NATIONAL WATER AND SEWERAGE CORPORATION

KAMPALA WATER

GPOBA-Funded Kampala Water Connections for the Poor Project
Resettlement Policy Framework, an Annex to the ESMF REPORT

November 2007
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EXECUTIVE SUMMARY

Water supply and sanitation in Uganda is the responsibility of Ministry of Water and Environment (MWE). The responsibility for development, management and operation of water and sanitation services in the major conurbations, including Kampala is delegated to NWSC, which is an autonomous public corporation in public ownership. There is a performance contract between NWSC and the central government represented by MWE and Ministry of Finance (MoF). This performance contract is currently operationalised through a series of Internally Delegated Area Management Contract (IDAMC) between NWSC Head office and its subsidiary 19 large towns (operational areas). The main characteristic features of the IDAMCs include incentive plans, definition of responsibilities, monitoring and evaluation mechanisms, operating risk sharing mechanism, etc. The water and sewerage bodies are regulated by MWE.

NWSC is one of the very well performing public utilities in the developing world. However, there is still a lot of room to improve. There are still large segments of the urban poor that are not connected to the piped water system, and are therefore paying large sums for consuming water of inferior quality from private vendors. NWSC would like to improve the current coverage for serving the urban poor through piped schemes in Kampala Water from 40% to between 90 and 100%.

The Global partnership on Output- Based Aid (GPOBA), a multi- donor trust fund administered by the World Bank is seeking to design and fund an output-based aid (OBA) scheme for Kampala’s urban water supply and sanitation sector. The scheme will be undertaken by Uganda’s National Water and Sewerage Corporation (NWSC) and will focus on extending connections to Kampala’s urban poor using performance-based subsidies. NWSC has applied to GPOBA for subsidy funding. The proposal is for GPOBA funding to be complemented by NWSC.

The project seeks to target the poor living in slum areas in and around Kampala as well as the peri urban areas and provide these poor with subsidized connections to the water supply network. The type of targeting is done by area (i.e. geographical) as it is assumed that the majority of the people living in these areas are all poor. The project envisages making a total of about 20,000 new connections (of which a little more than 19,000 will be shared yard taps, and a little less than 1,000 will be PWPs) over a period of four years. GPOBA will make payments against verified connections and against billed consumption.

As part of the implementation an urban poor unit/branch (“UPPB”) has been setup to coordinate the effective implementation of services in low income areas.

The main objectives of the UPPB will be:

- Support NWSC to create internal capacity for pro-poor planning
- Implement water and sanitation investments in the informal settlements;
- Build institutional and human resource capabilities at the community level for sustainability of improved water and sanitation services.
- Close monitoring of all customers to avoid accumulation of debts.
- To closely monitor and control illegal activities in slum areas as a result of increased interactions and relationships created.
To quickly and effectively handle leaks, bursts and cases of stolen meters which are very common in poor settlements

This report is an overview of the entire project and summarizes the environmental and social impact that will create by the project.

This report contains:
- Executive summary
- Introduction of the project
- Project description
- Environmental Impact Assessment
- Capacity building
- Resources
- Annex A: Construction Guidelines for the GPOBA-funded project
- Annex B: Resettlement Policy Framework (RPF) for the GPOBA-funded project (including sample claim forms)
1.0 INTRODUCTION

1.1 General
NWSC has applied to the Global partnership on Output- Based Aid (GPOBA), a multi-donor trust fund administered by the World Bank to design and fund an output-based aid (OBA) scheme for Kampala’s urban water supply and sanitation sector. This project aims at providing water services to the urban poor in the slums and peri urban areas of Kampala at a relatively low cost, with minimal negative environmental and social impacts. To ensure this, the OBA water project will be implemented under an Environmental and Social Management Framework. The project envisages making a total of 20,000 connections over a period of four years.

1.2 EMSF Purpose
The main aim of the EMSF is to ensure that during the implementation of the OBA water project for Kampala’s Poor environmental and social concerns are avoided, mitigated or minimized.

1.3 EMSF objectives
The specific objectives of the EMSF for the project include the following;
(a) To establish procedures for environment and social planning, and interventions during implementation of the project.
(b) To specify roles and responsibilities and outline the necessary reporting requirements for managing and monitoring environment and social concerns related to the project.
(c) To outline resource and capacity requirements for the successful mitigation and prevention of environmental and social concerns related to the project.
2.0 PROJECT DESCRIPTION

This project aims at providing water services to the urban poor in the slums and peri-urban areas of Kampala at a relatively low cost.

