

**REPUBLIC OF MALAWI**



**Ministry of Water and Sanitation**



**Blantyre Water Board**



**Blantyre City Council**

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**TERMS OF REFERENCE  
FOR**

**CONSULTANCY SERVICES FOR DETAILED ENGINEERING DESIGN, AND  
CONSTRUCTION SUPERVISION OF PUBLIC ONSITE SANITATION FACILITIES IN  
BLANTYRE CITY AND UPGRADING OF PROJECT IMPLEMENTATION UNIT(PIU)  
AND PROJECT SUPPORT TEAM (PST) OFFICES**

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**MALAWI WATER AND SANITATION PROJECT-1**

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**Prepared By:  
Blantyre Water Board  
P.O. Box 30369  
Chichiri  
Blantyre 3  
MALAWI**

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## **1. INTRODUCTION**

### **1.1 *Background***

The Government of Malawi (GoM) is committed to providing adequate, reliable and sustainable water and sanitation services to the urban, peri-urban, towns and rural population of Malawi to meet the ever-increasing demand for safe water for domestic, institutional, industrial, commercial and agricultural use. One focus area is Blantyre City, which currently faces a number of challenges related to water supply and sanitation services delivery. Some of the challenges include; high population growth, dwindling water resources, climate change, lagging infrastructure development and aging water and sanitation systems with high levels of non-revenue water creating large gaps between supply and demand, leading to unreliable services. The current water and sanitation situation in the city is alarming, which calls for comprehensive measures that will bring about sustainable and reliable improved services.

GoM through Blantyre Water Board (BWB) and Blantyre City Council (BCC) with financial support from the International Development Agency (IDA) of the World Bank intends to implement the Malawi Water and Sanitation Project-1 (MWSP-1). The MWSP-1 seeks to address the immediate and medium-term water and sanitation needs and support a long-term solution to Blantyre City's growing demand for improved water services and safely managed sanitation services.

BWB and BCC which are the implementing entities for the MWSP-1 commit themselves to successful implementation of the project which aligns with Malawi's development goals as well as strategic plans for the two institutions. The project is consistent with the Government's priorities, as it directly aligns with Malawi's commitment to improving urbanization as stipulated in the Malawi 2063.

### **1.2 *Project Development Objective and Components for the Malawi Water and Sanitation Project (MWSP)***

The project development objective (PDO) is to increase access to improved water supply and sanitation services in Blantyre metropolitan area and to enhance the operational and financial efficiency of the Blantyre Water Board. The PDO will be achieved through development and rehabilitation of water and sanitation infrastructure for Blantyre City and surrounding areas so that the city has adequate and reliable potable water supply with adequate pressure and improved sanitation services. The project focuses on four components that contribute to the achievement of the PDO.

### ***Component 1: Water supply improvements***

Under this component, the project will finance investments to improve water production, stabilize and improve network operational efficiency, reduce water losses, increase energy efficiency, improve water supply service quality, and expand water access to unserved areas, increasing energy efficiency, and boosting water access.

### ***Component 2: Priority sanitation investments***

This component involves several interventions to increase access to improved sanitation services and reduce environmental pollution that has public health impacts.

### ***Component 3: Institutional capacity strengthening***

This component will finance a set of institutional development activities aimed at enhancing BWB's financial efficiency and governance systems, improving BCC's capacity to manage sanitation services and supporting the water sector investment planning and policy development to enhance the sustainability of urban water services.

### ***Component 4: Technical Assistance and Project Management Support***

This component will finance TA activities designed to support the project implementing unit and the incremental operating costs for project management, including safeguards, communications, and project monitoring and evaluation. The project will also finance relevant training to enhance financial management, procurement, and safeguards capacity for the implementing entities.

### ***Component 5 – Contingency Emergency Response (CERC- US\$0).***

This component will provide preparedness and rapid response measures to address disaster, emergency and/or catastrophic events in accordance with the applicable CERC Manual. Following an eligible crisis or emergency, the Borrower may request the Bank to re-allocate project funds to support emergency response and reconstruction. This component would draw from the uncommitted loan/credit/grant resources under the project from other project components to cover emergency response.

## **1.3 *Situation Analysis***

### ***1.3.1 Public Onsite Sanitation Facilities***

Blantyre is the main commercial city of Malawi and according to the 2018 population census, the City of Blantyre had a total population of 853,500 people, with an average growth rate of 2.8% per annum. The Local Government Act of 1998, as amended in 2017, and the National Decentralization Policy of 1998, mandates Blantyre City Council to govern and manage the City of Blantyre. The Local Government Act stipulates a number of services which councils are supposed to provide to their residents and among them is the provision of off-site sanitation services in public places.

Public schools' sanitation promotion in the city is coordinated by the Blantyre District-Urban Education Office. Overseeing of WASH-related activities in all the 64 primary schools within the City is done by the office of School Health and Nutrition (SHN) Coordinator whose main activities include periodic training of toilet cleaners, monitoring of WASH activities at school level, and provision of limited financial support to schools for settling water tariffs.

Public schools' sanitation gets assistance, in areas like provision of WASH infrastructure, construction of toilets, WASH rooms, pad sewing, and provision of hygiene materials (buckets, soap), from a number of Non-Governmental Organizations. In addition to the assistance that schools get from various partners, it is common practice that schools raise own funds to support sanitation and hygiene activities which is mostly done by hired workers. Primary schools have sanitation related challenges such as inadequate toilet blocks which lead to high toilet to learner ratio, unavailability of water sources, lack of funds to support periodic training of cleaners and SHN teachers, erratic payments of toilet cleaners, and few menstrual hygiene management facilities.

An assessment done by the Basic Education Administrators in all the 64 primary schools within the City of Blantyre indicated that most of the schools had serious sanitation challenges that required urgent attention. The schools have high numbers of enrolled pupils (see appendix 1: Table 1) that does not correspond to the existing number of toilet holes currently being used by the pupils. Most of the existing toilets are in poor/dilapidated state that require complete demolition as they pose a threat to the lives of the pupils. The Malawi Government standard toilet pupil ration is 1:30 for boys and 1:25 for girls. Please refer to Appendix 2 on understanding the current prevailing situation.

In health care facilities, issues of WASH are coordinated and promoted by Infection Prevention Committee (IPC). Studies of 21 health facilities' (see Appendix 4) sanitation reveal that health facilities within Blantyre City have poor/dilapidated sanitation facilities that require either rehabilitation and/or complete demolition and construction of new ones

The rapid population growth of Blantyre City is exerting pressure on public sanitation provision thereby limiting the city's potential of acting as a catalyst for economic growth. Markets, which are managed by Blantyre City Council, are one of the places with high concentration of people especially during the day. This therefore contributes to poor sanitation in economically active public places and results into the spread of faecal-oral related diseases such as cholera; as well as environmental contamination. In order to improve sanitation services in public markets, the project shall prepare toilet designs for 32 markets within Blantyre City (see Appendix 3)

In order to reduce the population-toilet ratio and improve general public sanitation in schools, markets, and health centers within Blantyre City and for a maximum health impact, the Client plans to construct climate resilient, gender and disability friendly public sanitation facilities at 20 public sites, 10 of these sites being public primary schools, while 5 sites each are for markets and health facilities respectively. It is expected of the consultant to assist the client in the identification of the specific public sites onto which the construction of public sanitation facilities shall be done. Table 1 shows the schools, markets and health facilities earmarked for assessments for possible construction of public sanitation facilities.

