The Global Partnership on Output-Based Aid

PROJECT COMMITMENT PAPER

Project Name	**Nairobi Sanitation OBA Project (P131512)**
Sector	**Water and Sanitation**
Location	**Kenya**
Task Team Leader	**Patrick Mwangi**
GPOBA Transaction Advisor	**Iain Menzies**
Funding Request	**$ 4,330,000 (W3)**
Date	**December 17, 2012**

Contents

Annexes

ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
AWSB	Athi Water Services Board
CPS	Country Partnership Strategy
DFID	Department for International Development, United Kingdom
EIRR	Economic Internal Rate of Return
ERR	Economic Rate of Return
FI	Financial Institution
FIRR	Financial Internal Rate of Return
FM	Financial Management
GNI	Gross National Income
GoK	Government of Kenya
GPOBA	Global Partnership on Output-Based Aid
IDA	International Development Association
ISDS	Integrated Safeguards Data Sheet
IVA	Independent Verification Agent
KISIP	Kenya Informal Settlements Improvement Project
M&V	Monitoring and Verification
NCWSC	Nairobi City Water and Sewerage Company
NPV	Net Present Value
OBA	Output-Based Aid
O&M	Operations and Maintenance
WaSSIP	Water and Sanitation Service Improvement Project
WB	World Bank
WSP	Water and Sanitation Program

Executive Summary:

The objective of this project is to increase access to sewerage and water supply connections in Nairobi's low-income communities over a 4 year period.

The project builds upon a 2004 IDA Grant which successfully helped establish the Nairobi City Water and Sewerage Company (NCWSC) as an autonomous and ring-fenced service provision utility with clear roles, responsibilities and contractual arrangements. NCWSC will be the project implementer and service provider for this OBA project.

The project also builds on the 2007 IDA Credit (Water and Sanitation Service Improvement Project or WaSSIP) which has funded, inter alia, significant improvements to the water and sewerage networks in Nairobi's low-income areas. This expansion of local networks, particularly sewer networks, within Nairobi's low-income settlements has provided an opportunity for improved access to water and sewerage services. However, the cost of connecting to these networks is too high for low income families and so this project will provide targeted output-based subsidies for eligible households to facilitate service access.

The primary focus of this OBA project is access to sanitation services. However, given the need for clean water to be available for hygiene purposes (hand washing etc), as well as for drinking and cooking, this project will also offer subsidies for piped water supply access where the household is not already connected to the network.

Project outputs will be:

- Installation of a working water supply connection and 6 months of billed water consumption
- Installation of a working sewer connection (including all associated internal low cost plumbing/toilet facilities) and 6 months of billed service usage

The project aims to connect 16,000 poor households (80,000 people) to the water and sewerage network of NCWSC. The OBA subsidy per household/connection will be:

- Sewerage connection: $175 (70% of total connection cost)
- Water supply connection: $80 (40% of total connection cost)

The balance of the connection costs will be funded by household deposits and a five-year loan from NCWSC to the eligible household. NCWSC is planning to fund these loans by borrowing from local financial institutions.

The key features of the project are:

CONSIDERATION	EXPLANATION
Project Objective	▪ To increase access to water and sewerage services in low-income communities in Nairobi.
Implementers	▪ NCWSC will be the project implementer and service provider.
Outputs	▪ 16,000 independently verified working sewerage and water connections, and associated service delivery, for eligible low-income households (80,000 beneficiaries).
Subsidy Payment Trigger	▪ Independent verification of active sewerage and water connections and subsequent service delivery (ie. billing history over a 6-month period). ▪ 50% will be paid on verification of working connections ▪ 50% will be paid after verification of 6 months of sustained service delivery
Subsidy Targeting	▪ Geographical – the project will target low-income communities within the NCWSC area of jurisdiction.
Setting OBA Subsidies	▪ OBA subsidies will fill the gap between the full capital cost of connection and what the beneficiary households can afford and are willing to pay (through an upfront payment/deposit and 5-year loan from NCWSC). NCWSC will pre-finance all capital costs (less a small application deposit from the beneficiary household).
Pre-financing	▪ NCWSC will pre-finance connections through its internal cash flows and loans from local financial institutions.
Project Delivery Partners	▪ *Grant Agreement (GA) Recipient:* The GA will be signed with government of Kenya. There will be a subsidiary agreement with NCWSC for project implementation. ▪ *Sponsoring Government Authority:* Athi Water Services Board will assist in technical aspects of the project and provide support to NCWSC. ▪ *Water and Sanitation Program:* WSP will support the project on social marketing and hygiene promotion in addition to monitoring.
Estimates for Extent of Support Required	▪ OBA subsidies:$4.08 million ▪ Funding for independent verification agent: $250,000

Project Data Sheet

Project Name: **Nairobi Sanitation OBA Project P131284**

Scope: To increase access to sanitation and water supply for poor households in Nairobi's low income communities.

Total Project Costs: For the connections the total project cost is **$ 7.2 million**:

- $ 4.08 million GPOBA subsidy (57%)
- $ 2.976 million from NWSC (41%)
- $ 144,000 from household contributions (2%)

An additional $250,000 from GPOBA will be required for independent output verification.

Total GPOBA funding requested: $**4.33 million**
Subsidy: $4.08 million
IVA: $250,000

Funds: DfID 2 TF

Outputs: About 16,000 verified working sewerage and water connections

Expected beneficiaries: About 16,000 low-income households in Nairobi's low-income communities (about 80,000 people)

Targeting: The project will use geographic targeting, focusing on low income settlements of Kayole-Soweto, Matopeni-Spring valley & Embakasi-River Bank in Nairobi City

Economic Rationale: The EIRR of the GPOBA support is expected to be approximately 34%. The FIRR is 28% with GPOBA subsidy and 0% without the subsidy.

GPOBA subsidy:
Sewerage connection: $175 (70% of cost)
Water connection: $80 (40% of cost)

- 50% will be paid on verification of working connections
- 50% will be paid after verification of 6 months of sustained service delivery

GPOBA subsidy "efficiency": The average OBA subsidy is US$255 per household, or US$51per person. The average subsidy per 'service' is $25.5, which is within the average subsidy target set by DfID of less than $30 for at least 60% of target recipients and less than $60 for at least 80% of recipients (for less well tested sectors such as sanitation).

Grant recipient: Government of Kenya. Nairobi City Water and Sewerage Company (NCWSC) will be the delegated project implementer.

Sustainability: NCWSC operates costs recovery tariffs. Eligible households will be able to afford NCWSC tariffs.

Financial Management: A Financial Assessment was carried out for NCWSC in October 2012. The conclusion of the assessment was that the financial management arrangements have an overall residual risk rating of moderate, which satisfies the Bank's minimum requirements under OP/BP10.02, and therefore is adequate to provide, with reasonable assurance, accurate and timely information on the status of the project. The report is attached in Annex 3

Procurement: A Procurement Capacity Assessment on NCWSC was carried out in October 2012. The utility was found to have substantial capacity to proceed with the installation of customer connections, as it has been doing in the last few years. The report is attached in Annex 4.

Disbursement: GPOBA grant funds will reimburse US$ 4.08 million to NCWSC upon independent verification of each household connection in bi-annual tranches

Safeguards: The project will largely follow the Environmental and Social Management Framework (ESMF) developed for the IDA Water and Sanitation Service Improvement Project (WaSSIP) since the scope of the OBA project falls within that of WaSSIP. The Integrated Safeguards Data Sheet (ISDS) for this project, describing the GPOBA component, will be posted on Infoshop.

Government endorsement: A letter of endorsement Ref: AWSB/WSPA/VOL1/23 was issued to the GPOBA by the Athi Water Services Board dated 9th January 2012. This letter provided the government's support to Nairobi City Water and Sewerage Company's plans to work with the World Bank to provide water and sewerage connections to low income households in its area of operations. A copy of the letter is attached in Annex 8.

Exchange Rate: KES 85/$ ($ = USD)

Responses to the Comments Raised by the Panel of Experts at Eligibility Stage

The targeted areas are informal settlements. Does that mean that these settlements are only temporary unless the Government changes its policy? Although the NCWSC Social Connections Policy refers to informal settlements in its title, it applies to both informal settlements and low income communities. The OBA project will focus only on low income communities, where land entitlement by the residents is not contested.

With the new Policy in place, will those who paid to be connected to the informal or illegal 'spaghetti" network be able to, or want to, apply for a new OBA connection? Are NCWSC staff involved in these illegal connection arrangements? Where such illegal connections exist, they are typically organized by 'water mafia' operators who charge exorbitant tariffs/prices for the service. Such illegally connected households are likely to want regularized connections through the OBA project for economic reasons.

From experience, people are willing to pay for water, but less so for sewerage connections. How do you make sure that people install the sewerage system? New water connections will be made only in conjunction with sewerage connections.

It was not clear from the document how the project would help the development of the domestic private sector. The document only refers to the Financial Institution financing scheme (access to domestic private finance), not service provision.

It seems that WaSSIP cannot ensure service provision to low-income households without this kind of grant. It is surprising that the Bank would undertake a water and sanitation service project without including poor household access into the design. The team noted that WaSSIP had focused on primary/secondary network investments, with high- and middle-income households being able to afford to connect, leaving the low-income households unconnected. The WaSSIP PAD (Project Appraisal Document) does not refer to OBA for social connections, and metering, and does not allocate specific funds to household connection subsidy.

Under the proposed design, GPOBA would disburse to the FI. Why not disburse to the service provider directly? The Team noted the POE's concern and will look further into the pre-financing arrangements during the preparation phase.

Why the proposed partial intercept of revenues only from the GPOBA-funded activity? Normal commercial practice would intercept an existing revenue stream in addition to any project-related stream, treating this as a corporate loan, not project financing. This would provide much more security to the lenders, since the existing revenue stream has a collection history. The team stated that they had been thinking in terms of a project financing, not corporate financing, when proposing the design. They acknowledged that the alternative approach would be possible.

How many FIs have the Team approached? Several projects were discussed with a number of FIs and commercial banks; this particular design was discussed with Equity Bank, Eco Bank and K-Rep Bank. The Chair suggested that the subsidy be disbursed directly to the service provider (NCWSC) and that the Grant Agreement should also be signed with NCWSC and not with the FI. The Team recognized that NCWSC should offer a much better credit quality than the community water projects in the Kenya Microfinance project.

What will GPOBA disburse for and when? GPOBA will disburse a portion of the unit subsidy per each verified connection and the remainder after a certain period of satisfactory service delivery to each connection.

Is the proposed unit subsidy amount appropriate and how does it compare with other similar OBA projects? The connection cost is lower than in Sri Lanka, and much lower than in Morocco. The team promised to provide a comparative analysis of connection costs.

Who executes the connections? Could the private sector have a role in making the connections? The Team noted that like many utilities, connections were typically made by NCWSC internal teams. The scope for NCWSC to tender connection contracts to private contractors will be explored during the project preparation work on scheme design.

The tariff may be insufficient to cover the O&M costs and threaten project sustainability. The Team noted that NCWSC tariffs already cover O&M costs, but it will look into the sustainability of the project further by carrying out a financial analysis using the results from a demand and pricing study. The financial and economic analysis to be undertaken for the Commitment Paper will address this issue in more detail.

How will the scheme function after the project ends? The Social Connection Fund proposed in the Social Connections Policy will supersede the OBA scheme. The Team will work with NCWSC during implementation of the OBA project to facilitate the timely implementation of the Fund.

In addition, the Minutes of the POE Meeting noted that eligibility endorsement was subject to three comments:

1. *The Team should revise the project design in such a way that the subsidy disbursements are made directly to the service provider rather than the financing bank.*

The project is now structured with disbursements directly to the service provider (NCWSC).

2. *The Team should provide a comparative study of the connection cost.*

GPOBA has two projects with sewered connections. The unit costs for the Morocco OBA project are as follows:

Morocco Urban Water Pilots - Connections to piped sewerage*

Design estimates (USD equivalents) *	Casablanca	Meknes	Tangiers
Unit costs **	1,055	1,314	1,414
Unit subsidy **	401	462	869
Unit cost/ capita**	211	263	283
Unit subsidy / capita ***	80.2	92.4	173.8

Actual costs (USD equivalents)	Casablanca	Meknes	Tangiers
Actual unit costs *****	1,232	2,853	1,816
Unit subsidy *****	451	520	978
Unit cost/ capita	246	571	363
Unit subsidy / capita ***	90.2	104.0	195.6

* Source: Morocco - Improved Access to Water and Sewerage services project, Project appraisal - Commitment Document, August 2006

** Unit costs were proposed in Moroccan Dirhams. USD equivalents were calculated based on the exchange rate at the time of appraisal (1USD = 9MAD). Current exchange rate is 1USD = 8MAD. Exchange rate variation represents an 11% increase in unit costs.

*** Assuming 5 people/ households as in Sri Lanka, for comparison purposes.
**** Actual unit costs vary per project area of an operator, the costs presented are in average.
***** Unit costs were established in Moroccan Dirhams. USD equivalents calculated using the current exchange rate of 1USD = 8MAD.

The unit costs for the Sri Lanka Sanitation OBA project are as follows:

	Costs (US$)						
	Output 1: Sewer Connections						Output 2: Revised On-site sanitation improve-ments
	Output 1a: Revised Direct connections		Output 1b: Revised Connections to conventional sewer extensions	Output 1c: Revised Connections to simplified sewer extensions		Output 1d: Revised Connections to new decentralised networks	
Costs in US$	Output 1a1: Full cost build out	Output 1a2: Cost within premises		Output 1c1: Connections to simplified sewer extensions	Output 1c2: Connections to simplified sewer extensions plus pumping		
Unit cost of output	1,028	233	1,689	505	647	679	543
Unit HH contribution	30	30	30	30	30	30	15
Unit NWSDB capital contribution	0	0	0	70	88	100	58
GOSL co-financing	898	103	1405	90	161	130	157
GPOBA unit subsidy	**100**	**100**	**254**	**315**	**368**	**419**	**313**
%GPOBA subsidy	**9.7%**	**42.9%**	**15.0%**	**62.4%**	**56.9%**	**61.7%**	**57.6%**

These comparators indicate that the cost per connection of $250 per household for the Nairobi Sanitation project offers good value for money.

3. The Team must confirm project sustainability under the current tariff structure.

NCWSC charges cost recovery tariffs, is solvent and credit worthy (see Section A.1)

STRATEGIC CONTEXT AND RATIONALE

A.1 Country and Sector Context

The objectives of this project align with the Government of Kenya (GoK)'s stated policy goals for the water and sanitation sector. Kenya Vision 2030 (Kenya's national development plan) aims to ensure that "*improved water and sanitation are available and accessible to all*" by the year 2030. The GoK has set a near-term goal of 90% access to safe and reliable water and 40% access to sewerage in urban areas by 2012. NCWSC is committed to extending networked sanitation services to Nairobi's informal settlements. This project also builds on the World Bank's Country Partnership Strategy for Kenya (renewed March 2010) which pledges support for Kenya Vision 2030 and assistance to increase poor households' access to services including health, water and sanitation.