Definition of the Urban Poor

NWSC categorizes the following strata of customers whose vital statistics are stated as being among the urban poor:

- Household incomes of less than Shs.80,000 (US Dollars 40) per month and in most cases earned on a day-to-day basis i.e. equivalent household income of US Dollars 1.33 per day.
- Clustered settlements with a high crowding index of 0.25 - 14 people.
- Very low levels of water consumption of between 0-20 litres per capita per day.
- Customers who do not have own connections

2.1 Project target areas

The project targets the very poor living in slum areas, informal settlements and peri-urban areas in and around Kampala and provides these poor with subsidized connections to the water supply network. The Urban Poor are spread in all the branches of Kampala Water service area. The geographical areas covered by the water network and the branches are: City branch, Kansanga, Najjankumbi, Bwaise, Ntinda, Kitintale and Nateete, Nansana and Mukono. Some of the prominent slum areas are:- Kisenyi, Ndeeba, Kibuli, Naguru Go down zones, Katanga Wandegeya, Makerere Kivulu, Kalenwe, Nankulabye, Kawempe Kutaano, Mulago Kinywaranda zone, Kyebando Kisalosaloo, Kawempe Lugoba, Kikoni, Nsooba, Nakawa, Makindye and Rubaga areas. It’s vital to note that some of these locations have spaghetti lines that currently takes water to the communities, and are mainly extended by landlords and private water vendors (PSPs). Some network extensions and intensifications are required to serve this lot for NWSC to effectively serve the urban poor.
2.2 Project implementation arrangements and plan

As part of the implementation, a pro-poor unit has been set up to coordinate effective implementation of services in low income areas. The Urban Pro-Poor Unit will manage the following processes in the delivery of water services:

- Process and effect new water connections
- Supervise the delivery of water services to customers’ premises
- Invoice customers for services rendered and distribute the bill invoices
- Collect revenue for services rendered
- Promote the use of IEC strategy in service delivery
- Attend to any customer complaints and provide feedback
- Carry out general customer relationship management

2.3 Institutional arrangements

This incorporates the roles and responsibilities of stakeholders and how they interface. These stakeholders include the operator, regulator, government, customer, NGOs, independent verification agent, banks and community. These stakeholders include: the Ministry of Water and Environment (MWE); the National Water and Sewerage Corporation (NWSC) – the grant recipient in this project; the local government – in the case of this project, that is the Kampala City Council (KCC); an independent monitoring and verification auditor; and, the customers themselves.

Kampala Water-NWSC, has created an Urban Pro-Poor Branch (described in more detail below) that will manage daily implementation of the GPOBA-funded scheme. The UPPB will also be at the front line of ensuring that the environment and social safeguards outlined here and under Ugandan law are adhered to as the UPPB is closest to the ground for the project’s implementation.

NWSC/Kampala Water will follow the guidelines described here in this ESMF – and specified in the Construction Guidelines and Resettlement Policy Framework (RPF) included in the annexes. NWSC (who will handle procurement for the GPOBA-funded project on behalf of Kampala Water) will ensure that all works are undertaken according to the Construction Guidelines described in the Annex, and that the RPF will be adhered to. This ESMF and its annexes will in effect become part of the Grant Agreement.

NWSC and its divisions (e.g. Kampala Water) are well equipped to handle these responsibilities, and do so as a normal part of their work of contracting works and approving of final works.

More detail is provided here:

2.3.1 Ministry of Water and Environment (MWE):

The Ministry of Water and Environment has primary responsibility for water and wastewater service development and provision in Uganda, including the following:

- Overseeing of NWSC for provision of water and sanitation services in specified locations, including the areas in Kampala covered by this project,
- Approval of NWSC corporate plans
- Monitoring of NWSC (biannual reviews) to ensure levels of services and financial obligations are being met
Overseeing and approval of projects for water services expansion

2.3.2 National Water and Sewerage Corporation (NWSC):
The responsibility for development, management and operation of water and sanitation services in the major conurbations, including Kampala is delegated to NWSC, which is an autonomous public corporation in public ownership. It operates under MWE. NWSC operates in 19 major towns within Uganda. Kampala, which is the capital city of Uganda, is one of these towns. National Water and Sewerage Corporation has its Head quarters in Kampala where the OBA water project is going to be implemented. Responsibility for the management of water and sewerage services within Kampala area has been delegated to Kampala Water through the Internally Delegated Area Management Contracts (IDAMC). Kampala Water has also signed contracts with nine business units (Branches) that manage the water services within the different parts of Kampala.

The chief activities of NWSC include the following:
① Obtaining funding for new infrastructure development, operations and maintenance, including borrowing, subject to approvals and agreement with MWE and the Ministry of Finance.
② Providing operation and maintenance of its water and sewerage facilities in the Kampala Area through IDAMCs with its local area offices that establishes monitoring and control of agreed service level parameters.

The UPPB mentioned above will coordinate the effective implementation of the OBA water project. This unit consists of technical staff, administrative, commercial staff, community liaison officer, and a coordinator. The technical staff will be handling the technical issues in the project which will include effecting new connections, responding to complaints that are of technical nature that may arise during the project implementation. The commercial and administrative staff who will handle the commercial and administrative issues during the project implementation, and the community liaison officer will help in liaising with the community during the project implementation to reduce/eliminate any negative environ or social impacts. The project management by the unit will be overseen by NWSC headquarters which is also responsible for overseeing management of all water and sewerage services in all areas under its jurisdiction.

The UPPB will also be responsible for the primary report given on the OBA water project. This report will be passed on to NWSC Headquarters which will be responsible for presenting the final annual report on the OBA Water project to GPOBA and external auditors.