**Table 1: Public Schools, Markets and Health Centres for PSF Assessments**

<b>SCHOOLS</b>					
Kapeni LEA	Chilobwe vocation	Misesa	Zingwangwa PR	Likhubula	Nayizi
Chirimba	Chilomoni Catholic	Mlambalala	Mayera	Limbe	Ndirande Hill
Namasimba	Chilomoni LEA	Mpata	Mzamba	Lumbira	Ndirande LEA
Nkolokoti	Chimaliro	Mthawira	Yolodani	Makalanga	Ndirande Matope
Mpingwe	Chimwankhunda	Mulunguzi	Angelo Goveya	Makata	Nyambadwe
Chisombezi	Chisombezi	Namalimwe	Bangwe catholic	Makhetha	Sigerege
Nanjiriri	Chitawira	Namame	Blantyre Girls	Manja	SOS
Mbayani 2	Chitsime	Namatapa	Catholic Institute	Mbayani	South Lunzu
Bangwe CCAP	HHI	Namatete	Chichiri	St pius Girls	St Kizito
Malabada	Kameza	Namilango	Chigumula	St Thereza	St Maria Goretti
Matope	Kanjedza	Namiwawa	St pius Boys	-	-

<b>Markets</b>					
Limbe Produce	Naizi	Mussa Magasa	Ndirande	Chigumula A	Chigodi
Limbe Flea	Zingwangwa	Blantyre Flea	Kachere	Chimwankhunda	BCA
Chirimba	Chilomoni	Kachere	Soche	South Lunzu	Nanjiriri
Likhubula	Blantyre Produce	Safarao	Nkolokoti	Mpingwe	Chigumula B
Bangwe	Ndirande	Mulunguzi	Khama	Misesa	Chirimba Industrial
Manase	Ndirande Chinseu	-	-	-	-

<b>Health Centers/Clinics</b>						
Limbe	Mbayani	Soche Maternity		Ntonda	Mapanga	Misesa
Zingwangwa	South Lunzu	Chigodi		Nancholi	Manyowe	Gateway
Chilomoni	Ntenje	Cigumula Antenatal and Under-five		Masala	Mzedi	Chirimba

Ndirande	Bangwe	Makata	-	-	-
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Standard designs for these toilets will include hand-washing, urinals, menstrual hygiene, climate resilient and disability friendly sanitation facilities. The designs shall also take into account tiling of the toilets, installation of squat pans, and provisions of rainwater harvesting facilities and their associated pipe networks. While designing the toilets, the Consultant shall make reference to some existing designs used in schools e.g., UNICEF designs, in addition it is expected that the consultant will advise on type and number of additional toilet blocks, with minimum of 5 squat pans, per school. The consultant is also expected to review other designs and propose additional designs that are used in Markets and Health Centers within the City. Where feasible installation of flood lighting solar panels/system shall be done. In addition, hygiene will be promoted through existing behaviour change programs and the sanitation marketing principles.

Unlike the schools and health Centres where the operation models will be maintained, for public facilities, BCC intends to work with private operators in running the public facilities at the market as a business and also to ensure that the infrastructure is adequately maintained.

### ***1.3.2 Project Implementation Unit (PIU) and Project Support Team (PST) office upgrades***

#### ***1.3.2.1 PIU Offices***

Blantyre Water Board currently have the PIU office which is located along Chileka road near the Chileka International Airport. Currently sixteen (16) PIU members are operating from these offices. However, the office space is not enough to accommodate all PIU members. Additionally, the offices do not offer a safe, conducive and secure working environment as it is accessible to the public without authorization/permission. The office Carpark gets flooded and becomes muddy during rainy season because of poor drainage. The existing offices do not have functional air conditioners therefore becomes unconducive for productivity considering that Chileka is a high temperature area. The current layout of the offices does not economically provide enough space to accommodate the growth in both human and technical resources required by the Board.

#### ***1.3.2.2 PST Offices***

PST office structures shall be located within the premises Blantyre Wastewater Treatment Plant. The proposed site has office structures that are not only dilapidated but also inadequate to both accommodate 15 PST members and the associated office furniture and equipment.

BWB and BCC therefore intend to rehabilitate and upgrade the PIU & PST offices to meet the existing building standards to accommodate the project implementation and support teams. The existing offices need to be modernized to provide a safe, aesthetic, secure environment, which will promote health and wellbeing of staff and increase productivity.

BWB now seeks consulting services from a competent firm to prepare detailed engineering designs, tender documents, and to supervise the construction of public sanitation facilities and office upgrades at PIU offices in Chileka and PST offices at Blantyre Wastewater Treatment Plant.

## **1. OBJECTIVES OF THE CONSULTANCY ASSIGNMENT**

### **1.1 GENERAL OBJECTIVE**

The main objective of the assignment is to prepare detailed Architectural and Engineering designs, tender documents and construction supervision of public sanitation facilities and office upgrades at PIU offices in Chileka and PST offices

### **1.2 Specific Objectives of the Assignment**

The specific objectives of the assignment include the following key tasks:

- i. Design public sanitation facilities
- ii. Design for PIU and PST office upgrades
- iii. Prepare bills of quantities and tender documents for public and sanitation facilities
- iv. Prepare bills of quantities and tender documents for PIU and PST offices
- v. To provide comprehensive costing of the projects
- vi. Carry out supervision and quality assurance for construction works

## **2. SCOPE OF THE ASSIGNMENT**

The assignment is for 36 months and shall be undertaken in two phases: Phase 1-shall take 6 months under which the consultant shall prepare detailed engineering designs and tender documentation. Phase 2 shall take 30 months under which the consultant shall conduct construction supervision for the tendered works and also attend to any defects during the proving period of the project.

**Phase 1** shall be undertaken on a lump sum contract with a duration of Four (4) months. The consultant shall take full responsibility of the designs and shall make any necessary reviews/changes required design during construction phase. The works will include; (i) assessments and updating of public sanitation facilities (PSF) data for all the existing public sites as indicated in Table 1 and updating the GIS database of the same, (ii) field monitoring of the existing PSF's operation and maintenance, (iii) condition assessment of all the PSFs in all the targeted public sites, (iv) undertake a risk assessment looking at structures deterioration and associated risks etc. (v) design permanent monitoring to allow problems to be identified immediately, (vi) preparation of preliminary and detailed engineering designs and tender documentation for the PSFs and PIU and PST offices.

**Phase 2** shall be subject to satisfactory performance of which the criteria shall include (i) quality of deliverables (ii) timely submission of deliverables, (iii) compliance with contractual obligations including deployment of agreed staff and (iv) responsiveness of the consultant. This phase shall be undertaken on a time-based contract with a duration of 24 months which shall include 12 months defects liability period. Construction periods for PSF and PIU and PST offices shall both commence immediately after phase 1. Both phases will be procured together-i.e. the consultant is

required to quote for both phases. Phase 2 of the contract shall come into effect after completion of phase 1 and upon clients notice to the consultant instructing commencement of phase 2 services.

