application from another municipality to dispose waste at a designated waste disposal facility provided that the acceptance of waste from another

municipality will not impact on the Municipality's authority and ownership of the said waste disposal facility.

- (2) The Municipality may allow a person to dispose waste generated outside the Municipality's municipal area at a designated waste disposal facility of the Municipality provided such person first becomes an accredited service provider as provided for in this By-law.
- (3) The tariffs applicable to accredited service providers referred to in subsection (2) may differ from the waste disposal tariffs stipulated in the Municipality's Tariff By-laws, as annually determined during the approval of the budget.

## **CHAPTER 6**

### **Littering and Dumping**

#### **Provision of facilities for litter**

- 39.** (1) The Municipality must take reasonable steps to ensure that a sufficient number of receptacles are provided for the discarding of litter by the public on any premises to which the public has access.
- (2) The owner or occupier of private land to which the public has access must ensure that sufficient containers are provided to contain litter which is discarded by the public.

#### **Littering and dumping**

- 40.** (1) No person may drop, throw, deposit, spill, dump or in any other way discard, any litter or waste into or onto any public place, public road, road, municipal drain, land, vacant erf, stream or any other places not allowed for in this By-law or allow any person under their control to do so.
- (2) An authorised official may act against any of the contraventions listed in subsection (1) through a written notice directing such person to—
- (a) cease the contravention within a specified time;
  - (b) prevent a repeat of the contravention or a further contravention;
  - (c) take whatever measures that the Municipality considers necessary to clean up or remove the waste and rehabilitate the affected environment within a specified time; or
- institute criminal action in terms of the Criminal Procedure Act, 1977 (Act 51 of 1977) in case of non-compliance with paragraphs (a) to (c) above.
- (3) An owner or occupier of land or premises or any other person in control of land or premises, may not use or permit the land or premises to be used for unlawful dumping of waste and must take reasonable steps to prevent the use of the land or premises for that purpose.
- (4) Should the Municipality regard it necessary to remove waste or litter from land or premises, the owner, occupier or person having control over the land or premises will be held liable for the costs incurred by the Municipality for the removal operation.
- (5) In the case of hazardous waste, the Municipality will immediately remove such waste and thereafter issue notices to the person liable for the cost of removal and rehabilitation of the environment.



**Burning of waste**

41. Burning of waste is strictly prohibited.

**Abandoned objects**

42. A person who abandons any article is liable for any damage which that article has caused or may cause as well as for the cost of removing that article notwithstanding the fact that such person may no longer be the owner thereof.

**CHAPTER 7****External Service Providers****Part 1****Accredited Service Providers for Commercial Services****Accreditation applications**

43. (1) No person may provide commercial services for the collection and transport of waste in the municipal area unless such person has registered with the Municipality and obtained an accreditation authorising these waste management activities within the municipal area.
- (2) An application for accreditation must be submitted in writing in a format or on a form prescribed by the Municipality including such information as the Municipality requires and the prescribed fee and, unless subsection (3) applies, the Municipality's approval for the collection and transportation of waste must first be obtained before such waste services may commence.
- (3) Any person already providing these commercial services at the commencement of this By-law, must within ninety days of such commencement date submit an application for accreditation in terms of subsection (1), failing which the person will as from the date that the said ninety days' period expired no longer be able to render such services in the municipal area.
- (4) The Municipality will consider and grant or reject the application submitted in terms of subsection (3) within thirty days of its receipt having regard to the health, safety and environmental record of the applicant and the nature of the commercial service to be provided and will furnish in writing specific and substantive reasons if such application is rejected.

**Terms and conditions of accreditation**

44. (1) An accreditation must-
- (a) clearly identify the accredited person or entity;
  - (b) specify the accreditation period;
  - (c) specify the categories of waste which the accredited service provider may collect, transport and dispose;
  - (d) outline the information recording and submission requirements of the Municipality for its own integrated waste management plan and IPWIS; and
  - (e) deal with other procedural matters.
- (2) An accreditation for the collection and transport of waste—

- (a) may not be ceded or assigned without the prior written consent of the Municipality;
  - (b) is valid for one year from the date of issue; and
  - (c) is valid only for the categories of waste specified therein.
- (3) An accreditation authorisation will include a display sticker for each of the vehicles identified in the accreditation application indicating the validity period and the category of waste for which it is granted, which sticker must be clearly displayed on the front window of the identified vehicles.
- (4) The Municipality will not receive waste at its waste handling facilities or waste disposal facilities from service providers or contractors who are not able to provide proof of accreditation by the Municipality should it be requested and without an accreditation sticker on the vehicle.
- (5) An accredited service provider may not fail or refuse to provide the Municipality with any information reasonably requested with regards to the terms and conditions of the accreditation or give false or misleading information.
- (6) An accredited service provider is fully liable for any act or omission by any of his or her employees that could be seen as a transgression of the accreditation conditions and/or have a detrimental impact on human health or the environment.

#### **Renewal of accreditation**

- 45.** (1) An accreditation renewal application must be submitted at least sixty days prior to the expiry date of a current accreditation and will be considered and either granted or rejected by the Municipality within thirty days of receipt of the renewal application. The Municipality must provide substantive reasons for the rejection of an accreditation renewal.
- (2) Notwithstanding anything to the contrary in this By-law, the Municipality must temporary extend an accreditation for a specific duration not exceeding thirty days if an accredited service provider followed the correct procedure as contemplated in subsection (1) and due to the Municipality's processes, the renewal application has not been considered and a new accreditation granted or rejected.

#### **Suspension and revocation of accreditation**

- 46.** (1) The Municipality may suspend or revoke an accreditation if an accredited service provider failed to comply with any of the terms and conditions of the accreditation or any other provision of this By-law, or any national or provincial legislation regulating the collection, transportation or disposal of waste or any other grounds considered by the Municipality as substantive reason to revoke or suspend an accreditation.
- (2) The Municipality must give an accredited service provider written notice of the intended suspension or revocation of his or her accreditation and within thirty days from the date of issuing the notification to submit reasons for such action not to be taken by the Municipality.
- (3) The Municipality must make a final decision within fourteen days of the expiry of the period stated in subsection (2) irrespective if a representation was received from the service provider and notify the service provider in writing within seven days of taking a final decision.

**Accreditation exemptions**

47. The Municipality may exempt an external service provider or a type of commercial service from any or all of the accreditation provisions in Part 1 of Chapter 7 and such other sections as may be deemed necessary by the Municipality.

**Consumer responsibilities**

48. (1) The owner or occupier of premises or the holder of waste that contracts with an accredited service provider must ensure that—
- (a) the service provider is accredited to collect and transport the categories of waste for which he or she is contracted;
  - (b) until such time as the accredited service provider collects such waste from the premises on which it was generated, the waste is stored in an approved container and no nuisance, including but not limited to dust and smells, is caused by the handling of the waste in the course of its generation, storage or collection; and
  - (c) the service rendered is only in respect of the categories of waste authorised in the accreditation.

**Part 2**  
**Municipal Service Providers**

**Outsourcing of services**

49. The Municipality may enter into agreements with external service providers, whether public or private, for the rendering of municipal waste services and activities and must do so in accordance with municipal, provincial and national legislation.

**Consumer charter**

50. If a service provider as contemplated in section 49 is appointed by the Municipality, to render a service to a large geographical area or part of its population, the municipal service provider will be required to compile and adopt a consumer charter in consultation with the community.

**CHAPTER 8**

**General**

**Ownership**

51. (1) The person holding the licence to operate a waste handling or a waste disposal facility becomes the owner of all waste upon disposal thereof at that facility.
- (2) A person who generates domestic or business waste is the owner thereof until it is collected by the Municipality who then becomes the owner thereof.

**Access to premises**

52. Should the Municipality be impeded from collecting or handling refuse due to the layout of the premises and/or such layout is likely to result in damage to private property or municipal property or injury to the Municipality's employees, the Municipality may require the owner or occupier to do such alterations as necessary at own cost to remove any impediments, failing or refusing which, the Municipality must suspend the service and require the owner or occupier to indemnify the

Municipality in writing in respect of such damage or injury or any claims arising from it before resuming the service.

