MALAWI WATER AND SANITATION PROJECT – 1

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR PROPOSED CONSTRUCTION/REHABILITATION AND UPGRADING OF METERING SYSTEM OF SMART WATER KIOSKS UNDER THE CHOLERA EMERGENCY PREPAREDNESS AND RESPONSE

PROJECT PROPONENT:

BLANTYRE WATER BOARD,
OFF MAKATA ROAD,
Private Bag 30369,
BLANTYRE 3,
Malawi

Phone : +265 1 872 000
Email: piu@bwb.mw

FEBRUARY 2024

EXECUTIVE SUMMARY

1. Introduction`

This ESMP is for the proposed construction of Fifteen (15) new kiosks and upgrading of the metering system of Fifteen (15) other kiosks in cholera hotspots in Blantyre metropolitan area. Blantyre Water Board (BWB) is a Statutory Corporation under the Ministry of Water and Sanitation. It was established in 1929 and was incorporated under the Water Works Act No. 17 of 1995 with a purpose of supplying wholesome water to residents of the City of Blantyre and its surrounding peri-urban areas as directed by the Ministry of Water and Sanitation (MOWS) in accordance with the provisions of the Act.

In a bid to improve water supply and sanitation service delivery to residents of the city of Blantyre and surrounding areas, the Government of Malawi (GoM), through BWB and Blantyre City Council (BCC), with financial support from World Bank`s International Development Association (IDA), is implementing the Malawi Water and Sanitation Project-1 (MWSP-1). The project interventions are expected to contribute to improved access to water and sanitation services for the residents of Blantyre, thus improving the city's health outcomes and quality of life and accord a favorable business environment for the residents within Blantyre Metropolitan Area. The project duration is 5 years, running from March 2023 to March 2029.

Following the emergency event of Cholera which hit Malawi, a provisional package of emergency cholera response activities comprising water supply interventions (Component 1), awareness raising, and public sanitation facilities (Components 2) will be implemented under the project. One of the critical activities under the Cholera Emergency and Response Plan is the construction of new kiosks and upgrading of the metering system of existing kiosks in Cholera hotspots. This activity is expected to be implemented for 120 calendar days.

2. Nature and Scope of the Project

The nature and scope of works for the project include the construction of fifteen (15) new kiosks and upgrading of the metering system of already existing 15 other kiosks in cholera hotspots in Blantyre metropolitan area. Specifically, the works shall involve the following: Land Clearing, Excavation for foundation; Reinforced concrete work foundation, Reinforced concrete frame and upper floor, Block work (substructure & superstructure (3m high), Concrete roofing, wall finishes – pointing/ plastering, painting, Floor finishes – cement screed, Ceiling finishes – plastering and painting, Windows and doors, Joinery fittings and Electrical service.

3. Rationale of the Study

The operation of the proposed project activity requires an Environmental and Social assessment to be carried out in compliance with the regulatory requirements of the Environmental Management Act of 2017 (EMA) that proposed development projects should be implemented in an environmentally and sustainable manner. EMA requires that an environmental assessment should be carried out for such projects. Blantyre Water Board was

therefore asked to prepare an Environmental and Social Management Plan to integrate environmental and social issues into the project.

4. Justification of the Project

This project will greatly contribute to the achievement of the country's goals as outlined in the ***Malawi 2063***. The provision of potable water in cholera prone areas in Blantyre shall improve health and reduce occurrence of water borne diseases in the area which will result in reducing financial resources being spent for hospital treatment. Moreover, many people, including women shall reduce walking distances to fetch potable water.

5. Project Objectives

The main objective of the intervention is to increase access to potable water in cholera hotspots and potential hotspots in Blantyre metropolitan area. Furthermore, the following are additional objectives of the intervention:

- **To increases access to safe water:** Establishment of water kiosks at strategically selected sites to ensure immediate and consistent access to safe and clean drinking water for communities affected by cholera outbreaks.
- **To promote hygiene:** Utilization of the water kiosks as educational hubs to conduct hygiene awareness campaigns, promoting behaviour change and improved sanitation practices among community members.
- **To reduce Cholera transmission:** By centralizing water supply and minimizing reliance on potentially contaminated sources, the project seeks to reduce the risk of cholera transmission and other waterborne diseases.
- **To support health care system:** reduction in cholera cases will alleviate the burden on local healthcare facilities by preventing new cholera cases, thereby enabling healthcare providers to focus on treating existing cases and other critical medical emergencies.
- **Community Resilience:** Fostering long-term resilience against cholera and waterborne diseases by establishing a culture of safe water practices and hygiene awareness within the targeted communities.

6. Objectives environmental and social assessment/ study

The objective of this assessment was mainly to:

- Outline the nature and scope of the proposed project areas;
- Outline the policy and legal framework governing the proposed activities;
- Describe the existing biophysical and socio-economic environments;
- Identify key environmental and social impacts and recommend measures to enhance positive impacts and reduce, mitigate or eliminate negative impacts; and
- Propose an environmental and social management plan and monitoring plan to deal with the identified key environmental and social impacts.

7. Methodology

Initial desk and field investigations, including public consultations, were conducted prior to detailed field data collection. The team reviewed relevant literature pertaining to the proposed project. Field observation for physical parameters including geology, drainage, topography, amongst others, was conducted within the project sites. The study also engaged immediate surrounding communities and local government authorities to get an in depth understanding of the current water problems and relate to the proposed solution through the construction of the smart water kiosks.

8. Summary of identified impacts

This ESMP focuses on identifying both positive and adverse impacts of the proposed construction and operation of smart kiosks project. For positive impacts, the ESMP has provided enhancement measures and for negative impacts, the ESMP has provided mitigation measures. Below is the summary of the anticipated impacts and measures to be undertaken.

8.1. Positive impacts

8.1.1. Access to potable water by the communities

Proposed enhancement measures

- Proper maintenance of the kiosks;
- Conduct regular inspection of the pipelines to detect leaks, overflows and repair them;
- Employ adequate staff and ensure that they provide appropriate work inputs through proper work schedules; and
- Sensitize the water users on proper water management practices, water pricing and importance of payments of water bills in time

8.1.2. Increase in trade opportunities

Proposed enhancement measures

- Pay materials suppliers within the agreed times;
- Source materials from licensed suppliers;
- Support and promote entrepreneurship skills amongst the communities and business people in the project area by engaging them where appropriate; and
- Promote Village Savings and Loan (VSL) schemes during project implementation.

8.1.3. Creation of employment opportunities

Proposed enhancement measures

- Inform local communities of employment opportunities;
- Prioritise employment of local persons that qualify; pay workers above the minimum wage and timely pay overtime; and
- Sensitize workers to save and invest during project implementation

8.1.4. Improved sanitation, hygiene and health

Proposed enhancement measures

- Sensitize communities on hygienic practices for handling water to avoid secondary contamination; Promote general sanitation practices amongst communities in the project area;
- Conduct trainings aimed at building the capacity of water kiosk committees;
- Monitor the quality of water and promote health and hygiene at water points;
- Support initiatives implemented by Community Based Organizations to promote health, sanitation and hygiene; and
- Ensure there is adequate and efficient drainage within the community water points.

8.1.5. Increase in revenue generation

Proposed enhancement measures

- Properly manage revenue from the water sales;
- Regularly review water tariffs with consideration of the consumers to avoid overcharging them; and
- Manage water well by replacing old pipes, repairing pipes to prevent leakages.

8.2. Negative impacts

8.2.1. Loss of land and properties

Proposed mitigation measures

- Locate distribution pipelines within existing road reserves, as much as possible, and ensure that owners of land earmarked for construction/ rehabilitation of kiosks are engaged and freely/ willfully sign consent forms.
- Conduct sensitization and awareness on the need for land for the project and the compensation process;
- Coordinate/ involve other stakeholders (i.e. city and district officials within the project area) in the engagement of owners of land for water kiosks and signing of the consent forms in line with the MWSP RPF;
- Strengthen the Grievance Redress Mechanism used in other projects (such as Lilongwe Water and Sanitation i.e. use of WhatsApp forum to capture grievances) for use in this project;
- Sensitize the affected people to use the existing Grievance Redress Mechanism;

8.2.2. Potential risks of theft and vandalism

Proposed Mitigation Measures

- Regular inspection of the water infrastructure to identify and rectify water leakages;
- BWB to periodically conduct consultations and sensitizations with block leaders and security personnel against vandalism;
- Provide security at the water kiosk sites;
- Support activities of the neighbourhood watch (community policing) e.g. through provision of torches, uniforms and shoes;
- Reward for reports of vandalism and theft that may lead to capture;
- Report theft and vandalism cases to the police;

- Regularly monitor the water infrastructure; and
- Include the people from the local area in the work force

8.2.3. Increased solid waste generation

Proposed Mitigation Measures

- Sell or recycle metal waste to tinsmiths or vendors for reuse or re-sale;
- Provide solid waste storage bins and prevent overfilling;
- Dispose of collected waste in an approved disposal site; and
- Implement sensitization campaigns on consequences of indiscriminate waste disposal.

8.2.4. Increased dust generation

Proposed mitigation measures

- Apply water to suppress dust being generated or at times of strong wind;
- Provide protective gear (dust masks) to workers and ensure that they wear them;
- Erect a barrier around the work sites where construction activities are taking place to break or reduce wind and dust movement; and
- Store and handle sand and cement properly to limit dust generation.

8.2.5. Increased risk of soil erosion and sedimentation

Proposed Mitigation Measures

- Stockpile soil away from the excavation works at the site;
- Install sediment traps on natural drainage paths at construction site;
- Restrict land clearing only to the proposed site for construction activities;
- Compact and spray water on loose soil in all disturbed areas during construction phase

8.2.6. Increased risk of injuries and accidents to workers and public

Proposed Mitigation Measures

- Develop a workplace safety policy
- Induct workers on OSH requirements and repeat reminders on the same;
- Inform and sensitise the public about all open pits and trenches;
- Provide appropriate Personal Protective Equipment (PPEs) to construction workers and ensure that it is always used;
- Train First Aiders and provide fully stocked first aid kit; and
- Report accidents of people to the Department of Labour.

8.2.7. Disruption of water supply

Proposed Mitigation Measures

- Give adequate notice of potential water disruption to the water users that could be affected; and

- Provide alternative means of supplying water such as temporary by-pass piping or water bowsers where appropriate.

8.2.8. Increased risk of noise pollution and vibrations

Proposed Mitigation Measures

- Regularly service and maintain equipment;
- Provide ear muffs for the workers in noisy areas;
- Reduce noise by using plastic or rubber liners, noise control covers, and dampening plates and pads on large sheet metal surfaces;
- Limit the number of days of operation; restrict hours of operation and schedule noisy tasks for periods of low occupancy; and
- Notify the public of upcoming loud events.