### **3. DETAILED DESCRIPTION OF TASKS**

#### **3.1 Phase 1-Rehabilitation/upgrading needs assessment, detailed designs and tender documentation for offices and public sanitation facilities.**

This phase of the assignment shall be categorized into two parts

##### **3.1.1 Part 1: Rehabilitation/upgrading needs assessment, detailed designs and tender documentation for offices**

###### **3.1.1.1 Preparation of detailed designs for the rehabilitation of PIU and PST offices**

The consultant shall prepare detailed designs for the rehabilitation of PIU and PST offices. Specific activities shall include but not limited to:

- i. Prepare updated and technically sound architectural drawings of the building and cost estimates for both PIU and PST offices separately.
- ii. Review existing studies, preliminary designs, data and maps and identify gaps (if any) in the available information
- iii. Conduct necessary surveys and any additional studies required to verify the existing preliminary designs;
- iv. Prepare detailed designs (civil/structural, electro-mechanical, sanitary/plumbing and Local Area Network including construction drawings, technical specifications, bill of quantities, and engineer's cost estimates.
- v. Prepare detailed construction plan and implementation program for the works
- vi. Advise on procurement packaging of the works and prepare bid documents in accordance with World Bank requirements
- vii. Based on the client needs and the existing features of the property prepare a renovation project proposal for consideration by the client. The upgraded building shall include but not limited to;
  - (a) promote greater integration, collaboration of functions and people
  - (b) offer healthy, safer and efficient work space for all to increase staff morale, productivity and efficiencies
  - (c) comply with international environmental and civil engineering standards and meet all local building regulations in force.
  - (d) offer features that will enable the user to use water and energy efficiently
- viii. Prepare standard civil and structural designs of climate resilient, gender and disability friendly



- ix. Assisting in the bidding process, including assistance in preparing tender notices, arranging pre-bid meetings, responding to queries from bidders.
- x. Review relevant documentation of the property
- xi. Advise and or obtain all relevant construction permits required

### **3.1.1.2 Tender Assistance**

The consultant shall undertake the following under this task:

- (i) Draft bid documents including contract drawings, specifications, Bills of Quantities and conditions of contract shall be prepared, in accordance with the Bank's Standard Bidding documents. A set of these documents shall be prepared for each of the contract packages agreed upon.
- (ii) Prepare tender invitation notices and assist the Client with the invitation of bids, provide clarifications during the bid period, all in accordance with the Bank's procurement rules of procedures.

### **3.1.1.3 Assess possible environmental, Social and Gender Based Violence/Sexual Exploitation and Abuse/Sexual Harassment impacts of the proposed PSF and prepare relevant safeguards instruments**

The Consultant shall assess possible environment and social impacts of the proposed offices as well as cumulative impacts over the entire project area. This will include an assessment of the potential for temporary labor influx, e.g. the arrival of outside workers (as part of the contractor workforce) in the project area, including the possible establishment of work camps. The Consultant shall then prepare relevant environmental and social management plans (ESMPs) and other social and safeguards instruments, including traffic management, Environment, Health, and Safety Guidelines and Codes of Conduct for contractor employees, and a subproject-level Grievance Redress Mechanism (GRM), to be included in the bidding documents and construction contracts.

### **3.1.1.4 Preparation of Design Parameters for the Offices**

The consultant shall;

- i. Recommend the appropriate code for design and construction of office building (i.e., Malawian or International Standard) while taking into consideration the cost and the requirements for both BWB and BCC.
- ii. Provide interior solutions
- iii. Working drawings for all construction works.
- iv. Provide necessary instructions to the maintenance team in consultation with BWB and BCC management while preparing office layout
- v. Prepare the Design Parameters (based on recommended Codes/Standards) for the following:
  - a) **Architectural**
    - i. Interior floor plans with furniture and fixtures layout

- ii. Furniture layout
- iii. Interior elevations and sections
- iv. Spot details
- v. Interior perspectives
- b) Structural / Civil Works**
  - i. Assess the structural integrity of the structures
- c) Sanitary / Plumbing**
  - i. Revised plumbing layout
  - ii. Revised restroom layout
- d) Mechanical Works**
  - i. Revised Air Conditioning layout
  - ii. Revised fire alarm system layout
  - iii. Sprinkler layout
  - iv. Signage and decals details
- e) Electrical Works**
  - i. Ceiling and lighting layout (automated lighting system)
  - ii. Power layout
  - iii. Emergency power scheme (installation of solar backup power on roof tops)
  - iv. Auxiliary layout: telephone, LAN (structure cabling and wifi) and DATA
  - v. CCTV layout
  - vi. Sound system layout and paging system
- f) Local Area Network (LAN)**

The Design Parameters shall also take into consideration the following features of the upgraded Building as a minimum.

- i. Renovation should try to accommodate the current structure of both PIU and PST. Detailed structure is going to be provided together with number of staff.
- ii. Renovation is desired to be cost-effective. However, due expenses to be required for a modern work place would be considered appropriate.
- iii. minor extensions for the offices and roofing

The following are other workspace requirements apart from offices:

- i. Main Board Room
- ii. One (1) kitchen room close to the Meeting Rooms;
- iii. Modern restrooms
- iv. Reception;
- v. Visitors lounge
- vi. Archive room
- vii. Central Photocopying room
- viii. Canteen/small tuck shop

The upgraded office building shall also have the following exterior amenities:

- i. Parking for employees and visitor's vehicle;
- ii. Fire Assembly points;
- iii. Interlocking blocks for the parking area and pavements
- iv. Landscaping and drainage
- v. Access roads (only layout).

### **3.1.1.5 Key inputs to be provided by the Client and Consultant**

The Client shall provide the following to the Consultant:

- i. Requirements of the building in terms of number of occupants to be hosted and equipment to be installed in the building, number of spaces/rooms and services to be provided by each of the spaces with a target to define the total space.
- ii. Location map (both hard and soft copies);

The Consultant shall, among other deliverables aforementioned, provide the following:

- i. Detailed works schedule indicating timelines and responsible personnel;
- ii. Offices and all necessary equipment and resources to carry out the assignment;

Data and Information for existing structures, such as sewage lines or septic tanks, power supply, drainage system, ICT and communication lines, water system and geotechnical report.

### **3.1.2 Part 2: detailed designs and Bidding documentation for Public Sanitation Facilities**

This phase includes the following tasks

#### **3.1.2.1 Review of existing studies and designs of PSF, for previous projects in Blantyre or elsewhere in the region.**

The consultant shall carry out a critical review of the existing documentation and supplement with other studies that may be available in Malawi and the region on the design of PSF which could be aligned with local communities' behavior and be an improvement.

#### **3.1.2.2 Conduct necessary surveys and studies,**

The Consultant shall undertake the following under this task:

- i. Conduct necessary surveys and any studies required for the design of public sanitation facilities; including verifying critical data and information on performance of existing PSF
- ii. Review of existing management models/design of new ones for the public facilities especially for schools and markets
- iii. Conduct any field investigations and/or consultations in the selected areas to confirm the site conditions and other technical and human factors that may influence design and construction of the public PSF.
- iv. Develop a typology of site conditions – both physical (e.g. soil conditions, vulnerability to flooding, distance to existing borehole, ground water vulnerability; space limitation etc.)

and user conditions (e.g. size of public institution, availability of water; user preference and willingness to pay; emptying frequency etc).

- v. Conduct on-site surveys and estimate quantity and quality of faecal sludge that needs to be safely managed.
- vi. Do options analyses and conception of the public toilets, including an assessment of the re-use market, considering all possibilities including fuel (both solid and biogas), fertiliser/soil conditioner, pisciculture, protein for animal feed, building materials, etc.
- vii. Assess the existing social safety net mechanisms and explore options targeting the beneficiary institutions for PSF
- viii. Obtain, review and analyse all relevant documents (see annex 1), including previous plans and reports.

