Solid Waste Management within the City of Windhoek has undergone tremendous reforms over the past few years and is still being developed based on sustainable development principles. The circumstances in residential areas are dynamic and different from area to area and therefore the solutions to Solid Waste Management also vary from area to area.

The importance of community involvement and participation in Urban Solid Waste Management can no longer be overlooked. It is well documented that success in Solid Waste Management is only possible with public participation and involvement in these matters. Many of the city’s Solid Waste problems are caused by public ignorance, or in some instances public carelessness, with regard to the protection of the environment. It is therefore imperative for the City of Windhoek to strengthen the area of community education and awareness raising.

In order to assist in this major task, the City of Windhoek developed this “Information Booklet on Solid Waste Management” with specific reference to the Windhoek situation. During the drafting of this booklet, particular attention has been paid to ensure a user-friendly guide for the residents of Windhoek. It is aimed at teachers, politicians, Council officials, secondary school learners and residents of the City at large.

As such, the guide is intended as a tool to create a better understanding of the concepts of Solid Waste Management and to provide the reader with more insight into the services offered by the City of Windhoek in this regard. We hope that this Booklet will also contribute to promoting the proper usage of waste collection systems and to minimise the overall quantities of waste generated.

M Shikongo
Mayor of the City of Windhoek
TABLE OF CONTENTS

Foreword……………………………………………………………… 1

Table of contents…………………………………………………….. 2
Facilitator’s Manual………………………………………………….. 3

SECTION 1:
What is waste and who creates it?………………… 5

SECTION 2:
Can waste harm us?…………………………………. 6

SECTION 3:
Who manages waste in Windhoek?……………… 8

SECTION 4:
• What types of waste are there?……………… 10
• What must I do with my household waste?… 12
• How does the Wheelie-Bin system work?….. 13
• What if I have too much household waste for my Wheelie-Bin?………………………….. 16
• If my area does not have a Wheelie-Bin system, what must I do?………………………… 17
• What must I do with my garden refuse and building rubble?……………………………… 19
• If I produce hazardous waste, what must I do with it?……………………………………. 21
• What must I do with dead animals?…………. 21
• What must I do with other types of waste?………………………………………….. 23

SECTION 5:
What other Solid Waste Management services are available?…………………………………… 24

SECTION 6:
What is the cost of illegal dumping?…………………. 26

SECTION 7:
How can I contribute towards Solid Waste Management?………………………………………… 27
FACILITATOR’S MANUAL

What is the purpose of this booklet?

The purpose can be summarised as follows:

- To raise public awareness on waste management issues
- To improve public understanding with regard to environmental protection
- To educate the community on the Solid Waste Management services offered by the City of Windhoek

THE STRUCTURE OF THIS BOOKLET

The Booklet is divided into three parts:

Section 1 - 3 gives a general background on Solid Waste Management strategies, the impact on the environment and the harmful effects of unmanaged waste.

Section 4 - 5 provides detailed information pertaining to the types of Solid Waste Management services offered by the City of Windhoek. Each type of service is discussed under a separate heading and detailed information is provided with regard to the service scope, operation, distribution and tariffs.

Section 6 - 7 provides key guidelines on how to utilise the various services offered by the City of Windhoek. The reader is also prompted to contribute positively towards the problems of littering and illegal dumping.

The information is presented in a simplified format so that a wide spectrum of users of the Booklet will be able to understand the underlying concepts of Solid Waste Management and the impact on the environment.

City of Windhoek
Solid Waste Management Division
FACILITATOR’S MANUAL

INFORMATION FORMAT

It was one of the City of Windhoek’s primary objectives to produce a user-friendly booklet. Some distinct features were incorporated and are illustrated above.

Colour-coded headings
Each heading is printed in a different colour to help the user to quickly find a specific topic/service.

Sub-headings
To help the user distinguish between different sections/ concepts, the sub-headings are depicted by noticeable shapes and colours.

Descriptive illustrations
Each sub-heading is provided with a simple, yet descriptive, illustration to demonstrate key concepts. The illustration also assists the user when searching for a particular topic.

Subject content
Key ideas, concepts and descriptions are expressed in a concise manner. Particular attention has been paid to ensure that text can be easily read and understood.
SECTION 1

What is waste and who creates it?

Waste is rubbish, or anything that we don’t want, that we throw out of our homes or our offices every day, or anything unwanted that is produced by our industries and factories.

It may just be ordinary garbage in dustbins, or it might be old leaves and branches from our gardens. It may also be bigger things, like an old washing machine that no longer works, or it may be something more dangerous like waste from a factory.

We all generate waste because we throw away the things that we don’t need any more like packaging, rotten food or other things.

