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**PRIVATE PROVISION OF SOCIAL SERVICES
GABORONE, BOTSWANA
Landfill Operating Plan
and Privatization Tender Documents**

August 1993

**Prepared for:
Gaborone City Council
and
U.S. Agency for International Development**

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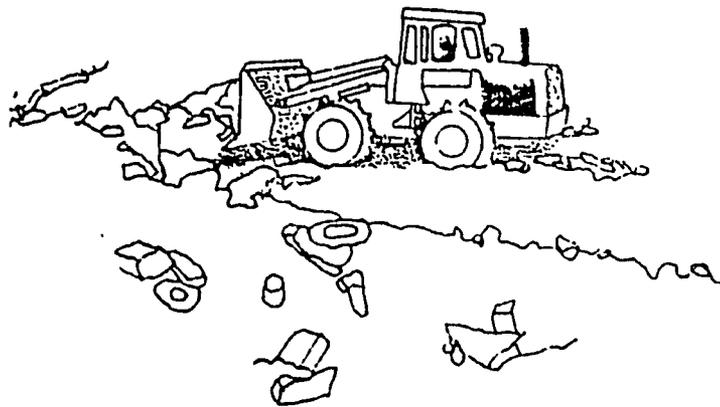
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Section I
Landfill Operating Plan

PRIVATE PROVISION OF SOCIAL SERVICES
GABORONE, BOTSWANA

LANDFILL OPERATING PLAN



PREPARED FOR:
GABORONE CITY COUNCIL
AND
U. S. AGENCY OF INTERNATIONAL DEVELOPMENT

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CITY OF GABORONE
LANDFILL OPERATIONS PLAN

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1.0 INTRODUCTION

1.1 GENERAL

This Landfill Operations Plan consists of a detailed plan for the operation of the new sanitary landfill to begin operations in the winter of 1993. The new landfill has been designed to replace landfills in Mara Pula and the recently closed site adjacent to the sewage ponds off Tlokweng Road.

At the time that this plan was prepared, the Gaborone City Council (GCC) was evaluating private operation of the landfill but had not made a final decision regarding this option. This plan describes the various technical and management functions necessary to operate the landfill and the responsible parties who will carry out each function. For the purposes of this plan, the parties will be referred to as the "OWNER" and the "OPERATOR". Assuming that the landfill will begin operation under total public control, both the OWNER and OPERATOR will be the GCC. At some point in the future, the operation of the site will be privatised and those functions of the OPERATOR will then become the responsibility of the private contractor selected to operate the landfill. The functions of the OWNER will continue to be the responsibility of the GCC under the private operation option.

Many of the operating functions will require the review and approval a technical ENGINEER, having specific experience in the design and operation of sanitary landfill. As referred to in this plan, ENGINEER shall mean the GCC engineer or a consultant engineer designated by the GCC to fulfill the duties of the ENGINEER as defined in this document.

Under the private operation option, this Operating Plan will be considered as the legal contractual description of the services to be provided by the OPERATOR.

1.2 DEFINITIONS

Solid waste generated within the City of Gaborone can be placed into categories according to composition and source of generation. As the GCC and the central Government of Botswana (GOB) continue to develop local and national waste management policies, management programs will be implemented to address the specific requirements for each waste category. Until these policies are implemented, the following waste definitions will apply to the operation of the landfill:

Residential Waste: Waste materials generated by single and multiple-family residences.

Commercial/Industrial Waste: Waste materials originating in wholesale, retail, institutional, or service establishments such as office buildings, stores, markets, theaters, hotels, warehouses, industrial operations and manufacturing processes.

Hazardous Waste: Waste which by reason of chemical reactivity or toxic, explosive, corrosive or other characteristics, cause danger or likely to cause danger to human health or the environment, whether alone or in combination with other wastes.

Medical Waste: Wastes generated by hospitals, clinics, nursing homes, doctors offices, medical laboratories, research facilities and veterinarians which are infectious or potentially infectious. Medical waste is further defined to include the following categories:

1. Microbial wastes (cultures and stocks of infectious wastes and associated biologicals that can cause disease in humans);
2. Human blood and blood products, including serum, plasma and other blood components;
3. Pathological wastes of human origin, including tissues, organs, and body parts removed during surgery or autopsy;
4. Contaminated animal wastes including animal carcasses, body parts and bedding which has been exposed to infectious agents during medical research, pharmaceutical testing or production of biologicals;
5. Isolation wastes associated with animals or human being known to be infected with "highly" communicable diseases;
6. Contaminated and uncontaminated sharps including hypodermic needles, scalpels and broken glassware;

Special Wastes: Wastes, which due to their nature, require special or separate handling, including but not limited to tires, brush, demolition debris, motor oil and bulky metal items.

Leachate: The liquid pollutant resulting from the landfilling and decomposition of organic waste matter.

Polluted Water Drains: Pipes or ditches located inside the landfill designed to drain leachate and polluted surface runoff to the Polluted Water Dam.

Polluted Water Dam: A liquid impoundment of leachate and polluted runoff.

Cell: An volume of compacted waste surrounded by cover soil.

Lift: A series of one or more landfill cells forming a section of landfilled waste that extends horizontally across the landfill.

Daily Cover: A daily application and compaction of approximately 15 centimetres of soil intended to control blowing litter, odors, flies, rats and fires, intended for an exposure of less than one week.

Intermediate Cover: An application and compaction of cover having the same functions as daily cover but applied at a thickness of 30 centimetres, intended to be exposed for a period of one week to one year.

Final Cover: An application and compaction of soil on the landfill after it has reached its designed elevation. The final cover soil shall be relatively impermeable and have a thickness of approximately 60 centimetres.

Scavenging: The unauthorized, unorganized searching of waste by individuals for reusable goods including food and other items. Scavenging is prohibited from the landfill.

Recycling: The authorized, organized separation of reusable materials from refuse either at the source of generation or from the landfill by firms recognized and approved by the OWNER.

1.3 QUANTITY ESTIMATES

Based on estimates performed in 1991 and updated in 1993, total waste quantities, exclusive of special wastes, are estimated to be 102 tonnes per day (TPD) in 1993. These estimates are based on current generation rates and waste disposal practices. Waste estimates will be effected by seasonal variations of 10 to 15 percent for on-site disposal and burning during the winter months. Figure 1.1 presents an estimate of waste quantities through the year 2010 assuming a 10% growth factor. The table shows estimated waste in TPD, TPY, as received volume per year and compacted in-place volume per year. These figures will provide a guide to the OPERATOR as to the amount of material to be landfilled during each year of operation.

1.4 GENERAL LOCATION

The landfill is located adjacent and south of the Tlokweg Road sewage ponds and is accessed by a new road connecting to Machel Road, just south of the show grounds. The general location of the landfill is shown on Figure 1.2.

1.5 PHYSICAL FEATURES

The landfill site contains several bedrock outcrop areas which may restrict landfill construction on the entire site. Therefore, the initial landfill phase will be built in the north west corner of the site with subsequent cells proceeding in an easterly direction. As stated earlier, the site is accessed by a new road connecting the landfill with Machel Road. The new road enters the site near the south east corner, where receiving facilities have been constructed, including offices, maintenance facility and weighbridge. Secure areas for tire storage and scrap metal are also located near the receiving facility. It is the intent of the GCC to also construct areas for brush landfilling and document incineration. The specific location of these facilities will be jointly determined by the GCC and OPERATOR.

Figure 1.3 is a sketch of the new landfill site showing the general location of the major components. This sketch is to be used as a general location guide and the OPERATOR is referred to more specific technical drawings in Appendix A for more detailed description of these site components.

LANDFILL LIFE WITHOUT PROCESSING

YEAR	TOTAL WASTE GENERATED (TPD)	TOTAL WASTE GENERATED (TPY)	ANNUAL AS-RECEIVED VOLUME (CU.M.)	ANNUAL IN-PLACE VOLUME (CU.M.)	CUMULATIVE IN-PLACE VOLUME (CU.M.)	LANDFILL LIFE (YEARS)
1991	84	30,660	122,640	40,880		
1992	92	33,726	134,904	44,968		
1993	102	37,099	148,394	49,465		
1994	112	40,808	163,234	54,411	54,411	1
1995	123	44,889	179,557	59,852	114,264	2
1996	135	49,378	197,513	65,838	180,101	3
1997	149	54,316	217,264	72,421	252,523	4
1998	164	59,748	238,991	79,664	332,186	5
1999	180	65,722	262,890	87,630	419,816	6
2000	198	72,295	289,179	96,303	516,209	7
2001	218	79,524	318,097	106,032	622,241	8
2002	240	87,477	349,906	116,635	738,877	9
2003	264	96,224	384,897	128,299	867,176	10
2004	290	105,847	423,387	141,129	1,008,305	11
2005	319	116,431	465,725	155,242	1,163,546	12
2006	351	128,074	512,298	170,766	1,334,312	13
2007	386	140,882	563,527	187,842	1,522,155	14
2008	425	154,970	619,580	206,627	1,728,781	15
2009	467	170,467	681,388	227,289	1,956,071	16
2010	514	187,514	750,055	250,018	2,206,089	17
2011	565	206,265	825,061	275,020	2,481,109	18
2012	622	226,892	907,567	302,522	2,783,632	19
2013	684	249,581	998,323	332,774	3,116,406	20
2014	752	274,539	1,098,156	366,052		
2015	827	301,993	1,207,971	402,657		
2016	910	332,192	1,328,768	442,923		
2017	1001	365,411	1,461,645	487,215		
2018	1101	401,952	1,607,810	535,937		
2019	1211	442,148	1,768,591	589,530		
2020	1332	486,362	1,945,450	648,483		

1. Assumes all waste is disposed at the landfill, except current paper and plastics recycling, estimated at 10 TPD in 1991 and assumed to continue and increase at the same 10% rate as total waste generation.
2. Based on total landfill volume of 3.28M cubic meters and 2.92M cubic meters of refuse, allowing for cover soil.
3. As-received density assumed at 250 kg/M based on the 1991 weighing program updated to 1993 collection vehicles.
4. In-place density of 750 kg/M assumed based of upgraded operation.
5. Volume calculation assumes that waste soil is used as cover material.

FIGURE 1.1
QUANTITY ESTIMATES

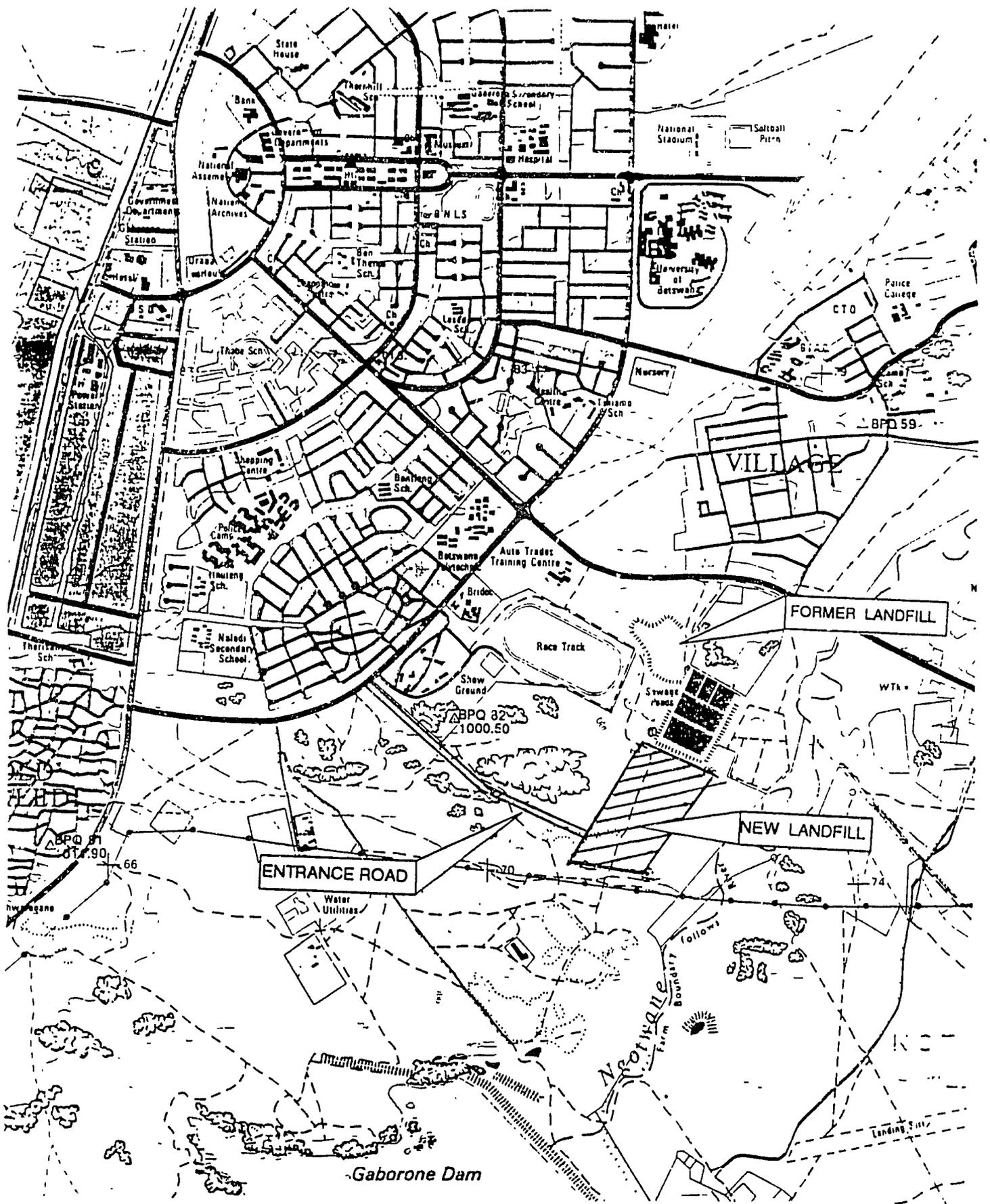


FIGURE 1.2
LOCATION MAP

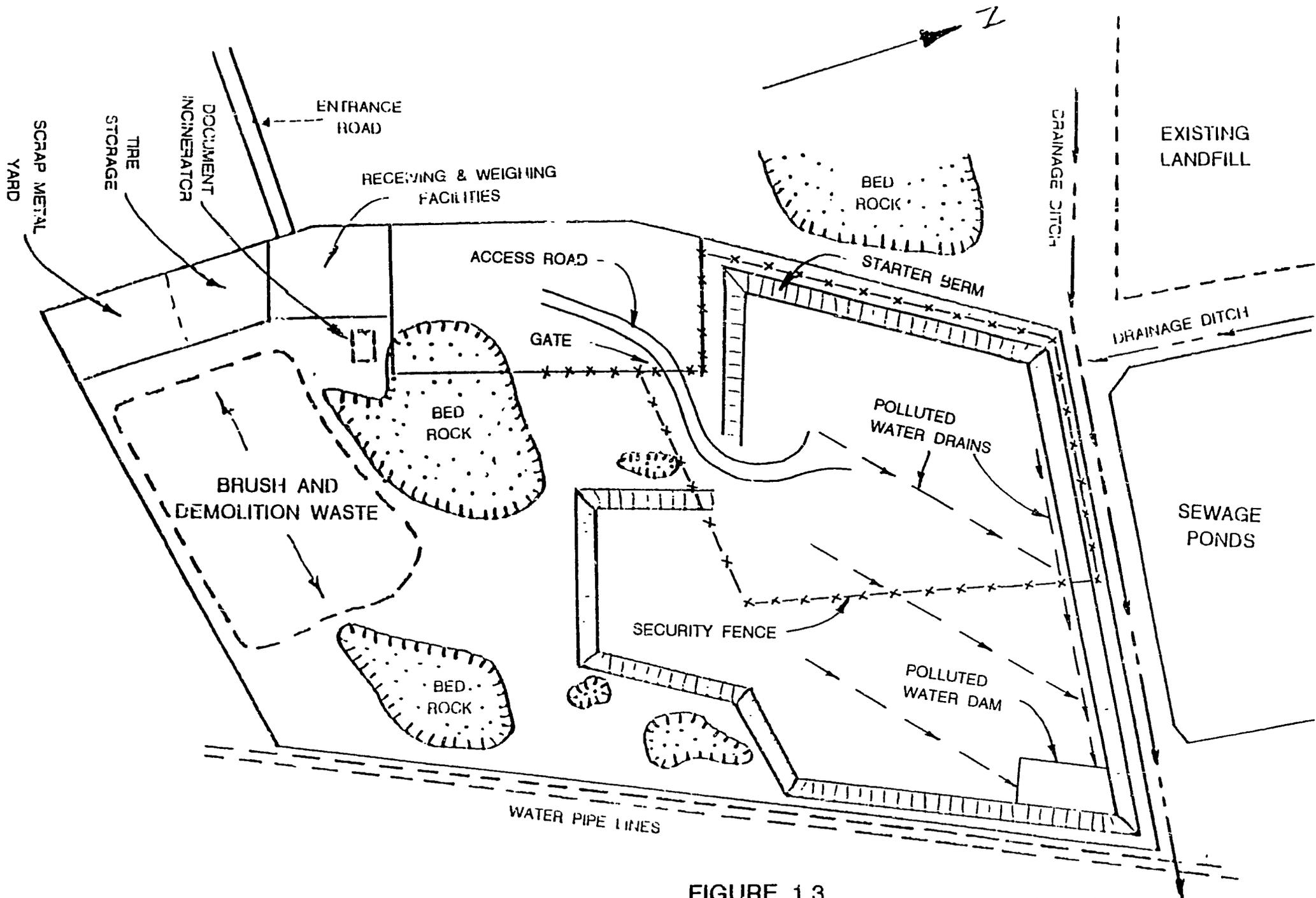


FIGURE 1.3

LANDFILL COMPONENTS

TO NGOTWANE
HIVLE

6.

1.6 HYDROGEOLOGY

Many of the environmental impacts of the landfill will be influenced by the site hydrogeology and the OPERATOR should have a general understanding of the soil, bedrock and groundwater characteristics in order to minimize those impacts.

1.6.1 Bedrock

The site is generally underlain by granite bedrock at varying depths. Areas of bedrock that extend above the ground surface are called outcrops and are shown on Figure 1.2. In the northwestern corner of the site, where the initial landfill cell will be constructed, the bedrock is 1 to 2 meters below the ground surface and has been determined by the ENGINEER to be relatively impermeable. The depth to bedrock becomes greater in the northeastern corner of the site, being 3 to 4 meters below the ground surface.

Bedrock in the center of the site contains many outcrop areas and is generally at or within one meter of the ground surface. A small area in the southwest corner of the site contains bedrock which is 1 to 2 meters below the surface. This area is designated on Figure 1.2 for brush and demolition waste.

During the operation of the landfill the OPERATOR shall observe minimum separation distances to bedrock established by the ENGINEER and report any inconsistencies in bedrock characteristics.

1.6.2 Groundwater

The location of the groundwater and the movement of groundwater through the site are important characteristics of the landfill operation. Due to the shallow depth to bedrock in the northwest corner of the site, the groundwater table is below the bed rock and of little significance given the impermeable nature of the bedrock. During rainfall, rainwater infiltrating the soil may accumulate on the bedrock surface and flow in an easterly direction toward the Ngotwane River.

As the bedrock becomes deeper in the eastern portion of the site, the groundwater rises above the bedrock and becomes more susceptible to contamination, requiring a separation zone of low permeability soil. Preliminary investigations indicate that the groundwater table varies by season and an adequate zone of unsaturated, low permeability soil must be maintained between the bottom of the landfill and the groundwater table. A more detailed explanation of groundwater issues will be presented in Section 4.

1.7 WEATHER CONDITIONS

Wind, rain and temperature directly impact landfill operations. Wind picks up paper and plastic bags and can create a litter problem adjacent to the landfill; wind, hot temperatures and the lack of rainfall can create very dusty conditions requiring dust control measures, and wet weather can create access problems due to muddy roads. The operator must be aware of these issues and take appropriate actions as outlined later Section 5 and 6.

1.8 MASTER PLAN

The following Operations Plan is intended as a general guide and a definition of the contractual responsibilities of the OPERATOR and OWNER. The reader is referred to the Landfill Master Plan for a more detailed presentation of hydrogeological conditions and design issues.

2.0 LANDFILL DESIGN

2.1 GENERAL

The design of a sanitary landfill requires the development of a detailed description and plan that outlines the steps to be taken to provide a safe and efficient disposal of the types and quantities of waste expected to be received. The following discussion is intended to be a general presentation of the various design issues and their relationships to environmental protection and general management of the site. This section is intended to be a general guide to the OPERATOR and his staff and should not be confused with the final design and MASTER PLAN, prepared for the GCC by ARUP Botswana, Consulting Engineers, which is included as Appendix A.

2.2 VOLUME REQUIREMENTS

The first landfill design task is the determination of the volume that will be required to dispose of the amount of waste expected to be received. As shown in Figure 1.1, an extensive volume calculation has been performed in a previous study. This calculation made some operational assumptions regarding waste densities and cover requirements which must be verified during the actual operation of the landfill. If actual conditions are different than the design assumptions then revisions to the volume calculations will be required.

The volume calculation assumes a density of 250 kg per cubic meter for as-received refuse and 750 kg per cubic meter after placement and compaction in the landfill. A lower in-place density will reduce the life of the landfill while a higher density will extend the life of the landfill. Recommended compaction practices for obtaining acceptable in-place densities are included in Section 3.

Cover material has been assumed at approximately 12 percent of the total landfill volume while compacted refuse occupies 88 percent. An increase in the amount of cover material will decrease the life of the landfill, and a decrease in cover material will increase landfill life.

2.3 SITE IMPROVEMENTS

In addition to the new entrance road and receiving facilities the GCC has constructed a temporary road to the active landfill face and constructed a chainlink fence around the entire active landfill cell. The fence serves as a security barrier against scavengers and a catch fence for blowing debris.

Prior to beginning landfill operations, the OPERATOR shall prepare additional areas to receive special wastes including the following:

Brush and Demolition Waste Area: As shown on Figure 1.2, an area has been delineated to receive brush and demolition material. This area must be cleared and grubbed by the OPERATOR to remove surface vegetation and soil. As directed by the ENGINEER, the OPERATOR shall also excavate the area to form a level platform on which the brush and demolition waste can be placed. Excess soil from this excavation shall be stockpiled on-site for use as cover material in the refuse

portion of the landfill. This area may also be further divided to permit periodic burning of brush and clean wood waste at the direction of the OWNER.

Hot Load Area: The OPERATOR shall designate and prepare a hot load area, separated from other areas where a hot load (load on fire) can be dumped to allow the fire to be extinguished. Under no circumstances will a hot load be allowed to tip at the active face of the refuse landfill. After extinguishing the fire, the load shall be brought to the active landfill face for disposal. The hot load area shall be located away from other landfill facilities, near a fire hydrant and hose but still easily accessible by collection vehicles. Hot loads are more frequent during the winter months due to wood or coal ashes placed in waste bins and loaded into collection vehicles. See Section 3.8 for a description of hot load procedures.

Document Incineration Area: The OPERATOR shall designate and prepare a Document Incineration Area where government offices can burn confidential documents. This area shall be isolated from other site components to prevent the spread of fires to the landfill, brush disposal area or tire storage area. Upon approval of the OWNER, the Document Incineration Area could be incorporated with the Hot Load Area.

Access Roads: In addition to the existing access road to the active landfill face, the OPERATOR shall construct and maintain access roads to the special waste areas noted above.

2.4 LEACHATE GENERATION

Leachate is a by-product of the decomposition of organic matter placed in the landfill. The amount of decomposition and leachate generation is directly proportional to the amount of moisture in the waste when it was placed in the landfill and the amount of moisture added to the waste due to rainwater infiltration. Although some amount of decomposition is unavoidable due to the initial moisture content of the landfilled waste, the decomposition and leachate generation can be controlled by reducing or eliminating the amount of rainwater infiltration that reaches the waste.

Leachate generated by organic wastes is a strong pollutant. The decomposition process produces organic acids which dissolve many harmful materials in the waste, including heavy metals such as mercury, chromium and cadmium, all of which have toxic impacts to human beings. In addition to the by-products of waste decomposition, leachate may also include toxic inert material which have been placed in the landfill such as solvents, waste oils or other liquid wastes. These products should be restricted from the landfill.

Although landfill leachate is a strong pollutant, its potential impacts to water resources can be managed by proper design and control of surface water, preventing it from infiltrating into the waste. Other sections of this document will outline the control measures to limit the environmental impacts of leachate.

2.5 CONTROL OF SURFACE WATER

Surface water caused by rainfall will be an infrequent occurrence at the landfill site but must be controlled to avoid operational and environmental impacts. The Master Plan, found in Appendix A, provides drains along the outside of the landfill for diversion of surface water run-off originating on adjacent property. These drains shall be maintained by the OPERATOR.

Surface water originating within the landfill site will be controlled by the OPERATOR through proper placement of refuse cells and grading of impervious cover material to be free draining. The Master Plan calls for the construction of a Polluted Water Drain within the active landfill along the northern berm, and temporary drains extending into the landfill cells. These drains are intended to intercept both surface water and leachate and direct the flow to the Pollution Control Dam. The OPERATOR shall at all times maintain a positive grade toward the drains to prevent ponding and standing water on completed portions of the landfill. Intermediate drains may also be necessary to direct surface runoff to the Polluted Water Drains.

The OPERATOR shall be responsible for the operation and maintenance of the Polluted Water Drains and the Pollution Control Dam in accordance with the Master Plan, including pumping and pipeline facilities.

2.6 GROUNDWATER PROTECTION

2.6.1 General

Groundwater under the landfill should not come in contact with landfilled waste or the leachate that is produced during the decomposition of the waste.

As stated in Section 1.6, groundwater under the landfill occurs below the granite bedrock in the northwest corner of the site but above the bedrock in the northeast corner of the site. In order to avoid contact between the landfilled waste and the groundwater, the area in the northeast corner of the site must be constructed with a separation distance between the waste and seasonal high groundwater. The separation distance, as specified in the master plan, should be a low permeability soil liner material to prevent leachate from direct contact with the groundwater.

2.6.2 Liner

The Landfill Master Plan provides details for installing the low permeability material prior to beginning the landfilling of waste in this area. The OPERATOR is responsible for excavation of soil materials to the limits stated in the Master Plan and installing the soil liner.

The soil liner material has two primary functions. The low permeability will allow only a small portion of the leachate to enter the soil while the remainder will drain to the Polluted Water Drains. The leachate that enters the soil will be filtered and biologically treated before

entering the groundwater. The degree of treatment will depend on the unsaturated thickness of the liner material, its permeability and other chemical and physical characteristics of the liner soil.

Leachate that collects on the liner must be drained to the Pollution Control Dam through the Polluted Water Drains. As the landfilling of waste moves in an easterly direction, the OPERATOR shall continue to construct polluted water drains within the landfill cells to allow leachate to drain to the Pollution Control Dam.

2.6.3 Observation Wells

The OWNER has installed several boreholes on the landfill site in order to investigate the nature of the soil and bedrock under the landfill. Several of these boreholes have been equipped with casings and screens and serve as permanent observation wells that can be used to measure groundwater levels. The OPERATOR shall take measurements of groundwater levels in the observation wells every two weeks and maintain a log of the results. The groundwater level measurements will assist the OPERATOR in understanding the fluctuations in the groundwater levels during different seasons, and to insure that no waste is placed below the seasonal high groundwater level.

These observation wells may also be used to obtain a groundwater sample for chemical evaluation. The degree of groundwater contamination is an indicator as to the effectiveness of the landfill operation and leachate management. The OWNER shall be responsible for periodic sampling of the observation wells for water quality evaluation.