### **3.1.2.3 Prepare detailed engineering designs and bidding documents**

The consultant shall undertake the following under this task:

- i. Prepare standard civil and structural designs for toilet blocks of climate resilient, gender and disability friendly public sanitation facilities at all public sites outlined in table 1 and propose an adequate number of blocks per site while taking into account the toilet-user ratio of specific sites. The public toilet designs shall also take into account user preferences (human-centred design), include facilities for Menstrual Hygiene Management (MHM), waste management, hand-washing and ensure easy accessibility for people with disabilities. The design shall ensure that preference is made to urine-diversion toilets which shall be equipped with waterless urinals and water-flushed urine diversion toilets, enabling the separate collection of urine and faeces. The design should include onsite sludge treatment and reuse features where feasible. For all public toilets, the designs shall ensure that the toilets are emptiable should the need arise. Appropriate measures to discourage the disposal of solid waste and enhance safe disposal of menstrual hygiene materials in non-water-sealed toilets will be required, since these greatly increase the difficulty and cost of pit emptying.
- ii. Prepare detailed cost estimates based on latest material, equipment costs and other necessary inputs and services.
- iii. Prepare detailed engineering design report and implementation plan.
- iv. Prepare specifications and bidding documents including evaluation criteria, in line with the World Bank standard requirements.
- v. Prepare schedules and standard bills of quantities for the work packages.
- vi. Prepare an initial assessment report detailing the findings from the reviews of documentation and surveys, including toilet options, management models and key technical, environmental and social features to influence the engineering design. The report should be presented to a number of key stakeholders, to be defined by BCC.

#### **3.1.2.4 Prepare guidelines and standards for construction of PSF and best practice manual for faecal sludge management**

- (i) The Consultant shall review existing standards and norms for construction of PSF in Blantyre. In consultation with Blantyre City Council (BCC), the Consultant shall prepare a set of guidelines and standards for construction of various PSF
- (ii) Prepare a Best Practices Manual (BPM) on faecal sludge handling and management; and recommend sludge handling management and procedures for Blantyre City Council to provide services widely and effectively in the City area. Preparation process of BPM will need to comply with the public health department and to collate lessons learnt during the process of: identifying optimum service areas; evaluating options for contracting the services for collection, transport and delivery of sludge; determining a financially viable tariff; public awareness during campaign; contracting the works; technical issues associated with operating and maintaining the sludge disposing system.
- (iii) Develop in consultations with BCC and the private FSM operators, a partnership model and implementation arrangements for the development and management the public toilets. The options analyzed shall include potential co-development with the private operator, construction and management, or plant management only.

#### **3.1.2.5 Tender Assistance**

The consultant shall undertake the following under this task:

- i. Draft bid documents including contract drawings, specifications, Bills of Quantities and conditions of contract shall be prepared, in accordance with the Bank's Standard Bidding documents. A set of these documents shall be prepared for each of the contract packages agreed upon.
- ii. Prepare tender invitation notices and assist the Client with the invitation of bids, provide clarifications during the bid period, all in accordance with the Bank's procurement rules of procedures.

### **3.2 Phase 2 – Construction Supervision and Verification**

In close collaboration with BWB and BCC, the consultant shall supervise the works execution on a day-to-day basis in accordance with the signed works contracts. The consultant shall make sure, amongst others, that (i) the works are carried out in accordance with the Conditions of Contract for Construction; (ii) the quality of materials and workmanship conforms with the specification of the construction contract; and (iii) construction plant and personnel provided and used by the contractors are adequate to construct the works.

Specific tasks shall include, but not necessarily limited to the following:

### 3.2.1 Contract Administration

- i. Assist BWB and or BCC in all aspects of contract administration and management of the construction works for the public facilities and the office buildings;
- ii. Prepare contract management manual which shall set out an organization chart, full contact details for each organization involved in the execution of the works, together with detailed procedures for the issuance of correspondences, information request, shop drawings, engineers instruction, variation orders management, contract sum adjustments, extension of time, standard monthly reporting by the contractor, minutes of monthly meetings, site inspection, standard forms to be used and project filing system;
- iii. Examining the contractor's detailed work program and guiding the contractors in preparation of a supervision schedule/work plan for each package;
- iv. Prepare detailed site reports, certified by the Site Engineer, during the continuation of the Contract. The reports shall include on site/off site activities, weather conditions, ground and traffic conditions, number of staff on site, records of visitors to the site, construction materials delivered, plants or equipment used or idling at site, daily works recording, quality inspections, encumbrances causing delays, photographic and video recording of important activities at site etc;
- v. Maintain daily site diaries, and daily reports to verify contractor's daily records of labour, plant and equipment, weather conditions, progress, instructions and delays;
- vi. Maintain a photographic record of the progress of the work;
- vii. Issue field instructions in writing as required and ensuring that the construction drawings are revised to suit actual site conditions encountered and to minimizing disruption to the progress of the works;
- viii. Organize and chair site meetings. As soon as practical after the meeting, prepare and distribute minutes for agreement and signing.
- ix. Report to the Client regularly on progress and advise the Client of any potential problem areas likely to affect progress and propose solutions to avert the problem.
- x. Evaluate and comment on the Contractor's Site personal experience and qualifications and recommend to Employer to justify approval or rejection by the Employer.
- xi. Preparation of Variation Orders and Extensions of times, estimation of the cost of the variations and extensions of times, negotiation of prices with the Contractor, and issuing of the Variation Orders and Extensions of times, after obtaining approval of the Employer as required by the Condition of Construction Contract.
- xii. Negotiate with the Contractor the prices of new works and new items revealed required during the construction period and not included in the original Tender, after obtaining approval of the Employer and as required by the Condition of Construction Contract.
- xiii. Issuing of written Orders to perform work, which will be paid from provisional Sums, after the Employer's written approval.
- xiv. Issuing Daywork Orders subject to the limitations on such orders contained in the Contract Documents.

- xv. Evaluation and documentation of claims, submitted by the Contractor.
- xvi. Services with regard to disputes in accordance with the General Conditions of the Construction Contract Documents including assisting the Employer in dealing with the settlement of all disputes and differences that may arise between the Employer and the Contractor.
- xvii. Prepare a snag list for the uncompleted works.
- xviii. Examine and recommend to the Employer the acceptance or the rejection of any part of the permanent Works.
- xix. Monitoring the Contractor's work in access roads, quarries, borrow areas and disposal areas and supervise their reinstatement.
- xx. Issuing the Taking-Over Certificate on satisfactory completion of all tests and take-over of the works by the Employer.
- xxi. Inspect the permanent Works during and on expiry of the defects liability period and inform the Contractor in writing about any repair, maintenance and/ or replacement required for the Works, and upon the Contractor's completion of the required repair, maintenance and/ or the replacement, proceed with the procedures of issuing the Defects Liability Certificate.
- xxii. Issuing the Defects Liability Certificate.
- xxiii. Approval of the removal of Contractor's Equipment, Temporary Works and Materials.

### **3.2.2 Quality assurance**

- i. Establish a quality assurance system, including verification of source material, specifications and quality, and certification;
- ii. Carry out necessary quality control activities and certifying that the quality of works and materials conforms to the specifications;
- iii. Examine and approve the contractors' proposed changes to design (if any) and drawings for compliance with the specifications. Also, attend factory tests/pre-shipment inspection for major equipment as required;
- iv. Examining the construction methods proposed by the contractor including environmental, safety, personnel and public issues. The consultant must ensure that the construction methods as proposed by the contractor for carrying out the works comply with the World Bank's environmental and social safeguards policy and guidelines.
- v. Check survey points for the works and main setting out done by the contractor and ensuring that any errors found are promptly notified to the contractor and necessary remedial action is taken.
- vi. Undertake site supervision of construction, installation, testing and commissioning;
- vii. Undertaking resident supervision of the works by a qualified Resident Engineer in the respective discipline with sufficient experience who shall perform his duties with due diligence, efficiency and in accordance with the best engineering profession and consulting standards;

- viii. Direct locations or times for field testing in accordance with the specification and witness all such tests that will be performed by the Contractor in the laboratory to be established by the Contractor. Ensure all tests are conducted in accordance with the approved standards.
- ix. From time to time, if deemed necessary, carry out independent tests using the Consultant's personnel and the Contractor's laboratory and equipment;
- x. Check that testing equipment conforms to and is operated in accordance with relevant standard and that calibration certificates, where applicable, are current.