8.2.9. Risk of water leakage and flooding

Proposed Mitigation Measures

- Ensure the technical designs of the kiosk are provided with proper water drainage;
- Ensure use of standard materials and competent expertise for technical aspects;
- The kiosk infrastructure should have a raised foundation to prevent it from being inundated during flooding.

8.2.10. Increase in spread of Sexually Transmitted Infections (STIs), HIV and AIDS, unplanned pregnancies and breaking up of families

Proposed Mitigation Measures

- Sensitize workers and surrounding communities on the risks of indulging in casual sex;
- Sensitize girls on the dangers of getting involved in pre-marital sex;
- Provide both male and female condoms to workers;
- Develop and implement a workplace policy on HIV and AIDs; and
- Implement and follow-up on Grievance Redress Mechanisms.

8.2.11. Gender-Based Violence (GBV) and Violence Against Children (VAC) and Sexual Exploitation & Abuse and Sexual Harassment (GBV/SEA/SH) –

Proposed Mitigation Measures

- Sensitize communities and workers about GBV, VAC, SEA, and SH risks during stakeholder engagements before project implementation.
- Conduct awareness campaigns to encourage reporting and publicize reporting channels.
- Sensitize communities on the GRM before project implementation.
- Integrate issues of GBV/SEA/SH comprehensively into the GRM.
- Implement and follow up on GRM to address reported cases.
- Ensure Codes of Conduct are prepared, signed, understood, and applied by all contractor's staff.
- Develop a comprehensive Code of Conduct that integrates issues of SEA/SH, translated into vernacular language.
- Provide separate facilities for men and women.

- Install appropriate signage on GBV in the local language.
- Provide equal employment opportunities to women and men.
- Coordinate with stakeholders, including the District Gender Welfare Office and NGOs, for ongoing projects promoting gender equality and ending sexual harassment.
- Enforce punitive and disciplinary measures, including dismissal, for project workers involved in sexual exploitation & abuse and sexual harassment.
- Create a conducive work environment that encourages workers to report cases of sexual harassment.
- Conduct on-board training on GBV/SEA/SH/VAC for all workers.
- Organize Tool Box Talks on GBV/SEA/SH/VAC
- Develop a comprehensive GBV/SEA/SH/VAC prevention and response plan.
- Collaborate and network with District Social Welfare, District Gender Office, and NGOs in the implementation of the GBV Action plan.
- Ensure the contractor takes necessary measures to prevent acts of sexual abuse and/or underage sex by their employees.

8.2.12. Child labour and trafficking

Proposed Mitigation Measures

- Employ people who have genuine identification to prove that they are 18 years old and above;
- Employ workers through established recruitment agencies; and if they are from other districts make sure the office of District Commissioner is informed.
- Maintain an accurate staff register against which employee presence must be checked every day.
- Collaborate and network with District labor office in implementation of Labor Management plan.

9. Conclusion

The environmental and social impact assessment of the project shows that, overall, this project does not pose serious long-term impacts on the geology, topography, soils, water resources, biological resources and the social environment of the area. The general negative impact of the project in the area is moderate negative, amenable to mitigation and is insufficient by itself to prevent the implementation of the project whose positive spin offs far much outweigh the short-term negatives.

10. Recommendations

The Environmental and Social Management Plan (ESMP) in this report describes the environmental and social impacts of the project and outlines corresponding management measures that should be implemented to mitigate the potential adverse environmental impacts that have been identified. The project should therefore comply with all local laws and regulations, which seek to ensure that the project is implemented in an environmentally sound manner while safeguarding the safety and health of the workers and the surrounding community. In this regard, it is recommended that:

- The project should adopt and implement the recommendations advanced in this report;

- The Project must ensure that safety and health issues are given the necessary attention;
- The developer should ensure that those who will be involved in the execution and monitoring of the ESMP are made aware of their roles and responsibilities.

Table of Contents

List of Figures

List of Tables

List of Acronyms and abbreviations

AIDS	Acquired Immunodeficiency Syndrome
BCC	Blantyre City Council
BWB	Blantyre Water Board
CoC	Code of Conduct
CDSS	Community Day Secondary School
DESC	District Environmental Subcommittee
EAD	Environmental Affairs Department
EDO	Environmental District Officer
ESCOM	Electricity Supply Corporation of Malawi
EMA	Environment Management Act
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standard
ESMF	Environmental and Social Management Framework
GBV	Gender Based Violence
GIS	Georgraphical Information Systems
GoM	Government of Malawi
GRM	Greivance Redress Mechanism
HIV	Human Immunodeficiency Virus
IEC	Information, Education and communication
IDA	International Development Association
IWRM	Integrated Water Resources Management
MEPA	Malawi Environmental Protection Agency
MWSP	Malawi Water and Sanitation Project
MoWS	Ministry of Water and Sanitation
NEAP	National Environment Action Plan
NEP	National Environmental Policy
NRM	Natural Resources Management
NWRA	National Water Resources Authority
OHS	Occupational Health and Safety
OSHWA	Occupation Safety Health and Welfare Act
PDO	Project Development Objective
PIU	Project Management Unit
PPE	Personal Protective Equipment
SEA	Sexual Exploitation and Abuse
SH	Sexual Harassment
STIs	Sexually Transmitted Infections
SWK	Smart Water Kiosk
TOR	Terms of Reference
TA	Traditional Authority
VEC	Valued Environmental Component
VAC	Violence Against Children
WASH	Water, Sanitation and Hygien
WUA	Water Users Association

CHAPTER 1: INTRODUCTION

This is an Environmental and Social Management Plan (ESMP) for the construction/ rehabilitation and operation of 30 smart water kiosks (SWKs) in 30 locations/ sites in Blantyre City. Of the 30 kiosks, 15 are existing kiosk structures/ buildings which the project will rehabilitate and upgrade into SWK and other 15 are new constructions. The specific areas/ names of sites for the construction and rehabilitation of the SWKs are: 1) kiosks to be newly constructed include Kandaya 3 & Mbayani 2 in Bangwe, Luchenza in Namiyango, Andrew in Kachere, Pokopoko in Limbe Market, Malabada & Mango in Gamulani, Safarawo 1 & Safarawo 2 in Ndirande, Ntoso in Nambewe, Gaka in Manase, Ndogolo in Manje, Chibwana in Mthukwa, Magasa in Mbayani and Mwachande 1; and 2) existing kiosk structures to be rehabilitated and upgraded to SWK include Nkhuku Ten in Bangwe, Chibalo in Namiyango, Thundu & Mboma Macheso in Manje, Lamula in Chirimba, Makhetha 2 in Makhetha, Office in Malabada, Chempira in Lunzu, Chinangwa 2 in Mbayani, Pensulo 2 in Pensulo, Chakana 2 in Ndirande, Suya in Chirimba, Mmangitsa & Nyangu in Baluti Area and Mkoka in Nancholi.

This chapter provides background information on the proposed project, proposed project locations, details of the project developer, objectives of the ESMP and the approach and methodology for the development of the ESMP.

1.1 Background Information

Blantyre Water Board (BWB) is a Statutory Corporation under the Ministry of Water and Sanitation. It was established in 1929 and was incorporated under the Water Works Act No. 17 of 1995 with a purpose of supplying wholesome water to residents of the City of Blantyre and its surrounding peri-urban areas as directed by the Ministry of Water and Sanitation (MOWS) in accordance with the provisions of the Act.

In a bid to improve water supply and sanitation service delivery to residents of the city of Blantyre and surrounding areas, the Government of Malawi (GoM), through BWB and Blantyre City Council (BCC), with financial support from World Bank`s International Development Association (IDA), is implementing the Malawi Water and Sanitation Project-1 (MWSP-1) with a total of USD 145 million and will run from March 2023 to March 2029. The Project Development Objective (PDO) is to increase access to improved water supply and safely managed 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 implementation of the following components: 1) Water supply improvements; 2) Priority sanitation investments; 3) Institutional capacity strengthening; 4) Technical Assistance and Project Management Support; and 5) Contingency Emergency Response.

As part of response to Cholera outbreak which affected several parts of Malawi including Blantyre City, Malawi Water and Sanitation Project (MWSP) in consultation with WB allocated a financing of MK500 million (USD300,000) to assist in increasing access to improved water supply through construction of 15 new smart water kiosks and upgrading of 15 already existing water kiosks in Blantyre City, targeting over 10,000 people. The construction and upgrading works of the kiosks will take 120 calendar days and will to create employment opportunities for more than 150 local

people (at least 5 people per site) of which 40% will be females. All the 30 kiosks will be constructed/ rehabilitated by one contractor.

1.2 Nature and scope of the proposed project

The objective of the proposed construction and upgrading of smart the smart waters kiosks include but not limited to: 1) increases access to safe water; 2) to promote hygiene through uutilization of the water kiosks as educational hubs to conduct hygiene awareness campaigns, promoting behaviour change and improved sanitation practices among community members; 3) to reduce Cholera transmission use of safe water; 4) to support health care system: reduction in cholera cases will alleviate the burden on local healthcare facilities by preventing new cholera cases, thereby enabling healthcare providers to focus on treating existing cases and other critical medical emergencies; and 5) to foster community long-term resilience against cholera and waterborne diseases by establishing a culture of using safe water and hygienic practices awareness within the targeted communities.

The proposed construction and upgrading works will involve activities such as land clearing, excavations works, reinforced concrete works, block work (substructure & superstructure of about 3m high), concrete roofing, wall finishes (pointing/ plastering, painting), floor finishes (cement screed), ceiling finishes (plastering and painting), installation of windows and doors, joinery fittings, electrical services, external works (storm water drains, soak away pit) and installation of water ATM .

In light of the proposed civil works at the mentioned sites, the MWSP project recognises the need to conduct an environmental and social assessment in order to identify anticipated positive and negative impacts and propose measures for managing these impacts. This will also assist the project to have social acceptance through the involvement of all relevant stakeholders. The report is a basis for managing, mitigating and monitoring the environmental and social impacts associated with the planning, construction, demobilisation, operation and maintenance phases of the proposed project.

1.3. Project proponent

The project proponent details are provided below.

Blantyre Water Board,
Off Makata Road,
Private Bag 30369,
Blantyre 3,Malawi

Stainley Bakolo
Phone : +265 1 895 000
Email:bwb@bwb.mw
piu@bwb.mw

1.4. Objectives of Environmental and Social Management Plan

The ESMP has been conducted in line with the Terms of Reference (ToRs) provided by MEPA contained in Annex 1 and they cover all the 30 sites. The main objectives are:

1) To determine the compatibility of the proposed project and evaluate the local environmental and social conditions of the areas;
2) To examine, in detail, likely adverse environmental and social aspects and associated impacts;
3) To provide appropriate enhancement and mitigation measures for the significant positive and negative impacts respectively; and
4) To develop an ESMP with mechanisms for monitoring and evaluating compliance and environmental performance.

