

“ The City of Heritage ”



ULUNDI LOCAL MUNICIPALITY

INTERGRATED WASTE

MANAGEMENT PLAN

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1. BACKGROUND

Ulundi Municipality developed an Integrated Waste Management Plan (IWMP) in terms of its statutory obligation to provide for competent waste management to protect human and environmental health within the local municipal area. (The Ulundi Municipality is hereafter ‘the Municipality’ unless otherwise specified.)

This statutory obligation is framed by Section 24 and Section 156 (in conjunction with Schedule 5B) of the Constitution of South Africa (Act 108 of 1996), which respectively declares the right to human and environmental health; and waste management as a local government competence.

Furthermore, the Department of Environmental Affairs *Integrated Waste Management Strategy* (1999/2000; IWMS) covers the relevant national principles and strategy as well as local government participation in implementing the strategy; the *White Paper on Integrated Pollution Prevention and Waste Management* (2000) provides for integrated waste management/pollution prevention initiatives; while the *Local Government Municipal Systems Act* (Act 32 of 2000; MSA) contains both broad and specific provisions relating to municipal service delivery.

However, since the National Environmental Management: Waste Act, Act 59 of 2008, (Waste Act) was promulgated on 10 March 2009 and came into effect on 1 July 2009, it now constitutes South Africa’s overarching primary waste legislation. As such the Waste Act provides legal standing for government to fulfil its obligation of compiling and implementing IWMPs. Section 11 of the Waste Act concerns the development of municipal IWMP:

“(4) (a) each municipality must –
(ii) submit its integrated waste management plan to the Member of Executive Council (MEC) for approval; and
(ii) include the approved integrated waste management plan in its integrated development plan contemplated in Chapter 5 of the Municipal Systems Act.”

The development of an IWMP involves a phased approach, which should include strategic planning, master planning and implementation. In turn this must be built on a comprehensive understanding of the current level of service, legal requirements, waste management demands, as well as developing a strategy and programme for best resolving the issues through the implementation of short, medium and long term projects. The Municipality thus recognises that integrated waste management planning is an evolving process. Accordingly, while this IWMP is the first published for the municipality and covers an anticipated 5 year period, it may require interim updating and revising. Notwithstanding that the IWMP may require interim updating and revising, in addition, the Waste Act requires that the annual performance report prepared in terms of the Municipal Systems Act must contain information on the implementation of the IWMP.

The approach followed in developing the IWMP, as described in **Section 1.3**, is compliant with section 12 of The Waste Act, which outlines the basic statutory

requirements that must be incorporated in the IWMP. The approach furthermore considered the national principles and reflected the national strategy. The *Guidelines for the Development of IWMPs for Local Governments* (DAEA, 2003) were also considered. The IWMP mainly covers solid waste management. This is however set in the broader context of waste management. This document represents the draft IWMP for public review and comment.

2. INTRODUCTION

Ulundi Local Municipality (ULM) is one of five local municipalities that constitute the Zululand District Municipality. Ulundi Local Municipality is situated in the Northern part of the KwaZulu- Natal Province.

The Ulundi LM consists of 24 wards with a total geographical area of 3250 km², with the population of 188 377 people living in 39 837 households with a population growth of 4%. The Municipality is experiencing a continuous influx of people into the municipal area due to residential and business development in the Municipality.

The status quo study will assess the municipal area with consideration to the various services

categories as well as evaluate the service delivery in each of the towns in the Municipality. The service categories that are taken into consideration can be summarised as follows:

- Refuse Removal: Residential, Commercial, Industrial, Garden Refuse, Builders' Rubble and Medical Waste
- Street and ablution cleaning
- Landfill Sites, Transfer Stations and Bulk Containers

The Status Quo investigation of the waste management section considered each of these aspects of service delivery by the Ulundi Municipality.

SERVICE CATEGORY SERVICE ASPECTS CONSIDERED

Refuse removal Waste generation, collection system, collection equipment, personnel, residential, commercial, garden refuse and builders' rubble, medical and hazardous waste, mining industry, obvious needs.

Street Cleansing Regularity of service, equipment, personnel, obvious needs

Landfill Sites, Transfer

Stations and Bulk Containers

Waste generation, collection and transportation, personnel, equipment, landfill operation, transfer stations, garden refuse sites,

GOAL

The main goal of the Municipality with regards to waste management is summarised as follows:

Optimise waste management in the Ulundi Municipal Area for the protection of human health and wellbeing by maximising the effective use of available resources and promoting sustainable environment.

In addition the Ulundi Municipal IWMP aims to:

- Ensure that the Municipality implements all existing legislation requirements in terms of waste management. The Municipality acknowledges that the Constitution of the Republic of South Africa is the supreme law of the land and that as such waste management principles must pre-eminently comply with the Constitution and any amendments thereto.
- Provide a basis for a system of integrated solid waste management by-laws that will be used to regulate waste generation and waste management services within the Municipality's jurisdiction, as well as serve as a disincentive for poor waste management practices.

3. STUDY AREA AND STATUS QUO

3.1 SERVICE AREA AND REFUSE COLLECTION

The Municipality currently service a total number of 39 837 properties in Ulundi. Approximately 6776 households receive a communal waste collection service.

A regular waste removal service is provided to all households and businesses within the major towns (Ulundi, Babanango, and Mashona) of the Municipal area, except to the households in rural areas. The majority of the population in rural areas either bury or burn their waste. The provision of such a service is at the moment not envisaged by the Municipality.

There are also private waste contractors active within the municipal area. The Municipality provides a weekly (1 day per week) waste collection service to all the households and businesses receive a special additional collection service from Mondays to Thursdays (2 x per week) in Babanango Town. Ulundi CBD collection service is daily depending on the collection requirements. Street cleaning (litter picking, sweeping, and cleaning of ablution facilities) is done on a daily basis in the CBD.