### **3.2.3 Schedule and Cost Management**

- i. Monitor the progress of the contract and prepare monthly progress reports on both schedule and cost performance of the contracts using Earned Value Techniques or other tools as appropriate. Flag any issues to the BWB and or BCC in a timely manner, and recommend actions to be taken;
- ii. Assess and incorporate confidential delay contingencies, should delays become unavoidable and advise the BWB and or BCC regarding the target practical completion dates for the Project components;
- iii. Undertake cost management for BWB and or BCC. The Consultant shall follow several bases in monitoring the cost such as details of breakdown of work items as in the Contract, variation and escalation contingencies within the budget, status of sub-packages, anticipated variations, running forecast cost at completion for each item;
- iv. Monitor the Contract costs relative to the Contract budget and programmed expenditure considering actual quantities and update quantity estimates, costs of variation orders, costs of potential claims and any other costs.
- v. Review and effect any design changes during construction.
- vi. Prepare actual and forecast monthly/yearly cash flows to assist BWB and or BCC 's cash flow management for the works;
- vii. Check contractor's invoice and issue progress payment certificates;
- viii. Check and make recommendation for any variation orders if required;
- ix. Check and recommend any extension of time required to be given to the contractor;
- x. Recommend substantial completion certificate to the contractor for the contract;
- xi. Recommend final acceptance certificate for the contractor after expiration of defect liability period;

### **3.2.4 As-Built Drawings and O&M Manuals**

- i. Ensure that the contractors maintain at the site a complete set of 'as-built' drawings for the contract as the work proceeds;
- ii. On completion of the construction of each structure, the consultant shall assist BWB and BCC to transfer all records changes in the Database.



- iii. Ensure the contractors provides all manufacturers operation manuals, instructions and technical details for the installations.

### **3.2.5 Environmental, Social, Health and Safety (ESHS) Monitoring**

The Consultant shall ensure that the Contractor's ESHS performance is in accordance with World Bank standards and guidelines and delivers the Contractor's ESHS obligations. The ESHS related services shall include but not limited to:

- (i) Supervise environmental and social matters in accordance with the stipulation of the Environmental and Social safeguards instruments. Any additional and unexpected environmental and social incidences should be noted and necessary adjustments recommended and amended accordingly;
- (ii) Review and approve the Contractor's Environment and Social Management Plan (C-ESMP), including all updates and revisions (not less than once every 6 months);
- (iii) Ensure implementation of measures proposed in the Environmental and Social Management Plans (ESMPs) and Environmental, Social, Occupational Health and Safety (ESOHS) requirements including:
  - a) Ensure that the contractor has an adequate Contractor Environmental Social Management Plan (C-ESMP), that its schedule, budget and work plan integrates ESOHS requirements and review and approve the Contractor's Environment and Social Management Plan (C-ESMP), including all updates and revisions.
  - b) Monitor and supervise the implementation of the Contractor Environmental Social Management Plan (C-ESMP) to ensure that the Contractor is implementing the mitigation measures, attaining the monitoring indicators established in the site ESMP and to verify the Contractor's compliance with ESOHS requirements including its GBV/SEA/SH obligations, with and without contractor and/or client relevant representatives, as necessary, but not less than once per month.
  - c) Undertake audits and inspections of Contractor's accident logs, grievance logs, monitoring findings and other ESOHS related documentation, as necessary, to confirm the Contractor's compliance with ESOHS requirements.
  - d) 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 ESOHS requirements including its GBV/SEA obligations, with and without contractor and/or client relevant representatives, as necessary, but not less than once per month
  - e) Ensure that the contractor complies with all national labour, Environment, Social, Occupational Health and Safety rules and requirements of the contract

documents as per the local legal and regulatory requirements, and project requirements;

- f) Ensure that all contractor's staff are properly equipped with personal protective equipment;
- g) Ensure that the contractor carries sufficient training of their personnel to ensure a safe working environment;
- h) Monitor the contractor's implementation of their traffic management plan to ensure safety of road users including pedestrians and non-motorized traffic during the works
- a) Provide immediate notification to the Client should any incident in the following categories occur while carrying out the Services. Full details of such incidents shall be provided to the Client within the stipulated timeframe in the ESOHS:
  - I. confirmed or likely violation of any law or international agreement;
  - II. any fatality or serious (lost time) injury;
  - III. significant adverse effects or damage to private property (e.g. vehicle accident); or
  - IV. any allegation of gender-based violence (GBV), sexual exploitation or abuse (SEA), sexual harassment or sexual misbehavior, rape, sexual assault, child abuse or defilement, or other violations involving children,
- b) Ensure that contractor immediate notifications on ESOHS aspects are shared with the Client immediately;
- c) Immediately inform and share with the Client any notification related to ESOHS incidents and undertaking root cause analysis provided to the Consultant by the Contractor, and as required of the Contractor as part of the Progress Reporting;
- d) Share with the Client in a timely manner the Contractor's ESOHS metrics, as required of the Contractor as part of the Progress Reports.
- e) Review and input, in a timely manner, the Contractor's ESOHS documentation (including regular reports and incident reports).
- f) Verify that the contractor establishes and maintains a grievance redress mechanism including types of grievances to be recorded and how to protect confidentiality e.g. of those reporting allegations of GBV/SEA/SH ensuring any GBV/SEA/SH instances and complaints that come to the attention of the consultant are registered in the grievance mechanism.
- g) Confirm compliance and remedial action/s and their timeframe for implementation in the event of a noncompliance with the Contractor's ESOHS obligations and ensure that any pending ESOHS non-compliances have been addressed and closed by the contractor.

- h) Ensure appropriate representation at relevant meetings including site meetings, and progress meetings to discuss and agree appropriate actions to ensure compliance with ESOHS obligations.
- i) Ensure that contractor activities are aligned with the Stakeholder Engagement Plan (SEP) and Labour Management Procedures (LMP):
- (iv) Review and approve ESHS provisions of method statements, implementation plans, Gender-Based Violence/Sexual Exploitation and Abuse (GBV/SEA) prevention and response action plan, drawings, proposals, schedules and all relevant Contractor's documents;
- (v) Review and consider the ESHS risks and impacts of any design change proposals and advise if there are implications for compliance with ESIA, ESMP, consent/permits and other relevant project requirements;
- (vi) 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 including its GBV/SEA obligations, with and without contractor and/or client relevant representatives, as necessary, but not less than once per month;
- (vii) Ensure operationalization of Grievance mechanism
- (viii) 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;
- (ix) Agree remedial action/s and their timeframe for implementation in the event of a noncompliance with the Contractor's ESHS obligations;
- (x) Ensure appropriate representation at relevant meetings including site meetings, and progress meetings to discuss and agree appropriate actions to ensure compliance with ESHS obligations;
- (xi) Check that the Contractor's actual reporting (content and timeliness) is in accordance with the Contractor's contractual obligations;
- (xii) Ensure that all environmental and pollution control measures are implemented in accordance with the contract and are maintained for the duration of the works;
- (xiii) Review and critique, in a timely manner, the Contractor's ESHS documentation (including regular reports and incident reports) regarding the accuracy and efficacy of the documentation;
- (xiv) Undertake liaison, from time to time and as necessary, with project stakeholders to identify and discuss any actual or potential ESHS issues;
- (xv) Supervise the Contractor's contractual obligation on HIV/AIDS, COVID-19 and Cholera prevention, as well as safety and health. Check that works are being carried out in a safe manner and report all breaches of safety requirement. Monitor the corrective action taken to ensure unsafe practice does not continue;
- (xvi) ESS capacity assessment and building for contractor