1.5.Rationale of the Study

The operation of the proposed project activity requires an Environmental and Social Management Plan to be carried out in compliance with the regulatory requirements of the Environment Management Act of 2017 that proposed development projects should be implemented in an environmentally and sustainable manner. EMA requires that an environmental assessment should be carried out for such projects. Blantyre Water Board was therefore asked to prepare an Environmental and Social Management Plan to integrate environmental and social issues into the project. The need for ESMP was also triggered by environmental and social screening which was carried out at each and every site earmarked for construction and rehabilitation of the kiosks, refer to Annex 2 for some of the completed environmental and social screening forms (Luchenza Kiosk, new kiosk and Chakana 2 Kiosk, existing kiosk)

1.6.Justification of the Project

This project will greatly contribute to the achievement of the country's goals as outlined in the ***Malawi 2063***. The provision of potable water in cholera prone areas in Blantyre shall improve health and reduce occurrence of water borne diseases in the area which will result in reducing financial resources being spent for hospital treatment. Moreover, many people, including women shall reduce walking distances to fetch fresh water.

1.7 Spatial Location and Size of Land

There are 30 (15 new and 15 existing) sites in Blantyre City that have been earmarked for construction, rehabilitation and upgrading smart water kiosks. The specific name of each site are provided in the introduction section. In all the earmaked locations, the land size for the construction of the smart water kiosks (SWKs) is $25m^2$. All the sites are located in Blantyre City. Figure 1 shows the map of the sites earmarked for the construction and upgrading of the SWKs.

Figure 1: Map of sites earmarked for the construction & upgrading of SWKs

The land earmarked for the construction and upgrading of SWKs belongs to the community individuals and is freely given to the project as indicated by one of the signed consent forms for Safalo 1 Site contained in Annex 3. All the land owners are beneficiaries of the project in sense that they will also draw water from the kiosks

1.8. Approach and Methodology in the development of the ESMP

The general steps followed during the assessment were desk studies; physical inspection of the site and surrounding areas; stakeholder consultations; and reporting and documentation.

1.8.1 Desk Study

The sources of information included Environmental and Social Impact Assessment (ESIA) reports for similar projects and some selected national documents, policies, and pieces of legislation. Among the documents, the desk study looked at relevant project documents that include the Environmental and Social Screening (ESS) report, the project's Environmental and Social Management Framework (ESMF), BWB and BCC Geographical Information Sysytem (GIS) Database, and the World Bank Environmental and Social Framework (ESF).

1.8.2 Field Visits

The study team conducted field surveys in the project sites between 12th – 16th June 2023 to observe and capture baseline data on the existing environment. During this period, studies were done to capture various information about the landscape and visual, ecology (flora and fauna), agriculture and socio-economic environment, among others. These visits assisted in identifying and assessing environmental and social impacts that might occur because of the project implementation

1.8.3 Stakeholder Consultations

Stakeholder participation involved engaging key stakeholders within the project area and selected structures such as Water Users Associations (WUA) and local leadership such as Councilors/ block leaders who expressed their views on the proposed project. The stakeholder participation process tried to ensure that due consideration is given to stakeholder values, concerns and preferences when decisions regarding the project are made. The purpose of stakeholder involvement was to: (i) inform the stakeholders about the proposed activity and its likely effects; (ii) canvass their inputs, views and concerns; and (iii) take account of the information and views of the stakeholders in the E & S assessment and decision-making. Some of the issues that were raised by stakeholders include: 1) a concern based on previous projects that usually project construction materials are prone to theft and even the constructed structures are prone to vandalism; and 2) construction projects of this nature are associated with spread of Sexually Transmitted Infections (STIs) including HIV and AIDS, victims being women and girls who are attracted by migrant construction workers. Additional concerns/ issues and their responses are contained in Annex 3.

1.9. Potential users of the ESMP

The ESMP shall be used by various stakeholders who are involved in planning, implementation, management and monitoring of project activities such as contractors, BWB, BCC, MEPA, Blantyre District Councils, National Water Resources Authority and WUA and the public. The plan contains policies and procedure to be adhered to, analysis of potential environmental and social impacts and suggested mitigation measures at various stage of implementing the project activities

CHAPTER 2: PROJECT DESCRIPTION

This chapter provides the description of the project according to project cycle (project phases) in order to ease understanding with regards to the level of detail and available planning or design options. The chapter also describes the activities to be undertaken in the implementation of the project.

2.1. Nature and scope of the project

The proposed project is the construction and operation of 15 new smart water kiosks and 15 upgraded smart water kiosks. Each smart water kiosk will cover a floor area of 13.272 square metres (3.587 x 3.7 metres) with a 5,000-litre tank fitted on top of each kiosk. It is estimated that 70 households will benefit from each kiosk. The new kiosks will be constructed in selected Cholera hotspots including markets and low-income residential areas. The land on all the proposed sites has been donated voluntarily as such there will be no compensation. The main building material will be cement hollow blocks of 400mm x 200mm x 200 mm measurements.

2.2 Main activities of the project

The project implementation cycle is categorized into planning and design, construction, demobilization, operation and maintenance phases. The main activities to be carried out during these phases have been highlighted in the following sections.

2.2.1 Planning and design phase

This is the first phase of the project. During this phase all the different aspects of the project will be defined including land surveying, technical feasibility and environmental assessment studies, preparation of technical drawings, resource mobilisation and tendering of the works. This also includes preparation of construction designs, processing of applicable authorization and approvals from relevant authorities, preliminary consultations, and land use planning.

The design for the Smart Water Kiosks (SWKs) to be constructed has been adopted from Lilongwe Water Board under the Lilongwe Water and Sanitation Project (LWSP), which were already approved by World Bank. The design for some of the existing kiosks is the almost the same as that of LWSP but lacks features like the smart water meter, water storage tank, painting and draining works, among other things. MWSP will rehabilitate and upgrade the existing kiosks by installing these features; however, no demolitions of existing structures will take place. Please refer to Annex 5 for the design drawings of the kiosks to be constructed.

Proposed sites for the 15 new water kiosks to be constructed as well as the 15 kiosks to be upgraded were identified. The choice of the construction site was the most important factor. The site selection took into consideration the following factors: 1) Cholera hotspots and potential cholera hotspots; 2) proximity to existing water supply mains; 3) hydraulic adequacy of the main and 4) absence of clean water.

Considering the selection criteria as highlighted above, there will be no requirement to install water pumps. In addition, only new kiosks will require new water connection to mains whose costs were already incorporated in the project cost.

2.2.2 Construction phase

The main activities to be undertaken during this phase of the project are land clearing and construction of the 15 new kiosks as per the designs as well as upgrading of 15 existing kiosks into

smart water kiosks. During this period, there will be a need for continued consultation with the stakeholders around the project. The following sections provide an insight on some of the activities which will be undertaken in the construction phase.

Contractor Mobilization*:* Mobilisation by the contractor shall be the first activity before commencement of any works on site. The mobilisation activity will allow contractor to organize himself by doing the following activities and others that the contractor may deem necessary:

- Identify and establish secure storage area/ buildings for construction material.
- Identify and establish ablution facilities for workers.
- Procure health, safety, social and environment packages that will include Personal Protective Equipment, first aid kits, fire extinguishers, torches, and others as may be deemed necessary.
- Identify water supply for contractor staff and construction purposes (drinking, construction, dust control).
- Identify sources for construction materials especially for sand and aggregate.

Land clearing and levelling for new kiosks*:* Land clearing of the proposed project sites will be the initial groundwork during the construction phase. Land clearing will be done in readiness of construction works using manual labour. The activities envisaged during site preparation are:

- Removal of existing vegetation within the site where the structure will be constructed;
- Preparation of the land to required levels and falls, which will entail some topsoil removal;
- Removal from site of some excess soil, stones, and rock if present; and
- Erect a temporary fence to act as hoarding will be built around each site during construction.

Construction of kiosks and associated works*:* The activities envisaged during construction include but not limited to: 1) Excavation and sub-structure works; 2) Frame and upper floors; 3) Blockwork – External walls; 4) Roofing; 5) Finishes – windows, doors, plastering, flooring, painting; and ceiling finishes; 6) Joinery fittings; 7) External works such as storm-water drainage and soak away; 8) Installation of cold-water pipes and fittings; 9) Disposal of rubble and other waste from the construction site; and 10) Soft landscape to restore beauty to original or better quality where necessary.

Construction materials and equipment*:* The main primary raw materials for construction are cement hollow blocks (400mm x 200mm x 200mm), quarry stones, sand, timber, and steel. These materials will be sources from approved/ licensed suppliers that are scrutinized and approved by relevant local authorities to as to be sure that the supplied materials were produced in a manner that promote sustainable development principles. A summary of construction materials and equipment for construction phase is provided in Table 1.

Table 1: Construction materials and equipment

Item #	Raw Material	Source	Mode of Delivery

1	Sand	Nearby rivers or streams approved by local authorities	Road Transport
2	General building materials such as cement hollow blocks, cement, and aggregates	Local approved suppliers	Road Transport
3	Diesel (for the operation of the generator and machinery)	Local approved suppliers	Road Transport
4	Construction Water	Existing water from nearby sources stored in tanks.	Tanks
5	Equipment (Tippers, scaffolding materials, light passenger vehicles, Engine generator and hand tools, smart metering system**)**	Contractor	Road Transport

2.2.3.Operation and maintenance phase

Upon completion of the construction works, it is expected that households as well as other beneficiaries will be using these kiosks. The users will benefit from modern smart water kiosks where accessibility will be unlimited. The operation activities will mainly involve training users on using the smart water kiosks. Repair and maintenance of the kiosks will be undertaken by BWB`s operations department (community clients office) which has 20 workers assigned to kiosks. These workers will be responsible for inspection of the kiosks, identification of issues and prompt rectification of the issues, among others. Customers will be provided with smart cards which will be loaded units/ values to draw water from the kiosks.

Additionally, this phase will cover sensitization activities on community involvement in providing security for the kiosk to ensure sustainable operations of the same. This phase is critical in attaining the project development objective which is to increase access to potable water in identified Cholera hotspots within Blantyre city. The operational phase will also have to implement project activities in line with the Project Implementation Manual which will cover trouble shooting of minor issues and reporting of any unusual situation such as faults and or leakages. The existing projects Grievance Redress Mechanism (GRM) shall be always operational to ensure that project participants and beneficiaries have a platform for presenting their grievances.