2.3.3 Independent Audit team
It is proposed that an independent audit team composed of technical and financial advisors will verify outputs produced under this project. The team will use data provided by NWSC project team, as well as collect its only primary data.

2.3.4 Customers
The customer signs a contract with NWSC for provision of Water supply to their premises which is usually categorized as domestic, Public Stand pipe, urban poor, commercial/industrial, institution/ government and in turn the customer pays for the water used at a tariff rate that is dependent on their category.
2.3.5 Local government

NWSC will liaise with appropriate levels of local government to obtain mobilization of support for the proposed network expansion, and assistance in selection of appropriate areas of need. This is done by engaging a coordinator who will be responsible in helping NWSC to establish areas with informal settlements, give permission when passing lines in certain areas, help in gathering people during community sensitization etc. The roles and responsibilities of stakeholders and how they interface can be demonstrated diagrammatically as follows:

2.4 Annual reporting procedures

A report based on performance indicators will be handed in to KW Headquarters on a monthly basis. This report will reflect the level of achievement of these indicators against pre-set targets. KW Headquarters will then verify the report through an internal audit team before forwarding the report to NWSC headquarters. NWSC Headquarters will then compile the report and send it to both an appointed external auditor and to GPOBA. The report will contain the principal output which in this case will be the number of new connections made, estimated investment cost benefit from field surveys made, the water sales that were made, arrears, billing, collections and suppressed accounts, the service quality that is the average hours per day to which there was access to the service and the number of interruptions/ outages during the day.
3.0 ENVIRONMENTAL ASSESSMENT
The KOBAWCP will involve the extension of water supply from the piped network in Kampala, into the poorest parts of Kampala.

3.1 Positive impacts
This project is likely to bring about the following positive impacts.

- The project will provide safe drinking water to the poor community thus improve the quality of life and health and hence lead to the reduction of water related diseases like typhoid, cholera, and other diseases from stagnated water sources like malaria etc.
- The project will help improve government’s facilitation, regulation, and planning of basic water and sanitation services and hence stimulate economic growth and development.
- The poor people’s productivity will increase as more time can be invested in developmental issues other than traveling long distances to collect water which most of the times would be contaminated as most of their sources are from surface water which can easily be contaminated.
- The socio-economic impact will be high as the community will have more time to engage in productive work. NWSC will work closely with other city stakeholders (Kampala City Council, NGOs, CBOs, etc) to ensure minimal negative environmental impacts as a result of the project. The same working arrangement will promote hygiene education thereby maximizing the project benefits.
- Available and adequate production capacity: The construction of a third water production plant at Gaba – Gaba III as well as the transmission mains to the Highlevel and lowlevel primary reservoir system was completed and duly commissioned by Feb 07. This new plant is providing an additional 80,000 m$^3$ of treated water per day into the network. As such the provision of connections to the urban poor and the demand created there from will not require any parallel interventions related to increasing the production and transmission capacities.
- The health conditions in the area will be improved due to fewer occurrences of water related diseases and this can also lead to savings made due to less money being used in treatment of diseases related to water. As a result these savings can be diverted into other income generating sources hence leading to the general development of the area.
- There will be a reduction in child labor since the children will not need to move distances in search of water instead of going to school. The productivity of the women in this area will also be increased since they will spend less time looking for water as they will have a clean, affordable source of water near their homes.

3.2 Negative impacts and Mitigation Measures (see Annexes A and B)
- The expropriation of land along the water supply routes and the traversing of historical or culturally sensitive sites will not arise due to the following mitigative approach to be adopted during project implementation. The tertiary mains and service lines will be laid along the road sides within the designated road reserves. The project is focusing primarily on yard taps and public water points that will be connected directly from the adjacent tertiary mains along the access roadways. Since most of the roads are gravel and the water lines to be laid are predominantly
small (DN 15 – DN 50) plastic pipes, the use of heavy machinery is not applicable. Labour based approaches will be adopted for the pipeworks. There will be very close coordination and consultation with the local community leaders in sensitizing the beneficiary communities and agreeing on the locations of the water points. See Annex B: Resettlement Policy Framework, for more information.

As a result of the planned construction activities involved during the pipe network laying, potential negative environmental impacts may occur. The works require excavation of lands and this may cause impacts such as initiation and aggravation of soil, erosion, loss of vegetation, air, and water and soil pollution. During the construction works, dust emission may be produced. The land will be refilled to original level after erosion and water pollution impacts. Measures such as sprinkling of water will be adopted dust raising and air pollution. See Annex A: Construction Guidelines, for more information.

Traffic congestion, an inconvenience to people’s movement can arise as a result cutting across roads. Mitigation measures include regulating traffic at the road crossings, diverting traffic, and reinstating the roads as soon as possible after a cut has been made. If possible, the pipes should be laid during construction of roads or rehabilitation of roads if that is the plan. The project affected people should be consulted and be involved in decision- making at different stages of the program to avoid demonstrations that may arise from inconveniences. See Annex A: Construction Guidelines, for more information.