Low Income Settlements

The current population of Nairobi stands at 3,138,369 (Male – 51.1%, Female – 48.9%). The population density is 4,515 people per km² with an annual growth rate of 4.1%. The number of households is 985,016 (Kenya Central Bureau of statistics 2009). It is estimated that 60% of the population lives in informal settlements, with this number expected to rise further with the creation of new counties under the government decentralization policy of the new constitution. There are over100 informal settlements in Nairobi alone. These settlements can be categorized into two types: (i) squatter settlements, and (ii) those that arise out of illegal sub-divisions of either government or private land. Most of these settlements are characterized by lack of access to water and sanitation, insecure tenure, lack of adequate housing, poor environmental conditions, and high crime rates (UN Habitat, 2008).

Rapid growth of low income settlements in the city of Nairobi can be attributed to a number of factors, including increasing income inequalities and urban poverty, increasing rates of rural migration, inefficient land delivery systems, high costs of urban living, and poor investment in low income housing. The low income settlements in Nairobi are often located in areas that are unsuitable for construction, such as riparian reserves, steep hill sides, abandoned quarry sites and marshy areas. Others are located next to areas that offer employment opportunities to the residents. Recently discrimination, especially along ethnic lines, has been experienced in some areas, with most ethnic groups tending to live in sub-communities of their own ethnic background. Although clashes between ethnic groups have been experienced in the past, the slums themselves are not seen as a major source of urban unrest. They do, however, constitute areas with a higher concentration of crime, violence and victimization.

Sanitation

According to the JMP Report (2012)[1], 2.5billion of the world's population lack access to improved sanitation facilities. In Kenya 32% of the population have access to improved sanitation, 27% to shared facilities, 27% to unimproved facilities, and 14% practice open defecation. For urban Kenyans, 32% have access to improved facilities and 48% have access to shared facilities. Currently, less than 40% of Nairobi is connected to the sewerage system, which mostly covers the high and upper middle income areas.

Improved Sanitation Facilities include use of:
- Flush or pour-flush to:
  - Piped sewer system
  - Septic tank
  - Pit latrine
- Ventilated improved pit (VIP) latrine
- Pit latrine with slab
- Composting toilet

Unimproved Sanitation Facilities include use of:
- Flush or pour-flush to elsewhere (that is, not to piped sewer system, septic tank or pit latrine)
- Pit latrine without slab, or open pit
- Bucket
- Hanging toilet or hanging latrine
- Shared or public facilities of any type
- No facilities, bush or field (open defecation)

Households in low income settlements use simple pit latrines, open defecation and low technology pour flush toilets draining into 'septic tanks'. The cost to poor households of accessing improved sanitation has proved to be a major barrier to access – one that this OBA project seeks to address.

NCWSC

Under the provisions of the Water Act 2002, NCWSC is responsible for water and sewerage services as well as billing and credit control. Although municipally-owned, it operates along the principles of a commercial business. However, it still carries with it some of the operational inefficiencies inherited from the past. In the Water Services Regulatory Board (WASREB)'s 2010 Impact report, NCWSC is recorded as having 40% Non-Revenue Water (NRW) and a personnel cost of 56% of operating and maintenance (O&M) costs (target is 20%). On the other hand, O&M cost coverage stood at 113%, one of the highest in the sector; metering ratio was 94%, revenue collection efficiency was 80%, and number of staff per 1,000 connections was 5, down from 10 in 2006/07. The company is streamlining operations, improving revenue collection, and strengthening skills and technological development. The WSP/Public-Private Infrastructure Advisory Facility (PPIAF) 2008 report "African Water Utilities" noted that operating margins have steadily improved since 2002. EBITDA in 2007 was 11.2% of revenues (up from 3.8% in 2005); debt has fallen, as measured by the net debt to EBITDA ratio, from 18.8 in 2005 to 2.5 in 2007. On revenue collection, days' receivables improved from 660 to 272 between 2006 and 2007. More recent data indicates that the improvements continue.

[1] Progress on Drinking Water and Sanitation, 2012 Update. Unicef and WHO Joint Monitoring Programme for Water Supply and Sanitation.

A credit-worthiness analysis of NCWSC was recently commissioned by WSP (*Debt capacity analysis and evaluation of available funding options*, CfC Stanbic Bank, September 2010). The report indicated that NCWSC's current gearing and liquidity is fully adequate for a commitment of the magnitude proposed by this project.

In terms of contract management capacity, NCWSC has a clear organizational structure and an increasingly results-oriented corporate culture. The growing Informal Settlements Department has dedicated capacity to oversee contracts relating to low-income service improvements. The company has extensive experience of managing large infrastructure contracts and has recently introduced a Social Connections Policy to facilitate water/sewer connection in "informal" (ie low income) settlements.

A.2 Rationale for GPOBA Involvement

The project is consistent with GPOBA's current focus on piloting OBA approaches in less well tested sectors, which includes sanitation. The project provides an opportunity to test the application of OBA for sewer networked connections which traditionally suffer from lack of financial sustainability.

The project meets GPOBA operational criteria, as well as core OBA principles. The project uses an explicit one-off subsidy to increase access to improved service quality. The subsidy is targeted to poor households who would not otherwise be able to afford improved service access. Accessing the sewer network will correct externalities by removing human waste from the urban environment. The subsidy will also be transparent, as its disbursement would be directly linked to the achievement of measurable service access outputs (working connections and sustainable service delivery).

The project shifts performance risk to the service provider (NCWSC) by disbursing the subsidy only after independently verified outputs have been delivered.

The project is also designed in part to enhance sector financial sustainability through supporting NCWSC's access to private finance. Chances for replication are high as it is intended that NCWSC's Social Connection Fund will take over the OBA scheme after successful completion of the GPOBA pilot.

A.3 Higher Level Objectives to Which the Project Contributes

The Project is in line with the need for infrastructure improvements necessary to support Kenya's Vision 2030 for economic and social development.

This project will support the World Bank's Kenya Country Partnership Strategy (CPS) for 2010-13 through reducing inequality and social exclusion. It will increase access of the poor to water

and sanitation services which is important given Kenya's history of unequally shared development.

B. PROJECT DESCRIPTION

B.1 Project Development Objective and Key Indicators

The development objective of the GPOBA project is to increase access to sanitation and water services in selected low-income communities of Nairobi. The key indicators are: (1) Number of sewerage and water connections, and (2) Number of people provided with access to sewerage and water services in the project areas.

B.2 Description of the Project

The proposed output-based aid (OBA) project 'Nairobi Sanitation Project' will provide subsidies to support increased access to sewerage and water supply connections in Nairobi's low-income communities over a 4 year period. The project builds upon a 2004 IDA grant and 2007 IDA Credit to the Nairobi City Water and Sewerage Company (NCWSC) and Athi Water Services Board (AWSB) respectively, which successfully helped establish NCWSC and AWSB as "autonomous and ring-fenced service provision utilities with clear roles, responsibilities and contractual arrangements" and is improving water and sewerage reticulation in Nairobi's low-income areas. The 2007 IDA credit – Water and Sanitation Service Improvement Projection (WaSSIP) has supported expansion of local networks, particularly sewer networks, within low-income settlements which in turn provide an opportunity for improved access to water and sewerage.

B.2.1 Project Design

The design of the project incorporates technical and financing components to fit the unique requirements of households living in low income areas in Nairobi. This project will be one of the first large-scale initiatives in Africa to apply low-cost sewerage approaches in low-income communities and informal settlements, with the potential to develop innovative incentive-based financing models. Notably, this project will innovate by using an OBA subsidy as an incentive for landlord/householder investment in sewered sanitation facilities, with the aim of avoiding past failures of sewerage projects, such as low connection rates and the exclusion of the poorest households.

Targeting

The proposed informal/low-income settlements for this OBA project are located in Nairobi Eastlands & Northlands low income areas: Matopeni/Spring Valley, Kayole Soweto, Maili-Saba,

Kahawa-Soweto, Huruma, and Embakasi-River Bank. Maps of the target locations can be found in Annex 2

Sanitation Service Preference and Willingness to Pay for Sanitation Improvement

Many low income settlement dwellers currently pay a significant proportion of their income for WSS-related expenditures according to a household survey undertaken in 2011 for the WaSSIP in low income settlements[2]. The table below illustrates the amount spent on water & sanitation per month against household income level:-

Settlement	Average House hold Income (KES)	Expenditure on Water per month	Expenditure on Sanitation per month
Matopeni-Spring valley	17,545	1,470	0
Embakasi-River Bank	12,481	1,320	750
Kayole-Soweto	12,000	540	0
Huruma	5,943	480	840
Maili Saba	12,853	960	0
Kahawa Soweto	7,232	630	360
Mathare	10,787	420	200

Water expenditure includes the cost of purchasing water, mainly from water kiosks. The sanitation expenditure includes the cost of using public latrines and cleaning/maintaining communally shared facilities.

During project preparation residents were surveyed about the extent to which they were willing to change their current household excreta disposal facilities to improved ones. Out of the 1,064 households interviewed 82% expressed willingness to change towards a better sanitation services level as compared to only 18% that opted for status quo. The table below summarizes the preferred sanitation service levels per-settlement.

Settlement	Pit Latrine	VIP Latrine	WC Connected to Septic tank	WC Connected to public
Matopeni-Spring Valley	8%	1.6%	0%	97.6%
Embakasi-River Bank	0%	3.0%	6.1%	90.9%
Kayole-Soweto	1.8%	0%	3.5%	94.7%
Huruma	0%	1.7%	3.3%	95.0%
Maili Saba	0%	0%	0%	100.0%
Kahawa Soweto	0%	3.0%	6.1%	90.9%
Mathare	3.8%	1.3%	9.2%	84.9%
Total	1.3%	1.3%	4.1%	93.0%

[2]WaSSIP Socio-Economic Report – Runji& Partners, 2011

Practically all low-income residents in the targeted settlements can be classified as poor. The high rate of economic poverty is accompanied by extremely low living conditions and other forms of non-economic poverty. The housing units are mostly illegal, of sub-standard quality, and crowded. Rents, however, are high. Unit owners are mostly absentee landlords who would seem to be operating a highly profitable business in providing shelter to the poor. Low income dwellers have poor access to gainful employment. About 49% of adult low income dwellers have regular or casual jobs and 19% work in a household micro-enterprise, but at least 26% are unemployed. 49% of the women report that they are unemployed. At the household level, micro-enterprises are helping diversify the income portfolio and appear to be assisting in the struggle against poverty. About 30% of households report that they "operate an enterprise" and, encouragingly, ownership of an enterprise is negatively correlated with poverty.

Willingness to pay for water connection and sewerage connection

According to the WaSSIP Socio-economic Report the majority of residents had considered changing their sanitation options to one that provided higher hygiene and lower maintenance costs. The willingness to pay for improved services, preferred methods of payments and the amount they are willing to pay are as follows:

Settlement	Proportion Willing to pay for improved services (%)	Preferred method of payment (%)		Amount willing to pay (Ksh)	
		Monthly	Per use	Monthly	Per use
Kayole Soweto	92	96	4	300	2
Kahawa Soweto	96	95	5	100	5
Matopeni/spring valley	87	97	3	430	5
Mailisaba	98	67	23	110	2
Mathare	91	85	15	100	3
Embakasi Riverbank	89	91	9	200	3
Huruma	98	60	40	100	5

Connection Fees and OBA Subsidy

The connection charges and deposit are included as part of the project cost. Based on the results from the household income and willingness to pay surveys it is proposed that eligible low income households will be required to pay a deposit of KES 742.20 (US$ 8.73) per connection or KES 148.44 (US$ 1.75) per beneficiary. The KES 742.20 deposit is the amount households are willing to pay, based on the socio-economic report carried out under the ongoing World Bank WaSSIP project. The proposed subsidy from GPOBA will be 175 US$ for a sewerage connection and 80 US$ for a water connection per household.

B.2.2 Project Components

The project will involve the installation of:
(1) water connections (but only where safe piped drinking water is not already available), and
(2) sewer connections.

Under this OBA project eligible households will have the option of receiving a:

- Sewer connection only (if they already have a NCWSC water connection)
- Water and sewer connection

Households will not be offered water only connections under this scheme since its primary objective to increase sustainable sanitation service access.

Sewer Connections

A sewer connection will include the works to convert pit latrines and other sanitation facilities to pour flush toilets. This will involve: (1) filling the pit (consumer/facility owner's contribution); (2) screed blinding for slab; (3) installation of a squatting WC pan; (4) installation of grey water storage pan (which will be used for flushing); (5) installation of a hand wash basin; and (6) installation of uPVC pipe to link facility to nearest manhole.

The sewer 'connection' includes all the internal plumbing (including WC pan) to ensure sanitation services are accessed and delivered. Hand washing facilities are an integral component of the output/facility to maximise the hygiene benefits of the sanitation facility – this is important for sustainability and maximising the economic/health benefits of improved sanitation.

Water Connections

A water connection will involve: (1) installation of uPVC pipe to link the household to distribution system; and (2) installation of meter. Further details of these connections can be found in Annex 2.

Social Marketing and Hygiene Promotion

The Water and Sanitation Program (WSP) will be responsible for funding and implementing a complementary social marketing and hygiene promotion program. WSP is currently implementing a project: Innovation in Scaling-up Access to WSS for the Urban Poor (P132015). Under this WSP project support will be given to Nairobi City Water and Sewerage Company for: mapping low income urban areas; leveraging water and sanitation infrastructure finance; further development of the Social Connection Policy; use of appropriate technology; innovative metering and billing approaches; and use of subsidized microfinance in Kenya's low-income

communities. This WSP project will also provide the required TA support for the implementation of the Nairobi Sanitation OBA Project.

Wastewater Treatment and Effluent Disposal

All the wastewater produced at the beneficiary households will be conveyed to the Kariobangi Sewerage Treatment Plant which was rehabilitated under the WaSSIP. The main sewers feeding the treatment plant were also rehabilitated under the WaSSIP.

Connection Costs and Unit Subsidies

The table below summarizes the unit costs and associated subsidies for both water supply and sewerage connections.

Project component	Number	CAPEX $/unit	Total CAPEX $	Average user contribution $ (application deposit)	NCWSC contribution $ (through credit from FI)	GPOBA contribution $ (OBA subsidy)
Sewerage Connections	16,000	250	4,000,000	80,000 *2%* *5.00/hh*	1,120,000 *28%* *70.00/hh*	2,800,000 *70%* *175.00/hh*
Water Connections	16,000	200	3,200,000	64,000 *2%* *4.00/hh*	1,856,000 *58%* *116.00/hh*	1,280,000 *40%* *80.00/hh*
TOTAL			7,200,000	144,000 *2%*	2,976,000 *41%*	4,080,000 *57%*

			Totals for both services		
Subsidy per Capita for both services		**$51**	**Deposit Contribution/ household $**	**Debt repayment / household (over 5 yrs) $**	**Subsidy / household $**

Debt repayment / household (per month)		**$3.1**	9.00	186.00	255.00
Debt repayment period	**60**	**Months**			

Under the terms of the OBA project each eligible household will make the following up-front payments for a connection:

- Water supply: $4
- Sewerage: $5

The GPOBA subsidy contribution to each connection will be:

- Water supply: $80
- Sewerage: $175

The balance of the connection cost will be met through a 5-year loan from NCWSC to the eligible household. For a combined water and sewerage connection the monthly loan repayment is estimated to be $3.1 at an interest rate of 19% pa. The interest rate will vary according to guidelines set by the Central Bank of Kenya and prevailing market rates.