2.3.Environmental Planning and Design

The Environmental Planning and Design section highlights environmental and social issues to be considered during the detailed design stage of the project. The inclusion of these issues in the detailed designs will ensure that identified negative impacts are mitigated and positive ones are enhanced. There is a need for environmental planning and design on issues relating to natural hazards (earthworks; floods, sources of construction material and handling of such materials; safety and public health issues; labour issues; and rehabilitation/revegetation issues.)

2.3.1 Safety and Risk Reduction Measures

Standard precautions for environmental health and safety procedures should be taken into consideration. The contractor will ensure that standard precautions for safety procedures are taken into consideration to prevent accidents. The contractor to be engaged will be required to submit to the project proponent a Contractors Environmental and Social Management Plan for approval before start of works.

Public consultations with the key stakeholders in the project areas revealed that the main risk associated with smooth operations of these facilities is vandalism. Considering that these modern kiosks will have some electrical fittings like solar panels which will be prone to vandalism, the following risk reduction measures:

- Selection of the proposed sites was done in consultation with WUA's and local block leaders to ensure project ownership during construction and operation and maintenance phases.
- Design of the smart water metering system to consider alternative sources of power other than solar (e.g. lithium batteries) to minimize the risk of theft of the solar panels.
- Involvement of WUA's on operation of the kiosk to ensure ownership of the project and security of SWK accessories.

2.3.2 Labour management

The proposed project is expected to create job opportunities in the project areas. This may be a training ground for the local people who may get specific skills in construction of the SWKs. It is recommended that the local labour is used for the works that do not require skills. For some of the less complex tasks, local unskilled labour should be given short term on the job training. For work that can be done using human labour the use of machinery is discouraged. To ensure that local people are employed, the District Labour Office and Local Chiefs will be involved in the recruitment of the workers. Refer to the generic Labour Management (LMP) in Annex 6 which the contractor will use when developing specific LMP that will suit the nature, scope and delivery method of this kiosk project.

2.3.3 Water Supply

The contractor will need to give due consideration of the water supply for construction purposes to ensure it does not affect the water needs of the people and livestock in the area were necessary. The key sources of water available in the proposed project sites are piped water, boreholes, wells and streams. The contractor will follow all due processes to get water from these sources for construction works. For instance, water abstraction from rivers and groundwater need to be permitted. If the water is obtained from community water supply (community borehole or tap), there has to be a formal agreement with the community in terms of payment of bills for the water or contribution for repair and maintenance of the water infrastructure.

2.3.4 Energy

During construction phase of the project, energy needs will be met using generators in areas where grid power is not accessible. However, in areas where grid power is available, the contractor can make arrangements for use of the same provided all necessary safety measures and approvals have been met. The contractor will engage with owners of available sources of energy or bring his own sources depending on the prevailing situations but all in all will have to ensure that the decision is not jeopardizing or posing any environmental and social risks.

2.3.5 Waste Management

The salient features of the proposed solid waste management strategy are as follows:

- For waste generated during the construction phase, gross segregation of waste will be made (into biodegradable and non-biodegradable).
- Material wastes like bricks, cement etc. will be used as fill material and concrete will be recycled and reused at the site where necessary.
- Adequate facilities for the storage of these waste materials would be made on site.
- Management of solid waste generated during the construction phase and operation phase, if any, would include collection, transportation, and disposal in a manner so as to cause minimal environmental and social impacts.
- Reusable and recyclable waste will be disposed of by selling to scrap dealers and private contractor for reuse.
- Non-biodegradable and non-reusable waste will be transferred to Blantyre City Council solid waste management facilities for safe disposal.

2.3.6 Tree Planting

It is recommended that the project should have tree planting activities in all the beneficiary areas. BWB annually plants trees in its catchment area and a deliberate plan will be made to provide seedlings for planting in these areas. The planting of trees will be done with guidance by the District Forestry Office, which will educate the community members on tree planting and management, and choice of tree species.

CHAPTER 3: POLICY AND LEGAL FRAMEWORK

3.1 Applicable Policy Frameworks

3.1.1 Malawi Vison 2063

Malawi Government published Malawi Vision 2063 in 2020 as a successor of Vision 2020 as a long-term development strategy. The Malawi Vision 2063 aims to transform Malawi into a wealthy and self-reliant industrialized upper middle-income country by the year 2063.

There are three pillars of Malawi Vision 2063. These are: Pillar 1-Agricultural productivity and commercialization; Pillar 2- Industrialization, and Pillar 3-Urbanization. The Vision also has six enablers. Enabler 1: Mindset change; Enabler 2: Effective governance systems and institutions; Enabler 3: Enhanced public sector performance; Enabler 4: Private sector dynamism; Enabler 5: Human capital development; and Enabler 6: Economic infrastructure.

The Water Supply project falls under Pillar 5 (Human Capital Development) where the objective is to have globally competitive and highly motivated human resources. Pillar number 5 has the following focus areas that include: Education and skills development; Science, Technology and Innovation; Health and Nutrition; Managing population growth; Water, Sanitation and Hygiene (WASH); Sports and creative arts; and Gender equality & equity and social welfare. Water Sanitation and Hygiene (WASH) envision that the Government shall take the lead and rally partners and communities in promoting the adoption of safe water and sanitation practices at the individual and household level. This shall include the provision and promotion of the use of improved and accessible sanitation facilities.

In this regard, the proposed construction and upgrading works of smart water kiosks (SWKs project will mainstream environmental and social concerns and considerations while fulfilling the aspirations of Malawi Vision 2063.

3.1.2 National Environmental Policy, 2004

The Policy was adopted by the Government in June 2004. The mandate of the policy is derived from Section 13 of the Malawi Constitution. In the policy, it is noted that Malawi has a diversified natural resource base and if properly utilized, the resources may provide the basis for sustainable socio-economic development of the country. The policy also takes note of the fact that the resources are subject to increasing pressure and there is serious degradation of the environment.

There are strategies on environmental planning and environmental impact assessment, audits and monitoring, among others. On environmental planning, the objective is to ensure that national and district development plans integrate environmental concerns in order to improve environmental management and ensure sensitivity to local concerns and needs. On ESIAs, the objective is to regularly review and administer the guidelines for ESIAs, audits, monitoring and evaluation so that adverse environmental impacts can be eliminated or mitigated and environmental and social benefits enhanced.

In line with the environmental policy (on planning and ESIAs, among others), the Blantyre Water Board (BWB) must integrate environmental and social concerns during the whole cycle of the project i.e. planning, construction, demobilization, operation and maintenance. This will ensure that the implementation of the SWKs activities is not only environmentally friendly but also socially acceptable by the project beneficiaries and surrounding communities.

3.1.3 The National Water Policy, 2005

The National Water Policy of 2005 is one of the administrative tools in the natural resources management (NRM) sector. The overall goal of this policy is to ensure "sustainable management and utilization of water resources, in order to provide water of acceptable quality and of sufficient quantities and ensure availability of efficient and effective water and sanitation services that satisfy the basic requirements of every Malawian and for the enhancement of the country's natural ecosystems". The policy is aimed at addressing all aspects of water including resource management, development and service delivery by means of an integrated approach to the integrated management of water resources in the country.

The Policy comprehensively covers areas of water resource conservation, management and development, water quality and pollution control, water utilization, disaster management and institutional roles and linkages. The Policy, among other issues, focuses on:

- Achieving sustainable and integrated water resources management and development that make water readily available and equitably accessible by all Malawians in pursuit of their socio-economic development and for environmental sustenance;
- Ensuring water of acceptable quality for all the needs in Malawi;
- Achieving sustainable provision of water supply and sanitation services that are equitably accessible and used by individuals and entrepreneurs for socio-economic development at affordable cost;
- Promoting efficient and effective utilization, conservation and protection of water resources for sustainable agriculture and irrigation, fisheries, navigation, eco-tourism, forestry, hydropower and disaster management and environmental protection;
- Undertaking the rehabilitation, upgrading, extension and construction of water infrastructure;
- Promoting international cooperation in the management of trans-boundary and cross boundary waters without compromising the country's sovereignty, security and territorial integrity;
- Dealing with challenges facing water resources management which include the need to adopt Integrated Water Resources Management (IWRM) Principles, the need to conform to current regional and international agreements and protocols on shared water resources, catchment protection and management, and water resources monitoring;
- Promoting the participation of the private sector in water resources development, management and service delivery;
- Strengthening and building capacity in the water sector; and
- Clarifying the roles of the Ministry for Water and Sanitation and other stakeholders in the water sector.

The statutes within the policy that are specific to this project will therefore have to be considered in the implementation of the proposed project. If the project will not be properly managed with regards to efficient and effective utilization, conservation and protection of water, the activities of the project may lead to the degradation and depletion of water resources thereby counteracting the principles of the National Water Policy.

3.1.4 The Decentralization Policy, 1998

The Decentralization Policy, developed in 1998, devolves administrative and political authority to the district level to promote popular participation. It assigns certain responsibilities to district councils. One of the key responsibilities is to assist the government in the management and preservation of the environment and natural resources. This policy is useful for the implementation of this project as it supports stakeholder involvement of decentralized structures to work together with WUAs in managing conflicts between users and protecting water resources.

3.1.5 National Land Policy, 2002

The National Land Policy is the principal policy that guides land management and administration in Malawi. The policy introduces major reforms intended for land planning, use, management and tenure. It provides clear definition of land ownership categories (Section 4), and addresses issues of compensation payment for land (Sub section 4.6).

The proposed project will likely have an impact on land, as land ownership in the proposed site is customary, public and private. The project will not displace people in the impact areas. The design has been made in the manner that there will be no displacement of people. The land is freely donated to the project by landowners and a consent form is signed for the same especially for the construction of new SWKs. With regards to the upgrading of the existing kiosks there is no need for land. In addition, a proper grievance redress system is already in place at the community and district level. From history, the main land disputes occurring in the impact areas are encroachments into each other's plots, unavailability of clear boundaries, unavailability of detailed layout plan and inactive land allocation committees. The project will also work closely with the city and district land offices where there are grievances regarding land issues. This will assist in resolving potential grievances which are likely to arise during the implementation of the project.

3.1.6 National Forest Policy, 2016

The policy aims at promoting sustainable contribution of national forests, woodlands and trees towards the improvement of the quality of life in the country by conserving the resources for the benefit of the nation and to the satisfaction of diverse and changing needs of Malawi population, particularly rural smallholders. The policy prevents unnecessary changes in land-use that promote deforestation or endanger the protection of the forests which have cultural, biodiversity or water catchment values. It also discourages development activities in gazetted forests unless proven to be environmentally friendly for which suitable inter-sectoral and local consultations will be conducted. Above all, the policy advocates for carrying out environmental and social impact assessment where actions are likely to have significant adverse impacts on important forests and other resources. This ESMP is in line with provisions of the policy. Ministry of Water and Sanitation will therefore be required to take advantage of provisions under this policy to prevent unnecessary destruction of forest resources and related resources in the project area. In line with this policy, the project can promote environmental conservation through planting of trees and other vegetative covers around the SWKs in order to prevent environmental degradation in the targeted sites.

