THE REPUBLIC OF UGANDA

MINISTRY OF WATER AND ENVIRONMENT

URBAN WATER AND SEWERAGE SERVICES DEPARTMENT

TERMS OF REFERENCE

For

CONSULTANCY SERVICES FOR CONSTRUCTION SUPERVISION OF:

(A) NAMASALE WATER SUPPLY AND SANITATION PROJECT AND KOBOKO SANITATION FACILITIES

(B) KALIRO-NAMUNGALWE WATER SUPPLY AND SANITATION PROJECT

(C) SANITATION FACILITIES FOR RUKUNGIRI MUNICIPALITY

JULY 2019

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1 INTRODUCTION

1.1 General

Uganda is a landlocked country that shares borders with the Democratic Republic of Congo, Rwanda, Tanzania, Kenya, and South Sudan. It lies between 4012' northern and 1029' southern latitudes, and 29034' and 350 eastern longitudes. It has a total area of 241,038 km2, of which 20% is covered by lakes and swamps. The current population of Uganda is estimated at 35 million, of which 87% live in rural areas and 13% live in urban areas.

The urban areas of Uganda have undergone rapid population growth during the recent years and is still growing. This has increased demand on infrastructure and in some sectors outrun gains in infrastructure development including the water and sanitation sub-sector. As much as there is an increase in the number of people served every year in the urban water sector, the number of unserved is stagnant or still growing partly due to the rapid population growth but also due to gazetting of additional areas as urban. (MWE, Sector Performance Report 2017).

Higher urban growth rates may be expected in the future as planned by the Vision 2040 which aims at a level of urbanisation of 60% by 2040. This calls for further efforts to increase investments in water supply and sanitation infrastructure to close access gaps and achieve sector goals of 100% coverage.

1.2 Institutional Framework for Water Supply and Sanitation Services in Uganda

The Ministry of Water and Environment (MWE) is the lead agency for provision and management of water supply and sanitation services in Uganda. The Ministry has three directorates:(i) Directorate of Water Resources Management (DWRM) responsible for managing, monitoring and regulation of water resources through issuing water use, abstraction and wastewater discharge permits; (ii) Directorate of Water Development (DWD) responsible for providing overall technical oversight for planning, implementation and supervision of the delivery of urban and rural water and sanitation services across the country, including water for production; (iii) Directorate of Environmental Affairs (DEA) responsible for the management of all environment related affairs.

National Water and Sewerage Corporation (NWSC), is a government parastatal, under oversight of Ministry of Water and Environment. NWSC is mandated to operate and maintain water and sewerage systems in 225 large urban centres across the country as of June 2018. However, in some of the towns under NWSC mandate, Faecal Sludge management is also being carried out. Onsite sanitation, solid waste management and storm water drainage are the responsibility of the local councils.

At district level, local governments (districts, town councils, sub-counties) are empowered by the Local Governments Act (2000) to provide water and sanitation services. They receive funding from the Government of Uganda in form of conditional grants and can also mobilise additional local resources for water and sanitation programmes.

Umbrella Water Authorities as of August 2017, were gazetted as Water Authorities to operate and maintain water supply systems directly or indirectly by contracting and supervising private operators in urban and rural piped water schemes, outside the jurisdiction of NWSC.

A number of other line ministries have important roles in the sector. These include; The Ministry of Health (MoH), responsible for hygiene and sanitation promotion for households; The Ministry of Education and Sports (MoES), responsible for hygiene, education, and provision of sanitation facilities in primary schools; The Ministry of Gender, Labour and Social Development (MGLSD), responsible for gender responsiveness and community development / mobilisation; The Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), responsible for agricultural development; and The Ministry of Finance, Planning and Economic Development (MoFPED), which mobilises funds, allocates them to sectors, and coordinates the inputs of various development partners.

The NGOs working in the sector are coordinated at the national level through the Uganda Water and Sanitation NGO Network (UWASNET), a national umbrella organisation for Civil Society Organisations (CSOs), which has been largely funded by sector development partners through the MWE.

1.3 The Urban Water Supply and Sanitation Sector (UWSSS) in Uganda

The Government of Uganda (GoU) initiated reforms in the Urban Water Supply and Sanitation Sector (UWSSS) with the long-term objective of providing sustainable and affordable water supply and sanitation services to all segments of the population living in the various cities and small towns by

i. Improving the planning and design of projects to match current and future demand.
ii. Placing the communities within a framework conducive to improving the quality of service and reducing its cost.
iii. Limiting the role of Government to that of a policy maker, facilitator and regulator in order to increase investment and efficiency within the water sector.

The overall policy objectives of the UWSSS in the context of the reform can be categorised as follows:

i. **Service coverage**: To expand clean water service coverage to 85% of the urban population by Financial Year 2020/21
ii. **Sustainability:** To achieve sustainability of service delivery.

iii. **Affordability:** To ensure that a basic adequate level of service is affordable via low cost service delivery and the implementation of a subsidy and tariff framework which is equitable and beneficial to the poor.

It is in the context of the UWSSS policy objectives that the DWD is planning to undertake the works detailed in this invitation. Kaliro-Namungalwe and Namasale will be constructed by the Urban Water and Sewerage Services Department under the Directorate of Water Development and will be handed over to **NWSC** and **Umbrella Authority – North** respectively for operation and maintenance.

1.4 Management of the Water Supply and Sewerage Services in NWSC Areas

The NWSC was established in 1972 as a government parastatal organisation with the role of developing, operating and maintaining water supply and sewerage services in urban areas of Uganda.

NWSC operates under performance contracts (PC) with the Government of Uganda which started in 2000. The Performance Contracts have been renewed five times and the current contract is running over the period 2015-2018. Each of the PC's defines activities, objectives and indicators to be achieved within a three-year contract period.

To meet the GoU performance requirements, NWSC, as part of its restructuring, undertook reforms aimed at improving operational, commercial and financial performance.

Under the reforms, NWSC subsequently entered into performance contracts with each of its operational areas with the aim of giving them more autonomy and accountability. Initially, this involved signing of Internally Delegated Area Management Contracts (IDAMC) and later on Performance, Autonomy and Creativity Enhancement (PACE) contracts with each of the operational areas.

Currently, NWSC is operating under the third PACE contract with all its area management teams after the phasing out of Internally Delegated Area Management Contracts (IDAMC). Each of the respective areas of operation has a specific set of targets which are to be achieved within the next two years.

One of the major successes of the PACE/IDAMC arrangement is the improvement in performance and efficiency of operations in the respective NWSC towns. As the drive for target achievement heightens, with cost optimization playing the central role, the need for cost effective investments is no longer a desirable but a key requirement. In undertaking the assignment, the consultant will be expected to treat this aspect as a central consideration.

The existing Kaliro-Namungalwe Water Supply System is already being managed by NWSC and therefore the completed new Water Supply System will be handed over to NWSC for Operation and Maintenance.

1.5 Management of Water Supply and Sanitation Services in the Small Towns

Regional structures of the Ministry of Water and Environment called Umbrella Organizations were established to support operation and maintenance of piped water supply schemes in small towns and rural growth centres. The first Umbrella was established in 2002 (South-Western – Kabale); today there are 6 Umbrellas (Northern, Eastern, Central, Karamoja and Mid-Western). The Umbrellas were mandated to support all piped water schemes, urban or rural.

This meant that Local government were gazetted as Water Authority and appointed a Water Board and contracted a scheme operator / private operator. The Umbrellas provided back-up O&M support. This model had a number of issues including; Limited capacity within local governments to supervise the scheme operators, Lack of effective regulation to enforce compliance with contractual obligations (impossible to regulate > 1,000 schemes!), Poor management practices, lack of preventive maintenance, Schemes were often run by inadequately qualified personnel and there were frequent cases of financial mismanagement, unpaid energy bills. These issues translated into; insufficient revenue collection to ensure financial sustainability, no savings made to pay for scheme repairs and expansions, Deterioration of the infrastructure, Poor service quality and reliability and Umbrellas' resources not sufficient to compensate for these shortcomings.

This translated into the Umbrellas working in "firefighting" mode – responding to the most urgent needs (with insufficient funds) but not enough focus on preventive maintenance, uphill struggle against bad management practices, no mandate to take action and Umbrella's operational costs and investments depending on continuous donor and GoU support.

Therefore, due to the above issues, the Umbrellas were gazetted into Water Authorities in August 2017 to carry out direct management of the piped water systems. Therefore, Umbrellas can now contract and supervise local scheme operators to operate systems and financial management is undertaken using computerized billing, accounting and revenue collection systems. The Local communities and local government now are represented in the local Water and Sanitation Committee which carries out a monitoring role. Regulation is done by the Ministry's Water Utility Regulation Department.

Currently the Umbrella Authorities (UAs) manage 261 piped water systems (as of June 2018). This new model of management has had improvements in operations especially restored functionality in a number of schemes, higher collection efficiency, reduction in non-revenue water and increased number of customers through extensions. Other initiatives have also been undertaken under this management model like Performance data available online through the

Utility Performance Monitoring Information System (UPMIS) system and Revolving Fund being launched to finance investments. It is foreseen that UAs will be sustainable and able to extend clean and safe water to every village and every household in the Country. Affordable services will also be realised as a result of improved efficiency and also regulated and manageable tariff.

The planned Namasale Water Supply System is to be gazetted / handed over to Umbrella Authority - North for Operation and Maintenance on completion.

1.6 Project Area

1.6.1 Kaliro - Namungalwe Project Area

The Project area is generally referred to as Kaliro – Namungalwe but includes Kaliro Town Council in Kaliro District and 7 (seven) en-route Rural Growth Centres (RGCs) from Iganga Municipality to Kaliro Town Council along the Iganga- Kaliro highway. The en-route RGCs include Bukaye, Namunkesu, Namungalwe, Nambale, Nasuuti, Naibiri and Nabitende, all of which are in Iganga District. Iganga and Kaliro districts are located in Eastern Uganda and are located at a distance of about 120km and 171km from Kampala respectively.

Table 1-1 below shows the Parishes and Villages within Kaliro Town Council that are targeted by the Project.

Table 1-1: Administrative Structure of Kaliro Town Council

District	Town Council	Parishes / Wards (LC II)	Villages (No.)	Villages (LC I)
Kaliro	**Kaliro Town Council**	Bukumankoola	1	Bugoma
			2	Kirindi
			3	Mwangha
		Budini	4	Bamutaze
			5	Mission
			6	Nyanza
		Naigombwa	7	Bugabwe
			8	Bulangira
			9	Zibondo
		Buyunga	10	Busoma
			11	Buwalujjo
			12	Nakiyanja
		Lumbuye	13	Industrial Area
			14	Kalitunsi
			15	Valley Hill

Table 1-2 below shows the villages which are in the en-route RGCs of Bukaye, Namunkesu, Namungalwe, Nambale, Nasuuti, Naibiri and Nabitende that are targeted by the Project.

Table 1-2: Administrative Structure of En-route RGCs

District	Sub-county	Parishes / Wards (LC II) (RGC)	Villages (No.)	Villages (LC I)
Iganga	Nakalama	**Bukaye**	1	Bukaye
			2	Buwongo
			3	Igulusa
	Namungalwe	**Namunkesu**	4	Bubogo A
			5	Bubogo B
			6	Nabikoote
		Namungalwe	7	Kawete
			8	Namungalwe Rural
			9	Namungalwe-A
			10	Namungalwe- B
	Nambale	**Nambale**	11	Nambale I A
		Nasuuti	12	Busimba
			13	Nasuuti North
			14	Nasuuti South
		Naibiri	15	Naibiri Central
			16	Naibiri South
		Nabitende	17	Nabitende A
			18	Nabitende coffee B

Figure 1-1 below shows the location and map of Kaliro Town Council.