2.7 GAS GENERATION AND MANAGEMENT

2.7.1 General

The same organic waste composition that generates leachate, also produces methane gas. Although other gases are also produced during decomposition, including carbon dioxide and hydrogen sulfide, methane is more of a concern because in concentrated quantities it is explosive.

Methane gas is produced by the anaerobic bacteria that are active in decomposing organic matter. Theoretically, each kilogram of waste containing 75% organic matter will produce .4 cubic meters of gas. The anaerobic bacteria begin producing gas as soon as the waste is landfilled and the ambient oxygen is depleted, and may continue producing gas for as long as 20 years, depending on several variable factors. As with the generation of leachate, moisture is the most important factor in methane gas production. In general the wetter the waste is, the more methane gas will be produced, but even low moisture waste will still produce small quantities of methane gas. Therefore the measures mentioned above to control water that infiltrates into the waste will also reduce the generation of methane gas.

2.7.2 Gas Movement

The major difference between methane gas and leachate is that the gas is lighter than air and will rise through the waste and escape to the atmosphere through porous cover material. Here we have the basic conflict between managing leachate and managing methane gas. We have just discussed using low permeability cover soils to restrict the infiltration of rainwater into the waste. This unfortunately also restricts the flow of methane gas out of the waste causing it to collect in pockets under the cover soil where it can concentrate and reach explosive limits. If sufficient gas accumulates in the landfill it can build up pressure and travel offsite, following geologic formations or utility trenches and may enter structures or homes located adjacent to the landfill. There are many instances of methane gas migration causing explosions in homes near old landfills.

2.7.3 Venting

Although the rate of methane gas formation will be low in Gaborone due to low rainfall, the potential for methane build-up will still exist and must be addressed by the landfill OPERATOR. Since the landfill is remote and will generally be built above the surrounding ground, offsite migration of methane should not be a significant problem. However, the finished landfill should be equipped with methane vents to collect and allow methane gas to escape to the atmosphere. Details of the methane venting system can be found in the Master Plan.

2.7.4 Gas Utilisation

In larger landfills, receiving greater annual rainfall, methane gas is often collected and either burned as a fuel for heating or is used to power internal combustion engines, producing electricity. The proposed Gaborone landfill is both too small and too dry to support such activities. Although water could be added to the waste to increase the rate of decomposition and gas production, it would also increase the generation of leachate resulting in a greater environmental threat to groundwater.

2.8 CELL CONSTRUCTION

The cell is the common building block in sanitary landfilling. All waste received at the landfill is spread and compacted in a confined area. At the end of each working day, it is covered with a thin continuous layer of soil, which is also compacted. The compacted waste and soil constitute a cell. A series of adjoining cells, all the same height makes up a lift. Figure 2.1 shows a cross-section of a typical landfill showing the relative shape and orientation of daily cells and lifts.

The dimensions of a daily cell will depend on the amount of waste placed and compacted on that particular day. Cell height is normally determined by the operator, his equipment and the conditions of the site. In general, a cell height of 6 to 8 feet is recommended. A shallower cell will spread the waste out too thin, result in a larger working face and use more daily cover soil. Figure 2.2 shows a typical sanitary landfill and the construction of a daily cell, with daily cover applied to the previous day's cell.

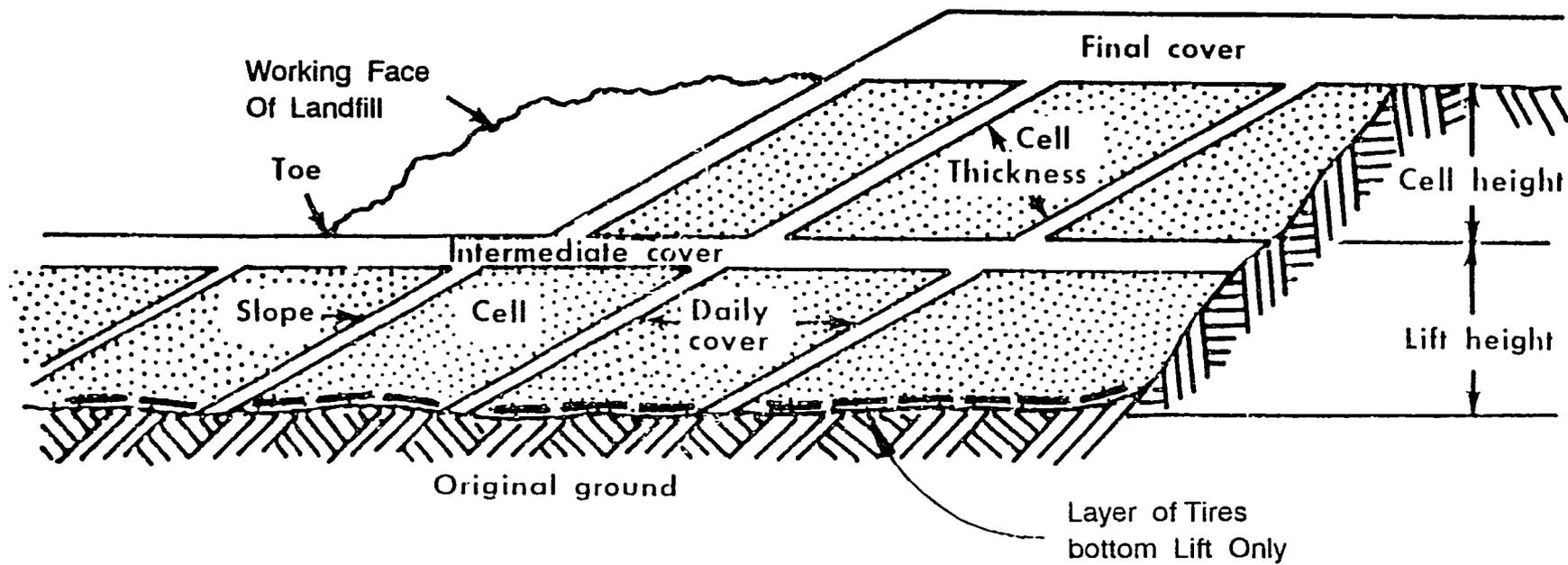


FIGURE 2.1
CELL CONSTRUCTION

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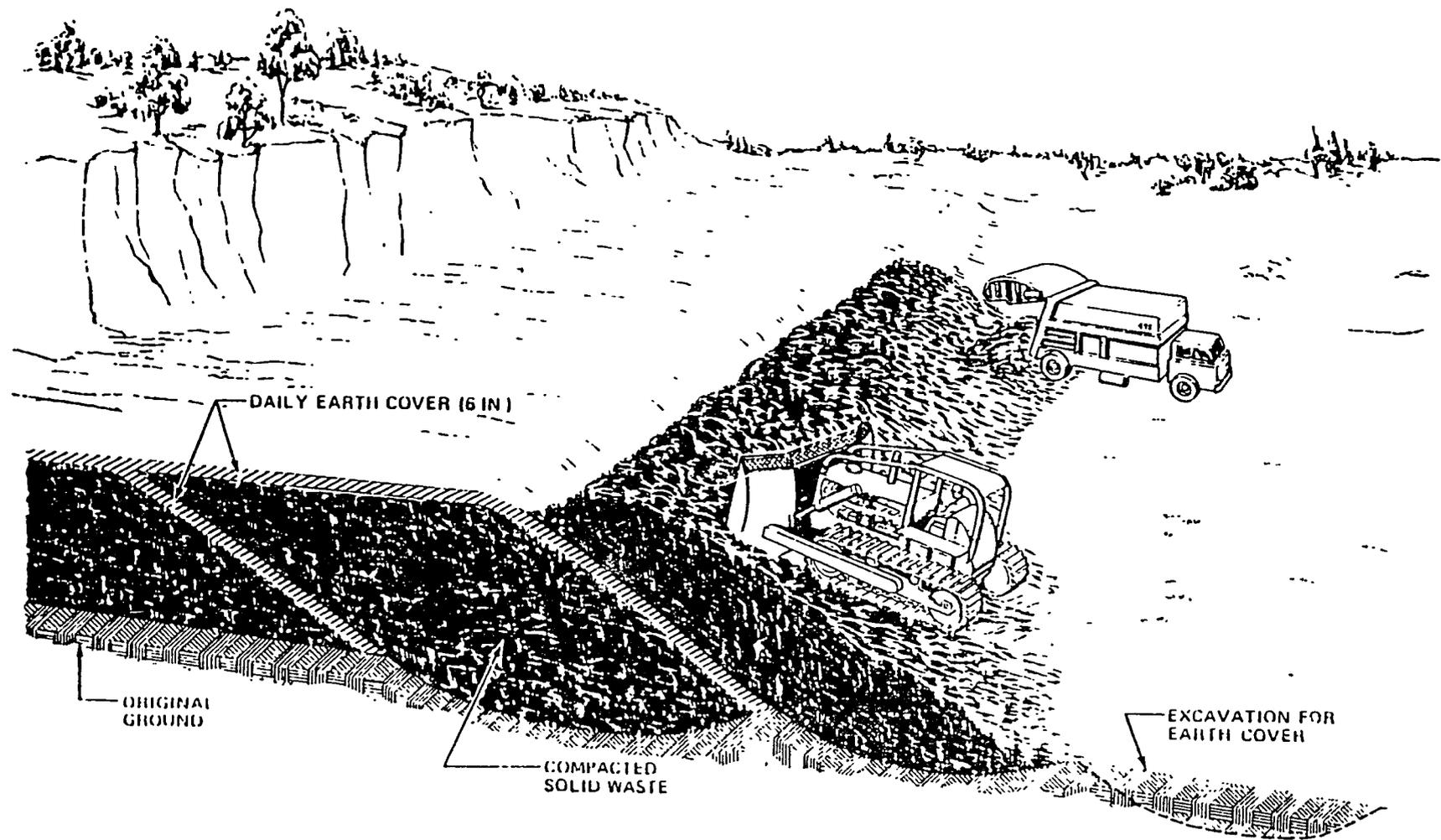


FIGURE 2.2
TYPICAL LANDFILL CROSS SECTION

Although the use of low permeability daily cover soil is desirable to control surface water, it is not required, and sandy, more porous soil will be suitable. Lower permeability soil should be stockpiled for use as final cover. The primary purpose of daily cover is to limit wind blown debris, control birds and rodents, and fires which have been a frequent occurrence at past Gaborone landfills. The construction of daily cells and placement of daily cover should greatly reduce the impact of landfill fires. Considering the projected shortage of cover soil at the proposed site, the OPERATOR shall stockpile all earth materials brought to the site for use as cover soil.

3.0 LANDFILL OPERATION

3.1 GENERAL

The best designed landfill will be of little value unless it is constructed and operated in an orderly, controlled manner. Unlike a typical civil works project, a landfill is continually under construction until it accepts its last load of waste and closes, and therefore construction and operation are actually one function. A carefully designed operations plan is essential if the landfill is to be an effective, environmentally safe disposal facility.

An effective operations plan specifies routine procedures and anticipates abnormal situations. It must have sufficient definition to govern daily activity yet have the flexibility to adapt to change.

3.2 HOURS OF OPERATION

The hours of operation are dependent on the amount and methods of waste delivered to the landfill for disposal. These hours shall be mutually agreed to by the OWNER and OPERATOR. Historically, past landfills have been open seven (7) days per week, generally during the daylight hours, however, supervision and security at the landfill were minimal.

The new landfill will be much different. All waste will be weighed at the weighbridge, the type and origin of waste will be determined, waste haulers will be directed to specific areas for special waste disposal, and security officers will enforce new scavenging provisions. This greater degree of management and control will require a larger staff than was required for past landfills.

Current plans call for the collection of refuse seven (7) days per week. Sunday collections are generally limited to hotels and commercial areas requiring daily service. The OWNER and OPERATOR may wish to consider reduced hours and staff on Sundays.

Normal business hours at the landfill will be 7:30 am to 6:00 pm seven (7) days per week including all holidays. As stated above, reduced hours on Sundays and holidays may be negotiated between the OWNER and OPERATOR. Daily operations will require the placement of daily cover soil at the end of each day's activity. In order to permit daily cover to be applied, the OPERATOR may restrict actual dumping of waste to the hours of 7:30 am to 5:00 pm to allow one hour for compacting and covering the day's waste, or extend operating hours by one hour.

3.3 WEIGHING OF WASTE

The efficiency of the landfill operations and projections of life expectancy can be determined by the amount of refuse being placed in the landfill. Therefore, all waste materials entering

the landfill should be weighed. Exceptions include tires, which can be counted and recorded and small amounts of waste brought in private vehicles, which can be estimated by volume.

At the beginning of operations, all vehicles must be weighed going in and coming out of the landfill. The weight of refuse is the difference in the two weights. The OPERATOR shall keep a log of all waste entering the landfill to include the weights, registration number of the vehicle, the type of waste and origin of the waste by extension number. A sample log sheet is included as Appendix B. In addition to filling in the log, the OPERATOR shall maintain a separate list of empty or "tare" weights of each vehicle by registration number. This list should be posted near the scale so that the tare weights can be entered in the log without weighing the empty truck during each trip.

The OPERATOR is required to follow the manufacturer's recommendations in the use and maintenance of the weighbridge. The OPERATOR shall maintain traffic controls to insure that all trucks are weighed before entering the landfill.

The OPERATOR shall be responsible for maintenance of the weighbridge. Any damage to the weighbridge due to the OPERATOR'S negligence shall be paid for by the OPERATOR. Any damage or repairs to the weighbridge due to normal operations shall be the responsibility of the OWNER.

3.4 TRAFFIC FLOW AND UNLOADING

The OPERATOR shall be responsible for maintaining an orderly and controlled flow of traffic into and out of the landfill site. Traffic should not be permitted to by-pass the weighbridge unless it is inoperable. Pylons, barricades, empty drums and signs shall be utilized to direct refuse vehicle to the active face of the landfill. Haphazard dumping shall not be permitted.

The OPERATOR shall furnish and place signs at appropriate locations directing traffic to the special waste areas. These signs shall be in large block letters. Copies of the site map shall be available to hand out to the vehicle driver, directing him to the appropriate disposal area.

Due to the wide variety of vehicles using the landfill, the active face of the landfill should have two separate areas, one for vehicles capable of manually discharging their wastes and a second area for vehicles which must be manually unloaded.

3.5 HANDLING OF WASTES

3.5.1 Identification

The operator shall be responsible for identifying all wastes entering the landfill and directing them to the appropriate disposal area. This should be done prior to the weighbridge so that the weighmaster can enter the type of waste in the log. One or more attendants shall be used for this purpose at the entrance gate.

3.5.2 Refuse

Refuse will be the largest component of waste received at the landfill. Refuse will contain residential, commercial and industrial waste of a non-hazardous nature. Refuse shall be unloaded at the base of the landfill face. Approved separation of recyclable materials shall commence as soon as the waste is unloaded. If the waste is primarily waste paper or cardboard from commercial offices, it may be unloaded in a separate area near the active face to allow more time for separation of recyclables. The OPERATOR shall coordinate with approved recycling contractors to maximize the separation of recyclable materials.

After recyclables have been removed, the waste shall be spread and compacted in .5 metre layers. Two to five passes with a steel wheeled compactor or a track dozer should provide adequate compaction. Figure 3.1 provides a graphic picture of unloading, spreading and compacting refuse.

Refuse may occasionally contain bulky items such as discarded furniture or appliances. These should be crushed with the steel wheeled compactor and compacted with other refuse.

3.5.3 Industrial Process Wastes

The landfill may be requested to accept Industrial Process Waste. These should be evaluated on an individual basis by the OWNER and OPERATOR to determine the most efficient and environmentally safe disposal method. Two such wastes currently being landfilled are described below.

The landfill will occasionally receive wastes from the abattoir, brewery or other manufacturer which are nonhazardous and can be safely landfilled with special handling. They will arrive at the site in a semi-liquid form and should either be dumped and mixed with dry refuse and compacted as described above or placed in a separate pit. The primary problem with these wastes is that they are ideal breeding ground for flies and other insects.

If placed in a separate pit they should be periodically covered to kill fly larva or mixed with other compatible wastes. Large quantities of wood or coal ash mixed with the semi-solid waste will absorb moisture and help to control insects.

3.5.4 Dead Animals

Dead animals may be safely landfilled if placed in the landfill and covered with other refuse or cover soil. Large animals such as a cow or horse should be placed in a separately dug pit and covered immediately.

3.5.5 Ashes

Large quantities of wood or coal ashes from incinerators or boilers which contain hot clinkers or coals, should be placed in a separate area of the landfill where they can be observed to insure that they are not a fire hazard. After the operator is confident that the material is not a potential fire source, the ashes should be incorporated into the refuse landfill.

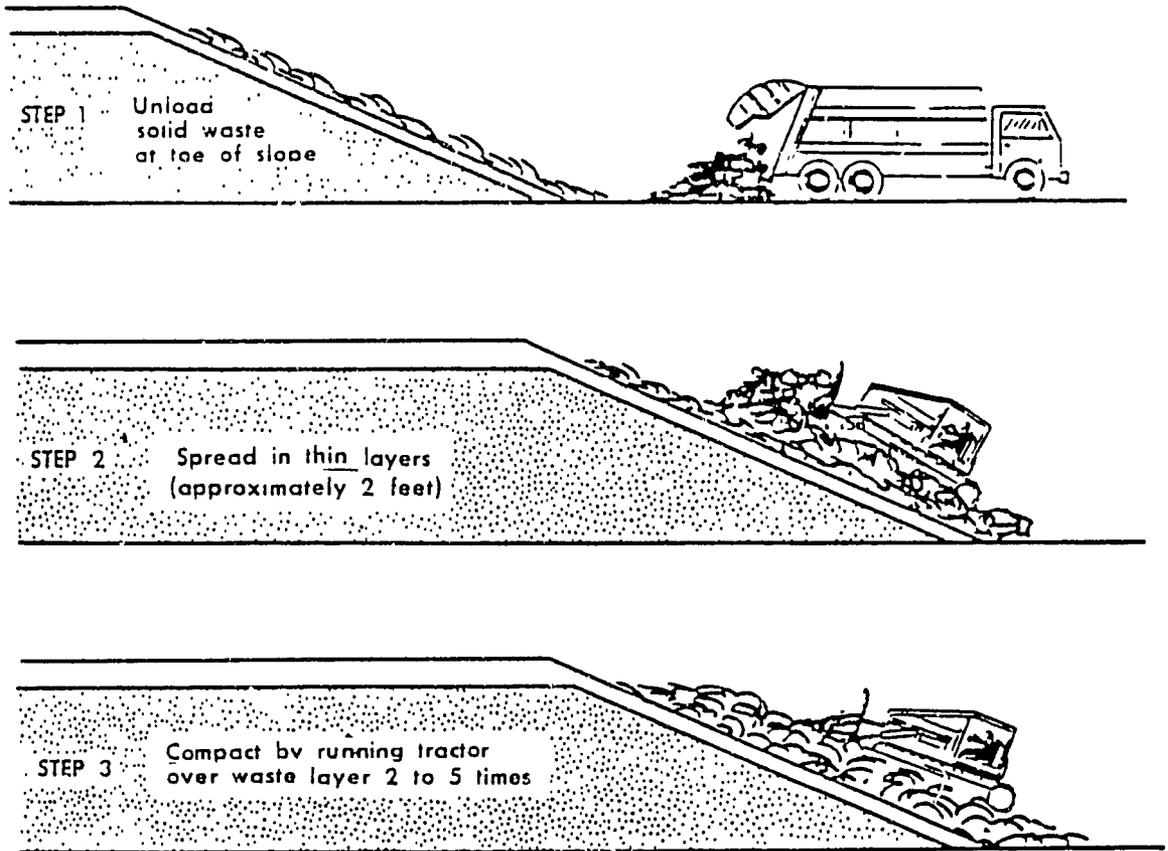


FIGURE 3.1
COMPACTION OF REFUSE

3.5.6 Tires

A separate fenced area has been established for tire storage. The OPERATOR shall direct all tires to be placed in this area. At the time that this plan was prepared, the OWNER was evaluating several management options for handling tires.

A proposed cement kiln in Palapye has expressed interest in burning the tires in their manufacturing process. If this facility is constructed, the OPERATOR will store the tires and assist the OWNER in transporting the tires to Palapye.

The OWNER is also considering shredding the tires so that they can be landfilled along with the refuse. Whole tires cannot be landfilled along with the general refuse because of their shape and construction which prevents them from being compacted. Shredding the tires would permit them to be landfilled along with other refuse.

The only exception to the above mentioned problem with landfilling tires is in a new landfill where the tires can be placed flat on the earth subgrade before any waste is dumped. Placing the tires flat on a hard base will allow them to be compressed and remain stable. This will also create voids on top of the landfill base which will assist in the drainage of leachate to the Polluted Water Drains. Since no viable disposal alternatives currently exists, for tires, the OPERATOR shall place a single layer of tires on the base soil at the beginning of each new cell, in the lowest landfill lift. The placement of the tire layer is shown on Figure 2.1.

3.5.7 Brush

A separate area has been designated for the disposal of brush and other clean wood waste. No other waste shall be permitted in this area. Several alternatives exist for handling this material.

Since the brush is clean waste, it can be burned without adverse environmental impacts. If this alternative is used, the OPERATOR shall prepare an isolated area and build earth berms to control the burning. The frequency of burning shall be determined by the amount of brush received and weather conditions, and it should not be burned during high winds. Although this area could also be used for document burning, it should not be used as the hot load area as described in Section 2.3. This could lead to burning of refuse which is prohibited.

If brush is not burned it should either be chipped with a mechanical chipper or crushed and compacted with a steel wheeled compactor or a tracked bulldozer and then periodically covered with soil. If a chipper is used, the wood chips could be used as landscape mulch or fuel.

3.5.8 Demolition Waste

Figure 1.2 shows the area designated to receive demolition waste which is primarily masonry and earth materials of an inert nature resulting from building demolition or new construction. Waste should be placed in cells like refuse but without daily cover soil. The area should be periodically graded and covered to allow for several vertical lifts to be constructed.

As an alternative, the OWNER could procure a crusher which could be used to convert the demolition waste into a reusable aggregate.

3.5.9 Small Vehicles

Unrestricted access to the landfill by any vehicle can cause traffic problems and congestion at the landfill face, especially during muddy conditions. Upon approval of the OWNER, the OPERATOR may restrict access to the landfill by cars and provide skips in the receiving area for small vehicles to use.

3.6 PLACEMENT OF COVER MATERIAL

3.6.1 General

Cover materials used at the landfill can be placed in three categories, daily, intermediate and final. The type of cover is determined by the amount of time that the material is exposed. In general, daily has an exposure of one week or less, intermediate from one week to one year, and final cover is placed if exposure is one year or more. Figure 2.1 shows the general location of the three types of cover material in a typical sanitary landfill.

3.6.2 Daily

As stated earlier, the primary functions of daily cover are control of litter, insects, birds, rodents and fire. Generally it should have a compacted thickness of 15 centimetres and can be of any soil type. If possible it should be applied to the top and sideslopes as the daily cell is built, thus leaving only the working face exposed.

3.6.3 Intermediate

Intermediate cover shall include the same functions as daily cover with addition of serving as a road base for constructing the next lift. Since intermediate cover must support traffic flow it should be approximately 30 centimetres thick. Periodic regrading or repair of intermediate cover may be required due to erosion or traffic damage. Intermediate cover may be any soil type with sufficient structural properties to support truck traffic.

3.6.4 Final

Final cover is placed on the landfill when it has reached its design limits. After the landfill is completed it is desirable to inhibit the infiltration of rainwater into the landfill. Therefore, final cover material should be a low permeability soil such as clay or silt. The final cover soil should also support vegetation which will limit erosion from rainfall runoff and will evaporate water that has soaked into the soil.

The finished grades of the landfill are important and should be part of the operating Master Plan. Grades should not exceed 1:3 to reduce erosion and they should not be less than 5 percent to prevent ponding of water over the refuse. After placing the final cover, gas vents should be installed to allow methane and other gases to escape to the atmosphere.

Since the placement of final cover is a major undertaking, using low permeability soil, specialized equipment and procedures, the OWNER will issue separate Tender for application of final cover. The OPERATOR will be responsible for placing and maintaining intermediate cover until the final cover soil is placed.

3.6.5 Source of Cover Material

The OPERATOR will obtain cover material from excess excavation of additional landfill space as defined in the Master Plan. Additional material from the excavation of the brush and demolition area shall also be stockpiled for use as cover material. All incoming earth materials shall be stockpiled and used as cover material. The OWNER will assist in the supply of cover materials by encouraging excess earth materials from civil works projects to be brought to the landfill.

In the event that the above sources of cover soil are inadequate, the OWNER shall issue a separate tender for the supply of cover material from offsite sources.

3.7 LEACHATE MANAGEMENT

The landfill Master Plan, included as Appendix A, calls for the construction of Polluted Water Drains within the landfill and a Polluted Water Dam to retain and store the leachate and surface water that has originated within the landfill. During most of the year there will be insufficient rainfall to produce either leachate or runoff and the Polluted Water Dam will be empty. During the wet season it is anticipated that some runoff water and leachate will reach the dam. If the dam has not reached its capacity as specified in the Master Plan, the liquid may be permitted to evaporate. If it is near its capacity, the liquid shall be removed by the OPERATOR and used for dust control or pumped to the adjacent sewage ponds. If pumped to the sewage ponds, the operator shall estimate the number of litres and record it in the daily log.

3.8 MAINTENANCE

3.8.1 General

The OPERATOR shall perform maintenance functions at the landfill in order to keep the site in good appearance and control insects and odors.

3.8.2 Dust Control

Dust can cause excessive wear of equipment, is a health hazard to personnel at the site and is a nuisance to adjoining land use, especially the show grounds. The OPERATOR shall employ a dust control plan that includes the use of coarse grained material for road construction and periodic watering of high dust areas. Water for dust control can be pumped from the ponds just south of the landfill or the polluted water dam.

3.8.3 Litter

One of the most important aspects of landfill maintenance is litter control. Blowing litter can be minimized by keeping the working face as small as possible and applying daily cover as stipulated herein. The OPERATOR shall be responsible for clean-up of litter on a daily basis. This shall include clearing litter from all fences and periodic clean-up of litter that has blown off the site onto adjoining land.

3.8.4 Pests

Rats, flies and birds are common problems at many landfills. The application of daily cover is the most effective measure to control these pests. If rat infestation becomes a problem at the landfill, the OPERATOR shall be responsible for conducting a baiting program to eliminate the rat population. If baiting is required, the OPERATOR shall post signs, informing all landfill employees and approved recyclers of the program. If flies become a problem at the working face, the OPERATOR shall use an insecticide during non-working hours to control them.

3.9 WEATHER CONDITIONS

Rain can obviously cause operational problems at the landfill. The OPERATOR shall take measures to insure that access to the landfill face is available at all times. This may require the use of gravel or construction rubble to stabilize access roads during muddy weather. Collection trucks that pick up mud at the site shall be required by the OPERATOR to clean and hose off the mud before leaving the site. The OPERATOR shall provide an area with a water hose for cleaning mud from collection vehicles.

3.10 FIRES AND HOT LOADS

Fires have been a frequent problem at past landfills, originating from a variety of sources including scavenger fires, document burning and hot ashes. As previously mentioned, separate areas for document burning, tire storage and brush should greatly reduce the potential of major fires at the landfill. The application of daily cover and the construction of daily cells will further reduce the impacts of fires.

If a fire starts at the landfill, the OPERATOR shall extinguish it as soon as possible using either cover soil or water. If the fire cannot be extinguished in a reasonable amount of time the OPERATOR shall contact the City Fire Department to extinguish it.

During the winter months, collection vehicles often collect waste that contains hot ashes that may ignite waste within the compaction body. This is called a hot load. Under no circumstances shall a hot load be dumped in the active area of the landfill. As stated in Section 2.3, the OPERATOR shall designate a hot load area where the hot load can be dumped and extinguished before being placed in the landfill.