In addition, BWB in collaboration with the Department of Forestry and National Water Resources Authority (NWRA), will support the formation of VNRMCs and CMCs to manage the catchment area of the Mudi Dam which provides raw water for BWB and consequently to some of the SWKs.

3.1.7 National HIV and AIDS Policy, 2005

The Policy highlights that HIV and AIDS impact on the country is quite significant and affects a range of socio-economic activities be it in agriculture, fisheries, public sector, private sector, tourism, urban areas, rural areas, among others. HIV and AIDS prevalence in the country varies from one region to the other and from rural to urban areas. The highest rate is in the Southern Region and the lowest in the Northern Region. Prevalence rate is high in urban areas as compared to the rural areas.

National HIV and AIDS Policy identifies migrant workers and women among highly vulnerable people to transmission of HIV and AIDS and other sexually transmitted diseases. In addition, increased disposal of income from migrant workers may enhance some workers to indulge in extra-marital affairs within the surrounding villages. These sexual activities would enhance the spread of HIV and AIDS among workers and local people.

It is therefore proposed that during implementation of construction activities of the water kiosk, BWB should ensure that the Contractor liaises with the stakeholders such as District AIDS Coordinators for Blantyre to sensitize workers as well as surrounding communities on the dangers of HIV and AIDS. Further, Information, Education and Communication (IEC) materials on HIV and AIDS should be distributed. It is also recommended that during Construction Phase, much of the labour force should be sourced from the surrounding communities to reduce the influx of migrant workers who may exacerbate the situation.

3.1.8 The National Gender Policy, 2015

Gender mainstreaming into the social economic development plans is one of the enablers for the sustainable development worldwide. The Malawi Vision 2063 (M63) recognizes the importance of gender and women empowerment in socio-economic development.

The National Gender Policy, which is currently undergoing review, calls for integration of gender responsiveness in planning and implementation of development projects and programmes. It is understood that consideration of gender needs and benefits enhance poverty reduction in both rural and urban environments. This project has to integrate consideration of needs of both males, females and other vulnerable groups in project activities. The potential considerations could be equal employment opportunities to both male and female during Construction Phase of the SWKs in order to enhance income for both. In addition, it advocates for 50% membership for both sexes in various committees, such as VNRMC and WUA, to ensure that concerns of all sexes are taken into consideration.

The Government of Malawi has made efforts to improve gender equality, for instance in 2002 the Ministry of Gender, Child Welfare and Community Services created a Multi-Sector Country Gender Profile in order to identify the areas of society that need the most attention in regard to gender inequities. Despite governmental efforts, women in Malawi face many challenges when it comes to household and everyday decision-making.

3.1.9 National Sanitation Policy, 2008

The National Sanitation Policy provides a vehicle to transform the hygiene and sanitation situation in Malawi. Section 1.2 of the policy provides for both guidelines and an action plan where, by 2020, all the people of Malawi will have access to improved sanitation, safe hygienic behavior will

be the norm and recycling of solid and liquid waste will be widely practiced. This will lead to healthier living conditions, a better environment and a new way for sustainable wealth creation. One of the policy objectives as highlighted in section 3.1.1 is the improvement of hygiene, sanitation and recycling of waste in the country. As such, the proposed project will ensure that liquid and solid waste management encourages the reduction, recycling and reuse of waste before final disposal hence complying with the provisions of the policy.

3.2 Relevant Legal Framework

3.2.1 Constitution of the Republic of Malawi, 1995

Legislation, policies and instruments exist to support environmental management in Malawi. Section 13.d of the Malawi constitution sets a broad framework for sustainable environmental management at various levels in Malawi and supports the enforcement of the Environment Management Act (EMA); and the environmental policy. In accordance with the provisions of the Constitution, the primary aim is to ensure that development activities of the country including the proposed project do not jeopardize the full rights of the future generation with regard to the environment. The Malawi Constitution therefore calls for sustainable management of natural resources and prevention of environmental degradation. The Environment Management Act sets the national legal framework. A few sectoral policies, acts, regulations and requirements, embracing transversely the environmental issues, support this document.

3.2.2 The Environment Management Act, 2017

The Environment Management Act makes provision for the protection and management of the environment and the conservation and sustainable utilization of natural resources. The Act is the principal piece of legislation on the protection and management of the environment. Under Section 6, the Act states that 'subject to the constitution, where a written law on the protection and management of the environment or the conservation and sustainable utilization of natural resources is inconsistent with any provision of the Act, the written law shall be invalid to the extent of the inconsistency.'

In order to integrate environmental and social considerations in projects, the Act provides for environmental planning and the need for Environmental and Social Impact Assessment (ESIA). The environmental planning is required to be done both at national and district levels. Section 31 of the Act is on environmental and social impact assessments. The Act stipulates that the Minister may, on the recommendation of the Malawi Environment Protection Authority (MEPA), specify by notice published in the Gazette, the type and size of project which shall not be implemented unless an Environmental and Social Impact Assessment is carried out. It also specifies that a person shall not undertake any project for which an Environmental and Social Impact Assessment is required without the written approval of the Authority, and except in accordance with any conditions imposed in that approval.

Section 26 (3) of the Act provides that a Licensing Authority shall not issue any license with respect to a project for which an ESIA is required under the Act unless the Director has certified in writing that the project has been approved by the Minister or that an ESIA is not required under the Act. However, due to the nature and size of this project an ESIA is not required. In line with provisions of this Act, BWB has initiated the development of this ESMP to ensure that all environmental and social concerns are incorporated into the project activities.

3.2.3 Water Resources Act, 2013

The Water Resources Act (2013) provides for the management, conservation, use and control of water resources; for the acquisition and regulation of rights to use water; and for matters connected therewith or incidental thereto.

Part VIII, Section 89 (1) prohibits any person who owns, controls, occupies or uses land on which an activity or process is or was performed to pollute water resources and which, unless authorized under this Part, causes, has caused or is likely to cause pollution of a water resource. The Act tasks all occupiers of a land to prevent pollution from occurring, continuing or recurring. As such it is an offence to alter the flow of or pollute or foul any public water. The Act defines pollution or fouling of public water to mean the discharge into or in the vicinity of public water or in a place where public water is likely to flow, of any matter or substance likely to cause injury whether directly to public health, livestock, animal life, fish, crops orchards or gardens to which such water is used or which occasions, or which is likely to occasion a nuisance.

The Act further, in Part V Section 39(1) prohibits abstraction of water without a Permit from National Water Resources Authority. In compliance with the provisions of the Act, BWB has water abstraction permit issued under the provisions of the Act. In the same vain, the contractor will require a permit before getting/ abstracting water from sources such as river, stream, etc. for construction activities.

3.2.4 The Land Act, 2016

The Land Act, 2016 is the revised and recent piece of legislation for management and administration of land issues in Malawi from the previous Land Act of 1965. Land Act, 2016 makes provision for land in Malawi and all matters connected to it.

The Land Act, 2016 defines land types including private and customary land. The land to which all the proposed projects will be implemented and operated, is basically customary, private and public land. The Land Act, 2016 defines customary land as all land which is held, occupied or used under customary law but does not include any public land. This definition entrusted the authority to administer customary land in the hands of traditional leaders (i.e., chiefs, group village headmen and village headmen). Customary land falls under the jurisdiction of traditional authorities and is administered under customary law. Power for the distribution and control of this land is vested in the hands of traditional leaders. Under the system, customary land rights are closely connected to ethnic identity and traditional authorities (T/As). This is tenure system designed to preserve the asset base of the community for current and future generations. Customary land is vested in the President in trust for the people of Malawi and is under the jurisdiction of customary traditional authorities. Customary land may be held communally or individualized in the names of a lineage, family, or individual.

The land for the proposed project activities of the project include customary, private and public land. The land is voluntarily donated by owners who are also beneficiaries of the proposed project.

3.2.5 The Forest Act as amendment in 2017

The Forestry Act, (as amended in 2017) provides for participatory forestry, forest management, forestry research, forestry education, and forestry industries. Protection and rehabilitation of

environmentally fragile areas and international cooperation in forestry and for matters incidental thereto or connected therewith.

Section 34 of the Act states that any person who or community which protects a tree or forest, whether planted or naturally growing in any land which that person or community is entitled to use, shall acquire and retain the ownership of the tree and forest with the right to sustainable harvest and dispose of the produce. In this regard, the project shall ensure that naturally growing trees and planted ones are protected during the implementation of project activities. The contractor for the upgrading and construction works of the SWKs shall also be advised to minimize cutting trees by limiting land clearance to the project sites.

Part VI of the Act is on afforestation. Section 35 of the Act provides for the promotion of tree growing in forest reserve, public land, customary land and private land by the Government, Non-Governmental Organizations and the community. In line with the Section, BWB will strengthen WUA or kiosk operators to establish tree nurseries that will be planted to replace trees that may have been affected by project activities.

3.2.6 Local Government Act, 1998

The Act, as read with Section 146 of the Republican Constitution, provides the mandate to the local councils in planning, administration, and implementation of various development program in their areas. It further provides for environmental functions, which include urban management, local planning, local afforestation program, and control of soil erosion, among others.

The District Environmental Sub-committee (DESC) looks at all environmental issues in the district. During the development of ESMP for this project, Blantyre DESCs were engaged to ensure that environmental and social issues are incorporated during project planning and implementation. The Environmental District Officer for Blantyre is mandated to coordinate all the environmental issues in the district and report to respective DESC.

The implication of this Act is that the DESC will be responsible to advise the project on the best ways to implement the project in a sustainable manner. In addition, the DESC will monitor the implementation of mitigation measures for the anticipated negative impacts for the project.

3.2.7 Occupational Safety, Health and Welfare Act, 1997

The Act regulates work conditions with respect to safety, health, and welfare of workers. The duty of ensuring safety, health, and welfare of workers rests with the employer. However, every employee is required to take reasonable care for his/her own safety and that of other workers.[1]

In compliance to the requirements of the Act, the contractor that will be hired to do construction works for the project will develop an Occupational Safety, Health and Welfare plan. Furthermore, according to Section 58 (Part VI) all workers for the construction works will be provided with appropriate personal protective equipment (PPE) and these will include work suits, industrial boots, hard helmets and gloves during the construction period.