3.2 WASTE RECEPTACLES

The Ulundi Municipality utilises a black refuse bag system for all the households and businesses in the municipal area. The Municipality provides the residents in all townships with one black bag per week. The Municipality accepts any number of bags per household. The bags are placed outside the house or business and collected from there. Businesses provide their own bins or refuse area for larger supermarket.

3.3 MUNICIPAL BY-LAWS PERTAINING TO WASTE

The Ulundi Municipality has a set of by-laws, promulgated in 2007, pertaining to solid waste disposal. Although the by-laws are quite comprehensive, it is recommended that the by-laws should be expanded to include aspects of waste minimisation e.g. recycling and other issues as set out in the National Environmental Management: Waste Management Act, 2008 to promote integrated waste management.

3.4 WASTE GENERATION RATES

3.4.1 WASTE GENERATION

The landfill site and waste transfer station in the Municipal area do not have weighbridges and therefore the quantities of waste disposed of are not exactly known; only waste from transfer station is weighed at UThungulu landfill site where waste is taken for final disposal. In such cases the Minimum Requirements for Waste Disposal by Landfill prescribes that the daily tonnages of waste generated can be obtained by applying per capita waste generation rates to the figures for the population served. These rates vary with the socio-economic standing of the population, from 0.2 kg per capita per day in the poor areas, to 1 kg per capita per day in the affluent areas.

4. NATIONAL WASTE MANAGEMENT STRATEGY 2011

The overall purpose of the strategy is to give effect to the object of the waste Act, which are to protect health, well-being and the environment through sound waste management application of the waste management hierarchy. The strategy provides a plan to give practical effect to the Waste Act, and as such it seeks to ensure that responsibility for waste management is properly apportioned. Moreover the National Waste Management Strategy is a system of national norms and standards, which creates common national platform for waste management activities to be undertaken by both public and private sector

Strategic goals of the NWMS

Goal 1: Promote waste minimisation, re-use, recycling and recovery of waste

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

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

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

Goal 5: Achieve integrated waste management planning

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

Goal 7: Provide measure to remediate contaminated land

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

4.1 Definition of Waste

Waste is currently defined as “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 (he 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 sector, 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 Act, 2008) or as

"an undesirable or superfluous by-product, emission, or residue of any process or activity which has been discarded, accumulated or been stored for the purpose of discarding or processing. It may be gaseous, liquid or solid or any combination thereof and may originate from a residential, commercial or industrial area. This definition includes industrial waste water, sewage, radioactive substances, and mining, metallurgical and power generation waste." (DEAT, 2000).

Although this is the official national definitions of waste, it should be noted that this IWMP focuses on solid waste and waste that is generally disposed of through landfilling.

4.2 Waste Classes

Waste is divided into two classes based on the risk it poses - general waste and hazardous waste.

(a) General Waste

General waste, as defined by the Waste Act, refers to "waste that does not pose an immediate hazard or threat to health or to the environment, and includes:

- (a) domestic waste;
- (b) building and demolition waste;
- (c) business waste; and
- (d) inert waste."

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As such the waste may typically consist of:

- Paper
- Metals (non-hazardous)
- Glass
- Plastic
- Organics
- Inerts and Builders rubble.

(b) Hazardous Waste

Hazardous waste, as defined by the Waste Act, refers to "any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment". The *White Paper on Integrated Pollution Prevention and Waste Management* defined hazardous waste as "waste, including radioactive waste, which is legally defined as 'hazardous' in the state in which it is generated. The definition is based on the chemical reactivity or toxic, explosive, corrosive or other characteristics which cause, or are likely to cause, danger to health or to the environment, whether by itself or when in contact with other waste."

The Minimum Requirements for the Classification, Handling and Disposal of Hazardous Waste, uses as a primary classification scheme the International Maritime Dangerous Goods (IMDG) Code, which has been published as SANS Code 10228.

The code divides hazardous materials, in this case hazardous wastes, into 9 categories based on their hazardous characteristics, i.e.:

- Class 1 – Explosives
- Class 2 – Compressed Gases
- Class 3 – Flammable Liquids
- Class 4 – Flammable Solids
- Class 5 – Oxidising Substances and Organic Peroxides
- Class 6 – Toxic and Infectious Wastes
- 6.1 – Toxic (poisonous) Wastes
- 6.2 – Infectious Wastes
- Class 7 – Radioactive Wastes
- Class 8 – Corrosive Wastes and
- Class 9 – Miscellaneous Dangerous Wastes

(c) Priority Waste

Priority Waste refers to waste that has been declared to be a priority waste in terms of section 14 of the Waste Act.

4.3 Core Principles

Waste management in South Africa is based on the principles of the *White Paper on Integrated Pollution and Waste Management* and the *National Waste Management Strategy* (NWMS) published by DEAT in 1999 and 2000. In a national context, these principles for Integrated Waste Management Planning are effectively reflecting principles of framework legislation, including the Constitution of South Africa and the National Environmental Management Act (Act 107 of 1998, NEMA).

These core principles include:

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

Principle Understanding

Duty of care

This is also known as the environmental responsibility principle. It imposes the duty of acting with due care so that damage to others and the environment is avoided. Those who make, supply, import or use material are held responsible for providing sufficient information on its manufacture and intended use, so that the risks of such material to

health and environment can be evaluated. The “cradle to grave” principle reflects this by stipulating that any entity that generates waste has a final responsibility for ensuring that such waste is safely disposed.

Polluter pays

According to this principle, the polluter pays the costs of reducing pollution that does damage to society or that exceeds an acceptable level. Polluters therefore are required to assume individual responsibility for the environmental impacts that they cause. This

Also applies to accidental pollution, where the polluter bears strict liability, and is responsible for the safe handling and environmentally sound disposal of any material that is produced.