Output Monitoring and Verification (M&V)

This component ($250,000) will finance the monitoring and verification of outputs over the 4-year period. The Terms of Reference for the Independent Verification Agent will be detailed in the Project Operations Manual

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B.2.3 Disbursement Schedule

GPOBA will reimburse NCWSC a subsidy payment of US$ 255 for each combined connection following independent verification of sustainable service delivery. Subsidies will be paid out upon verification of outputs as outlined below.

The subsidy will be paid in two phases:

- 50% upon verification of a working sewerage and/or water supply connection
- 50% upon verification of 6 months satisfactory service deliver (as evidenced from billing records)

Verification will be requested following connection of each additional 1,000 households. Once the connections are confirmed through verification of a sample set, funds will be disbursed to NCWSC from GPOBA on a semi-annual basis. It is expected that NCWSC will complete the

16,000 connections funded through this project within the 4 years. The project life is stated at 4 years to allow for some potential slippage and for final verifications to be made after the last batch of connections are complete.

The closing date for the Grant Agreement will be June 30, 2017 (to align with DfID2 TF end-disbursement date of December 31, 2017). An indicative disbursement schedule is provided below:

	FY14	FY15	FY16	FY17
Connections	2,000	4,000	5,000	5,000
Disbursements		$1m	$1m	$2m

B.3 Economic and Financial Analysis

a) Economic Analysis

The EIRR for the project is 34% over a 10 year timeframe. This is based on the willingness to pay for poor households and the consumer surplus method. Please refer to Annex 2 for more details, including sensitivity analysis for investment costs, willingness to pay and expected household consumption.

b) Financial Analysis:

The 10 year **FIRR is 0% without subsidy and 28% with subsidy**. Commercial bank rates for Kenya are approximately 19% at present. They are expected to decline shortly and this is expected to increase uptake based on cheaper credit available. Details of the analysis are provided in Annex 2, which also includes the sensitivity analysis covering the percentage share of illegal connection conversion, the expected consumption per household, and the revenue "leakage". The financial return is considered reasonable given the high risks associated with working in informal areas and the high cost of borrowing.

B.4 Lessons Learned and Reflected in Project Design

The design of this project incorporates lessons learnt from NCWSC's Water Subsidy project in Kayole Soweto low income community and from other utilities in Africa. In Kayole Soweto, the initiative covered the provision of social water supply connections for "informal" settlements in low-income areas. Lessons learned include:

- A value of a social connections approach that champions the right of access to affordable water services on a non-discriminatory basis, especially for disadvantaged or marginalized groups. This approach is enshrined in Nairobi Water Company's corporate policy on social connections that has the Board's approval.

- The value of a financing and micro-credit scheme that makes water services affordable to low-income households through access to subsidized micro-loans, and staggered payment of consumption bills. Low-income households can borrow small amounts of money to offset the initial costs of getting a water connection and, through a flexible payment scheme, repay the loans together with the monthly water bill over an agreed period. This scheme is designed to suit the fluctuating incomes of self-employed and informal sector earners.
- The value of an ICT platform that enables water consumers to use a mobile phone to send their own water meter readings, query and receive current water bills, then pay using mobile money such as Safaricom's MPESA and Airtel's ZAP.

Innovations proposed here are:

Nairobi Water Company will implement strategies defined in its Social Connection Policy for the pre-financing of investment costs for making sewerage connections through payment in instalments over a five-year period. This approach enables even the poor households to afford access to sewerage services, thereby promoting equitable access to sewerage services across all income groups.

The use of settlement based sanitation committees to promote community cohesiveness and motivate individual households to adopt improved sewerage options. These committees will also improve communication between the community and NCWSC.

The choice of sewerage by the households reduces sanitation operations and maintenance costs to households, which have mostly rested with the tenants. This should ease the pressure on household budgets and facilitate the funding of other productive activities.

Sewerage as an improved sanitation option will reduce the health risks such as prevalence of diarrheal diseases which are brought about by unhygienic conditions in the households and environment and the discharge of untreated effluent into local watercourses.

Sewerage connections will reduce the vandalism of sewer trunks for the illegal discharge of waste from the pit latrines.

C. IMPLEMENTATION

C.1 Milestones for project implementation

MILESTONE	ESTIMATED DATE
Eligibility of GPOBA funding, with technical assistance approved	Dec 2011
Technical assistance – detailed project	Oct – Dec 2012

preparation	
Commitment of GPOBA funding	December 2012
Grant signing	May 2013
Grant effectiveness	August 2013
Subsidy disbursements begin	January 2014

C.2 Institutional and Implementation Arrangements

The project will be able to use the existing institutional and implementation arrangements used for implementing the WaSSIP. The Project will be implemented by NCWSC, under the guidance of the Athi Water Services Board. The key roles and responsibilities will be as follows:

- NCWSC will be the implementing agency of the Project and will hire and supervise the Independent Verification Agent.
- The Independent Verification Agent will verify that working water and sewarge connections have been installed, and subsequently that sustainable services have been delivered.

The ToR for the IVA will be included in the Operations Manual for the project. The Manual will detail the *modus operandi* of the project.

The proposed funds flow arrangements are discussed in Annex 3.

Fiduciary and Safeguard Appraisal

The GPOBA scheme will be implemented broadly under the policy arrangements developed for the Bank's ongoing Water Sanitation Service Improvement Project (WaSSIP) and Kenya Informal Settlements Improvement (KISIP) projects. Nairobi City Water and Sewerage Company has implemented other Bank projects and is trained in the Bank's procurement and financial management procedures. NCWSC's fiduciary performance has consistently been ranked satisfactory in past Bank projects. The Water and Sanitation Service Improvement Project is considered a Category B project. An Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) have been prepared and publicly disclosed.

C.3 Reporting

(a) The Project Implementing Entity will submit semi-annual performance reports to WSP / The World Bank and GPOBA in accordance with the reporting requirements set out in the Operations Manual.
(b) To satisfy the fiduciary requirements of project fund disbursements, the Project Implementing Entity will provide Interim Financial Reports on a quarterly basis to the World Bank's Financial Management specialists.
(c) A Completion Report not later than six (6) months after the Closing Date of the Grant Agreement.

Additional financial management, fund flows and reporting agreements, if needed, will be included in the Operations Manual and Grant Agreement.

C.4 Sustainability

Once the OBA scheme household is connected it will become a regular customer of NCWSC. The Project helps to increase access to WSS services by meeting the funding affordability gap for connections in low income settlements. The sustainability of the program is enhanced by the ongoing infrastructure investments and improvements to water and sewerage operations in low income areas by AWSB, NCWSC, the World Bank and other development partners. NCWSC is aware of their past relationship with residents, which has been confrontational at times due to suspension of services during drought and damage to equipment as a result of floods. They are committed to improving this relationship as a sustainability measure in the project. They will be conducting public awareness campaigns in the target communities and are considering giveaways and prizes for households that legally connect to the networks. There is an understanding that NCWSC must connect as much of the population as possible in order to avoid simply shifting the illegal connection networks to other areas.

NCWSC will establish community committees that will encourage households to connect to a sewer, improve reporting & communications strategies, promote community policing of the infrastructure and improve consumer confidence in the utility's services

***Scale-up and Replication*:**

Kenya's Bill of Rights grants the right to reasonable standards of sanitation and to clean and safe drinking water in adequate quantities for every person. The new draft National Water Policy requires water service providers to offer social connections in low-income areas and recover costs through staggered payments or instalments. This OBA scheme will, therefore, form a template for replication in other low-income/informal settlements in Nairobi and other Kenyan cities and towns. NCWSC's adoption of a Social Connection Policy is an indication of its commitment to scaling up credit to households for connections.

C.5 Critical Risks

Much of the risk of this project is mitigated through NCWSC's role as the implementing agent. NCWSC has a strong record of project implementation with the World Bank and is familiar with the requirements of the World Bank's governance, fiduciary, and safeguards policies.

Risk (Probability/impact)	**Mitigation**
• Low income settlement residents not interested to connect (low)	The GPOBA funded Technical Assistance (TA) consultant has studied and confirmed the ability and willingness to pay in the targeted

	areas. The main hurdle (high connection fee) will be overcome with the provision of consumer credit and the GPOBA subsidy. A survey conducted during preparation of the GPOBA Commitment Paper found that the majority of residents already use improvised excreta disposal techniques, which indicates a latent demand for improved sanitation services. NCWSC will carry out communication campaigns within the targeted settlements, explaining to residents the benefits of water & sewer network connections (better service quality, avoiding disconnections, health issues)
• Country's governance risk (medium/high)	The country's governance situation is fragile and the World Bank is addressing it through sector work to improve: transparency and accountability, core public financial management, and special attention to governance issues in the priority sectors - agriculture, education, water & sanitation, health and road development. Kenya is one of the priority CGAC countries. NCWSC's governance track record in previous World Bank projects has been good.
• Program failure due to financial & social un-sustainability (medium).	The bulk of the sanitation improvements will be shared or individual household toilets, reflecting the experience in Nairobi that shows that users prefer facilities close to their home. Subsidies will be targeted at the poorest households in each district in accordance with NCWSC's Social Connections Policy. In addition, householder and landlord financed connections will be encouraged, increasing coverage and generating revenues. Households connected through this approach will become formal customers through their connection application contracts with NCWSC. The current tariff for low consumption is about \$0.19/m³. For consumption between 10-30m³ the tariff is about \$0.28/m³. The sewerage tariff is charged at **75%** of the water consumed for all sewer connections. Sewage will drain to the existing treatment plant in Ruai, 40km from Nairobi, the capacity of which is adequate for the prospective increased loading. These

	factors, together with the direct involvement of NCWSC in service delivery, will underpin the financial and social sustainability of the services funded by this project.
• Willingness of service provider to maintain affordable water and sewerage tariffs in low income areas (medium).	WSP and World Bank will continue supporting NCWSC to ensure that low income areas benefit from affordable and sustainable tariffs.
• Vandalism of new infrastructure by farmers and neighbouring communities (low)	The target communities will form sanitation committees that will promote community policing of new infrastructure and improve reporting of any breakdowns in a timely manner to NCWSC.
• Default on monthly repayments (medium)	NCWSC will develop incentives and penalties in addition to its revenue collection strategies that will ensure prompt payment of bills
• Increased costs transferred to tenants by landlords (medium)	The repayment of connection costs will be made over a five-year period, thus reducing the short term financial burden on landlords. NCWSC will conduct sensitization campaigns within the target areas on the benefits of sewerage costs such as reduced sanitation O&M costs and making housing attractive.

ANNEX 1: Project Costs

Expenditure Categories	**Local (US$)**	**Foreign (US$)**	**Total Cost (US$)**
GPOBA subsidy		**X**	**4.080 million**
Monitoring & Evaluation and Audit (GPOBA)		**X**	**0.250 million**
NCWSC leveraged loan	**X**		**2.976 million**
User contribution	**X**		**0.144 million**
Total costs			**7.45 million**

ANNEX 2: Technical, Economic & Financial Analysis

1. BACKGROUND ON THE SETTLEMENTS

2.1 Kayole Soweto Village

Kayole Soweto village is situated in Embakasi Division in Nairobi's Eastlands area. The settlement was formed by the transfer, due to a government directive of poor people who had previously lived in the city centre. The settlement has a population estimated to be 89,600 people distributed in 22,400 households. The land in which the settlement is built belongs to the Nairobi City Council. However, the residents have been given allotment cards to enable them carry on with development activities. This notwithstanding, land use planning and subdivision have been undertaken and social service facilities provided. The settlement is wholly residential though lots of commercial activities are evident. The total area of the settlement is 74 hectares. Administratively, the settlement is divided into nine zones which are Muthaiga Central, ShauriYako, Bahati, Muoroto, Kibagare, Gitau, Kamola and Patanisho. Each zone has a village elder who oversees the general administration on behalf of the area Assistant Chief.

Most of the plots are of size 25 x 60 feet, with the majority (67%) of the residents being tenants as compared to 33% of the landlords who live in the settlement. The settlement is well planned with residents having allotment letters from the City Council of Nairobi. Analysis of property owners by gender revealed that 68% are owned by males while 32% are owned by females. It is estimated that the settlements has over 800 housing units measuring 10x10 sq.ft. Most of the structures have walls made of stone, iron sheets and bricks, whilst the prevalent roofing material is iron sheeting.

Existing Sanitation Facilities

Data and information collected in Kayole Soweto shows that the settlement has no sewer line connection although a trunk sewer runs to the south of the village. The residents rely on on-site systems (mainly pit latrines) for excreta disposal - many of them built and maintained by the property owners.

Number of people sharing the Facility

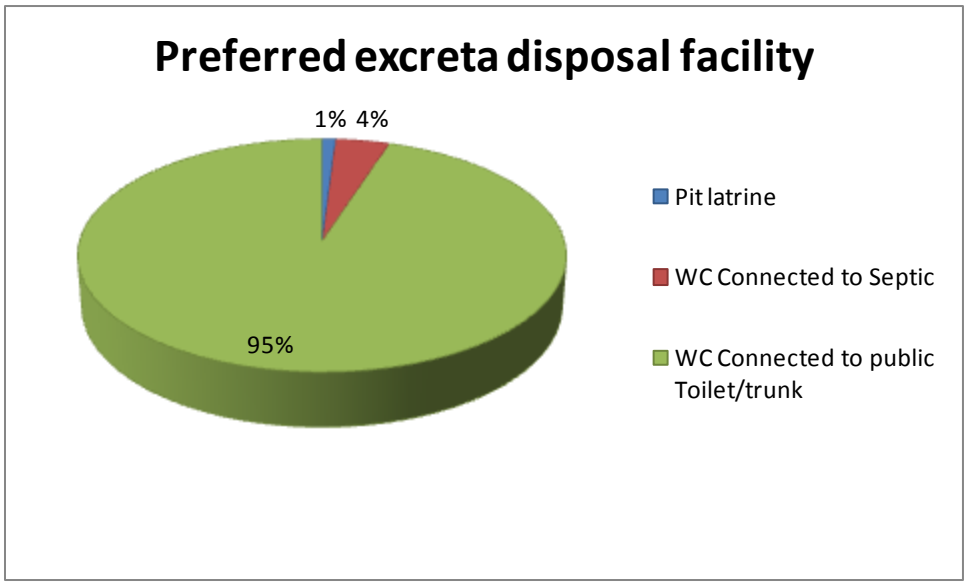
Most of the excreta disposal facilities in Kayole Soweto are found within the plots. The average number of households sharing a facility was estimated to be 16 households. Based on the number of people per household, this translates to 32 people per facility.