### **3.2.6 Progress Reporting**

The consultant shall prepare several reports to document progress of the works. These include, but not limited to the following:

- i. Comprehensive monthly report to BWB and or BCC which shall among others include the current expected completion date, the current forecast and cost, achievements during the month, status against program, personnel deployed by both the Contractor and the Consultant, equipment on site and status, progress on procurement of key materials and equipment forming part of the works, provision of other required services including power supply connection, current expenditures against expected cash flow, an analysis of any cost changes or variations, report on any significant problem areas and the action being undertaken to resolve them. The reports shall include a summary program showing the status, together with the trend graphs of key activities and a photographic and video record of work on site. The reports shall incorporate individual reports prepared by others as required;
- ii. Comprehensive annual report covering the same subjects as the monthly reports, but in a comprehensive format related to technical and financial matters including consultant's work plan for the next twelve months;
- iii. Prepare a comprehensive final Project Completion Report (PCR) at the end of the assignment. This report must be submitted immediately after completion of contracts and shall summarize the methods of construction, construction supervision performed and recommendations for future projects of similar nature to be under taken by the Employer. The report should also contain summary of all reports in terms of project implementation, targets versus achievements, lessons and experience gained in project implementation, problems encountered and resolved;
- iv. Other reports as required (such as ESHS reports, technical reports etc).

## **4. DELIVERABLES AND TIMEFRAME**

The total duration of the detailed design, tender assistance and construction supervision for public sanitation facilities assignment is estimated at 28 months split into two phases. Phase 1 is estimated to take 4 months while Phase 2 is estimated to take 12 months for construction supervision and 12 defects liability period. Table 2 below provides a summary of the expected deliverables and timeframe. For each deliverable, the consultant shall prepare and submit to the Client one [1] electronic copy, preferably in MS Word, on CD Rom/ Pen-drive and five (5) hard copies of the reports.

Table 2: Deliverables for Phase 1 and 2 for detailed design, tender assistance and construction supervision for public sanitation facilities and PIU and PST offices

No.	Report	No of Copies	Due date (No. Of months from commencement date)	
			Public Sanitation Facilities	PIU and PST Offices
<b>Phase 1: detailed designs and tender documentation</b>				
1	Inception report	5	0.5 months after commencement of phase	0.5 months after commencement of phase
2	Draft Existing Situation Report (DESR)	5	1 months	1 months
3	Final Existing Situation Report	5	1.5 months	1.5 months
4	Feasibility Study Report for the Priority Public Toilets Works	5	2 months	2 months
5	Draft Detailed Design Report and Tender Documents for Public Toilets Works	5	3months	3months
6	Final Detailed Design Report and Tender Documents for Priority Public Toilets Works	5	4 months	4 months
7	Draft Detailed Design Report and Tender Documents for the office upgrades	5	3 months	3 months
8	Final Detailed Design Report and Tender Documents for the office upgrades	5	4 months	4 months
9	Environmental and Social Management Plans (ESMPs)	5	4 months	4 months
<b>Phase 2a – Construction Supervision and Verification</b>				
10	Supervision and contract management manual	5	2 weeks after commencement of phase 2	2 weeks after commencement of phase 2
11	Monthly Supervision Reports	5	Every 5 <sup>th</sup> day of the following month	Every 5 <sup>th</sup> day of the following month

12	Memorandums with proposed actions to be undertaken to address any issues arising during the implementation of the contract	5	As required	As required
13	Certificates on quality of works	5	As required	As required
14	Cash flow projections versus actual disbursements	5	As required	As required
15	Memorandums on the contractor's Interim Certificates payments and claims	5	As required	As required
16	ESHS Reports	5	Every 5 <sup>th</sup> day of the following month	Every 5 <sup>th</sup> day of the following month
17	Operation and Maintenance Manuals	5	1 month after final acceptance	1 month after final acceptance
18	As-Built Drawings	5	1 month before practical completion	1 month before practical completion
19	Final construction report (for each works package)	5	3 months after practical completion	3 months after practical completion
<b>Phase 2b - Defects Liability Period (12 Months)</b>				
20	Quarterly Inspection Reports	5	Every 4 <sup>th</sup> Month after commencement of phase 3	Every 4 <sup>th</sup> Month after commencement of phase 3
21	Project Completion Report	5	3 months before the end of the Defects Liability Period	3 months before the end of the Defects Liability Period

## **5. FORMAT OF REPORTS OR DELIVERABLES**

### **5.1 Inception Report**

The Consultant shall prepare an Inception Report one [1] month after commencement date. This report shall be prepared and submitted in five [5] hard and one [1] electronic copies to the Employer and shall include at least the following:

- i. The Engineer's state of mobilization
- ii. Any changes to the composition of the Engineer's team
- iii. Proposed methodology for carrying out the services, including quality, cost control, and ensuring compliance with environmental, H&S, PHPSA Plan and other requirements
- iv. Proposed site communication procedures and recordkeeping
- v. Detailed program of works, showing time, duration and personnel, as well as inter-relationship between activities
- vi. Risk register that will be updated in the subsequent monthly progress report. The register should highlight what is required for the attention of the client and may affect the successful delivery of the assignment
- vii. Format of Monthly Progress Reports
- viii. Understanding of the ToR and scope of work, any proposals to improve the TORs, indication of adequacy or inadequacy of the ToR
- ix. Outputs implementation, costs and performance of the system,
- x. Preliminary findings from initial assessments (desk or documentation review and field)

### **5.2 Monthly Progress Reports**

The Monthly Progress Reports to the Client during construction phase should include:

- i. Brief description of the Works;
- ii. Description of activities completed and in progress;
- iii. Progress compared with construction programme and estimated completion date including approved extension;
- iv. Financial report with payments to date compared to programme disbursements;
- v. Schedule and cost performance
- vi. Quality control;
- vii. Contractor's personnel and constructional plant;
- viii. Consultant personnel;
- ix. Weather conditions;
- x. Safety matters;
- xi. Labour matters;
- xii. Environmental and pollution control;

- xiii. challenges, issues, risks, updated risk register, and level of effort expected from the consultant's team in the following month; and
- xiv. Photographic records.
- xv. Plant and equipment deployment
- xvi. progress on procurement,
- xvii. planned work or activities in the next reporting period

### **5.3 Environmental, Social, Health and Safety (ESHS) Reports**

The Consultant shall provide immediate notification to the Client should any incident in the following categories occur while carrying out the Services. Full details of such incidents shall be provided to the Client within the timeframe agreed with the Client. Such reports may include issues such as confirmed or likely violation of any law or international agreement, non-compliance with ESMP; any fatality or serious (lost time) injury; (significant adverse effects or damage to private property (e.g. vehicle accident); or any allegation of gender-based violence (GBV), sexual exploitation or abuse (SEA), sexual harassment or sexual misbehavior, rape, sexual assault, child abuse or defilement, or other violations involving children etc.

### **5.4 Contract Management Manual**

The Consultant shall prepare a Contract Management Manual which will lay out procedures to be followed during the execution of the works. The manual shall be set out an organization chart, full contact details for each organization involved in the execution of the works, together with detailed procedures for the issuance of correspondences, information request, shop drawings, engineer's instruction, variation orders management, contract sum adjustments, extension of time, standard monthly reporting by the contractor, minutes of monthly meeting, site inspection, standard forms to be used and project filing system. The Manual will also serve as a basis for on-the-job training of the Employer's Representative staff during the implementation of the works contract.

### **5.5 O&M manuals**

The Consultant shall prepare necessary and detailed institutional arrangements including manuals for operation, servicing and maintenance of the works.