During the operation of the project wastewater flow is expected to increase due to the increased demand of potable water supply to the urban poor dwelling. Waste water will also increase from the construction team during the operation. This, if not handled can cause contamination of resources such as surface water, ground water and soil as wastewater can be disposed off there. When disposed off on land, the waste water can be a habitat for disease carriers such as mosquitoes, snails leading to the spread of water related diseases. To minimize such impacts waste water disposal systems should be planned to provide full wastewater disposal capacity. The community will be enlightened and educated on the need and implementation of proper wastewater disposal systems. The systems such as soak-away, septic tanks and pit latrines will be adequately designed, installed and maintained in order to avoid ground water contamination. Surface water contamination will be minimized by locating latrines, soak pits, and septic tanks at least 30m from any water body e.g. a stream. See Annex A: Construction Guidelines, for more information.

During operation of the project there is a possibility of contaminants entering the water supply system or the source being contaminated thus lead to spreading of water related diseases. To mitigate such problems regular testing of the treated water will be made before supply to ensure that it is fit for supply. The project will involve adequate planning and design as well as installation to ensure contamination of the source up to the receiver is minimized. Proper sanitation utilities will be planned to avoid contamination of potable water. Important also is involvement of the community through education and training on how to properly operate and maintain the project works as well as improve on the sanitation. See Annex A: Construction Guidelines, for more information.
**Sanitation services.** The disposal of human excreta constitutes one of the critical aspects of environmental health in the city. NWSC sewerage coverage reaches only 8% of the city’s population. A significant proportion (12%) of households does not have access to private pit latrines. About 78% of residents own some form of pit latrine. Commercial pay per visit is about 26% of the sanitation facilities. However, most of the pit latrines are of traditional type that is they are not emptiable. This implies that new pit latrines must be developed whenever the old ones fill up. But due to space limitations this is not feasible. Hence in a way of coping, the pit latrines are unplugged during the rainy season and the sludge allowed to flow into storm water drains. And since the roads are very poor most pit emptying services avoid the areas. Options for improving excreta management include; ensuring adequate facilities in building construction, piloting new technologies that reduce dependency on pits and enforcing sanitation rules and regulations.

Unlike water supply, few agencies are engaged in sanitation services. These included,
- a) NWSC for management of sewerage services
- b) Ministry of Health and Kampala City Council (KCC) for managing on-site sanitation
- c) NGOs such as Plan International were instrumental in construction of VIPs in some areas in Kawempe division in the city

The institutional framework for sanitation is convoluted and responsibility scattered in many organizations with no coordination of interventions. Policies and roles are confused thus limiting benefits that investments do not provide. For example while ministry of Health Sanitation guidelines recognize pit latrines as an urban sanitation option, KCC regulations regard them as temporary measures valid only for purposes of developing the plot. Another critical issue constraining toilet construction is the terrain. Most informal settlements are located in low land marshy areas where the water table is very high. This meant easy filling of toilets which implied heavy costs on landlords. It is this factor that also influenced the latter to ignore the construction of toilets.

The problem has been compounded by service demand backlog resulting from the many years of political turmoil that halted development planning and urban infrastructure provision in the 1970s and early 80s thus undermining the public health regulatory mechanisms.

To mitigate this, NWSC has created an internal capacity to serve the poor by forming a community management department (CMD) which is the Urban Pro-Poor Unit and some of its tasks among others will include strengthening of the institutional linkage between NWSC and KCC, creating alliances and learning how to work with other service providers such as NGOs and small scale service providers in order to reduce operational overheads of enhanced service delivery in informal settlements.

Another anticipated negative impact during the planning of the project would arise from the source of water to be supplied. This usually results into conflicting demands on surface or ground water supplies especially if the community depend on the same sources for their daily supply e.g. for their livestock, domestic use etc. This project however already has adequate water quantities drawn from Lake Victoria through the
three treatment plants at Gaba Water works. There is therefore expected to be minimal conflicts regarding water supply.

Denied access to a residential area: this may mainly be due to the excavation works being carried out hence the ability of vehicles to move into certain areas may be restricted. However, alternative routes can be established and ensuring that work on roads is done over the weekends and after this immediate backfilling is done to limit the traffic congestion. See Annex A: Construction Guidelines, for more information.
4.0 CAPACITY BUILDING
NWSC has created internal capacity to serve the poor through a Community Management Department- the Urban Pro-poor Unit, to formulate and manage pro-poor policies.

The mandate of the CMD covers the aspects below:
① Strengthen institutional linkage between NWSC and Kampala City Council (KCC) to encourage better coordination of activities in informal settlements. KCC should appoint counterpart officers preferably at division level to closely liaise with the CMD in the implementation of the pro-poor projects.
② Reform operational routines in NWSC from supply driven to a pro-poor, demand oriented, and customer friendly approach.
③ Create awareness and change staff attitudes and encourage recognition of the urban poor as a strategic market not an inconvenience.
④ Reverse the current approach whereby the market seeks out the provider and implement proactive arrangement for improving services to the urban poor.

Further more, KCC and NWSC have to create alliances and work with other service providers in order to reduce operational overheads of enhanced service delivery in informal settlements.