## **CHAPTER 9**

### **Enforcement and Legal Services**

#### **Compliance with this By-law and other laws**

53. (1) The owner or occupier of premises is responsible for ensuring compliance with this By-law in respect of all or any of its stipulations.
- (2) Any person who, or an entity which, requires a waste related license or authorisation in terms of national, provincial or municipal legislation must prove on request, to an authorised official that such person or entity has obtained the appropriate license by submission thereof to the Municipality within 30 days or such other period as specified by the authorised official.

#### **Authorisation of an official**

54. (1) The Municipality or a municipal service provider as contemplated in section 49 of this By-law, may authorise any person in its employ to become an authorised official.
- (2) The waste management officer of the Municipality is an authorised official.

#### **Functions and powers of an authorised official**

55. (1) An authorised official may execute work, conduct an inspection and monitor and enforce compliance with this By-law and, as applicable, national and provincial legislation relating to waste management.
- (2) Subject to the provision of any other applicable law, an authorised official must carry out the functions contemplated in this section and the powers set out herein.

#### **Service of notices and documents**

56. (1) A notice or document issued by the Municipality in terms of this By-law must be deemed to be duly authorised if an authorised official signed it.
- (2) If a notice or document is to be served on an owner, occupier or any other person in terms of this By-law it shall be deemed to be effectively and sufficiently served on such a person-
- (a) when it has been delivered to him or her personally or to his or her duly authorised agent;
  - (b) when it has been left at his or her residence or place of business or employment to a person apparently not less than sixteen years of age and residing or employed there;
  - (c) if he or she has nominated an address for legal purposes, having been delivered to such an address;
  - (d) if he or she has not nominated an address for legal purposes, having delivered it to the address given by him or her in his or her application for the provision of waste services, for the reception of an account for the provision of waste services;
  - (e) when it has been sent by pre-paid registered or certified post addressed to his or her last known address for which an acknowledgement of the posting thereof will be obtained from the postal service;

- (f) in the case of a legal person, by delivering it at the registered office or business premises of such legal person; or
- (g) if service cannot be effected in terms of subsections (a) to (f), by affixing it to a conspicuous place on the premises concerned.

### Compliance notices

57. (1) An authorised official may issue a written notice to any person contravening the provisions of this By-law.
- (2) A notice in terms of subsection (1) must
- (a) provide details of the provision of the By-law that has not been complied with;
  - (b) provide the owner, occupier, or other party a reasonable opportunity to make representations and state his or her case in writing to the Municipality within a specified period, unless the owner, occupier or other person was given such an opportunity before the notice was served;
  - (c) specify the steps that the owner, occupier or other person must take to rectify or remedy the failure;
  - (d) specify the period within which the owner, occupier or other person must take these steps to rectify the failure; and
  - (e) indicate that the Municipality may-
    - (i) if the notice is not complied with, undertake or allow the work that is necessary to rectify the failure to be undertaken and recover from the owner, occupier or other person the actual cost of such work; and
    - (ii) take any other action it deems necessary to ensure compliance.
- (3) If an owner or occupier or any other person fails to comply with a written notice served on him or her by the Municipality in terms of this By-law, the Municipality may take such action as in its opinion is necessary to ensure compliance, including-
- (a) Undertaking the actions and/or work necessary and recovering the cost of such actions and/or work from the owner, occupier or other person, as the case may be; or
  - (b) Instituting legal proceedings against the owner, occupier, or other person, as the case may be in terms of the Criminal Procedure Act, 1977 (Act 51 of 1977).
- (4) In the event of an emergency, notwithstanding any other provisions of this By-law, the Municipality may without prior notice undertake the work contemplated in subsection (3) and recover such costs from the owner, occupier or other person, as the case may be.
- (5) The actual costs recoverable by the Municipality in terms of subsections (3) and (4) shall be the full costs associated with such work.
- (6) In the case where compliance with a notice is required within a specified number of working days, such period shall be deemed to commence on the date of issue of such notice.
- (7) A notice or document issued in terms of subsection (2) is valid until one of the following events occurs:
- (a) it is carried out;
  - (b) it is cancelled by the authorised official who issued it or, in that person's absence, by a person with similar authority;
  - (c) the purpose for which it was issued, has lapsed.
- (8) An authorised official who is satisfied that the owner or occupier or person apparently in control of any premises has satisfied the terms of a compliance notice may issue a *compliance certificate* to that effect.

**Power of entry and inspection**

- 58.** (1) An owner or occupier must, on request, allow an authorised official access to premises to carry out such inspection and examination as he or she may deem necessary to investigate any contravention of this By-law and ensure compliance therewith.
- (2) When accessing the premises, the authorised official must, if requested, identify him or herself through written proof of authorisation.

**Using force to enter**

- 59.** (1) Force may not be used to affect entry to execute work or conduct an inspection on any in terms of premises section 58, unless an emergency arises.
- (2) An authorised official carrying out a written authorisation in terms of section 58 which is regarded as an emergency situation, may overcome any resistance to entry, execution of work or inspection by using as much force as is reasonably required, including breaking a lock, door or window of the premises to be entered.
- (3) Before resorting to force to gain entrance to the premises, the authorised official carrying out the written authorisation must audibly demand admission and must announce his or her purpose, unless he or she reasonably believes that doing so may induce a person to destroy, dispose of, or tamper with, the article or document or object that is the focus of the inspection.

**Liabilities and compensation**

- 60.** The Municipality will not be liable for damages or compensation arising from anything done by it in terms of this By-law.

**False statement or information**

- 61.** No person may make a false statement or furnish false information to the Municipality, an authorised official or an employee of the Municipality, or falsify a document issued in terms of this By-law.

**Appeals**

- 62.** An appeal to a decision of the Municipality taken in terms of delegated powers must be made in terms of section 62 of the Systems Act by giving written notice of the appeal and the reasons therefor within twenty one days of the date of notification of the decision to the municipal manager.

**Offences**

- 63.** (1) It is an offence for any person to -
- (a) refuse to grant an authorised official access to premises to which that authorised official is duly authorised to have access;
  - (b) obstruct, interfere or hinder an authorised official who is exercising a power or carrying out a duty under this By-law;
  - (c) fail or refuse to provide an authorised official with a document or information that the person is required to provide under this By-law;
  - (d) give false or misleading information to an authorised official;
  - (e) unlawfully prevent the owner of any premises, or a person working for that owner, from entering the premises in order to comply with a requirement of this By-law;

- (f) pretend to be an authorised official;
  - (g) falsely alter an authorisation to an authorised official or written authorisation, compliance notice or compliance certificate issued in terms of this Chapter;
  - (h) enter any premises without a written notification in circumstances requiring such notification;
  - (i) act contrary to a written notice or document issued in terms of this Chapter;
  - (j) disclose any information relating to the financial or business affairs of any person which was acquired in the performance of any function or exercise of any power in terms of this By-law, except –
    - (i) to a person who requires that information in order to perform a function or exercise a power in terms of this By-law;
    - (ii) if the disclosure is ordered by a court of law; or
    - (iii) if the disclosure is in compliance of the provisions of any law.
  - (k) contravene or fail to comply with any of the provisions of this By-law;
  - (l) fail to comply with any notice issued in terms of this By-law;
  - (m) fail to comply with any lawful instruction given in terms of this By-law;
  - (n) Contravene or fail to comply with any conditions imposed upon the granting of any licence, consent approval, concession, exemption or authority in terms of this By-law.
- (2) A person who causes or incites another person to commit an offence referred to in subsection (1), or who, being in a position of authority over another person, permits or allows him or her to commit an offence, will be guilty of that offence.

### **Penalties**

64. (1) Any person who contravenes any of the provisions of section 63 shall be guilty of an offence and liable on conviction to-
- (a) a fine or imprisonment or to such imprisonment without the option of a fine or to both such fine and such imprisonment and,
  - (b) in the case of a continuing offence, to an additional fine or an additional period of imprisonment or to such additional imprisonment without the option of a fine or to both such additional fine and imprisonment for each day on which such offence is continued and,
  - (c) a further amount equal to any costs and expenses found by the court to have been incurred by the Municipality as a result of such contravention or failure.
- (2) In addition to any penalty imposed in terms of subsection (1) the Municipality may terminate the rendering of waste services to such a person.
- (3) The Municipality may without compensation, confiscate the property or other equipment or instruments through which unauthorised services were obtained.