User pays

It requires the user of a natural resource to bear the cost of running down natural capital. Therefore, all costs associated with the use of a resource should, where possible, be included in the price of goods and services developed from such a resource.

Intergenerational equity

This is concerned with ensuring a fair distribution of the benefits and impacts of development within a generation, regardless of class, ethnicity, gender or any other social grouping or status.

Precautionary principle

This principle promotes a cautious and risk-averse approach to the use of resources especially where scientific information is insufficient to accurately indicate the possible impacts of such use.

Public trust doctrine

It places a duty on the State to hold environmental resources in trust for the benefit of the public.

Subsidiary principle

Decisions should be made by the communities affected or, on their behalf, by the authorities closest to them. Decisions should preferably rest at the national rather than the international level, and local rather than national level.

Proximity principle

This requires the treatment and disposal of hazardous waste to take place at the closest possible location to its source, in order to minimise risks associated with its transport.

4.4 Waste Management Hierarchy

Specifically the NWMS sets out the policy on pollution prevention, waste minimisation, impact management and redemption and includes various strategic goals to achieve integrated pollution and waste management. South Africa supports the waste hierarchy in its approach to waste management, by promoting cleaner production, waste minimisation, reuse, recycling and waste treatment with disposal seen as a last resort in the management of waste. Refer to

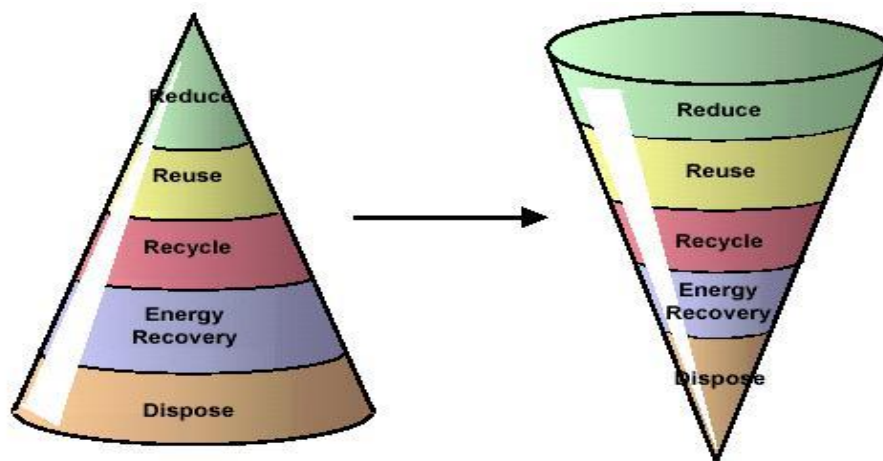


Figure 1.1 for an illustration of the waste hierarchy.

Figure 1.1: Waste Management Hierarchy

Source: South African Waste Information Centre (SAWIC, 2008) and National Waste Management Strategy (NWMS 2011)

(a) Cleaner Production

Waste prevention is the first step in the waste management hierarchy. Cleaner Production provides a mechanism for prevention or reduction in the generation of waste, during the production phase. Cleaner Production is a business and environmental strategy for enhancing productivity and environmental performance for overall socio-economic development. Cleaner production processes are those that use less resources and produce less waste, whether in the form of liquid wastes discharged to waterways, solid wastes going to landfill or gaseous wastes discharged to the air.

(b) Waste Recycling and Reuse

"Recycling of waste refers to the separation at source of recyclable materials from the general waste stream and the reuse of these materials. The objectives of recycling are to save resources as well as reduce the environmental impact of waste by reducing the amount of waste disposed at landfills. To meet these objectives, waste separation at source is proposed, as the quality of recyclable materials is higher when separated at source. In addition, recycling has the potential for job creation and is a viable alternative to informal salvaging at landfills, which is undesirable due to the problems of health and safety associated with salvaging" (NWMS,2011). A great deal has been written on the subject, and various recycling projects, initiatives and strategies are in place in South Africa. However, due to the varying degrees of success, and even some failures, recycling has a somewhat tainted reputation. However, the imperative remains – to reduce the amount of waste going to landfill. Therefore waste recycling should be actively pursued.

(c) Waste Treatment and Disposal

Waste disposal remains the predominant means of managing waste in South Africa. Waste disposal sites were formerly controlled under Section 20 of the Environmental Conservation Act (Act 73 of 1989). However, as soon as the Waste Act is brought into effect, Section 26 thereof, which deals with authorisation of waste disposal, and Sections 43 to 59, which deal with licensing of waste management activities, will be relevant. Technical guidance on the development, operation and monitoring of waste disposal sites is provided through the Department of Water Affairs and Forestry's (DWAF's) Minimum Requirements. The incineration of waste (predominantly medical waste) takes place on a relatively small scale in South Africa and is considered controversial and is often met with opposition from the public. Currently, there is a movement toward the consideration of alternate

5. LEGISLATIVE FRAMEWORK

Following is a short summary of all the relevant legislation pertaining to waste management. The South African Constitution (Act 108 of 1996) is the supreme law of the land. All law, including environmental waste management planning must comply with the Constitution.

- The Constitution states that the people of South Africa have the right to an environment that is not detrimental to human health, and imposes a duty on the state to promulgate legislation and to implement policies to ensure that this right is upheld.
- All departments of state or administration in the national, provincial or local levels of government have similar obligations. The principles of cogovernance are also set out in the Constitution and the roles and responsibilities of the three levels of government are defined.
- According to the Constitution, responsibility for waste management functions is to be devolved to the lowest possible level of government. Local government therefore is assigned the responsibility for refuse removal, refuse dumps and solid waste disposal. Provincial government has the exclusive responsibility to ensure that local government carries out these functions effectively.