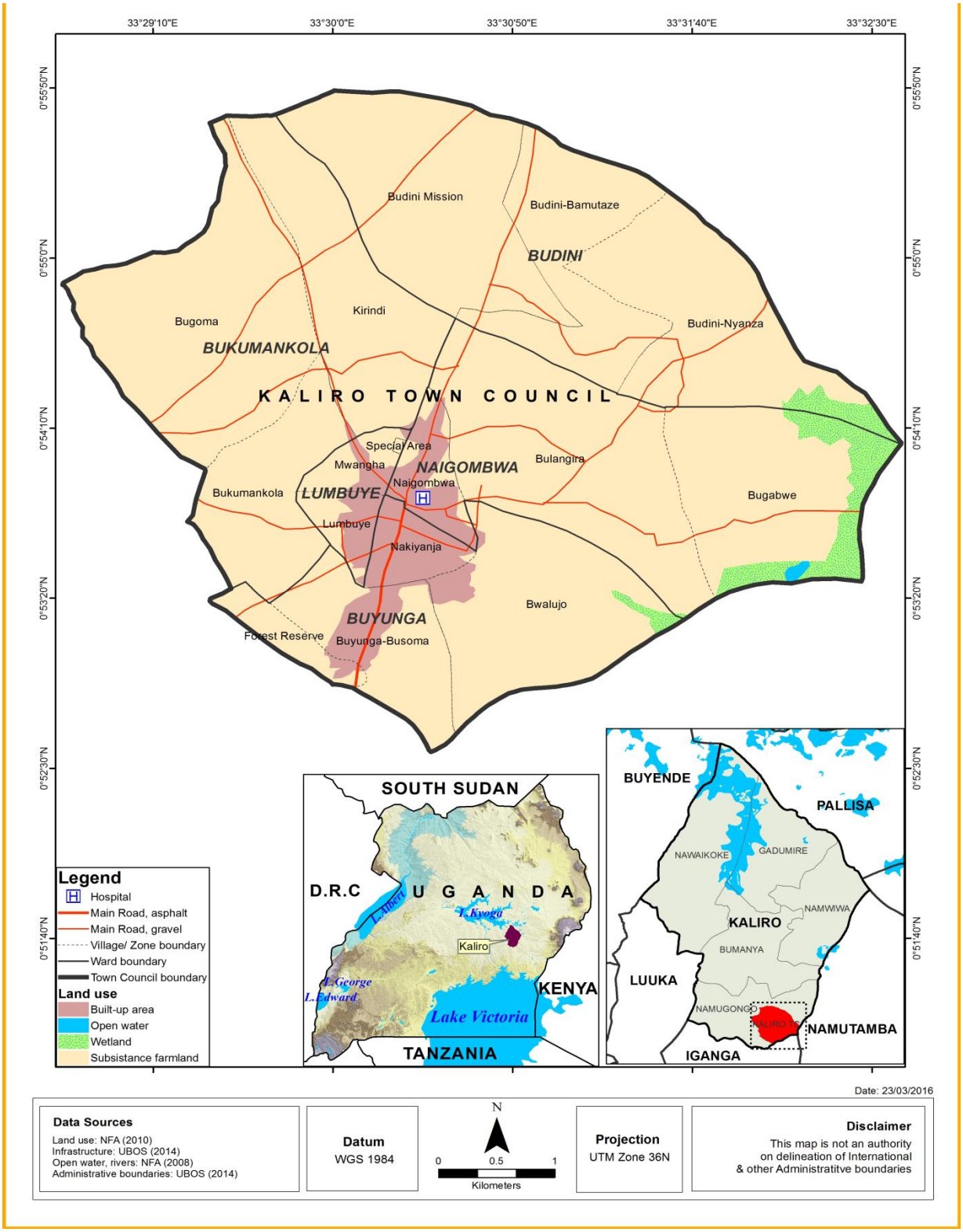

Figure 1-1: Map of Kaliro Town Council and its location

Figure 1-2 below shows the location of the seven en-route RGCs.

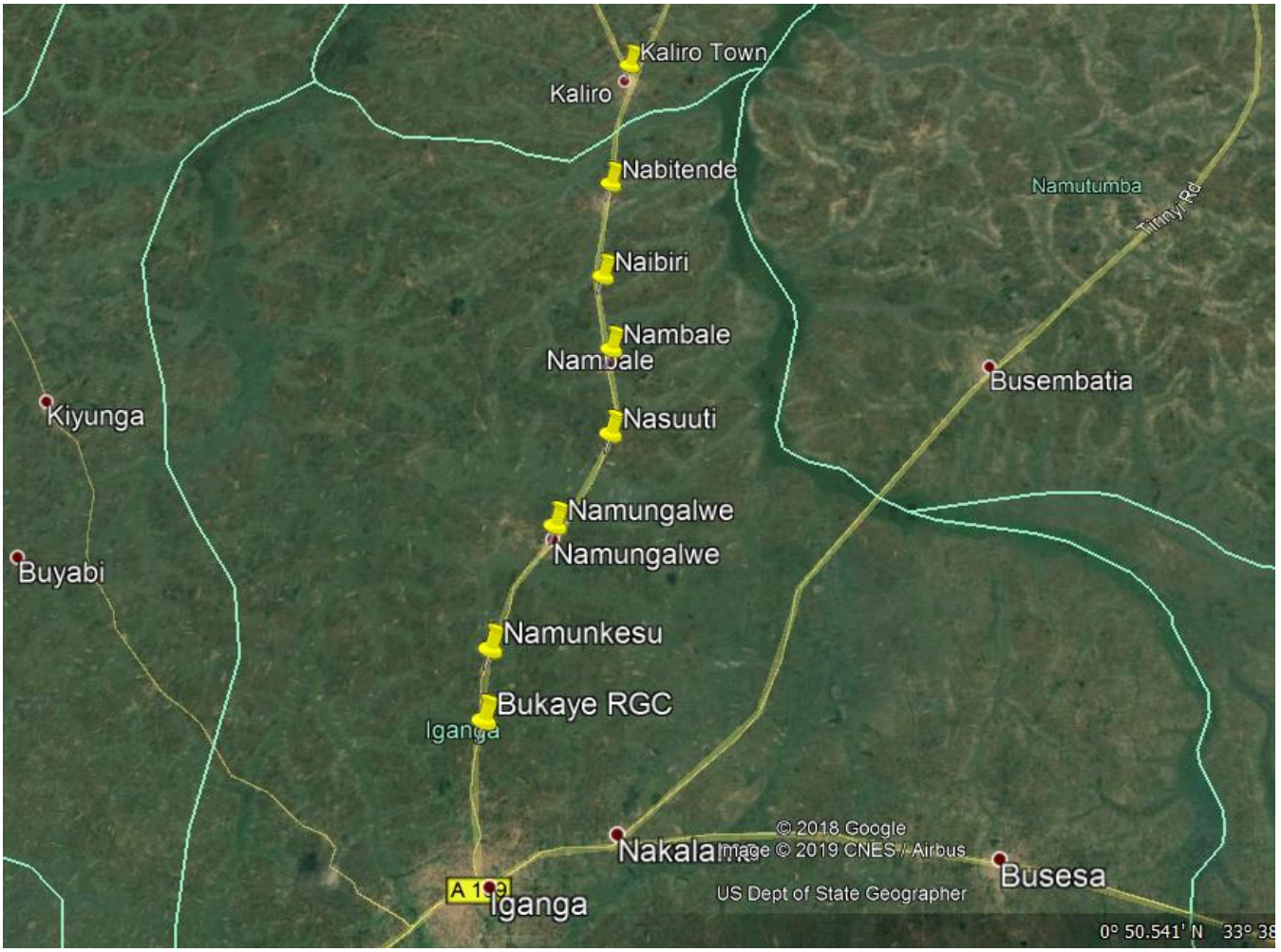

Figure 1-2: Map showing the location of the en-route RGCs of Bukaye, Namunkesu, Namungalwe, Nasuuti,Nambale, Naibiri and Nabitende

The total population of the Project area is 58,319 as per the National Population and Housing Census 2014 as shown in the Table 1-3 below.

Table 1-3: Population of the Project Area as per the 2014 National Population and Housing Census

District	Town Council/Sub-County	Parish	Population 2014
Kaliro	Kaliro Town Council	Bukumankola	2,932
		Lumbuye	3,209
		Buyunga	4,775
		Budini	2,583
		Naigombwa	3,045
		Kaliro Total	**16,544**
Iganga	Nambale S/C	Nabitende RGC	6,813
		Naibiri RGC	4,508
		Nasuti RGC	7,017
		Nambale RGC	3,354
	Namungalwe S/C	Namungalwe RGC	8,500
		Namunkesu RGC	3,880
	Nakalama S/C	Bukaye RGC	7,704
		Enroute Towns	**41,775**
	Project Area Total		**58,319**

1.6.2 Namasale Project Area

Namasale Town Council is a landing site located on the shores of Lake Kyoga in Amolatar District, Northern Uganda. It is 20km west of Amolatar Town Council and about 150km from Kampala via a ferry on Lake Kyoga in Nakasongola District. It is connected to the main grid electricity and hosts the Amolatar ferry landing site. The Parishes falling within the Project Area are Central, Kayago, Wabinua and Aweipeko with 20 villages. Amolatar District falls under the Lango Sub-region in Northern Uganda and is boardered by the districts of: Apac to the Northeast, Kaberamaido to the East, Nakasongola to the West and Lake Kyoga to the South.

Table 1-4 below shows the Parishes and Villages within Namasale Town Council that are going to be served under the Project.

Table 1-4: Administrative Structure of Namasale Town Council

District	Town Council	Parishes / Wards (LC II)	Villages (No.)	Villages (LC I)
Amolatar	Namasale Town Council	Central	1	Namasale TRC
			2	Kasubi
			3	Kamalau
			4	Market Area
			5	Bung
		Kayago	6	Apito Pat
			7	Kayago-A
			8	Kayago-B
			9	Kayago-C
		Wabinua	10	Wabinua-A
			11	Wabinua-B
			12	Oribcan
			13	Odokolit
			14	Alobokwe
			15	Arwot-Ogik
		Aweipeko	16	Anoga
			17	Aweipeko
			18	Anga Oryem
			19	Mbiko LS

Figure 1-3 below shows the map of Namasale Town Council while Figure 1-4 below shows the location of Amolatar district in which Namasale T/C is located.

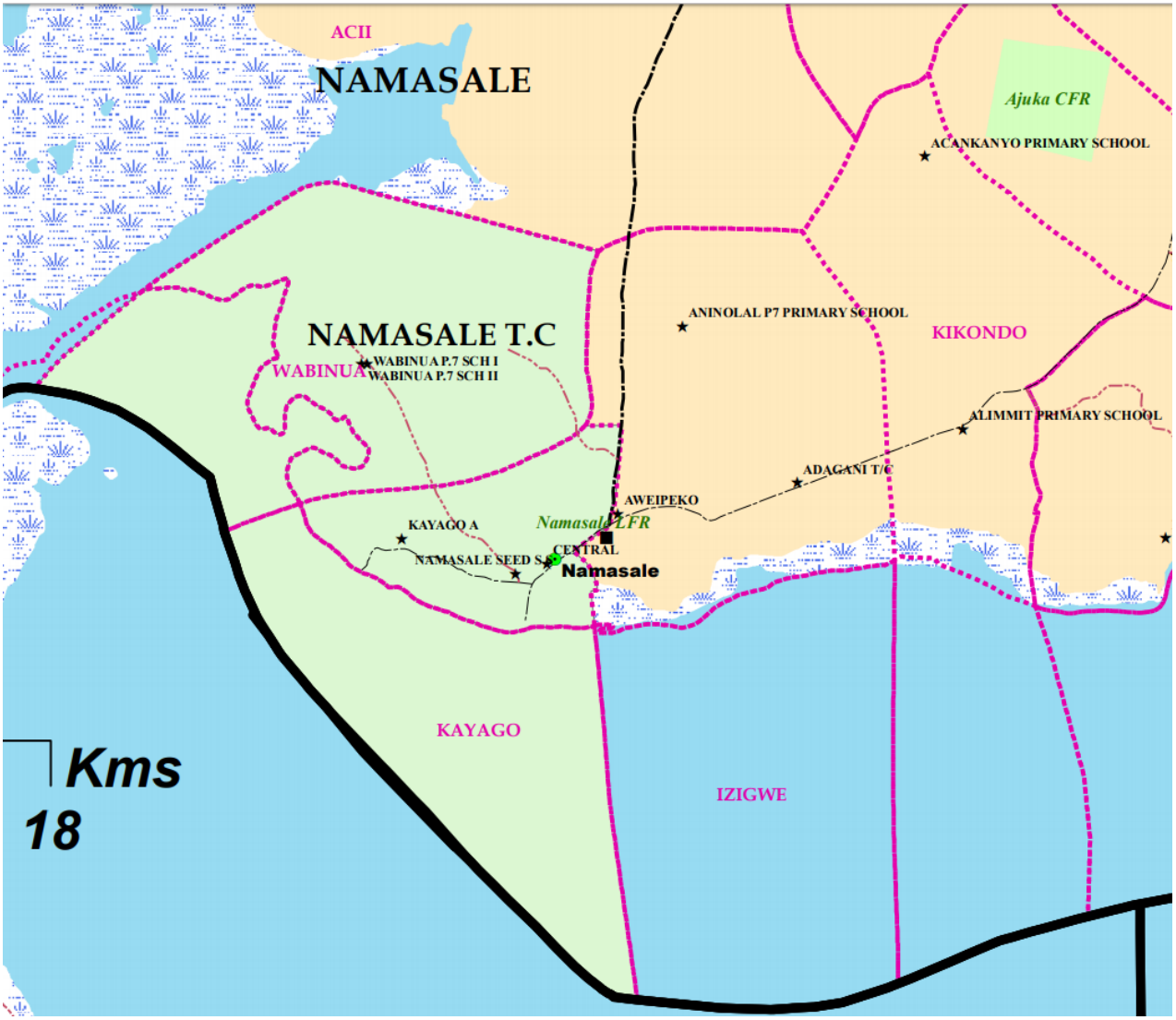

Figure 1-3: Map of Namasale Town Council and its Parishes

Figure 1-4: Map of Uganda Showing location of Amolatar District

The total population of the Project area is **10,277** as per the National Population and Housing Census 2014 as shown in the Table 1-5 below.