### **Application of this By-Law**

65. This by-law applies to all persons or bodies, including organs of State, situated within the area of jurisdiction of the Municipality.

### **Repeal of By-laws**

66. The by-law listed in Schedule "A " is hereby repealed.

### **Short title and commencement**

67. This By-law is called the Integrated Waste Management By-law, 2013 and commences on the date of publication in the Provincial Gazette.

**SCHEDULE A****BY-LAWS REPEALED**

**The following By-law is hereby repealed in terms of section 66 of this By-law:**

<b>NUMBER AND YEAR OF NOTICE</b>	<b>TITLE OR SUBJECT</b>	<b>EXTENT OF REPEAL</b>
P.N.6423 /2007	Overstrand Municipality: Solid Waste Management By-law	In full



# **ANNEXURE 3**

## **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	56935	km					
VOLUME CAPACITY	18	m3					
PAYLOAD	8	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	GANSBAAI BUSINESS	MASAKHANE B/HILLS	GANSBAAI FRANSKRAAL	BBOS BUSINESS	MASAKHANE GANSBAAI		
LOADS	1	1	1	1	2		
HOURS	-	-	-	-	-		
TOTAL M3	7.5	7	7	6	7.5	0	0
IN SEASON							
LOADS							
HOURS							
TOTAL M3	7.5	15	0	15	0	0	0

COLLECTION GANSBAAI							
REGISTRATION NUMBER	CEM 23347						
DRIVER	B KONDOKTER						
NO OF LABOURERS	6						
FABRICATE	Nissan Diesel UD 90						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	2007						
CURRENT ODO READING	90177	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	GANSBAAI		
LOADS	1	1	1	1	2		
HOURS	5.5	5.5	5.5	5.5	6.5		
TOTAL M3	18	18	18	18	36	0	0
IN SEASON							
	PEARLY BEACH, BUFFELJAGS, ELUXOLWENI	DE KELDERS	FRANSKRAAL	KLEINBAAI	GANSBAAI		
LOADS	3	3	3	3	4		
HOURS	5.5	7.5	7	7	7		
TOTAL M3	54	54	54	54	72	0	0
		KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS	KLEINMOND BUSINESS		
LOADS		2	2	2	2		
HOURS		5	5	5	5		
TOTAL M3	0	36	36	36	36	0	0
TOTAL M3	54	90	90	90	108	0	0

COLLECTION GANSBAAI							
REGISTRATION NUMBER	CEM 17013						
DRIVER	M KUTU						
NO OF LABOURERS	6						
FABRICATE	Nissan Diesel UD 90						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	2000						
CURRENT ODO READING	182850	km					
VOLUME CAPACITY	18	m3					
PAYLOAD	8	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS							
HOURS							
TOTAL M3	30	30	30	30	30	0	0
IN SEASON							
	GANSBAAI BUSINESS	DE KELDERS	FRANSKRAAL	KLEINBAAI, BAARDSKEERDESB OS	MASAKHANE, BEVERLY HILLS, GANSBAAI		
LOADS	4	4	2	3	4		
HOURS	7.5	7.5	7.5	7	7.5		
TOTAL M3	72	72	36	54	72	0	0

COLLECTION GANSBAAI							
REGISTRATION NUMBER	CEM 30681						
DRIVER	G VD RADT						
NO OF LABOURERS	6						
FABRICATE	NISSEN UD 35						
DESCRIPTION	TIPPER						
YEAR OF MANUFACTURE							
CURRENT ODO READING	15941	km					
VOLUME CAPACITY	25	m3					
PAYLOAD	3	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS							
HOURS							
TOTAL M3	40	40	20	20	30	0	0
IN SEASON							
	GANSBAAI BUSINESS	DE KELDERS	FRANSKRAAL	KLEINBAAI, BAARDSKEERDESB OS	MASAKHANE, BEVERLY HILLS, GANSBAAI		
LOADS	10	10	10	10	10		
HOURS	7.5	7.5	7.5	7.5	7.5		
TOTAL M3	250	250	250	250	250	0	0

COLLECTION GANSBAAI							
REGISTRATION NUMBER	CEM 5748						
DRIVER	KUTU						
NO OF LABOURERS	6						
FABRICATE	NISSEN UD 40						
DESCRIPTION	CAGED TIPPER: COLLECTION OF RECYCLABLES						
YEAR OF MANUFACTURE	2011						
CURRENT ODO READING	44539	km					
VOLUME CAPACITY	25	m3					
PAYLOAD	3	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS							
HOURS							
TOTAL M3						0	0
IN SEASON							
	PEARLY BEACH	DE KELDERS	FRANSKRAAL	KLEINBAAI	GANSBAAI		
LOADS	7	7	7	7	7		
HOURS	7.5	7.5	7.5	7.5	7.5		
TOTAL M3						0	0

COLLECTION GANSBAAI							
REGISTRATION NUMBER	CEM 26365						
DRIVER	G VD RADT						
NO OF LABOURERS	9						
FABRICATE	NISSAN HARDBODY B						
DESCRIPTION	BAKKIE						
YEAR OF MANUFACTURE	2004						
CURRENT ODO READING	190750	km					
VOLUME CAPACITY		m3					
PAYLOAD	1	ton					
OUT OF SEASON							
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	HANDLES COMPLAINTS & CLEANING PROJECT						
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 6932						
DRIVER	A SCHUMANE						
NO OF LABOURERS	6						
FABRICATE	Nissan UD 80						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	1998						
CURRENT ODO READING	211617	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	-	5	5		
TOTAL M3	18	18	0	36	36	0	0
IN SEASON							
	VERMONT	ONRUS	ZWELIHLE	NORTHCLIFF	KWAAIWATER GOLF ESTATE		
LOADS	3	3	2	2	2		
HOURS	8	8		8	8		
TOTAL M3	54	54	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	-						
CURRENT ODO READING	112134	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	3	2	3	2		
HOURS	8	10	0.5	8	10		
TOTAL M3	36	54	36	54	36	0	0
IN SEASON							
	RESTAURANTE, SANDBAAI VOELKLIP	SANDBAAI, HEMEL- EN-AARDE, NEW SANDBAAI INDUSTRIES	MNT PLEASANT	PLASE HERMANUS INDUSTRIAL	HAWSTON		
LOADS	4	4	2	3	2		
HOURS	8	10	8	8	10		
TOTAL M3	72	72	36	54	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	27088	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	2	2	2	2	2		
HOURS	8	8	3	8	8		
TOTAL M3	36	36	36	36	36	0	0
IN SEASON							
	VERMONT, FISHERSHAVEN	ONRUS	ZWELIHLE	WESTCLIFF	HERMANUS HEIGHTS EASTCLIFF		
LOADS	4	3	2.5	2	2		
HOURS	8	8	8	8	8		
TOTAL M3	72	54	45	36	36	0	0

COLLECTION HERMANUS							
REGISTRATION NUMBER	CEM 17262						
DRIVER	N HENDRIKS						
NO OF LABOURERS	5						
FABRICATE	MASSEY FERGUSON 240						
DESCRIPTION	TRACTOR TRAILER						
YEAR OF MANUFACTURE	1994						
CURRENT ODO READING	8653	km					
VOLUME CAPACITY	5.6	m3					
PAYLOAD	1	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	5	5	5	5	5		
HOURS	8	8	8	8	8		
TOTAL M3	28	28	28	28	28	0	0
IN SEASON							
LOADS	5	5	5	5	5		
HOURS	8	8	8	8	8		
TOTAL M3	28	28	28	28	28	0	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	124068	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	4.5	4.5	4.5	4.5	1	1
HOURS	8	8	8	8	8	4	4
TOTAL M3	37.8	37.8	37.8	37.8	37.8	8.4	8.4
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	4.5	4.5	4.5	4.5	2	2
HOURS	8	8	8	8	8	6.5	6.5
TOTAL M3	125	112.5	112.5	112.5	112.5	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	317924	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	1	5.5	5.5	5.5	5.5	1	1
HOURS	8	8	8	8	8	4	4
TOTAL M3	25	137.5	137.5	137.5	137.5	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	5.5	5.5	5.5	5.5	2	2
HOURS	8	8	8	8	8	6.5	6.5
TOTAL M3	75	137.5	137.5	137.5	137.5	50	50