Although we don’t actually make industrial waste ourselves, we certainly help to create it because we use all kinds of products like toothpaste, combs, cassettes tapes and even cars. When these products are made, the factories create waste.

So really, we are all responsible for generating waste.
SECTION 2

Can waste harm us?

Unfortunately, if waste is not properly controlled and is just dumped anywhere, it can harm us. We must dispose of it in a manner and at places where it will not cause pollution to the air, the soil or water and where people will not be exposed to it.

This is true for all kinds of waste, not only for medical and poisonous or hazardous waste. If ordinary household rubbish is not disposed of properly, it will grow rotten and will become a place where bacteria, flies and rats breed and bad smells will occur.

Some of the harmful effects of unmanaged waste that can quickly develop in just a few days are:

- the environment looks unsightly and smells bad
- flies, rats, bacteria and other pests breed and spread diseases
- plants, animals and humans can be poisoned
- the air, soil and water become polluted
- people can be injured by broken glass and other sharp objects like tins, nails, etc.
SECTION 2

After a long time of ongoing pollution some more harmful effects can occur, such as:

- poisonous chemicals can build up in the soil and water
- natural resources like air and water, especially groundwater resources in our city, can become unsafe for human and animal consumption
- diseases can occur such as cancer and birth defects in babies
- property values can decrease
- the tourism industry can be negatively affected
SECTION 3

Who manages waste in Windhoek?

All waste within Windhoek is managed by the Solid Waste Management (SWM) Division of the City of Windhoek.

The SWM division was established as part of the Department of Infrastructure, Water and Technical services in 1998. The division employs the following employees:

- about 250 permanent employees including a manager, engineers, educators, technicians, project leaders, team leaders, administrative staff and labourers
- about 200 Private Contractors, and
- about 300 Community Waste Control Volunteers

The structure of the division is shown on the opposite page.

The main function of the Division is to make sure that all types of solid waste in Windhoek are managed (collected, contained, transported and disposed of) in a safe, suitable and optimal manner. In order to achieve this a variety of services are offered, ranging from the well known ‘240-Litre Wheelie-Bins’ and the big (6m$^3$) orange skip containers to lesser known systems such as paid loads, open space and street cleaning. All of these services are described in this booklet.
SECTION 4

What types of waste are there?

Waste is anything that is unwanted and/or disposed of. One of the ways to categorise waste is by the way that the City of Windhoek collects and disposes of it. The basic types of waste are:

- **household refuse**: this is any waste that we would normally generate in our houses/ offices like bottles, cans, boxes, plastic, paper and food waste. Household waste also includes all of the soft biodegradable waste from our gardens, such as dead leaves or grass that can be thrown away in a plastic refuse bag.

- **garden refuse**: this is any heavy waste from your garden, like tree branches, tree trunks or non-biodegradable items like rocks or soil.

- **building rubble**: this is certain waste material as a result of building works, such as bricks, concrete, ceiling boards, timber, etc.
SECTION 4

- **hazardous waste**: this is all of the waste that could be an immediate threat to either human health or to the environment. This can include medical waste products from hospitals and clinics, poisonous substances such as insecticides and their containers, asbestos, industrial waste products and even dead animals, car batteries, engine oil and paint products.

- **other wastes**: other examples of solid waste are car wrecks, scrap metal, broken furniture and household appliances, fridges, washing machines and old car tyres.

The City of Windhoek has developed different special ways of dealing with each of the different types of waste.
SECTION 4

What must I do with my household waste?

Formal Residential Areas

In areas that are categorized as formal residential areas, residents should make use of the municipal 240-Litre Wheelie-Bin system or refuse containers provided by private sector waste contractor for their household waste.

Informal Residential Areas

The grey areas on the map below are categorized as informal areas and residents should make use of the black bags provided by private contractors.
SECTION 4

How does the 240-Litre Wheelie-Bin system work?

What is a Wheelie-Bin?

- LID
- SERIAL NUMBER on the side
- AREA NAME
- HOUSE NUMBER
- WHEELS

What can I put in my Wheelie-Bin?

All of your normal household/domestic waste can be placed in the wheelie-bin along with all of the soft garden waste.

Hot coals and ashes from a fire cannot be put in the bin until they are cold.

What is the removal cost of household refuse per month?

The tariff for the weekly emptying of the 240-Litre Wheelie-Bin is N$ 57-04 per month, which equals 4 removals per month.
SECTION 4

How do I use the wheelie-bin?

Keep the bin near your house. Since the lid closes there should be little trouble from flies and smells.