Table 1-5: Population of the Project Area as per the 2014 National Population and Housing Census

District	Town Council	Parish	Population 2014
Amolatar	Namasale	Central	2,927
		Kayago	3,094
		Wabinua	2,094
		Aweipeko	2,162
		Total	**10,277**

1.7 Existing Water Supply Situation in the Project Towns

1.7.1 Kaliro – Namungalwe and En-route RGCs

(i) Kaliro Town Council

Kaliro Town Council has an existing piped water supply system which is being managed by National Water and Sewerage Corporation. However, the existing system has exceeded its 10 years design horizon (from 2000 – 2010) and there are many dry zones. The system is composed of 1.5 km of transmission pipe of OD 63mm; 5.5 km of distribution pipe from OD 32 to OD 110; 3no. production boreholes complete with submersible pumps and control panels with yields of 30 m^3/h, 5m^3/h and 8m^3/h; 1 no. 3-phase generator set; two storage reservoirs of 100 m^3 capacity each; and 2 No. Chlorination units.

The total capacity of the existing system is 43 m^3/h which is equivalent to 688 m^3/day for 16 hours per day of pumping. This is much less than the current demand of Kaliro town of 878 m^3/d and ultimate year 2040 demand of 1,768 m^3/d. Most of the existing infrastructure has aged apart from the newly constructed 100m^3 capacity steel reservoir and 30m^3/h production borehole and pump house. The coverage of the distribution pipe network is limited and is composed of small diameter pipes. However, some of the existing infrastructure like the old 100m^3 capacity steel tank and distribution pipes can still be used by incorporation in the new distribution network.

Figure 1-5 below shows photographs of the existing reservoirs and borehole pump house.

Figure 1-5: Reservoirs and borehole pump house for the existing Kaliro town water supply system

The existing piped water supply system is limited to the core areas of the town. The total number of connections is estimated at 601. The system is being managed by NWSC and is charging a tariff of UGX 4,012 per m^3 as per the policy of the Corporation. Water vending also exists in the town and a jerry can of water costs between UGX 50 and 100.

Some of the population of the Town Council is served by a total of 25 functional boreholes spread out in the entire Town Council. In the developed core of the Town Council there are 3 boreholes which are functional and serving the population which is not accessing piped water. The rest of the population in the Town Council depends on unsafe water sources like streams, swamps and shallow wells.

(ii) En-Route RGCs of Namungalwe, Bukaye, Namunkesu, Nambale, Nasuuti, Naibiri and Nabitende

Namungalwe RGC, the biggest of the RGCs, has no piped water supply system. The population is served by boreholes, springs and shallow wells as the major source of water. The Sub-County has a total of 57 boreholes spread out in the seven parishes that make up Namungalwe sub-county. There are also 4 protected springs and 19 shallow wells.

The other RGCs of Bukaye, Namunkesu, Nambale, Nasuuti, Naibiri and Nabitende similarly have no piped water supply system and the population depends on boreholes, springs and shallow wells.

1.7.2 Namasale Town Council

Namasale Town Council has two existing mini piped water supply systems located at the shores of Lake Kyoga in the Central Parish. One scheme which was managed by the Town Council is no longer functional while the scheme which is managed by the Beach Management Unit is functional serving the fishing commercial activities. The rest of the population depends on boreholes and Lake Kyoga.

(a) Water Supply Scheme under the Beach Management Unit

The Scheme was built under the African Development Bank (ADB) program to serve the fishing commercial activities in a hygienic manner. The intake has an OD90 HDPE pipeline extending into Lake Kyoga adjacent to the landing site. There is a raw water pump with capacity of $6m^3/h$ drawing raw water from the Lake, delivering it through a pressure filter with capacity of $12m^3/h$ to the storage tank of capacity $36m^3$. An in-line Chlorine doser was installed after the pressure filter to inject chlorine into the filtered water. Power supply is from the main power grid and there is a stand-by generator set of 3.3kW capacity. The main storage reservoir has a capacity of $36m^3$ and is elevated on an 8m high steel tower. The components of the water supply system are illustrated in Figures 1-6, 1-7, 1-8 and 1-9 and Table 1-6 below:

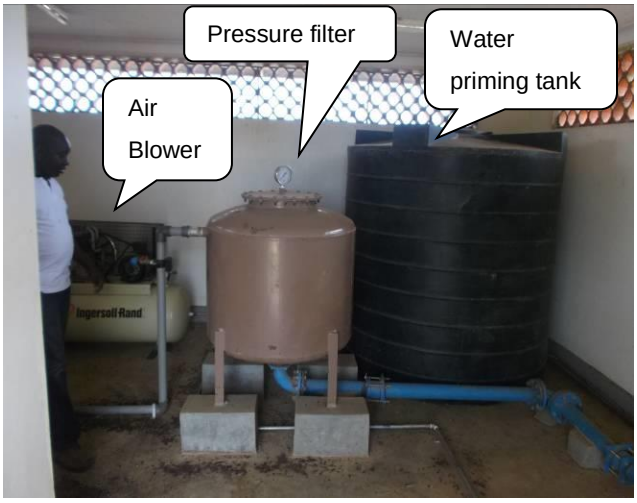

Figure 1-6: Pressure Filtration Unit & Water Priming Tank

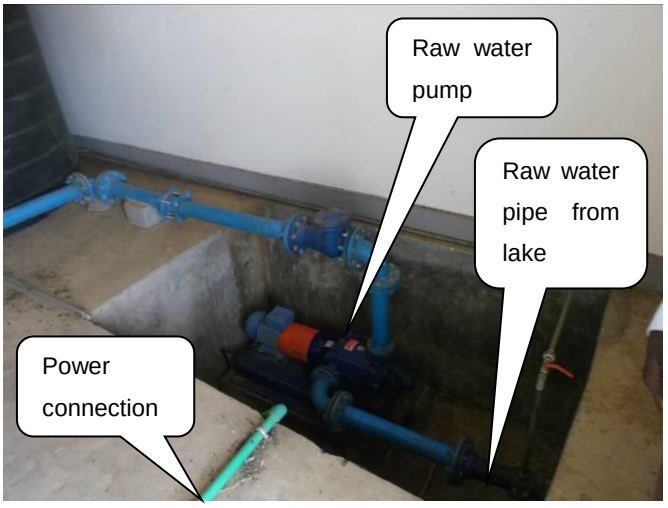

Figure 1-7: Raw Water Pump and Pipe Work

Figure 1-8: Storage Reservoir

Figure 1-9: Chlorine Dosing Unit

Table 1-6: Components of the Water Supply System being managed by the Beach Management Unit (BMU)

System Component	Specifications
Intake system	Has a flexible OD90 HDPE suction pipeline anchored to the shore bed
Standby Generator set	FG Wilson P40P2, enclosed Model No. PPEU1, Engine Family-1103C, Type 3348/1500 RPM Perkins Stand by: 230V, 50Hz Power: 3.3kW
Power connection	The power supply is a single– phase line. There is need to make a 3 –phase meter connection and a transformer to be able to power the 3 phase pumps.
Filtration Unit	Dayliff, Model FC 210 D= 875 mm H= 1050 mm Filter Area = $0.6m^2$ Capacity = $12m^3/hr$
Air Compressor / Blowers	Pump synchronous Motor, Ingersoll Rand, Type: 112 S1, 400 Volts, 15.4/8.9 RpM, 4 kW
Pump size	WKLn 4014, Impeller Dia = 170 (161) mm Q= $6m^3/hr$ H = 33m n= 1400 /min P= 1.15 kW
Chlorine Doser	Dosatron type DS0S mounted on the stock solution container of 100 litres capacity. Injection rate = 0.2-2%, flow rate = 1 to 20 m^3/hour
Reservoir	36 m^3 Steel plate tank raised on an 8m tower.

The water supply system was designed for commercial fishing activities. The Lake raw water only goes through basic treatment of rapid sand filtration without prior aeration, coagulation and sedimentation. Therefore, the raw water treatment is basically fit for fishing commercial activities. There are no available water quality test results to confirm suitability of the treated

water for domestic use. The mini water supply system is being managed by the Beach Management Unit (BMU). The BMU is a community fisheries management institution, legally empowered and registered with the Department of Fisheries Resources. One of its role is to improve the welfare and livelihood of people in fisheries dependent communities through improved planning and resource management, good governance, democratic participation and self-reliance.

(b) Mini Water Supply Scheme under Management of the Town Council

The scheme was built as a pilot mini piped water supply system to serve the community under the Norwegian Agency for Development Cooperation (NORAD), the Norwegian hardware supplier – SCAN WATER and the Ministry of Water and Environment (MWE) in 2007. The Scheme draws raw water from Lake Kyoga through a retractable flexible suction pipe and was designed with a capacity of $66m^3/d$. The raw water pump is a portable unit (Lombardini 3.68kWh). The Scheme has a sedimentation tank of canvas supported by corrugated galvanized iron sheet of capacity 20 m^3. Water is filtered through a pressure filter charged with sand and charcoal. Treated water is pumped by a high lift pump through a transmission line of ND 50 to HDPE tanks of storage capacity $20m^3$ installed on dwarf walls 0.8m high. The water distribution network is of ND 50mm HDPE pipes approximated to 80m total length. The Scheme has 34no. private connections and 2no. public water kiosks. The mini piped water supply scheme is illustrated in **Figure 1-10**1-10, 1-11, 1-12 and 1-13 below.

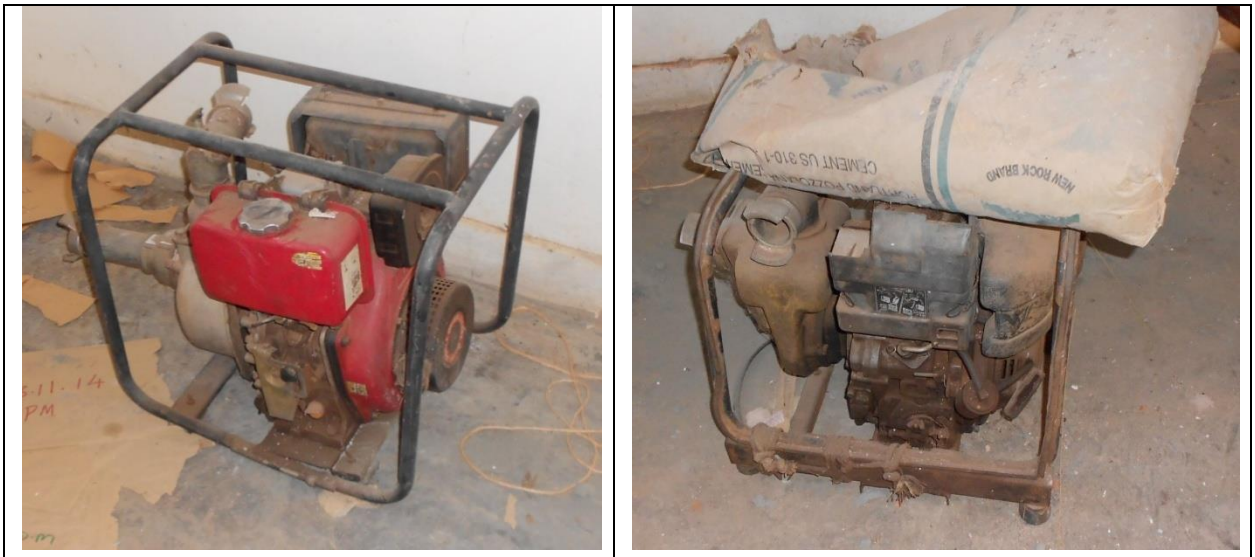

Figure 1-10: Raw water pumps for the mini piped water supply scheme

Figure 1-11: Pump House, disinfection tanks and flexible pipework in the Pump house

Figure 1-12: Water Kiosk

Figure 1-13: Storage Tanks

The water supply scheme was being managed by 2 Technicians that were appointed by the Town Council and were reporting to the Community Water Committee. The Scheme was relying on diesel for pumping and the fuel costs were too high compared to the revenue that was being collected from the 34 connections. A 20 litre jerry can was being charged at UGX 1,000 and the community was finding it unaffordable. Due to these operational challenges the Scheme eventually ran down and it is no longer operational.