COLLECTION HERMANUS							
REGISTRATION NUMBER	CEM 17727						
DRIVER	A HANSEN						
NO OF LABOURERS	0						
FABRICATE	NISSAN HARDBODY 1600						
DESCRIPTION	LDV						
YEAR OF MANUFACTURE	2000						
CURRENT ODO READING	149137	km					
VOLUME CAPACITY		m3					
PAYLOAD	0.5	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 KLEINMOND EXTENSION 3 & ABOVE MAIN ROAD							
REGISTRATION NUMBER	CEM 2746						
DRIVER	M THOMAS						
NO OF LABOURERS	3						
FABRICATE	NISSAN						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE						TRAILERS	
CURRENT ODO READING	244671	KM					
VOLUME CAPACITY	15.4	M3		15.4			M3
PAYLOAD	5	TON					TON
OUT OF SEASON							
RESIDENTIAL	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	2						
HOURS	8	8	8	8	8	0	0
TOTAL M3	30.8	0	0	0	0	0	0
IN SEASON							
RESIDENTIAL	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	3	2	2	2	2	0	0
HOURS	8	8	8	8	8	0	0
TOTAL M3	46.2	30.8	30.8	30.8	30.8	0	0



COLLECTION KLEINMOND EXTENSION 3 & ABOVE MAIN ROAD							
REGISTRATION NUMBER	CEM 33775						
DRIVER	P LITOLI						
NO OF LABOURERS	1						
FABRICATE	NISSAN BAKKIE						
DESCRIPTION	LDV						
YEAR OF MANUFACTURE	2013					TRAILERS	
CURRENT ODO READING	69015		KM				
VOLUME CAPACITY	2.7		M3	2.7			M3
PAYLOAD	1		TON				TON
OUT OF SEASON							
RESIDENTIAL	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	6						
HOURS	8						
TOTAL M3	16.2	0	0	0	0	0	0
IN SEASON							
RESIDENTIAL	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD BLACK BAGS ONLY		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	6	3	3	3	3		
HOURS	8	8	8	8	8		
TOTAL M3	0	24	24	24	24	0	0

COLLECTION KLEINMOND EXTENSION 3 & ABOVE MAIN ROAD							
REGISTRATION NUMBER	CEM 28619					TRAILERS	
DRIVER	R APPEL					CAM 22845	
NO OF LABOURERS	2					6.48	M3
FABRICATE	NISSAN BAKKIE					0.5	TON
DESCRIPTION	LDV						
YEAR OF MANUFACTURE	2013						
CURRENT ODO READING	52884	KM					
VOLUME CAPACITY	2.7	M3		9.18			
PAYLOAD	1	TON					
OUT OF SEASON							
BUSINESS	BUSINESS KLEINMOND RECYCLING ONLY	BUSINESS KLEINMOND RECYCLING ONLY	BUSINESS KLEINMOND RECYCLING ONLY	BUSINESS KLEINMOND RECYCLING ONLY	BUSINESS KLEINMOND RECYCLING ONLY		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	1	0	0	0	0	0	0
HOURS	1	0	0	0	0	0	0
TOTAL M3	9.18	0	0	0	0	0	0
RESIDENTIAL	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	3	0	0	0	0	0	0
HOURS	7	0	0	0	0	0	0
TOTAL M3	27.54	0	0	0	0	0	0
TOTAL M3	36.72	0	0	0	0	0	0
IN SEASON							
RESIDENTIAL	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTAL	RESIDENTAL
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	4	2	2	2	2	0	0
HOURS	8	8	8	8	8	0	0
TOTAL M3	36.72	18.36	18.36	18.36	18.36	0	0

COLLECTION KLEINMOND STREET SWEEPERS							
REGISTRATION NUMBER	CEM 28619						
DRIVER	M MITCHELL						
NO OF LABOURERS	1						
FABRICATE	NISSAN BAKKIE						
DESCRIPTION	LDV						
YEAR OF MANUFACTURE	2013					TRAILERS	
CURRENT ODO READING		KM					
VOLUME CAPACITY	2.7	M3		2.7			M3
PAYLOAD	1	TON					TON
OUT OF SEASON							
RESIDENTIAL	STRAAT VEERS	STRAAT VEERS	STRAAT VEERS	STRAAT VEERS	STRAAT VEERS		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	5	2	2	2	2		
HOURS	8	8	8	8	8		
TOTAL M3	13.5	5.4	5.4	5.4	5.4	0	0
RESIDENTIAL	STRAAT VEERS	STRAAT VEERS	STRAAT VEERS	STRAAT VEERS	STRAAT VEERS		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	6	3	3	3	3		
HOURS	0	0	0	0	0		
TOTAL M3	16.2	8.1	8.1	8.1	8.1	0	0

COLLECTION KLEINMOND GERMAN TOWN AND SUNNY SEAS B&B							
REGISTRATION NUMBER	CEM 14080						
DRIVER	D CRONJE						
NO OF LABOURERS	2						
FABRICATE	ISUZU NPR 300						
DESCRIPTION	CAGED TIPPER						
YEAR OF MANUFACTURE	2006					TRAILERS	
CURRENT ODO READING	98423		KM				
VOLUME CAPACITY	12.77		M3	12.77			M3
PAYLOAD	3		TON				TON
OUT OF SEASON							
RESIDENTIAL	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD BLACK BACKS ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD BLACK BACKS ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD BLACK BACKS ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD BLACK BACKS ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD BLACK BACKS ONLY		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	4	0	0	0	0	0	0
HOURS	8	0	0	0	0	0	0
TOTAL M3	51.08	0	0	0	0	0	0
IN SEASON							
RESIDENTIAL	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD BLACK BACKS ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD BLACK BACKS ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD BLACK BACKS ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD BLACK BACKS ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD BLACK BACKS ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD BLACK BACKS ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD BLACK BACKS ONLY
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	5	2	2	2	2	0	0
HOURS	8	8	8	8	8	0	0
TOTAL M3	63.85	25.54	25.54	25.54	25.54	0	0

COLLECTION KLEINMOND GERMAN TOWN AND SUNNY SEAS B&B							
REGISTRATION NUMBER	CEM 33776						
DRIVER	P GALANT						
NO OF LABOURERS	2						
FABRICATE	NISSAN						
DESCRIPTION	BAKKIE						
YEAR OF MANUFACTURE	2013					TRAILERS	
CURRENT ODO READING	67185	KM					
VOLUME CAPACITY	2.7	M3		2.7			M3
PAYLOAD	1	TON					TON
OUT OF SEASON							
RESIDENTIAL	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD RECYCLING ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD RECYCLING ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD RECYCLING ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD RECYCLING ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD RECYCLING ONLY		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	4	0	0	0	0	0	0
HOURS	8	0	0	0	0	0	0
TOTAL M3	10.8	0	0	0	0	0	0
PUBLIC AREAS	BB/ PB RE SEA DRUMS AND PUBLIC AREAS	BB/ PB RE SEA DRUMS AND PUBLIC AREAS	BB/ PB RE SEA DRUMS AND PUBLIC AREAS	BB/ PB RE SEA DRUMS AND PUBLIC AREAS	BB/ PB RE SEA DRUMS AND PUBLIC AREAS		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	0	0	0	0	2	0	0
HOURS	0	0	0	0	6	0	0
TOTAL M3	0	0	0	0	5.4	0	0
TOTAL M3	0	0	0	0	5.4	0	0
IN SEASON							
RESIDENTIAL	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD RECYCLING ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD RECYCLING ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD RECYCLING ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD RECYCLING ONLY	RESIDENTAL GERMAN TOWN KM / BB SUNNY SEAS / MALKOP VLEI UPPER MAIN ROAD RECYCLING ONLY	RESIDENTAL	RESIDENTAL
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	6	3	3	3	3		
HOURS	8	8	8	8	8		
TOTAL M3	16.2	8.1	8.1	8.1	8.1	0	0