Once a week you must push the bin onto the pavement in front of your house on the removal day shown on the map on the previous page. Each bin has a number on the front so that you will know afterwards which is yours. Remember that you must do this early in the morning (before 06h00) since the removal service starts very early, otherwise you may want to put the bin out the evening before. Once the bin has been emptied you should bring it back inside to your house.

All formal households in Windhoek are shown in coloured areas on the map on the previous page. To establish the day of the week that refuse will be removed from your area, you must first determine in which coloured area on the map your property falls. Your household refuse will be removed on the calendar day with the same colour. Please consult the removal calendar that will be distributed yearly.
SECTION 4

What happens to the waste that is collected from my Wheelie-Bin?

The contents of each bin are loaded into a refuse compactor truck. Once the refuse compactor truck is full, the truck is driven to the General Waste Landfill Site at Kupferberg where the refuse is safely disposed of by way of landfilling.

In fact all the domestic and general waste material collected in Windhoek is taken to the Kupferberg General and Hazardous Waste Landfill Site, which is located about 13 km from the city on the C26 national (Gamsberg) road. The site separates all general waste and hazardous waste into two distinct sections.
SECTION 4

What if I have too much household waste for my Wheelie-Bin?

If your waste generation consistently exceeds the capacity of your 240-Litre Wheelie-Bin, you can request the City of Windhoek to provide you with an additional 240-Litre Wheelie-Bin.

If you only occasionally have too much household waste you can either put the excess waste into a black bag next to your bin or you can transport it yourself to the Kupferberg site (see time table below):

For the renting of bins for functions or any additional information you can call the Chief: Solid Waste Management at tel: (061) 290-3110 or fax: (061) 290-2844 for more information.

Monday to Friday       07h30 to 16h30
Saturday              09h00 to 13h30
Sundays and Public Holidays 09h00 to 12h00

Please note: The hazardous waste area is closed over weekends

If you are a private resident and you bring the household waste yourself in a private sedan vehicle (with or without a trailer) or in a bakkie (but only on Saturday or Sunday) then disposal will be free of charge. - FREE

Also, if you bring clean recyclable material (such as paper, clean metal and cans, card board, plastic or glass) disposal is also free of charge. - FREE

The disposal charges for other items, or at other times, can be obtained by contacting the Chief: Solid Waste Management at tel: (061) 290-3110 or fax: (061) 290-2844.
SECTION 4

If my area doesn't have a Wheelie-Bin system, what must I do?

Formal Residential Areas

Formal residential areas are shown in colour on the map below. If you live in one of these areas and you don't have a 240-Litre Wheelie-Bin, you must contact the Chief: Solid Waste Management at tel: (061) 290-3110 or fax: (061) 290-2844 to ask for one.

Informal Residential Areas

If you live in one of the informal residential areas (shown in grey on the map) you should make use of the black bags provided by Private Contractors.
SECTION 4

How does the black bag system work?

In the informal areas two plastic bags a week are issued by the Private Contractors to each dwelling.

The Private Contractors remove the plastic bags twice a week. They may only enter private property between the hours of 07h00 and 13h00 on week days.

The area served by each Private Contractor consists of 200 houses and the adjacent open spaces. The Private Contractor places the filled black bags in a specific area where the bags are collected daily between 07h00 and 13h00 by municipal compactor trucks.

What happens to the refuse that is collected?

Once the refuse compactor truck is full, the truck is driven to the General Waste Disposal Site at Kupferberg where the refuse is safely disposed of by way of landfilling.
SECTION 4

What must I do with my garden refuse and building rubble if I live in a formal area?

If you live in a formal area you have two alternative ways of disposing of garden refuse and building rubble.

Firstly, you can transport garden refuse and building rubble to the nearest of the 6 satellite garden waste disposal sites shown on the map on the removal calendar.

FREE There is no disposal fee charged at these sites but they are only open from 07h30 to 19h30 daily (including Sundays) and you must unload the waste yourself. No paper or plastic are permitted at these sites.

Secondly, should you have too much to transport or if you do not have access to a suitable vehicle, arrangements can be made for the collection of the waste by the City of Windhoek by telephoning the Chief: Solid Waste Management at tel: (061) 290-3110 or fax: (061) 290-2844.

In this case the waste must be neatly piled on the pavement in front of your house and it will be removed against a tariff of N$ 216-25 per load of garden or light refuse and N$ 445-58 per load of building or heavy refuse, which will be debited to your next Municipal account.
SECTION 4

What must I do with my garden refuse and building rubble if I live in an informal area?

If you live in an informal area you can make use of the skip system.

About 300 skip bins have been placed at strategic points within the northwestern residential areas, and informal residential areas.

The skip bins are placed at street corners or in open spaces.

Support your Community Volunteer in keeping your area clean.