1.8 Existing Sanitation Situation in the Project Towns

1.8.1 Kaliro – Namungalwe and En-route RGCs

The Project area does not have conventional sewerage system. The population is mainly served by onsite sanitation facilities of pit latrines (91.3%). There are some waterborne toilets with septic tanks in Kaliro town that has an existing water supply system that serve about 1.4% of the population. The general practice of faecal sludge management followed by the households and institutions is that when pit latrines get filled up, they are abandoned and new ones built adjacent to the filled up ones. There are some public toilets at the market place and the taxi parks but they are in poor condition. There is need to construct new public toilet facilities and faecal sludge disposal facilities in the project area and this has been taken care of in the design.

There is no proper solid waste disposal in the project area. 42.2% of the households reported disposing their rubbish in the open in the garden and only 21.8% reported pouring it in a pit within the compound to be burnt later.

1.8.1 Namasale Town Council

The town has no central piped sewerage system and only 3.8% of the population is served with septic tanks. 49% have shared pit latrines. There is also poor disposal of waste water as most houses (53%) do not have soak pits and dispose off waste water in the open. The safe latrine coverage is 31%.

There is one public toilet (pit latrine) in Kayago Parish, close to the rubbish dump that is in poor condition. There is a public toilet at the UNRA Ferry Station and at the Beach Management Unit facility. These were designed to use water flushing system but at the moment they are using the pour flush method due to lack of adequate water supply.

There is no proper solid waste disposal in the town. The rubbish bunk at Kayago is filled up and overflowing with rubbish. The overflowing rubbish bunk is an indication that either the frequency of garbage collection by the Town Council is low or there are too few pubic disposal points for the high levels of garbage that is generated. Solid waste collection and disposal is a responsibility of the Town Council.

1.9 The Proposed Integrated Water Management and Development Project (IWMDP)

The IDA has approved a loan to finance the Integrated Water Management and Development Project (IWMDP) as a successor Project to the ongoing WMDP. Under the IWMDP, funds

have been earmarked for design review and construction supervision under consultancy services, construction works as well as the implementation of full scale source protection measures.

Kaliro-Namungalwe and en-route RGCs and Namasale are some of the towns to be implemented under the IWMDP. Feasibility studies and detailed designs for Kaliro-Namungalwe and en-route RGCs and Namasale were completed in 2018 and 2015 respectively. These designs have been updated in 2019. The Consultant to undertake Environmental and Social Impact Assessment (ESIA) and Resettlement Action Plan (RAP) has already been procured and is already executing the assignment. Source protection measures will be undertaken by the construction supervision consultant together with the contractor who will be procured to implement the project.

The IWMDP Development Objective is to improve access to water supply and sanitation services, capacity for integrated water resources management and the operational performance of service providers in project areas. The project will also contribute to the achievement of National Development Plan II objectives, Vision 2040 and Sustainable Development Goals.

1.10 Kaliro-Namungalwe and En-route RGCs Feasibility Study and Detailed Design

Feasibility Study and Detailed Design of Kaliro-Namungalwe and en-route RGCs were completed by Bright Technical Services Ltd. in 2018 with a design horizon of 2020 to 2040 and design period of 20 years; the design has been updated in 2019 to a design horizon of 2023 to 2043 with a design period of 20 years where it is estimated that the Project will be commissioned in 2023. The proposed interventions towards meeting the water and sanitation needs for the year 2043 are as detailed below.

1.10.1 Proposed Water Supply System

The water supply system has been designed based on maximum day demand of 3,501m^3/d in the intermediate year 2033 and 4,650m^3/d in the ultimate 2043. The design period is 20 years with 2023 as the initial year and 2043 as the ultimate year. The project is designed to serve a population of 76,916 in the initial year 2023 and 142,568 in the ultimate year of 2043. The estimated Project Cost is about UGX 26.45 billion.

The proposed source of water is the National Water and Sewerage Corporation DN 300 steel transmission pipe at Iganga which transports treated water from Mission hill reservoir of 50,950 m^3 capacity in Jinja and the source of water is Lake Victoria. Water is treated at Masese water treatment plant with current capacity of 20,000 m^3/d. Water will flow by gravity from the reservoir at Mission hill in Jinja to Wairaka through a distance of 7.9km. A booster pump station will be constructed at Wairaka which will pump the water all the way to Iganga through a distance of 29.1km to increase the flow of water in the transmission pipeline to meet the demand of the Project towns. Water will then flow by gravity to Kaliro and the en-route

RGCs. The capacity of the water treatment plant at Masese in Jinja will be boosted from 20,000 m^3/d to 30,000 m^3/d by construction of a new horizontal flow clarifier of capacity 10,000 m^3/d which had not been constructed during the completed phased construction of the Masese water treatment plant to bring it to its full capacity.

The components of the designed Water Supply and Sanitation System are listed below:

1. A new horizontal flow clarifier at Masese water treatment plant in Jinja with capacity of 10,000 m^3/d.
2. A booster pump station at Wairaka with capacity of 336m^3/hr and 164m head in 2023; 376m^3/hr and 228m head in 2033.
3. A tee-off the existing NWSC DN 300mm Steel transmission pipe in Iganga Town, near the reservoir.
4. A new gravity transmission main along the Iganga- Kaliro Highway consisting of OD 280 uPVC PN16 – 12.75 km and OD250 uPVC PN20 – 21.07 km
5. Tee-offs for the en-route population in Bukaye, Namunkesu, Namungalwe, Nasuuti, Nambale, Naibiri and Nabitende trading centers along the Iganga-Kaliro road.
6. A Cold Pressed Steel reservoir of 320 m^3 on a 20m elevated steel tower for Kaliro town.
7. A Cold Pressed Steel reservoir of 140 m^3 on a 20m elevated steel tower for Nabitende RGC.
8. A Cold Pressed Steel reservoir of 160 m^3 on a 20m elevated steel tower at Nambale for Nambale and Naibiri RGCs.
9. A Cold Pressed Steel reservoir of 140 m^3 on a 20m elevated steel tower for Nasuuti RGC.
10. A Cold Pressed Steel reservoir of 220 m^3 on a 20m elevated steel tower for Namungalwe RGC.
11. A Cold Pressed Steel reservoir of 230 m^3 on a 20m elevated steel tower at Bukaye for Bukaye and Namunkesu RGCs.
12. A new distribution pipe network of total length 15.2 km HDPE and uPVC pipes ranging from OD160-50 mm PN10 for Kaliro Town.
13. A new distribution pipe network of total length 77 km HDPE and uPVC pipes ranging from OD125-50 mm PN10 for the 7 en-route RGCs.
14. 14 Public stand posts
15. 2,000 consumer connections (Kaliro and the 7 enroute RGCs)
16. Water offices- 2 No.
17. Public Toilets – 8 No.

1.10.2 Environmental and Social Impact Assessment and Resettlement Action Plan

The Environmental and Social Impact Assessment (ESIA) and Resettlement Action Plan (RAP) for this Project are being done under a separate Consultancy Contract.

1.10.3 Water Source Protection Plan, Sub-Catchment Management Plan and Design for Implementation

The goal of water source protection is to ensure sustainable supply of clean and adequate water for supporting livelihoods. To achieve this goal it requires that the quality and quantity of water at the abstraction point is maintained or sustained through a series of land and water based management interventions that reduce the risk of pollution, declining water quantities and conflict over water use among the various stakeholders. This goal seeks to ensure low costs of water purification and maintenance of supply infrastructure.

The source of water for the Kaliro-Namungalwe and en-route RGCs Project is the DN 300 steel transmission pipe at Iganga. The source of water is Lake Victoria in Jinja which is about 40km away from Iganga. Considering the big distance from the Project area to the source of water, the scope of catchment protection was not included under this Project. Water source catchment protection is the responsibility of National Water and Sewerage Corporation that is managing the intake and water treatment plant that are located on the shores of Lake Victoria in Masese, Jinja.

1.11 Namasale Feasibility Study and Detailed Design

Feasibility Study and Detailed Design of Namasale Town Council Water Supply and Sanitation System was completed by M & E Associates Ltd. in 2015 with a design horizon of 2020 to 2040 and design period of 20 years. The design has been updated in 2019 to a design horizon of 2023 to 2043 with a design period of 20 years where it is estimated that the Project will be commissioned in 2023. The proposed interventions towards meeting the water and sanitation needs for the year 2043 are as detailed below.

1.11.1 Proposed Water Supply and Sanitation System

The water supply system has been designed based on maximum day demand of 828m^3/d in the intermediate year 2033 and 1,204m^3/d in the ultimate 2043. The design period is 20 years with 2023 as the initial year and 2043 as the ultimate year. The project is designed to serve a

population of 14,043 in the initial year 2023 and 28,110 in the ultimate year of 2043. The estimated Project Cost is about UGX 11.02 billion.

The proposed source of water is Lake Kyoga and the intake is proposed to be constructed at Mbiko landing site. The raw water will go through a series of conventional treatment processes at the treatment plant which will include aeration, flocculation, sedimentation and rapid sand filtration. Water will then be pumped to an elevated reservoir at the Town Council from where it will be distributed to the town by gravity.

The components of the designed Water Supply and Sanitation System are listed below:

1. An intake at Mbiko Landing Site which will abstract water from Lake Kyoga to meet the ultimate year 2043 demand of 1,204m^3/d.
2. A conventional water treatment plant to meet the ultimate year 2043 demand of 1,204m^3/day having the processes of aeration, flocculation, sedimentation and rapid sand filtration.
3. Transmission pipeline of OD200 uPVC of total length 2.5km.
4. Steel tank of nominal capacity 360m^3 elevated on a 10m steel tower.
5. Distribution pipe network of HDPE pipes ranging in size from OD50 to OD90 and uPVC pipes ranging in size from OD110 to OD225 of total length 14.7km.
6. 439 initial domestic connections and 49 public and institutional connections.
7. Water office to be constructed at the Town Council.
8. 1no. water borne public toilet at the market.
9. 1no. lined VIP institutional toilet and 1no. Incinerator at Namasale Primary School.
10. Source protection measures which include tree planting and demarcation of Lake buffer zone with concrete pillars.

1.11.2 Other Works to be done under Namasale Project

There are sanitation works to be done in Koboko Municipality which have been combined with works under Namasale Project mainly because the scope of works under Namasale Project is not big and Koboko is in the same direction as Namasale. Koboko Municipality is in the West Nile region and is about 512km from Namasale via Namasale-Lira-Kamdini-Pakwach-Nebbi-Arua-Koboko road. A resident Clerk of Works has been provided for in the staffing of the construction supervision consultant to carryout full time construction supervision of these works. These works include:

1. 9no. Public and Institutional toilets at Taxi/Bus park, Hospital, Primary and Secondary Schools as shown in Table 1-7 below.

Table 1-7: Public Places and Institutions in Koboko Municipality which Need Construction of Toilets

SN	Name of Institution/Public Place	Type	Enrolment	Toilet Type
01	Abele Primary school	Government Primary School	2,379	VIP lined
02	Ombachi Self-Help Primary School	Government Primary School	2,598	VIP lined
03	Teremunga Primary School	Government Primary School	2,191	VIP lined
04	St. Charles Lwanga College Koboko	Secondary Government Aided	387	VIP lined
05	Nyarilo Secondary School	Secondary Government Aided	439	VIP lined
06	Nyarilo Primary Primary	Government Primary School	2,468	VIP lined
07	Nyangilia Secondary School	Secondary Government Aided	599	VIP lined
08	Koboko Hospital	Government Hospital		Water borne
09	Koboko Taxi/Bus Park	Public place		Water borne
Total			**11,061**	

2. 1no. faecal sludge treatment plant. The plant will aim at separation of solids and liquids in planted drying beds and retention of solids. The Plant will also pre-treat the liquid portion in constructed wetlands, further treat the liquid through horizontal rock filters and finally the effluent is treated in natural wetlands.

1.11.3 Environmental and Social Impact Assessment and Resettlement Action Plan

The Environmental and Social Impact Assessment (ESIA) and Resettlement Action Plan (RAP) for this Project are being done under a separate Consultancy Contract.

1.11.4 Water Source Protection Plan, Sub- Catchment Management Plan and Design for Implementation

The goal of water source protection is to ensure sustainable supply of clean and adequate water for supporting livelihoods. To achieve this goal it requires that the quality and quantity

of water at the abstraction point is maintained or sustained through a series of land and water based management interventions that reduce the risk of pollution, declining water quantities and conflict over water use among the various stakeholders. This goal seeks to ensure low costs of water purification and maintenance of supply infrastructure.

The area for the water source protection plan was defined by the land that drains into Mbiko landing site on the shores of Lake Kyoga where the intake works for Namasale WSS will be located. The total area of the defined drainage basin is about 50km^2 and referred to as Water Source sub-catchment. In addition, the area covered by the future water supply system is taken into account for the purpose of protecting the water resource all along its path from intake to consumers. Protection interventions proposed in the source protection plan focus on addressing priority protection issues identified as shown in Table 1-8 below. These interventions include among others limiting harmful activities and encourage beneficial activities by creating a buffer zone as per the National Environment Regulations.