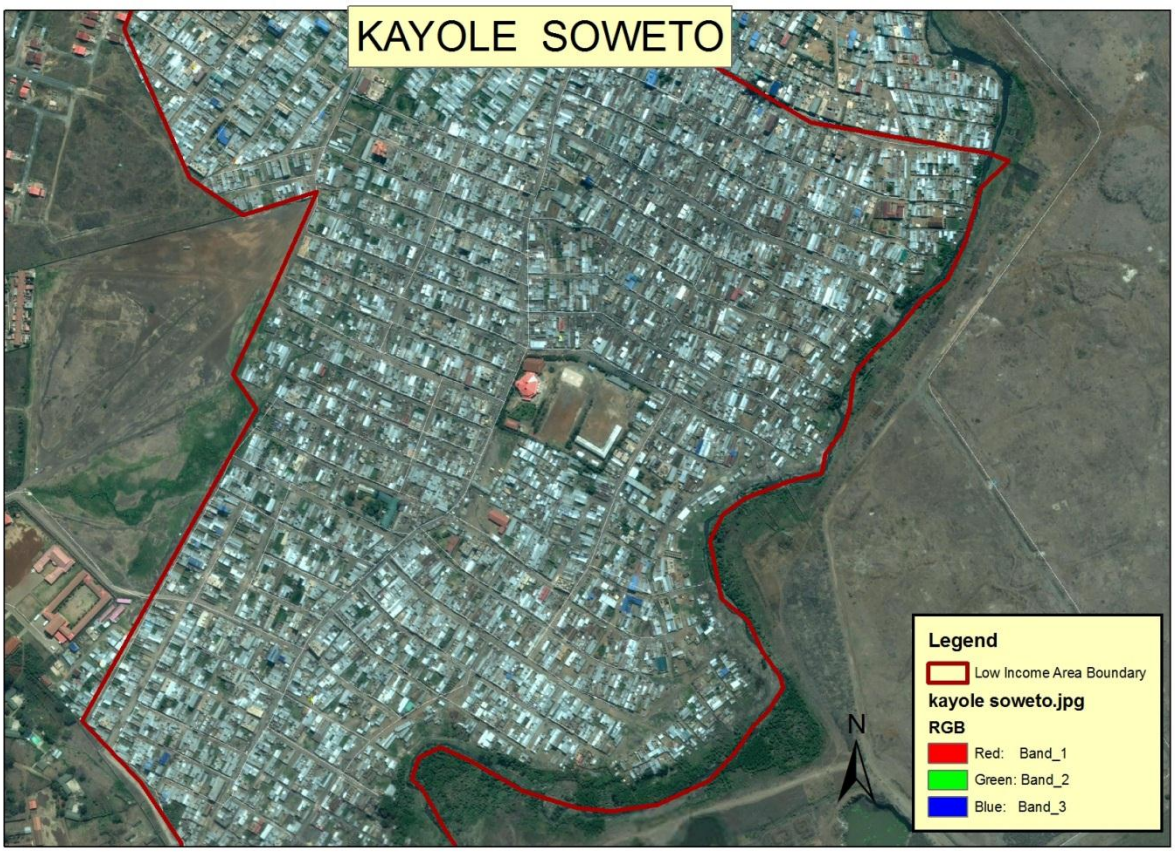
Ownership of Excreta Disposal Facility

Assessment of the ownership status of the existing excreta disposal facilities revealed that an 93% of the facilities are owned by the landlords as illustrated below:

Latrine Ownership	Percentage
Individual/Privately owned	5%
Landlord (Shared facility)	92%
Public facility	2%
Neighbours	1%
Total	**100%**

Most of the households prefer improved sanitation facilities. 84% prefer changing their system of excreta disposal to an improved one. Among the various options available to the residents, the most preferred is the water closet connected to the public sewer. Reasons advanced for the preference included high hygiene level and easy maintenance. Willingness to pay for the improvement was expressed by 92% of the residents as opposed to 8% who did not. Monthly payment is the most preferred method of payment for 96% while 4% prefer the Pay as you Use method. The average amount people are willing and able to pay was cited as KES 2.00 for 'Pay as You Use' and KES 300 for the monthly charge.





2.2 KAHAWA SOWETO

Kahawa Soweto is located in the north-eastern part of Nairobi in Kahawa West Location, Kasarani Division. It lies adjacent to the Kahawa Barracks, separated only by the railway line. The settlement is situated approximately 20 km from the Nairobi Central Business Centre. It is estimated that the village has a total population of about 7,000 people who live in 700 structures on approximately 15 acres of land.

Excreta Disposal

Data and information collected in Kahawa Soweto indicate that despite being adjacent to a sewage treatment plant, Kahawa Soweto does not have sewer line connections. Residents rely on on-site systems (mainly pit latrines) or WCs connected to septic tanks for excreta disposal.

Ownership of Excreta Disposal Facility

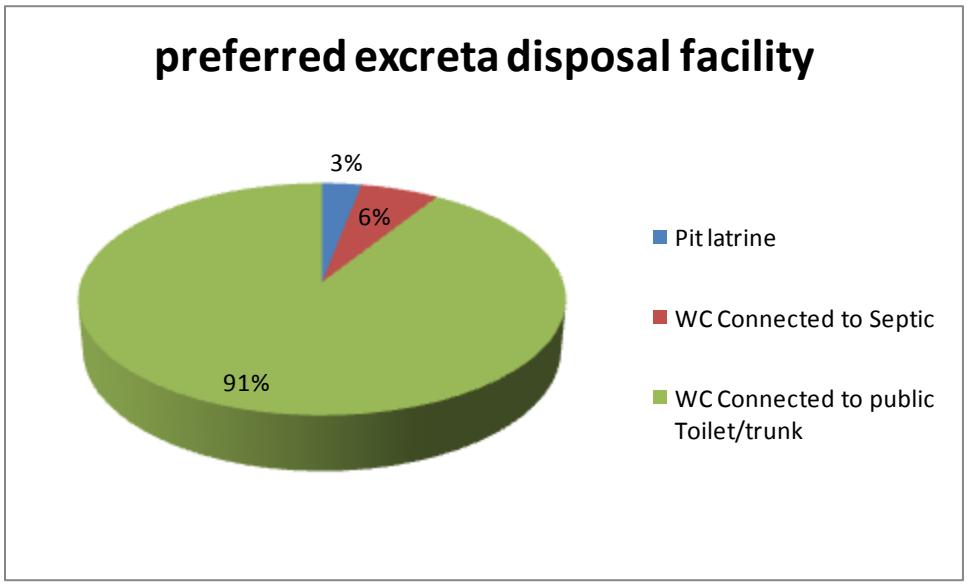
Assessment of the ownership status of the existing excreta disposal facilities revealed that 38% of the facilities are individually owned while 21% access a landlord shared facility as illustrated.

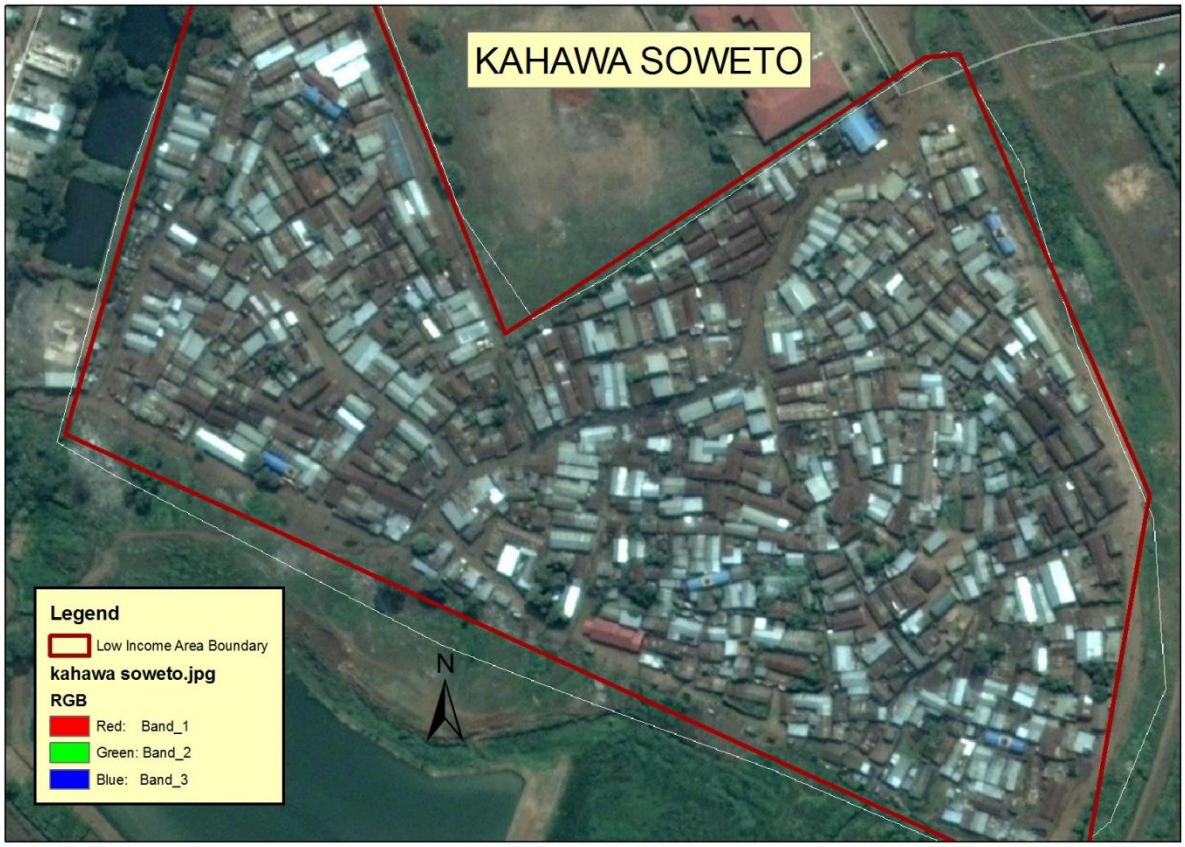
Latrine Owner	Percent
Individual/Privately Owned	38.0
Landlord/Shared Facility	21.1
Public Facility	35.2
Shared Facility	5.6
Total	**100.0**

Number of people sharing the Facility& Willingness to Pay

The average number of households sharing a facility was estimated to be 30 households. Based on the number of people per household, this translates to 150 people per facility. 90% expressed their willingness to change and pay for an improvement of their system of excreta disposal. Among the various options available to the residents, the most preferred method of excreta disposal was water closet connected to public sewer.

In relation to the willingness to pay for the improvement, majority (96%) expressed willingness while 5% did not. For the method of payment for excreta disposal services, a total of 95% expressed preference for monthly payment while 5% choose the "Pay as I use" method. The average amount people are willing and able to pay was stated as KES 5.00 for Pay as I Use and KES 100 for the monthly charge.




KAHAWA SOWETO
Legend
Low Income Area Boundary
kahawa soweto.jpg
RGB
Red: Band_1
Green: Band_2
Blue: Band_3
N

2.3 Embakasi - River Bank Informal Settlement

Embakasi-River Bank informal settlement is located in Embakasi, Tassia sub-location. The population of the settlement is estimated at 6,840 persons housed in 580 plots. The land is owned by the Nairobi City Council. A power way leave separates it from Baraka estate. The settlement is wholly residential though lots of commercial activities are evident within the village. The total area of the settlement is 55 hectares.

The settlement has over 4,000 properties, about 48% owner occupied and 52% rented. It is estimated that only 35% of the landlords reside in the settlement. There are two types of structures within the settlements; 85% of them constructed with blocks and roofed with iron sheets, and the remaining 15% made of iron sheets. Most of the structures are rented on a 1-2 room basis with tenants paying an average of Kshs.800 per month for the iron sheets houses and Kshs.2,500 per month for the stone houses.

Excreta Disposal

The area is seriously underserved in regard to sewerage coverage. Presently there is no sewerage system in Riverbank village despite the presence of two sewer lines passing through the area; one from Donholm through Embakasi and another from Industrial area through Embakasi and Umoja estates. Residents were found using various excreta disposal facilities among them pit latrines, pour flush toilets, and WC connected to septic tank. Other residents have no facility at all.

Ownership of the Excreta Disposal Facility

Findings show that 57% of the current excreta disposal facilities are landlord shared while 38% are individually owned. A small proportion (5%) of the residents rely on their neighbours' facilities. The number of households sharing a facility ranges from 2 to 30 households.

Existing Sanitation Facilities

The village has a layout plan. The plot owners of Embakasi- River Bank village are putting up permanent masonry houses. A sewer from Baraka Estate passes near RiverBank village but the village has not connected to the sewer. The people use pit latrines as means of sanitation disposal. However, based on analysis of the mode of disposal, the average number of households sharing a facility was given as 10.

Preference and Willingness to Pay for Sanitation Improvement

75% of the residents have thought of changing their system of excreta disposal to an improved one. Among the various options available to the residents, the most preferred is the water closet connected to the public sewer.


EMBAKASI RIVER BANK
Legend
Low Income Area Boundary
embakasi river bank.jpg
RGB
Red: Band_1
Green: Band_2
Blue: Band_3
N

2.4 Matopeni/ Spring Valley Villages

Matopeni/Spring Valley village is in Umoja location. The village borders the Kayole estate to the west, Stone Quarry to the south and Kangundo road to the north and east. The settlement has a population of about 15,000 people in 1,875 households. The village consists of three distinct smaller villages namely; Spring Valley, Manna and Matopeni. The settlement is wholly residential though lots of commercial activities are evident within the settlements. The total area of the settlement is 97 hectares. Each of the three sub-villages is represented by a village elder that assists the Assistant Chief administratively.

It is estimated that the settlement has a population of about 15,000 people in 1,875 households. The adult/child ratio estimated at 3:7, typical of the high dependency burdens in informal settlements (Pamoja Trust 2009). The average household size was estimated to be 4 members.

Existing Sanitation Facilities

Matopeni/Spring Valley village has a layout plan and people are waiting to be issued with title deeds since they were given allotment letters. The village is less congested than others and it is easily accessible. Most of the houses in the village are permanent although they are poorly constructed. There are no public sanitation facilities even at the Chiefs camp which is nearby and the area is served by pit latrines (which are manually exhausted) or connected to septic tanks for a few households. Although trunk sewer runs along Ngong River that borders the village to the south and a branch sewer runs to the north of the village that collects sewage from Kayole Estate, the village is not sewered.

The settlement has over 1,000 structures, more than half of them (51%) owner occupied and 49% rented. It is estimated that 72% of the households are male headed, while 28% are female headed. There are two types of structures within the settlements; 65% of them of block construction, 34% made of iron sheets and 2 % constructed using mud.

Further area based analysis revealed that in Matopeni, the presence of two public sewer lines near the settlement will make it possible for a sanitation facilities to be connected to the main sewer.

For those using WC connected to the septic tanks, most of them were said to be very shallow hence short durations taken to fill. Poor ground conditions mainly rocky surface increase the cost of digging the pits hence shallow pits.