In addition, the Contractor shall ensure that a well-stocked First Aid Box is made available at the construction site for use by workers as provided for under Section 33 (Part IV) of the Act. The First Aid Box shall be under the charge of a well-qualified person. In line with Part II, Section 6

[1] Section 18 of the Act.

of the Occupation Safety, Health and Welfare Act, the contractor shall also apply for the workplace certificate registration.

3.2.8 HIV and AIDS (Prevention and Management) Act, 2018

The HIV and AIDS (Prevention and Management) Act makes provision for the prevention and management of HIV and AIDS; provisions for the rights and obligations of persons living with HIV or affected by HIV and AIDS; provisions for the establishment of the National AIDS Commission; and provisions for matters incidental thereto or connected therewith. Part 4, Section 6 (1) states that discrimination on a basis related to HIV or AIDS is prohibited. Part 5, Section 9 (1) states that a person living with HIV has the right to privacy and confidentiality regarding information concerning their status. Part 8 of this Act gives provisions to employers by stipulating requirements in several sections quoted as follows:

- Section 26 states that *an employer shall not require any person to undergo HIV testing as a pre-condition for recruitment;*
- Section 27 (1) states that *an employer shall not terminate the employment of an employee solely on the ground that the employee is living with HIV or is perceived to be living with HIV;*
- Section 28 (1) states that *an employee shall not be discriminated against or be subjected to unfair treatment solely on the ground that he is perceived to be or is living with HIV; and*
- Section 32 (1) states that *the State shall ensure that employers adopt and implement an HIV and AIDS policy at the workplace.*

The implications to the proposed project is that BWB will ensure that HIV and AIDS intervention measures are put in place that respond to the requirements of the Act. The project will use already existing Government of Malawi's HIV and AIDS policy in all workplaces and during operation of the project.

3.2.9 Public Health Act, 1948

The Act provides legal framework on planning and management of a wide range of health-related issues including environmental health, occupational health and solid wastes management. Section 79 parts (a) and (b) provide legal powers for the local authority to enforce the provision of sewage works for large scale development projects. Section 80 stipulates the requirements for preparation of detailed plans for planned sewage works for implementation. Section 82 outlines some activities which can limit the free flow of wastes into sewage works and which must be avoided as much as possible. These activities include disposal of solid wastes in oxidation ponds, disposal of chemical refuse, waste stream, and petroleum spirit or carbon calcium. Section 88 stipulates the requirements for separate toilets for both female and male persons in public buildings or buildings, which would be used by both male and female employees.

The implication of the Act on the proposed project is that developer should ensure that there are appropriate and adequate waste disposal facilities, hand washing facilities and provision of sanitary toilets during construction. The toilets will need to be demarcated according to sexual category.

3.2.10 Gender Equality Act, 2013

The Gender Equality Act in Malawi aims to address prevalent inequalities between men and women in various aspects of daily life. The primary objectives are to promote gender equality,

integration, influence, empowerment, dignity, and opportunities for both men and women across all societal functions. The Act expressly prohibits and seeks redress for sex discrimination, harmful practices, and sexual harassment. Applicable to all individuals and matters, it extends its reach to private and public institutions, religious settings, chiefs, and the government. With a comprehensive scope covering diverse aspects of Malawian life, Part 2 of the Act specifically prohibits sex discrimination and harmful social or cultural practices. Section 7 emphasizes the need for a workplace policy to prevent sexual harassment. The proposed project developer is therefore mandated to incorporate these principles in all activities, ensuring fair representation and creating a conducive environment free from sexual harassment and gender discrimination, with a targeted employment distribution of 40% for women and 60% for men.

3.2.11 Malawi Employment Act, 2000

The legal framework for child labour in Malawi is contained in the Employment Act of 2000 (CAP 55:01). The Act sets the minimum age for admission of a child to employment at 14 years. The Act further prohibits children between the ages of 14 and 18 to work in hazardous work.

The employment (amendment), 2021 has redefined "industrial undertaking" as (a) mine, quarry and other works for the extraction of minerals from the earth, (b) an industry in which articles are manufactured, altered, or demolished, or in which materials are transformed including ship building and the generation, transformation and transmission of electricity or power of any kind; (c) construction, maintenance, or demolition works of any infrastructure; and (d) transport of passenger or goods by road, rail, sea or in land waterway, including the handling of goods at docks, quays, wharves and warehouses.

In line with provisions of this Act, the contractor for the construction activities of this project will ensure that under-aged people (less than 18 years old) are not employed in the construction works.

3.3 Regulatory Licenses and Permits

The regulatory licenses, approvals and standards that have to be obtained or met for the proposed project to ensure that the project activities are in line with sound and environmental management practices and comply with relevant legislation have been summarized in the Table 2

Table 2: Regulatory approvals relevant for the project

No	Regulations/ Approvals	Description	Reference	Issuing Institution	Status
1	Approval Letter (ESMP approval)	The approval letter will be provided after approval of the ESMP report	EMA, 2017	MEPA	Not done
2	Development project approval	Development project approval	Physical planning act 2016	Blantyre City Council	Not done

No	Regulations/ Approvals	Description	Reference	Issuing Institution	Status
3	Water Abstraction Rights	Abstraction of surface water for construction works	Water Resources Act (2013)	National Water Resources Authority	Not done
4	Work permit	To protect workers for the project	OSHW Act (1997)	Ministry of Labour	Not done

3.4 World Bank Environmental and Social Standards

World Bank Environmental and Social Standards (ESSs) are used during the implementation of projects or activities funded by the Bank to protect the interest of beneficiaries, clients, shareholders and the Bank. The ESSs also provides a comprehensive framework for enhancing positive impacts, avoiding negative impacts and promoting sustainability. Below is the summary of ESSs identified as relevant to the proposed project:

3.4.1.ESS1: Assessment & Management of Environmental & Social Risks and Impacts

The ESS1 sets out the Borrower's responsibilities for assessing, managing and monitoring environmental and social impacts associated with each stage of a project supported by the Bank through investment project financing, to achieve environmental and social outcomes consistent with the ESSs.

In line with ESS1 an environmental and social screening of the proposed project was undertaken through the preparation and review of the Project Brief and it was found that they will be of low to moderate severity. Hence, the project was classified as Moderate Risk; which triggered further environmental and social assessments, stakeholder engagements and the preparation of the Environmental and Social Management Plan. During project implementation there will be need for adequate monitoring and reporting on the environmental and social performance of the project works against the ESS 1.

3.4.2.ESS 2: Labour and Working Conditions

The ESS 2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. The project implementers can promote sound worker management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.

The project will use recommended Labour Management Procedures, including guidelines on health, safety and welfare of the workers in accordance with the requirements of national laws and ESS2.

As per this ESS, a worker-specific Grievance Redress Mechanism will be put in place to support implementation of program activities. To ensure safety of the workers from hazards, measures relating to occupational health and safety risks guided by the WB General Environmental Health and Safety Guidelines, and Occupational Safety Health and Welfare Act, 1997 will be adopted during project implementation. Measures will be put in place to avoid the impact associated with

influx of migrant workers. The project will ensure that the workers and communities abide by the code of conduct to minimize and mitigate environmental and social impacts. No child shall be employed during implementation of the program.

3.4.3.ESS 3: Resource Efficiency and Pollution Prevention and Management

ESS 3 recognizes that economic activity and urbanization often generate pollution to air, water, land, and consume finite resources that may threaten people, ecosystem services and the environment at local, regional and global level. The current and projected atmospheric concentration of Greenhouse Gases threatens the welfare of current and future generations. The nature of the proposed project activities is expected to cause significant water and energy use; and the associated handling and storage of construction material could raise the potential for waste production. Inappropriate disposal of wastewater might pollute the environment, and burning of wastes generated in construction activities may contribute to air pollution. Building materials such as sand, quarry and gravel will also have to be obtained from sustainable sources to avoid impacts on natural resources.

To comply with this ESS, the contractor will be required to apply technically and financially feasible resource efficiency and pollution prevention measures in accordance with the mitigation hierarchy. The ESMP has identified impacts related to resource efficiency and pollution and appropriate mitigation measured to be implemented have been identified. For instance, dust emission which may lead to air pollution will be controlled by introducing vehicle speed limit through construction of humps, speed control signs and sprinkling water on earth roads or exposed land or soils.

3.4.4.ESS4: Community Health and Safety

ESS 4 recognizes that program activities, equipment, and infrastructure can increase community exposure to risks and impacts. To satisfy the requirements of ESS4, the Environmental and Social Assessment of the project works considered the risks and impacts of the project on the health and safety of the communities. Measures have been provided in the ESMP to avoid the impacts or reduce their effects in the case that they still occur.

3.4.5. ESS5: Land acquisition and restrictions on land use

ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons. Project-related land acquisition or restrictions on land use may cause physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both. The term “involuntary resettlement” refers to these impacts. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement.

Physical and economic displacement, if not mitigated, may give rise to severe economic, social and environmental risks: production systems may be dismantled; people face impoverishment if their productive resources or other income sources are lost; people may be relocated to environments where their productive skills are less applicable and the competition for resources greater; community institutions and social networks may be weakened; kin groups may be dispersed; and cultural identity, traditional authority, and the potential for mutual help may be diminished or lost. For these reasons, involuntary resettlement should be avoided. Where

involuntary resettlement is unavoidable, it will be minimized and appropriate measures to mitigate adverse impacts on displaced persons (and on host communities receiving displaced persons) will be carefully planned and implemented.

In this project no one will be relocated or physically displaced. All landowners freely and willfully donated the land for the project to construct the kiosks. All landowners are beneficiaries of the kiosks in sense that they will be drawing water from the kiosk and the water is very close to their doorstep.

3.4.6.ESS 8: Cultural Heritage

The term 'cultural heritage' encompasses tangible and intangible heritage, which may be recognized and valued at a local, regional, national or global level. Tangible cultural heritage, may include movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Tangible cultural heritage may be located in urban or rural settings, and may be above or below land or under the water;

Intangible cultural heritage, which includes practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artifacts and cultural spaces associated therewith— that communities and groups recognize as part.

The construction and rehabilitation of 30 kiosks in this project may not adversely affects cultural heritage in the earmarked site. However, since the construction of the 15 new kiosks involve excavation of trenches for foundation, it is probable that a physical cultural resource can be found in the course of undertaking excavation works, hence the need to have a chance find procedure in place to manage such accidental encounters.

Chance Find Procedures outline, step by step, what needs to be done when projects come across archaeological sites, historical sites, remains and objects, including graveyards or individual graves during excavations or construction. Refer to Annex 7 for details about the procedure.

3.4.7.ESS10: Stakeholder Engagement and Information Disclosure

ESS 10 recognizes the importance of open and transparent engagement between the project proponent and program stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of program activities, enhance program acceptance, and make a significant contribution to successful program design and implementation.