5.0 RESOURCES
National Water and Sewerage Corporation has created a project team, the Urban Pro-Poor Unit to coordinate effective implementation of services in low income areas.
UPPU currently has a coordinator, community mobilization officer, Technical Supervisor, a cashier/Front Desk Officer and 3No Casuals who also doubles as Driver, Community Care takers. However, the branch in consultation with the Operator will second more staff to the branch to have the staffing levels as follows: 01No. Finance and Administration Officer, 2Nos. Technical Supervisors, 01No. Commercial Officer, 01No. Community Liaison Officer, 2Nos. Commercial Assistants, 4Nos. Marketing Assistants, 1No Surveyor, 04 No. Plumbers, 01No. Front Desk Officer, 01No. Cashier, 1No Driver.

The branch will network with the neighboring branches whose block maps were incorporated in the Urban Pro-Poor Branch in the issue of information sharing and other operational issues.

With respect to the financial aspects, the project will be financed through a combination of GPOBA grant, NWSC resources/loans to pre-finance new connections to the targeted beneficiaries and consumer payments through customer contributions (nominal subscription fee as a precondition to service) and tariff. Pre-financing is to be done mainly by NWSC and to some extent by private contractors. In the case of private contractors, NWSC will pay an initial amount through its own funds.
ANNEX A: Construction Guidelines

CONSTRUCTION GUIDELINES FOR THE GPOBA-FUNDED KAMPALA WATER CONNECTIONS FOR THE POOR PROJECT

1.0 GENERAL

Site Establishment and Management

Every precaution shall be taken to prevent pollution of air, soil, ground and surface water as a result of construction or associated activities at all locations of the contract.

The Contractor shall undertake works in a cautious manner to avoid negative environmental impacts. Contractors shall adhere to specifications regarding noise, debris etc. to ensure safety of works, personnel and third parties.

Traffic routes to working areas: no indigenous site vegetation shall be destroyed by construction vehicles, unless authorised by the Engineer.

Staff ablution facilities: only chemical toilets flush or/toilets discharging into approved septic tanks and soak ways will be allowed on site so as to limit potential groundwater pollution caused by other forms of ablution facilities.

Storm water control measures: care shall be taken not to alter natural storm water drainage during construction activities resulting in potential pollution.

Pollution control:

- Discharge of hazardous chemicals on the site or to the storm water system is prohibited.
- Soil erosion caused by construction activities shall be kept to a minimum. Care should be taken in the siting of facilities and materials.
- All wastewater leaving the site shall be contained and treated before release to the streams, to comply with Government standards for wastewater/effluent discharge.

Management of waste: litter and solid waste, associated with construction activities, shall be confined to areas designated for that specific use by the Engineer.

The Contractor shall draw-up a plan of all parts of the construction site, showing the layout of site establishment, topsoil stockpiles, planned access and circulation routes, borrow pits, etc. The plan shall be submitted to the Engineer for comment and approval before site establishment commences.
Where the Environmental Specification is in conflict with other sections of the technical specification, the Environmental Specification shall apply.

**Housekeeping**

The Contractor shall ensure that the Contractors camp and working areas are kept clean and tidy at all times. The Engineer shall inspect these areas on a regular basis.

**Demarcated areas and fencing**

Routes for temporary access and haul roads shall be located within the approved demarcated areas and vehicle movement shall be confined to these roads. Movement of vehicles outside the designated working areas shall not be permitted without written authorization from the Engineer.

All construction activities shall be restricted to designated working areas shown on the drawings and/or approved by the Engineer. Materials, including spoil, shall only be stockpiled on designated areas.

Fences as indicated on the drawings and tender specification shall be maintained throughout the construction period. All temporary fencing as indicated by the Engineer shall be removed on completion of the contract.

**Fire risk and Burning**

Burning of vegetation including tree trunks and stumps cut during site clearing and establishment shall not be permitted unless authorised by the Engineer. Woody material not required by the Contractor should preferably be given to the surrounding community. All vegetation not disposed of by means of the above nor retained for landscaping purposes shall be removed to a site designated by the Engineer.

The Contractor shall ensure that the risk of fire at any location on the site is kept to a minimum.

The Contractor shall supply fire fighting equipment appropriate to the fire risk presented by the type of construction and other on-site activities and materials used on site. This equipment shall be kept in good operating order.

Open fires for heating and cooking shall only be permitted in protected areas designated by the Engineer for this purpose. The Contractor shall supply his labour force with wood, coal etc for cooking and heating purposes.

No fires will be allowed adjacent to the boundary fence, either inside or outside the Works.

**Storage of fuel and other materials**

Fuel, lubricants, transmission and hydraulic fluids shall only be stored in the designated areas.
Control of damage to plants, trees and animals

The underlying requirement is to minimise damage to natural habitats within the designated area. In practice a certain amount of damage is sometimes unavoidable, in which case the aim is to rehabilitate the disturbed land according to a rehabilitation plan approved by the Engineer or the Engineer’s instructions.

Destruction of plants and trees

Plants and trees within the designated area shall only be moved or removed with prior written approval of the Engineer to areas specified by the Engineer. Removal, damage or disturbance of any plant or trees outside the said areas is not permitted.