In addition to the Constitution, a number of government policies and statutes are relevant waste management at the local government level, which includes the following:

- National Environmental Management Act 107 of 1998
- National Environmental Management: Waste Management Act, 2008
- Environment Conservation Act 73 of 1989
- Municipal Demarcation Act 27 of 1998
- Municipal Structures Act 117 of 1998
- Municipal Systems Act 32 of 2000
- National Environment Management: Air Quality Act 39 of 2004
- Atmospheric Pollution Prevention Act 45 of 1965
- National Water Act 36 of 1998
- Health Act 63 of 1977
- White Paper on Environmental Management Notice 749 of 1998
- White Paper on Integrated Pollution and Waste Management for South Africa, Notice 227 of 2000
- Minimum Requirements for Waste Disposal by Landfill, 2nd edition, 1998
- Minimum Requirements for the Handling and Disposal of Hazardous Waste, 2nd Edition 1998
- Minimum Requirements for Monitoring at Waste Management Facilities, 2nd edition, 1998
- National Waste Management Strategy and Action Plans.
- Relevant Provincial Legislation
- Local government by-laws on waste management.

5.1 NATIONAL ENVIRONMENTAL MANAGEMENT ACT 107 OF 1998

The National Environmental Management Act (NEMA) provides for co-operative governance by establishing principles and procedures for decision-makers on matters affecting the environment. An important function of the Act is to serve as an enabling Act for the

promulgation of legislation to effectively address integrated environmental management. Some of the principles in the Act are:

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

Chapter 2 makes provision for the establishment of the Committee for Environmental Coordination (CEC). The objective of the committee is to promote the integration and co-ordination of environmental functions by the relevant organs of state and in particular to promote the achievement of the purpose and objectives of environmental implementation plans and environmental management plans.

Chapter 3 requires that national government departments that have waste management responsibilities and every province must develop environmental implementation plans (EIPs) every four years and an environmental management plan (EMP). Local government is obliged to exercise its responsibilities in accordance with these plans and to report annually within four months from the end of its financial year on implementation of the environmental management plan or environmental implementation plan. Provincial government must ensure that municipalities adhere to the relevant environmental implementation and management plans within its province, as well as the principles in the preparation of any policy, programme or plan, including the establishment of Integrated Development Plans (IDPs) and Land Development Objectives (LDOs).

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

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

Chapter 9 allows the Minister to make model by-laws aimed at establishing measures for the management of environmental impacts of any development within the jurisdiction of the municipality, which may be adopted by the municipality as by-laws. Any municipality may request the Director-General to assist it with its preparation of by-laws on matters affecting

the environment and the Director-General may not unreasonably refuse such a request. The Director-General may institute programmes to assist municipalities with the preparation of by-laws for the purposes of implementing this Act.

5.2 NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE MANAGEMENT ACT, 2008

The National Environmental Management: Waste Act (Act 59 of 2008) was published in No 278 in Government Gazette No. 32000, on 10 March 2009. The Act was signed by the President on 6 March 2009 and published on 10 March 2009. On 1 July 2009 the Waste Act came into operation.

The Waste Act repealed Section 20 of the Environment Conservation Act, 1989 (Act 73 of 1989)

and introduces new provisions regarding the licensing of waste management activities. Waste activities listed under Schedule 1 in the National Environmental Management Waste Act 2008 as defined in the environmental impact assessment (EIA) regulations made under section 24(5) of the National Environmental Management Act 2008 (NEMA), should be licensed in terms of Section 45 of the National Environmental Management: Waste Act 59 of 2008. The licence is made subject to a number of conditions, which *inter alia* pertain to the design, construction, monitoring and closure of a waste disposal sites. The DWAF Minimum Requirements documents still form the basis for the licensing process and may be included as permit conditions, thereby becoming legally binding on the licence holder. The licence holder is generally required to operate, maintain and attend to the closure of a waste disposal site in compliance with the licence conditions, as well as in accordance with the guidelines set out in the Minimum Requirements documents.

Environment Impact Assessment Regulations, regarding activities defined under Section 21(1) of

the Environment Conservation Act, have been promulgated in Government Notice R1183 of 5 September 1997. An environmental impact assessment must be conducted prior to the establishment of waste disposal facilities.

The Waste Act entrenches best practices in waste management into law, replacing the outdated

and unsustainable “end of pipe” approach with a new, and more environmentally responsible and sustainable approach.

The Act deals with minimising the consumption of natural resources, waste generation, recycling,

waste disposal, prevention of pollution, promotion of waste services, remedying land degradation, and achieving integrated waste management reporting and planning.

5.3 ENVIRONMENT CONSERVATION ACT 73 OF 19

The National Environmental Management: Waste Act, 2008, repeals and amends parts of the Environment Conservation Act and the Environment Conservation Amendment Act with regard to the management of waste in South Africa and introduces new provisions regarding the authorisation of waste management activities.

5.4 MUNICIPAL DEMARCATION ACT 27 OF 1998

The Municipal Demarcation Act 27 of 1998 provides criteria and procedures for the determination of municipal boundaries by an independent authority. In terms of the Act, the Municipal Demarcation Board is established to determine municipal boundaries. Section 24 provides that when demarcating a municipal boundary, the Board must aim to establish an area that would enable the municipality to fulfil its Constitutional obligations, including the provision of services in an equitable and sustainable manner, the promotion of social and economic development and the promotion of a safe and healthy environment. The tax base must also be as inclusive as possible of users of municipal services in the municipality.