In Spring Valley, 55% have access to a WC connected to a public sewer. Focus group discussion revealed that this was made possible through the community members' efforts where they were able to construct a main sewer system approximately 350 meters long. Due to high costs of

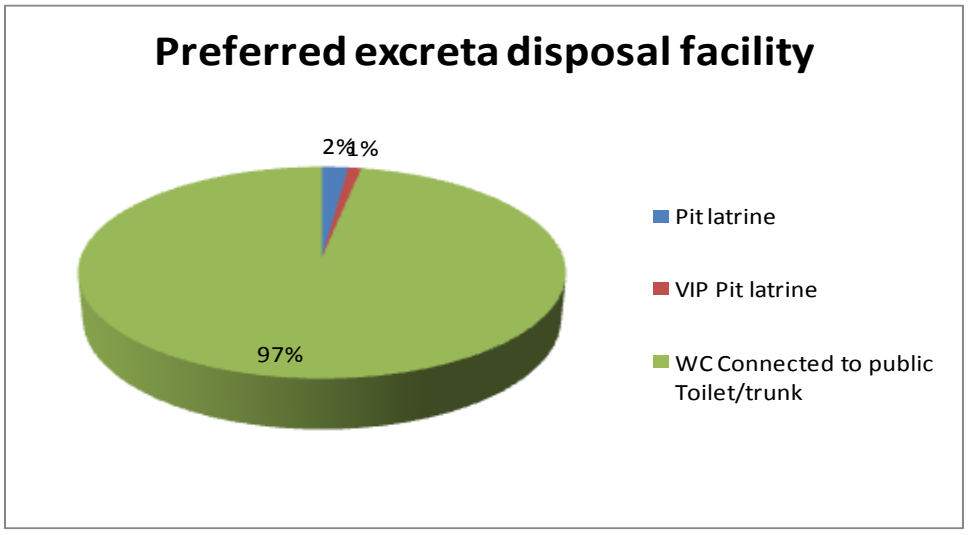
connections, this effort managed to connect only 20 out of 680 households. Those without a facility cited the high cost of digging a pit estimated at a cost of KES 1,000 per foot.

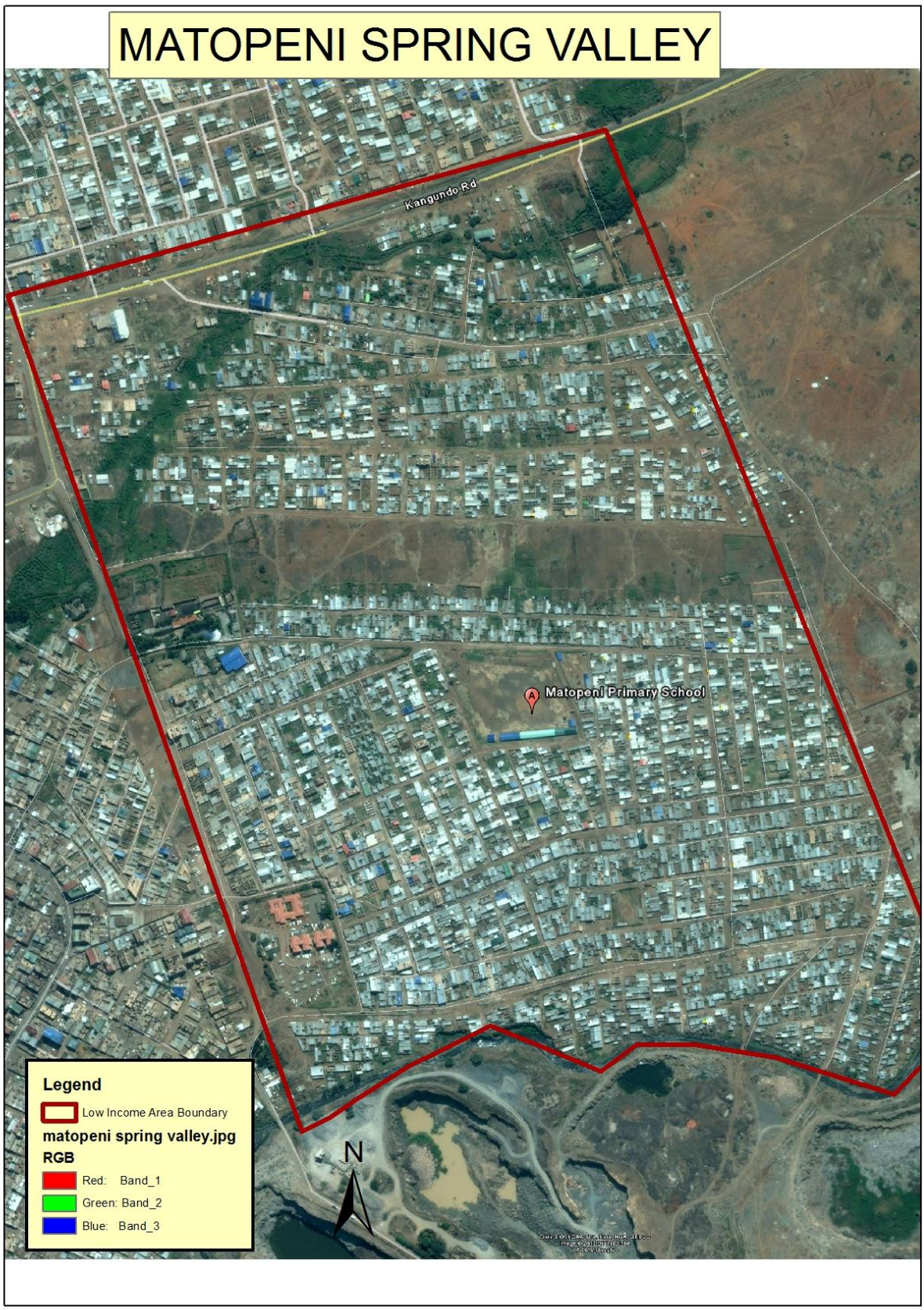
Ownership of the Excreta Disposal Facility

Knowledge of the ownership status of excreta disposal facilities is crucial as it can inform on the best method of entering into a community as well as determine the type of excreta disposal intervention to be implemented. Findings of the survey noted that 61% of the current excreta disposal facilities are landlord shared facilities while 38% are individually owned. A smallproportion (1%) of residents rely on their neighbours' facilities. The number of households sharing a facility ranges from 1 to 30 households, though majority falls within a mode of 10 households per facility

Preference and Willingness to Pay for Sanitation Improvement

Among the various options available to the residents, the most preferred is the water closet connected to the public sewer. Reasons advanced for the preference included high hygiene level and easy maintenance. Monthly payment is the most preferred method of payment for 97% while 3% prefer the Pay as you Use method. The average amount people are willing and able to pay was cited as KES 5.00 for Pay as You Use and KES 430 for the monthly charge.




MATOPENI SPRING VALLEY
Kangundo Rd
Matopeni Primary School
Legend
Low Income Area Boundary
matopeni spring valley.jpg
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Red: Band_1
Green: Band_2
Blue: Band_3
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2.5 Maili Saba

Maili Saba is situated in Eastern Part of Nairobi in Embakasi constituency, Saika Sub-Location, Njiru Location. It is subdivided into 8 villages (zones) including Bondeni, K.P.C.U, Shilanga Railway, Bosnia, Silanga Riverside, Maili Saba Central, Biafra and Silanga Central. In 1998 residents of Maili Saba through the D.Os office and provincial surveyor of Kenya achieved subdivision and allocation of land.

Maili Saba is estimated to have a population of 10,012 and a total of 1,966 households with children making a third of the population. The average household size was estimated to be 5 members.

Excreta Disposal

Residents of Maili-saba access a number of excreta disposal facilities; the main one being pit latrines with 63%, 18% rely on WC connected to septic tank, 17% on VIP latrines while 2% do not have a facility at all. For those without a facility, majority relieve themselves in the uncompleted buildings common in the area in addition to flying toilets which are disposed along the roads or in the uncompleted building structures. There are no public toilets in the area.

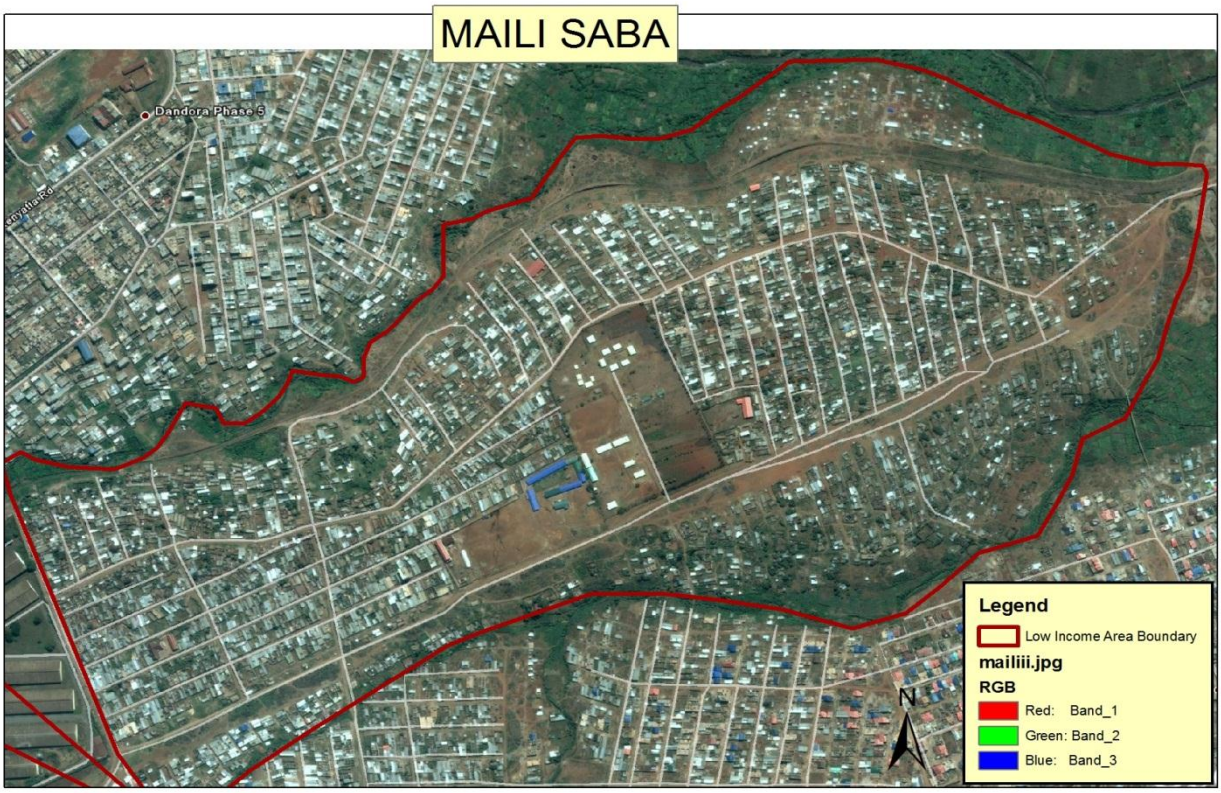
Ownership of the Excreta Disposal Facility

Findings of the survey revealed that 68% of the current excreta disposals facilities in Mailisaba are individually owned while a small proportion (2%) of the residents rely on their neighbours' facilities.

Owner of facility	**Percent**
Individual/Privately owned	68.4
Landlord (Shared Facility)	26.3
Public Facility	3.2
Neighbors	2.1
Total	**100.0**

Preference and Willingness to Pay for Sanitation Improvement

Out of the 95 households interviewed, 100% reported to have thought of changing their system of excreta disposal to an improved one. Among the various options available to the residents, all the respondents' interviewed expressed preference for the water closet connected to the public sewer. Among the reasons advanced for the preference, 50% sited cleanliness and convenience. Willingness to pay for the improvement was expressed by 98% of the residents interviewed as opposed to 2% who did not. Monthly payment is the most preferred method of payment for 67% while 23% prefer the Pay as you Use method. The average amount people are willing and able to pay was cited as KES 2.00 for Pay as You Use and KES 110 for the monthly charge.


MAILI SABA
Dandora Phase 5
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Low Income Area Boundary
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Blue: Band_3
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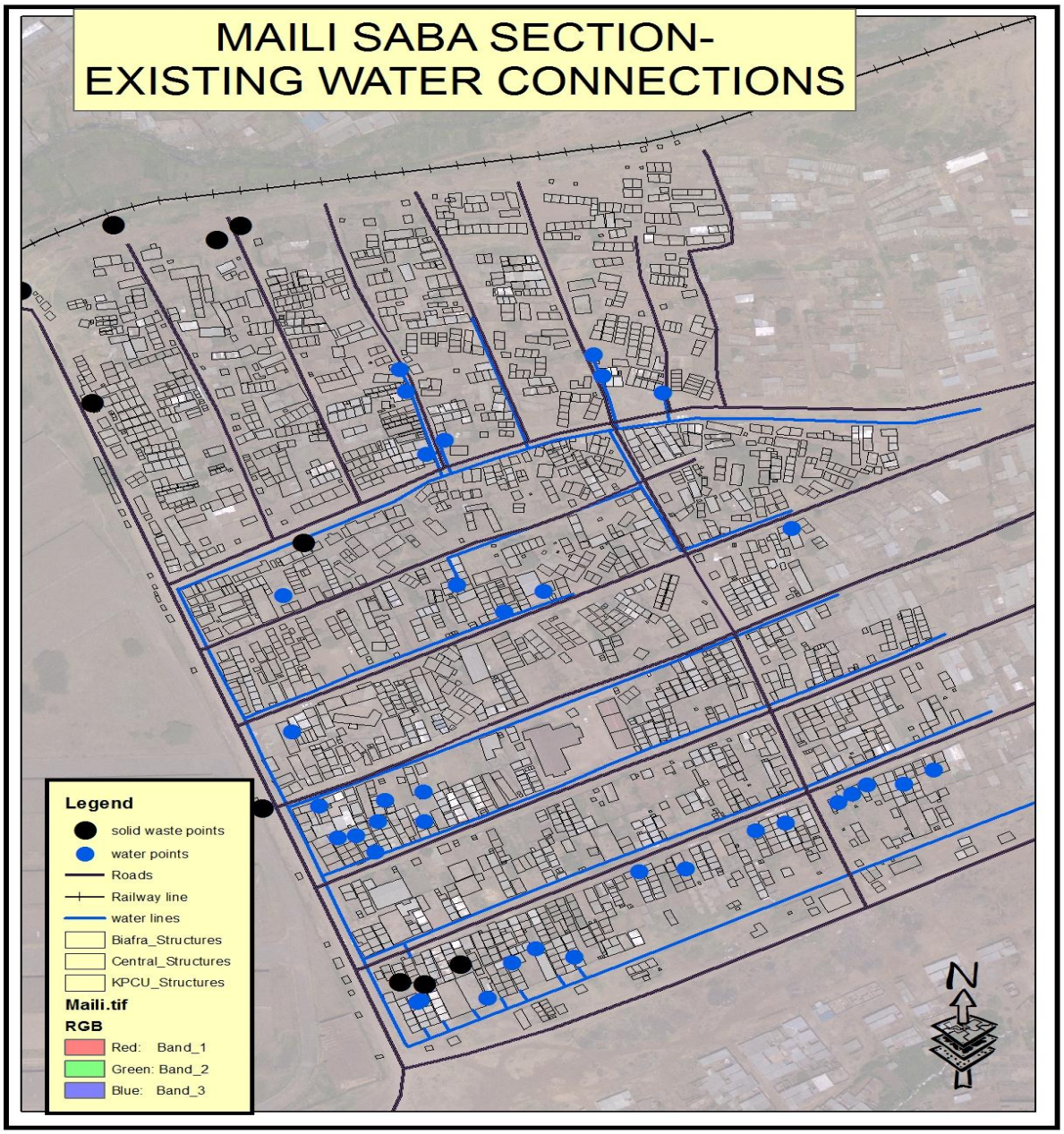
MAILI SABA SECTION-
EXISTING WATER CONNECTIONS
Legend
solid waste points
water points
Roads
Railway line
water lines
Biafra_Structures
Central_Structures
KPCU_Structures
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Blue: Band_3
N

2.6 Huruma

Huruma Estate is a residential estate located in the Northeastern part of Nairobi. It borders Kariobangi and Dandora to the East, Moi Air Base to the south and Mathare to the North and Easleigh to the West. The settlement is comprised of seven villages among them Kambi Moto, Mahiira, Redeemed, Ghetto, Gitathuru, Grogan and Madoya. Apart from the administrative arm that has the Chief and the Assistant chief as the government representatives, a village elder is in charge of the local administration within the various villages in Huruma. The main responsibility of the elder is to inform important matters pertaining the village to the Assistant Chief and Chief respectively. According to some of the residents some of the elders are seen as impediments to development.