3.11 SCAVENGING AND RECYCLING

With the revised operating procedures, scavenging of the waste will be dangerous for both the scavengers and landfill personnel. The OPERATOR shall take measures to prevent the general, uncontrolled scavenging of the landfill, including maintaining the security fence and employing security guards who shall restrict access to the landfill. Any damage to the security fence shall be promptly repaired by the OPERATOR.

Although general scavenging of the landfill shall be prohibited, approved recycling of material shall be permitted and encouraged. The OWNER shall designate approved recycling companies to remove recyclable materials at the landfill. Recycling companies shall remove only designated material and shall not interfere with the operation of the landfill. The OPERATOR shall cooperate with the approved recycling company to maximize the removal of material from the waste. All employees of the recycling company shall wear uniforms bearing the name or logo of the company to distinguish them from the landfill operator's employees and general scavengers. The OWNER and OPERATOR shall prepare procedures and rules governing recycling operations at the landfill.

3.12 LANDFILL RULES

The OPERATOR in cooperation with the OWNER shall prepare a list of Landfill Rules to control the landfilling of waste and other activities at the landfill. The landfill rules shall be printed on a single sheet of paper, with a map of the landfill printed on the back. Copies of the rules shall be available from the landfill inspectors and at the weighbridge. The OPERATOR shall distribute copies of the rules to all drivers and persons using the landfill. The Landfill Rules may be revised from time to time subject to the approval of the OWNER. A suggested list of rules is enclosed as APPENDIX 3.

The OPERATOR shall have the authority to enforce all Landfill Rules.

4.0 EQUIPMENT

4.1 GENERAL

A properly operated landfill must have the correct equipment to perform the various functions necessary to maintain the site in an efficient and environmentally safe manner. Since money spent on equipment is a large capital investment and is a significant portion of landfill operating costs, the equipment selection should be based on a careful evaluation of the functions to be performed.

4.2 EQUIPMENT FUNCTIONS

4.2.1 Waste Handling

Although the handling of waste at a landfill appears similar to earthmoving, there are significant differences that require special consideration. Solid waste is less dense, more compactible and more heterogeneous than earth. Handling a given volume of solid waste requires less energy than an equal amount of soil.

Although the waste is more compactible than soil, in terms of initial density versus compacted density, the actual compaction is more difficult to obtain and requires large compressive forces and multiple passes. A large heavy machine is preferred over a small lighter machine which would require more passes to accomplish the same result.

4.2.2 Cover Material Handling

Unlike the handling of waste, the excavation, hauling, spreading, and compaction of cover material are similar to earthmoving operations and require similar equipment. Since the majority of cover material will come from on-site excavations for additional landfill space, the equipment selected for handling cover material should be based on the soil types expected to be encountered. These soils have been evaluated in previous studies and are predominantly hard packed silty sands with some ferrocrete and calcrete. The Master Plan also calls for partial excavation of a weathered rock zone above the hard granite bedrock. Preliminary excavations required the use of a relatively large D-8 bulldozer. However, once the soil is excavated and stock piled, a rubber tired loader would be sufficient to load the material onto a dump truck to be hauled to the working face, or directly transfer the material with the loader bucket.

The OWNER has two options for the excavation and stockpiling of cover soils. The OPERATOR could be required to procure a sufficiently large bulldozer to perform the excavation and stock piling of excavated soil. Since this periodic process may not fully utilize the larger bulldozer, the owner could periodically tender for this service, avoiding the capital expense of purchasing the larger bulldozer.

4.2.3 Radio Communications

The landfill OPERATOR should be in radio communications with several key personnel and equipment on the site at all times. This system should consist of a radio base located in the

OPERATOR'S office and portable remote radios at the weighbridge, inspection area, security guards and the traffic controllers.

4.2.4 Support Functions

In addition to the handling of refuse and cover material, landfill equipment must also be provided for several support functions. These include but are not limited to: access road construction and maintenance, dust control, fire protection, and site administration. Many of these functions can be provided by equipment which has already been mentioned but others may require specific additional equipment.

4.3 REQUIRED EQUIPMENT

In consideration of the above function descriptions the following equipment is recommended for use at the landfill:

1. Steel Wheeled Compactor - For compaction of refuse and cover soil.
2. Track Bulldozer, D6 or D7 - For excavation of cover soil, spreading and compaction of cover soil, road construction, and as a back-up to the steel wheeled compactor for compaction of refuse.
3. Rubber Tired Loader - For placing of cover soil, loading/unloading refuse, stockpiling of cover soil, road construction, and litter clean-up.
4. Tipper Truck - For excavation, stockpiling and placing of cover soil, access road construction, litter clean-up
5. Water Truck or Trailer - For dust and fire control.
6. Pick-up Truck - For the site manager and litter pick-up.
7. Radio Communication System - For communication between the main office and key operational locations.

4.4 EQUIPMENT MAINTENANCE

The OPERATOR shall be responsible for maintaining all landfill equipment including a written preventive maintenance program in accordance with manufacturer's recommendations and approved by the OWNER. Maintenance items include fuel, oil, lubricants, filters and any expenses associated with routine maintenance. The OPERATOR shall maintain a maintenance log for each piece of major equipment which shall be available for inspection by the OWNER at any time.

5.0 PERSONNEL

5.1 GENERAL

The landfill operation will only be as effective as the people who operate it. The OPERATOR will be required to hire employees of acceptable education and experience, capable of performing the jobs as described herein.

5.2 JOB DESCRIPTIONS

1. Manager (1): Shall be responsible for overall site operations, assignment of personnel, cost controls, performance evaluation and liaison with the OWNER.
2. Secretary Clerk (1): Shall assist the manager in general administration, ordering supplies, and completing records and reports.
3. Weighmaster (2): Weighmasters shall be responsible for operating the weighbridge and completing the daily waste log. Two (2) weighmasters are recommended during peak traffic periods. The Weighmasters shall be trained in the operation and maintenance of the weighbridge according to manufacturers recommendations and printed instructions.
4. Inspectors (2): Two waste inspectors shall be positioned at the entrance gate to determine the contents and origin of each load of waste. Depending on the type of waste, the inspectors shall direct the truck to the weighbridge or special waste area. The inspectors may also assist the Weighmaster in filling out the daily waste log. The inspectors shall be trained in the ability to recognize different waste materials, including hazardous and special wastes.
5. Traffic Controllers (3): The traffic controllers shall be responsible for directing truck traffic at the disposal locations, insuring that waste is dumped only in the assigned areas. Two traffic controllers shall be assigned to the refuse disposal area and one at the brush and demolition area.
6. Security Guards (4 to 8): The primary responsibility of the security guards will be to prevent access to the site by scavengers. The need for security guards will be greatest when the landfill starts up and should diminish thereafter. Guards should remain on duty 24 hours per day.
7. Equipment Operators (3): One operator shall be assigned to the Steel Wheeled Compactor at all times. The other two operators will be preparing, placing and compacting cover soil or performing dust and fire control.
8. Maintenance Mechanic (1): Shall be responsible for supplying fuel and a preventative maintenance program, for all vehicles including oil changes, filters, lubricants and tires.

9. General Labor (3): Shall be available for miscellaneous site work such as litter clean-up, maintenance activities and assisting other personnel in the performance of their responsibilities.

5.3 JOB TRAINING

All employees of the OPERATOR shall receive training in the general operation of the landfill and the specific tasks of their job title. Training shall include general environmental and physical features related to landfill operation and related health impacts of handling solid waste. All employees shall be trained in the identification of various types of waste and their need for special handling. Specifically, all employees shall be advised of the potential health impacts due to handling waste that may contain hazardous and medical wastes.

5.4 OWNER LIAISON

The OWNER shall assign a liaison officer to work with the OPERATOR during the operation of the landfill. The liaison officer shall make frequent visits to the site in order to assess operations and evaluate OPERATOR performance.

6.0 ADMINISTRATION

6.1 GENERAL

The operation of the landfill shall be administered through a joint effort between the OPERATOR and the OWNER through the liaison officer. Administrative tasks shall include: daily operations, cost documentation and control, performance evaluation, personnel and public relations.

6.2 COST DOCUMENTATION AND CONTROL

The OPERATOR shall be responsible for maintaining cost documentation of all landfill costs, including labor, supplies and maintenance. This documentation shall be available to the OWNER at all times. At least 60 days prior to the end of each fiscal year or the CONTRACT term, the OPERATOR shall prepare a summary of all costs incurred to date and submit it to the OWNER along with all cost adjustments to be requested for the next fiscal year or CONTRACT term.

6.3 PERFORMANCE EVALUATION

The OPERATOR and OWNER shall undertake a performance evaluation of total landfill operations at least twice per year to determine conformance with operating procedures and identify any specific areas or types of waste where changes are warranted in either performance specification or cost of service.

6.4 PERSONNEL

The OPERATOR shall establish procedures for personnel review including job performance, advancement, warnings for substandard performance and removal. The OWNER liaison officer shall assist in the evaluation of personnel and make recommendations to the OPERATOR for actions where necessary.

6.5 PUBLIC RELATIONS

The OPERATOR shall cooperate with the OWNER in maintaining good relations with the general public, especially those who live or work in close proximity of the landfill. Any complaints from the public regarding litter, dust, fire or offensive odors shall be quickly addressed. Any significant change in operating procedures that may have an impact on the visibility of the landfill shall be preceded by public announcements in local newspapers, television and radio.

APPENDICES

Appendix One	Engineering Master Plan
Appendix Two	Daily Waste Log
Appendix Three	Landfill Rules

APPENDIX ONE

Engineering Master Plan

(not included)

Appendix Three

GABORONE CITY LANDFILL

LANDFILL RULES

GENERAL: All persons using the landfill must abide by the following rules.

HOURS OF OPERATION: Monday through Sunday 7:30 am to 6:00 pm.

ACCEPTABLE WASTE: All refuse, brush, demolition material, tires, earth or other similar wastes. Specific industrial process wastes, including sludges or other semi-solid waste will be accepted only after prior approval of the OPERATOR.

UNACCEPTABLE WASTES: Waste oils, sewage and latrine pumpings, large quantities of hazardous waste and other wastes determined by the OPERATOR to be a danger to public health or the environment.

SPECIAL WASTES: Special wastes such as tires, brush, demolition waste, construction waste, semi-solid process wastes, dead animals and ashes shall be dumped in special areas or as directed by the Waste Inspectors or Traffic Controllers.

INSPECTION OF WASTE: All drivers of waste vehicles must stop at the entrance gate for waste inspection and determination of waste type and origin. Waste Inspectors will direct the driver to the weighbridge or special waste disposal area. If the driver has a "Hot Load" he shall inform the inspectors immediately upon entering the landfill and will proceed as directed by the Waste Inspectors to the "Hot Load" area.

RECEIPT AND WEIGHING OF WASTE: All waste trucks, directed to the weighbridge, will be weighed in and out by the Weighmaster. If the vehicle Tare Weight has been obtained during a previous trip the Weighmaster will inform the driver that he does not have to weigh out as he leaves the landfill. After weighing in the Weighmaster will direct the driver to the appropriate disposal location.

TRAFFIC AND UNLOADING: All drivers shall obey traffic signs and Traffic Controllers and dump waste only in designated areas as directed by the Traffic Controllers. After dumping the load, the driver shall immediately leave the disposal area and return to the Weighbridge for weighing out, or exit the landfill.

SCAVENGING: Scavenging of any waste for food or other materials is Strictly Prohibited. Any person observed Scavenging will be removed from the site by the Security Guards.

BURNING: Burning of any refuse will be Strictly Prohibited in all areas excepted those which are specifically designated as burning areas. Any driver wishing to burn confidential documents shall inform the waste inspectors in the receiving area and follow their directions to the designated burning area.

Section II
Tender for
Waste Oil Collection and Disposal

GABORONE CITY COUNCIL

GABORONE, BOTSWANA

TENDER

FOR

WASTE OIL COLLECTION AND DISPOSAL

ISSUED SEPTEMBER __, 1993

TENDER NUMBER _____

This Tender Document Contains 12 pages of Text and the following Appendices:

Appendix A - Drawings

Appendix B - 3 pages

Appendix C - 2 pages

Appendix D - 1 page

Appendix E - 2 page

Appendix F - 1 page

FIRST DRAFT 10 AUGUST 93

GABORONE CITY COUNCIL
TENDER
FOR
WASTE OIL COLLECTION AND DISPOSAL
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APPENDICES

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APPENDIX F - Price Fluctuation Clause

DEFINITIONS

In the Tender Documents, as herein defined, the following definitions shall apply:

- "Tenderer"** shall mean the person or firm who takes Tender Documents prepared by the GCC for the purpose of preparing a Tender to perform the services described therein.
- "Contractor"** shall mean the person or firm whose Tender for the stipulated services has been accepted by the GCC to operate the landfill. Also referred to as the OPERATOR in the Landfill Operating Plan.
- "Waste Oil"** shall mean used lubricating oil from automobiles, trucks, engines, and other heavy equipment which has been drained and is no longer usable as a lubricant. It does not include asphalt oil, cutting oil, vegetable oil, synthetic oil, solvents, furnace oil, grease, or antifreeze.
- "Hazardous Waste"** shall mean waste which by reason of its chemical reactivity, toxic, explosive, corrosive or other characteristics, causing danger or likely to cause danger to human beings or the environment, whether alone or in combination with other wastes.
- "Special Wastes"** shall mean wastes, which due to their nature require special or separate handling and disposal practices, including but not limited to tires, motor oil and bulky waste items.
- "Recycling"** shall mean the authorized, organized separation of reusable materials from refuse either at the source of generation, or from the landfill by firms recognized and approved by the GCC.

ABBREVIATIONS

- "GOB"** shall mean the Government of Botswana.
- "GCC"** shall mean the Gaborone City Council.
- "USAID"** shall mean the United States Agency of International Development.
- "ICMA"** shall mean the International City Management Association.
- "BHC"** shall mean the Botswana Housing Corporation.
- "VDC"** shall mean the Village Development Committee.

1.0 CONDITIONS OF TENDER AND INSTRUCTIONS TO TENDERERS

1.1 GENERAL

Tenders are invited by the Gaborone City Council (GCC) for Waste Oil Collection and Disposal Services. The selected Contractor shall perform the services as herein described.

All interested Tenderers shall complete and submit two (2) copies of the attached Tender Form and related documents to: City Clerk's Office, Room 66, Private Bag 0089, Independence Avenue, Gaborone, Botswana, prior to 4:00 pm local time, on the ___ day of ___ 1993, at which time the Tenders will be publicly opened and read aloud.

Tender Documents shall be enclosed in a plain sealed envelope clearly marked: **TENDER NO. _____ WASTE OIL COLLECTION AND DISPOSAL.**

All mailed Tenders should be sent by registered post to ensure delivery. Telephone, telegraph, telex or facsimile Tenders will not be accepted.

All Tenderers shall provide a detailed statement of qualifications, including a list of references. Particular emphasis will be put on knowledge of waste oil generation in Gaborone, environmental awareness, organizational ability, existing equipment and business background.

Each Tender must be accompanied by a Tender Surety, in favour of the GCC, issued by an approved Insurance Company or Bank in the amount of P5 000.

The GCC may conduct personal interviews with selected Tenderers. The GCC expects that Tenderers selected for interviews will make available key personnel proposed to work on this project available for such interviews.

1.2 PRE-TENDER MEETING

A Pre-Tender will be held on _____, 1993, at 9:00 am, at the GCC Conference Room. The GCC will give a presentation on the Tender Documents and its expectations of Tenderers. Questions from prospective Tenderers will be answered at that time.

1.3 TENDER PERIOD

The Tender shall remain valid for ninety (90) days from the final date for submission of Tenders stipulated above.

The GCC shall notify the successful Tenderer (if any) by letter written within the stipulated ninety (90) day Tender period, or such extension of the Tender Period as mutually agreed between the GCC and Tenderers. The successful Tenderer shall

accept the notification within 30 days of the date of the GCC notification of offer and the Contractor's written acceptance thereof shall constitute a formal Contract until the signing of the Form of Agreement.

The GCC is not bound to accept the lowest or any Tender or to assign any reason for its acceptance or rejection of any Tender and in no case shall any Tenderer be paid for any expense incurred in the preparation of this Tender.

1.4 REPRESENTATION OR INTERPRETATION OF DOCUMENTS

Representation or interpretation of Contract Documents shall be done in writing by the GCC. If during the Tendering period, the GCC makes an interpretation, clarification or change in the Contract Documents, as result of the Pre-Tender Meeting or other new information, the GCC will issue a letter to all Tenderers explaining the interpretation, clarification or change. The Tenderer shall acknowledge the receipt of all such letters in his submitted Tender.

1.5 REQUIRED TENDER INFORMATION

Each Tender shall contain the following information:

1. Tender's Company name, address, telephone number, and contact individual.
2. Completed Tender form(s).
3. Tender Surety.
4. Statement of qualifications and list of references.
5. Narrative description of the proposed system.
6. Service Fee cost documentation.
7. Request for GCC financial support (optional).
8. Statement regarding storage facility and depot.
7. Implementation Schedule.
8. Subcontractor Declaration.

1.6 SIGNATORY REQUIREMENTS

Each Tender shall be accompanied by an original cover letter committing the Tenderer, if selected, to carrying out the proposed work at the Tender prices. These prices is to be valid for ninety (90) days from the date of the Tender. It must further state that all information submitted in support of the Tender is accurate. The cover letter must contain the signature of a person authorized to commit the firm(s) to a Contract.

All forms requiring signatures shall be signed by the same individuals signing the cover letter.

1.7 PUBLIC POLICY

It is the policy of GCC that during the performance of this contract, the Contractor will not discriminate against any employee or applicant for employment because of age, race, creed, colour, national origin, ancestry, martial status or sex.

1.8 PROOF OF GENERAL LIABILITY INSURANCE

The selected Tenderer will be required to obtain Liability Insurance of the limits and conditions stated in Appendix D. Proof of insurance in the form of a Certificate of Insurance will be required within 30 days of the notice of award and prior to Contract signing.

1.9 TENDERER RESPONSIBLE TO LEARN LOCAL CONDITIONS

All Tenderers submitting Tenders for this Contract are cautioned to examine carefully the conditions affecting the operation of a Waste Oil Collection and Disposal System, including the identification of waste oil generators, current and future markets for waste oil and equipment requirements. Appointments to inspect the former sewage pumping station, which the GCC is offering as a waste oil storage facility, can be made through the City Engineer's Office.

Submission of a Tender shall be deemed conclusive evidence that the Tenderer has read and understands the Scope of Contract and is fully acquainted with and shall be fully responsible for any restrictions, or constraints relative to collecting and disposing of waste oil generated in Gaborone.

All Tenderers interested in submitting Tenders for this Contract are encouraged to submit alternate Tenders where appropriate that achieve the same goals and results identified by GCC, its staff and its consultants.

2.0 BACKGROUND

2.1 General

Waste oil disposal is becoming a major problem in the City of Gaborone, due to its increasing generation and absence of an effective and environmentally safe system of collection and disposal.

Waste oil has been the topic of several workshops sponsored by local Environmental Groups. These workshops have concentrated on the difficulties in identifying the many waste oil generators and the problems associated with collection and transportation to existing refineries in the Republic of South Africa and Zimbabwe. Low prices paid for the oil, high transportation costs and strict contamination requirements were all cited as constraints to effective waste oil recycling. Due to these constraints, much of the waste oil generated in Gaborone continues to be dumped in the bush or at the landfill.

This illicit dumping of waste oil may have a catastrophic impact on the environment if it is not stopped. Major contamination of groundwater aquifers, rivers and streams may result from current disposal practices. Although the City of Gaborone obtains its drinking water from surface supplies, surrounding towns use groundwater and future City expansion may have to rely on groundwater.

2.2 Waste Oil Generators

Approximately 20 automobile service stations and dealers generate an estimated 8,000 litres of waste oil per month, for a total annual generation of 96 000 litres. In addition to the service stations and dealers, there are three other major generators of waste oil in Gaborone; the Botswana Railways, the Central Transportation Organization; and the Botswana Defense Force. Various organizations have estimated the total waste oil generation to be between 500 000 and 600 000 litres per year.

2.3 Disposal Options

2.3.1 Refining

The best waste oil disposal option is to recycle the oil into new oil. This is done by refining the oil in a process similar to that used for crude oil. Oil refineries in the Republic of South Africa and Zimbabwe are capable of refining waste oil but the low price paid, transportation costs and waste oil from other sources are restricting this option. Transportation is marginally cost effective only at full tandem trailer loads of 40 000 litres, and therefore local collection and storage becomes a major issue.

Previous studies have evaluated the potential of building a waste oil refinery in Botswana to handle its own waste oil. Due to relatively low waste oil generation, high capital costs and limited markets, these proposals were judged not feasible without heavy government subsidies. A new study being performed by local businessmen is again considering the feasibility of such a facility. As the amount of waste oil generation increases and the potential of major environmental impacts also increases, the GCC and GOB should give consideration to supporting such a venture, including financial support.

2.3.2 Burning

In other countries, it is common practice to burn waste oil for heating or in manufacturing facilities as an alternative to refining. In particular, the use of waste oil, blended with fuel oil has been used successfully in asphalt manufacturing facilities. This method is acceptable only if the oil is relatively clean and not contaminated with heavy metals. Unfortunately, Botswana and South Africa still use leaded gasoline and waste oil from gasoline engines normally contains high levels of lead. Burning this waste oil without air pollution control devices may lead to excessive lead emissions and is not recommended.

The Botswana Development Corporation (BDC) has proposed the construction of a cement manufacturing facility to be built in Palapye. This plant will use coal as its

primary fuel and will be equipped with pollution control devices. This facility would also be suitable for burning other fuels, including waste oil, and the pollution control devices will control any excess heavy metals that may be produced from burning waste oil. This facility is only in the planning phase but may become a disposal option in the future.

2.3.3 Short Term Options

Unfortunately, the above disposal options are long term and may not be implemented for many years if at all. In the short term, the only environmentally sound disposal option is to continue transporting waste oil to the two refineries in South Africa and Zimbabwe regardless of cost.

2.4 Economics

Perhaps the greatest impediment to the recycling of waste oil is the cost. Even if all of the estimated 500 000 litres of waste oil in Gaborone were to be recycled, the current market price paid by refineries would produce only P20 000,00 to P30 000,00 per year. This is far short of what would be required to operate an effective collection and disposal system.

Since the current price paid for waste oil will not support an effective collection and transportation system, additional revenue must be obtained from other sources. The most obvious additional source of funds would be a fee charged to the waste oil generator, per litre of waste oil for disposal services. This fee should be high enough to cover the cost of collection and disposal and a reasonable profit for the system operator, but low enough to insure use of the system rather than continuing to dump in the bush. The fee would be passed on to the customer who actually produced the waste oil.

Although the GCC feels that the fee charged to waste oil generators for disposal services should fully compensate the Contractor for collection and disposal services and reasonable profit, they are concerned that the fee, due to current market conditions, may be too high and may promote continued illicit disposal of waste oil. Therefore, the GCC is willing to consider limited financial support to the waste oil collection and disposal program to ensure a cost effective and environmentally safe solution to this problem. Preferably, this support would be only for start-up costs or support during the initial years of operation, to be eventually transferred to the service fee.

3.0 SCOPE OF CONTRACT

3.1 General

In consideration of the environmental impacts due to existing disposal of waste oil, the GCC is requesting Tenders from companies or individuals to collect, store, transport or otherwise dispose in an approved manner, waste oil generated in

Gaborone and the surrounding region estimated to be approximately 500 000 litres per year.

3.2 Storage Facility

The GCC is prepared to offer for lease at a cost of P1,00 per year, the abandoned wastewater pumping station located near the corner of Old Lobatse Road and Machel Drive. This facility has a 400 000 litre underground concrete storage chamber and pump building and would be suitable as a waste oil collection and storage depot. The lease will have the following provisions:

1. The Contractor shall be responsible for cleaning the pump station chamber and disposing of all sludge and pumpage.
2. The Contractor shall operate the oil storage depot in a manner that will not result in the release of waste oil into the ground or into the sewage collection system.
3. The Contractor shall make site improvements, including access roads, walkways, etc. to allow vehicle access to the storage chambers that will receive the waste oil.
4. The contractor shall keep the site in a neat and orderly appearance at all times.
5. The site shall not be used for any other purpose, including the housing of trucks or other equipment.
6. At the conclusion of any Contract period that is not renewed, the Contractor shall remove all waste oil from the pump station chamber, or make arrangements with a new operator or the GCC for handling any remaining oil.

A copy of the engineering drawing of the subject pumping station is enclosed as Appendix A. Tenderers may consult with the City Engineer for more information regarding the existing pumping station facility.

3.3 Contractor's Responsibilities

3.3.1 General

The Contractor shall establish a waste oil collection, storage and disposal program covering the City of Gaborone. At the Contractor's option, he may also expand the program to cover adjoining towns in the surrounding area. All waste oil generators shall be identified and offered collection and disposal services. The contractor shall not deny access to the collection and disposal service to any waste oil generator for any reason. The Contractor shall procure the necessary collection trucks, pumps and related equipment to perform the service.

3.3.2 Rules and Procedures

The Contractor shall establish rules and procedures for the program including contamination specifications, times and methods of collection, and collection of disposal Service Fees. The rules and procedures shall be subject to GCC approval.

3.3.3 Storage Facility

The Contractor shall be responsible for operating a waste oil storage facility in a neat and environmentally safe manner. The storage facility shall have adequate capacity to allow access to several alternative markets or to schedule waste oil transportation in the most cost effective manner. The Contractor may utilize the GCC facility mentioned above or his own facility.

3.3.4 Service Fee

The Contractor shall be responsible for establishing a Service Fee, per litre, to be charged to all waste oil generators for the disposal of waste oil, subject to GCC approval. The Contractor shall document the amount of the fee by disclosing all costs associated with operating the collection and disposal service. The initial Service Fee shall be established in the Contractor's response to this Tender. The Tender response shall also stipulate the method for increasing or decreasing the fee based on market conditions. Any increase in the Service Fee shall be based on general inflation or significant increases to the Contractor's costs, such as a decrease in the amount paid for waste oil at the refinery. As a minimum the Contractor shall be entitled to a Service Fee Increase or other financial support as a result of Statutory Fluctuations as defined in Section 4.2.

3.4 GCC Responsibilities

3.4.1 General

The GCC will fully support the Contractor and the program for the Collection and Disposal of Waste oil. The GCC will take measures to enforce current bye-laws governing refuse disposal with specific attention towards illicit waste oil disposal.

The GCC will provide timely review of all financial data and requests for Service Fee Adjustments which shall not be unreasonably withheld.

3.4.2 Financial Support

The GCC is prepared to offer financial support to the program for start-up or support during the initial years of operation. Subsequent support will be based on Contractor's performance, program participation, market conditions and availability of funds. The offer of financial support is intended to subsidize the cost of waste oil collection and disposal and also to serve as an incentive to the Contractor to maximize the amount of oil actually collected and disposed.

The amount of financial support offered by the GCC will be calculated on the success of the project based on the amount of oil actually collected and disposed of per litre in the following increments:

1. The first 100 000 litres.
2. 100 000 to 250 000 litres.
3. 250 000 to 500 000 litres.
4. Greater than 500 000 litres.

3.5 LENGTH OF CONTRACT

The GCC is seeking a three (3) year Operating Contract, which may be renewed up to a maximum of three (3) additional years at the sole discretion of the GCC.