Stakeholder engagement and information is an integral part of the implementation of the project. During the ESMP preparation, all relevant stakeholders were met and consulted. Importantly, to apply the requirements of ESS10, the Proponent will continue to disclose information to allow stakeholders to understand the risks and impacts of the project, and potential opportunities.

CHAPTER 4: ENVIRONMENTAL AND SOCIAL SETTING

This chapter shall provide description of the biophysical and socio-economic characteristics of the proposed project sites.

4.1.Biophysical environment

4.1.1.Specific location, terrain

Table 3 and 4 highlight specific description of each site in terms of site location (name), photo, GPS Coordinates, topography, proximity to amenities such as markets, schools including type of soil for each site, both old and new sites.

Table 3: Kiosks to be Rehabilitated and Upgraded to Smart Kiosks

NO	NAME	DESCRIPTION	IMAGE	GPS Coordinates
1	**Chakana 2 Kiosk**	The kiosk is in Chakana Village (Blantyre district). It is existing and functional kiosk. Its structure is in good condition but shall require minor maintenance works when upgrading the kiosk into smart metering system. The site is		36L 0719078 UTM 8254546

		generally flat with no vegetative cover and the soil type is loam. There are Boreholes and piped water available for upgrading works. The minor/ rehabilitation works shall involve installation of vending machine, water storage tank, painting works, and drainage works.		
2	**Thundu Kiosk**	The kiosk is in Macheso Village (Misesa ward); TA Kapeni (Blantyre District). The kiosk is functional and will be upgraded into a Smart Water Kiosk under the project. The site is generally flat with no vegetative cover. The existing structure is in good condition and will require minor maintenance during upgrading works. There are no significant socio-economic activities taking place. No flora or fauna will be affected by the upgrading works. The minor/ rehabilitation works shall involve installation of vending machine, water storage tank, painting works, and drainage works.		36L 0719204 UTM 8247120
3	**Chibalo Kiosk**	The kiosk is in Chipagala village; TA Machinjiri (Blantyre district) and is operating under Namiyango-Chigumula WUA. This is a functional kiosk and will be upgraded into a smart water kiosk. The site is generally flat with no vegetative cover.No flora or fauna will be affected by the upgrading and minor maintenance works of the kiosk. The condition of structure and the surrounding physical features. There are wells available for upgrading works. The		36L 072158 UTM 847005

		minor/ rehabilitation works shall involve installation of vending machine, water storage tank, painting works, and drainage works.		
4	**Lamula Kiosk**	The kiosk is located in Mwachande Village, GVH Magasa, TA Machinjiri (Blantyre district). It is operating under Michiru WUA. The kiosk is in a working condition. The site is generally flat with no vegetative cover. It will require minor maintenance and will be upgraded into a smart water kiosk. No flora and fauna will be affected with the upgrading works. The minor/ rehabilitation works shall involve installation of vending machine, water storage tank, painting works, and drainage works.		36L 0716384 UTM 8259252
5	**Makhetha 2 Kiosk**	The kiosk is in Blantyre district. The landowner is Mr Maula. The kiosk is existing and functional. It will be upgraded into a smart water kiosk. The site is generally flat with no vegetative cover. No flora and fauna will be affected during the upgrading works. The structure is almost new. It might require minor reinstatements during upgrading works. There is a borehole available for upgrading works. The minor/ rehabilitation works shall involve installation of vending machine, water storage tank, painting works and drainage works.		36L 0716376 UTM 8259245

6	**Office Kiosk**	The kiosk is in Makata village; TA Kapeni (Blantyre district). Ndirande Malabada WUA is the administrator of the kiosk. It was constructed in 2022.The kiosk is functional, and the existing structure is almost new. The site is generally flat with no vegetative cover. The kiosk will require minor rehabilitation and upgrading into a smart water kiosk. The minor/ rehabilitation works shall involve installation of vending machine, water storage tank, painting works, and drainage works.		36L 0718660 UTM 8255868
7	**Chinangwa 2 Kiosk**	The kiosk is in Mbayani village, TA Machinjiri (Blantyre District). The kiosk is existing and is in working condition. The framework of the kiosk is made of steel and there is no proper super structure to provide shelter and protection to the kiosk. Its water service pipelines are exposed and subject to vandalism. The steelwork structure cannot be adopted. It requires construction of a new blockwork structure complete with a smart metering system. The site is generally flat. There is a tree close to the site but will not be cut during rehabilitation works. There are no significant economic activities which are currently taking place on this site. This will involve construction of kiosk structure to		36L 0714235 UTM 8254736

		replace the existing open kiosk structure, installation of vending machine, water storage tank, painting works, and drainage works.		
8	**Mmangisa kiosk**	The kiosk is in Baluti village, TA Nsomba (Blantyre district). The kiosk is functional and its structure is made of steel which does not provide shelter or protection to the kiosk. The kiosk's steel structure substantiates the requirement to upgrade the kiosk by constructing of a new blockwork structure complete with a smart metering system. The site is generally flat with no vegetative cover. The upgrading works will not contribute to destruction of the vegetation since the land is bare. This will involve construction of kiosk structure to replace the existing open kiosk structure, installation of vending machine, water storage tank, painting works, and drainage works.		36L 0713178 UTM 8250170
9	**Pensulo 2 kiosk**	The kiosk is in Blantyre district. The kiosk is being operated by Mitsidi WUA. Pensulo 2 Kiosk has an existing functional structure which will require minor maintenance works and upgrading into a smart metering system. There are reports of frequent burst pipes that affect supply of water to this kiosk. The water development pipeline to the kiosk will require further lowering and replacement to rectify frequent burst pipes issue. The site is generally flat with no		36L 0708792 UTM 8251651

		vegetative cover. The minor/ rehabilitation works shall involve installation of vending machine, water storage tank, painting works, and drainage works.		
10	**Nkhuku Ten kiosk**	The kiosk is in Blantyre district. The kiosk is non-functional. Nkhuku Ten kiosk is an existing kiosk structure with a dilapidated brickwork structure because it was operational for barely one year from 2011 to 2012. Rejuvenating the kiosk through rehabilitation and upgrading the existing analogue metered kiosk to the smart metering system is vital because of its strategic position and the vast number of households it used to serve. The environment features surrounding the kiosk. The site is generally flat with no vegetative cover. The prospects of fauna destruction is ruled out. The minor/ rehabilitation works shall involve installation of vending machine, water storage tank, painting works, and drainage works.		36L 0725191 UTM 8252160
11	**Mboma Macheso Kiosk**	The kiosk is under Group Village Head Jumbe; TA Kapeni (Blantyre district). The land where the kiosk was built belongs to the Chief. The kiosk is non-functional and super structure together with its fixtures		36L 0719235 UTM8247334

		were vandalized. This kiosk's structure requires re-construction and upgrading into a smart water kiosk. The space is big enough to accommodate the construction of the proposed new kiosk. The site is generally flat. Flora present on the proposed land is grass which will not be removed during rehabilitation works. The rehabilitation works will involve construction of kiosk structure to replace the existing open kiosk structure, installation of vending machine, water storage tank, painting works, and drainage works.		
12	**Chempira 2 Kiosk**	The kiosk is in Chempira village, TA Kapeni (Blantyre District). The kiosk is non-functional. The kiosk has an existing structure which was partially vandalized of the meter and door. It is therefore vital to reinstate and upgrade the kiosk into a smart water kiosk. The kiosk was operational barely for four years after construction from 2013 to 2017. The gravity of usage of the kiosk necessitates rejuvenation of the kiosk. The site is generally flat with no vegetative cover. The minor/ rehabilitation works shall involve installation of vending machine, water storage tank, painting works, and drainage works.		36L 0715501 UTM 8268115
13	**Nyangu kiosk**	The kiosk is in Nyangu village, TA Nsomba (Blantyre District). Nyangu Kiosk is non-functional, and it was made of steel framework. This kiosk is in a vandalized state which require		36L 0712347 UTM 8248541

		rehabilitation and upgrading into a smart water kiosk. Based on the gathered historical information, the kiosk was constructed in 2014 and was very active. Vandalism disrupted operations therefore reviving the kiosk is important. The site is generally flat. No vegetation will be destroyed during the construction works for the kiosk. The minor/ rehabilitation works shall involve installation of vending machine, water storage tank, painting works and drainage works.		
14	**Mkoka kiosk**	The kiosk is in Blantyre district. The kiosk is under Mitsidi WUA. The kiosk is non-functional, and its structure is in a dilapidated and vandalized state. Therefore, reviving the kiosk and upgrading the kiosk to smart metering system would be prudent considering that the kiosk is surrounded by a community that relies on unsafe water drawn from Mudi River situated far from the site and will not be affected by the kiosks rehabilitation activities. There also one functional borehole from where the communities draw water for various purposes. The site is generally flat with no vegetative cover. The minor/ rehabilitation works shall involve installation of vending machine, water storage tank, painting works and drainage works.		36L 0711412 UTM 8249195

15	**Suya Kiosk**	The kiosk is located in Chirimba, Blantyre district. The kiosk will be rehabilitated at Suya in Chirimba. The site is one of the Cholera hotspots. The existing kiosk was built with support from Water for People, an American Based NGO that seeks to promote portable water supply access by communities in Blantyre and other districts in Malawi. The topography of the land is flat, the soil type is loam. with little vegetative cover.The minor/ rehabilitation works shall involve installation of vending machine, water storage tank, painting works and drainage works.		36L 074901 UTM 8258493