5.5 ORGANISED LOCAL GOVERNMENT ACT 52 OF 1997

The Organised Local Government Act 52 of 1997 provides for the recognition of national and provincial organisations representing the different categories of municipalities and determines various procedures concerning local government, including procedures by which local government may consult with national and provincial government.

5.6 MUNICIPAL STRUCTURES ACT 117 OF 1998

The main object of the Municipal Structures Act 117 of 1998 is to provide for the establishment of municipalities in accordance with the requirements relating to categories and types of municipality and to provide for an appropriate division of functions and powers between categories of municipality. It is one of a set of legislation that is aimed at the transformation of local government into a more financially sustainable and performance orientated sphere of government. The Act is aimed at creating the permanent structures mandated by the Constitution, which will replace the transitional structures created by the Local Government Transition Act. Municipalities are categorised either as A, B or C, depending on the level of development.

Chapter 5 sets out the functions and powers of the municipalities in accordance with the Constitution.

5.7 MUNICIPAL SYSTEMS ACT No. 32 OF 2000

The Municipal Systems Act describes the core principles, mechanisms, and processes that are necessary to enable municipalities to move progressively towards the social and economic upliftment of communities and ensure access to services that are affordable to all. Its focus is primarily on the internal systems and administration of the municipality.

The Act enables the process of decentralisation of functions through assigning powers of general competence to local Government. Municipal by-laws are regulated to achieve harmony with national and provincial legislation. As service authorities, municipalities remain responsible for the effective delivery of services and must provide an appropriate policy and regulatory framework. This can be achieved through the most appropriate service provider, ranging from internal departmental delivery to corporatisation and joint ventures to private sector delivery options.

Performance management systems are to be developed to measure and evaluate performance in priority areas, which are to be reported annually to citizens and other spheres of government. The process to be followed in planning, drafting and adopting the Integrated Development Plan is set out.

5.8 THE DEVELOPMENT FACILITATION ACT 67 OF 1995

The Development Facilitation Act 67 of 1995 sets out a planning and land development system, which ensures that national, provincial, and local government policies are implemented. Section 28 describes the requirements for Land Development Objectives, which must be developed by each local authority. One of the objectives of Land Development Objectives is to create a new system of planning that encourages sustained utilisation of the environment, particularly with regard to the environmental consequences of developments. Municipalities are encouraged to co-operate in order to develop the capacity of each municipality to exercise its powers and duties and manage its affairs.

5.9 NATIONAL ENVIRONMENT MANAGEMENT: AIR QUALITY ACT 39 OF 2004

The purpose of the National Environmental Management: Air Quality Act 39 of 2004 is to reform the law regulating air quality in order to protect the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development; to provide for national norms and standards regulating air quality monitoring, management and control by all spheres of government; for specific air quality measures; and for matters incidental thereto.

Part 2 of Chapter 2 of the Act sets out national, provincial and local ambient air quality and emission standards, chapter 3 institutional and planning matters, chapter 4 air quality management measures (priority areas, Listing of activities resulting in atmospheric emissions, controlled emitters, controlled fuels and other emitters.

Chapter 5 describes the procedures to apply for licenses for listed activities, while chapter 7 describes the offences and penalties for non-adherence.

5.10 NATIONAL WATER ACT 36 OF 1998

The National Water Act contains a number of provisions that impact on waste management ,including the disposing of waste in a manner, which detrimentally impacts on a water resource and the discharge of waste into a water resource. The Act allows the Minister to make regulations for:

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

5.11 HEALTH ACT 63 OF 1977

The Health Act 63 of 1977 provides measures for the promotion of health, for the rendering of health services and defines duties of certain authorities which render health services in the Republic Section 20 sets out the duties and powers of local authorities. It provides that every local government is obliged to take measures to maintain its district in a clean and hygienic condition and to prevent the occurrence of any nuisance, unhygienic or offensive

condition or any other condition, which could be of danger to the health of any person. A “nuisance” includes any accumulation of refuse or other matter that is offensive or is injurious or dangerous to health. The local government is obliged to abate the nuisance or remedy the condition and to prevent the pollution of any water intended for the use of the inhabitants of its district.

Draft regulations for the control of environmental conditions constituting a danger to health or a nuisance were published in GNR21 of 14 January 2000. In terms of the proposed regulations, registration is required for: concerns that to carry out a scheduled trade, including waste incineration, waste (including medical waste) disposal sites and waste collecting, sorting, treating or processing sites.

5.12 WHITE PAPER ON ENVIRONMENTAL MANAGEMENT NOTICE 749 OF 1998

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

The policy document is an overarching policy framework that refers to all government institutions and to all activities that impact on the environment. The policy states that government will allocate functions to the institutions and spheres of government that can most effectively achieve the objectives of sustainable development and integrated environmental management. This would include the allocation of certain functions to the municipal sphere of government.

Where appropriate, provincial and local government are to develop their own legislation and implementation strategies to address their specific needs and conditions within the framework of the policy.

5.13 WHITE PAPER ON INTEGRATED POLLUTION AND WASTE MANAGEMENT FOR SOUTH AFRICA, NOTICE 227 OF 2000

The White Paper of Integrated Pollution and Waste Management were published in March 2000 and represents formal government policy regarding integrated pollution and waste management. Integrated pollution and waste management is defined as a holistic and integrated system and process of management aimed at pollution prevention and minimisation at source, managing the impact of pollution and waste on the receiving environment and remediating damaged environments. Waste management is to be implemented in a holistic and integrated manner and extend over the entire waste cycle from cradle-to-grave and will include the generation, storage, collection, transportation, treatment and disposal of waste.