3.6 IMPLEMENTATION SCHEDULE

Each Tenderer shall include an implementation schedule with the Tender Documents. The Implementation Schedule shall include but not be limited to the following items:

1. Sign Contract and provide required proof of insurance within 30 days of notice and Contractor's acceptance of award.
2. Order and receipt of equipment and vehicles, and/or lease negotiations with the GCC.
3. Establish office and maintenance facilities.
4. Hire employees.
5. The GCC anticipates implementation of Waste Oil Collection and Disposal services within 45 days of the Contract signing.

4.0 PAYMENTS

4.1 General

The Contractor shall submit payment requests for financial support on the last working day of the month for services performed during that month. Requests shall include documentation of the amount of oil collected and disposed within that month. Payment shall be due and payable 15 days thereafter. The amount of the monthly payment will be computed based on the Tender Prices entered on the Tender Form or as adjusted due to price fluctuations.

The GCC may withhold any amount as a result of non-performance of the Scope of Contract as herein described.

4.2 Price Fluctuation Clause

Due to the length of this Contract, the Contractor shall be entitled to an adjustment of the Service Fee and/or Financial Support, due to Statutory Fluctuations of any material or labor cost as a result of Customs Duty, Tax, Currency Exchange Rates, Minimum Labour Rates or any other governmental action, which shall occur after seven (7) days preceding the date of Tender. Price adjustments due to Statutory Fluctuations shall not include overhead or profit and will be considered only when fully documented.

If the Tenderer wishes to be protected against price fluctuations other than due to Statutory Fluctuations, he shall list those prices in Appendix F for which protection is requested and upon which he based his Tender. In support of these prices the Contractor shall furnish, either with his Tender or when requested, prior to acceptance, bona vide current merchants quotations.

4.3 Subcontractors

The Contractor may utilize the services of Subcontractors to perform specific portions of the Contract Services up to 50 percent of the Contract as herein described. The Contractor shall list all Subcontractors that he intends to use on this project in Appendix C, along with the specific tasks to be performed. All subcontractors shall be subject to GCC review and approval.

5.0 PERSONNEL

5.1 COMPETENT LABOUR

The Contractor shall use all diligence in arranging for sufficient and competent labour at all times during the term of this Contract. Competent supervisory and managerial staff shall be employed to oversee the Contract operations and to ensure that the services are performed as stipulated in Scope of Contract.

5.2 EMPLOYEE TRAINING

The Contractor shall provide all hired staff with the appropriate training in the use of all equipment, safety gear and uniforms. Training shall include sanitary and environmental practices for handling waste materials.

5.3 WORKMEN'S COMPENSATION

The Contractor shall comply with the Workmen's Compensation Act (CAF 43:1977) and any amendments thereto. The Contractor shall obtain the required insurance from a registered insurer under the Act. Proof of insurance will be a requirement of Contract signing.

5.4 CONDUCT OF CONTRACTOR'S EMPLOYEES

The Contractor shall comply with existing local labor laws, regulations and labor standards.

The Contractor shall formulate and enforce an adequate safety programme with respect to all work under this Contract, whether performed by the Contractors or subcontractors. The Contractor has the assurance from the GCC of cooperation where the implementation of these safety measures requires joint cooperation.

Upon written request of the GCC, the Contractor will remove or replace any of its employees employed under this Contract.

All Contractor and subcontractor employees shall at all times conduct themselves within the laws of Botswana.

6.0 CONDITIONS OF CONTRACT

6.1 ARBITRATION

If any dispute or difference of any kind shall arise between the GCC and the Contractor in connection with or arising out of the Contract or performance of the specified services, it shall in the first place be fully documented in writing and negotiated amongst the two parties. If these negotiations do not produce a settlement within 90 days, from the date of written notice of a dispute or difference by either party, the matter shall be referred to arbitration. The arbitrator shall be selected from a list of arbitrators agreeable to both parties. The matter may be referred to arbitration prior to expiration of 90 days upon mutual consent of both parties.

If the dispute or difference involves payments to the Contractor, only that portion of the payment which is in dispute shall be withheld during the arbitration period and all other payments due the Contractor shall be paid as stipulated under the payment provisions of this document. Submission of a dispute or difference to arbitration shall not relieve the Contractor from his obligations to perform the services as specified herein

The said arbitrator/s shall have full power to open up, review and revise any decision, opinion, any decision, direction, or valuation of either party and neither party shall be limited in the proceedings before the arbitrator to the evidence or arguments for the purpose of obtaining a decision. The decision of the arbitrator shall be binding upon both parties.

6.2 TERMINATION

6.2.1 By GCC for Cause

If at any time during the Contract Term, the Contractor is deemed by law unable to pay his debts or enters into voluntary or involuntary bankruptcy, liquidation or

dissolution, or without reasonable excuse has failed to perform the stipulated services after due notice and reasonable time to correct the area of non-performance, the GCC may, issue a written termination notice, terminating the Contractor.

The termination notice shall stipulate the conditions of termination including the time of termination.

The dispute of any component of the termination notice, or the submission of any dispute to arbitration, shall not relieve the Contractor of his responsibility to perform the collection services during the termination period.

6.2.2 By Contractor for Cause

If at any time during the Contract term, the GCC is unable to make payments to the Contractor or otherwise is unable to perform its obligations under the Contract without cause, after written notice and reasonable time to correct said area of non-performance, the Contractor may upon 14 days written notice, terminate the Contract. Upon termination, the Contractor shall be paid all sums that are payable to him for providing services under the Contract, plus damages suffered by the Contractor due to the premature termination of the Contract.

6.2.3 Termination by GCC for Convenience

If at any time before the completion of the Contract Term, it shall be found by the GCC that for reasons beyond the control of the parties render it impossible or against the interest of the GCC to continue the Contract, the GCC at any time, by 90 day written notice to the Contractor may discontinue work and terminate the Contract in whole or in part. Upon service of such notice of termination, the Contractor shall discontinue to work in such manner, sequence and at such times as the GCC may direct, continuing and doing after said notice only such work and only until such time or times as the GCC may direct. The Contractor shall have no claim for damages for such discontinuance or termination of the Contract but the Contractor shall receive compensation for reasonable expenses incurred in good faith for the performance of the Contract and for reasonable expenses associated with termination of the Contract. The GCC will determine the reasonableness of such expenses. The Contractor shall have no claim for anticipated profits on the work thus terminated, nor any claim, except for the work actually performed at the time of complete discontinuance.

6.3 INDEMNIFICATIONS

The Contractor shall indemnify, protect and save harmless the GCC against all losses and claims for death of or injury to any person, or loss or damage to any property, which may arise out of or in the consequence of the Contractor's performance under this Contract, except those that are due to willful or negligent acts, or omissions by the GCC.

The GCC shall indemnify, protect and save harmless the Contractor against all losses

and claims for death of or personal injury to any person, or loss or damage to any property which may arise out of or in the consequence of the GCC's obligations under this Contract, except those that are due to the willful or negligent acts or omissions of the Contractor.

6.4 GCC REPRESENTATION

The GCC's authorized representative shall be the Town Clerk, who may in whole or in part, delegate such authority to one or more persons appointed to carry out such duties and exercise such authority as may be delegated to them by the Town Clerk. The GCC will inform the Contractor on or before Contract signing the identity of the GCC representatives and will outline their duties and authority to represent the GCC during the term of the Contract.

6.5 NOTICES

All notices, including payment requests, disputes and other correspondence given to the GCC shall be sent by post, facsimile or delivered in person addressed to the City Clerk, Private Bag 0089, Room 66, Gaborone, Botswana.

All notices, or instructions given to the Contractor by the GCC under the terms of the Contract, shall be sent by post, cable, telex or facsimile to or left at the Contractor's principal place of business or other such address as the Contractor shall nominate for that purpose.

6.6 ACCESS TO CONTRACTOR'S FACILITIES AND RECORDS

Upon reasonable notification, the GCC shall have access to the Contractor's offices, maintenance depot, other facilities and records for the purpose of determining the Contractor's compliance with the Contract conditions.

APPENDICES

APPENDIX A - Plans of Pumping Station

APPENDIX B - Form of Tender

APPENDIX C - Subcontractor Declaration

APPENDIX D - Form of Insurance Coverage

APPENDIX E - Form of Agreement

APPENDIX F - Price Fluctuation Clause

APPENDIX A

Plans of Pumping Station

(Under Separate Cover)

APPENDIX B

GABORONE CITY COUNCIL

WASTE OIL COLLECTION AND DISPOSAL

FORM OF TENDER

(Note: Appendices A to F form part of the Form of Tender)

The City Clerk
Gaborone City Council
Private Bag 0089
GABORONE

1. Having examined the Tender Documents including the Scope of Contract, the Appendices and the existing sewage pumping station, which describe the work to be performed under the Waste Oil Collection and Disposal Contract, we offer to perform the Waste Oil Collection and Disposal Services in conformity with the Scope of Contract, and Appendices base on the following Costs:

SERVICE FEE:

For a Service Fee charged to all waste oil generators as compensation for collection and disposal services, per litre of waste oil collected:

_____ (P)
(Service Fee in words)

Note: Attach cost documentation for calculating Service Fee.

**FORM OF TENDER
PAGE 2**

GCC Support of Operation: (Optional)

For financial support of the Waste Oil Collection and Disposal Program the following unit prices per litre of waste oil:

For the first 100 000 litres:

_____ (P)
(Pula in words)

For waste oil collected between 100 000 and 250 000 litres:

_____ (P)
(Pula in words)

For waste oil collected between 250 000 and 500 000 litres:

_____ (P)
(Pula in words)

For waste oil collected in excess of 500 000 litres:

_____ (P)
(Pula in words)

2. We acknowledge that Appendices A to E to the Form of Tender form part of this Tender.
3. We undertake if our Tender is accepted to commence work in accordance with the Scope of Work and the Implementation Schedule.
4. We agree to abide by this Tender for the period of ninety (90) days from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period, or such other extended period that may be agreed between ourselves and the Gaborone City Council.
5. Unless and until a formal Agreement is prepared and executed, this Tender with our written acceptance shall constitute a binding Contract between us, and shall be deemed for all purposes to be the Contract Agreement.
6. We understand that you are not bound to accept the lowest or any Tender you may receive and that you will not defray any expenses incurred by us in tendering.

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**FORM OF TENDER
PAGE 3**

DATED this _____ day of _____ 19 _____

SIGNATURE: _____

(Name of Signatory Printed): _____

In the Capacity of: _____

Duly authorised to sign Tenders for and on behalf of: _____

(Block Capitals)

ADDRESS: _____

(N.B.): Board Resolution authorising signatory must be attached

SIGNATURE OF WITNESS: _____

ADDRESS: _____

NAME OF WITNESS (Printed): _____

OCCUPATION: _____

DATE: _____

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APPENDIX C

SUB-CONTRACTOR DECLARATION

If the Tenderer wishes to sub-contract any portion of the work described in the Scope of Work under any heading, he shall be free to do so but must give full details of the Sub-Contractors he intends to employ for each portion of the Work.

Failure to declare subcontractor information may invalidate the Tender.

1. Portion of the Work: _____

i Sub-contractor: _____

Address: _____

ii Experience in _____

similar work: _____

2. Portion of the Work: _____

i Sub-contractor: _____

Address: _____

ii Experience in _____

Similar Work: _____

3. Portion of Work: _____

i Sub-contractor: _____

Address: _____

ii Experience in _____

Similar Work: _____

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Subcontractor Declaration
Page 2

4. **Portion of the Work:** _____

i **Sub-contractor:** _____

Address: _____

ii **Experience in** _____

similar work: _____

5. **Portion of the Work:** _____

i **Sub-contractor:** _____

Address: _____

ii **Experience in** _____

Similar Work: _____

Signature: _____ **Date:** _____

Name of Signatory: _____

In the Capacity of: _____

Duly Authorized on behalf of: _____

APPENDIX D

FORM OF INSURANCE

The selected Tender shall be required to obtain general liability insurance as a condition of Contract signing within thirty (30) of notice of award. The selected Tenderer shall provide an Insurance Certificate at Contract Signing as proof of insurance coverage for the following amounts:

For liability for bodily injury, including accidental death, Pula 500 000,00 on account of any one occurrence, and Pula 1 000 000,00 aggregate limit.

For liability for property damage, Pula 200 000,00 on account of any one occurrence and Pula 500 000,00 aggregate limit.

An umbrella policy in the amount of Pula 500 000,00 covering underlying policies.

The contractor shall also be required to secure the following insurance:

1. Motor vehicle on equipment and vehicles.
2. Workmen's Compensation Insurance.

APPENDIX E

GABORONE CITY COUNCIL

WASTE OIL COLLECTION AND DISPOSAL

CONTRACT No. _____

FORM OF AGREEMENT

ARTICLE OF AGREEMENT

MADE AND ENTERED INTO BY AND BETWEEN:

THE GABORONE CITY COUNCIL
(hereinafter called the Employer)

of the one part and _____
(hereinafter called the Contractor)

WHEREAS the Employer is desirous to provide private Waste Oil Collection and Disposal Services;

AND has caused documents describing the Waste Oil Collection and Disposal Services to be prepared;

AND WHEREAS the said documents entitled, TENDER FOR WASTE OIL COLLECTION AND DISPOSAL, and consisting of SCOPE OF CONTRACT, Section 1.0 through 6.0 and Appendices A through F;

AND WHEREAS the Contractor has executed by signature the Tender Documents and entered Tender costs to perform the described services on the Form of Tender;

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. For the consideration as stipulated by the Contractor on the Form of Tender, the Contractor will upon and subject to the Conditions annexed hereto, execute and perform the Services in accordance with the above referenced documents.
2. The Employer gives permission to the Contractor to operate a WASTE OIL COLLECTION AND DISPOSAL SERVICE as specified in the Tender Documents and to charge the SERVICE FEE as stipulated in the Form of Tender.
3. The EMPLOYER agrees to pay to the CONTRACTOR the amount stipulated in the Form of Tender for financial support of the WASTE OIL COLLECTION AND DISPOSAL SERVICES.
4. The Term of this Agreement shall be for a period of three (3) years, with adjustment and escalation of the Contract Sum as stipulated in the Tender Documents. This Agreement may be extended beyond the initial three (3) year term at the Employer's option subject to negotiation of the Contract Sum, satisfactory performance by the Contractor and availability of funds.
5. This Agreement may be terminated by the Employer, without notice, for cause as a result of non-performance of this agreement or non-compliance with local or national regulations and by-laws. In the event of Termination for cause, the Contractor shall reimburse the Employer for any reasonable increased costs incurred in arranging for alternate landfill operations services.

6. This Agreement and its performance shall be construed and governed in accordance with the Laws, Acts and Regulations of the Republic of Botswana.

This Agreement represents the entire Agreement of the parties hereto and supersedes all prior negotiations, representations or agreements either written or oral. This Agreement may be amended only in writing signed by both the Employer and the Contractor. This agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

SIGNED BY THE CONTRACTOR: _____

ADDRESS: _____

on this the _____ day of _____ 19 _____

at _____ in the presence of the undersigned witnesses

AS WITNESS:

1. _____ ADDRESS: _____

2. _____ ADDRESS: _____

SIGNED BY THE EMPLOYER: _____
(City Clerk)

on this the _____ day of _____ 19 _____

at _____ in the presence of the undersigned witnesses

AS WITNESS:

1. _____ ADDRESS: _____

2. _____ ADDRESS: _____

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APPENDIX E

PRICE FLUCTUATION CLAUSE

Tenderers are referenced to Sections 4.12 relative to adjustments to the Base Tender Price due to price fluctuations. The Tenderer is to provide below, a list of unit prices used to compile his Tender in respect of which he requires protection due to fluctuations other than Statutory Fluctuations. The list should be as detailed and complete as possible in order for the GCC to evaluate a price fluctuation should it occur.

Item	No. of Units	Unit Price	Total Cost
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Section III
Tender for
Refuse Collection Services,
Gaborone South

GABORONE CITY COUNCIL

GABORONE, BOTSWANA

TENDER

FOR

REFUSE COLLECTION SERVICES

GABORONE SOUTH

ISSUED 18 AUGUST 1993

TENDER NUMBER _____

This Tender Document contains 21 pages of text and the following Appendices:

Appendix A - 1 page

Appendix B - 1 page

Appendix C - 25 pages

Appendix D - 4 pages

Appendix E - 2 pages

Appendix F - 1 page

Appendix G - 1 page

Appendix H - 1 page

Appendix I - 2 pages

Appendix J - X pages

Appendix K - 2 drawings

FINAL DRAFT - 10 AUG 93

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GABORONE CITY COUNCIL
TENDER
FOR
REFUSE COLLECTION SERVICES
GABORONE SOUTH
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APPENDIX G - Form of Intent for Performance Bond

APPENDIX H - Form of Performance Bond

APPENDIX I - Form of Agreement

APPENDIX J - Form of Lease Agreement

APPENDIX K - Street Maps

DEFINITIONS

In the Contract and Tender Documents, as herein defined, the following definitions shall apply:

- "Tenderer" shall mean the person or firm who takes Tender Documents prepared by the GCC for the purpose of preparing a Tender to perform the services described therein.
- "Contractor" shall mean the person or firm whose Tender for the stipulated services has been accepted by the GCC.
- "Service Area" shall mean the geographic area known as Gaborone South and further described in the Tender Documents.
- "Refuse" shall mean solid waste generated by residential, commercial and industrial waste generators which shall not contain significant amounts of other wastes as herein defined.
- "Medical Waste" shall mean wastes generated by hospitals, clinics, nursing homes, doctor's offices, medical laboratories, research facilities, and veterinarians which are infectious or potentially infectious.
- "Hazardous Waste" shall mean waste which by reason of its chemical reactivity, toxic, explosive, corrosive or other characteristics, causing danger or likely to cause danger to human beings or the environment, whether alone or in combination with other wastes.
- "Construction Waste" shall mean wastes of an inert nature resulting from the demolition of structures or in the construction of structures. These include stones, earth, masonry, concrete, unpainted wood, and similar solid material.
- "Yard Wastes" shall mean brush, grass cuttings, soil, leaves, clean wood, garden waste or other similar solid material.
- "Special Wastes" shall mean wastes, which due to their nature require special or separate handling and disposal practices, including but not limited to tires, motor oil and bulky waste items.
- "Recycling" shall mean the separating, processing and marketing of discarded materials which can be reused to produce another usable product.

- "Bin"** shall mean a receptacle intended for the storage and transfer of refuse, of various sizes up to 210 litres, suitable to be handled by manual labor.
- "Skip"** shall mean a receptacle intended for the storage and transfer of refuse, of various sizes greater than 210 litres, which requires mechanical equipment to empty into a refuse collection vehicle.

ABBREVIATIONS

- "GOB"** shall mean the Government of Botswana.
- "GCC"** shall mean the Gaborone City Council.
- "USAID"** shall mean the United States Agency of International Development.
- "ICMA"** shall mean the International City Management Association.
- "BHC"** shall mean the Botswana Housing Corporation.
- "VDC"** shall mean the Village Development Committee.
- "CMT"** shall mean Cubic Metres

1.0 CONDITIONS OF TENDER AND INSTRUCTIONS TO TENDERERS

1.1 GENERAL

Tenders from prequalified Tenderers are invited by the Gaborone City Council (GCC) for the collection and transportation of refuse from residences, businesses, Government Offices and public bins in Gaborone South. The selected Contractor shall perform the services as herein described.

All interested Tenderers shall complete and submit two (2) copies of the attached Tender Form and related documents to: City Clerk's Office, Private Bag 0089, Room 66, Civic Center, Independence Avenue, Gaborone, Botswana, prior to 4:00 pm local time, on the first (1) day of October 1993, at which time the Tenders will be publicly opened and read aloud.

Tender documents shall be enclosed in a plain sealed envelope clearly marked: **TENDER NO. _____ REFUSE COLLECTION SERVICES**

All mailed Tenders should be sent by registered post to ensure delivery. Telephone, telegraph, telex or facsimile Tenders will not be accepted.

All Tenderers shall provide a detailed statement of qualifications, including a list of references. Particular emphasis will be put on solid waste handling experience, carting or trucking experience, organizational ability, existing equipment and business background.

Each Tender must be accompanied by a Tender Surety, in favor of the GCC, issued by an approved Insurance Company or Bank in the amount of P10 000.

The GCC may conduct personal interviews with selected Tenderers. The GCC expects that Tenderers selected for interviews will make available key personnel proposed to work on this project available for such interviews.

1.2 TENDER PERIOD

The Tender shall remain valid for ninety (90) days from the final date for submission of Tenders stipulated above.

The GCC shall notify the accepted Tenderer (if any) of such acceptance by letter written within the stipulated ninety (90) day Tender Period or such extension of the Tender Period as mutually agreed to by the GCC and Tenderers and said Tenderer shall execute the formal contract within thirty (30) of said acceptance letter.

The GCC shall not be bound to accept the lowest or any Tender or to assign any reason for its acceptance or rejection of any Tender and in no case shall any Tenderer be paid for any expense incurred in the preparation of this Tender.

1.3 PRE-TENDER MEETING

A Pre-Tender meeting will be held at 9:00 am on 20 August 1993 for the purpose of reviewing the Tender Documents and answering any questions from Tenders regarding the Scope of Work or any other aspect of the Refuse Collection Programme.

1.4 REPRESENTATION OR INTERPRETATION OF DOCUMENTS

Representation or interpretation of Tender Documents shall be done in writing by the GCC. If during the Tendering period, subsequent to the Pre-Tender Meeting, the GCC makes an interpretation, clarification or change in the Tender Documents, the GCC will issue a letter to all Tenderers explaining the interpretation, clarification or change. The Tenderer shall acknowledge the receipt of such letter in his submitted Tender.

1.5 REQUIRED TENDER INFORMATION

Each Tender shall contain the following information:

1. Tender's Company name, address, telephone number, and contact individual,
2. Completed Tender form(s)
3. Tender Surety
4. Statement of qualifications and list of references
5. Description of proposed equipment
6. Procedures for skip placement and collection
7. Procedures for collection in Old Naledi
8. Implementation Schedule,
9. Subcontractor Declaration.
10. Form of Intent for Performance Bond

1.6 SIGNATORY REQUIREMENTS

Each Tender shall be accompanied by an original cover letter committing the Tenderer, if selected, to carrying out the proposed work at the Tender price. This price is to be valid for ninety (90) days from the date of the Tender. It must further state that all information submitted in support of the proposal is accurate. The cover letter must contain the signature of a person authorized to commit the firm(s) to a Contract.

All forms requiring signatures shall be signed by the same individuals signing the cover letter.

1.7 PUBLIC POLICY

It is the policy of GCC that during the performance of this Contract, the Contractor will not discriminate against any employee or applicant for employment because of

age, race, creed, colour, national origin, ancestry, marital status or sex.

1.8 PROOF OF GENERAL LIABILITY INSURANCE

The selected Tenderer will be required to obtain Liability Insurance of the Limits and conditions stated in Appendix F. Proof of insurance in the form of a Certificate of Insurance will be required within 30 days of the notice of acceptance and prior to Contract signing.

1.9 PERFORMANCE BOND REQUIREMENTS

A Performance Bond, in the amount of 10% of the base Tender price, shall be required of the successful Tenderer in the form stipulated in Appendix H, executed by a surety company duly authorized to do business in the Republic of Botswana. The Tender Documents shall include an Intent for Performance Bond as included in Appendix G.

The Performance Bond shall be executed for the first year of the Contract and shall be a condition precedent to the execution of any Contract and any renewal thereof. A Performance Bond shall be renewed annually for the work performed in the 2nd and 3rd years, increased accordingly. The Performance Bond shall be in the amount of ten (10) percent of the yearly total sum.

The Performance Bond shall be furnished within thirty (30) days, after the date of notification to the selected Tenderer by GCC and his acceptance of the Tender and prior to Contract signing.

1.10 TENDERER RESPONSIBLE TO LEARN LOCAL CONDITION

All Tenderers submitting Tenders for this programme are cautioned to examine carefully the conditions affecting the collection and transportation of refuse, and to acquaint themselves with the quantity and character of the materials to be handled under this programme.

Each Tenderer is also cautioned to become fully familiar with each Extension, and all the physical characteristics of that Extension which may affect the Tender and all services stipulated herein.

Submission of a Tender shall be deemed conclusive evidence that the Tenderer is fully acquainted with and shall be fully responsible for any restrictions, constraints or any physical difficulties within Gaborone South, as defined, including the disposal site to which all refuse shall be collected and delivered.

All Tenderers interested in submitting Tenders for this Contract are encouraged to submit alternate Tenders where appropriate that achieve the same goals and results identified by GCC, its staff and its consultants.

2.0 BACKGROUND

The City of Gaborone, Republic of Botswana is undergoing rapid growth in both economic activity and population. This situation is having a significant impact on the delivery of public services, and on public facilities.

In addition, public management of these services cannot keep pace with the urbanization of the population, and complex environmental problems associated with rapid growth and changing socio-economic conditions.

Recognizing these issues and their potential impact on its population, the Gaborone City Council (GCC) developed a solid waste management strategy in cooperation with the International City Managers Association (ICMA), with financial assistance provided by the United States Agency for International Development (USAID).

The solid waste management programme was developed over a two year period involving two phases.

Phase I, conducted in 1991, examined GCC's refuse collection and transport services, disposal and landfill operations. A detailed review and assessment of existing conditions was conducted and presented to a Steering Committee, that provided feedback on alternatives and recommendations that were developed for consideration by the GCC. The Steering Committee is composed of representatives from GCC and Central Government.

One of the recommendations considered and approved by GCC was the privatization of refuse collection services for the Gaborone South area of the City of Gaborone.

Phase II of GCC's management plan is the implementation of these services through public Tender, public awareness and education, and on-going programme evaluation and monitoring.

3.0 DESCRIPTION OF GABORONE SOUTH & CURRENT SERVICES

3.1 SERVICE AREA

For the purposes of this Tender, Gaborone South includes eighteen (18) Extensions, and is defined as that portion of the City of Gaborone bounded as follows:

The western boundary is Nkrumah Road, running parallel to the Railway Reserve, and extending southward to include all of Naledi Extension, and both sides of Machel Drive, Mobuto Drive, and then north to Nyerere Drive, including Metsemasweu Road and Maruapula, to Nelson Mandela Drive south, including Khama Crescent and the Mall.

Extension areas within the Contract service area include:

1 - Mmaraka	2 - Selebela
3 - Borakanelo	4 - Dilalelo
5 - Botswelole	6 - Madirelo
7 - Sekgwa	8 - Bontleng
9 - Phologolo	10 - Boitshoko
11 - Madibeng	12 - Mephato
13 - Naledi	14 - Babusi
Extension 15	Extension 39
The Village	The Township - Badiri

Detailed maps of Gaborone South are provided in Appendix A. These include:

- 1) The East Sheet Gaborone Street Names and Plot Numbers
- 2) The West Sheet Gaborone Street Names and Plot Numbers.

In Gaborone South there are an estimated:

6,158 residential plots with 7,950 residential housing units, consisting of both single family and multi-level flats;

292 commercial - retail plots with 522 different businesses;

96 Government plots consisting of clinics, health centre, hospital, police offices, Government facilities and offices;

18 schools consisting of public and private, primary, secondary, training centres, technical centres, and the University.

In addition to the above, street vendors and takeaway caravans, providing a variety of goods and services are located throughout Gaborone South.

3.2 EXISTING LEVEL OF SERVICE

The GCC provides refuse collection services to businesses, homes, Government Offices and Schools in Gaborone South. This service includes the collection of bins and skips.

3.2.1 Residential Areas & Old Naledi

Residential plots in 15 Extensions, which includes Old Naledi are serviced with twice per week collection of residential bins.

The GCC refuse collection crews enter individual plots in order to carry individual household refuse bins to the collection vehicle for emptying the bins, and place the emptied bins at curbside. The homeowner is responsible for returning the bin(s) to his/her respective plot.

In Old Naledi, curbside refuse collection is also provided and this area is serviced with twice per week collection.