Table 1-8: Proposed Source Protection Interventions

Water Source protection	Underlying Cause	Intervention/control
Sustaining water quality at Abstraction point	Loss/degradation of wetland belt (due to agricultural encroachment) thus undermining capacity to filter sedimentation and or stabilize the lake shore bank.	• Enforce wetland policy to protect or regulate wetland use. • Enforce Environmental Regulations (Lake Shore and Wetlands). • Promote wise use practices of wetland resources. Demarcate and protect Wetland/lake shore protection zone. You will supervise the Contractor during installation of concrete pillars along the boundary of the protection zone and planting of trees in the zone.
	Use of agro pesticides that find their way into water at abstraction point	• Improve capacity for safe handling and disposal of agro-pesticides • Promote soils erosion control measures so as to reduce surface runoff • Supervise the Contractor during construction of diversion trenches to trap and divert storm water or Soil wash from uptake point
	Soil erosion/surface erosion from gardens and along the access road resulting in sedimentation/silting and pollution.	• Promote soils erosion control measures so as to reduce surface run off • Supervise the Contractor during construction of road drainage to divert stormwater away from abstraction point.
	Poor human and livestock waste disposal leading to contamination of water at the abstraction point	• Restrict human and livestock access to abstraction and water treatment point through implementation of fencing. • Ensure safe disposal of human waste by implementation of Public, Communal and Institutional toilets.
	Sand mining in the upstream drainage system	• Regulate sand mining
Sustaining water quantity	Poor agricultural land uses in the catchment that affect the hydrological system (underground water) e.g., through increased surface runoff, exposing high water table	• Promote Sustainable land management /agricultural practices in the catchment. • Regulate sand mining in upstream drainage
Maintenance of Water Supply Infrastructure	Insecurity of water supply infrastructure due to vandalism and thefts	• Implement fencing of water supply infrastructure and provide for security of major infrastructure. • Develop and apply conflict mitigation/ management strategies.

Water Source protection	Underlying Cause	Intervention/control
Ensuring adequate and equitable access to piped water	Population growth or concentration along supply routes resulting into increasing water demand	• Implement water supply system that serves all the current and future population within the Project area. • Promote alternative water supply /water harvesting /water storage technologies.
	Conflicts related to access to piped water among current and potential water users	• Engage all Stakeholders during implementation of the water supply system. • Develop and apply conflict mitigation/ management strategies.
Sustaining livelihoods	Declining soil fertility and overall land productivity	• Promote Sustainable Land Management practices (soil fertility management, control of soil loss, etc.) • Promote technologies for enhancing land productivity (e.g., improved varieties of crops, disease and pest control, etc.)
	Conflicting or competing land uses (e.g., cultivate wetland edge) and water uses (e.g., fishing near/around the abstraction point)	• Zoning protection areas of the wetland, lake and infrastructure • Empowering stakeholders to plan for and manage their water sources (provision of incentives for protecting water source e.g., fishing gear and boats that enables fishing activity in deep waters) • Increase awareness on the relationship between land/water use and water quality and water availability at Mbiko landing site

1.12 Sanitation Facilities for Rukungiri Municipality

Rukungiri Municipality is located in Southwestern Uganda and is about 382km from Kampala and about 532km from the other Project town of Kaliro that is located in Eastern Uganda. Due to the long distance between Kaliro town and Rukungiri Municipality and being located in different regions of Uganda, works for sanitation facilities for Rukungiri were packaged under a separate standalone contract. The estimated construction cost of these sanitation works is about UGX 2bn. A resident Clerk of Works has been provided for in the staffing of the construction supervision consultant to carryout full time construction supervision of these works.

These works include:

1. 08no. Public and Institutional toilets at markets, health centres and Primary Schools shown in Table 1-9 below.

Table 1-9: Public Places and Institutions in Rukungiri Municipality which Need Construction of Toilets

SN	Name of Institution/Public Place	Type	Enrolment	Toilet Type
01	Nyakibale Upper Primary School	Government Aided	1300	VIP lined
02	Nyakibale Lower Primary School	Government Aided	553	VIP lined
03	Kinyansano Boarding Primary School	Government Aided	984	VIP lined
04	Kahororo Primary School	Government Aided	408	VIP lined
05	Kebisoni Market	Public place		Water Borne
06	Nyamayenjo Market	Public place		Water Borne
07	Kakabanda Health Centre	TASO Health Centre		Water Borne
08	Nyakibale Hospital	Government Hospital		Water Borne
Total			**3,245**	

2. 1no. faecal sludge treatment plant. The plant will aim at separation of solids and liquids in planted drying beds and retention of solids. The Plant will also pre-treat the liquid portion in constructed wetlands, further treat the liquid through horizontal rock filters and finally the effluent is treated in natural wetlands.

2 PROJECT OBJECTIVES

The aim of the Kaliro – Namungalwe and en-route RGCs and Namasale Water Supply and Sanitation Projects is to improve water supply and sanitation in the respective selected Project towns and improve faecal sludge management in Rukungiri and Koboko towns.

2.1 Specific Project Objectives

The specific objectives of the Project include:

1. To ensure adequate and sustainable provision of water for Kaliro – Namungalwe and en-route RGCs and Namasale towns until the year 2043 through development of new infrastructure as well as the rehabilitation, enhancement and incorporation of sound components of the existing water supply systems.
2. To implement appropriate source protection measures that are sustainable, within socially acceptable cost, and in accordance with the catchment protection guidelines under preparation by the DWRM (Framework and Guidelines for Water Source Protection) in Namasale Town Council.
3. Improve sanitation at public places and selected institutions in the Project towns and faecal sludge management in Rukungiri and Koboko Municipalities by provision of Faecal Sludge Treatment Plants (FSTPs) and public and institutional toilets and supporting the required processes to ensure proper functionality of the FSTPs.

2.2 Objectives of the Consultancy Services

The consultancy services are aimed at the following;

1. Review and internalise the updated Detail Engineering Designs, ESIA, RAP and Source Protection Plan (2019) to ensure that you are conversant with the designs and all Project documentation and propose improvements where necessary to ensure the Project meets its objectives of providing adequate water supply and improved sanitation for the design year 2043.
2. Provide engineering consulting services complete in all respects in undertaking supervision of construction works under the contract.
3. Update the bidding documents to reflect the design review findings and ensure completeness and conformity with World Bank procurement and safeguard policies and guidelines as well as with the latest Multilateral Development Bank (MDB) harmonised version of the FIDIC conditions of contract.

4. Knowledge and skills transfer to sector professionals in contract management, safeguard management as well as water and sanitation infrastructure construction skills.

3 SCOPE OF CONSULTANCY SERVICES

The Construction Supervision Consultant will review and acquaint himself with the designs and carry out construction supervision of the following three contracts in accordance with the implementation schedule:

(a) Kaliro-Namungalwe Water Supply and Sanitation Project

(b) Namasale Water Supply and Sanitation Project and Koboko Sanitation Facilities

(c) Sanitation Facilities for Rukungiri Municipality

The Consultant shall provide independent teams as proposed in these TORs to carry out construction supervision. The Consultant shall therefore have the technical and financial capacity to supervise these works concurrently.

The scope of the consultancy services includes but is not limited to:

3.1 Review and Acquaintance with the Detailed Engineering Designs, ESIA, RAP and Source Protection Plan

The Consultant shall review the existing Detailed Engineering Designs for water supply and sanitation systems to familiarise with the designs and assess the appropriateness in meeting the demand for 2043, and in particular the proposed interventions. The Consultant will also review the ESIA, RAP and Source Protection Plan (SPP) to ensure that the provisions are sufficient. At the end of the review process, the Consultant will be required to provide a written statement to the employer indicating that the Detailed Engineering Designs and associated ESIA, RAP and SPP are all acceptable with any proposed revisions. This is anticipated to take **two months**.

This task shall also include confirmation of all project sites especially for the proposed public and institutional toilets, faecal sludge disposal sites and sites for storage reservoirs and water treatment plants.

3.2 Review and Amendment of the Existing Tender Documents

The Consultant shall review the existing tender documents for completeness and appropriateness. The revised tender documents shall be packaged in accordance with World Bank Procurement Regulations for IPF Borrowers, Procurement in Investment Project Financing; Goods, Works, Non-Consulting and Consulting Services, July 2016. **The Consultant shall prepare discrete works packages under three separate lots: (i) Lot 1-Namsale Water Supply and Sanitation System and Koboko Sanitation Works (ii) Lot 2-**

Kaliro-Namungalwe Water Supply and Sanitation System (iii) Sanitation Works for Rukungiri Municipality; to be tendered under one procurement.

The Consultant shall use the World Bank SBD-Procurement of Works & Users Guide dated April 2015 and updated January and October 2017 to enhance ESHS performance.

3.3 Assistance in the Tendering Process

The Consultant shall assist the Client during the tendering of works as designed. Key anticipated tasks shall comprise of:

1. Facilitating the contractors' pre-bid meeting and providing appropriate responses to requests for clarification from bidders.
2. Technical input during the evaluation of bid submissions.
3. Participation in pre-contract negotiations and preparation of the works contracts.

3.4 Construction Supervision

The Consultant shall prepare for the commencement of the works; and subsequently supervise the construction Contract as the "Engineer". The terms and conditions for construction works shall be as stipulated in the latest harmonised version of the FIDIC conditions of contract. Construction supervision will also be in line with the ENVIRONMENTAL AND SOCIAL POLICY in section 12, and the CODE OF CONDUCT in section 13.

Construction supervision will encompass the entire scope of work related to the project. The scope of supervision will also encompass re-instatement works and, if necessary, structures for source protection. The consultant shall put in place a quality assurance system, risk and environmental management systems to ensure compliance with construction standards.

Construction supervision covers three distinct phases: (i) pre-construction and mobilisation phase **(3months)**; (ii) construction phase **(15months)** and (iii) defects liability phase **(12months)**.

3.4.1 Pre-Construction and Mobilisation Phase

During the pre-construction and mobilisation phase, the Consultant shall undertake all preparations for commencement of works like site handover to Contractors. The tasks shall include but not limited to;

1. Review the contractor's work programme and method statements and highlight areas that may pose a risk to timely and in-budget project completion.

2. Review the contractor's proposed staffing, equipment, and insurance, performance securities, advance payment guarantees, and recommend appropriate actions to the Client.
3. Review and make recommendations on the Contractor's procurement schedule.
4. Review and approve the Contractor's ESMP, including Labour Influx Management Plan and Workers' Camp & Accommodation Management Plans, Environmental, Social, Health and Safety (ESHS) provisions, and Grievance Redress Mechanisms.
5. Carryout due diligence on and approve Contractor's proposals for construction materials acquisition sources.
6. Carryout and/or supervise any pre-construction sensitization activities associated with environmental and social issues towards potentially affected communities and Contractor/sub-contractor staff.
7. Liaise with the Hygiene Education and Sanitation Promotion Consultant hired by the Client to carry out Sanitation Marketing in the Project towns and assist him to align his activities to the implementation plan and progress of construction of sanitation facilities such as faecal sludge treatment plants and public and institutional toilets.
8. Review and approve the Contractor's proposed procurements during mobilisation, ensuring that all materials are from the right source, are of right quality and are in sufficient quantities.
9. Monthly progress reporting to the Client, and immediate reporting should any issues be identified that could impact on the project completion schedule.
10. Development and confirmation of training plan with the MWE.

3.4.2 Construction Phase

The Consultant shall represent the Client on site and supervise the entire construction process in close cooperation with the Client's Project Manager. During the construction period, the Consultant's task shall specifically attend to the following;

1. Supervise the Contractor's work progress vs. the planned project time schedule and ensure that delays are being kept to a minimum and, wherever possible, the Contractor takes measures to make up for the time lost and put the Project back on the planned schedule.
2. Timely issuance to the Contractor all necessary correspondences related to information, instructions, clarifications and suggestions so as to ensure consistency in quality, positive progress and planned costs.

3. Inspect, determine and approve the part of works, before, during and after construction of part and or whole of the works to ensure all time compliance with the specifications and standards.
4. Supervise the Contractor's procurements, ensuring that all materials are from the right source, are of right quality and are of sufficient quantities. In addition, the Consultant shall prepare/modify and approve specifications for equipment to be procured for the Project as necessary.
5. Supervise the Contractor's construction activities, ensuring that all construction is undertaken as designed, or in accordance with the Client's approved variations to the original design, and that all quality standards are met.
6. If necessary, make amendments to the design with approval from the Client.
7. Admeasure and certify all quantities invoiced by the Contractor. Certify payment certificates for payments of completed works or parts thereof. Prepare the Contractor's payment statement including certificates in accordance with the General Conditions of Contract and Particular Conditions.
8. Inspect and certify all completed works.
9. Prepare snag lists after substantial completion of works.
10. Advise the Client on contractual obligations and establish early warning systems to minimise financial impacts from compensation events and subsequent claims.
11. Ensure that the contractor meets Environment, Social, Health and Safety (ESHS) as indicated in Annex 1 & 2 and in the project ESIA.
12. Ensure that the Contractor works within the Environmental and Social frameworks as detailed in the Project's Environmental Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) and the Resettlement Action Plan.
13. Periodically review the status of the Contractor's real vs. required staffing, equipment, insurance, performance securities, advance payment guarantees and recommend appropriate actions to the Client.
14. State all methods and procedures that are intended to ensure robust quality control, execute all procedures accordingly, and report on all quality control undertakings and their results to the Client. This will include performance of tests from approved laboratories on selected materials to ensure they comply with standards and specifications.
15. In addition to continuous construction supervision, schedule and organise a weekly formal visitation of activities with the Contractor's representative and agree with the Contractor on progress made as compared to the previous week.