Gathering of firewood outside the designated area shall not be permitted.

Disturbance of animals

Any animals resident within the site shall not be killed nor unnecessarily disturbed. Where sensitive species occur these shall be relocated at the Employer’s cost.

1.2 CONTROL OF DAMAGE TO SOIL AND WATER

Topsoil

Topsoil shall be stripped from the areas as indicated below prior to the commencement of site establishment and construction and stockpiled for use in reinstatement and rehabilitation:

- roads;
- any part of the site where berms are to be constructed from overburden, subsoil and excavated materials;
- any area upon which structures, buildings and hardstandings are to be constructed;
- any area which is to be used for temporary storage of materials including topsoil stockpiles;
- areas which could be polluted by any aspect of the construction activity; and
- areas designated for the dumping of spoil.

The Contractor shall ensure that subsoil and topsoil are not mixed during stripping, excavation, reinstatement and rehabilitation.

Stripping of topsoil shall be undertaken in such a way as to minimise erosion by wind or runoff.
Areas from which topsoil is to be removed shall be cleared of any foreign material which may come to form part of the topsoil during removal including bricks, rubble, any waste material, litter, excess vegetation and any other material which could reduce the quality of the topsoil. Topsoil shall be stockpiled in areas designated by the Engineer. Where required the stockpiles shall either be vegetated or covered by a suitable fabric to prevent erosion and invasion by weeds.

Topsoil shall be stripped from the above areas to a depth not exceeding 300 mm from the original ground level unless otherwise specified by the Engineer, after clearing and grubbing of the area is complete.

1.3 **CONTROL OF POLLUTION**

As a minimum requirement all waste emissions (hazardous, airborne, liquid and solid) from the site shall be kept within the limits of standards set in terms of relevant national and local pollution legislation and regulations.

**General**

No waste of a solid, liquid or gaseous nature shall be emitted from the site without approval by the Engineer.

Accidental pollution incidents shall be reported to the Engineer immediately after they occur and shall be cleaned-up (to the satisfaction of the Engineer) by the Contractor or a nominated clean-up organisation at the expense of the Contractor.

**Soil**

Vehicle and plant maintenance shall be confined to the areas demarcated for this purpose. Should any fuel, transmission oil or hydraulic fluids be spilled onto the soils the Engineer shall be informed immediately.

**Water**

The quality of water bodies on and/or adjacent to the site will probably be monitored before, during and after construction by the Employer.

**Air**

All reasonable measures should be taken to minimise air emissions in the form of smoke, dust and gases, e.g. by applying dust prevention techniques such as the sprinkling of water.

1.4 **MANAGEMENT OF WASTE**

All wastes arising from construction activities are to be handled, transported and disposed of in accordance with the relevant regulations. All efforts should be
made to minimise, reclaim or recycle waste, and failing that, dispose of it in a manner licensed by the government for that purpose.

**Sewage**

The Contractor shall provide sanitation facilities in the form of chemical toilets or flush toilets at the camp, office, workshop and construction site for staff and visitors discharging to septic tank(s) and soakaway(s). The location, number and sizing of all such facilities shall be to the approval of the Engineer. No other form of sanitation will be permitted except with the written approval of the Engineer. No surface discharge of septic tank effluent will be permitted.

**Wastewater**

All runoff from both fuel tanks/drums, truck washing areas and wash water from concreting vehicles and other equipment shall be collected and directed through oil traps to settlement ponds and treated to comply with Uganda standards for effluent disposal. The settlement ponds shall be suitably lined at the Contractor’s expense, if required in the opinion of the Engineer, in order to minimise potential groundwater pollution.

Wastewater may not be disposed of directly into drainage lines, streams or the dam. The Contractor shall provide suitable retention and filtration structures (which shall be properly maintained) for the collection of wastewater. Wastewater from dewatering activities will be allowed to settle before the supernatant is pumped or gravitated to the streams.

Any water used for cleaning, testing and commissioning of equipment shall be contained in a retention structure and if necessary treated before discharge to one of the streams or Dam.

Washing and changing facilities shall be provided by the Contractor. All run-off from these washing and/or changing facilities shall be contained and treated to the satisfaction of the Engineer.

**Solid Waste**

Definition: “Refuse” refers to all construction waste (such as rubble, cement bags, waste cement, timber, cans, other containers, wires and nails), household and office waste. Refuse shall be collected and stored in demarcated, fenced areas in skips and/or bins. The fenced areas or containers should be designed to prevent refuse from being blown out by wind and should be strategically and conspicuously placed throughout the site.

Refuse shall not be buried nor burned on site unless prior written approval has been sought from and given by the Engineer.

**Hazardous Waste**

**Definition:**
Hazardous wastes are those which are proven to be toxic, corrosive, explosive, flammable, carcinogenic, radioactive, poisonous or as determined by the Hazardous Substances and Articles Act as amended.

Discharges of hazardous chemicals (such as paint, turpentine and oil) on the site or to the stormwater system are prohibited, as declared under the Hazardous Substances and Articles Act as amended.