## COLLECTION KLEINMOND BELOW MAIN ROAD BLACK BAGS

REGISTRATION NUMBER	CAM 10971					
DRIVER	JAN MOJAKI					
NO OF LABOURERS	6					
FABRICATE	NISSAN CABSTAR UD 35					
DESCRIPTION	CAGED TIPPER					
YEAR OF MANUFACTURE	2002				TRAILERS	
CURRENT ODO READING		KM				
VOLUME CAPACITY	12.43	M3	12.43			M3
PAYLOAD	3	TON				TON

## OUT OF SEASON

RESIDENTIAL	RESIDENTIAL BELOW MAIN ROAD	RESIDENTIAL BELOW MAIN ROAD	RESIDENTIAL BELOW MAIN ROAD	RESIDENTIAL BELOW MAIN ROAD	RESIDENTIAL BELOW MAIN ROAD		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	5	0	0	0	0	0	0
HOURS	8	0	0	0	0	0	0
TOTAL M3	62.15	0	0	0	0	0	0

## IN SEASON

RESIDENTIAL	RESIDENTIAL BELOW MAIN ROAD	RESIDENTIAL BELOW MAIN ROAD	RESIDENTIAL BELOW MAIN ROAD	RESIDENTIAL BELOW MAIN ROAD	RESIDENTIAL BELOW MAIN ROAD		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	6	4	4	4	4	0	0
HOURS	8	0	0	0	0	0	0
TOTAL M3	74.58	49.72	49.72	49.72	49.72	0	0

COLLECTION KLEINMOND BELOW MAIN ROAD BLACK BAGS							
REGISTRATION NUMBER	CEM 30170					TRAILERS	
DRIVER	C MITCHELL						
NO OF LABOURERS	2					6.48	M3
FABRICATE	NISSAN BAKKIE					0.5	TON
DESCRIPTION	LDV						
YEAR OF MANUFACTURE	2013						
CURRENT ODO READING			KM				
VOLUME CAPACITY	2.7		M3	9.18			
PAYLOAD	1		TON				
OUT OF SEASON							
RESIDENTIAL	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	5	0	0	0	0	0	0
HOURS	7	0	0	0	0	0	0
TOTAL M3	45.9	0	0	0	0	0	0
IN SEASON							
RESIDENTIAL	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	7	4	4	4	4	0	0
HOURS	8	0	0	0	0	0	0
TOTAL M3	64.26	36.72	36.72	36.72	36.72	0	0

## COLLECTION KLEINMOND PALMIET WHITE BAGS

REGISTRATION NUMBER	CEM 31898						
DRIVER	W KARELSE						
NO OF LABOURERS	5						
FABRICATE	NISSAN UD 40						
DESCRIPTION	CAGED TIPPER						
YEAR OF MANUFACTURE						TRAILERS	
CURRENT ODO READING	36852	KM					
VOLUME CAPACITY	12.43	M3		12.43			M3
PAYLOAD	3	TON					TON
OUT OF SEASON							
RESIDENTIAL	RESIDENTIAL KLEINMOND PALMIET	RESIDENTIAL KLEINMOND PALMIET	RESIDENTIAL KLEINMOND PALMIET	RESIDENTIAL KLEINMOND PALMIET	RESIDENTIAL KLEINMOND PALMIET		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	4	0	0	0	0	0	0
HOURS	8	0	0	0	0	0	0
TOTAL M3	49.72	0	0	0	0	0	0
IN SEASON							
RESIDENTIAL	RESIDENTIAL KLEINMOND PALMIET	RESIDENTIAL KLEINMOND PALMIET	RESIDENTIAL KLEINMOND PALMIET	RESIDENTIAL KLEINMOND PALMIET	RESIDENTIAL KLEINMOND PALMIET		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	5	4	4	4	4	0	0
HOURS	8	0	0	0	0	0	0
TOTAL M3	62.15	49.72	49.72	49.72	49.72	0	0



COLLECTION KLEINMOND							
REGISTRATION NUMBER	CAM 25938						
DRIVER	R DANIELS						
NO OF LABOURERS	2						
FABRICATE	NISSAN TIPPER						
DESCRIPTION	TIPPER						
YEAR OF MANUFACTURE						TRAILERS	
CURRENT ODO READING			KM				
VOLUME CAPACITY	12.43		M3		12.43		M3
PAYLOAD	1		TON				TON
OUT OF SEASON							
RESIDENTIAL	RESIDENTAL KLEINMOND BELOW MAIN ROAD RECYCLING	RESIDENTAL KLEINMOND BELOW MAIN ROAD RECYCLING	RESIDENTAL KLEINMOND BELOW MAIN ROAD RECYCLING	RESIDENTAL KLEINMOND BELOW MAIN ROAD RECYCLING	RESIDENTAL KLEINMOND BELOW MAIN ROAD RECYCLING		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	5	0	0	0	0	0	0
HOURS	8	0	0	0	0	0	0
TOTAL M3	62.15	0	0	0	0	0	0
IN SEASON							
RESIDENTIAL	RESIDENTAL KLEINMOND BELOW MAIN ROAD RECYCLING	RESIDENTAL KLEINMOND BELOW MAIN ROAD RECYCLING	RESIDENTAL KLEINMOND BELOW MAIN ROAD RECYCLING	RESIDENTAL KLEINMOND BELOW MAIN ROAD RECYCLING	RESIDENTAL KLEINMOND BELOW MAIN ROAD RECYCLING		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	6	4	4	4	4	0	0
HOURS	8	0	0	0	0	0	0
TOTAL M3	74.58	49.72	49.72	49.72	49.72	0	0

COLLECTION KLEINMOND DRUMS / PARKS							
REGISTRATION NUMBER	CAM 26214						
DRIVER	J REX						
NO OF LABOURERS	2						
FABRICATE	NISSAN						
DESCRIPTION	BAKKIE						
YEAR OF MANUFACTURE					TRAILERS		
CURRENT ODO READING			KM				
VOLUME CAPACITY	3		M3	2.7			M3
PAYLOAD	1		TON				TON
OUT OF SEASON							
SEE DRUMS AND PUBLIC	KLEINMOND SEE DRUMS AND PUBLIC AREAS	KLEINMOND SEE DRUMS AND PUBLIC AREAS	KLEINMOND SEE DRUMS AND PUBLIC AREAS	KLEINMOND SEE DRUMS AND PUBLIC AREAS	KLEINMOND SEE DRUMS AND PUBLIC AREAS		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	5				5		
HOURS	8				8		
TOTAL M3	13.5	0	0	0	13.5	0	0
IN SEASON							
SEE DRUMS AND PUBLIC	KLEINMOND SEE DRUMS AND PUBLIC AREAS	KLEINMOND SEE DRUMS AND PUBLIC AREAS	KLEINMOND SEE DRUMS AND PUBLIC AREAS	KLEINMOND SEE DRUMS AND PUBLIC AREAS	KLEINMOND SEE DRUMS AND PUBLIC AREAS		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	5	3	3	3	3	2	2
HOURS	8	8	8	8	8	2	4
TOTAL M3	13.5	8.1	8.1	8.1	8.1	5.4	5.4