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

Within this framework of the overarching goal, the following strategic goals apply:

1. Effective institutional framework and legislation;
2. Pollution and waste minimisation, impact management and remediation;

3. Holistic and integrated planning – the intention is to develop mechanisms to ensure that integrated pollution and waste management considerations are integrated into the development of government policies, strategies and programmes as well as all spatial and economic development planning processes and in all economic activity. The strategic mechanisms include the following:

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

5.14 DWAF MINIMUM REQUIREMENTS FOR LANDFILL, 2ND EDITION, 1998

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

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

5.15 NATIONAL WASTE MANAGEMENT STRATEGY AND ACTION PLANS.

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

The internationally accepted waste hierarchical approach was adopted of waste prevention/minimisation, recycle/reuse, treatment and finally disposal. The strategy outlines the functions and responsibilities of the three levels of government and where possible, firm plans and targets are specified. During the development of the strategy a number of priority strategic initiatives were identified which were categorised into short-term (by the year 2004),

medium-term (by the year 2008) and long-term (by the year 2012) initiatives. Action plans have been developed for the short-term initiatives for integrated waste management planning, a waste information system, waste minimisation and recycling, general waste collection, waste treatment and disposal, and capacity building, education, awareness and communication. A logical framework analysis approach was adopted to develop the Action Plans that analysed the problems, stakeholders, and the risks to successful implementation followed by the development of outputs, activities, inputs and assumptions, as well as a proposed allocation of functions, roles, and responsibilities of the three levels of government. The roles and responsibilities in terms of the NWMS for local government include:

- *Integrated waste management planning:* Local government will be responsible for the compilation of general waste management plans for submission to provincial government.
- *Waste information system:* Local government will be responsible for data collection.
- *Waste minimisation:* Local government will implement and enforce appropriate national waste minimisation initiatives and promote the development of voluntary partnerships with industry.
- *Recycling:* Local government are to establish recycling centres and/or facilitate community initiatives.
- *Waste collection and transportation:* Local government are to improve service delivery. Private public partnerships to assist service delivery are encouraged.
- *Waste disposal:* Local government is to take responsibility for the establishment and management of landfill sites, and to promote development of regionally based facilities. Formalising and controlling of scavenging is the responsibility of the permit holder.

6. ACTION PLAN

6.1. DISSEMINATION OF INFORMATION/COMMUNICATION

Goal

- Capacity Building through Information Sharing

Objectives

- Develop and Maintain a Waste Information System
- Contribute to Inter Municipal Waste Information Workshops
- Build Community Awareness

Objective 1: Develop and Maintain a Waste Information System

The main objective would be to develop and maintain a WIS. This system would allow for the keep of comprehensive records of waste disposal and collection on which informed decision-making can be based and to comply with the reporting requirements of the relevant authorities such as DEA.

The National Department of Environmental Affairs has developed a generic WIS that may be used by Municipalities for implementation.

Objective 2: Contribute to Inter Municipal Waste Information Workshops

The current difference in service delivery management within the Kwa-Zulu Natal Province necessitates that frequent information sharing sessions be held to share capacity building information. Another option is to provide quarterly reports regarding waste management to other Local Municipalities. It is proposed that the information sharing sessions would be the preferred option since it would allow for discussions on problems encountered and not only provide information. These quarterly meetings should be attended by all the Local Municipalities within the District Municipality as well as representatives from the relevant Kwa-Zulu Natal Provincial Department (DAEARD).

Objective 3: Build Community Awareness

The Ulundi Municipality presently does not have any formal community awareness campaigns that are directed at informing the general community with regards to disposal and recycling. A top down approach by the municipality relies heavily on non-payment penalties to ensure that residents comply with legislation. Recycling and waste minimisation initiatives however, are not included in the normal service delivery and can only be effectively achieved with the co-operation of the residents.

It is therefore vitally important that the community is made aware of initiatives, waste recycling activities and the advantages of waste minimisation and recycling by the Municipality. This can either be achieved by advertisements and notices in the local newspapers or by providing information regarding these initiatives on the municipal bills distributed each month. The municipality can also conduct a road show to all the towns to demonstrate to and inform people of waste related issues.

Including but not limited to eco-school programme, greenest municipality programmes, development of education material and clean-up campaigns

6.2 WASTE MINIMISATION

Goal

- Decrease Waste Deposited on Landfill

Objectives

- Encourage Recycling Activities/ Separation at source initiatives
- Encourage waste minimisation
- Develop Garden Refuse Strategy
- Food Waste project
- Disposal of building rubble

Objective 1: Encourage Recycling Activities/ separation at source

Council has institutionalized waste minimization and recycling which seeks to reduce the tonnage of waste reaching the landfill sites and subsequently creates jobs for those who are interested to participate in recycling programs. Recycling is encouraged by the provision of igloos for paper, glass, plastic and a container is provided for oil.

The council is in the process of formalising a recycling initiative by trying to involve co-operatives in terms of street cleaning and recycling. The intention of this initiative is to train cooperatives on street cleansing and waste management. The recyclable waste could be sold to buy-back centres and increase the income of the cooperatives.

The municipality is in the process of getting funding for this initiative. The Municipality should continue and extend with the above-mentioned initiatives. Recycling of waste will lengthen the lifespan of the landfill site and will reduce the costs of waste transferred for final disposal. Through proper recycling it might be possible to remove as much as 30% of all material earmarked for landfill disposal.

Recycling activities tend to fail due to the effort required from the community. The Municipality therefore can place recycling containers at central and visible locations to maximise exposure and convenience. Community awareness about recycling and recycling initiatives must also then be increased through advertisements and the distribution of flyers and letters. There is also a national initiative that will put a levy on the purchase of new and re-tread tyres. This levy will go into a national fund that will be responsible for the disposal and possible recycling of used tyres.

Regulate/ restriction of the number of refuse bags collected per household. Provision of colour coded refuse bags in order to start sorting at the household level.

Objective 2: Encourage Waste Minimisation.