Remember that the skip is for garden refuse, building rubble and heavy refuse only and definitely not for household waste.
SECTION 4

If I produce hazardous waste, what must I do with it?

Hazardous waste is all of the waste (e.g. health care risk waste/ medical waste, chemicals, etc.) that could pose a threat to either human health or to the environment. This waste must not be placed in wheelie bins or skips or disposed of in open places.

What must I do with dead animals?

Dead animals must go to the Hazardous Waste Disposal Facility at Kupferberg. Phone the number below to report dead animals or for assistance with the disposal of such animals (charged at a nominal fee).

If there is any uncertainty as to whether you or your business are producing a hazardous waste or any uncertainty regarding dead animals, advice can be obtained by contacting the Chief: Solid Waste Management at tel: (061) 290-3110 or fax: (061) 290-2844.

Who must contain and transport my hazardous waste?

The person or business that produces the waste is responsible for the proper and safe containment, storing, handling (treatment where applicable) and transportation of the hazardous waste for suitable disposal.
SECTION 4

Where must hazardous waste be disposed of?

The Hazardous Waste Disposal Facility is located adjacent to the General Waste Disposal Site at Kupferberg but the two sites are separated by a razor mesh fence. The City constructed the hazardous waste disposal facility during 1997-1998 at a cost of approximately N$ 6 million.

The facility is equipped with a specially designed lining system, to prevent any leakage of leachate (liquids from waste) to the groundwater sources.

To prevent the spreading of diseases, all hazardous waste generated must be disposed of at the Kupferberg hazardous waste disposal facility.

The fees for the treatment and disposal of different types of hazardous waste can be obtained from the Chief: Solid Waste Management at tel: (061) 290-3110 or fax: (061) 290-2844.
SECTION 4

What should I do with other types of waste?

Other types of large waste items should be disposed of on an ad hoc basis. If you are in doubt please contact the City of Windhoek, Chief: Solid Waste Management at tel: (061) 290-3110 or fax: (061) 290-2844.

Most bulky items (such as old furniture or car tyres) can be transported to the Kupferberg site for disposal against a fee.

Old car wrecks and scrap metals can also be disposed of by the City of Windhoek as above or private companies may be contacted since the scrap may have some value.

If you live in the northwestern residential areas you should place this type of waste into the skip container.
What other Solid Waste Management services are available?

Apart from the services described above, the City of Windhoek also provides a range of general services to all the residents of Windhoek.

- **The pole or pedestrian bin system.**
  Throughout the city there are a large number of pole mounted waste bins and bins that stand on the ground. Any form of degradable litter, particularly papers and un-used food items, can be placed in these bins. The purpose of the bins is to provide the opportunity for litter to be disposed of in public areas and for this reason these bins are well distributed. The City of Windhoek empties and cleans the bins on a regular basis.
SECTION 5

- **Street sweeping service.** Any litter that is disposed of in the street, or which is blown onto the street from surrounding houses, must be cleaned up. This is done either using special sweeping equipment or by manual sweeping.

- **Cleaning of open spaces.** Since any form of waste can become injurious to health if left unattended, the City of Windhoek also clears open spaces whenever necessary. This is done by manual or mechanical operations.

In addition to open spaces, the City of Windhoek also makes use of Community Waste Control Volunteers to keep the areas around the skip containers clean.
SECTION 6

What is the cost of illegal dumping?

Illegal dumping comprises not only of deliberate dumping of waste in open spaces but also of random littering and negligent storing of waste.

In order to keep open spaces, streets and the areas around skips clean from litter and rubbish, the City spends over **N$ 20 million per year** on clean up operations.

If there was no littering or illegal dumping all of this money could have been spent on other much needed Development Projects.

What must I do when I see illegal dumping?

Illegal dumping is an offence and you must report culprits to the Chief: Solid Waste Management at tel: (061) 290-3110.

Please remember to provide as much detail as possible, ie. the location, the culprit’s vehicle registration number or address.
SECTION 7

How can I contribute towards Solid Waste Management?

The answer is very simple. Use the facilities that the City of Windhoek has provided:

• Use your Wheelie-Bin or skip container
• Keep your property tidy
• Take your garden refuse and building rubble to the satellite sites/ skip containers, as applicable
• Take your surplus waste to Kupferburg or arrange for it to be removed
• Use the pole, pedestrian and other waste bins at shops and streets
• Report illegal dumping to the relevant officials

Let's all work together to keep Windhoek clean and healthy so that we can save money to use elsewhere on other important projects.

Be proud of your City!
Don’t Litter!
Don’t Dump Illegally!
Keep it clean!

City of Windhoek
SOLID WASTE MANAGEMENT DIVISION