COLLECTION BETTYS BAY HABOUR AREA								
REGISTRATION NUMBER	CAM 20080			TOTAAL		TRAILERS		
DRIVER	J THEUNISSEN					CAM 6607		
NO OF LABOURERS	6					6.84	M3	
FABRICATE	NISSAN CABSTAR UD 35					0.5	TON	
DESCRIPTION	CAGED TIPPER							
YEAR OF MANUFACTURE	2004							
CURRENT ODO READING	250949		KM					
VOLUME CAPACITY	12.27		M3	19.11				
PAYLOAD	3		TON					
OUT OF SEASON								
BUSINESS	BUSINESS BETTYS BAY	BUSINESS BETTYS BAY	BUSINESS BETTYS BAY	BUSINESS BETTYS BAY	BUSINESS BETTYS BAY			
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	
LOADS	1	0	0	0	0	0	0	
HOURS	1	0	0	0	0	0	0	
TOTAL M3	19.11	0	0	0	0	0	0	
RESIDENTIAL	RESIDENTAL BLESBERG / HARBOUR BLACK BACKS IN TRUCK / RECYCLING IN TRAILER	RESIDENTAL BLESBERG / HARBOUR BLACK BACKS IN TRUCK / RECYCLING IN TRAILER	RESIDENTAL BLESBERG / HARBOUR BLACK BACKS IN TRUCK / RECYCLING IN TRAILER	RESIDENTAL BLESBERG / HARBOUR BLACK BACKS IN TRUCK / RECYCLING IN TRAILER	RESIDENTAL BLESBERG / HARBOUR BLACK BACKS IN TRUCK / RECYCLING IN TRAILER			
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	
	LOADS	2	1	0	0	0	0	0
	HOURS	7	4	0	0	0	0	0
	TOTAL M3	38.22	12.27	0	0	0	0	0
TOTAL M3	57.33	12.27	0	0	0	0	0	
RESIDENTIAL	RESIDENTAL BLESBERG / HARBOUR BLACK BACKS IN TRUCK / RECYCLING IN TRAILER	RESIDENTAL BLESBERG / HARBOUR BLACK BACKS IN TRUCK / RECYCLING IN TRAILER	RESIDENTAL BLESBERG / HARBOUR BLACK BACKS IN TRUCK / RECYCLING IN TRAILER	RESIDENTAL BLESBERG / HARBOUR BLACK BACKS IN TRUCK / RECYCLING IN TRAILER	RESIDENTAL BLESBERG / HARBOUR BLACK BACKS IN TRUCK / RECYCLING IN TRAILER	RESIDENTIAL	RESIDENTIAL	
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	
	LOADS	3	2	2	2	2	0	0
	HOURS	8	8	8	8	8	0	0
	TOTAL M3	57.33	38.22	38.22	38.22	38.22	0	0

COLLECTION KLEINMOND							
REGISTRATION NUMBER	CEM 5372						
DRIVER	B BOOYSEN						
NO OF LABOURERS	3						
FABRICATE	NISSAN CABSTAR UD 35						
DESCRIPTION	FLATBED						
YEAR OF MANUFACTURE	2012					TRAILERS	
CURRENT ODO READING	61572	KM					
VOLUME CAPACITY	12.27	M3		18.75		6.48	M3
PAYLOAD	3	TON				0.5	TON
OUT OF SEASON							
RESIDENTIAL	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL	RESIDENTAL
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	3	0	0	0	0	0	0
HOURS	8	0	0	0	0	0	0
TOTAL M3	56.25	0	0	0	0	0	0
IN SEASON							
RESIDENTIAL	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL	RESIDENTAL
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	3	2	2	2	2	0	
HOURS	8	8	8	8	8		
TOTAL M3	56.25	37.5	37.5	37.5	37.5	0	0

COLLECTION KLEINMOND							
REGISTRATION NUMBER	CEM 26897						
DRIVER	A FLORIS						
NO OF LABOURERS	2						
FABRICATE	NISSAN HARD BODY 2.0						
DESCRIPTION	WITH CANOPY						
YEAR OF MANUFACTURE	2012					TRAILERS	
CURRENT ODO READING		KM					
VOLUME CAPACITY	3.86		M3	3.86			M3
PAYLOAD	1		TON				TON
OUT OF SEASON							
RESIDENTIAL	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD	RESIDENTAL VLEI AREA DIE STOOR/ MOOIUITSIG/ BASS ROAD		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	3	0	0	0	0	0	0
HOURS	8	0	0	0	0	0	0
TOTAL M3	11.58	0	0	0	0	0	0
COLLECTION ROOI ELS EN PRINGLE BAAI SWART SAKKE							
REGISTRATION NUMBER	CEM 17431						
DRIVER	VACANT / M GUDU						
NO OF LABOURERS	4						
FABRICATE	NISSAN						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	2011					TRAILERS	
CURRENT ODO READING	CEM 17431		KM				
VOLUME CAPACITY	15.4		M3	15.4			M3
PAYLOAD	5		TON				TON
IN SEASON							
RESIDENTIAL	RESIDENTAL / ROOI ELS / PRINGLE BAY	ROOI ELS / PRINGLE BAAI BESIGHEDE /HELP OP KLEINMOND EXT 6 WAENS	RESIDENTAL / BUSINESS ROOI ELS / PRINGLE BAY WAENS GASTE HUISE	RESIDENTAL / BUSINESS ROOI ELS / PRINGLE BAY WAENS GASTE HUISE	RESIDENTAL / BUSINESS ROOI ELS / PRINGLE BAY WAENS GASTE HUISE		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	2	2	1	1	1	0	0
HOURS	8	8	8	8	8	0	0
TOTAL M3	30.8	30.8	15.4	15.4	15.4	0	0

COLLECTION ROOI ELS AND PRINGLE BAY WHITE BAGS							
REGISTRATION NUMBER	CAM 15874						
DRIVER	S MADO						
NO OF LABOURERS	6						
FABRICATE	NISSAN CABSTAR UD 35						
DESCRIPTION	CAGED TIPPER						
YEAR OF MANUFACTURE	2003					TRAILERS	
CURRENT ODO READING	281196		KM				
VOLUME CAPACITY	12.27		M3	12.27			M3
PAYLOAD	3		TON				TON
OUT OF SEASON							
RESIDENTIAL	PRINGLE BAY RESIDENTAL AND ROOI ELS WIT SAKKE	PRINGLE BAY RESIDENTAL AND ROOI ELS WIT SAKKE	PRINGLE BAY RESIDENTAL AND ROOI ELS WIT SAKKE	PRINGLE BAY RESIDENTAL AND ROOI ELS WIT SAKKE	PRINGLE BAY RESIDENTAL AND ROOI ELS WIT SAKKE		
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	3	1	0	0	0	0	0
HOURS	8	4	0	0	0	0	0
TOTAL M3	36.81	12.27	0	0	0	0	0
IN SEASON							
RESIDENTIAL	PRINGLE BAY RESIDENTAL AND ROOI ELS	PRINGLE BAY RESIDENTAL AND ROOI ELS	PRINGLE BAY RESIDENTAL AND ROOI ELS	PRINGLE BAY RESIDENTAL AND ROOI ELS	PRINGLE BAY RESIDENTAL AND ROOI ELS	PRINGLE BAY RESIDENTAL AND ROOI ELS	PRINGLE BAY RESIDENTAL AND ROOI ELS
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	4	2	2	2	2	0	0
HOURS	8	8	8	8	8	0	0
TOTAL M3	49.08	24.54	24.54	24.54	24.54	0	0

COLLECTION KLEINMOND							
REGISTRATION NUMBER	CEM11377						
DRIVER	M THOMAS						
NO OF LABOURERS	4						
FABRICATE	NISSAN						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE						TRAILERS	
CURRENT ODO READING	244671	KM					
VOLUME CAPACITY	15.4	M3	15.4				M3
PAYLOAD	5	TON					TON
IN SEASON							
RESIDENTIAL	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL	RESIDENTIAL
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	3	2	2	2	2	0	0
HOURS	8	8	8	8	8	0	0
TOTAL M3	46.2	30.8	30.8	30.8	30.8	0	0
IN SEASON							
RESIDENTIAL	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL/ EXT 3 / ABOVE MAIN ROAD RECYCLING ONLY	RESIDENTIAL	RESIDENTIAL
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	3	2	2	2	2	0	0
HOURS	8	8	8	8	8	0	0
TOTAL M3	46.2	30.8	30.8	30.8	30.8	0	0