At multi-flat housing plots with central refuse collection areas, the GCC crews service only the refuse collection storage areas.

3.2.2 Commercial & Government Plots

The GCC services all commercial, retail and Government Office refuse bins with twice per week refuse collection.

The GCC also provides, maintains, and services daily 13 tractor hauled skips located at the following plots in Gaborone South:

- Princess Marina Hospital - 2 skips
- National Health Institute - 1 skip
- University of Botswana - 1 skip
- Botswana Institute of Administration and Commerce - 1 skip
- Abattoir - 1 skip
- Gaborone Station - 4 skips
- Botswana Breweries - 1 skip
- African Mall - 1 skip.

The GCC also provides, maintains and services on alternative days 16 tractor hauled skips located at the following plots in Gaborone South:

- Extension 2, Tsholetsa - 1 skip
- National Assembly - 1 skip
- Police Headquarters - 1 skip
- Extension 7 Mall - 1 skip
- Extension 12 Mall - 1 skip
- Extension 12, Health Centre - 1 skip
- Extension 15 - Village Mall - 1 skip
- Extension 4 Mall - 1 skip
- Extension 2, Taxi Rank - 1 skip
- Extension 13 Mall - 1 skip
- Extension 13, Jwaneng - 1 skip
- Extension 15, Gaborone Club - 1 skip
- Extension 14 Mall - 2 skips
- Extension 14 RM Stores - 1 skip
- Extension 6, Dulux Paint - 1 skip.

In addition to the above, GCC services approximately 65 public refuse bins daily. These bins are located along public streets and walkways located throughout Gaborone South.

3.3 SOLID WASTE GENERATION

Based on previous studies and field observations, the City of Gaborone generates approximately 80 tonnes of refuse daily. It is estimated that Gaborone South generates approximately 40-50 tonnes of refuse per day. This includes both household generated refuse and that from commercial and retail sources.

Only household refuse and refuse from commercial-retail activities and Government offices will be included in this Tender. Refuse covered under this contractor will "not" include Special Wastes or any liquid wastes. As stipulated later in this document, small amounts of Medical Wastes and household generated Hazardous waste will be included as Refuse under this Contract.

3.4 RECYCLING

The GCC endorses the concept of recycling and will promote and encourage recycling through its public education efforts and the private sector.

3.4.1 Existing Recycling Efforts

Materials currently being recycled in Gaborone include: corrugated cardboard, mixed office papers, newsprint and plastic film by Waste Paper Recovery; beverage and food tins by Metal Box; returnable (deposit) bottles and plastic litre containers by Kgalagadi Breweries; and co-mingled glass bottles by Skip Hire.

For the purpose of this Tender, GCC intends to support existing recycling efforts by eliminating these items from this Tender Document where these items are currently separated at the source of generation.

To the extent that recyclable materials are separated at the source of generation, these materials shall not be considered as refuse and are not included in the collection contract. These materials include cardboard, paper and plastic film placed in storage cages and glass containers placed in storage bins.

To the extent that recycled materials are mixed with other refuse at the point of generation, they shall be considered refuse and are to be included in the collection contract.

The contractor is urged to cooperate with existing recycling businesses in order to increase the quantity and quality of the materials being recycled.

4.0 SCOPE OF CONTRACT

Interested Tenderers may submit Tenders on the attached forms for refuse collection and transport to the GCC landfill with two alternatives as follows:

Alternative 1: Leased Vehicles From GCC

GCC procures refuse collection equipment and vehicles, retains ownership and leases said collection equipment and vehicles to the contractor. The Contractor shall maintain and operate the collection equipment and vehicles in accordance with Form of Lease Agreement, Appendix J, to be negotiated between the Contractor and the GCC.

Alternative 2: Contractor Owned Vehicles

The Contractor shall provide his/her own refuse collection equipment and collection vehicles, of sufficient size and quantity to perform the collection services as specified herein.

The Contractor will be paid for his services based on the Base Tender Price and unit prices as defined in the Form of Tender. The Base Tender Price shall include all costs associated with the collection of refuse in Gaborone South, including servicing all residential, commercial and office bins and skips. The Tenderer is referred to Section 4.12.3 and Appendix A regarding fluctuation of the Base Tender Price.

4.1 LENGTH OF CONTRACT AND RENEWALS

The GCC is seeking a three (3) year operating contract, which may be renewed up to a maximum of three (3) additional years at the sole discretion of the GCC.

4.2 CONTRACTOR RESPONSIBILITIES

4.2.1 Collection Schedules & Routes

Each Tenderer is responsible for determining the most cost effective logistics and routes, on an Extension by Extension basis for the curbside collection of residential refuse and servicing commercial-retail-public bins and skips, transportation, and disposal at the new landfill facility.

The proposed routes and schedules for the collection of refuse are those that are presently served with curbside collection of refuse within the eighteen (18) Extensions of Gaborone South. Appendix B lists current collection schedules.

The Contractor shall provide GCC with a detailed description of collection routes and schedules within thirty (30) days after receipt of notice to proceed by GCC.

The GCC reserves the right to negotiate, establish and reschedule routes with the Contractor in the interests of programme costs, efficiency and general public interests.

Plot locations and street names can be located on either of the two maps: East Sheet Gaborone Street Names and Plot Numbers, and West Sheet Gaborone Street Names and Plot Numbers, provided in Appendix K.

4.2.2 Drivers

The Contractor is responsible for ensuring that all drivers are of a sober persuasion, licensed and trained in the use of the collection vehicles, and that all loads being transported comply with all local acts, bye-laws and regulations.

4.2.3 Operational Costs

Each Tenderer is responsible for including all fuel, insurance, vehicle maintenance and spare parts replacement, labour, uniforms, and all related costs in their respective Tenders.

4.2.4 Hot Loads

The Contractor shall develop, in conjunction with GCC and the landfill operator, procedures for dealing with potential hot loads on vehicles.

4.2.5 Replacement of Bins with Skips

The Phase I report concluded that the current system of using multiple bins for industrial, commercial and office plots is inefficient and should be replaced with skips. The use of skips in lieu of multiple bins will increase collection efficiency, reduce collection frequency and reduce litter in collection areas due to spillage from animals or lack of adequate bin capacity. This Contract for collection services includes the transition from bins to skips in the above mentioned areas. New skips will be provided by either the GCC, under Alternative 1 or the Contractor under Alternative 2.

Under either alternatives the Contractor shall be responsible for transporting and placing the skips at locations to be mutually agreed upon by the Contractor and the GCC. The Contractor will be paid a unit cost for transporting and placement of skips.

A description of each extension and the recommended placement of new skips is included in Appendix C. The skip and bin placements included in Appendix C are recommendations only and are not binding upon the Contractor and each Tenderer is required to make his own evaluation of each extension and determine where the placement of skips is required to meet the objectives of this Tender.

Each Tenderer shall include with their Tender documents, their proposed plan for the transition from bins to skips in the industrial, commercial and office areas within the service area. This shall clearly state the approximate number of skips the Tenderer intends to place and service in order to establish the level of service in the unit Tender Price for placement of skips as stipulated in the Form of Tender.

Although not a requirement under this Tender request, Tenderers are also encouraged to consider the use of skips in lieu of multiple bins at BHC multi-family housing plots, in order to increase efficiency and decrease litter. Each multi-family facility includes a central collection location with multiple bins. The Contractor shall negotiate

with the BHC for converting collection to skips for each BHC facility. All bins that are eliminated by this transition shall be returned to the BHC.

4.2.6 Public Education

The Contractor shall be responsible for developing and implementing all publicity and public education materials for the intended programmes. This shall include, but not be limited to the following:

1. A printed notice delivered to each plot owner in the Service Area, advising him of changeover from public to private collection, acceptable materials, the approved schedule of collections in each extension, acceptable container requirements and the phone number of the Contractor's central office where questions and complaints may be directed. Copies of the notice shall also be posted at public bulletin boards and other public places. Said notice shall be delivered to the service area plots and posted at least two (2) weeks prior to the implementation of waste collection services in that extension. The GCC shall review and approve the notice before it is printed.
2. The Contractor shall make arrangements for the above notice to be published in all local newspapers as a block advertisement at least two (2) weeks prior to implementing the program.
3. A Contractor's representative shall visit each commercial and office establishment in the Service area and assess their waste needs and advise them of times and methods of collection including any proposed conversion of bins to skips.
4. The Contractor or his representative shall be available to speak at public forums regarding the new collection programme and its impacts on plot owners.

All of the Contractor's personnel associated with this programme will be required to be familiar with all aspects of said programme for their respective routes and overall programme goals. Each vehicle shall carry additional copies of the above referenced notice for distribution throughout the Contract term.

The Tenderer shall enter his cost to perform the Education Program in the appropriate space on the Form of Tender.

4.2.7 Complaints

The Contractor shall maintain a daily log of all complaints and information calls regarding contractor service. A copy of the log shall be sent to the GCC every two weeks and the log shall be available for GCC review at all times.

The Contractor shall respond to any and all complaints within eight (8) hours of receipt of said complaint(s) and enter the respective response in the complaint log.

Persistent failure of the Contractor to address complaints of substandard service or requests for information, or evidence that the Contractor has falsified the complaint log, may result in withholding of payments from the Contractor or other disciplinary action.

4.2.8 Subcontractors

The Contractor may utilize the services of a Subcontractor to perform specific portions of the collection services up to a maximum of 50% of the Contracts Services, as herein described. The Contractor shall list all Subcontractors that he intends to use on this project in Appendix E along with the specific task to be performed. All subcontractors shall be subject to GCC review and approval.

4.3 CONTRACTOR'S OFFICE & HOURS OF OPERATION

4.3.1 Office

The Contractor shall maintain and staff a central office and appropriate maintenance facilities within the Gaborone City limits, with radio dispatch capability that comply with all applicable acts, bye-laws and regulations established by the GOB. Said office(s) will be open for business from 7:30 am - 4:30 pm, Mondays through Saturdays, holidays excluded, to coordinate collection activities and to take complaints and/or information calls.

The Contractor may consider the lease of a portion of the existing office and maintenance areas at the Gaborone South Depot in West Gaborone.

4.3.2 Times of Operation

The Contractor shall not service commercial, retail and public skips earlier than 4:00 am on any day of operation, unless prior approval has been provided by GCC.

The Contractor shall not service residential areas earlier than 6:00 am on any day of operation.

In general, the times of collection shall include Monday through Sunday, including holidays.

4.4 LANDFILL DISPOSAL & HOURS OF OPERATION

The Contractor shall have access to the GCC landfill only during normal business hours. These are: Monday - Sunday, 7:30 am - 6:00 pm, including all holidays.

The Contractor shall comply with all applicable rules and regulations established by the landfill Operator.

4.5 LANDFILL DISPOSAL FEES

Any and all landfill tipping fees that may be subsequently developed by GCC shall be the sole responsibility of GCC.

4.6 CURBSIDE COLLECTION OF RESIDENTIAL REFUSE

4.6.1 General

The Contractor shall provide all residential plots and flats with twice per week refuse collection services.

The Contractor's collection crew shall enter each residential plot in order to carry bins to the curbside for emptying into the collection vehicle, and said crews shall place the empty bins at the curbside in front of the plot.

The homeowner is responsible for returning the bin(s) to the plot where the bins are normally stored.

All multi-family housing units have central refuse collection areas and generally are accessible with collection vehicles. At all multi-family housing locations, the Contractor shall access the plot to either empty bins or remove bins for emptying into the collection vehicle and return said bins to the central collection area.

The homeowner is responsible for providing adequate bin capacity for the refuse being collected twice per week, and securing the bins from tipping by animals. The Contractor shall be responsible for collecting refuse that is contained in refuse bins. Any refuse that has been placed on the ground, or spilled from overflowing or overturned bins shall be the homeowner's responsibility.

4.6.2 Extension 13 - Old Naledi

Old Naledi has been a difficult area to provide collection services to in the past. The following description of services is to serve as a general guide to Tenderers in preparing their Tender. However, the GCC urges all prospective Tenderers to evaluate the services required and propose alternatives which meet the collection goals stated above, while maximizing the contractor's equipment and resources.

The Tenderer shall service the nine sections of Old Naledi with twice per week refuse collection using tractor hauled skips or other vehicles suited to Old Naledi's narrow and inconsistent street pattern. The collection crews shall remove bins from individual plots and empty the bins into the skips, and leave the empty bin on the roadside for the homeowner to return to his/her plot.

The Tenderer is urged to consult with the Village Development Committee (VDC) in developing a collection programme for Old Naledi. A representative of the VDC will be invited to participate in the Pre-Tender Meeting.

All Tenderers shall present their plan for collecting waste in Old Naledi in the Tender Documents.

4.7 COMMERCIAL & GOVERNMENT OFFICES COLLECTION

4.7.1 General

As previously mentioned, all Tenderers should note that the daily storage capacity for refuse generated by commercial and retail activities, and Government Offices in Gaborone South is insufficient to meet existing and anticipated needs.

This situation necessitates daily refuse collection in most areas of Gaborone South, placing enormous pressure on collection activities, and contributing to collection problems and litter.

Recognizing this, GCC has recommended the use of skips in place of bins, where deemed appropriate, for all commercial and retail businesses, and Government offices in Extensions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 39, the Village and Township areas.

4.7.2 Skips

The GCC staff and consultants have recommended an initial need to provide an estimated 285 skips for the proposed collection programme. These skips range in size from 4.58 cubic metres (cm) to 6.11 cm. All skips are to be supplied with metal or plastic molded covers to control vectors and minimize potential health issues. Drain holes shall also be located in the bottom of the skips.

As previously stated in Section 4.2.5, the Contractor shall work with GCC in developing the change over programme from bins to skips, assist GCC in identifying suitable locations for skips in Gaborone South, transport skips to approved locations, and maintain said skips during the term of the Contract.

All skips shall be compatible with mechanical rearloading and/or dumping mechanisms on the refuse collection vehicles.

Under Alternate 1, the GCC will lease collection vehicles and skips to the Contractor in accordance with the Lease Agreement. The Contractor will be paid a unit cost per skip for transporting and placing skips at the locations to be mutually agreed upon by the Contractor and the GCC. At the appropriate place in the Form of Tender, each Tenderer shall enter the number of skips he proposes to utilize and the unit price Tender for transporting and placing GCC leased skips.

Under Alternate 2, the Contractor will supply, transport and place the number of skips stipulated in his Tender. The Contractor will be paid the unit cost stipulated in the Form of Tender for providing skips.

Under either alternative, the Contractor shall be responsible for maintenance and repair of all skips. At the conclusion of the Contract Term or upon termination of the Contract for any reason, all skips will become the property of the GCC.

4.7.3 Medical Wastes

GCC clinics, the Health Centre and Princess Marina Hospital shall be supplied with skips for general refuse only. These facilities currently separate their infectious wastes and provide their own on-site disposal.

As previously stated in the definition of Refuse, all non-separated medical wastes from doctors offices, laboratories, veterinarians and other generators of medical wastes shall be handled as refuse until bye-laws governing their handling and disposal are approved and implemented. Until the bye-laws are enacted, the Contractor is urged to identify all medical waste generators within the service area and take whatever precautions are necessary to identify these wastes and protect his workers from injury.

4.7.4 Frequency of Service

For the purposes of this Tender, all Tenderers should anticipate servicing these skips at least twice per week. This frequency may be increased or decreased at a later date by GCC, depending upon the volume of refuse generated at each skip location.

4.8 PRIVATE SKIP OPERATIONS IN GABORONE SOUTH

Those businesses in Gaborone presently serviced by private skip operators are exempt from this Tender, but may elect to become part of the programme at their option.

4.9 SPILLAGE OF REFUSE

The Contractor shall be responsible for cleaning up any spillage that results from carrying, or otherwise moving bins and/or skips during Contract operations.

The Contractor shall not be responsible for refuse placed on the ground due to inadequate bin capacity or bins overturned by animals. Individual plot owners or occupants shall be responsible for providing adequate refuse container capacity. Approved containers shall include metal or plastic refuse bins, heavy duty plastic bags, or other suitable containers. The Contractor shall report residential and/or commercial plots that do not have adequate refuse storage capacity to GCC. If the plot is a BHC flat or SHHA area, the report shall be given to the appropriate BHC office responsible for providing bins to their plots. If the inadequate storage capacity is a private plot, the Contractor shall advise the plot owner of his responsibility to provide adequate refuse storage capacity. Repeated failure of a private homeowner to provide adequate refuse storage capacity shall be reported to the bye-law enforcement office.

4.10 BIN COLLECTION FROM PUBLIC AREAS

The GCC proposes to increase the number of public bins from its present level of approximately 65 bins in Gaborone South by approximately 250 new bins, providing a total of 315 public bins for Gaborone South.

The distribution of these bins will be in commercial - retail shopping areas, public parks and walkways.

Where public bins are within 10 metres of a public road, the Contractor is responsible for servicing public bins on the day that residential or commercial collection occurs in that extension.

Where public bins are not accessible from public roads, the GCC street sweeping and litter staff shall be responsible for servicing the bin(s) and/or transferring refuse from the bin(s) to the nearest skip.

Appendix C provides a list of recommended locations for all new skips and public bins and a brief description of each Extension. Placement of public bins will be the responsibility of the GCC.

4.11 IMPLEMENTATION SCHEDULE

Each Tenderer shall include an implementation schedule with the Tender Documents. The GCC realizes the need to order and receive new equipment and hire employees. Evaluation and placement of new skips will also be an important time factor.

The Implementation Schedule shall include but not be limited to the following items:

1. Sign Contract and provide required bonding and proof of insurance within 30 days of notice and acceptance of award by the Contractor.
2. Order and receipt of collection trucks, skips and other equipment.
3. Establish office and maintenance facilities.
4. Hire employees.
5. Initiate Educational Program.
5. Phased implementation of collection within the Service Area.
7. The GCC anticipates full implementation of collection services within 120 days of the Contract signing.

4.12 PAYMENTS

4.12.1 General

The Contractor shall submit Payment Requests on the last working day of the month for services performed during that month. Payment shall be due and payable 15 days thereafter. The amount of the monthly payment will be computed based on the Base Tender Price entered on the Tender Form or as adjusted due to price fluctuations, divided by twelve (12), plus any unit prices for the educational program and providing and placing skips that may apply during the preceding month.

The GCC may withhold any amount as a result of non-performance of the collection services as herein described.

Payments will be made during the implementation period based on the negotiated percentage of the Service Area that was serviced during that month of operation. The percentage will be based on the number of housing plots serviced in each extension as compared to the total number of housing plots within the Service Area.

4.12.2 Price Fluctuation Clause

Due to the length of this Contract, the Contractor shall be entitled to an adjustment of the Base Tender price due to Statutory Fluctuations of any material or labor cost as a result of Customs Duty, Tax, Currency Exchange Rates, Minimum Labour Rates or any other governmental action, which shall occur after seven (7) days preceding the date of Tender. Price adjustments due to Statutory Fluctuations shall not include overhead or profit and will be considered only when fully documented.

If the Tenderer wishes to be protected against price fluctuations other than due to Statutory Fluctuations, he shall list those prices in Appendix A for which protection is requested and upon which he based his Tender. In support of these prices the Contractor shall furnish, either with his Tender or when requested prior to acceptance, bona vide current merchants quotations.

4.12.3 Uncontrollable Events

If the Contractor is unable to perform his responsibility under the conditions of the Contract due to circumstances beyond his control, which results in increased cost to the Contractor for overtime or work on weekends, or other increased costs, the Contractor shall be reimbursed for said additional cost. If the Contractor experiences an unforeseen and uncontrollable circumstance he shall give immediate notice to the GCC, prior to incurring any additional cost, who shall review the notice and, direct the Contractor accordingly.

5.0 REFUSE COLLECTION VEHICLES AND EQUIPMENT

5.1 NEW VEHICLES

The GCC may, under Tender Alternative 1, provide on a leased basis to the selected Contractor the following new solid waste collection equipment:

Three (3) new 19.0 - 20.5 cubic metre (CMT) rear load compaction bodies, mounted on appropriate chassis, which are serviceable in Gaborone. These units are also capable of handling 4.58 CMT - 7.64 CMT refuse skips.

Two (2) tractors capable of hauling skip trailers,

One hundred and fifty (150) skips, 6.11 CMT size,

One hundred and thirtyfive (135) skips, 4.85 CMT size

One (1) 2x4 pick-up vehicle for supervisory personnel.

The four compaction vehicles, two tractors, pick-up truck and skips, shall be used exclusively for refuse collection in Gaborone South, unless otherwise approved by GCC.

The collection vehicles, tractors and pick-up truck shall be equipped with radios to allow communication between each vehicle and the contractor's office. All communication equipment shall be supplied by the Contractor and conform to all applicable laws and regulations governing such equipment in Botswana.

5.2 USED VEHICLES

All Tenderers shall also have the option under Alternative One of leasing existed used vehicles from the GCC. Tenderers are advised that these trucks cannot service skips and will be considered for lease only if combined with at least one additional truck capable of servicing skips. If the Tenderer wishes to consider this option he shall contact the GCC for a list of existing Vehicles available for lease under this Contract.

5.3 STANDBY EQUIPMENT

The Contractor shall be responsible for arranging for standby equipment and vehicles in the event that the primary vehicles are removed from service for extended maintenance or repairs. The Contractor shall schedule his maintenance and repair of vehicles so as not to interrupt the collection of refuse.

5.4 TENDER REQUIREMENTS

All tenderers shall be responsible for evaluating all information regarding the leasing of vehicles including all capital and maintenance costs and selecting the appropriate

equipment and procurement method that will meet the goals and objectives of this contract.

In addition to entering the base price in the Tender Form, each Tenderer shall clearly state the type and number of vehicles they wish to lease from the GCC along with the assumed conditions as stipulated in the Form of Lease Agreement found in Appendix J. Upon selection of the Contractor, the GCC will negotiate final terms of the lease agreement.

5.5 EQUIPMENT MAINTENANCE

The Contractor shall maintain and operate according to manufacturer specifications all leased collection vehicles, provided and owned by GCC. The Contractor shall also be solely responsible for annual registration of collection vehicles and terms as outlined in the Lease Agreement to be negotiated with the GCC.

The Contractor shall be required by GCC to develop a preventive maintenance policy and service schedule for all equipment and vehicles, and be responsible for all maintenance and timely repairs.

5.6 SKIP MAINTENANCE

All skips provided either by GCC or the Contractor for this programme shall be included by the Contractor in the aforementioned preventive maintenance programme.

6.0 PERSONNEL

6.1 COMPETENT LABOUR

The Contractor shall use all diligence in arranging for sufficient and competent labour at all times during the term of this Contract. Competent supervisory and managerial staff shall be employed to oversee the Contract operations and to ensure that the services are performed as stipulated in Scope of Contract.

6.2 RECRUITMENT OF GCC LABOUR

The GCC shall require that the Contractor provide employment opportunities, to those GCC staff currently employed by the GCC that may be displaced as a result of this privatization project.

6.3 EMPLOYEE TRAINING

The Contractor shall provide all hired staff with the appropriate training in the use of all equipment, safety gear and uniforms. Training shall include sanitary and environmental practices for handling waste materials.

6.4 EMPLOYEE APPEARANCE

The Contractor personnel shall be representing GCC and the proposed programme. As such, they shall be neatly dressed, well-groomed, courteous, and knowledgeable about the programme. All collection workers shall wear uniforms, dissimilar to existing GCC uniforms, bearing the name or logo of the Contractor.

6.5 WORKMEN'S COMPENSATION

The Contractor shall comply with the Workmen's Compensation Act (CAP 43:1977) and any amendments thereto. The Contractor shall obtain the required insurance from a registered insurer under the Act. Proof of insurance will be a requirement of Contract signing.

6.6 CONDUCT OF CONTRACTOR'S EMPLOYEES

The Contractor shall comply with existing local labor laws, regulations and labor standards.

The Contractor shall formulate and enforce an adequate safety programme with respect to all work under this Contract, whether performed by the Contractors or subcontractors. The Contractor has the assurance from the GCC of cooperation where the implementation of these safety measures requires joint cooperation.

Upon written request of the GCC, the Contractor will remove or replace any of its employees employed under this Contract.

All Contractor and subcontractor employees shall at all times conduct themselves within the laws of Botswana.

7.0 CONDITIONS OF CONTRACT

7.1 ARBITRATION

If any dispute or difference of any kind shall arise between the GCC and the Contractor in connection with or arising out of the Contract or performance of the specified services, it shall in the first place be fully documented in writing and negotiated amongst the two parties. If these negotiations do not produce a settlement within 90 days, from the date of written notice of a dispute or difference by either party, the matter shall be referred to arbitration. An arbitrator will be selected from a list of candidates agreeable to both parties. The matter may be referred to arbitration prior to expiration of 90 days upon mutual consent of both parties.

If the dispute or difference involves payments to the Contractor, only that portion of the payment which is in dispute shall be withheld during the arbitration period and all other payments due the Contractor shall be paid as stipulated under the payment provisions of this document. Submission of a dispute or difference to arbitration shall

not relieve the Contractor from his obligations to perform the services as specified herein.

The said arbitrator/s shall have full power to open up, review and revise any decision, opinion, any decision, direction, or valuation of either party and neither party shall be limited in the proceedings before the arbitrator to the evidence or arguments for the purpose of obtaining a decision. The decision of the arbitrator shall be binding upon both parties.

7.2 TERMINATION

7.2.1 By GCC for Cause

If at any time during the Contract Term, the Contractor is deemed by law unable to pay his debts or enters into voluntary or involuntary bankruptcy, liquidation or dissolution, or without reasonable excuse has failed to perform the stipulated services after due notice and reasonable time to correct the area of non-performance, the GCC may, issue a written termination notice, terminating the Contractor.

The termination notice shall stipulate the conditions of termination including the time of termination and the disposition of equipment. The GCC shall have the option of purchasing the Contractor's equipment based on the fair market values as determined by a third party appraiser agreed to by both parties. The time of termination may be a period of up to 90 days to allow the GCC to arrange for another contractor to perform the services. The Contractor shall continue to provide refuse collection services during the termination period and be paid as stipulated herein.

The dispute of any component of the termination notice, or the submission of any dispute to arbitration, shall not relieve the Contractor of his responsibility to perform the collection services during the termination period.

7.2.2 By Contractor for Cause

If at any time during the Contract term, the GCC is unable to make payments to the Contractor or otherwise is unable to perform its obligations under the Contract without cause, after written notice and reasonable time to correct said area of non-performance, the Contractor may upon 14 days written notice, terminate the Contract. Upon termination, the Contractor shall be paid all sums that are payable to him for providing services under the Contract, plus damages suffered by the Contractor due to the premature termination of the Contract.

7.2.3 Termination by GCC for Convenience

If at any time before the completion of the Contract Term, it shall be found by the GCC that for reasons beyond the control of the parties render it impossible or against the interest of the GCC to continue the Contract, the GCC at any time, by 90 day written notice to the Contractor may discontinue work and terminate the Contract in whole or in part. Upon service of such notice of termination, the Contractor shall

discontinue to work in such manner, sequence and at such times as the GCC may direct, continuing and doing after said notice only such work and only until such time or times as the GCC may direct. The Contractor shall have no claim for damages for such discontinuance or termination of the Contract but the Contractor shall receive compensation for reasonable expenses incurred in good faith for the performance of the Contract and for reasonable expenses associated with termination of the Contract. The GCC will determine the reasonableness of such expenses. The Contractor shall have no claim for anticipated profits on the work thus terminated, nor any claim, except for the work actually performed at the time of complete discontinuance.

7.3 INDEMNIFICATIONS

The Contractor shall indemnify, protect and save harmless the GCC against all losses and claims for death of or injury to any person, or loss or damage to any property, which may arise out of or in the consequence of the Contractor's performance under this Contract, except those that are due to willful or negligent acts, or omissions by the GCC.