16. Develop and maintain a project progress reporting format that is both, concise and in accordance with the Client's and the Development Partner's requirements.
17. Monthly progress reporting to the Client, and immediate reporting should any issues be identified that could impact on the project completion schedule.
18. In consultation with the Client, prepare the necessary variation orders.
19. Schedule and organise witness testing events, including contractual tests for the completed works.
20. Maintain daily site records on prevailing weather conditions, labour, availability and operational condition of key plant, disputes between employers and staff as well as between contractor and local residents, and all other observations that may be of importance in case of any arbitration or legal disputes.
21. Mentor and transfer knowledge to trainees attached to the Project including endorsement of monthly training reports to be submitted to MWE.

3.4.3 Defects Liability Phase

During the defects liability period, the Consultant's tasks which will be performed in close cooperation with the staff of the operators of the Water Supply Systems (NWSC or Umbrella Authorities of Water and Sanitation) as nominated by the Client shall include, but not be limited to the following;

1. Supervise and certify the addressing of the entire snag list by the Contractor, as agreed at substantial completion.
2. Monitor the performance of all plant, notify both the Contractor and the Client on defects identified, and recommend remedial actions.
3. Supervise and certify the remedying of any defects that become apparent during the defects liability phase.
4. Review and supervise the agreed upon 'on the job' training programme of staff of the operators of the Water Supply System (NWSC or Umbrella Authorities of Water and Sanitation) by the Contractor.
5. Ensure that the Contractor supplies complete sets of all works manuals, drawings, models, warranties, and other relevant plant documentation to the Client. The supervision Consultant should point out all items missing and recommend actions to be taken by the Client.
6. Review, approve, and certify 'as built' drawings.
7. Review and certify the final statement of accounts.

8. Develop and maintain a defects liability reporting format that is both, concise and in accordance with the Client's and the Development Partner's requirements.
9. Conduct quarterly site meetings with the Contractor where all defects identified are recorded and a time schedule for remedying the defects is agreed.
10. Prepare monthly progress reporting to the Client on the operation status of the plant.
11. Prepare final completion report.
12. Update asset register.

3.4.4 Works Commissioning

During this phase, the Contractor will continue to operate/ oversee operation of the scheme to ensure it is fully optimised and functioning to the satisfaction of the Client. The Consultant will implement works commissioning including:

1. Preparing the completion report for the works, which will be based on the record maintained during construction and defects liability supervision phases. It will include the environmental completion report which will be submitted to NEMA and the World Bank for compliance with initial recommendations for environmental mitigation measures. The Consultant will be expected to include a project outputs delivery report on areas agreed with the Project Manager (Client) as a key component in the completion report. The outputs report will form the project operational baseline data summary report for operation improvement tracking purposes.
2. The Consultant will ensure the preparation of 'as-built drawings' by the Contractor during construction of works. On completion of the Project, the Consultant will check, approve and submit to the Project Manager for the Client's retention, 2 complete sets of all detailed drawings and 2 electronic CD-ROM copy and computations in accordance with revisions made during the construction.
3. Based on the information and booklets received from the Contractors, Manufacturers, Suppliers and his own experience, the Consultant will ensure preparation and submission of the Operation and Maintenance Manuals by the Contractor. The Consultant will ensure the manuals are complete with the O&M recommendations identified during construction and that all relevant technical booklets of scheme components are provided in English.

The Consultant's tasks for execution of this assignment have been outlined and detailed as thoroughly as possible. However, the Consultant shall bear in mind that the list of tasks and activities can by no means be considered as a complete description of the Consultant's duties.

It is to be understood that the Consultant shall perform all duties of the Engineer as outlined in FIDIC Red book, Environmental and Social Policy and Code of Conduct.

4 ORGANIZATION OF THE ASSIGNMENT

4.1 Contractual Arrangements

The scope of work shall be time based for Design Review (2 months) and Construction Supervision 30 months (Pre-construction and Mobilisation, Construction and Defects Liability Monitoring).

4.2 Liaison with the Client

MWE shall nominate members to constitute a contract management team. The team will comprise of Project Manager and Engineer. The Project Manager shall carry out all project management oversight activities, supervisory roles and review, sign-off and approval of Consultant's reports. It will be the Consultant's duty to maintain close contact with the Project Manager on all aspects of work. As a matter of principle, all formal communications relating to the work will be directed to the attention of the Project Manager.

MWE shall nominate an Engineer as part of the contract management team, responsible for the day-to-day coordination and monitoring of the project activities. As such, the Engineer shall closely work with the Consultant during the design review and supervision stages to ensure that all the technical requirements of the Project are fully met. In particular, the Engineer, under the guidance of the Project Manager, shall review and provide the Client's input, comments and guidance on the work plans, methodologies and reports prepared by the Consultant for quality assurance and achievement of set objectives. The MWE shall also assign social and environment safeguard specialists responsible for supervision of EHS and social aspects of the Project.

4.3 Logistical Setup and Staffing

Within the technical proposal, the Consultant shall elaborate on the envisaged logistical setup and deployment of appropriate skills for execution of the assignment. The Consultant shall present the staffing schedule in a manner that clearly shows the stage and duration where each of the proposed team members is planned to be involved in the Project.

An organogram reflecting the responsibilities of each staff member and line management setup of the proposed team shall be part of the proposal. Organogram for supervision stage has been proposed in the Flow Chart on page 40 but the Consultant is free to modify it. It is recommended that the Consultant integrates local expertise into the project execution team.

In the course of implementation of the assignment, all the proposed personnel must be available for this assignment. **Staff changes shall not be accepted, except in exceptional circumstances (and at the discretion of the Client).**

Tables 4-1, 4-2 and 4-3 below show the required personnel and the estimated time inputs. As a minimum, the key personnel shall be required to undertake this assignment within the stipulated timeframe. The Consultant is free to propose additional staff beyond the minimum stipulated and also propose additional time, provided a clear justification is provided in the technical proposal.

NB: The experts with few time inputs can be scheduled to work in all the lots while the experts with high time inputs like Team Leader, Resident Engineer and Clerk of Works have to be provided for each lot as proposed in Tables 4-1, 4-2 and 4-3 below.

Table 4-1: List of Required Personnel with Minimum Time Inputs for Kaliro – Namungalwe Project

Expert	**Number Required**	**Minimum Relevant Experience (years)**	**Staff Input (Design Review)**	**Staff Input (Construction Supervision)**
Project Manager (Team leader)	1	15	2	18
Water Resources Specialist	1	15	0.5	1
Resident Engineer	1	15		20
Electromechanical Engineer	1	10	0.5	4
Water treatment specialist/ process Engineer	1	10	0.5	2
Geotechnical Engineer	1	10	0.5	1
Hydraulic Expert	1	10	0.5	2
Structural Engineer	1	10	0.5	2
Clerk of Works –Water Supply and Sanitation	1	10		15
Sanitation Expert	1	10	0.5	1
Surveyor	1	10	0.5	10
Valuer	1	10	0.5	2
Social Development Specialist	1	10		10
Environmental Specialist	1	10	0.5	10
Total			**7**	**98**

Table 4-2: List of Required Personnel with Minimum Time Inputs for Namasale WSS and Koboko Sanitation Project

Expert	Number Required	Minimum Relevant Experience (years)	Staff Input (Design Review)	Staff Input (Construction Supervision)
Project Manager (Team leader)	1	15	2	18
Water Resources Specialist	1	15	0.5	2
Resident Engineer	1	15		20
Electromechanical Engineer	1	10	0.5	4
Water/Waste Water treatment specialist/ Process Engineer	1	10	0.5	3
Geotechnical Engineer	1	10	0.5	1
Hydraulic Expert	1	10	0.5	2
Structural Engineer	1	10	0.5	2
Clerk of Works - Water Supply and Sanitation	1	10		15
Clerk of Works -Sanitation for Koboko	1	10		9
Sanitation Expert	1	10	0.5	2
Surveyor	1	10	0.5	10
Valuer	1	10	0.5	2
Social Development Specialist	1	10		10
Environmental Specialist	1	10	0.5	10
Total			**7**	**110**

Table 4-3: List of Required Personnel with Minimum Time Inputs for Rukungiri Sanitation Works Project

Expert	Number Required	Minimum Relevant Experience (years)	Staff Input (Design Review)	Staff Input (Construction Supervision)
Project Manager (Team leader)	1	15	1	9
Waste Water Treatment Specialist/ Process Engineer	1	10	0.5	1
Geotechnical Engineer	1	10	0.5	1
Structural Engineer	1	10	0.5	1
Clerk of Works – Sanitation Works	1	10		9
Sanitation Expert	1	10	0.5	1
Surveyor	1	10	0.5	4
Valuer	1	10	0.5	1
Social Development Specialist	1	10		4
Environmental Specialist	1	10	0.5	4
Total			**4.5**	**45**