### **5.6 Final Construction Report**

The report shall cover all main aspects of the works, construction methods, design changes, actual conditions, quality control, problems encountered, as-built construction programme compared with original, disbursement schedule and other major aspects during construction of works. The Consultant shall submit five (5) hard copies and two [2] electronic copies of Final Construction Report to the Client within three [3] months of practical completion of each of the works packages.



## **5.7 Project Completion Report (PCR)**

Prepare a comprehensive final Project Completion Report (PCR) at the end of the assignment. This report must be submitted immediately after completion of contracts and shall summarize the methods of construction, construction supervision performed, lessons learnt, and recommendations for future projects of similar nature to be under taken by the Employer. The report should also contain summary of all reports in terms of project implementation, targets versus achievements, lessons and experience gained in project implementation, problems encountered and resolved. The PCR shall cover the relevant information on the Project pertaining to the Consultant's observation and work carried out during Defects Liability Period. The Consultant shall submit five (5) hard copies and two [2] electronic copies of Project Completion Report to the Client within three [3] months before the end of Defects Liability Period and shall cover the relevant information on the Project pertaining to the Consultant's observation and work carried out during Defects Liability Period.

## **6. STAFFING REQUIREMENTS**

### **6.1 Key Professionals Composition and Estimated Time Input**

The Client intends to engage a consultancy firm with experience in engineering design and construction management of public sanitation facilities and offices of similar nature and complexity. A verifiable track record of providing innovative sustainable low-cost construction solutions/designs is an advantage.

The consultant shall ensure that a team of experts and professional staff with necessary education, skill and experience is deployed for all tasks in the field of design, construction supervision, quality assurance and contract/project management of such projects. Furthermore, the consultant must provide specific professionals on public sanitation facilities in low-income areas in developing countries, as well as on construction supervision and management of contracts with multiple sites. An indicative list of the positions and man-months allocation of the key professional staff /experts is given in the tables below:

Table 4 Man-months allocation for key experts.

<b>A. Key Staff</b>					
<b>Sl. No.</b>	<b>Position</b>	<b>Minimum Number of Required Staff</b>	<b>Man-Months Allocation</b>		<b>TOTAL</b>
<b>Phase 1</b>	<b>Detailed Designs and Tender documentation</b>				
1	Team leader	1	4		4
2	Civil/Sanitation Engineer	2	3		6
3	Architect	1	3		3
4	Community/Social Development Officer	1	1		1
5	Environmental Health and Safety Officer	2	1		2
<b>Total</b>					<b>21</b>
<b>Phase 2</b>			Construction Supervision	Defects Liability Period	
1	Resident Engineer	1	12	3	15
2	Civil/ Construction Engineer	2	12	3	30
3	Community/Social Development Officer	1	4	0	4
4	Environmental Health and Safety Officer	1	10	0	10
5	Inspectors (2 No.)	2	12	0	24
<b>Total</b>					<b>83</b>
<b>Grand Total</b>					<b>104</b>

In addition to above listed positions of key professionals; the consultant may make arrangements for other experts and support professionals with adequate experience in relevant fields.

## 6.2 Minimum required Qualifications for Key Experts

<b>Phase 1 : Detailed Designs and Tender documentation</b>				
<b>Sl. No.</b>	<b>Designation</b>	<b>Academic Qualification Required</b>	<b>Professional Experience Required</b>	<b>Specific Experience Required</b>
1	Team Leader	BSc (or higher) in Civil Engineering or similar (e.g. other Engineering disciplines) technical education Plus MSc. In Civil Engineering or equivalent	10 years	8 years' experience in works of similar nature and should have fully completed (in all respects) 2 or more urban sanitation projects as Team Leader. Required previous experience with Public sanitation and office infrastructure design in Southern Africa region or related urban services. Practical experience as Team Leader for minimum of 2 similar assignments i.e. design of public sanitation facilities and office infrastructure. Must be registered with a recognized Engineering Institution. Proficiency in listening and speaking of English. Demonstrable experience with FIDIC Conditions and projects funded by international financing institutions such as the World Bank
2	Civil/Sanitation Engineer	BSc in Civil Engineering or its equivalent	7 years	5 years' experience in works of similar nature and should have handled 1 or more urban sanitation projects involving PSF. Required previous experience with urban sanitation and office infrastructure design in Southern Africa region or related urban services. Practical experience as Civil Engineer for minimum of 2 similar assignments i.e. design of public sanitation facilities and office infrastructure. Must be registered with a recognized Engineering Institution. Proficiency in listening and speaking of English. Demonstrable experience with FIDIC Conditions and projects funded by international financing institutions such as the World Bank.

3	Architect	BSc in Architectural Studies /Design or equivalent	7 years	<p>5 years' experience in engineering drawings and designs. Required previous experience with urban sanitation and office infrastructure design in Southern Africa region or related urban services. Practical experience as Architect for minimum of 2 similar assignments i.e. design of public sanitation facilities and office infrastructure.</p> <p>Proficiency in listening and speaking of English.</p> <p>Demonstrable experience with FIDIC Conditions and projects funded by international financing institutions such as the World Bank.</p>
4	Community/Social Development Officer	BSc in Social Work or Equivalent	10 years	<p>5 years' experience in social work</p> <p>Required previous experience with urban sanitation and office infrastructure design in Southern Africa region or related urban services. Practical experience as Community/Social Development Officer for minimum of 2 similar assignments i.e. design of public sanitation facilities and office infrastructure.</p> <p>Proficiency in listening and speaking of English.</p> <p>Demonstrable experience with FIDIC Conditions and projects funded by international financing institutions such as the World Bank.</p>
5	Environmental Safeguards Officer	BSc in Environmental Sciences or Engineering or equivalent.	10 years	<p>5 years' experience in works of similar nature and must be familiar with the environmental impacts surrounding such developments.</p> <p>Required previous experience with urban sanitation and office infrastructure design in Southern Africa region or related urban services. Practical experience as Environmental Safeguards Officer for minimum of 2 similar assignments i.e. design of public sanitation facilities and office infrastructure.</p>

				Proficiency in listening and speaking of English. Demonstrable experience with FIDIC Conditions and projects funded by international financing institutions such as the World Bank.
<b>Phase 2: Construction Supervision, Site Handover and Defects Liability Period</b>				
6	Resident engineer	BSc (or higher) in Civil Engineering or similar technical education Plus Master's Degree in Civil or Sanitary Engineering or its equivalent including project management or contract management	15 years	At least 15 years' experience in construction supervision, 10 years of which should as Resident Engineer in construction management. Practical, hands-on experience in construction of public sanitation facilities and others similar installations, is highly desirable. Should have fully completed (in all respects) at least 2 urban comprehensive sanitation projects as Resident Engineer involving planning, process design, detail engineering design, construction supervision, monitoring and commissioning. The Resident Engineer should have demonstrable working experience on works. Must be registered with a recognized Engineering Institution. Proficiency in listening and speaking of English. Demonstrable experience with FIDIC Conditions and projects funded by international financing institutions such as the World Bank
7	Civil/ Construction Engineer	BSc in civil engineering	10 years	At least 10 years of professional experience working as Inspector of civil engineering works, water and wastewater Inspector or other equivalent type of projects. Working experience in a similar position in at least 2 similar projects, in the past ten years. Proficiency in listening and speaking of English. Demonstrable experience with FIDIC Conditions and projects funded by international financing institutions such as the World Bank
8	Community/Social Development Officer	BSc in Social Science, Social Work, Sociology or its equivalent	10 years	At least 5 years post qualification professional working experience in construction of sanitation facilities projects. Working Experience in provision of Social (including sexual exploitation and abuse (SEA) and gender-based