It is estimated that the population for the six settlements combined is 15,356 distributed in 4,537 households. The average household size was estimated to be 4 members. The survey covered a total of 324 households drawn from the six villages.

Excreta Disposal Facility

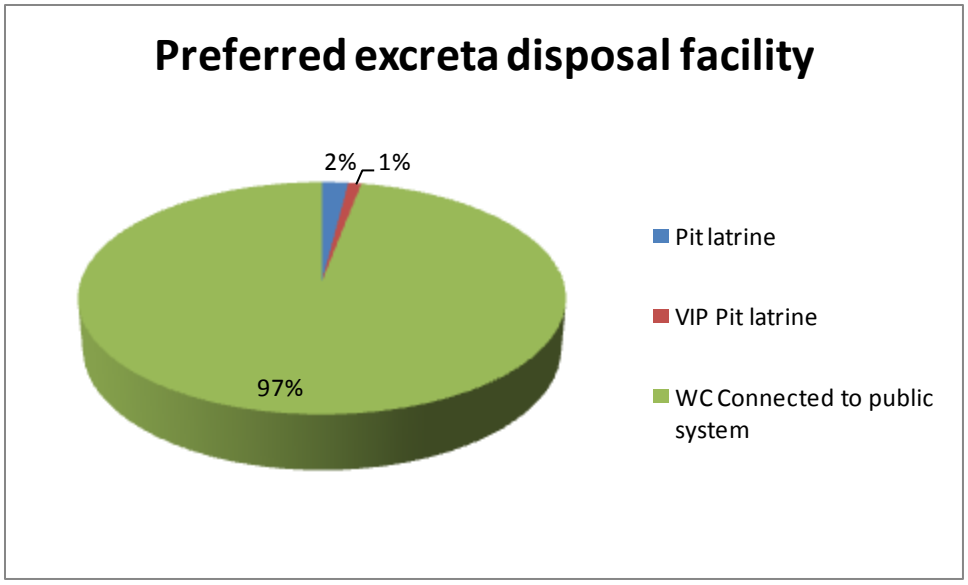
It was noted that 46% use WC connected to public sewer, 41% rely on hanging toilet, 5% WC connected to septic tank.

Ownership of the Excreta Disposal Facility

It was noted that 64% of the current excreta disposal facilities are landlord shared facilities, 28% individually owned while a small proportion (4%) of the residents rely on their neighbours' facilities. The number of households sharing a facility was said to range from 1 to 100. However, across the sample, except for public facilities, the average number of households sharing a facility was given as 9 households.

Preference and Willingness to Pay for Sanitation Improvement

It was noted that 95% have thought of changing their system of excreta disposal to an improved one. Among the various options available to the residents, the most preferred is the water closet connected to the public sewer. Monthly payment is the most preferred method of payment for 60% while 40% prefer the Pay as you Use method. The average amount people are willing and able to pay was cited as KES 5.00 for Pay as You Use and KES 100 for the monthly charge.


Preferred excreta disposal facility
2%
1%
97%
Pit latrine
VIP Pit latrine
WC Connected to public system

2. CONNECTION DESIGN CRITERIA

Sewer Connection:

a) The system shall convey only wastewater from within the premises to the sewerage system. Rainwater shall not be discharged into sanitary drainage system.
b) The size, length and material shall be chosen to facilitate maintenance and reliable service.
c) Bends or kinks are to be avoided in any branch/main drain-line.
d) The branch/main drain-line shall be of the same diameter and laid using the same material throughout its entire length.
e) The branch/main drain-line shall have a constant gradient. The size and gradient of the drain-line shall be chosen to provide adequate carrying capacity and also allow for adequate ventilation.
f) In addition, the choice of gradient for the branch/main drain-line shall be such as to maintain self-cleansing velocity (0.9 m/sec) and not to exceed scouring velocity (2.4 m/sec) under normal discharge condition.
g) The drain-line laid shall be watertight
h) Inspection chamber shall be masonry and be watertight. It shall also be designed to minimize the risk of blockage, facilitate maintenance and prevent flotation in ground where the water table is high. It shall have adequate depth to allow ease of maintenance.
i) A slab structure shall be incorporated into the sewer connection detail in areas where there exists no connection. This is to ensure the improved sanitation area is washable and drainable.

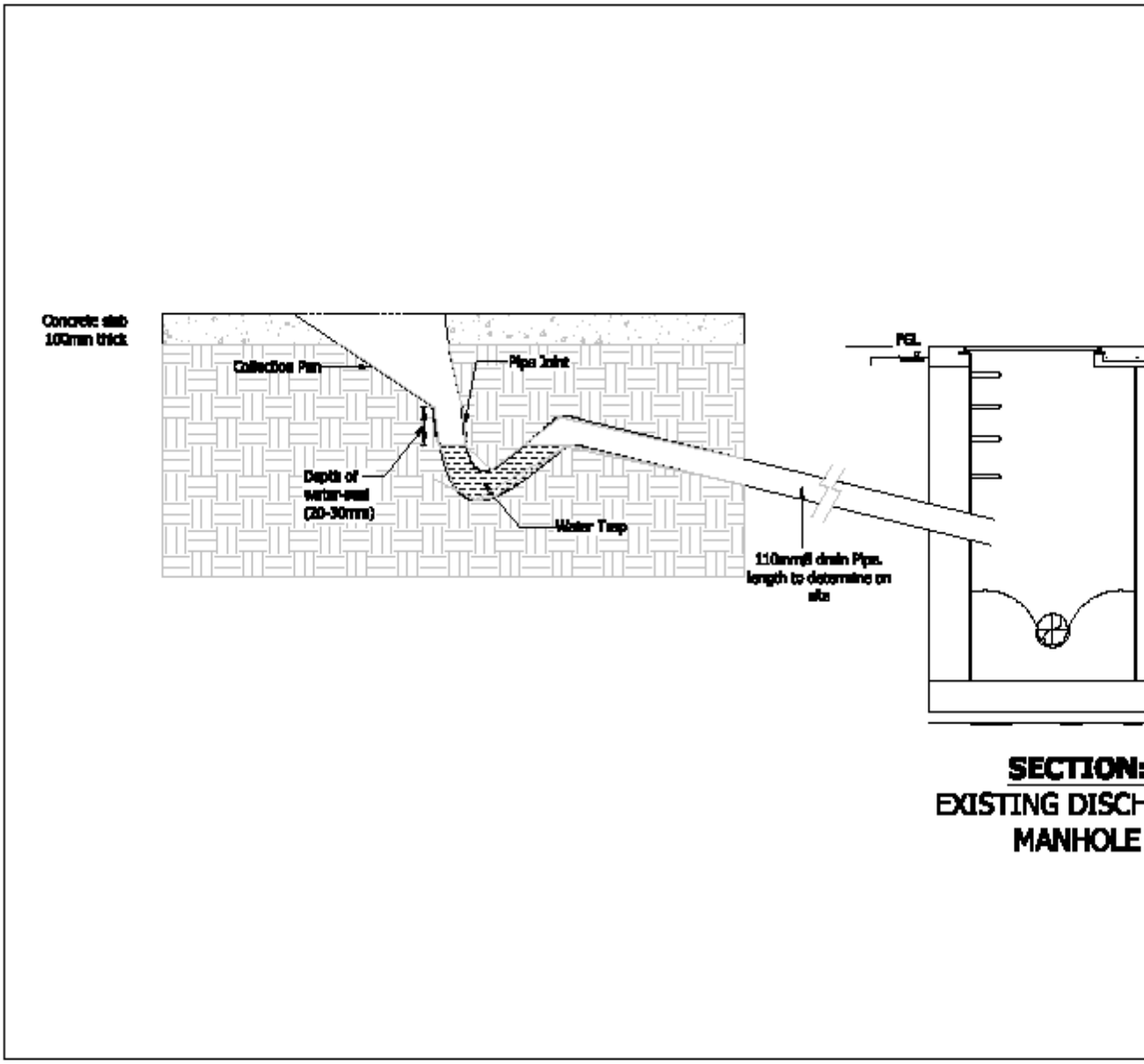


Fig 1: Proposed connection of improved sanitation facility to sewer manhole.

NB

The location and type of wash basin with grey water storage will be the prerogative of the user(s).

Water Supply connection:

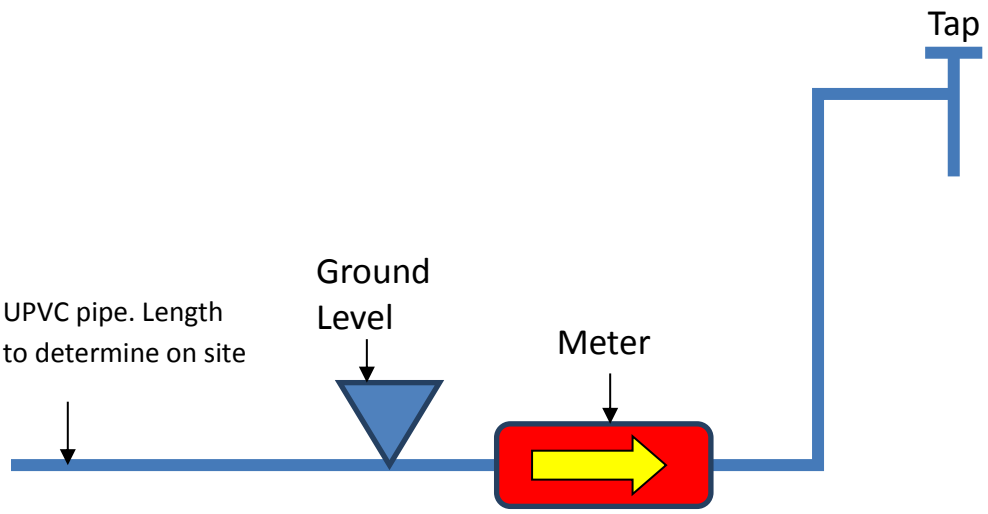


Fig: Simple water connection details

3. ECONOMIC ANALYSIS

It is assumed that 16,000 connections will be made. Revenue leakage (NRW) has been estimated to be 35% based the NCWSC history of revenue collections and other losses[3]. Technical data and assumptions made based on surveys or actual data provided by NCWSC and Runji and Associates.

Methodology

The economic analysis is based on consumer surplus methodology which measures the net benefits from consuming n units of a good or the utility value of good n minus the expenditure incurred on the good. The methodology illustrated by Figure 2, uses the demand curves to estimate the increase in consumer surplus, which results from the increase in water and sanitation consumption at lower price following connection of the household to the NCWSC water supply and sewer mains.

The amount the consumer is willing to pay for a quantity Q is the area under the demand curve from 0 to Q. Hence the consumer is willing to pay A+B+D for consumption Q0 but actually pays B+D (=P0*Q0), leaving a consumer surplus of A. Once water and sewer becomes available, the consumer surplus is A+B+C, so the increase in consumer surplus as a result of water and sewer are provided is B+C. This consumer surplus has two parts: that arising from the reduction in the price of the Q0units already being consumed and that associated with the new consumption Q1-Q0. The benefit to the consumer is B+C. The area D+E is what consumer pays for the new consumption of water and sewer. This area also equals to the cost of production + producer surplus. The area D+E is also often included in the economic benefits, which is acceptable as long as it is also reflected in the cost side of the analysis. In that case D+E is simply a transfer payment from the customer to the utility and therefore a neutral flow for economic analysis. The present economic analysis integrates D+E in both benefits and cost calculations.

[3] WASREB impact report number 5 page 46 shows that the NCWSC revenue collection efficiency is 76% of which is added a 119% leakage due to unaccounted for water.

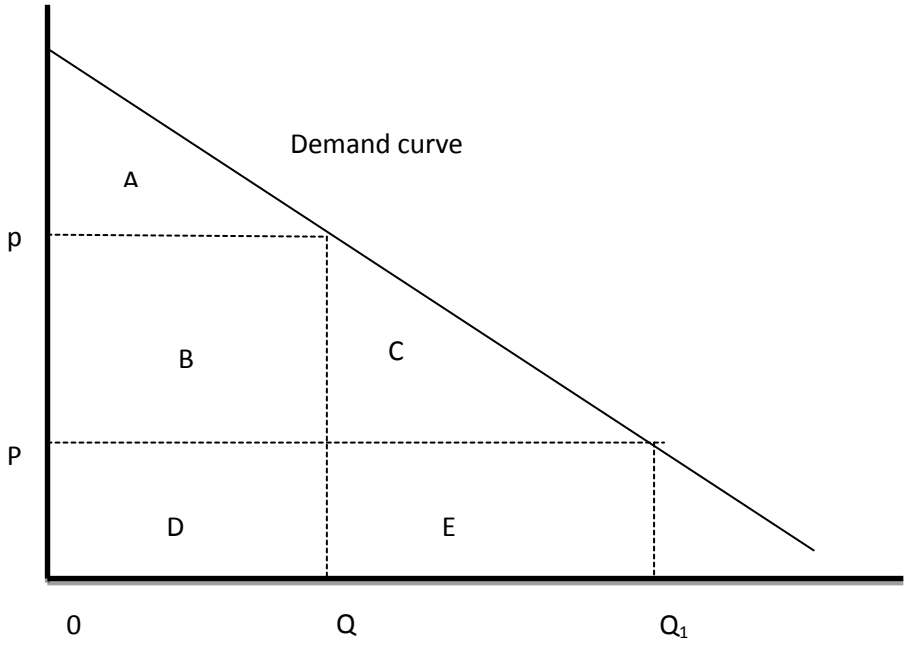


Figure 2: Illustration of consumer surplus method calculation

The value of area C depends on the shape of the demand curve. The simplest assumption is a linear demand curve (a straight line) between the two observed points. But if the demand curve is convex to the origin, as theory suggests, then the linear demand curve overestimates the amount of consumer surplus. It is therefore recommended to use a constant elasticity (log linear)curve. Alternatively, it is possible to assume only a fraction of linear demand curve consumer surplus estimate. The present analysis uses a linear demand curve for simplicity, but considers only 1/3 of the consumer surplus benefits derived from this linear curve.