The GCC shall indemnify, protect and save harmless the Contractor against all losses and claims for death of or personal injury to any person, or loss or damage to any property which may arise out of or in the consequence of the GCC's obligations under this Contract, except those that are due to the willful or negligent acts or omissions of the Contractor.

7.4 GCC REPRESENTATION

The GCC's authorized representative shall be the Town Clerk who may, in whole or in part, delegate such authority to one or more persons appointed to carry out such duties and exercise such authority as may be delegated to them by the Town Clerk. The GCC will inform the Contractor on or before Contract signing the identity of the GCC representatives and will outline their duties and authority to represent the GCC during the term of the Contract.

7.5 NOTICES

All notices, including payment requests, disputes and other correspondence given to the GCC shall be sent by post, facsimile or delivered in person addressed to the Town Clerk, Private Bag 0089, Gaborone. All notices, or instructions given to the Contractor by the GCC under the terms of the Contract, shall be sent by post, cable, telex or facsimile to or left at the Contractor's principal place of business or other such address as the Contractor shall nominate for that purpose.

7.6 ACCESS TO CONTRACTOR'S FACILITIES AND RECORDS

Upon reasonable notification, the GCC shall have access to the Contractor's offices, maintenance depot, other facilities and records for the purpose of determining the Contractor's compliance with the Contract conditions.

APPENDICES

APPENDIX A - Price Fluctuation Clause

APPENDIX B - Existing Schedule

APPENDIX C - Recommended Skip and Bin Placement

APPENDIX D - Form of Tender

APPENDIX E - Subcontractor Declaration

APPENDIX F - Form of Insurance Coverage

APPENDIX G - Form of Intent for Performance Bond

APPENDIX H - Form of Performance Bond

APPENDIX I - Form of Agreement

APPENDIX J - Form of Lease Agreement

APPENDIX K - Street Maps

REVISED REFUSE COLLECTION SCHEDULE--GABORONE SOUTH

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Ext. 9	Township 5	Ext. 11	Ext. 9	Ext. 8	Ext. 11	ONE TRUCK & CREW
Ext. 8 & 2 Mall	Ext. 4 & 39, 2 Mall	Ext. 2 residential & mall	Ext. 2 Mall	Ext. 4 & 39, 2 Mall	Ext. 2 residential & mall	COLLECTS HOTELS
Ext. 3	Ext. 3	Ext. 3	Ext. 3	Ext. 3	Ext. 3	AND INSTITUTIONS
Ext 15	Ext. 15	Ext. 15	Ext. 15	Ext. 15	Ext. 15	AT GABORONE SOUTH
Ext. 7	Ext. 10 & 39	Ext. 12	Ext. 7	Ext. 10 & 39 residential	Ext. 12	
Naledi South A	Naledi South B	Naledi South C	Naledi South A	Naledi South B	Naledi South C	
Naledi North A	Naledi North B	Naledi North C	Naledi North A	Naledi North B	Naledi North C	
Ext 14.	Ext. 14	Ext. 14	Ext. 14	Ext. 14	Ext. 14	
Plastics	Plastics	Plastics	Plastics	Plastics	Plastics	Litter pickers, plastic bags
Tractors Towing skips	Tractors Towing skips	Tractors Towing skips	Tractors Towing skips	Tractors Towing skips	Tractors Towing skips	Tractors Towing skips

- | | |
|----------------------------|------------------|
| 1. Gaborone station | 12. Mall ext. 13 |
| 2. Gaborone | 13. Mall ext. 7 |
| 3. Main mall | 14. Mall ext. 2 |
| 4. G. Sun | 15. Mall ext. 12 |
| 5. University | 16. Mall ext. 4 |
| 6. Village recreation club | 17. Mall ext. 15 |
| 7. Chinese restaurant | |
| 8. Boipuso Hall | |
| 9. Polytechnic | |
| 10. Cresta Lodge | |
| 11. Mall ext. 14 | |

APPENDIX C

COLLECTION TENDER RECOMMENDATIONS FOR BINS & SKIPS.

EXTENSION # 1 - MMARAKA

For the proposed programme, Extension 1 also includes the commercial and Government Offices located on the northwestern side of Khama Crescent.

This includes all of the office buildings located on Embassy Drive, State Drive, Mmaraka Road, Station Road, Nelson Mandela Drive, and Khama Crescent.

Description of Area

Extension 1 and the area described above, consists of 63 single-use or multi-use commercial plots, 15 Government Offices, street vendors and takeaway caravans. There are no residential areas in Extension # 1.

The combination of street vendors, local out-door-markets, shopping malls, bottles stores, supermarkets, retail shops and office buildings generate a very large volume of refuse and recyclable paper products (cardboard and mixed office) daily.

The area lacks adequate refuse storage capacity for both solid waste and recyclables. A limited number of GCC bins and skips are located throughout the area, however these are insufficient to handle the volume.

In three skip locations, street vendors use the skips to prop-up stalks of sugar cane which renders the skips inaccessible to the general public.

Recommendations for bins and skips are as follows:

New Bins Locations

Khama Crescent

- 1 bin at each of the pedestrian walkways on Khama Crescent (6 bins)
- 4 bins along the walkways bordering the car park on Embassy Drive
- 2 bins at the corner of the US Embassy and Nelson Mandela Way
- 4 bins along Talane Way

Mmaraka Road

- 1 bin in front of each of the takeaway caravans located in the area (10)
- 5 bins in the car park in front of Ellerines Store
- 6 bins along Mmaraka Road, from Madirelo House up to the BP Station

6 bins in front of the shops at Fairways
8 bins in front of the shops at OK Mall

This is a total of 51 new bins to service the area. Each bin should be fitted with a plastic liner, and the liner should be removed when full by GCC personnel in the area.

As soon as a bin is full, the plastic bag should be removed, tied off and a new liner installed in the bin. All full bags should be taken to the nearest skip and deposited in the skip.

All free standing bins should be secured with a bottom weight - a concrete slab or a piece of pipe driven into the ground and secured to the bin to prevent theft and/or roaming dogs from tipping the bins over.

GCC personnel in the area (4-6 for the Khama Crescent section and 6-8 for the Mmaraka Road and OK Mall section), equipped with street push brooms (6), flat shovels (6), rakes (10), and pushcarts fitted with bins (6) can service this area properly.

Arrangements can be made to store their equipment and supplies at a local shop or Government Office.

Their daily routine should include servicing the bins in their respective areas, litter pick-up, and street sweeping.

Daily supervision is recommended to insure that the Extension is properly serviced and personnel are at duty.

Once the proposed privatization programme is implemented, all shops in the area will be notified in person by GCC staff of proposed collection schedules, and provided with public education regarding the handling and storage of refuse, use of bins and skips, and programme goals.

The GCC staff should also maintain an on-going rapport with shop owners to understand their customers' needs and to adjust to ever changing waste streams.

The GCC may wish to consider contacting individual shop owners or Mall owners and have them purchase through GCC, the necessary bins for their store fronts. For example, the OK Mall may approve the purchase of 8-15 bins for distribution throughout the Mall.

New Skip Locations

It is recommended that each of the Government Offices on Khama Crescent receive, at a minimum 1 new 4.58 cubic meter (cm) (6 cubic yards) or a 6.11 cm (8 cubic yards) skip, fitted with either metal or plastic covers. The capacity of each skip will be determined by both the quantity and type of refuse generated daily. The skip size is recommended for each Extension. Where a size is not noted, the 6.11 cm size is applicable.

Arrangements should be made with Waste Paper Recovery (WPR) to provide cages for collecting mixed office papers and cardboard.

Each office should have a WPR cage and skip next to each other and further arrangements made with individual office cleaning staff to segregate recyclables from refuse.

Each of the office complexes and embassies should also have at least 1 new 4.58 cm skip.

Efforts should be made to eliminate the burying of refuse and papers in this Extension. If Government wishes to continue this practice, then GCC may be able to make arrangements through the Central Police Station to utilize their incinerator or construct a facility at the new landfill site.

New skips are proposed for the following locations:

1 skip behind Ackermans 1 skip behind Barnetts Furnishers
1 skip behind Sacmech 1 skip in front of Ellerines

4 skips in the car park opposite Ellerines
1 skip between BP Station and Talk of Town Furnishers
1 skip each for the Boipelego Education Project, Weights and Measures, and BHC (3)
1 skip for the new offices, between Barnetts and Talk of the Town Furnishers
1 skip for Fairways Market
2 skips located in front of Barclay's Station Branch
8 skips in the car park at OK Mall. One located at the Cellar Bottle Shop.

A total of 20 skips are proposed for the OK Mall - Mmaraka Road area, plus an additional 18 for the Khama Crescent area.

As previously mentioned, WPR should be contacted to place waste paper cages near GCC skips. Targeted areas include:

- each Government Office on Khama Crescent
- each office complex on Khama Crescent, Barclay's Bank, Finance House, and Post Office Tower, Orapa House, and the embassies.
- Ackermans, Barnetts Furnishers Sachmech, and Ellerines
- Talk of the Town Furnishers, Fairways and OK Mall

Businesses and the general public will be educated in the use of the skips and recycling cages, and GCC personnel will be trained to monitor the skips and adjust the number and frequency of collection accordingly.

EXTENSION # 2 - SELEMELA

Description of Area

Residential Area

Selemela Extension has 380 residential plots, one GCC Clinic, and the Ben Thema School.

It is recommended that the proposed collection tender maintain the same collection schedules and frequency of service. Once the proposed programme is implemented, schedule adjustments can be made, particularly in the commercial areas.

Commercial Area

Forty-seven retail shops are located in the African Mall, at the junction of Mogwe Way, Merafe and Sechele Roads. These include retail shops, restaurants and takeaways, green grocery, supermarket, and a number of smaller shops within the enclosed Mall area.

The entire area is provided with 8 bins located throughout the parking area, and two GCC skips located behind the Pep Store.

The eight bins and two skips are insufficient to meet the daily-weekly volume of refuse generated in the area. In addition, the skips are located away from the major generators of refuse, approximately 75 meters behind the Pep Store.

Bins need to be placed in high waste volume and high pedestrian traffic areas. Similarly, skips need to be placed in a convenient location for the business owner.

Recommendations

New Bin Locations

It is proposed that GCC place new bins at the following locations:

- 8 bins around the car park between Merafe Road and Mogwe way. These include 1 bin at each corner and 2 bins on either side of the car park.

- 2 bins in front of Chicken Licken

- 3 bins in the enclosed Mall area

- 8 bins, 1 bin each in-front of African Beat House, Gaborone Hardware, Ake Electrical, Timba Trading, Uncle Boyce's Shop, The Pharmacy, Gallery Ann, and Bata Shoes.

- 2 bins on Mogwe Way, 1 each at the corner of the sewing shop

- 3 bins in front of Kentucky Fried Chicken

This is a total of 26 bins to service the area. Each bin should be fitted with a plastic liner and the liner should be removed when full by GCC personnel in the area.

As soon as a bin is full, the plastic bag should be removed and a new liner installed in the bin, and the cover replaced. All full bags should be taken to the nearest skip and deposited in the skip.

All free standing bins should be secured with a bottom weight - a concrete slab or a pile of pipe driven into the ground and secured to the bin to prevent theft and/or roaming dogs from tipping over the bins.

GCC personnel in the area (2-3 labourers), equipped with street push brooms (3), flat shovels rakes (3), and pushcarts (2) fitted with bins can service this area properly.

Arrangements can be made to store their equipment and supplies at a local shop or at the Ben Thema School.

All of the labourers should have access to a telephone, in order to call in any requests for back-up assistance with collection vehicles.

Their daily routine should include servicing the bins when full, picking up spillage and litter in and around the immediate areas of the bins and skips, and routine litter patrols throughout the area.

A portion of the daily routine for GCC personnel in the area, should be to rake and pick-up litter along Mogwe Way, Merafe Way, Sechelle Road, and Iabavu Close.

The area bordering the Ben Thema School fence should also be policed for litter daily. There are several large piles of refuse, rubble, and garden wastes stockpiled throughout the area, and these can also be cleaned up.

Daily supervision is recommended, early-mid morning, and one-two afternoon inspections may be necessary to insure the area is properly serviced and personnel are at duty.

Once the proposed privatization program is implemented, all shops in the area will be notified in person by GCC staff of proposed collection schedules and provided with public education regarding the handling of refuse, use of the skips, and programme goals.

The GCC staff should also maintain an on-going rapport with shop owners to understand their customers' needs and to adjust to ever changing waste streams.

New Skip Locations

It is recommended that 8 new 6.11 cubic meter (8 cubic yards) skips, fitted with metal or plastic covers be placed at the following locations:

- 1 next to the utility box, located in the car park, directly across from Timba Trading
- 1 next to the tree, located in the car park, across the road from the Taj Restaurant
- 1 behind the Taj Restaurant, in the car park
- 1 at the corner of the building of Gallery Ann
- 1 directly behind Kentucky Fried Chicken
- 1 directly behind the Pharmacy & Bergers Clothing
- 1 next to the smaller utility box in the car park in-front of the African Beat shop
- 1 at the existing GCC location, next to the public toilets

It is also proposed that GCC provide its clinic and the Ben Thema School with skips. This provides a total of 10 new skips for Extension # 2.

It is also recommended that GCC contact WPR and we arrange for paper collection cages at 4 locations. These include:

- 1 skip next to the utility box, across from Timba Trading
- 1 skip next to the tree location described above
- 1 skip behind the Bata Shop
- 1 skip at the existing location, next to the GCC skips

It is also proposed that the GCC skip location be moved closer to the walkway between the Pep Shop and Le Bouganinville Restaurant.

EXTENSION # 3 - BORAKANELO

Description of Area

The Mall is the center of the downtown area of Gaborone. There are no residential units. At street level, there are 38 shops, which include 3 food markets (Corner Market, Co-op and Food Town), 3 takeaways (Kings, Kudu, and Kentucky Fried Chicken), 2 bookshops, and various retail shops.

The President Hotel and Central Post Office are also located on the Mall, as well as 21 other commercial offices. These include travel agencies, banking and other services. In addition, there are banking and commercial offices above most of these shops.

A number of craft and food vendors can also be found daily, located along the length of Mall.

There are 29 bins located on the Mall. Six of these are provided by Kings Takeaway, and two provided by Kudu Takeaway. The remaining 21 appear to be the property of GCC.

In addition to the bins, GCC staff have 4 plastic carts used for litter and sweeping routines, and for transferring refuse to empty bins.

The distribution of bins appears to be concentrated about the food shops and not where people have been observed eating their lunches. For example, two bins are located in the area closest to GCC. Five are located by the Corner market, 4 are located in front of the Cinema, 10 in front of Kings Takeaway, two in front of Kudu Takeaway, 3 between the Standard Bank and Botswana Book Shop, and 3 others in walk ways to Botswana Road or Queens Way.

Bins were not found in the area between the Nigerian Embassy and Barclays Office Complex near Khama Crescent. Bins were also lacking between Standard House and the Jet Store.

The lack of storage capacity is also evident behind the Mall on both Botswana and Queens Roads.

When bins are full, shop owners simply stack their refuse against the side of the building. This practice contributes to public health problems, vector and litter control.

One private skip (Skip Hire) is located behind the Presidential Hotel.

GCC personnel, mostly women attend to the bins and general clean-up of the Mall area. They do an excellent job with the limited storage capacity they have for the volume of daily refuse generated.

The number of bins and/or skips provided by the GCC and Skip Hire are insufficient to store the daily volume of refuse generated.

Recommendations

New Bin Locations

Beginning at the arch, located in front of the Town Hall, two bins should be placed at the corner of each office block up to Freshaire Shop. For example:

- 2 - 1 in front of Sports Center and 1 opposite the Mall in front of Guys & Girls
- 2 - 1 in front of the Pharmacy and 1 opposite in front of Standard House
- 2 - 1 in front of Universal Fashions and 1 opposite the Mall in front of Air Botswana
- 2 - 1 in front of Jet and 1 opposite in front of Standard House
- 2 - 1 behind Caltex in the open space and 1 opposite the Building Society
- 2 - 1 in front of Lewis' and 1 opposite in front of Zambia House

- 2 - 1 in front of Bergers and 1 opposite in front of Gaborone Hardware
- 4 - along the upper walkway, beginning in front of Freshaire up to the Corner Market
- 8 - around the perimeter of the centre of the Mall, in front of the Presidential Hotel
- 2 - 1 in front of the Post Office and 1 in front of Barclays Bank
- 1 - in front of Standard Bank
- 1 - in front of Pick-a-Pair
- 2 - in front of Kentucky Fried Chicken
- 1 - in front of the Book Shop
- 6 - in the open space between the Book Shop up to Khama Crescent, 1 opposite the other

In addition to this scheme, a bin should be located next to each telephone box and bench located throughout the Mall (12 bins).

The same frequency of service as previously described should be implemented by GCC personnel attending the Mall, and depositing full plastic refuse bags at central skip locations.

New Skip Locations

It is recommended that 26 new 4.58 m³ (6 cy) skips be located behind the Mall in car parks, accessible from both Botswana Road and Queens Road.

This effort will not only increase on-site refuse storage capacity, but also decrease the frequency of collection from daily, and in some cases twice daily, to perhaps every two-three days to once per week. Subsequently this will lower overall operational costs.

The Mall locations for skips include:

Botswana Road

- 1 skip in the carpark behind the PEP Shop
- 1 skip in the carpark behind the Jet Store
- 2 skips in the carpark behind Lewis' Shop
- 1 skip in the carpark behind the Corner Market
- 2 skips for the Presidential Hotel and the shops adjacent to it
- 1 skip for the Post Office and Standard Bank
- 2 skips in the carpark behind Kentucky Fried Chicken
- 1 skip for Government Printing
- 1 skip for the Cash Bazaar and Standard Bank
- 2 skips for Barclays Bank Complex

Queens Road

- 2 skips in the carpark behind Zimbank and Standard House

- 1 skip behind the National Development Bank
- 1 skip behind Gaborone Hardware
- 1 skip behind the Cooperative Market
- 1 skip for the Food Town Market, Bookstore, and the Capital
- 2 skips in the carpark behind Kings
- 1 skip behind Business Office Products
- 1 skip behind Kudu Travel Agency
- 1 skip for the Nigerian Embassy
- 1 skip for the British Consulate

In addition to skips, WPR should be contacted to place paper recycling cages near GCC skips or behind the largest generators, the banks, supermarkets, hardware and bookshops.

EXTENSION # 4 - DILALELO

Description of Area

Dilalelo Extension has an estimated 330 homes, 1 Community Center, 1 Police Station, the Lesedi School, and a shopping center.

The residential areas should be provided the same schedule and frequency of collection service presently being given by the GCC. Collection of bins from inside the plots is also recommended

Once the proposed collection programme is implemented, Extension 4 may be considered for one collection per week.

Commerical Area

There are 10 shops located in one area between Kgopo Close and Mackenzie Way. These consist of two markets, two meat centers, two bottle shops, one Pub, a restaurant/takeaway, and retail shops.

The area is currently provided with 2 GCC skips and 3 GCC bins.

Recommendations

New Bins

Ten new bins should be located in the area as follows:

- 3 bins at the corners of the Pop-in-Supermarket
- 1 bin front of the Zrinski Bottle Shop
- 1 bin in front of Part II Pub

- 1 bin in front of Skyline Butchery
- 2 bins in front of the Guinea Fowl Restaurant
- 2 bins at the end of Kgopo Close

In addition, 4 bins should be provided along the walkway bordering Lesedi School and Ratshosa Lane. This provides a total of 14 new bins for the area.

New Skips

It is proposed that 7 new 4.58 cm skips be allocated this area, and distributed as follows:

- 4 skips be located in the compound behind the Pop-in-Supermarket. These would service seven shops
- 1 skip were GCC now has its skip
- 2 skips at the end of Kgopo Close

In addition, 1 skip should be provided to Lesedi School, the Community Center, and the Police Station. This provides a total of 10 new skips for Extension # 4.

EXTENSION # 5 - BOTSWELELO

Description of Area

There are an estimated 111 residential homes in Extension # 5. The Gaborone Secondary School, National Museum, and Town Hall offices are also located in this Extension.

The residential area will receive the same level of service as is presently provided by the GCC. This area may be considered for once per week collection after the overall programme has been implemented.

New Bin Locations

Ten new bin locations are recommended along Independence Circle and Pula Circle. These include:

- 3 bins in front of the Town Hall
- 3 bins in front of the National Museum
- 4 bins around Pula Circle at bus stops and walkways

New Skip Locations

Five new skips are recommended for Extension 5. These include:

- 2 skips for the Town Hall
- 1 skips for the National Museum

2 skips for Gaborone Secondary School

Three WPR cages are also recommended for the above locations. Again, the cages and skips should be placed in a convenient location.

EXTENSION # 6 - MADIRELO

Description of Area

This area contains some 230 businesses, consisting of agency offices, banking, manufacturing and retailing, warehouses, workshops and plants. There are no residential units in this Extension.

Because of the volume of waste generated daily, and the diverse character of this area, skips are recommended in place of bins. Depending on the type of activity, a business may have its own skip or share a skip with an adjacent business.

New Bin Locations

Twenty new bins are recommended in and around the fast food and takeaway caravans in the area. These include the area between Station Road and on Macheng Road, behind Water Utilities, and down the lengths of Luthuli Road, Halie Selassie Roads, and Molosiwa Road. Bins should be serviced daily and their contents deposited in the skips by GCC staff.

New Skip Locations

Lobatse Road and Moapane Road

- 1 skip for Chicago Chicken Licken,
- 1 skip for the Game Room and Protea
- 3 skips for the right side of Moapane Road, distributed with 1 at Botswana Railways, 1 at Ministry of Works, and 1 for Car Tyre Services at the Electron Services/Motor Building compound

- 1 skip for Central Medical Stores
- 1 skip located for the PG Industries Building, in the carpark in front of PGI
- 1 skip in carpark in front of Motovalve and Puncture Repair

Lobatse Road and Macheng Way

Unless otherwise noted, all skips should be located in the carparks between Luthuli Road and Lobatse Road.

- 1 skip for the Water Utilities Corporation

- 1 skip between Barclays Bank and Beta House
- 1 skip between Standard House and B&B Motors
- 1 skip in Style and Value and Lion Motors
- 1 skip in front of City Radio
- 1 skip in front of the newly constructed Martex House
- 1 skip in front of Macsteel
- 1 skip in front of Sismo
- 1 skip in front of the Botswana Cooperative Union
- 1 skip in front of Union Bank Building (note 3 offices on second floor)
- 1 skip in front of or in the lot at Travaglini Brothers
- 1 skip for Transafrica
- 1 skip in front of Wil-Flo Products
- 1 skip in the compound of TJM Partners
- 1 skip for the Clover Chemical Building
- 1 skip between BOSH and FNB building
- 1 skip between the Toyota and Mobil compounds
- 2 skips for the Caltex station and 6 shops and offices

Molosiwa Road to Nkrumah Road

- 1 skip between Specialized Panel Beaters and Apex Trading
- 1 skip between Imter Electronics and the Tyre Shop
- 1 skip for L&H Construction
- 1 skip for the BHC compound
- 1 skip for Water Affairs
- 1 skip for the Abattoir
- 1 skip between Multi-Construction and Apex Plastics
- 1 skip for Fiberchem

The above skips can either be placed inside individual compounds or abutting compound walls, facing the road.

Haile Selassie Road to Macheng Road

- 1 skip between Sharp and Al Garage
- 1 skip for EZ Glass and 3 shops
- 1 skip for Eureka Wholesale
- 1 skip for the 6 shops directly from Eureka Wholesale
- 2 skips for the Star Bakery and 7 shops
- 1 skip for the Industrial Restaurant and Nekwe Club compound
- 1 skip for Canopys
- 2 skips for Dulux Paints
- 2 skips for the 9 shops in the near Mall, between Dulux and Caltex

- 2 skips for the BP complex
- 1 skip for BB Motors/Caltex
- 1 skip for UTA and the 2 shops, and Bostwana Steel Furniture
- 1 skip for the Warehouse
- 2 skips for the offices housing Botswana Agriculture and Consulate of the Netherlands, and the Office Supply Store

- 1 skip in the 4 shop complex between General Refrigeration and Gaborone Electric
- 1 skip for General refrigeration
- 1 skip for Gaborone Electric
- 1 skip between Engine Exchange and Auto Fit
- 2 skips for CAT compound
- 1 skip for Kalahari Ford
- 1 skip for Bostwana Distributors
- 1 skip for Haskins
- 1 skip for the 4 shops behind ABE's Canteen
- 1 skip between Savell's and Department of Immigration
- 1 skip for the office complex under construction
- 2 skips for the Plaza, with 12 shops
- 2 skips for the GCC workshop
- 1 skip for Royal
- 1 skip between Teletran and Barclays
- 2 skips for the shops and offices on the corner of Macheng Way (Apple Computer etc.)

The above skips can either be placed inside compounds or against the outside fence to permit access.

Nkrumah Road

- 2 skips for the Department of Public Works
- 1 skip between MMALA Paint and Sun Con
- 1 skip for Haskins
- 1 skip between Timber Treatment and Selalama Wholesalers
- 1 skip inside Selalama
- 2 skips between ASS Engineering and Botswana Breweries
- 2 skips inside brewery
- 1 skip for Caltex
- 1 skip for Department of Supplies

In addition to the above, the rubbish piles opposite ASS Engineering and along the rail track need to be removed and 1 skip placed in each location.

GCC personnel in Extension # 6 may continue their normal routine of litter collection and tending the various bins. It is however recommended that this area be divided up to provide better coverage, particularly around the numerous takeaway caravans in the area.

A major emphasis on public education and soliciting the participation of the business community in Extension # 6 will assist GCC in obtaining its proposed long range solid waste management goals.

EXTENSION # 7 - SEKGWA

Description of Area

This are an estimated 535 residential homes, the Thebe Primary School, and a small retail area in Sekgwa Extension. It is proposed that the schedule and frequency of refuse collection will remain the same.

Recommendations for the commerical area located on Mophane Road include, 8 new bins and 4 new skips.

New Bin Locations

- 3 bins, 1 at each corner of White City Discount Center
- 1 bin in front of White City Butchery
- 2 bins in front of Adams Rib Bottle Store
- 2 bins at the entrance to Thebe Primary School

GCC staff (2-3) with street cleaning equipment previously described should be responsible for litter pick-up and emptying the full bins into the skips.

New Skip Locations

- 1 skip behind White City Discount
- 1 skip in front of Adama Rib Bottle Shop
- 1 skip next to the Star Restaurant
- 1 skip at the Thebe School

EXTENSION # 8 - BONTLENG

Description of Area

Extension # 8 has an estimated 502 residential homes, the Bontleng School, 1 GCC Clinic, and a Chubuku Shop on Tshesebe Road. Most of the secondary roads in this Extension are unpaved.

Residential service to remain the same as that presently provided by GCC.

New Skip Locations

- 1 skip for the GCC Clinic
- 1 skip for Bontleng School
- 1 skip in front of the chibuku shop on Tshesebe Road

EXTENSION # 9 - PHOLOGOLO

Description of Area

There are an estimated 434 residential homes in Phologolo Extension, including the Northside School, and the Hospital Compound. There are no commercial/retail shopping areas.

The schedule of collection will remain the same, however the frequency of collection will be reduced from twice per week to once per week for all homes.

In addition, all homeowners will be required to place their rubbish bins at the curbside the morning of scheduled collection. BHC flats are exempt from this requirement.

New Skip Locations

- 1 skip for Northside School
- 5 skips for the Hospital

EXTENSION # 10 - BOITSHOKO

Description of Area

There are an estimated 309 homes in Extension # 10, and several offices between Notwane Road and Church Road. There is no commercial/retail area.

The schedule and frequency of collection will remain the same, and homeowners will not be required to put their bins at curbside.