				<p>violence (GBV)), Health and Safety [ESHS] oversight on infrastructure projects; in at least Three Similar Projects size, complexity and financial magnitude.</p> <p>Familiarity with World Bank Environmental and Social Framework and guidelines (Social, Compensation and Resettlement) and Social National Regulatory Framework. At least two years working experience in Sub-Saharan African Countries</p>
9	Environmental, Health and Safety Officer	BSc in Environmental Management, Environmental Engineering,	10 years	<p>At least 5 years post qualification professional working experience in construction of sanitation facilities projects. Working Experience in provision of Environment, Social (including sexual exploitation and abuse (SEA) and gender-based violence (GBV)), Health and Safety [ESHS] oversight on infrastructure projects; in at least Three Similar Projects size, complexity and financial magnitude. Familiarity with World Environmental and Social Framework and guidelines (Environmental, Social, Health and Safety and Compensation and Resettlement) and Environmental and Social National Regulatory Framework. At least two years working experience in Sub-Saharan African Countries Experience on World Bank funded projects and World Bank safeguards instruments</p>
10	Inspectors	<p>Bachelor's Degree in Civil/Electromechanical Engineering/Construction Management,</p> <p>or</p> <p>Diploma in Civil/Electromechanical Engineering with at least eight</p>	<p>3 years</p> <p>5 years</p>	<p>At least 2 years of relevant experience or its equivalent in sewerage infrastructure and concrete works of similar magnitude and complexity</p> <p>At least 3 years of relevant experience in sewerage infrastructure and concrete works of similar magnitude</p>

		<p>or</p> <p>Technician qualifications in Civil/ Electromechanical Engineering with at least</p>	5 years	<p>At least 3 years of relevant experience in sewerage infrastructure and concrete works of similar magnitude and complexity.</p> <p>Required previous experience with urban sanitation and office infrastructure design and inspections in Southern Africa region or related urban services. Practical experience as Environmental Safeguards Officer for minimum of 2 similar assignments i.e. design of public sanitation facilities and office infrastructure.</p> <p>Proficiency in listening and speaking of English. Demonstrable experience with FIDIC Conditions and projects funded by international financing institutions such as the World Bank.</p>
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## **7. CONTRACT MANAGEMENT**

### **7.1 Obligation of the Consultant**

- i. The Consultant shall be responsible for the payment of local taxes and duties for all goods and services including levies during execution of the project. The Consultant is, therefore, expected to liaise with tax authorities, National Construction Industry Council (NCIC) and Blantyre City and District Councils in this respect.
- ii. The Consultant is expected to be fully self- sufficient in terms of accommodation, office supplies, office equipment, communication, transport, VISAs or permits, insurance and living expenses of the staff. The Consultant's proposal should include the cost of procuring 2 No. Brand New Twin cab 4 x 4 pickup vehicles, for use during the assignment, as provisional sums whose estimated market value has been predetermined by the client as part of Request for Proposal documents. The consultant will be instructed to procure this and/or any other property, under the direction and supervision of the client All items, including vehicles, bought under this assignment or contract that will become property of the client after the project. The cost of running the vehicles will be borne by the Consultant.
- iii. The data, documentation and assets from the consultancy will remain the property and in the custody of the Client at the end of the consultancy.
- iv. The Consultant shall be available, at all times, for subsequent discussions of the assignment with the Client. The Consultant shall be responsible for the payment of local taxes and duties for all goods and services including applicable levies, during execution of the project.

### **7.2 Obligation of the Client**

The Client shall, wherever possible:

- i. Assist the Consultant in obtaining information and data to enable the Consultant execute the services described herein effectively. However, the Consultant shall be solely responsible for executing the ground levels surveys, analysis and interpretation of all data and from his findings, making appropriate conclusion and recommendations;
- ii. Ensure that data is accurate and available for ease of supervision of the works;
- iii. Provide copies of available study reports and other relevant documents;
- iv. Ensure that the Consultant has access to all available information required for timely execution of the assignment;
- v. Assist the consultant to obtain necessary immigration, VISAs, registration with any board or agency, and residence work permits for the approved expatriate personnel and their dependants. However, the consultant remains responsible for this



### 7.3 Reporting Arrangements Reviews and Schedule of Deliverables

Blantyre Water Board, with support from Blantyre City Council, will be the implementing agency for the execution of this assignment. The Consultant will be reporting to the PIU Manager on contractual matters and to the BCC Project Support Team Coordinator on daily operational issues. The Consultant will be required to submit all the reports to Project Implementation Unit, with copies to BCC as per the specified timelines.

## 8. Payment Schedule

### 8.1 Phase 1

Payments for both Phase 1 and 2 of the assignment shall be based on approved deliverables. Table 4 shows the expected payment schedule (subject to negotiation with winning bidder).

**Table 4: Payment Schedule for phase 1**

No.	Deliverable	% Of payment
<b>Phase 1: Review, Update, Design and Tender Phase</b>		
1.	Inception Report	10%
3	Final Existing Situation Report	10%
4	Draft design report (Drawings, Specifications, Implementation schedule); Contracting strategy and Draft Tender documents	10%
5	Draft Detailed Design Report and Tender Documents for offices upgrades	10%
6	Environmental and Social Management Plans (ESMPs)	15%
7	Draft technical guidelines, management structure and standards for construction of PSF	10%
8	Final design report, contracting strategy and tender documents for PSF	15%
9	Final design report, contracting strategy and tender documents for the office upgrades	20%
Total		100%

## 8.2 Phase 2

Phase 2 of the consultancy assignment is expected to be conducted over a period of 24 months (this includes 12 months defects liability period). Table 5 below provides a summary of the expected deliverables during this period. For each deliverable, the consultant shall prepare and submit to the Client one [1] electronic copy, preferably in MS Word, on CD Rom/ Flash Pen and five (5) hard copies of the reports.

The Consultant will be required to prepare reports during the implementation of the project. All reports and documents will be in English language and all quantities expressed in metric units. The Consultant shall prepare and submit to the Client the following reports:

**Table 1: Summary of the Expected Deliverables – Phase II**

<b>No.</b>	<b>Description</b>	<b>Due date (No. of months from commencement date)</b>
1	Inception report	1 month from commencement
2	Monthly progress reports	Monthly
3	Contract management manual	1.5 month from commencement
4	Memorandums with proposed actions to be undertaken to address any issues arising during the implementation of the contract	As required
5	Certificates on quality of works	As required
6	Cash flow projections versus actual disbursements	As required
7	Memorandums on the 'contractor's Interim Certificates payments and claims	As required
8	ES Reports	Monthly
9	Operation and Maintenance Manuals	1 month after project completion
10	As-Built Drawings	1 month after practical completion
11	Final construction report (for each works package) _	3 months after practical completion
12	Project Completion Report	3 months before the end of the Defects Liability Period

**ANNEX 1: LIST OF DOCUMENTS TO BE REVIEWED BY THE CONSULTANT**

<b>ITEM NO</b>	<b>DOCUMENT</b>	<b>YEAR</b>
1	Blantyre Sewage Scheme: Sewerage and Sewage Disposal Works Extensions Engineering Reports	1975
2	Study and Preliminary Design for the Improvement of Mudi and Limbe Sewer System and Limbe Sewage Disposal Works	1980
3	Blantyre City Sanitation Master Plan	1995
4	Business Model Development on Toilet Emptying and Desludging Activities	2016
5	Blantyre City Wastewater Treatment Plants Assessment Report	2017
6	Situational Analysis Study for the Development of City Sanitation Masterplan Draft Report	2021