Typical Organogram for Construction Supervision

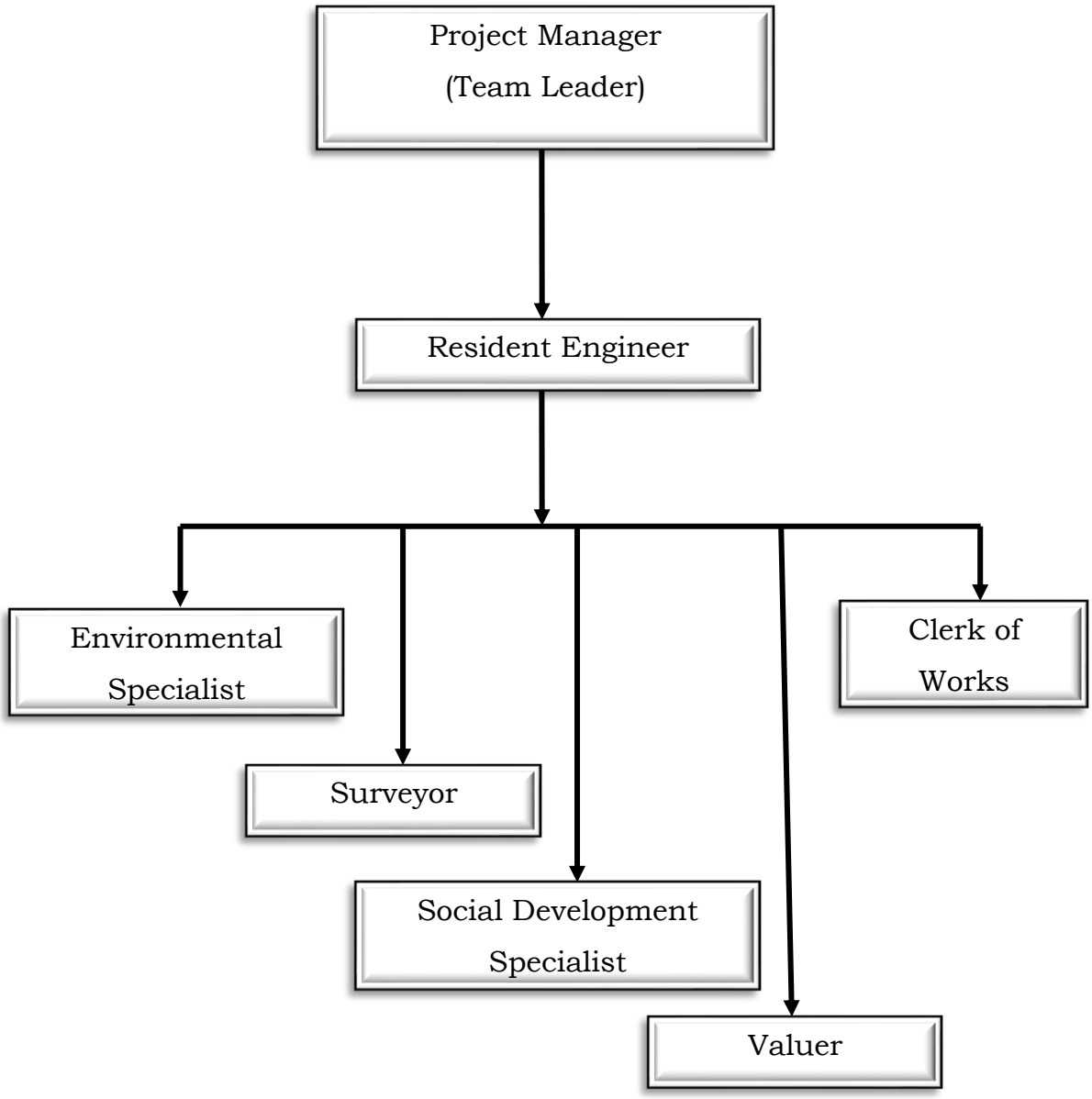

Table 4-4: Minimum Qualifications and Experience of Key Personnel

Position	Minimum Qualifications and Experience
Project Manager	**Education**: Bachelor's degree in civil / environmental / hydraulic engineering or other relevant discipline. Master's degree in a relevant discipline will be added advantage. **General experience**: Minimum of 15 years working experience **Specific experience**: • 10 years' experience in planning and implementation (design or design review and construction supervision) of water supply and sewerage infrastructure including water and wastewater treatment. • Experience as Project Manager or Team Leader on not less than 3 previous projects similar in scale and content to this one. • Experience in implementation of projects in Sub-Saharan Africa • Shall be a Registered Engineer in Uganda or any other recognized engineering society.
Water Resources Specialist	**Education:** Bachelor's degree in water resources / hydrology/ or other relevant discipline. Master's degree in a water resources planning or a related field. **General experience**: Minimum of 15 years working experience **Specific experience**: • 5years' experience in basin planning at several levels including source protection, small sub-basins and catchments. • Experience as Water Resources expert on not less than 3 previous projects similar in scale and content to this one. Particular in hydrological assessments • Experience in implementation of projects in Sub-Saharan Africa.
Water/Waste Water Treatment Specialist/ Process Engineer	**Education**: Bachelor's degree in water / environmental / process engineering or other relevant discipline. Master's degree in a relevant discipline will be added advantage. **General experience**: Minimum of 15 years working experience **Specific experience**: Shall have acted as a Water/Waste Water Process Engineer on not less than 5 previous similar projects in water/waste water treatment
Electromechanical Engineer	**Education:** Bachelor's degree in electrical / mechanical engineering or other

Position	Minimum Qualifications and Experience
	relevant discipline. **General experience**: Minimum of 10 years working experience **Specific experience**: 10 years' experience in the field of water and wastewater for design, procurement, installation and operation and control of electromechanical systems
Hydraulic Expert	**Education:** Bachelor's degree in civil / environmental / hydraulic engineering or other relevant discipline. **General experience**: Minimum of 10 years working experience **Specific experience**: 10 years' experience in the field of water and wastewater hydraulics and design.
Structural Engineer	**Education:** Bachelor's degree in civil engineering or other relevant discipline. **General experience**: Minimum of 10 years working experience **Specific experience**: • 10 years' experience in the field of structural engineering and shall have acted as Structural Engineer on not less than 5 previous projects involving water and wastewater infrastructure as well as similar concrete structures. • Shall be a Registered Engineer in Uganda or any other recognized engineering body.
Geotechnical Engineer	**Education:** Bachelor's degree in civil engineering or other relevant discipline. **General experience**: Minimum of 10 years working experience **Specific experience**: • 10 years' experience in the field of geotechnical engineering and shall have acted as Geotechnical Engineer on not less than 3 previous projects involving water and wastewater infrastructure. • Shall be a Registered Engineer in Uganda or any other recognized engineering body.
Resident Engineer	**Education:** Bachelor's degree in civil / environmental / hydraulic engineering or other relevant discipline. Master's degree in a relevant discipline will be added advantage. **General experience**:

Position	Minimum Qualifications and Experience
	Minimum of 15 years working experience **Specific experience**: • 10 years' experience in construction supervision of water supply infrastructure including similar conventional water treatment plants and pipe networks • Experience as Resident Engineer on not less than three previous projects (similar in scale and content to this one) with at least one in Sub-Saharan Africa • Experience in construction supervision of sanitation infrastructure including waterless and waterborne systems • Shall be a Registered Engineer in Uganda or any other recognized engineering society.
Surveyor	**Education:** Bachelor's degree in Surveying or other relevant discipline. **General experience**: Minimum of 10 years working experience in cadastral and topographic surveying among others. Must be Registered with relevant professional body. **Specific experience**: Experience in surveying works on at least one previous water supply or sewerage project in Uganda.
Social Development Specialist	**Education:** Bachelor's degree in any social sciences field. Master's degree in a relevant discipline will be added advantage. **General experience**: Minimum of 10 years working experience. **Specific experience**: Seven years' relevant experience in managing project associated social risks and specifically implementing resettlement action plans (RAP) and environmental and social management plans (ESMP) on World Bank funded infrastructure projects in Uganda.
Environmental Specialists	**Education:** Bachelor's degree in environmental sciences/ engineering or equivalent. Master's degree in a relevant discipline will be added advantage. **General experience**: Minimum of 10 years working experience. Must be Registered with relevant professional body. **Specific experience**: • Seven years' relevant experience in assessment and mitigation of

Position	Minimum Qualifications and Experience
	environmental impacts on infrastructure projects in Uganda • Experience in delivering good international industry practice with respect to Environment, Social, Health and Safety (ESHS). • Experience with World Bank environmental policies • Experience in supervision of at least 2 infrastructure projects, managing associated Environment, Social, Health and Safety aspects
Valuer	**Education:** Bachelor degree in Land and/or Development Economics or an equivalent **General experience**: Minimum of 10 years working experience. Must be Registered with relevant professional body. **Specific experience**: • Seven years' relevant experience in valuation of properties for compensation on infrastructure projects in Uganda • Experience in obtaining Chief Government Valuers approval for valuation reports
Clerks of Works – Water Supply and Sanitation	**Education:** Bachelor's degree or Higher diploma in Civil/Water engineering or related field. **General experience**: Minimum of 10 years working experience **Specific experience**: Seven years' supervision of water supply and sanitation infrastructure projects involving surface water intakes and conventional treatment plants, reservoirs and pipe networks and sanitation facilities such as faecal sludge treatment plants and public and institutional toilets.
Clerks of Works – Sanitation Works	**Education:** Bachelor's degree or Higher diploma in Civil/Water engineering or related field. **General experience**: Minimum of 10 years working experience **Specific experience**: Five years' supervision of sanitation infrastructure projects involving faecal sludge treatment plants and public and institutional toilets.

NB: All CVs including for Key and Non-Key staffs shall be endorsed by the Experts and the Consultant's representative (with power of attorney).

4.4 Familiarization with the Assignment

To familiarise Consultants with the services to be provided under this consultancy, a pre-bid meeting will be held in Kaliro – Namungalwe and en-route RGCs and Namasale Town Council and it will include a tour to the project sites. It is at the Consultant's discretion to make additional visits to the project area, in case they feel there is need to gather more information. It should be understood, that any cost incurred to the Consultant in this regard shall not be reimbursed.

5 DURATION OF THE ASSIGNMENT

The duration of the consultancy services is expected to last **33 months** and the time estimates for the various components are as follows:

1. Review detailed design, ESIA, RAP and source protection – 2 months.
2. Pre-construction and mobilisation – 3 months
3. Construction supervision – 15 months
4. Defects liability period – 12 months.
5. Final reporting and project closure – 01 months.

The above stated durations are to be understood as guidance and it is the responsibility of the Consultant to establish a detailed work program within the above time estimates. The estimated staff time inputs should be provided in accordance with the Consultant's professional judgment and knowledge of the local conditions and needs.

6 PRICING

In accordance with World Bank rules, the consultancy services shall be priced in any fully convertible currency, singly or in combination of up to three foreign currencies.

7 REPORTING AND MEETING REQUIREMENTS

7.1 Reporting address

The Project Coordinator – Integrated Water Management and Development Project
Telephone: +256392731290 / 0772 578 223
E-mail: ps@mwe.go.ug / herbert. nuwamanya@mwe.go,ug
Plot 22/28 Port Bell Road, Luzira

Kampala, Uganda

The Consultant will be required to deliver a hard copy of each of the reports as shown in Table 7-1below to the World Bank to;

The Task Team Leader - Integrated Water Management and Development Project
World Bank
Uganda Country Office
Rwenzori House, Plot 1, Lumumba Avenue
Kampala

As indicated in Table 7-1 below, the Consultant will be required to produce and submit the following principal reports and documents in the quantities and timing indicated. At each reporting stage, the Consultant shall also be required to submit to the Client an electronic copy, using the software specified in Table 7-1**.**

Table 7-1: Summary of Reporting Requirements

Description	**Timing in months from starting date**	**No. of hard copies to**		**Electronic copies to MWE contact**
		MWE	**World Bank**	
Part 1: Design Review				
Inception report	0.5	2	1	Word; Excel (all tables), MS Project (time schedules)
Draft design review report	1.0[1]	2	1	Word; Excel (all tables); CAD (all drawings); Hydraulic modelling software to be agreed with client (all modelling related work)

[1] The client will review and submit his comments to the consultant within two weeks of the draft document

Description	Timing in months from starting date	No. of hard copies to		Electronic copies to MWE contact
		MWE	World Bank	
Final design review report	2.0	2	1	Word; Excel (all tables); CAD (all drawings); Hydraulic modelling software to be agreed with client (all modelling related work)
Part 2 – Construction and Defects Liability Period				
Monthly construction progress reports	Months 1 - 16	2	1	Word; Excel (all tables), MS Project (time schedules)
Substantial project completion report	17	2	1	Word; Excel (all tables)
Interim progress report (quarterly)	(17 – 28)	2	1	Word; Excel (all tables)
Operational manuals	17	2	1	Pdf
As built drawings	18	2	1	CAD (all drawings); ArcViewGIS (location of all new & rehabilitated assets)
Asset register (update to existing Client register)	26	0	1	Software to be discussed with Client
Hydraulic models & associated reports	26	0	1	Word; Excel (all tables); Software to be discussed with Client
Final completion report	26	2	1	Word; Excel (all tables)

7.2 Reporting Requirements – General

The Consultant shall hand over all data collected during the course of the assignment to the Client in formats approved by the Client. Furthermore, all calculation sheets must be made available to the Client at the end of the Project and, on request, at any stage of the project.

7.2.1 Reporting Requirements – Design Review Phase

7.2.1.1 Inception Report

The Inception Report shall clearly define the work plan and schedule for completing all elements of the contract, provide details of planned staffing, and describe the proposed deliverables.

7.2.1.2 Draft Design Review Report

This report shall include but not limited to; (i) review of the existing detailed design (water and sanitation) to identify gaps and relevant changes, (ii) update of the detailed design to fill the gaps as may be necessary (iii) ESIA and RAP revisions as appropriate and (iv) revised Source Protection Plan

7.2.1.3 Final Design Review Report

The final design review report shall be prepared with amendments arising from Client's comments to the draft design review report.

7.2.1.4 Tender **documentation package**

The final Tender documents prepared in accordance with World Bank guidelines shall contain standard bidding documents, revised Bills of Quantities (BoQs), drawings, , and specifications. All documents shall be incorporate amendments arising from the design review and shall be harmonised with each other. The consultant shall ensure that all relevant Environment and social safeguard requirements are adequately provided for.

7.2.2 Reporting Requirements – Construction Phase

During the construction phase, the Consultant shall submit reports as stated in Table 7-1. The reports shall, as a minimum, meet the following requirements:

7.2.2.1 Monthly Construction Progress Reports

The monthly progress reports shall state the status of Project implementation (i.e. actual vs. planned physical progress; actual vs. planned expenditures), actual staffing levels and deployment of equipment by the Contractor against planned, financial information, all agreed and all new variation and compensation events, all issues requiring Client attention, social safeguards, health and safety information, and other information that may have an impact on project progress. The report shall include a Gantt chart and should include photographic evidence of progress. In addition, the report should project cash flows and work progress over the next three months. The report shall also provide details on the training activities undertaken

7.2.2.2 Substantial Project Completion Report

The substantial completion report shall state the project scope, principal activities by the Consultant and the Contractor (including deployment of resources during project implementation), the Contractor's performance, all project relevant observations of the Consultant, major issues that were encountered during project implementation and how these were solved, the project schedule citing all delays if any, and financial information. The report shall also provide details of benefits and beneficiaries reached as a result of project activities. Most important, the substantial completion report shall include a list with all snags to be addressed during the defects liability period, if any, and propose a time schedule for addressing the issues that have been identified. Recommendations shall be made to the Client on how to improve service provision. The substantial completion report shall also include a presentation on the report to be made by the Consultant to the Client.

7.2.3 Reporting Requirements – Defects Liability Phase

During the defects liability phase, the Consultant shall submit reports as stated in Table 7-1. The reports shall, as a minimum, meet the following requirements:

7.2.3.1 Interim/Quarterly Reports

The interim progress report shall state progress of the Contractor on addressing items on the snag list, all observations on the performance of the project installations, system weaknesses and defects, and warranty issues. In addition, the report shall report the Consultant's and / or the Contractor's progress on the undertaking of staff training. The reports shall also include progress on safeguard management including on provisions in abstraction and discharge permits and grievance management.