Potentially hazardous raw and waste materials shall be handled and stored on-site in accordance with the manufacturer’s specification and relevant legal requirements.

Hazardous waste products shall include, but shall not necessarily be limited to, the following:
- cement;
- diesel, petroleum, oil and lubricants;
- explosives;
- drilling fluids;
- pesticides;
- concrete additives; and
- water purification chemicals.

All hazardous waste products shall be removed from site and disposed of in a manner, and at a site, approved by the Hazardous Substances and Articles Control Board.

1.5 MANAGEMENT OF STORM WATER AND EROSION

The aim is to minimise soil loss from the site due both to wind and water.

Storm water

At all stages of the contract, storm water control measures as specified by the Engineer shall be applied to keep soil on-site by minimising:
- erosion of temporary stockpiles of topsoil and permanent spoil dumps;
- erosion from construction roads, excavations and borrow pits;
- silt-laden run-off from all areas stripped of vegetation, including excavation surfaces and stockpiles of spoil and topsoil;
- contaminated run-off from storage areas;

Thereby preventing it from entering watercourses.

Natural storm water run-off which is not polluted by site operations shall be diverted around spoil dumps and topsoil stockpiles. Where uncontaminated storm water has accumulated in the workings and needs to be pumped out, it must be disposed of into the side streams in such a way that erosion does not occur along the course of its passage.
Control of Erosion

At all stages of the contract, erosion of bare soil, other excavation surfaces and stockpiles of topsoil and spoil shall be prevented by the application of erosion control measures as specified by the Engineer.

Should erosion occur due to negligence on the part of the Contractor in applying the above measures, the Contractor will be responsible for reinstatement of the eroded area to its former state at his own expense. Any surface water pollution occurring as a result of this negligence will be cleaned up by the Contractor or a nominated clean-up organisation at the expense of the Contractor.

Cross and side storm water drainage measures shall be constructed on access and haul roads to the site and on roads within the site.

The Contractor shall ensure that run-off from access and haul roads, and that diverted into cross and side drains, does not cause erosion.

1.6 REHABILITATION

At all excavation sites, the soil excavated shall be replaced after completion of the construction activity, and revegetated with indigenous grass and plants according to landscaping instructions within 30 days after completion of the construction activity, to the satisfaction of the Engineer.

All construction sites (including borrow pits) will be cleaned and rehabilitated to their original state and/or to the satisfaction of the Engineer.

1.7 WORKER SAFETY MEASURES

The following measures shall be put in place to ensure workers’ safety during the entire construction period:

(i) On site training of the workers on safe ways of handling and operating different equipment, machinery and tools to be used by the Contractor.
(ii) Provision of adequate protective gear;
(iii) Provision of adequate first aid facilities on site all the time.
(iv) Adequate and well labelled access and exit means shall be provided.
(v) Clear storage areas of the equipment and materials.
(vi) Persons’ access from outside shall be controlled and clear regulations provided concerning the access within construction sites.
(vii) Safe and adequate storage of inflammable materials and substances.
(viii) Basic fire fighting equipment shall be provided on site at all times and staff shall adequately trained on equipment operation.
(ix) Excavation work
  ③ Before starting the excavations to ensure the performance of these works in safety conditions; the following precautions shall be taken:-
  ③ The stability of the ground shall be checked by the engineer
  ③ The construction in the neighbourhood shall be protected
The work shall be well planned, adequate method and technical support chosen, at the same time, the excavation works shall be done under the surveillance of the employer.

(x) Training of workers on safe hygiene and sanitary practices

1.8 **DRINKING WATER QUALITY STANDARDS**

The water treatment plants (WTP) for the Kampala Water and Sewerage Service Area are located in Gaba by the shores of Lake Victoria – a fresh water lake. In Gaba there are 3Nos WTP i.e. Gaba I, Gaba II and Gaba III.

The water treatment processes in Gaba follow a conventional treatment method, based on the multiple barrier principle – i.e. screening, pre-chlorination, coagulation, flocculation, sedimentation, filtration, disinfection and pH correction. The procurement department follows a proactive and clear procurement plan to ensure that water treatment chemicals are available in right quantities and at the right time.

NWSC has a well-established water quality monitoring safety programme based on a comprehensive water safety plan matrix. The water safety plan clearly stipulates the hazard events, control measures for each of the hazard events, the target and action limits, and recommendations on how and when these control measures should be monitored and verified.

The most important water quality parameters monitored include: Bacteriological count of E-coli and faecal coliforms, Colour, Turbidity, PH and Suspended solids which must all comply with World Health Organisation and National- water quality standards.

NWSC has well qualified and competent staff in water treatment, production transmission and distribution. The quality assurance staff perform full time process control at the WTP and also carry out daily monitoring of water quality in distribution following a sampling programme derived from the water safety plan. The sampling points are already clearly mapped out through the entire distribution network.