New Skip Locations

- 1 skip at the YWCA compound
- 1 skip at the Government Offices, plot # 5355-5356

EXTENSION # 11 - MADIBENG

Description of Area

Extension # 11 has an estimated 285 homes, no schools, office or shopping areas. Several plots consist of multiple housing units.

Recommendations

The collection schedule will remain the same, however the frequency of collection will be reduced from twice per week to once per week.

In addition, homeowners will be required to place their refuse bins at curbside the morning of scheduled collection. BHC flats and those plots with multi-housing units are exempt from this requirement. However, collection vehicles must be allowed access to the compounds.

EXTENSION # 12 - MEPHATO

Description of Area

Mephato Extension has an estimated 333 homes, including the Tshiamo School, one Health Center, the Dairy Cooperative Shop, and a commercial/retail area.

Recommendations

The schedule and frequency of collection will remain the same. Homeowners will not be required to place their bins at curbside.

Six new bins and 5 new skips are recommended at the following locations:

6 bins placed around the six shops, located between Maisatumo Way and Matsaakgang Way. 2 bins in front of the Bottle Shop, two at the corners of the Good Shepard Market, and 1 each in front of R & Sons Market, and Cash Butchery.

New Skip Locations

- 1 skip between the Bottle Shop and Cash Butchery
- 1 skip in the open space, across the road from the Good Shepard Market
- 1 skip at the Dairy Cooperative, located on the corner of the South Ring Road and Kaunda Road
- 1 skip at the Health Center
- 1 skip at the Tshiamo School

EXTENSION # 13 - NALEDI

Description of Area

The Old Naledi area has an estimated 1,750 housing units, that include SHHA, and staff housing for the Police. In addition, there are two schools, one Community Center, one GCC market/retail area, and a commercial/retail area.

The Naledi area presents some rather challenging opportunities for the GCC. By far the biggest challenge and emphasis will be devoted to refuse collection, public education and public participation in solid waste management.

It is recommended that Old Naledi be divided up according to the present plot numbering system. There are 9 sections, section 01-09 for example. Each section will be divided into subsections, and within each subsection, residents will be directed to central collection points. These central collection points will consist of tractor hauled skips.

Tractor hauled skips are recommended because of the type of roads and the width of the roads characteristic of Old Naledi.

GCC staff or a private contractor's crews will be employed to collect refuse from individual plots and carry it to the central skip(s) locations for transfer to the landfill for disposal.

The landfill site is close enough to Old Naledi to justify using tractor hauled skips.

New bins are not recommended in the residential areas, as homeowners will only use them for household refuse. The GCC may redistribute bins taken from other areas to Naledi Extension.

Ten new bins are proposed for areas in and around the schools, shopping center and bus stops.

New Skip Locations (Residential)

27 skip (tractor hauled) locations are recommended for the 9 sections of Old Naledi, this will provide 3 central collection receiving areas within each of the 9 sections. Once the proposed collection programme is implemented, the number of skips can be adjusted for each section.

New Skip Locations (Non Residential)

1 skip at the Community Center
1 skip at the GCC Clinic
2 skips, 1 skip at each of the Primary Schools
2 skips for the commercial/retail area

- 1 skip for the SHHA Offices
- 2 skips for the GCC market, located inside the fence
- 2 skips for the Police Offices

EXTENSION # 14 - BABUSI

Description of Area

Babusi Extension is the second largest residential area, with an estimated 1,095 homes. In addition, there are three commercial/retail areas, four schools, a Post Office, Court and Police Station and Police Housing compound.

It is recommended that the collection schedule and frequency remain the same.

Commercial Areas

Allison Crescent

Four retail shops are located on Allison Crescent. These include a supermarket, a Bottle Shop, a Pub/Restaurant, and a Butchery. The area has 1 GCC skip and no bins.

Recommendations

- 3 bins, 1 placed in front of the Dixeland Supermarket, the Cantina Amigos, and the Butchery
- 1 skip, located on the left side (Sekukuni Close) of the Dixeland Market
- 1 skip on next to the Butchery

One-two GCC personnel can keep this area, and the adjacent playground tidy.

Allison Crescent and Lumumba Close

The GCC has a compound consisting of 12 shops, with a central collection point for 6 bins.

Recommendations

- 1 skip in place of the bins, and routine litter patrols by GCC staff

Willoughby Way and Malope Way

This area has 42 shops, a Post Office, Police Station, and Court. The shops include two Bottle Shops, three supermarkets, three butcheries, a takeaway, a bar/lounge, numerous service shops, and offices on the second and third floors. In addition, there are a variety of local vendors selling produce, clothing, music tapes and other dry goods.

Recommendations

New Bins

Provide 20 new bins in the following locations:

- 1 bin between the Everest Liquor Restaurant and Thaba Market
- 1 bin in front of the Ice Center
- 1 bin in front of Grenada Bottle Store
- 1 bin in front of Cleanrite Laundry
- 1 bin in front of the Co-op Market
- 1 bin in front of Gaborone Butchery
- 1 bin in front of Knox Supermarket
- 1 bin in front of Gaborone Pharmacy
- 1 bin in front of Soya Market
- 1 bin in front of TV Repair Shop
- 4 bins, 1 at each corner of the open air market
- 1 bin in front of Sammy's Lounge & Bar
- 3 bins along the back of the shops on Willoughby Way
- 2 bins along the back of the shops on Warthog Close

New Skip Locations

Provide 10 new 6.11 cm skips with covers, in the following locations:

- 1 skip next to Sammy's Bar & Lounge
- 1 skip behind Beef Botswana
- 1 skip behind the Co-op market
- 1 skip behind the Doll House Inn
- 1 skip behind or next to Uncle Joe's Takeaway
- 1 skip behind the Soya Market
- 1 skip behind the TV repair
- 1 skip at the Police Station
- 1 skip behind the Gaborone Butchery
- 1 skip for the open air market

GCC personnel (2-4), litter pickers and street sweepers equipped with 2 pushcarts, brooms, rakes and shovels should be capable of maintaining this area.

In addition, clean-up efforts should be directed towards the pile of refuse and rubble behind Botswana Beef, and the area between Uncle Joe's Takeaway and the Knox Supermarket.

Recommendations for School Compounds

Bokamoso Community Secondary School (access from Machel Drive)

16 staff houses with bins, no need for additional bins, however provide

- 1 skip at the kitchen
- 1 skip at the central collection point

Botswana Polytechnic

- 1 skip for kitchen
- 1 skip for the two dorms
- 2 skips for the east campus (corner of Machel Drive and Tlokweng Road)

Ithuteng School

Staff houses have ample bins. Provide

- 1 skip for the kitchen
- 1 skip to supplement the bins at the central collection point

Naledi School

28 staff with ample bins. Provide

- 1 skip at the kitchen
- 1 skip for the offices

In addition to the above recommendations, GCC should arrange for WPR to install mixed paper and cardboard recycling cages at all of the commercial/retail areas, and at each school.

Targeted shops should include the retail and supermarkets, which generate a large volume of cardboard and other mixed waste papers.

EXTENSION # 15

Description of Area

This area consists of 465 housing units, consisting of single family and multi-story blocks of flats. Plot # 21060, at the corner of Jawara Road and Mobuto Drive for example has 118 housing units. Please see the attached list of BHC apartments for additional information.

There is no commercial/retail shopping area in Extension # 15.

Recommendations

Once the collection programme is underway, the GCC and BHC may wish to consider converting all of the central collection areas from using bins to skips.

New Skip Locations

- 3 skips for the BRIDEC compound
- 2 skips for the Automotive Training School

EXTENSION # 39

This area is primarily residential with an estimated 406 single family and multi-family units. This Extension also includes the 11 blocks of BHC flats on Metsemasweu Road, and the Special Police Force, located on the road to the Game Preserve. The Police compound has 150 individual staff homes with ample bins. In addition, there is Maruapula School and the Ministry of Roads/Works Training Compound.

Additional bins are not required in the above areas.

Recommendations

The residential area between Maruapula Way, Nyerere Drive and Metsemasweu Road will be reduced from twice per week collection to once per week. In addition, homeowners will be required to place their refuse bins at the curb-side the day of scheduled collection.

- 1 skip for Maruapula School kitchen
- 2 skips for the Police Special Force Compound, 1 at the kitchen and 1 for the tents
- 2 skips for the Ministry of Roads/Works Training Center, 1 at kitchen, 1 for offices
- 1 skip at the Golf Club
- 1 skip for the Notwane Tennis Club
- 1 skip for the Squash Club
- 1 skip for the Gaborone Sun Hotel

Recycling cages should be installed at the above locations for mixed office papers and cardboard.

The National Stadium is presently serviced by a number of 200 liter drums. These should be replaced with 24 new bins, and serviced immediately after every event.

- 4 skips, 1 each located at each corner of the National Stadium
- 1 skip for the Softball field.
- 1 skip for the Cricket field

TOWNSHIP - BADIRI

Description of Area

This area is all residential with an estimated 194 housing units, the State House, and the Thornhill School.

Recommendations

Residential refuse collection will be reduced from twice weekly to once per week. In addition, homeowners will be required to place their refuse bins at the curb-side the day of scheduled collection.

Those plots that consist of multiple housing units with central refuse collection areas within the compound are exempt from the curb-side requirement.

New Skip Locations

- 1 skip for the State House
- 1 skip for the Thornhill School
- 1 skip for Botswana Radio

In addition to the above, GCC should arrange for WPR recycling cages for the above areas.

VILLAGE EXTENSION

Description of Area

The Village area has an estimated 821 housing units, both single family and multi-story units. In addition, it has a retail shopping area and numerous Government compounds, which have staff housing.

Recommendations

Residential units in the Village area will receive refuse collection once per week and will not be required to place their refuse bins at the curb-side.

New Bin Locations

Fairways Shopping Area

- 3 bins in front of Fairways Supermarket
- 1 bin by the Telephone Box
- 1 bin by the takeaway caravan

- 2 bins in the car park opposite Prestige Outfitters
- 1 bin in front of My Lunch Takeaway

Fairways Shopping Area

New Skip Locations

- 1 skip, located near Fairways shipping & receiving door
- 1 skip behind Dynamic Office Supplies
- 1 skip behind My Lunch Take Away
- 1 skip next to Prestige Outfitters
- 1 skip for the Camp School

In addition, WPR recycling cages are also recommended at the following locations:

- 1 cage next to the Fairways skip
- 1 cage next to the Dynamic Office Supplies skip

Village Mall Area

This shopping area consists of seven commercial/retail shops, a health club with full facilities, including a restaurant and a cinema.

Recommendations

New Bin Locations

- 3 bins, 1 in front of the Hair Salon, 1 in front of the Health Club, and 1 in front of Travel Wise
- 3 bins in the car park, 2 in front of the cinema, and 1 in front of the side entrance to the Health Club

New Skip Locations

- 2 skips in the car park, in front of the Health Club at each corner of the building
- 2 skips next to the burned refuse area near the cinema

One WPR recycling cage should also be located in the car park for this area

Additional skip locations in the Village Area

- 1 skip for the Forestry Department workshop, located on at the corner of Shashe Road South and Tlokweng

- 1 skip for the GCC Clinic
- 1 skip for the Gaborone Club
- 3 skips for the Police Training Depot, 1 for the kitchen, 1 for the offices, and 1 for workshop area
- 1 skip for the Police Offices on Maaloso Road (near band practice area)
- 4 skips for the Prison, 1 for the kitchen, 1 for the offices and 2 for the workshops
- 1 skip for the Post Office
- 1 skip for the Police Station
- 1 skip for the Central Transport Organization
- 4 skips for the Botswana Institute of Administration and Commerce, 1 for the kitchen, 1 for the offices, and 2 for the dorms

Depending upon the volume of waste paper, WPR cages should also be positioned next to the skips at the above locations.

The number of new bins is 233, however it is recommended that GCC purchase 250 bins.

The number of new skips for rear-load compaction vehicle tipping is 283, and 300 are recommended. These include:

- 260 4.58 m capacity (6 cubic yards)
- 40 6.11 m capacity (9 cubic yards)

An additional 27 4.30 m capacity, tractor hauled skips for Old Naledi are also recommended. Appendix I provides a summary of bin and skip location per Extension.

APPENDIX D

**GABORONE CITY COUNCIL
REFUSE COLLECTION SERVICES**

FORM OF TENDER

(Note: Appendices A to K form part of the Form of Tender)

The City Clerk
Gaborone City Council
Private Bag 0089
GABORONE

Having examined the written Scope of Contract, the Appendices and the locations of the Refuse Collection Services to be performed under the Collection Tender, we offer to perform the Refuse Collection Services in conformity with the Scope of Work and Appendices for the following Costs:

Tenderer shall enter Tender for one of the following Alternatives:

Alternate One:

BASE TENDER PRICE: For performance of the Refuse Collection Services as described in the Scope of Contract with leased vehicles under the terms and conditions included herein for an annual lump sum Base Price of:

_____ (P _____)
(Pula in words)

UNIT PRICES: For transporting and placing of skips to be leased from the GCC, a unit price of:

_____ 6.11 CM Skips at P _____ each. (P _____)
(number) (unit cost) (Total Cost)

_____ 4.85 CM Skips at P _____ each. (P _____)
(number) (unit cost) (Total Cost)

SUBTOTAL ALTERNATE 1 (P _____)

Alternate Two:

BASE TENDER PRICE: For performance of the Refuse Collection Services as described in the Scope of Contract with all collection vehicles and related equipment supplied by the Contractor, for an annual lump sum Base Price of:

_____ (P _____)
(Pula in words)

UNIT PRICES: For providing, transporting and placing of skips, a unit price of:

_____ 6.11 CM Skips at P _____ each. (P _____)
(number) (unit cost) (Total Cost)

_____ 4.85 CM Skips at P _____ each. (P _____)
(number) (unit cost) (Total Cost)

SUBTOTAL ALTERNATE 2 (P _____)

Education Program:

For completion of the educational program as defined in Section 4.2.6 for a lump sum price of:

_____ (P _____)
(Pula in Words)

2. We acknowledge that Appendices A to K to the Form of Tender form part of this Tender.
3. We undertake if our Tender is accepted to commence work in accordance with the Scope of Work and the Implementation Schedule.
4. If our tender is accepted, we will within thirty (30) days, execute the formal Contract Agreement and obtain the guarantee of a Bank or acceptable insurance company (subject to your approval) to be jointly and severally bound to the City of Gaborone in the sum of 10% of the Base Tender Cost and as stipulated Appendix H hereto, for due performance of the Contract under the terms of a Performance Security in the form appended hereto.
5. We agree to abide by this Tender for the period of ninety (90) days from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period, or such other extended period that may be agreed between ourselves and the Gaborone City Council.
6. Unless and until a formal Agreement is prepared and executed, this Tender with our written acceptance shall constitute a binding Contract between us, and shall be deemed for all purposes to be the Contract Agreement.
7. We understand that you are not bound to accept the lowest or any Tender you may receive and that you will not defray any expenses incurred by us in tendering.

DATED this _____ day of _____ 19 _____

SIGNATURE: _____

(Name of Signatory Printed): _____

In the Capacity of: _____

Duly authorised to sign Tenders for and on behalf of: _____

(Block Capitals)

ADDRESS: _____

(N.B.): Board Resolution authorising signatory must be attached

SIGNATURE OF WITNESS: _____

ADDRESS: _____

NAME OF WITNESS (Printed): _____

OCCUPATION: _____

DATE: _____

APPENDIX E

SUB-CONTRACTOR DECLARATION

If the Tenderer wishes to sub-contract any portion of the work described in the Scope of Work under any heading, he shall be free to do so but must give full details of the Sub-Contractors he intends to employ for each portion of the Work.

Failure to declare subcontractor information may invalidate the Tender.

1. Portion of the Work: _____

i Sub-contractor: _____

Address: _____

ii Experience in _____

similar work: _____

2. Portion of the Work: _____

i Sub-contractor: _____

Address: _____

ii Experience in _____

Similar Work: _____

3. Portion of Work: _____

i Sub-contractor: _____

Address: _____

ii Experience in _____

Similar Work: _____

Subcontractor Declaration
Page 2

4. **Portion of the Work:** _____

i **Sub-contractor:** _____

Address: _____

ii **Experience in** _____

similar work: _____

5. **Portion of the Work:** _____

i **Sub-contractor:** _____

Address: _____

ii **Experience in** _____

Similar Work: _____

Signature: _____ **Date:** _____

Name of Signatory: _____

In the Capacity of: _____

Duly Authorized on behalf of: _____

1/21

APPENDIX F

FORM OF INSURANCE

The selected Tender shall be required to obtain general liability insurance as a condition of Contract signing within thirty (30) of notice of award. The selected Tenderer shall provide an Insurance Certificate at Contract Signing as proof of insurance coverage for the following amounts:

For liability for bodily injury, including accidental death, Pula 500 000,00 on account of any one occurrence, and Pula 1 000 000,00 aggregate limit.

For liability for property damage, Pula 200 000,00 on account of any one occurrence and Pula 500 000,00 aggregate limit.

An umbrella policy in the amount of Pula 500 000,00 covering underlying policies.

The contractor shall also be required to secure the following insurance:

1. Motor vehicle on equipment and vehicles.
2. Workmen's Compensation Insurance.

APPENDIX G

FORM OF INTENT FOR PERFORMANCE BOND

It is hereby agreed that a Performance Bond as defined in the Tender Documents and Appendix H, will be provided by the sureties, Insurance Company or Bank named hereunder.

NAME OF TENDERER: _____
(Printed)

SIGNATURE OF TENDERER OR AUTHORIZED REPRESENTATIVE:

NAME OF ABOVE SIGNATORY: _____
(Printed)

NAME OF BOND GUARANTOR: _____
(Printed)

SIGNATURE OF GUARANTOR OR AUTHORIZED REPRESENTATIVE:

NAME AND POSITION OF ABOVE SIGNATORY: _____
(Printed)

DATED _____ DAY OF _____ 19 _____

APPENDIX H

FORM OF PERFORMANCE BOND

We the undersigned _____

of _____

and _____

of _____

do hereby bind ourselves as sureties in solidum and co-principal debtors for the due performance of the Contract by the Contractor named therein, and for all losses, damages and expenses that may be suffered or incurred by the Gaborone City Council as a result of non-performance of the Contract by the Contractor, renouncing all benefits from the legal exceptions ordinis seu excussionis et divisionis "No value, received" and all other exceptions which might or could be pleaded against the validity of this guarantee, with the meaning and effect of which exceptions we declare ourselves to be fully acquainted; provided that the liability of the undersigned under this guarantee is limited to and shall not exceed:

_____ (P)

(Pula in words)

and will lapse thirty days after the conclusion of the Contract Term, unless the Sureties are advised in writing by the Gaborone City Council before the expiration of said thirty days of their intention to institute claims and particulars thereof, in which event this guarantee shall remain in force until all such claims are paid or settled.

FOR AND ON BEHALF OF THE SURETIES:

AT _____ on this _____ Day of _____ 19 _____

AS WITNESS:

1. _____ 2. _____

ADDRESS:

APPENDIX I

GABORONE CITY COUNCIL

REFUSE COLLECTION SERVICES

GABORONE SOUTH

CONTRACT No. _____

FORM OF AGREEMENT

APPENDIX I

ARTICLE OF AGREEMENT

MADE AND ENTERED INTO BY AND BETWEEN:

THE GABORONE CITY COUNCIL
(hereinafter called the Employer)

of the one part and _____
(hereinafter called the Contractor)

WHEREAS the Employer is desirous to provide Refuse Collection Services in the Service Area known as Gaborone South, including residential, commercial, industrial and office plots;

AND has caused documents describing the Refuse Collection Services to be prepared;

AND WHEREAS the said documents entitled, TENDER FOR REFUSE COLLECTION SERVICES GABORONE SOUTH, and consisting of SCOPE OF CONTRACT, Section 1.0 through 6.0 and Appendices A through I;

AND WHEREAS the Contractor has executed by signature the Tender Documents and entered Tender costs to perform the described services on the Form of Tender;

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. For the consideration as stipulated by the Contractor on the Form of Tender, the Contractor will upon and subject to the Conditions annexed hereto, execute and perform the Services in accordance with the above referenced documents.
2. The Employer will pay the Contractor the sum of payments as stipulated in the Form of Tender, in accordance with the payment provisions included in the Tender Documents, hereinafter referred to as the Contract Sum.
3. The Term of this Agreement shall be for a period of three (3) years, with adjustment and escalation of the Contract Sum as stipulated in the Tender Documents.
4. This Agreement may be extended beyond the initial three (3) year term, up to an additional three (3) years at the Employer's sole option subject to negotiation of the Contract Sum.

6. This Agreement and its performance shall be construed and governed in accordance with the Laws, Acts and Regulations of the Republic of Botswana. This Agreement represents the entire Agreement of the parties hereto and supersedes all prior negotiations, representations or agreements either written or oral. This Agreement may be amended only in writing signed by both the Employer and the Contractor. This agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

SIGNED BY THE CONTRACTOR: _____

ADDRESS: _____

on this the _____ day of _____ 19 _____

at _____ in the presence of the undersigned witnesses

AS WITNESS:

1. _____ ADDRESS: _____

2. _____ ADDRESS: _____

SIGNED BY THE EMPLOYER: _____

(City Clerk)

on this the _____ day of _____ 19 _____

at _____ in the presence of the undersigned witnesses

AS WITNESS:

1. _____ ADDRESS: _____

2. _____ ADDRESS: _____

Section IV

Tender for Landfill Operation

**GABORONE CITY COUNCIL
GABORONE, BOTSWANA**

**TENDER
FOR
LANDFILL OPERATION**

ISSUED SEPTEMBER __, 1993

TENDER NUMBER _____

This Tender Document Contains 12 pages of Text and the following Appendices:

**Appendix A - 39 pages
Appendix B - 3 pages
Appendix C - 2 pages
Appendix D - 1 page**

**Appendix E - 1 page
Appendix F - 1 page
Appendix G - 2 pages
Appendix H - 1 page**

FIRST DRAFT 10 AUGUST 93

GABORONE CITY COUNCIL

TENDER

FOR

LANDFILL OPERATION

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APPENDIX B - Form of Tender

APPENDIX C - Subcontractor Declaration

APPENDIX D - Form of Insurance Coverage

APPENDIX E - Form of Intent for Performance Bond

APPENDIX F - Form of Performance Bond

APPENDIX G - Form of Agreement

APPENDIX H - Price Fluctuation Clause

DEFINITIONS

In the Tender Documents, as herein defined, the following definitions shall apply:

- "Tenderer"** shall mean the person or firm who takes Tender Documents prepared by the GCC for the purpose of preparing a Tender to perform the services described therein.
- "Contractor"** shall mean the person or firm whose Tender for the stipulated services has been accepted by the GCC to operate the landfill. Also referred to as the OPERATOR in the Landfill Operating Plan.
- "Landfill"** shall mean the Gaborone City Landfill.
- "Operating Plan"** shall mean the document completed by USAID in August 1993 and included as Appendix A. (See Section I at beginning of document.)
- "Master Plan"** shall mean the detailed engineering documents and design drawings of the landfill completed by the Engineering Department through ARUP Consulting Engineers and other consultants.
- "Refuse"** shall mean solid waste generated by residential, commercial and industrial waste generators which shall not contain significant amounts of other wastes as herein defined.
- "Medical Waste"** shall mean wastes generated by hospitals, clinics, nursing homes, doctor's offices, medical laboratories, research facilities, and veterinarians which are infectious or potentially infectious.
- "Hazardous Waste"** shall mean waste which by reason of its chemical reactivity, toxic, explosive, corrosive or other characteristics, cause danger or are likely to cause danger to human beings or the environment, whether alone or in combination with other wastes.
- "Construction Waste"** shall mean waste of an inert nature resulting from the demolition of structures, or in the construction of structures. These include stones, earth, masonry, concrete, unpainted wood, and similar solid material.
- "Yard Wastes"** shall mean brush, grass cuttings, soil, leaves, clean wood, garden waste or other similar solid material.

- "Special Wastes"** shall mean wastes, which due to their nature require special or separate handling and disposal practices, including but not limited to tires, motor oil and bulky waste items.
- "Recycling"** shall mean the authorized, organized separation of reusable materials from refuse either at the source of generation, or from the landfill by firms recognized and approved by the GCC.
- "Scavenging"** shall mean the unauthorized, unorganized searching of waste by individuals for reusable goods including food or other items. Scavenging is prohibited at the landfill.
- "Bin"** shall mean a receptacle intended for the storage and transfer of refuse, of various sizes up to 210 litres, suitable to be handled by manual labor.
- "Skip"** shall mean a receptacle intended for the storage and transfer of refuse, of various sizes greater than 210 litres, which requires mechanical equipment to empty into a refuse collection vehicle.

NOTE: Additional definitions are included in the Landfill Operating Plan found in Appendix A.

ABBREVIATIONS

- "GOB"** shall mean the Government of Botswana.
- "GCC"** shall mean the Gaborone City Council.
- "USAID"** shall mean the United States Agency of International Development.
- "ICMA"** shall mean the International City Management Association.
- "BHC"** shall mean the Botswana Housing Corporation.
- "VDC"** shall mean the Village Development Committee.

1.0 CONDITIONS OF TENDER AND INSTRUCTIONS TO TENDERERS

1.1 GENERAL

Tenders from prequalified Tenderers are invited by the Gaborone City Council (GCC) for operation of the Gaborone City Landfill as described in the Landfill Operating Plan. The selected Contractor shall perform the services as herein described.

All interested Tenderers shall complete and submit two (2) copies of the attached Tender Form and related documents to: City Clerk's Office, Room 66, Private Bag 0089, Independence Avenue, Gaborone, Botswana, prior to 4:00 pm local time, on the ___ day of ___ 1993, at which time the Tenders will be publicly opened and read aloud.

Tender Documents shall be enclosed in a plain sealed envelope clearly marked: **TENDER NO. _____ LANDFILL OPERATION.**

All mailed Tenders should be sent by registered post to ensure delivery. Telephone, telegraph, telex or facsimile Tenders will not be accepted.

All Tenderers shall provide a detailed statement of qualifications, including a list of references. Particular emphasis will be put on solid waste handling experience, landfill operation experience, organizational ability, existing equipment and business background.

Each Tender must be accompanied by a Tender Surety, in favour of the GCC, issued by an approved Insurance Company or Bank in the amount of P10 000.

The GCC may conduct personal interviews with selected Tenderers. The GCC expects that Tenderers selected for interviews will make available key personnel proposed to work on this project available for such interviews.

1.2 PREQUALIFICATION MEETING AND LANDFILL INSPECTION

A prequalification meeting and landfill inspection will be held on _____, 1993, at 9:00 am, beginning at the landfill. After the landfill inspection, the meeting will reconvene at the City Council Chambers. The GCC will give a presentation on the Tender Documents and its expectations of Tenderers. Questions from prospective Tenderers will be answered at that time. All prospective Tenderers will be required to fill out a Prequalification Questionnaire, which will be handed out and explained at the Prequalification Meeting. Prequalification Questionnaires will be due 15 days after the Prequalification Meeting. After review and evaluation of the Prequalification Questionnaires, the GCC Tender Committee will determine those firms who are prequalified to submit Tenders. The prequalified Tenderers will be informed in writing of their selection and invited to submit Tenders as described herein.

1.3 TENDER PERIOD

The Tender shall remain valid for ninety (90) days from the final date for submission of Tenders stipulated above.

The GCC shall notify the successful Tenderer (if any) by letter written within the stipulated ninety (90) day Tender period, or such extension of the Tender Period as mutually agreed between the GCC and Tenderers. The successful Tenderer shall accept the notification within 30 days of the date of the GCC notification of offer and the Contractor's written acceptance thereof shall constitute a formal Contract until the signing of the Form of Agreement.