7.2.3.2 Operational Manuals

The Consultant shall ensure that suppliers / manufacturers / the Contractor submit all operational manuals to the Client in the formats and numbers of copies specified in Table 7-1.

7.2.3.3 As Built Drawings

The supervision Consultant shall submit all 'as built drawings' to the Client in the format and numbers of copies specified in Table 7-1.

7.2.3.4 Asset Register Update

The supervision Consultant shall collect data on all rehabilitated and new assets to update the Client's asset register. The software used for this purpose shall be agreed with the Client.

Data on the location of all civil structures shall be handed to the client in ArcView GIS, or a format agreeable to the client.

7.2.3.5 Completion of Training Report

The completion of training report shall state the training obligations of the Consultant and the Contractor, as agreed with the Client, the type and duration of training activities undertaken, the number of participants in each training and their professional background, training outputs and achievements, as well as recommendations for further / continued training if any.

7.2.3.6 Final Completion Report

The final completion report shall include the same type of information as outlined for the 'substantial completion report'. In addition, it shall show the status of all outstanding actions that were to be completed during the defects liability period.

7.3 Meeting Requirements

For ensuring organisational and stakeholder wide appreciation and ownership of the project outputs, the Consultant shall be required to organise coordination workshops for presentation of key reports after each project milestone to a representative group of stakeholders that is to be agreed with the Client.

During the Design Review Period (Phase I), one workshop is proposed and shall include presentation of the final design review report. During the Construction Period, the Consultant's Resident Engineer shall be available whenever stakeholders visit the project sites arranged by the Client.

During Construction Phase, monthly site meetings shall be conducted and during the defects liability period, quarterly site meetings shall be held.

8 DATA, SERVICES AND FACILITIES TO BE PROVIDED BY THE CLIENT

To the extent possible, the Client will provide free of charge all existing information, data, reports and maps in the custody of the Client and will assist the Consultant in obtaining other relevant information and materials from governmental institutions and state authorities as far as possible. The data shall include (but not be limited to) the recently concluded Feasibility Studies, Detailed Engineering Designs, Tender Documents, Environmental and Social Impact Assessment (ESIA) reports, Repatriation Action Plan (RAP) and Source Protection Plan (SPP).

The information, data, reports, etc., will be available for the Consultant's unlimited use during execution of the proposed services.

For purposes of capacity building and ensuring adequate direct involvement of the Client in delivering the final project objectives, the Client will assign counterpart staff that shall be agreed upon with the Consultant prior to commencement of the consultancy services.

One vehicle will be provided to the Consultant by the Client for the initial stages of the assignment prior to commencement of construction works. However, it will be the responsibility of the Consultant to incur all maintenance costs for this vehicle.

9 SERVICES AND FACILITIES TO BE PROVIDED BY THE CONSULTANT

In carrying out this assignment, the Consultant shall provide the following services, among others, which should be duly provided for in the Consultant's proposal:

1. Suitable office space necessary for the Consultant's team engaged on the assignment.
2. Office furniture and other related equipment including desk top computers complete with printers, auxiliary power units, and modern plan reproduction equipment all to be purchased by the Consultant through the contract as a reimbursable expenditure.
3. Office supplies, as required for the period of services.
4. Utility services and costs.
5. Long term accommodation for the Consultant's staff while in Uganda and hotel accommodation for short term experts.
6. Subsistence (or per diem) payments for official travel for Consultant's staff.
7. Secretarial and administrative support staff.
8. International and local telephone services for official communication only.

All furniture, technical and office equipment procured under the project shall be handed over to the Client after termination of the consultancy services.

10 SERVICES AND FACILITIES TO BE PROVIDED BY THE CONTRACTOR

Upon commencement of the works contract, the Contractor will provide the following services to the supervision Consultant:

1. A fully furnished site office for the Resident Engineers and Clerks of Works, fully maintained and utility services paid.
2. Survey equipment.
3. Transport for official work of the Consultant (Project Manager and Resident Engineers)
4. Fully furnished accommodation for the Resident Engineers and Clerks of Works, fully maintained and utility services paid.
5. Remuneration for support staff of the Resident Engineers.

11 ACTIONS REQUIRING CLIENT CLEARANCE DURING CONSTRUCTION SUPERVISION

The Consultant shall note that taking any action under a civil works contract designating the Consultant as "Engineer" for which action pursuant to such civil works contract to the written approval of the Client as "Employer" is required for the following actions:

1. Use of provisional sums.
2. Variations to works that materially differ in technology, geography, plant layout, etc. from the design agreed upon for the works contract.
3. Variations to works that increase the contract sum by more than the maximum allowable sum stated in the special conditions of contract of the works contract document.
4. Certification of any construction related claims by the Contractor including extension of time.
5. Certification of substantial project completion.

12 ENVIRONMENTAL AND SOCIAL POLICY

The Environmental, Social, Health and Safety policy which will guide the supervision of the works has been attached in Annex 2.

13 CODE OF CONDUCT

The code of conduct attached in Annex 3 has been set out to take into account considerations of Environment, Social and Health issues, Occupation Health and Safety of experts, Client's and Contractor's personnel and the community.

The Code of Conduct should be signed by each Expert to indicate that they have:

1. Received a copy of the code;
2. Had the code explained to them;
3. Acknowledged that adherence to this Code of Conduct is a condition of employment; and
4. Understood that violations of the Code can result in serious consequences, up to and including dismissal, or referral to legal authorities.

Annex 1; Environment, Social, Health and Safety (ESHS)

The Consultant will ensure the Contractor's ESHS performance is in accordance with good international industry practice and delivers the Contractor's ESHS obligations. This includes

1. Recruitment of qualified personnel in the positions of Environmental Specialist/Officer, Health and Safety Specialist/Officer, Social Development Officer;
2. Review and approve the C-ESMP, including all updates and revisions (not less than once every 6 monthly);
3. Review and approve ESHS provisions of method statements, plans, proposals, schedules and all relevant Contractor's documents;
4. Review and advise the relevant person on the ESHS risks and impacts of any design change proposals and the implications for compliance with ESIA, ESMP, consent/permits and other relevant project requirements;
5. Undertake audits, supervisions and/or inspections of any sites where the Contractor is undertaking activities related to the Works, to verify the Contractor's compliance with ESHS requirements, with and without Contractor and/or Client relevant representatives, as necessary, but not less than once per month;
6. Undertake audits and inspections of Contractor's accident logs, community liaison records, monitoring findings and other ESHS related documentation, as necessary, to confirm the Contractor's compliance with ESHS requirements;
7. Agree remedial action/s and their timeframe for implementation in the event of a noncompliance with the Contractor's ESHS obligations;
8. Attend meetings including site meetings, progress meetings to discuss and agree appropriate actions to ensure compliance with ESHS obligations;
9. Check that the Contractor's actual reporting (content and timeliness) is in accordance with the Contractor's contractual obligations;
10. Review and critique, in a timely manner, the Contractor's ESHS documentation (including regular reports and incident reports) and to provide advice to ensure the accuracy and efficacy of the documentation;
11. Undertake liaison, from time to time and as necessary, with project stakeholders to identify and discuss any actual or potential ESHS issues.
12. Ensure that Contractor develops and implements a Labor Influx Management Plan and Workers' Camp & Accommodation Management Plans as part of C-ESMP. This should include the following actions: all workers to sign employment contract including Code of Conduct (Annex H in ESIA– example); establish a Grievance Committee for Workers; sensitize workers on community based social behavior and conduct; sensitize workers to not engage in sexual relations with underage girls and married women; establish a Grievance Redress Committee to act as link between community and the project; local leadership should always be sought as a first priority in solving issues. Refer to ESIA and RAP for additional information.

Annex 2; Environmental and Social Policy

The Works' policy goal is to integrate environmental protection, occupational and community health and safety, gender, equality, child protection, vulnerable people (including those with disabilities), gender-based violence (GBV), HIV/AIDS awareness and prevention, wide stakeholder engagement, land acquisition and compensation of project affected persons in the planning processes, programs, and activities of the parties involved in the execution of the Works.

The Environment and Social Management Plan for the Project and the Contractor's Site-Specific Environment and Social Management Plan will be used for monitoring, continuously improving processes and activities and for reporting on the compliance with the policy.

The policy is derived from different international and/or national policies within legal frameworks some of which are highlighted below. It is expected that during the supervision of the works, the Consultant will commit to;

1. Apply good international industry practice to protect and conserve the natural environment and to minimize unavoidable impacts (National Environment Act 1995);
2. Provide and maintain a healthy and safe work environment and safe systems of work as stipulated in the draft National Occupational Safety and Health Policy in the framework of the Occupational Safety and Health Act 2006;
3. Protect the health and safety of local communities and users, with particular concern for those who are disabled, elderly, or otherwise vulnerable;
4. Ensure that terms of employment and working conditions of all workers engaged in the Works meet the requirements of the ILO labour conventions to which the host country is a signatory (Employment Act 2006 and Occupational Safety and Health Act 2006);
5. Be intolerant of and enforce disciplinary measures for illegal activities. To be intolerant of, and enforce disciplinary measures for GBV, child sacrifice, child defilement, and sexual harassment (Employment Act 2006) ;
6. Incorporate a gender perspective and provide an enabling environment where women and men have equal opportunity to participate in, and benefit from, planning and development of the Works (The Uganda National Employment Policy 2011, The National Equal Opportunities Policy 2006, Uganda Gender Policy);
7. Work co-operatively, including with end users of the Works, relevant authorities, contractors and local communities;
8. Engage with and listen to affected persons and organisations and be responsive to their concerns, with special regard for vulnerable, disabled, and elderly people;

9. Provide an environment that fosters the exchange of information, views, and ideas that is free of any fear of retaliation;
10. Minimize the risk of HIV transmission and to mitigate the effects of HIV/AIDS associated with the execution of the Works (The National HIV/AIDS and The World of Work Policy 2007);
11. Acquisition or restriction of land to mitigate unavoidable adverse social and economic impacts through incorporate compensation of project affected persons and community engagement throughout the works implementation.

…….

Project Manager

MWE

Annex 3: Code of Conduct

This code of conduct is to be followed by all Consultant's Experts. It should be read together with the Environment and Social Policy, the World Bank Group Environment Health and Safety Guidelines. The experts are expected to:

1. Be Compliant with applicable laws, rules, and regulations of the Republic of Uganda.
2. Be Compliant with applicable health and safety requirements to protect the local community (including vulnerable and disadvantaged groups), the Consultant's Experts, the Client's personnel, and the Contractor's personnel, including sub-contractors and day workers (including wearing prescribed personal protective equipment, preventing avoidable accidents and a duty to report conditions or practices that pose a safety hazard or threaten the environment).
3. Not use of illegal substances.
4. Be non-discriminatory in dealing with the local community (including vulnerable and disadvantaged groups), the Consultant's Experts, the Client's personnel, and the Contractor's personnel, including sub-contractors and day workers (for example, on the basis of family status, ethnicity, race, gender, religion, language, marital status, age, disability (physical and mental), sexual orientation, gender identity, political conviction or social, civic, or health status).
5. Have acceptable and appropriate interactions with the local community(ies), members of the local community (ies), and any affected person(s) (for example to convey an attitude of respect, including to their culture and traditions).
6. Avoid unethical and unbecoming behavior such as use of rude, abusive and obscene language, indecent dressing, hard supervision and sexual suggestive gestures which constitute sexual harassment (for example to prohibit use of language or behavior, in particular towards women and/or children, that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate). A child / children means any person(s) under the age of 18 years.
7. Avoid violence, including sexual and/or gender-based violence (for example acts that inflict physical, mental or sexual harm or suffering, threats of such acts, coercion, and deprivation of liberty.
8. Avoid exploitation including sexual exploitation and abuse (for example the prohibition of the exchange of money, employment, goods, or services for sex, including sexual favors or other forms of humiliating, degrading behavior, exploitative behavior or abuse of power).
9. Promote protection of children (including prohibitions against sexual activity or abuse, or otherwise unacceptable behavior towards children, limiting interactions with children, and ensuring their safety in project areas).
10. Ensure sanitation requirements are provided like toilets are acceptable and approved and are gender sensitive (for example, to ensure workers use specified sanitary facilities provided by their employer and not open areas).

11. Avoid conflicts of interest (such that benefits, contracts, or employment, or any sort of preferential treatment or favors, are not provided to any person with whom there is a financial, family, or personal connection).
12. Respect reasonable work instructions (including regarding environmental and social norms).
13. Protect and use any project property properly (for example, to prohibit theft, carelessness or waste).
14. Report any violations of this Code.
15. Ensure that there is non-retaliation against personnel who report violations of the Code, if that report is made in good faith.