Waste minimisation and recycling at source is more effective than recycling at the landfill since it

reduces the removal and transport costs. It is therefore recommended that waste sorting and

minimisation is encouraged amongst the businesses in the Municipal area. It is recommended that a system be implemented whereby businesses within the community are billed for waste removal based on the number of receptacles or mass collected from their premises.

They therefore effectively receive a discount for in house recycling activities, as it will limit the number of receptacles collected.

Objective 3: Develop Garden Refuse Strategy.

The Municipality should develop a garden refuse strategy to *inter alia* investigate the feasibility of establishing a composting facility to process garden refuse generated within the Municipal Area. It is recommended that the Municipality should buy a chipper to process garden refuse at the

Babanango landfill site or waste transfer station. Garden refuse constitutes up to 15% of the municipal solid waste stream. Composting garden refuse can therefore significantly reduce waste stream volume and by diverting garden refuse from the waste stream will save valuable landfill air space. Composting is considered a viable option only when the compost can be marketed – that is either sold or used by the Municipality in their parks.

Objective 4: Food Waste Strategy

- Composting
- Contaminated food – hospitals
- One home one garden project

Objective 5: building rubble

- Asbestos – hazardous (proper disposal)
- Reuse to close eroded grounds

Objective 6 - disposal of bulk waste

- special trucks to collect at least twice a year
- cooperatives trained to fix broken furniture

6.3. MANAGEMENT OF ILLEGAL ACTIVITIES

Goal

Minimise/Prevent Illegal Activities

Objectives

- Develop Penalty System for Illegal Activities (littering,)
- Monitoring the disposal of medical and hazardous waste
- Improve Removal of Illegally Dumped Waste

The Ulundi Municipality as with several other Municipalities in the country has problems with illegal dumping throughout the municipal area. This can either be attributed to a lack of an effective refuse removal service or residents being unaware of their options regarding private waste disposal. A certain portion of these activities will be eliminated through proper community awareness programs as discussed above.

Objective 1: Develop Penalty System for Illegal Activities

It is imperative that the Municipality develops and implements a system to minimise or stop illegal dumping within the Municipal area. The major problem facing the Municipality is that they do not have the specific manpower to police the illegal disposal of waste. Within the serviced areas it is easier to regulate illegal dumping

and introduce a penalty system for offenders. There are several actions the Municipality can take to minimise illegal dumping and introduce such a penalty system. The first is that the Municipal By-laws must be amended to allow the Municipality to issue spot fines for residents caught dumping waste in illegal areas. This will to a certain degree reduce and prevent illegal dumping within the town boundaries. The disadvantage is that it will not reduce dumping outside the town boundary and it will increase the pressure on already limited human resources.

A second option will be to introduce community awareness whereby a community watch movement is introduced. This will limit the pressure on the human resources of the municipality as neighbourhood watch systems are put in place. Incentives such as discount on regular fees for “clean” neighbourhoods can be introduced to encourage these activities.

A third option is the provision of garden/domestic refuse skips at strategic locations throughout the town to minimise travelling distances for the general public. The Municipality can then remove the refuse on a monthly basis.

It is recommended that a combination of the above be implemented to find an effective solution to the illegal dumping of waste. The amendment of the by-laws will provide the municipality to officially produce policies and strategies that will benefit the community. Through community awareness and a neighbourhood watch system the residents will have all the information regarding the disposal of waste in their area. They will also be aware of the incentive scheme to prevent illegal dumping from taking place within their surrounds. To prevent illegal dumping outside of town, garden refuse skips should be placed at strategic locations to provide convenient access to a disposal facility.

Objective 2: Monitoring the disposal of medical and hazardous waste

The disposal of medical waste from local practitioners, old age homes and pharmacies sometimes end up on the local landfill site. The disposal of medical waste on a landfill is prohibited. Then control over the disposal of medical waste is therefore essential to prevent the disposal of medical waste on a landfill. It is recommended that a medical waste stream management strategy be formulated to deal with this component, and with the intention of ensuring compliance with SANS 0228.

Development of database and checklist for medical practitioners

Objective 3: Improve Removal of Illegally Dumped Waste

Illegal dumping of waste is common all over the Municipal area. The Municipality has to collect this waste at an unnecessary cost. The Municipality should clean all areas where waste is illegally dumped. The Municipality should place skips in “illegally dumping hot spot areas”, as well as notice boards to try and prevent further illegal dumping in these areas once cleaned.

6.4.INSTITUTIONAL CAPACITY AND HUMAN RESOURCES

Goal

- Provide Effective Waste Management Service

Objectives

- Effective Structure of Human Resources
- Promote capacity building of employees
- Internal controls

Objective 1: Effective Structure of Human Resources

The municipality requires the following positions to be made available to realise that an effective waste management policy can be implemented successfully. 1 x environmental officer and 1 x waste management officer and 1x waste information officer and Environmental educators.

The Municipality is currently not experiencing shortages of labour for waste collection in the form of general workers and heavy duty drivers. When services are extended to un serviced and newly developed areas, additional drivers and general workers will be required. It is anticipated that at least 2 x drivers and 10 x general workers will be required in addition to the current staff compliment. Vacant positions should be filled as a priority.

Objective 2: Promote Capacity building

The delivery of an effective refuse service and efficient waste management within the

Municipality depends on the ability of the staff to perform their specific functions. It is therefore a

non-negotiable that staff is trained to perform their specific duties. Depending on the level of

training required, general labourer versus compactor operator, it has to be decided whether to

provide in-house training or whether to provide the employee with specialised training.

In-house training should only be attempted if the capacity and knowledge exist within the Municipality .Based on the fact that for lower levels employees the knowledge is available within the Municipality, it is recommended that specialists be obtained to provide more specialised training.