The GCC is not be bound to accept the lowest or any Tender or to assign any reason for its acceptance or rejection of any Tender and in no case shall any Tenderer be paid for any expense incurred in the preparation of this Tender.

1.4 REPRESENTATION OR INTERPRETATION OF DOCUMENTS

Representation or interpretation of Contract Documents shall be done in writing by the GCC. If during the Tendering period, the GCC makes an interpretation, clarification or change in the Contract Documents, the GCC will issue a letter to all Tenderers explaining the interpretation, clarification or change. The Tenderer shall acknowledge the receipt of such letter in his submitted Tender.

1.5 REQUIRED TENDER INFORMATION

Each Tender shall contain the following information:

1. Tender's Company name, address, telephone number, and contact individual.
2. Completed Tender form(s).
3. Tender Surety.
4. Statement of qualifications and list of references.
5. List of Staffing assumptions used to prepare the Tender.
6. List of Equipment assumptions used to prepare the Tender.
7. Implementation Schedule.
8. Subcontractor Declaration.
9. Form of Intent for Performance Bond.

1.6 SIGNATORY REQUIREMENTS

Each Tender shall be accompanied by an original cover letter committing the Tenderer, if selected, to carrying out the proposed work at the Tender price. This price is to be valid for ninety (90) days from the date of the Tender. It must further state that all information submitted in support of the Tender is accurate. The cover letter must contain the signature of a person authorized to commit the firm(s) to a Contract.

All forms requiring signatures shall be signed by the same individuals signing the cover letter.

1.7 PUBLIC POLICY

It is the policy of GCC that during the performance of this contract, the Contractor will not discriminate against any employee or applicant for employment because of age, race, creed, colour, national origin, ancestry, martial status or sex.

1.8 PROOF OF GENERAL LIABILITY INSURANCE

The selected Tenderer will be required to obtain Liability Insurance of the limits and conditions stated in Appendix D. Proof of insurance in the form of a Certificate of Insurance will be required within 30 days of the notice of award and prior to Contract signing.

1.9 PERFORMANCE BOND REQUIREMENTS

A Performance Bond, in the amount of 10% of the base Tender price, shall be required of the successful Tenderer in the form stipulated in Appendix F, executed by a surety company duly authorized to do business in the Republic of Botswana. The Tender Documents shall include an Intent for Performance Bond as included in Appendix E.

The Performance Bond shall be executed for the first year of the Contract and shall be a condition precedent to the execution of any Contract and any renewal thereof. A Performance Bond shall be renewed annually for the work performed in the 2nd and 3rd years, increased accordingly. The Performance Bond shall be in the amount of ten (10) percent of the yearly total sum.

The Performance Bond shall be furnished within thirty (30) days after the date of notification to the selected Tenderer by GCC and his acceptance of the Tender and prior to Contract signing.

1.10 TENDERER RESPONSIBLE TO LEARN LOCAL CONDITIONS

All Tenderers submitting Tenders for this Contract are cautioned to examine carefully the conditions affecting the operation of the landfill and to acquaint themselves with the quantity and character of the materials to be handled under this Contract, and the Landfill Operating Plan. Appointments to inspect the landfill shall be made through the Chief Health Inspector's office.

Submission of a Tender shall be deemed conclusive evidence that the Tenderer has read and fully understands the Landfill Operating Plan and is fully acquainted with and shall be fully responsible for any restrictions, or constraints relative to operating the landfill.

All Tenderers interested in submitting Tenders for this Contract are encouraged to submit alternate Tenders where appropriate that achieve the same goals and results identified by GCC, its staff and its consultants.

2.0 BACKGROUND

The City of Gaborone, Republic of Botswana is undergoing rapid growth in both its economy and population. This situation is having a significant impact on the delivery of public services, and on public facilities.

In addition, public management of these services does not keep pace with the urbanization of the population, and complex environmental problems associated with rapid growth and changing socio-economic conditions.

Recognizing these issues and their potential impact on its population, the Gaborone City Council (GCC) developed a solid waste management strategy in cooperation with the International City Managers Association (ICMA), with financial assistance provided by the United States Agency for International Development (USAID).

The solid waste management programme was developed over a two year period involving two phases.

Phase I, conducted in 1991, examined GCC's refuse collection and transport services, disposal and landfill operations. A detailed review and assessment of existing conditions was conducted and presented to a Steering Committee, that provided feedback on alternatives and recommendations that were developed for consideration by the GCC. The Steering Committee is composed of representatives from GCC and Central Government.

One of the recommendations considered and approved by GCC was the privatization of Landfill Operation.

Phase II of GCC's management plan is the implementation of these services through public Tender, public awareness and education, and an on-going programme of evaluation and monitoring.

3.0 DESCRIPTION OF EXISTING LANDFILL OPERATION

The current landfill is being operated by the GCC through the Public Health and Engineering Departments. Landfilling began at this site in September of 1993. Prior to that date, landfilling was performed at a site in Mara Pula and at a former landfill, adjacent to the existing site and the sewage ponds. The landfill is being operated in accordance with the Landfill Operating Plan and Engineering Master Plan which were completed in late 1993.

NOTE: THIS SECTION SHOULD BE UPDATED TO INFORM THE TENDERERS OF THE CURRENT STATUS OF THE LANDFILL PRIOR TO ISSUING THESE TENDER DOCUMENTS:

3.1 SOLID WASTE GENERATION

Based on previous studies and field observations, the City of Gaborone generates approximately 80 tonnes of refuse daily in 1993. Waste projections during future years are included in the Operating Plan.

The wastes to be included in the Landfill Operating Contract are all residential, commercial, industrial, medical and special wastes generated in the City of Gaborone with the exception of medical waste generated by the City's two hospitals, waste oil, latrine waste, sewage sludge and other problem wastes as described in the Operating Plan.

During the Term of this Contract, it is anticipated that the GCC will develop additional waste management procedures to eliminate several of the waste types currently being landfilled. In particular, the GCC is considering the private collection and disposal of waste oil and medical wastes.

3.2 RECYCLING AND SCAVENGING

Scavenging has been practiced at former GCC landfills, but due to public health implications, is not permitted at the current landfill.

The GCC endorses the concept of recycling and will promote and encourage recycling through its public education efforts and the private sector.

Although recycling is most efficient when performed at the source of generation, waste being dumped at the landfill still contains significant quantities of recyclable materials. Realizing the overall benefits of removing these materials from the waste, the GCC permits organized recycling of select materials by approved companies at the landfill, to the extent that they do not conflict with landfill operations.

Materials currently being recycled in Gaborone include: corrugated cardboard, mixed office papers, newsprint and plastic film, by Waste Paper Recovery; beverage and food tins by Metal Box; returnable (deposit) bottles and plastic litre containers by Kgalagadi Breweries; and co-mingled glass bottles by Skip Hire. The only company approved to perform recycling at the landfill is Waste Paper Recovery.

4.0 SCOPE OF CONTRACT

Interested Tenderers may submit Tenders on the attached Tender Forms for Operation of the Landfill with two alternatives.

Alternative 1: Leased Equipment from GCC

The Contractor shall operate the Landfill in accordance with the Operating Plan using existing or new equipment and vehicles to be leased from the GCC. The Contractor

shall maintain and operate the equipment and vehicles in accordance with a lease agreement to be negotiated between the Contractor and the GCC.

Alternative 2: Contractor Owned Equipment

The Contractor shall operate the Landfill in accordance with the Operating Plan utilizing his own equipment and vehicles, of sufficient size and quantity to perform the Landfill Operations as specified herein.

The Contractor shall be responsible for all maintenance, including spare parts replacement, under either alternative.

4.1 LENGTH OF CONTRACT

The GCC is seeking a three (3) year Operating Contract, which may be renewed up to a maximum of three (3) additional years at the sole discretion of the GCC.

4.2 CONTRACTOR RESPONSIBILITIES

The Contractor shall operate the City Landfill in accordance with the Landfill Operating Plan included as Appendix A. This Plan consists of general information regarding landfilling of waste and specific requirements for the operation and maintenance of the landfill, including equipment and minimum staffing.

If the Tenderer wishes to deviate from the operating provisions in the Operating Plan and submit an alternative Tender, he must fully describe, in his Tender response, all areas where his Tender differs from the Operating Plan.

4.3 CONTRACTOR'S OFFICE & HOURS OF OPERATION

4.3.1 Office

The GCC will make available to the Contractor a portion of the current landfill office and weighbridge facilities at the landfill. The Contractor will be responsible for providing all office furniture and related supplies and office machines, for maintenance and repair during the term of the Contract, and to return occupancy of the buildings to the GCC at the conclusion of the Contract.

4.3.2 Times of Operation

As stated in the Operating Plan, the Contractor shall open the landfill to the general public Monday through Sunday, 7:30 am to 6:00 pm including all holidays.

In addition to the public hours stated above, the Contractor shall maintain security guards at the landfill 24 hours per day to prohibit scavenging and unauthorized access.

4.4 IMPLEMENTATION SCHEDULE

Each Tenderer shall include an implementation schedule with the Tender Documents. The Implementation Schedule shall include but not be limited to the following items:

1. Sign Contract and provide required bonding and proof of insurance within 30 days of notice and Contractor's acceptance of award.
2. Order and receipt of equipment and vehicles, and/or lease negotiations with the GCC.
3. Establish office and maintenance facilities.
4. Hire employees.
5. The GCC anticipates full implementation of Landfill Operating services within 45 days of the Contract signing.

4.5 PAYMENTS

4.5.1 General

The Contractor shall submit Payment Requests on the last working day of the month for services performed during that month. Payment shall be due and payable 15 days thereafter. The amount of the monthly payment will be computed based on the Base Tender Price entered on the Tender Form or as adjusted due to price fluctuations, divided by twelve (12).

The GCC may withhold any amount as a result of non-performance of the Scope of Contract as herein described.

4.5.2 Price Fluctuation Clause

Due to the length of this Contract, the Contractor shall be entitled to an adjustment of the Base Tender price due to Statutory Fluctuations of any material or labor cost as a result of Customs Duty, Tax, Currency Exchange Rates, Minimum Labour Rates or any other governmental action, which shall occur after seven (7) days preceding the date of Tender. Price adjustments due to Statutory Fluctuations shall not include overhead or profit and will be considered only when fully documented.

If the Tenderer wishes to be protected against price fluctuations other than due to Statutory Fluctuations, he shall list those prices in Appendix H for which protection is requested and upon which he based his Tender. In support of these prices the Contractor shall furnish, either with his Tender or when requested, prior to acceptance, bona vide current merchants quotations.

4.5.3 Uncontrollable Events

If the Contractor is unable to perform his responsibility under the conditions of the Contract due to circumstances beyond his control, which results in increased cost to the Contractor for overtime or work on weekends, or other increased costs, the Contractor shall be reimbursed for said additional cost. If the Contractor experiences an unforeseen and uncontrollable circumstance he shall give immediate notice to the GCC, prior to incurring any additional cost, who shall review the notice and, direct the Contractor accordingly.

4.6 SUBCONTRACTORS

The Contractor may utilize the services of Subcontractors to perform specific portions of the Landfill Operations up to 50 percent of the Contract as herein described. The Contractor shall list all Subcontractors that he intends to use on this project in Appendix E, along with the specific tasks to be performed. All subcontractors shall be subject to GCC review and approval.

5.0 LANDFILL EQUIPMENT

5.1 NEW EQUIPMENT

The GCC may, under Tender Alternative 1, provide on a leased basis to the selected Contractor the following new landfill operating equipment:

1. Steel Wheeled Compactor
2. Track Bulldozer
3. Rubber Tired Loader
4. Tipper Truck

5.2 USED EQUIPMENT

All Tenderers shall also have the option under Alternative One of leasing existed used equipment from the GCC. If the Tenderer wishes to consider this option he shall contact the GCC for a list of existing vehicles available for lease under this Contract.

5.3 STANDBY EQUIPMENT

The Contractor shall be responsible for arranging for standby equipment and vehicles in the event that the primary vehicles are removed from service for extended maintenance or repairs. The Contractor shall schedule his maintenance and repair of vehicles so as not to interrupt the operation of the landfill.

5.4 TENDER REQUIREMENTS

All tenderers shall be responsible for evaluating all information regarding the leasing of equipment, including all capital and maintenance costs and selecting the appropriate equipment and procurement method that will meet the goals and objectives of this Contract.

In addition to entering the base price in the Tender Form, each Tenderer shall clearly state the type and number of vehicles they wish to lease from the GCC along with the

assumed conditions as stipulated in the Form of Lease Agreement found in Appendix I. Upon selection of the Contractor, the GCC will negotiate final terms of the lease agreement.

5.5 EQUIPMENT MAINTENANCE

The Contractor shall maintain and operate according to manufacturer specifications all leased equipment, provided and owned by GCC.

The Contractor shall be required by GCC to develop a preventive maintenance policy and service schedule for all equipment and vehicles, and be responsible for all maintenance and timely repairs.

6.0 PERSONNEL

6.1 COMPETENT LABOUR

The Contractor shall use all diligence in arranging for sufficient and competent labour at all times during the term of this Contract. Competent supervisory and managerial staff shall be employed to oversee the Contract operations and to ensure that the services are performed as stipulated in Scope of Contract.

6.2 RECRUITMENT OF GCC LABOUR

The GCC shall require that the Contractor provide employment opportunities, to those GCC staff currently employed by the GCC that may be displaced as a result of this privatization project.

6.3 EMPLOYEE TRAINING

The Contractor shall provide all hired staff with the appropriate training in the use of all equipment, safety gear and uniforms. Training shall include sanitary and environmental practices for handling waste materials.

6.4 EMPLOYEE APPEARANCE

The Contractor personnel shall be representing GCC and the proposed programme. As such, they shall be neatly dressed, well-groomed, courteous, and knowledgeable

about the programme. All collection workers shall wear uniforms, dissimilar to existing GCC uniforms, bearing the name or logo of the Contractor.

6.5 WORKMEN'S COMPENSATION

The Contractor shall comply with the Workmen's Compensation Act (CAP 43:1977) and any amendments thereto. The Contractor shall obtain the required insurance from a registered insurer under the Act. Proof of insurance will be a requirement of Contract signing.

6.6 CONDUCT OF CONTRACTOR'S EMPLOYEES

The Contractor shall comply with existing local labor laws, regulations and labor standards.

The Contractor shall formulate and enforce an adequate safety programme with respect to all work under this Contract, whether performed by the Contractors or subcontractors. The Contractor has the assurance from the GCC of cooperation where the implementation of these safety measures requires joint cooperation.

Upon written request of the GCC, the Contractor will remove or replace any of its employees employed under this Contract.

All Contractor and subcontractor employees shall at all times conduct themselves within the laws of Botswana.

7.0 CONDITIONS OF CONTRACT

7.1 ARBITRATION

If any dispute or difference of any kind shall arise between the GCC and the Contractor in connection with or arising out of the Contract or performance of the specified services, it shall in the first place be fully documented in writing and negotiated amongst the two parties. If these negotiations do not produce a settlement within 90 days, from the date of written notice of a dispute or difference by either party, the matter shall be referred to arbitration. The arbitrator shall be selected from a list of arbitrators agreeable to both parties. The matter may be referred to arbitration prior to expiration of 90 days upon mutual consent of both parties.

If the dispute or difference involves payments to the Contractor, only that portion of the payment which is in dispute shall be withheld during the arbitration period and all other payments due the Contractor shall be paid as stipulated under the payment provisions of this document. Submission of a dispute or difference to arbitration shall not relieve the Contractor from his obligations to perform the services as specified herein.

The said arbitrator/s shall have full power to open up, review and revise any decision, opinion, any decision, direction, or valuation of either party and neither party shall be limited in the proceedings before the arbitrator to the evidence or arguments for the purpose of obtaining a decision. The decision of the arbitrator shall be binding upon both parties.

7.2 TERMINATION

7.2.1 By GCC for Cause

If at any time during the Contract Term, the Contractor is deemed by law unable to pay his debts or enters into voluntary or involuntary bankruptcy, liquidation or dissolution, or without reasonable excuse has failed to perform the stipulated services after due notice and reasonable time to correct the area of non-performance, the GCC may, issue a written termination notice, terminating the Contractor.

The termination notice shall stipulate the conditions of termination including the time of termination and the disposition of equipment. The GCC shall have the option of purchasing the Contractor's equipment based on the fair market values as determined by a third party appraiser agreed to by both parties. The time of termination may be a period of up to 90 days to allow the GCC to arrange for another contractor to perform the services. The Contractor shall continue to provide refuse collection services during the termination period and be paid as stipulated herein.

The dispute of any component of the termination notice, or the submission of any dispute to arbitration, shall not relieve the Contractor of his responsibility to perform the collection services during the termination period.

7.2.2 By Contractor for Cause

If at any time during the Contract term, the GCC is unable to make payments to the Contractor or otherwise is unable to perform its obligations under the Contract without cause, after written notice and reasonable time to correct said area of non-performance, the Contractor may upon 14 days written notice, terminate the Contract. Upon termination, the Contractor shall be paid all sums that are payable to him for providing services under the Contract, plus damages suffered by the Contractor due to the premature termination of the Contract.

7.2.3 Termination by GCC for Convenience

If at any time before the completion of the Contract Term, it shall be found by the GCC that for reasons beyond the control of the parties render it impossible or against the interest of the GCC to continue the Contract, the GCC at any time, by 90 day written notice to the Contractor may discontinue work and terminate the Contract in whole or in part. Upon service of such notice of termination, the Contractor shall discontinue to work in such manner, sequence and at such times as the GCC may direct, continuing and doing after said notice only such work and only until such time or times as the GCC may direct. The Contractor shall have no claim for damages for

such discontinuance or termination of the Contract but the Contractor shall receive compensation for reasonable expenses incurred in good faith for the performance of the Contract and for reasonable expenses associated with termination of the Contract. The GCC will determine the reasonableness of such expenses. The Contractor shall have no claim for anticipated profits on the work thus terminated, nor any claim, except for the work actually performed at the time of complete discontinuance.

7.3 INDEMNIFICATIONS

The Contractor shall indemnify, protect and save harmless the GCC against all losses and claims for death of or injury to any person, or loss or damage to any property, which may arise out of or in the consequence of the Contractor's performance under this Contract, except those that are due to willful or negligent acts, or omissions by the GCC.

The GCC shall indemnify, protect and save harmless the Contractor against all losses and claims for death of or personal injury to any person, or loss or damage to any property which may arise out of or in the consequence of the GCC's obligations under this Contract, except those that are due to the willful or negligent acts or omissions of the Contractor.

7.4 GCC REPRESENTATION

The GCC's authorized representative shall be the Town Clerk, who may in whole or in part, delegate such authority to one or more persons appointed to carry out such duties and exercise such authority as may be delegated to them by the Town Clerk. The GCC will inform the Contractor on or before Contract signing the identity of the GCC representatives and will outline their duties and authority to represent the GCC during the term of the Contract.

7.5 NOTICES

All notices, including payment requests, disputes and other correspondence given to the GCC shall be sent by post, facsimile or delivered in person addressed to the City Clerk, Private Bag 0089, Room 66, Gaborone, Botswana.

All notices, or instructions given to the Contractor by the GCC under the terms of the Contract, shall be sent by post, cable, telex or facsimile to or left at the Contractor's principal place of business or other such address as the Contractor shall nominate for that purpose.

7.6 ACCESS TO CONTRACTOR'S FACILITIES AND RECORDS

Upon reasonable notification, the GCC shall have access to the Contractor's offices, maintenance depot, other facilities and records for the purpose of determining the Contractor's compliance with the Contract conditions.

APPENDICES

**APPENDIX A - Landfill Operation Plan
(Provided here as Section I at beginning of this document)**

APPENDIX B - Form of Tender

APPENDIX C- Subcontractor Declaration

APPENDIX D - Form of Insurance Coverage

APPENDIX E - Form of Intent for Performance Board

APPENDIX F - Form of Performance Bond

APPENDIX G - Form of Agreement

APPENDIX H - Price Fluctuation Clause

APPENDIX A

**Landfill Operation Plan
(See Section I at beginning of document)**

FORM OF TENDER
PAGE 2

2. We acknowledge that Appendices A to H to the Form of Tender form part of this Tender.
3. We undertake if our Tender is accepted to commence work in accordance with the Scope of Work and the Implementation Schedule.
4. If our tender is accepted, we will within thirty (30) days, execute the formal Contract Agreement and obtain the guarantee of a Bank or acceptable insurance company (subject to your approval) to be jointly and severally bound to the City of Gaborone in the sum of 10% of the Base Tender Cost and as stipulated Appendix F hereto, for due performance of the Contract under the terms of a Performance Security in the form appended hereto.
5. We agree to abide by this Tender for the period of ninety (90) days from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period, or such other extended period that may be agreed between ourselves and the Gaborone City Council.
6. Unless and until a formal Agreement is prepared and executed, this Tender with our written acceptance shall constitute a binding Contract between us, and shall be deemed for all purposes to be the Contract Agreement.
7. We understand that you are not bound to accept the lowest or any Tender you may receive and that you will not defray any expenses incurred by us in tendering.

**FORM OF TENDER
PAGE 3**

DATED this _____ day of _____ 19 _____

SIGNATURE: _____

(Name of Signatory Printed): _____

In the Capacity of: _____

Duly authorised to sign Tenders for and on behalf of: _____

(Block Capitals)

ADDRESS: _____

(N.B.): Board Resolution authorising signatory must be attached

SIGNATURE OF WITNESS: _____

ADDRESS: _____

NAME OF WITNESS (Printed): _____

OCCUPATION: _____

DATE: _____

APPENDIX C

SUB-CONTRACTOR DECLARATION

If the Tenderer wishes to sub-contract any portion of the work described in the Scope of Work under any heading, he shall be free to do so but must give full details of the Sub-Contractors he intends to employ for each portion of the Work.

Failure to declare subcontractor information may invalidate the Tender.

1. Portion of the Work: _____

i Sub-contractor: _____

Address: _____

ii Experience in _____

similar work: _____

2. Portion of the Work: _____

i Sub-contractor: _____

Address: _____

ii Experience in _____

Similar Work: _____

3. Portion of Work: _____

i Sub-contractor: _____

Address: _____

ii Experience in _____

Similar Work: _____

Subcontractor Declaration
Page 2

4. Portion of the Work: _____

i Sub-contractor: _____

Address: _____

ii Experience in _____

similar work: _____

5. Portion of the Work: _____

i Sub-contractor: _____

Address: _____

ii Experience in _____

Similar Work: _____

Signature: _____ **Date:** _____

Name of Signatory: _____

In the Capacity of: _____

Duly Authorized on behalf of: _____

APPENDIX D

FORM OF INSURANCE

The selected Tender shall be required to obtain general liability insurance as a condition of Contract signing within thirty (30) of notice of award. The selected Tenderer shall provide an Insurance Certificate at Contract Signing as proof of insurance coverage for the following amounts:

For liability for bodily injury, including accidental death, Pula 500 000,00 on account of any one occurrence, and Pula 1 000 000,00 aggregate limit.

For liability for property damage, Pula 200 000,00 on account of any one occurrence and Pula 500 000,00 aggregate limit.

An umbrella policy in the amount of Pula 500 000,00 covering underlying policies.

The contractor shall also be required to secure the following insurance:

1. Motor vehicle on equipment and vehicles.
2. Workmen's Compensation Insurance.

APPENDIX E

FORM OF INTENT FOR PERFORMANCE BOND

It is hereby agreed that a Performance Bond as defined in the Tender Documents and Appendix H, will be provided by the sureties, Insurance Company or Bank named hereunder.

NAME OF TENDERER: _____
(Printed)

SIGNATURE OF TENDERER OR AUTHORIZED REPRESENTATIVE:

NAME OF ABOVE SIGNATORY: _____
(Printed)

NAME OF BOND GUARANTOR: _____
(Printed)

SIGNATURE OF GUARANTOR OR AUTHORIZED REPRESENTATIVE:

NAME AND POSITION OF ABOVE SIGNATORY: _____
(Printed)

DATED _____ DAY OF _____ 19 _____

APPENDIX F

FORM OF PERFORMANCE BOND

We the undersigned _____
of _____
and _____
of _____

do hereby bind ourselves as sureties in solidum and co-principal debtors for the due performance of the Contract by the Contractor named therein, and for all losses, damages and expenses that may be suffered or incurred by the Gaborone City Council as a result of non-performance of the Contract by the Contractor, renouncing all benefits from the legal exceptions ordinis seu excu. sionis et divisionis "No value received" and all other exceptions which might or could be pleaded against the validity of this guarantee, with the meaning and effect of which exceptions we declare ourselves to be fully acquainted; provided that the liability of the undersigned under this guarantee is limited to and shall not exceed:

_____ (P)

(Pula in words)

and will lapse thirty days after the conclusion of the Contract Term, unless the Sureties are advised in writing by the Gaborone City Council before the expiration of said thirty days of their intention to institute claims and particulars thereof, in which event this guarantee shall remain in force until all such claims are paid or settled.

FOR AND ON BEHALF OF THE SURETIES:

AT _____ on this _____ Day of _____ 19 _____

AS WITNESS:

1. _____ 2. _____

ADDRESS:

APPENDIX G

GABORONE CITY COUNCIL

LANDFILL OPERATION

CONTRACT No. _____

FORM OF AGREEMENT

ARTICLE OF AGREEMENT

MADE AND ENTERED INTO BY AND BETWEEN:

THE GABORONE CITY COUNCIL
(hereinafter called the Employer)

of the one part and _____
(hereinafter called the Contractor)

WHEREAS the Employer is desirous to provide private Landfill Operation of the City Landfill;

AND has caused documents describing the Landfill Operation to be prepared;

AND WHEREAS the said documents entitled, LANDFILL OPERATING PLAN and TENDER FOR LANDFILL OPERATION, and consisting of SCOPE OF CONTRACT, Section 1.0 through 7.0 and Appendices A through H;

AND WHEREAS the Contractor has executed by signature the Tender Documents and entered Tender costs to perform the described services on the Form of Tender;

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. For the consideration as stipulated by the Contractor on the Form of Tender, the Contractor will upon and subject to the Conditions annexed hereto, execute and perform the Services in accordance with the above referenced documents.
2. The Employer will pay the Contractor the sum of payments as stipulated in the Form of Tender, in accordance with the payment provisions included in the Tender Documents, hereinafter referred to as the Contract Sum.
3. The Term of this Agreement shall be for a period of three (3) years, with adjustment and escalation of the Contract Sum as stipulated in the Tender Documents.
4. This Agreement may be extended beyond the initial three (3) year term at the Employer's option subject to negotiation of the Contract Sum, satisfactory performance by the Contractor and availability of funds.
5. This Agreement may be terminated by the Employer, without notice, for cause as a result of non-performance of this agreement or non-compliance with local or national regulations and by-laws. In the event of Termination for cause, the Contractor shall reimburse the Employer for any reasonable increased costs incurred in arranging for alternate landfill operations services.
6. This Agreement and its performance shall be construed and governed in accordance with the Laws, Acts and Regulations of the Republic of Botswana.

**AGREEMENT
PAGE 2**

This Agreement represents the entire Agreement of the parties hereto and supersedes all prior negotiations, representations or agreements either written or oral. This Agreement may be amended only in writing signed by both the Employer and the Contractor. This agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

SIGNED BY THE CONTRACTOR: _____

ADDRESS: _____

on this the _____ day of _____ 19 _____

at _____ in the presence of the undersigned witnesses

AS WITNESS:

1. _____ ADDRESS: _____

2. _____ ADDRESS: _____

SIGNED BY THE EMPLOYER: _____
(City Clerk)

on this the _____ day of _____ 19 _____

at _____ in the presence of the undersigned witnesses

AS WITNESS:

1. _____ ADDRESS: _____

2. _____ ADDRESS: _____