Data

Willingness to pay of households is derived from household surveys undertaken in May 2012 in Kayole Soweto involving 117 households with no water connections and 128 households on improved sanitation facilities. The surveys show that the households in the un-serviced villages pay up to KES 175/m^3 of water and between KES 2 and 5 per use of available toilets. Also the survey shows that the households are normally responsible for the exhausting of the pit latrines at a cost ranging from KES 250 per drum of sludge and KES 2500 per truck where mechanised services are provided. Willingness to pay for the improvement was expressed by 92% of the residents interviewed as opposed to 8% who did not. Monthly payment is the most preferred method of payment for 96% while 4% prefer the Pay as you Use method. The average amount people are willing and able to pay was cited as KES 2 for Pay as You Use and KES 300 for the monthly charge.

The consumption Q0 of households has been estimated by various studies done on slum areas based on the jerry cans drawn by the households per day. A range of 20 - 40 litres of fresh water per day per person is considered to be a necessary minimum to meet the needs for drinking and sanitation alone. An overall basic requirement of 50 litres per person per day has been suggested as a minimum standard to meet four basic needs; drinking, sanitation, bathing and cooking (WHO, 1993). This translates to an average of 3,000l per day per household or 3 m^3 per month. This amounts to 15m^3. The consumption of Q1 based on consumption after the water is connected to the household is estimated at 7 m^3 per month based on the above analysis or 35m^3 per connection.

The water consumed at Q0 is assumed to have been purchased by the households at the average high cost of KES 175 per M^3. On the other hand the consumption of 7m3 after the households are connected with water is at KES 42.89 per m^3. Sewer is charged at the rate of 75% of the water bill.

Limitations of the analysis

Economic Internal Rate of Return

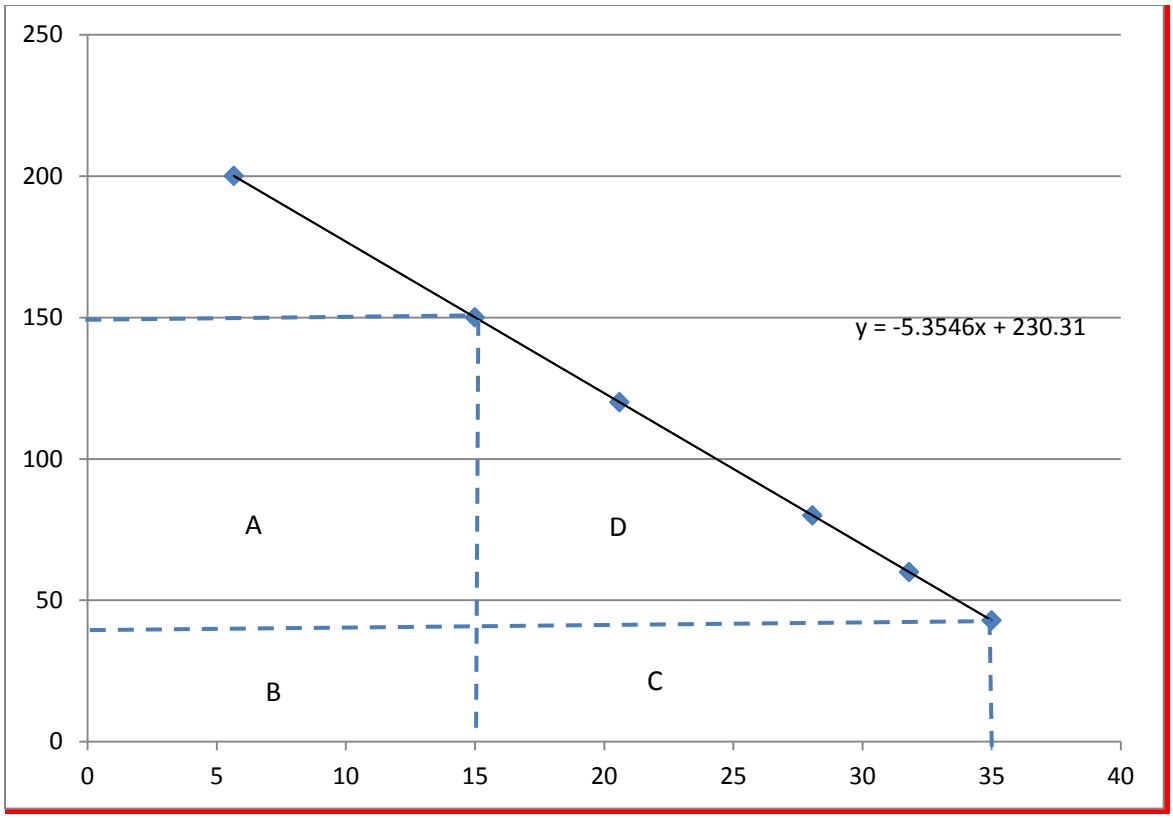
The calculations cover only benefits derived from the increased consumer surplus of connected homes. There are other additional benefits primarily health (60% of diseases in this income group are caused by poor water and lack of adequate sanitation). Productive use of time and energy is also used, particularly by women and young children who otherwise spend long periods of time searching for affordable sources of water.

In addition many of the households may have illegal connections in which case the actual economic gains from switching to legal connections are not as high. Other important benefits such as improved quality of service and product are difficult to quantify.

The economic internal rates of return are therefore likely to be underestimated.

Financial Analysis

From the above consumption data, a demand curve was derived, included in Figure 3 below. A linear curve is assumed due to the lack of sufficient data points to calculate a log linear curve, but only 1/3 of consumer surplus (triangle C) is included in benefits to compensate for the more probable convex shape of the demand curve.



Consumer Benefits were calculated separately per methodology described above. The calculation results in annual benefits of KES 52,356.60 (US$615.96) per connection or KES 10,475.40 (US$ 123.24) per household (areas A+B+C+D).

	Connection	Household
Benefits	**(US$)**	
Area under A + B (original Expenditure	26.47	5.29
1/3 of area D (consumer surplus) $/Month	4.20	0.84
Area C (new Consumption)	10.09	2.01
Total benefits per month	40.76	8.14
Total Benefits per year	489.12	97.68

Economic Internal Rate of Return.

Based on the costs and benefits mentioned, the EIRR has been calculated for 16,000 connections. **The EIRR is 34% over 10 years**. This relatively high EIRR is as the result of two major factors

– a very high willingness to pay for the facility (estimated 80+ in the surveys), and the relatively low cost of operation and maintenance in the high density low income areas.

Other key assumptions are shown below.

WTP households	KES 750 deposit KES 335 interest / month
Average Consumption per month	Water - 7 m3 Sewer – 5.25 m3
Average Cost of non-tariff market water	KES 150 per m3
Collection inefficiency and water leakages	35% of revenue
O & M costs	40% per annum
Exchange Rate (November 2012) 1 US$	KES 85.00
Commercial Bank Interest Rate	19%

Sensitivity Analysis

Sensitivity Analysis was run for the following scenarios (i) investments costs increase by 20%, (ii) decrease in revenue collection due to technical and non-technical issues by 30% (iii) worst case scenario of both occurring at the same time.

Financial Analysis

The financial analysis takes into account the investment costs for connecting the targeted 16,000 connections. The GPOBA subsidy is estimated to provide 63.40% while the user contributes the rest. The FIRR with the GPOBA increases the incentive for NCWSC to make the connections within a three year period in a low income area.

The FIRR is calculated by looking at the investment costs of connecting the 16,000 households and the expected revenue stream over a period of ten years. The relatively short time period has been chosen because of the high turnover rate for residences in many slum settlements. Given the high level of uncertainty of long term settlements in low income areas in Nairobi, a short investment period appears prudent.

The Key variables are the same as those used in the economic analysis above.

The investment costs include the cost of connections for the households and assume a three year implementation period. The customer payments are inflows for NCWSC and the outflows are operating and maintenance costs and revenue leakages. Although the technical design is intended to greatly reduce commercial losses in the low income areas, it is expected that there will be some losses due to theft and tampering.

Assuming the basic household consumption of 12.25 m3 of water, and all the other parameters explained above, FIRR is as below:

FIRR for normal conditions	
10 year FIRR no subsidy	0%
10 year FIRR with subsidy	28%

For the financial analysis the greatest uncertainties also come from the investment cost and collection inefficiency or losses arising from any number of reasons. Similar to the economic analysis the sensitivity has been done on the basis of the following scenarios (i) investments costs increase by 20%, (ii) decrease in revenue collection due to technical and non-technical issues by 30% (iii) Interest rate decreases to 12%.

FIRR Sensitivity Analysis

Sensitivity Analysis	
Investments Cost increase by 20%	
10 year FIRR – no subsidy	-20%
10 year FIRR – with subsidy	-6%
Revenue Collection decreases by 30%	
10 year FIRR – no subsidy	-19%
10 year FIRR –with Subsidy	-4%
Interest rate decreases to 12%	
10 year FIRR – no subsidy	5%
10 year FIRR – with subsidy	47%

Given that the commercial lending rate in Kenya is approximately 19% (albeit likely to reduce) and the WACC for NCWSC is approximately 5.95, the project is only attractive with the subsidy. While the rerun appears high it is very dependent on customer uptake, willingness to pay and the ability of NCWSC to operate efficiently in the low income areas. This level of uncertainty and risk justifies the higher FIRR.

ANNEX 3: Financial Management and Disbursement (OP/BP 10.02 and 12.00)

Financial Management

KENYA PORTFOLIO: FM ASSESSMENT REPORT- OCTOBER 2012

P131284: Grant for Nairobi Sanitation Preparation Project

A. Introduction

1. The Bank's financial management team conducted a financial management assessment of Nairobi City Water and Sewerage Company (NCWSC) who are the project implementers. The objective of the assessment was to determine whether (a) the NCWSC has adequate financial management arrangements to ensure that the funds will be used for the purposes intended in an efficient and economical manner; (b) the project's financial reports will be prepared in an accurate, reliable and timely manner; and (c) the entity's assets will be protected. The financial management assessment was carried out in accordance with the financial management practices manual issued by the Bank's Financial Management Sector Board on November 3, 2005.
2. The assessment indicates that NCWSC has adequate FM capacity to manage the grant. The organization has experience in managing IDA funds using FM arrangements similar to those required by the World Bank.

B. Country Issues

3. Public Expenditure and Financial Accountability (PEFA) assessments have been done in Kenya. Progress has been achieved in the adoption of International Public Sector Accounting Standards (IPSAS), Supreme Audit being strengthened and through the ongoing public financial management review in line with the new Constitution. There is also the office of Controller of Budget under the new constitution which will oversee proper budget execution. The weaknesses in the Judiciary are being addressed by the revamped Judiciary under the new constitution with the appointment of a new Chief Justice and creation of the Supreme Court. The government has also re-launched the implementation of IFMIS to address past concerns / weaknesses.
4. The Ethics and Anti Corruption Commission (EACC) has also been entrenched in the new constitution and it's expected to be more robust in the fight against corruption.

C. Disbursement and Audit Arrangements

The project will adopt the SOE method of disbursement. The disbursement and audit arrangements will be in line with the Financial Management Operation Review Committee (FMORC) Case Recommendation and Decision Report no.19.

D. Risk Assessment and Mitigating Table

5. The analysis of the assessment is as follows:

Risk	Risk Rating	Risk mitigating measures incorporated into project design	Condition of Effectiveness (Y/N)?	Residual Risk rating
Inherent Risk				
Country Level This is based on the Country Public Financial Management environment and it takes into account relevant governance issues such as corruption and weaknesses in the Judiciary. It also takes into account the current reforms being undertaken in the review of Public Financial Management in line with the New Constitution. The weaknesses in the Judiciary are being addressed by the revamped Judiciary under the new constitution with the appointment of a new Chief Justice and creation of the Supreme Court. The government has also re-launched the implementation of IFMIS to address past concerns / weaknesses.	S	he Government has set up a Public Financial Management Reform programme in line with the new Constitution and a revamped implementation of IFMIS by Treasury. The ongoing reforms in the Judiciary and EACC will also address the governance and corruption issues. A new PFM law has also been enacted.	No	S
Entity Level The NCWSC has adequate capacity and experience in managing donor financed projects.	L	N/A	No	L
Project Level The project design is relatively simple.	M	N/A	No	M
Overall Inherent Risks:	**M**			**M**
Control Risk:				
Budgeting Budget system deemed adequate for purposes of the Project	L	NCWSC budget process is in line with country systems with approvals by top management and board of directors.	No	L

Accounting NCWSC has adequate accounting capacity and the FM unit is headed by a qualified Finance Manager being assisted by 5 coordinators two of whom have prior experience in implementing IDA funded project . Comprehensive FM manual for management of donor projects is in place and the provisions are similar to those required for Bank operations.	M	Finance and administration director and the chief accountant having prior experience in implementing IDA projects will in consultation with the bank carry out capacity building to the rest of the staff members who will be directly be involved in the project implementation.	No	L
Internal controls, management oversight and risk management NCWSC has internal audit director assisted by an internal audit manager and risk manager. He report to the board audit and governance committee and administratively to the managing director. FM manual makes adequate provisions for satisfactory internal control systems.	M	Project to be subjected to institutional internal audit and risk management framework.	No	M
Funds Flow Due to nature of project design, funds flow relatively simple through the DA in Treasury to PA in NCWSC in designated CBK or commercial bank acceptable to World Bank. SOE method of disbursement to be adopted.	L	N/A	No	L
Financial Reporting NCWSC already preparing quarterly reports in form and substance similar to the sources and uses of funds of the IFR. The IFR will be submitted to the Bank within 45 days after every quarter.	M	NCWSC already has a boards finance and commercial committee in charge of reviewing financial information including financial statements to ensure compliance accounting standards and other disclosure requirements. Format of IFR agreed between NCWSC and the Bank.	No	M

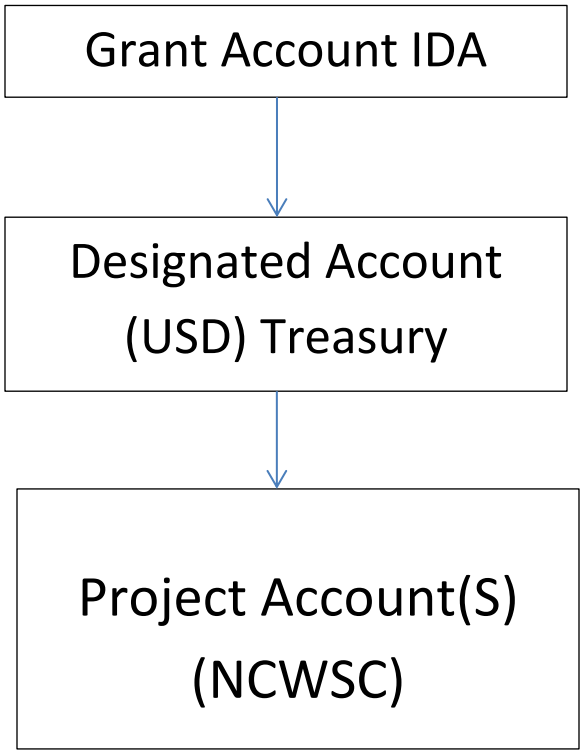
Auditing NCWSC is audited by the independent auditors KENAO and received adverse qualified opinion for FY10 to the effect that financial statements do not present fairly the financial position of NCWSC Limited as at 30 June 2010 and its financial performance and its cash flows for the year then ended in accordance with international accounting standards and does not comply with water act, 2005 and the companies act, cap 486 of the laws of Kenya.	M	Project accounts to be prepared on cash basis of accounting and project has adequate capacity to manage this. Format of financial statements issued by Treasury in 2008.	No	M
Overall Control Risk	**M**			**M**

H = High; S = Substantial; M = Moderate; L = Low.