6.5 FINANCIAL RESOURCES

Goal

Provide Cost Effective Waste Management Service/ WASTE MANAGEMENT SHOULD BE ECONOMICALLY VIABLE FOR THE MUNICIPALITY

Objectives

- **Improve data capturing processes**
- Improve Payment of Service Tariffs
- Standardise Tariff Structure

The Municipality is at the moment experiencing a lack of payment of tariffs, which needs to be rectified to provide a cost effective waste management services.

Objective 1: Improve Payment of Service Tariffs

Formal households as well as businesses currently serviced are billed on a monthly basis in conjunction with their water and electricity bills. Penalties for non-payment of accounts should therefore easily be enforced by withholding services. This however is an administrative problem that generally takes a long time. The inclusion of more areas however, may increase the likelihood of non-payment by residents.

Objective 2: Standardise Tariff Structure.

Upgrading service delivery throughout the municipal area will entail standardising the service that is delivered to all the households in the area. All households must therefore be serviced on a weekly basis, either by the Municipality or by the community. It is important that the tariffs identified for service delivery is comparable throughout the municipal area. Specific tariffs for a specific service, municipal or communal, should therefore be levied and not vary depending on the geographical area. The standardisation of the tariff structure will provide uniformity that may encourage payment of tariffs. Tariffs for additional services, including garden and commercial waste removal, building rubble should also be levied according to approved tariff structure.

7.IMPLEMENTATION PLAN

Strategic initiative	Activities	Financial Requirement
Information / communication	Develop information and communication programmes for civil society and private sector	R200 000
	Develop and display public information sheet	R100 000
	Develop and implement promotional campaign	R100 000
	Develop and Council waste minimisation and recycling program	R200 000
Recycling Infrastructure Development	Promote separation at source	R500 000
	Establish new buy back centres	R1mil
	Establish new and support existing recycling programs	R1mil
Waste education and awareness programmes	Design education and awareness program	R100 000
	Conduct education, awareness and capacity building program	R100 000
	Develop waste recycling resources for schools	R100 000
	Introduce a recycling competition for schools	R50 000
	Develop and conduct waste minimisation awareness campaigns for Council staff	R50 000
Improve waste management services	Review waste collection operations, in order to make them as efficient as possible, with due regard to value for money in the area of municipal waste collection	
	Collect accurate data regarding general and commercial waste generation and collection	
	Set standards for street cleaning	
Illegal dumping and littering management	Identify illegal dumping hot spot	
	Develop and implement Clean up campaigns	R200 000
	Provide bulk containers to places such as taxi ranks	R300 000
	Develop and implement anti littering campaign	R100 000
	Develop mechanism and procedures to deal	

		with illegal dumping of building rubble waste	
		Investigate alternative uses of building rubble waste	
Payment services	of	Develop education and awareness programmes that will be used to promote an understanding of the importance of waste management, including the collection and how the service fees are used to fund waste collection	R80 000

8. MONITORING AND EVALUATION

Monitoring and evaluation is done through the inclusion of action plan objective in the Service Delivery Budget Implementation Plan (SDBIP).

Introduction

The monitoring and review of this WMP are essential elements of the plan process and serve to ensure that sustainable waste management is achieved in Ulundi. Monitoring the plan's implementation is necessary to make sure it provides a relevant, cost effective, sustainable and flexible framework to guide waste development and that if required adjustments can be made to the plan. As the development of the plan in some cases has been based on certain assumptions, it would be best to verify these by monitoring so that the WMP, and its various projects can be reviewed and refined with time.

Monitoring an effective monitoring programme is essential to provide information against which the plan's performance is measured. For example monitoring waste information over time can indicate the extent of change in the community's behaviour and this in turn will provide an indication of waste generation in the future.

The objectives of monitoring are to:

- Ensure that the progress on the implementation of the WMP is on track according to the implementation programme and those adjustments and refinements can be made where required.

- Improve service provision

- Fulfil the monitoring requirements as may be imposed in terms of the provisions of the Local Government: Municipal Systems Act and other legislation.

To ensure that implementation of the WMP runs smoothly and that the system is sustainable, regular monitoring is required. Improvements and alterations to an WMP will enhance the plan and ultimately improve waste management in the Ulundi Municipality. Those parties responsible for monitoring the WMP for the Ulundi Municipality and the types of monitoring activities for the different elements in the plan have been detailed below.

Monitoring Activities Monitoring should focus on the short-term objectives of the WM planning process to assess current problems and hurdles and to re-evaluate the implementation programme for the short, medium and long terms.

Monitoring of activities will therefore determine to what extent targets are being met. Overall monitoring activities would include:

- Volumes of waste generated, recycled and disposed
- Success of various collection services.
- Recycling and composting initiatives
- Illegal dumping and littering.

- Effectiveness of legislation, regulations, ordinances and/or by-laws.
- Complaints received regarding poor waste management.
- Management and control of salvaging at landfill sites.
- Compliance of landfill sites to permit conditions, RODs, etc.

IMPLEMENTATION PLAN

- Launch of Environmental Awareness Campaign in September 2013, stakeholders involved
 1. **Collect-a-can**
 2. **Glass recycling**
 3. **Environmental Affairs**
 4. **Department of Education**
 5. **Cooperatives**
- Operation Khuculula – removal of illegal dumps and education awareness
- Capacity Building
 1. **ICANDO – Project team**
 2. **Workshop for waste loader and waste pickers**
 3. **Waste service providers training**
 4. **WESSA training**
 5. **Coperatives training**
- Appointment of 15 graduates to the following position for a period of one year
 1. **Environmental educators**
 2. **Landfill site assistants**
 3. **Data capture**
- Collection of data base of all waste recyclers within Ulundi Area
-