COLLECTION KLEINMOND							
REGISTRATION NUMBER	CEM 28619						
DRIVER	N NKETU						
NO OF LABOURERS	2						
FABRICATE	NISSAN						
DESCRIPTION	BAKKIE						
YEAR OF MANUFACTURE	2013					TRAILERS	
CURRENT ODO READING	67185	KM					
VOLUME CAPACITY	2.7	M3		2.7			M3
PAYLOAD	1	TON					TON
IN SEASON							
PUBLIC AREAS	BB SEA DRUMS AND PUBLIC AREAS	BB SEA DRUMS AND PUBLIC AREAS	BB SEA DRUMS AND PUBLIC AREAS	BB SEA DRUMS AND PUBLIC AREAS	BB SEA DRUMS AND PUBLIC AREAS	BB/ PB RE SEA DRUMS AND PUBLIC AREAS	BB/ PB RE SEA DRUMS AND PUBLIC AREAS
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	3	2	2	2	2	1	2
HOURS	1	1	1	1	1	2	4
TOTAL M3	8.1	5.4	5.4	5.4	0	0	0
COLLECTION KLEINMOND							
REGISTRATION NUMBER	CEM 17431						
DRIVER	VACANT / M GUDU						
NO OF LABOURERS	4						
FABRICATE	NISSAN						
DESCRIPTION	COMPACTOR						
YEAR OF MANUFACTURE	2011					TRAILERS	
CURRENT ODO READING	CEM 17431	KM					
VOLUME CAPACITY	15.4	M3		15.4			M3
PAYLOAD	5	TON					TON
IN SEASON							
RESIDENTIAL	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK	RESIDENTAL / EXT 6 / POPPE DORP AND RIEM VASMAAK
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
LOADS	3	2	2	2	2	0	0
HOURS	8	8	8	8	8	0	0
TOTAL M3	46.2	30.8	30.8	30.8	30.8	0	0



**ANNEXURE 4**

**WASTE MANAGEMENT PROJECT REVIEW  
FORM**

## OVERSTRAND MUNICIPALITY IWMP IMPLEMENTATION PROJECT REVIEW FORM

PROJECT NAME AND DESCRIPTION: .....

.....

.....

PROJECT COMMENCEMENT DATE: .....

PROJECT COMPLETION DATE: .....

RATE PROJECT OVERALL SUCCESS IN TERMS OF INTENDED PURPOSE:

1

2

3

4

5

REASON(S) FOR SCORE: .....

.....

.....

IF SCORE = 1-3, LIST THE ACTIONS THAT ARE TO BE TAKEN ALONG WITH TARGET DATES TO IMPROVE  
SCORE: .....

.....

.....

.....

LIST ALL PUBLIC COMMENTS/COMPLAINTS RECEIVED RE THIS PARTICULAR PROJECT: .....

.....

.....

HAVE THESE BEEN ADDRESSED: .....

.....

**ANNEXURE 5**

**PUBLIC COMMENT ADVERTISEMENT**



## **OPPORTUNITY TO SUBMIT REPRESENTATIONS:**

- 1. DRAFT REVIEWED INTEGRATED DEVELOPMENT PLAN (IDP) FOR 2015/16 AND RELATED DOCUMENTS**
  - 2. DRAFT INTEGRATED WASTE MANAGEMENT PLAN (IWMP) FOR 2015/16**
- 

**NOTICE IS HEREBY GIVEN** that the following documentation is available for comment:

- Draft reviewed Integrated Development Plan (IDP) in terms of section 34(a) of the Municipal Systems Act No 32 of 2000;
- Revision of the key performance indicators (KPI's) and targets for 2015/16 (Draft Service Delivery and Budget Implementation Plan (SDBIP));
- Draft Integrated Waste Management Plan (IWMP) for 2015/16 as a sectoral plan to the IDP in terms of National Environmental Management Act: Waste Act 2008

The local community is invited to submit representations in connection with the three documents to the Municipality by submitting such representations on or before 30 April 2015 to the Municipal Manager (For attention Ms. R Louw -Draft Reviewed IDP & Draft SDBIP and Mr. J van Taak - Draft IWMP) at the under-mentioned address or fax number.

The Council will consider the Final IDP review and Final IWMP together with all the comments and representations received during a meeting which is scheduled to take place on 27 May 2015. The three documents will be available for perusal during office hours at the offices of the Area Managers in Gansbaai, Stanford, Hermanus and Kleinmond, in all the public libraries in the Overstrand, the Corporate Head Office of the municipality in Hermanus and on the municipality's website at [www.overstrand.gov.za](http://www.overstrand.gov.za).

Persons who cannot write can visit the Area Managers in Gansbaai, Stanford, Hermanus and Kleinmond during office hours where such persons will be assisted to transcribe their comments or representations.

**C GROENEWALD**  
**MUNICIPAL MANAGER**

Overstrand Municipality  
PO Box 20  
HERMANUS  
7200

Fax number: (028) 313 8030

Notice number:../2015



## **GELEENTHEID OM VERTOË TE RIG:**

- 1. KONSEP HERSIENDE GEÏNTEGREEDE ONTWIKKELINGSPLAN (GOP) VIR 2015/16 EN VERWANTE DOKUMENTE**
  - 2. KONSEP GEÏNTEGREERDE VASTE AFVAL BESTUURSPLAN (GABP) VIR 2015/16**
- 

**KENNIS GESKIED HIERMEE** dat die volgende dokumente vir vertoë beskikbaar is:

- Konsep Hersiende Geïntegreerde Ontwikkelingsplan (GOP) in terme van artikel 34(a) van die Wet op Plaaslike Regering: Munisipale Stelsels, 2000 (Wet 32 van 2000);
- Hersiening van die sleutel prestasie indikatore en teikens vir 2015/16 (Konsep Dienslewering en Begrotingsimplementeringsplan (DBIP);
- Konsep Geïntegreerde Vaste Afval Bestuursplan (GABP) vir 2015/16 as 'n sektorale plan tot die GOP in terme van die Nasionale Wet op Omgewingsbestuur: Vaste Afval Wet 2008

Die plaaslike gemeenskap word uitgenooi om vertoë met betrekking tot die drie dokumente aan die munisipaliteit voor te lê deur hul vertoë voor of op 30 April 2015 te rig aan die Munisipale Bestuurder (vir aandag Me R. Louw)- Konsep Hersiende GOP & Konsep DBIP en Mnr. J van Taak- Konsep GABP by onderstaande adres of faksnommer.

Die Raad sal die Finale Hersiende GOP en Finale GABP tydens 'n vergadering wat op 27 Mei 2015 gehou staan te word tesame met alle kommentaar of vertoë wat ontvang is, oorweeg.

Die drie dokumente is gedurende kantoorure ter insae by die kantore van die Areasbestuurders in Gansbaai, Stanford, Hermanus en Kleinmond, in alle openbare biblioteke in die Overstrand, die Korporatiewe Hoofkantoor van die munisipaliteit in Hermanus en op die munisipaliteit se webwerf by [www.overstrand.gov.za](http://www.overstrand.gov.za).

Persone wat nie kan skryf nie kan gedurende kantoorure by die onderskeie Areabestuurders in Gansbaai, Stanford, Hermanus of Kleinmond besoek aflê waar daardie persone gehelp sal word om hul kommentaar of vertoë op skrif te stel.

### **C GROENEWALD MUNISIPALE BESTUURDER**

Overstrand Munisipaliteit  
Posbus 20  
HERMANUS  
7200

Faksnommer: 028 313

Kennisgewingnommer: ../2015

# **ANNEXURE 6**

## **DETAIL BUDGET**

	<b>Amended Budget</b>
	<b>To date [R]</b>
<b>1500 WASTE MANAGEMENT</b>	
<b>3400 Solid Waste Disposal: B/Bay</b>	
E Expenditure	
<b>2010 Employee Related Cost</b>	
Basic Salary & Wages	94 771
Overtime Pmnts - Nn Str O Tme	14 699
Annual Bonus	7 851
Soc Contributions - Bargaining	82
Soccontr - Group Life Insurance	701
Social Contributions - Pension	17 059
Soc Contributions - Unimplment I	1 018
Sub-section Total:	136 181

<b>1500 WASTE MANAGEMENT</b>	
<b>3410 Solid Waste Disposal: Hawston</b>	
E Expenditure	
<b>2010 Employee Related Cost</b>	
Basic Salary & Wages	79 020
Overtime Pmnts - Nn Str O Tme	14 115
Annual Bonus	6 494
Soc Contributions - Bargaining	82
Soccontr - Group Life Insurance	585
Social Contributions - Pension	14 224
Soc Contributions - Unimplment I	856
Sub-section Total:	115 376