In addition to the monitoring the reservoirs and tanks are cleaned on a regular basis and also a mains flushing programme is in place and adhered to. In case of deteriorating quality at any of the sampling points, immediate and additional flushing of mains or even reservoir cleaning is triggered off.
ANNEX B: Resettlement Policy Framework (RPF)

RESETTLEMENT POLICY FRAMEWORK FOR GPOBA - FUNDED KAMPALA WATER CONNECTIONS FOR THE POOR PROJECT

1.0 Minimizing Damage to Property
Pipelines shall be laid along the road sides or road reserves. This will minimize crossing of private land and damaging of properties (houses, walls, fences, etc). Where the road sides or road reserves are paved, NWSC will adequately make provisions for reinstatement.

2.0 Community Liaison
Identifying where the pipelines are to pass and where to install public water facilities and yard taps NWSC shall involve the local civic and community leaders to ensure cooperation with and minimize discontent of project area residents.

For such works;
NWSC shall attach a Sociologist or community liaison officer who will work hand-in-hand with the Engineer and the Contractor and his/her main role is equivalent to an advance team meant to resolve "social" obstacles.

The community liaison officer will sensitize the affected/beneficiary community, seek their approvals regarding where to pass the lines, and shall maintain constant contact with the community leaders and coordinate documentation and assessment of cases eligible for compensation.

As a policy NWSC has partnerships with the local leaders, with Kampala City Council etc regarding provision of services to the communities in Kampala.

3.0 Compensation Procedure and Reinstatement (and Valuation and Dispute Settlement)
In the event that there is property damaged and is due for compensation, the following steps shall be followed (the procedures followed are those outlined under sections 33 and Section 91 of the "THE WATER ACT"):

1) The person(s) to be affected by the works shall be informed in advance about the likely damage of their property, crops etc.

2) At the time when the actual damage is to take place the Contractor, Engineer, Community Liaison Officer, Affected Person(s), Local civic leaders and NWSC legal officer and internal auditor shall be present to witness and quantify the damage. For instance in case of crops, these shall be counted.

3) A property damage report shall be prepared on site and all parties sign to reflect joint agreement of the proceedings. NWSC shall acknowledge the property damages and commit to compensate based on the government Valuer's financial assessment.

4) The property damage report shall be sent to the government valuer who will assess and pronounce a monetary value.
5) NWSC shall pay the affected person based the government Valuer’s pronounced amount.

6) If the affected person objects to the government Valuer’s amount, he is free to sue/appeal to the Minister or to the courts of law. However, the government valuer shall base his amount on the prevailing market rates of the respective aspects damaged and thus contests to the pronounced amounts avoided.

In instances where the affected person may not be interested in the bureaucratic steps of government valuer etc, especially where the damaged property can be reinstated, NWSC shall proceed, through the contractor, to effect the reinstatements. NWSC will be responsible for the costs of any such reinstatement.

A sample Compensation Form and Compensation Acknowledgement Form are attached to this RPF, and provide additional information on how resettlement compensation is valued and processed.
NATIONAL WATER AND SEWERAGE CORPORATION

KAMPALA WATER

COMPENSATION FORM

Claimant's Name ........................................................................................................................................
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Description of Land in Respect of which the claim is made
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Interest in the land
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The damage caused to the land
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Particulars of any other damage
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Total amount of the claim
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NOTE

1. If damage is caused to land in the exercise of powers conferred on an authority by this act, the authority shall, if required, compensate all parties interested in the land for all damage sustained by them in consequence of the exercise of those powers, subject to the water act.

2. For purposes of this action, “damages to land” means loss suffered as a result of –
   • Deprivation of the possession of the surface of any land
   • Damage to the surface of land and to any improvements, crops or trees on the land;
• Damage to stock; and
• All consequential damage

3. In calculating compensation under this section –
• For damage to land payable under this section
• In respect to compulsory acquisition of any interest in land for the purposes of this act, no amount will be payable to the owner of any interests in, or the occupier of, any land in respect of the taking or use of water on, adjacent to or beneath that land by an authority pursuant to a water granted under part II of the water act.
NATIONAL WATER AND SEWERAGE CORPORATION

KAMPALA WATER

COMPENSATION ACKNOWLEDGMENT FORM

I………………………………………………….. Acknowledge receipt of the sum of ………………………………………………………. as a compensation for damages caused to my land.

This is the last and final payment I have received.

Signature……………………………….

Name……………………………………

In the Presence of

LC’s Name and signature:……………………………………………………………………

Valuer’s Name and Signature………………………………………………………………

Compensating officer’s name and signature……………………………….……………..

Title……………………………………..
National Water and Sewerage Corporation

NOTE

1. If damage is caused to land in the exercise of powers conferred on an authority by this act, the authority shall, if required, compensate all parties interested in the land for all damage sustained by them in consequence of the exercise of those powers, subject to the water act.

2. For purposes of this action, “damages to land” means loss suffered as a result of –

   • Deprivation of the possession of the surface of any land
   • Damage to the surface of land and to any improvements, crops or trees on the land;
   • Damage to stock; and
   • All consequential damage

3. In calculating compensation under this section –

   • For damage to land payable under this section
   • In respect to compulsory acquisition of any interest in land for the purposes of this act, no amount will be payable to the owner of any interests in, or the occupier of, any land in respect of the taking or use of water on, adjacent to or beneath that land by an authority pursuant to a water granted under part II of the water act.