D. Disbursement arrangements

6. The implementing agency will open Designated Account (DA) denominated in US dollars at Treasury in the CBK or commercial bank acceptable to the World Bank. Funds from the DA will be transferred to project account (PA) opened by NCWSC in local currency commercial bank acceptable to the World Bank.
7. The project will adopt the SOE method of disbursement. Tranches of amounts agreed between IDA and NCWSC will be made to the DA in advance and disbursed to the WSP from the PA by approval by NCWSC. Payments related to project management and consultancies and other related costs will be paid from the PA by NCWSC.

E. Funds Flow Chart



F. Implementation support plan

8. Based on the outcome of the financial management risk assessment, the following implementation support plan is proposed:

Financial management activity	Frequency	FM OUTPUT
Desk reviews		
IFRs review	Quarterly	Interim Financial statements review report
Audit report review of the NCWSC	Annually	Audit review report
Review of other relevant information such as internal control systems reports	Continuous as they become available	FM review report
Onsite visits		
Review of overall operation of the financial management system including internal controls.	Once every 12 months	FM review report
Monitoring of actions taken on issues highlighted in audit reports, auditors' management letters, internal audit and other reports	As needed	FM review report
Transaction reviews (if needed)	Annually or as needed	FM review report
Capacity building support		
Financial management training sessions	By effectiveness and thereafter as needed	Training sessions held

G. Conclusion of the assessment

9. The conclusion of the assessment is that the financial management arrangements have an overall residual risk rating of moderate, which satisfies the Bank's minimum requirements under OP/BP10.02, and therefore is adequate to provide, with reasonable assurance, accurate and timely information on the status of the project required by IDA.

Disbursement

The flow chart below shows the process for implementation and funds flow within the project. Verification will be requested following connection of each additional 1,000 households. Once the connections are confirmed through verification of a sample set, funds will be disbursed to NCWSC from GPOBA ($175 per sewer connection and $80 per water connection). It is expected that NCWSC will complete the 16,000 connections funded through this project within the 4 years. The project life is 4 years to account for the second verification six months after connection and any slippages in the timeline

ANNEX 4: Procurement Capacity Assessment

1. Introduction

As part of the Nairobi Sanitation Project **(NSP)** pre - appraisal mission a procurement capacity assessment was conducted by **Efrem Fitwi**, Procurement Specialist, on 19, November 2012 for the Nairobi Water and Sewerage Company (NCWSC), the agency responsible for the fiduciary management of the project The NCWSC operates under the Kenya Procurement Act of 2005 and Kenya procurement regulation of 2006 and its procurement capacity has been built to handle procurement under the existing procurement laws. Overall, the procurement capacity of the NCWSC is mainly limited to local procurement of goods, low value works and few consultant services.

2. Objectives

The objectives of the capacity assessment were to:

a) evaluate the capability of the NCWSC as well as the adequacy of procurement and related systems in place, to administer procurement;
b) assess the risks (institutional, political, organizational, procedural, etc.) that may negatively affect the ability of the Ministry to carry out the procurement process;
c) develop an action plan to be implemented as part of the Project, as necessary, to address the deficiencies detected by the capacity analysis and to minimize the risks identified by the risk analysis (if any); and
d) propose a suitable Bank procurement supervision plan for the project considering the relative strengths and risks revealed by the assessment.

3. Country Procurement Environment

The public procurement system in Kenya covers all government entities which include the central government, local authorities, state corporations, education institutions and other government agencies that purchase goods, works and services using public resources in accordance with the provisions of the public procurement law; i.e. the Public Procurement and Disposal Act of 2005 (PPDA), which came into effect in January, 2007, replacing the Exchequer and Audit Act (Public Procurement), Regulations, 2001. Section 8 (1) of the Act established a central Public Procurement Oversight Authority (PPOA) in addition to the Public Procurement Department established under the Regulations (2001) in the Ministry of Finance. The PPOA was officially launched in June 2008. The Act sets out the rules, procedures and institutional arrangements that the public entities should follow in the management of public procurement. The Act also provides mechanisms for enforcement of the law. The PPOA provides oversight function in monitoring compliance with rules and procedures spelt out in the Act. However, the Law contains some critical provisions that impede transparency and efficiency. Some provisions

of PPDA are not fully consistent with the World Bank procurement guidelines and Consultants Guidelines, and therefore these may not be applied for the implementation of this project without modification. These provisions will be clearly stated in the Financing Agreement. Corruption in procurement is not yet controlled. Capacity building by the respective Government entity (PPOA) is underway, but compliance and enforcement of the Law to ensure value for money still remains very weak.

4. Organization and staffing of the Procurement Function under the NCWSC

The present procurement function is structured within the Finance as an independent function and the head of procurement (Supply and Chain Manager) administratively reports directly to Financing Director and functionally to the Managing Director (CEO). The procurement function is at par with the Revenue and Finance (Accounts). Currently procurement is headed by the Supply Chain Manager assisted by his deputy who is also the Procurement Coordinator including 67 staff members composed of a Procurement Officer, four Supervisors and four Assistants among others. The head of procurement has over 5 years of procurement experience overall of which 3 are within the agency. It was revealed that the implementing agency has limited knowledge in international procurement and little or no experience in the use of World Bank Procurement Guidelines. Agency's experience involves mainly local procurement using the Kenya procurement laws and procedures using the PPDA and the national Standard Bidding Document. Similarly all internal approvals also follow the Kenya procurement laws. Unfortunately, agency had little opportunity to procure internationally using Bank Guideline. In the event that international procurement using Bank Guidelines is anticipated, it would be necessary to plan upfront that the Head and his deputy attend basic procurement training in the use of Bank Guidelines. With this and close support/guidance from the World Bank Country office in Kenya on the application of Bank procurement Guidelines on Goods, Works and Selection of Consultants, my view is that there is adequate internal capacity to handle procurement under the project.

5. Procurement Processes

The Agency like other similar Kenyan organizations follows the Public Procurement Disposal Act (PPDA) which is generally acceptable to the Bank except for some provisions and their modifications which will be clearly indicated in the Financing Agreement. Consequently, the approval levels are no different from other Institutions which follow the PPDA. Consistent with the procurement act, tender opening as well as Technical Evaluation committees are appointed on ad hoc basis whose evaluation recommendations would be subjected to the approval of the permanent Tender Committee after which time it is submitted to the Managing Director for signature. This arrangement is working well whereby, immediately after bid

opening, a technical evaluation committee comprising of able personalities from the technical units of minimum 5 members are appointed and conduct the evaluation within a defined period of time. Bidding documents are prepared jointly by the technical staff and the support of the procurement staff and are issued to public by the procurement unit.

6. Records Handling

The Agency has established an adequate records management system on contract by contract basis and the Procurement Coordinator acts as the sole custodian of all procurement records. I was informed that so far no problems have been encountered in procurement records handling.

7. General Observation and Recommendation

Overall, the procurement responsibility has been limited to local procurement. I was informed that, so far, one works contract has been handled using the AFD guidelines and no contracts using Bank Guidelines. Therefore, considering the limited capacity in international procurement using World Bank Guidelines in the event that international procurement is anticipated, it would essential to plan training staff in the use of Bank Guidelines which would not be difficult for the Agency to handle. The Bank's responsibility would only be limited to conduct induction courses or pertinent topics and clinics as appropriate. The Agency may also wish to engage consultant on need basis.

8. Overall Risk Assessment

Taking into consideration the overall lack of experience in international procurement using Bank Procurement Guidelines, my assessment / review of the capacity of the procurement section of the implementing agency to manage procurement under the forthcoming project, is **'Substantial'**.

9. Prior Review Thresholds

Harmonized prior review thresholds for Africa shall be applicable. Additional information regarding methods of procurement and frequency of supervision will be included in the procurement plan. The following are the Harmonized prior review thresholds:

No.	**Procurement Method**	**Prior Review Threshold in US$**
1.	ICB and LIB (Goods)	**≥500,000**
2	ICB Works + Supply & Installation of Plant $ Equipment	**≥5,000,000**
3	QCBS / CQS (Consultancy Services)	**≥200,000**
4	ICS (Consultancy Services)	**≥100,000**
5	SSS (Consultancy Services)	**All**

10. Mitigating Measures

The following mitigating measures could be considered.

(i) Train procurement staff at NSP on Basic World Bank Procurement Guidelines or hire a Consultant on need basis to bridge any gap.

(ii) Bank to give an induction course on procurement and filling system to procurement staff at NSP before project effectiveness.

ANNEX 5: Safeguards

The related project, Water Sanitation Service Improvement Project (WaSSIP)), has already been prepared, including the Environmental and Social Management Framework for the implementing agency (NCWSC).

ANNEX 6: Results and Monitoring

The overall responsibility for monitoring and verification lies with NCWSC. NCWSC will use key performance indicators to monitor specific areas of interest.

In addition, the following information would be used as a guideline for Results and Monitoring of the GPOBA Project. Figures presented are merely illustrative.

		2012		2013		2014	
Year		P1	P2	P1	P2	P1	P2
Number of connections	Planned						
Disbursements (US$ million)	Actual						

Table 1: Static data (to be provided at the beginning of the project and updated when necessary)

Outputs	Definition of outputs	Water & Sewer connection to poor households in informal settlements
	Disbursement milestones	Approximately 50% at verification of connection and the remainder at verification of operational connection six months later.
Access	Number of people per household in project area	To insert as appropriate
Targeting	Targeting	
	Average household expenditure on alternative service provision	
Aid Efficiency	Actual unit subsidy	
	Comparator information from output or input-based projects	
	Time (months) to design OBA scheme	
	Cost of project development (TA)	
Provid	Description of service provider	
	Type of contract/ certification	Typical Connection and Loan Agreement Public

		incumbent
	Competitive bidding used?	
Dev. Impacts	Development impacts recorded by the project	The project will reduce health risks associated with poor sanitation, O&M costs for effluent disposal, promote low cost sanitation financing for poor urban communities, promote affordable household based sanitation
	Gender impact	Reduce the security risks to women and girls in travelling outside the home in search of toilets, increase women participation through the community organization mechanisms, promote safer, cleaner & more private pour flush toilets

Table 2: Indicator tracking table

Year	**Unit**	**Baseline**	**2013**				**2014**				**2015**			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
People provided with access to Sewerage in the project area	Nr													
Direct project beneficiaries (Number), of which female (%).	Nr (%)													

Table 3: Project funding sources (per period)

Year		Unit	Unit Cost per hh	Total
GPOBA connection subsidy	Planned	US$		
	Actual			

NCWSC connection subsidy	Planned	US$		
	Actual			
User contribution	Planned	US$		
	Actual			
Verification and Supervision (GPOBA)	Planned	US$		
	Actual			
Total	Planned	US$		
	Actual			

ANNEX 7: Government Endorsement

A letter of endorsement Ref: AWSB/WSPA/VOL1/23 was issued to the GPOBA by the Athi Water Services Board dated 9th January 2012. The letter shown below provided the government's support to Nairobi City Water and Sewerage Company's plans to work with the World Bank to provide water and sewerage connections to low income households in its area of operations.

Athi Water Services Board

Africa Re Centre, [illegible] Road, P.O. Box 45283 - 00100, [illegible] Tel +254 020 [illegible] Email: info@awsboard.go.ke Website: www.awsboard.go.ke

When replying please quote AWSB/WSPA/VOL1/23

9th January 2012

The Program Manager
Global Partnership on Output-Based Aid
The World Bank
Washington DC

RE: Expression of Interest to Participate in the Proposed Output-Based Aid Pilot Project to Improve Water and Sanitation Coverage in Nairobi's Low Income Areas

The Nairobi City Water and Sewerage Company has informed us of the ongoing discussions with the World Bank regarding a potential pilot project to improve water and sewerage coverage in low income areas of Nairobi using output based aid approaches.

This letter serves to express our No Objection to the proposed project. We understand that the project, if approved, would partly finance a subsidy scheme through a microfinance institution to support individual low income consumer water and sewerage connections over four year period in selected low income areas.

Nairobi City Water and Sewerage Company (NCSWC) is mandated to supply water and sewerage services to the residents in Nairobi. The AWSB continues to undertake investments using funds from IDA and other sources for the expansion of the water and sewerage network in Nairobi city. We are also investing in bringing additional water and increasing sewerage treatment capacity for Nairobi City. However coverage of Water and Sewerage services in low income areas of Nairobi remains low. One of the main obstacles to improved coverage in these areas is the relative high cost of water and sewerage connections to individual households. This pilot project will subsidize financing of connections for low income households in areas where AWSB is investing in water and sewerage reticulation.

We look forward and are committed to working with NCWSC and the World Bank to finalize the details of this project. We also understand that there is no guarantee for financing as a result of participating in the preparatory activities.

We appreciate your valuable and continued support to Athi Water services board.

Yours faithfully,

ENG. MALAQUEN MILGO
CHIEF EXECUTIVE OFFICER

c.c

1. Permanent Secretary,
   Ministry of Water and Irrigation
   Maji House
   Nairobi

2. Managing Director,
   NCWSC
   Kampala Road
   Nairobi

Chairman: Hon. Reuben Ndolo, **Directors:** Mr. Joseph Kinyua, Eng L N Simitu, Prof Karega Mutahi ,Mr. John Kiarie, Mr. Silverse L. Anami, OGW, Mrs. Mary Mathew Malinda, Mr. Peter Githinji Kung'u, Mr. Mbuvi Kathenge, Aden S. Ali, John Giathi Charles

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