<b>1500 WASTE MANAGEMENT</b>	
<b>3420 Solid Waste Disposal: Voelklip</b>	
E Expenditure	
<b>2010 Employee Related Cost</b>	
Basic Salary & Wages	87 749
Overtime Pmnts - Nn Str O Tme	37 600
Annual Bonus	7 313
Soc Contributions - Bargaining	82
Soccontr - Group Life Insurance	649
Social Contributions - Pension	15 795
Soc Contributions - Unimplment I	951
Sub-section Total:	150 139

<b>1500 WASTE MANAGEMENT</b>	
<b>3430 Solid Waste Disposal: Stanford</b>	
E Expenditure	
<b>2010 Employee Related Cost</b>	
Basic Salary & Wages	198 261
Overtime Pmnts - Nn Str O Tme	7 827
Acting Allwnc	610
Annual Bonus	13 950
Standby Allwnc	6 875
Soc Contributions - Bargaining	164
Soccontr - Group Life Insurance	1 236
Social Contributions - Pension	30 072
Soc Contributions - Unmplment I	1 811
Sub-section Total:	260 806

<b>1500 WASTE MANAGEMENT</b>	
<b>3440 Refuse Disposal: P/Beach(Trfst</b>	
<b>2010 Employee Related Cost</b>	
Basic Salary & Wages	189 739
Essential User	2 784
Overtime Pmnts - Nn Str O Tme	21 631
Annual Bonus	15 891
Soc Contributions - Bargaining	164
Soccontr - Group Life Insurance	1 755
Social Contributions - Pension	34 154
Soc Contributions - Unmplment I	2 062
Sub-section Total:	268 180

<b>1500 WASTE MANAGEMENT</b>	
<b>3510 Solid Waste Disposal: Hermanus</b>	
E Expenditure	
<b>2010 Employee Related Cost</b>	
Basic Salary & Wages	1 094 865
Overtime Pmnts - Nn Str O Tme	106 916
Annual Bonus	49 320
Soc Contributions - Bargaining	574
Soccontr - Group Life Insurance	4 399
Social Contributions - Pension	107 077
Soc Contributions - Unmplment I	6 459
Sub-section Total:	1 369 610



<b>1500 WASTE MANAGEMENT</b>	
<b>3620 Waste Disposal Site:Gansbaai</b>	
E Expenditure	
<b>2010 Employee Related Cost</b>	
Basic Salary & Wages	335 913
Overtime Pmnts - Nn Str O Tme	8 662
Annual Bonus	27 894
Soc Contributions - Bargaining	328
Soccontr - Group Life Insurance	2 486
Social Contributions - Pension	60 466
Soc Contributions - Unmplment I	3 641
Sub-section Total:	439 390
<b>1500 WASTE MANAGEMENT</b>	
<b>3410 Solid Waste Disposal: Hawston</b>	
<b>2030 Operational Cost</b>	
Op Cst - Uniform & Protective C	2 500
Sub-section Total:	2 500
<b>1500 WASTE MANAGEMENT</b>	
<b>3510 Solid Waste Disposal: Hermanus</b>	
<b>2030 Operational Cost</b>	
Op Cst - Assts Less Thn Th Cap	5 000
Op Cst - Uniform & Protective C	37 100
Sub-section Total:	42 100
<b>1500 WASTE MANAGEMENT</b>	
<b>3440 Refuse Disposal: P/Beach(Trfst</b>	
<b>2050 Contracted Services</b>	
Maintenance Of Buildings & Faci	60 114
Sewerage Servs	8 212
Sub-section Total:	68 326
<b>1500 WASTE MANAGEMENT</b>	
<b>3510 Solid Waste Disposal: Hermanus</b>	
<b>2050 Contracted Services</b>	
Maintenance Of Buildings & Faci	144 500
Sub-section Total:	144 500

<b>1500 WASTE MANAGEMENT</b>	
<b>3620 Waste Disposal Site:Gansbaai</b>	
<b>2050 Contracted Services</b>	
Maintenance Of Buildings & Faci	18 078
Maintenance Of Equip	18 078
Maintenance Of Unspecified Asse	18 181
Sub-section Total:	54 337

<b>1500 WASTE MANAGEMENT</b>	
<b>3640 Overstrand: Solid Waste Disp.</b>	
E Expenditure	
<b>2050 Contracted Services</b>	
Chipping	2 420 000
Haulage	13 695 000
Sub-section Total:	16 115 000

<b>1500 WASTE MANAGEMENT</b>	
<b>3400 Solid Waste Disposal: B/Bay</b>	
<b>2100 Inventory</b>	
Inventory - Materials & Supplie	7 555
Sub-section Total:	7 555

<b>1500 WASTE MANAGEMENT</b>	
<b>3410 Solid Waste Disposal: Hawston</b>	
<b>2100 Inventory</b>	
Inv - Consumable Stores - Stand	1 500
Sub-section Total:	1 500

<b>1500 WASTE MANAGEMENT</b>	
<b>3420 Solid Waste Disposal: Voelklip</b>	
<b>2100 Inventory</b>	
Inv - Consumable Stores - Stand	1 400

<b>1500 WASTE MANAGEMENT</b>	
<b>3430 Solid Waste Disposal: Stanford</b>	
<b>2100 Inventory</b>	
Inv - Consumable Stores - Stand	7 000
Inventory - Materials & Supplie	5 500
Sub-section Total:	12 500

<b>1500 WASTE MANAGEMENT</b>	
<b>3440 Refuse Disposal: P/Beach(Trfst</b>	
<b>2100 Inventory</b>	
Inventory - Materials & Supplie	25 841
Sub-section Total:	25 841

<b>1500 WASTE MANAGEMENT</b>	
<b>3510 Solid Waste Disposal: Hermanus</b>	
<b>2100 Inventory</b>	
Inv - Consumable Stores - Stand	3 180
Inventory - Materials & Supplie	20 000
Sub-section Total:	23 180

<b>1500 WASTE MANAGEMENT</b>	
<b>3620 Waste Disposal Site:Gansbaai</b>	
<b>2100 Inventory</b>	
Inv - Consumable Stores - Stand	10 330
Inventory - Materials & Supplie	240 782
Sub-section Total:	251 112

<b>1500 WASTE MANAGEMENT</b>	
<b>3400 Solid Waste Disposal: B/Bay</b>	
<b>2090 Depreciation And Amortisation</b>	
Infrastructure - Wst Man	12 534
Sub-section Total:	12 534

<b>1500 WASTE MANAGEMENT</b>	
<b>3410 Solid Waste Disposal: Hawston</b>	
<b>2090 Depreciation And Amortisation</b>	
Infrastructure - Wst Man	40 006
Sub-section Total:	40 006

<b>1500 WASTE MANAGEMENT</b>	
<b>3430 Solid Waste Disposal: Stanford</b>	
<b>2090 Depreciation And Amortisation</b>	
Infrastructure - Wst Man	98 929
Sub-section Total:	98 929

<b>1500 WASTE MANAGEMENT</b>	
<b>3440 Refuse Disposal: P/Beach(Trfst</b>	
<b>2090 Depreciation And Amortisation</b>	
Infrastructure - Wst Man	95 814
Sub-section Total:	95 814
<b>2090 Depreciation And Amortisation</b>	
Furniture & Off Equip - All Exc	164
Infrastructure - Wst Man	684 239
Sub-section Total:	684 403

<b>1500 WASTE MANAGEMENT</b>	
<b>3510 Solid Waste Disposal: Hermanus</b>	
<b>2090 Depreciation And Amortisation</b>	
Furniture & Off Equip - All Exc	121 877
Infrastructure - Wst Man	1 119 453
Infrastructure - Water	798 800
Sub-section Total:	2 040 130

<b>1500 WASTE MANAGEMENT</b>	
<b>3620 Waste Disposal Site:Gansbaai</b>	
<b>2090 Depreciation And Amortisation</b>	
Furniture & Off Equip - All Exc	4 023
Infrastructure - Wst Man	1 821 900
Sub-section Total:	1 825 923

<b>1500 WASTE MANAGEMENT</b>	
<b>3640 Overstrand: Solid Waste Disp.</b>	
<b>2090 Depreciation And Amortisation</b>	
Infrastructure - Wst Man	534
Sub-section Total:	534

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