Table 4: Kiosks to be newly constructed

NO	NAME	DESCRIPTION	IMAGE	GPS COORDINATES
1	**Luchenza Kiosk**	The kiosk will be constructed at Panjanji Chokani market in Chilumba Village; TA Machinjiri, Namiyango/Chigumula along Chimaliro river. The available land was offered voluntarily by Mr Felix Chizenga. The proposed site is close to a local market which relies on contaminated source of water from the well. The site is a cholera hotspot positioned away from the existing kiosks. The topography of the land is flat, and the soil type is		36L 0722701 UTM 8246833

		loam with no vegetative cover. The spotted site has an adequate space to construct the specified Kiosks according to the designs		
2	**Ndogolo kiosk**	The kiosk will be. constructed in Ndogolo Village; TA Kapeni, Blantyre district. The available land was offered voluntarily by Mr and Mrs Mwajanga. The proposed site is a human settlement area which relies on untreated water from the borehole and a well. The site is a potential cholera hotspot positioned way from the existing kiosks. The topography of the land is flat, the soil type is loam with no vegetative cover. The spotted site has an adequate space to construct the specified Kiosks according to the designs		36L 0718074 UTM 8246247
3	**Kandaya 3 kiosk**	The kiosk will be constructed in Kandaya Village; TA Machinjiri, Blantyre district along Chisombezi River. The available land belongs to one of the community members and was offered voluntarily for the construction of the kiosk. The proposed site is located at a local commercial area which relies on untreated water from the borehole. The site is a potential cholera hotspot positioned way from		36L 0724237 UTM 8250706

		the existing kiosks. The topography of the land is flat, the soil type is sandy loam with no vegetative cover. The spotted site has an adequate space to construct the specified Kiosks according to the designs .		
4	**Mbayani 2 kiosk**	The kiosk will be constructed in Mwamadi Village in Mthandizi ward; TA Kapeni, Blantyre district. The available land was offered voluntarily by Violet Gomera. The proposed site is a human settlement area which relies on untreated water from a well. The site is a potential cholera hotspot positioned way from the existing kiosks. The topography of the land is flat, the soil type is loam with no vegetative cover. The spotted site has an adequate space to construct the specified Kiosks according to the designs.		36L0723309 UTM 8249393
5	**Andrew kiosk**	The kiosk will be constructed in Mkolokoti village under Mkolokoti Kachere WUA; TA Machinjiri in Blantyre district. The available land was offered voluntarily by Mr Maundala. The proposed site is a human settlement area which relies on untreated water from a well. The site is a potential cholera hotspot positioned way from the existing kiosks. The topography of the land is flat, the soil type is loam with no vegetative cover. The spotted site has an adequate space to construct the specified Kiosks according to the designs (refer to Site plan 1).		36L 0723745 UTM 8252883

6	**Pokopoko Kiosk**	The kiosk will be constructed in Limbe market in Mkolokoti under Kachere WUA; TA Kapeni in Blantyre district. The available land was offered voluntarily by Blantyre City Council and is located under. The proposed site is a commercial area which relies on source of water from Mudi River. The site is a cholera hotspot positioned away from the existing kiosks. The topography of the land is flat, and the soil type is loam. There is grass on the site. The spotted site has an adequate space to construct the specified Kiosks according to the designs		36L 0720207 UTM 8250274

7	**Malabada Kiosk**	The kiosk will be constructed in Gamulani village under Malabada WUA; TA Kapeni in Blantyre district. The available land was offered voluntarily by the local chief. The proposed site is a human settlement area which relies on untreated water from the river. The site is a potential cholera hotspot positioned way from the existing kiosks. The topography of the land is flat with vegetative (grass and shrubs) cover and the soil type is loam. The spotted site has an adequate space to construct the specified Kiosks according to the designs.		36L 0718220 UTM 8256221
8	**Mango Kiosk**	The kiosk will be constructed in Gamulani village under Malabada WUA; TA Kapeni in Blantyre district. The available land was offered voluntarily by the local chief. The proposed site is a human settlement area which relies on untreated water from the river. The site is a potential cholera hotspot positioned way from the existing kiosks. The topography of the land is flat, and the soil type is clay with no vegetative cover. The spotted site has an adequate space to construct the specified Kiosks according to the designs		36L 0718016 UTM 8256394

9	**Safarao-1 kiosk**	The kiosk will be constructed in Matope Village under Matope WUA; TA Kapeni in Blantyre district. The available land was offered voluntarily by Mr Chimbewa. The proposed site is a local commercial area which relies on contaminated source of water from the wells. The site is a cholera hotspot positioned away from the existing kiosks. The topography of the land is flat, and the soil type is loam with no vegetative cover. The spotted site has an adequate space to construct the specified Kiosks according to the design.		36L 0711084 UTM 8254816
10	**Safarao 2 Kiosk**	The kiosk will be constructed in Matope Village under Matope WUA; TA Kapeni, Blantyre district. The available land was offered voluntarily by Mr Kaliati. The proposed site is a local commercial area which relies on contaminated source of water from the wells. The site is a cholera hotspot positioned away from the existing kiosks. The topography of the land is flat, and the soil type is loam with no vegetative cover. The spotted site has an adequate space to construct the specified Kiosks according to the design.		36L 0719159 UTM 8255026

11	**Ntoso kiosk**	The kiosk will be constructed in Suya village along Nambewe river; TA Machinjiri, Blantyre district. The available land was offered voluntarily by the Christina Ali. The proposed site is a human settlement area which relies on untreated water from the river. The site is a potential cholera hotspot positioned way from the existing kiosks. The topography of the land is flat, and the soil type is clay. There is a tree just near the site but might not be cut down during construction because adequate space to construct the specified kiosk according to the designs		36L 0714374 UTM 8258716
12	**Gaka kiosk**	The kiosk will be constructed in Sumali village along Mudi river, TA Somba, Blantyre district. The available land was offered voluntarily by Chrissy Chakhala. The proposed site is a human settlement area which relies on untreated water from the river. The site is a potential cholera hotspot positioned way from the existing kiosks. The topography of the land is flat, and the soil type is Dambo sand with no vegetative cover. The spotted site has an adequate space to construct the specified Kiosks according to the designs		36L 0712623 UTM 8250170

13	**Chibwana kiosk**	The kiosk will be constructed in Chengwachi village; TA Kuntaja, Blantyre district. The available land was offered voluntarily by the local chief. The proposed site is a human settlement area which relies on untreated water from the wells. The site is a potential cholera hotspot positioned way from the existing kiosks. The topography of the land is flat, and the soil type is sandy loam with no vegetative cover. The spotted site has an adequate space to construct the specified Kiosks according to the design		36L 0712085 UTM 8256689
14	**Magasa kiosk**	The kiosk will be constructed in Chinangwa village under Michiru WUA; TA Machinjiri, Blantyre district. The available land was offered voluntarily by Mr Kelvin Chunga. The proposed site is a human settlement area which relies on unclean water. The site is a potential cholera hotspot positioned way from the existing kiosks. The topography of the land is flat, and the soil type is Sandy loam with no vegetative cover. The spotted site has an adequate space to construct the specified Kiosks according to the designs.		36L 0714179 UTM 8254765

15	**Mwachande-1 kiosk**	The kiosk will be constructed under Michiru WUA; TA Kuntaja, Blantyre district. The available land was offered voluntarily by Mr Maganga. The proposed site is a human settlement area which relies on untreated water from a well. The site is a potential cholera hotspot positioned way from the existing kiosks. The topography of the land is flat with no vegetative cover and the soil type is loam. The spotted site has an adequate space to construct the specified Kiosks according to the designs		36L 0716305 UTM 8258512

4.1.2.Climate characteristics

Malawi, in common with the greater part of South-Central Africa, has a Tropical Continental Climate with two main seasons during the year; the dry and the wet. The wet season lasts from November to May and the remainder of the year is dry, with temperatures increasing until the onset of the next rains. The Shire Highlands ridge, by virtue of its height, is relatively cool for much of the year and, in the higher parts of the Thyolo and Mulanje districts, rainfall, during the dry season, is sufficient to support the cultivation of tea. The Phalombe and the Chileka Plains lying, respectively, east and west of the Shire Highlands, have higher temperatures and lower rainfall figures than the highlands themselves.

The mean annual rainfall is 1,122 mm (44.17 in), of which about 80% falls within 3½ months between November and March. In terms of temperatures, the city is generally cool with mean monthly temperatures ranging from 19 °C during the cool season (May to July) to 26 °C during the hot season (September to November) but thereafter, the rains bring moderating effects. Rainfall has profound impact on environmental degradation in the City of Blantyre. Surface runoff enhances soil erosion.

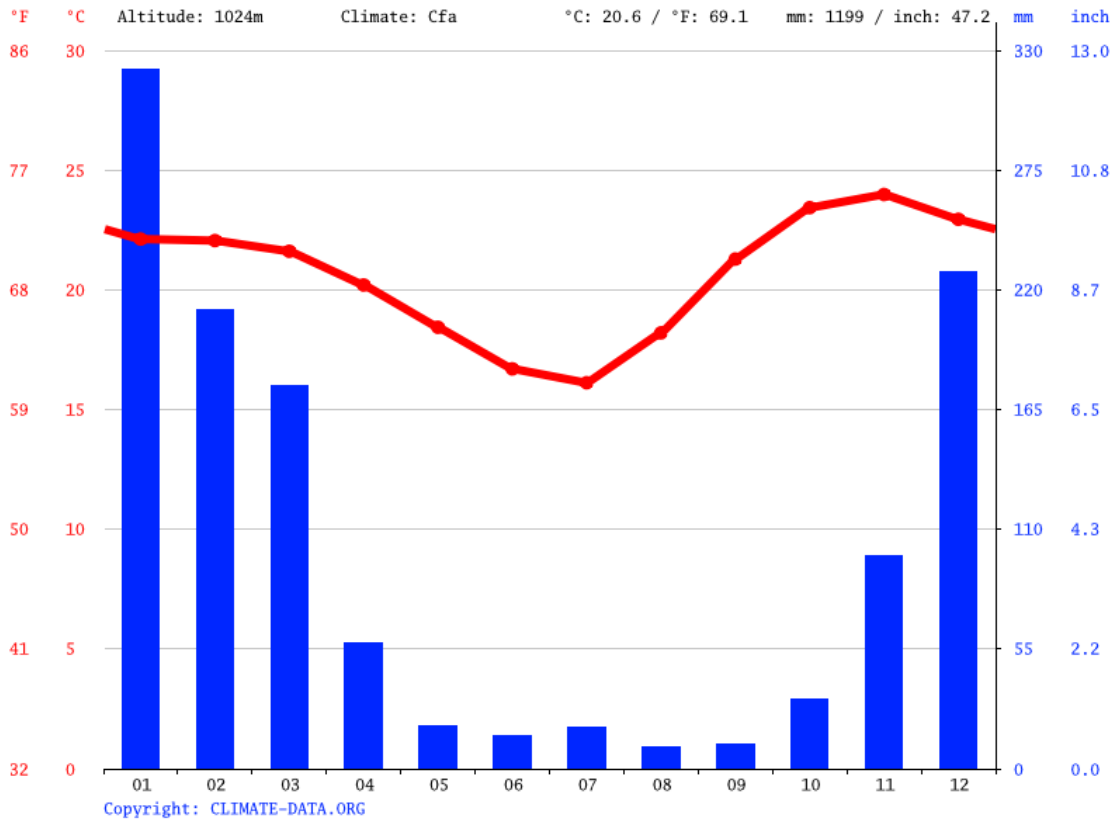


Figure 2: Climatic characteristics of Blantyre City

Precipitation is the lowest in August, with an average of 10 mm | 0.4 inch. On average, the highest amount of rainfall occurs during January with a mean value of 321 mm | 12.6 inch as shown in Figure 2.

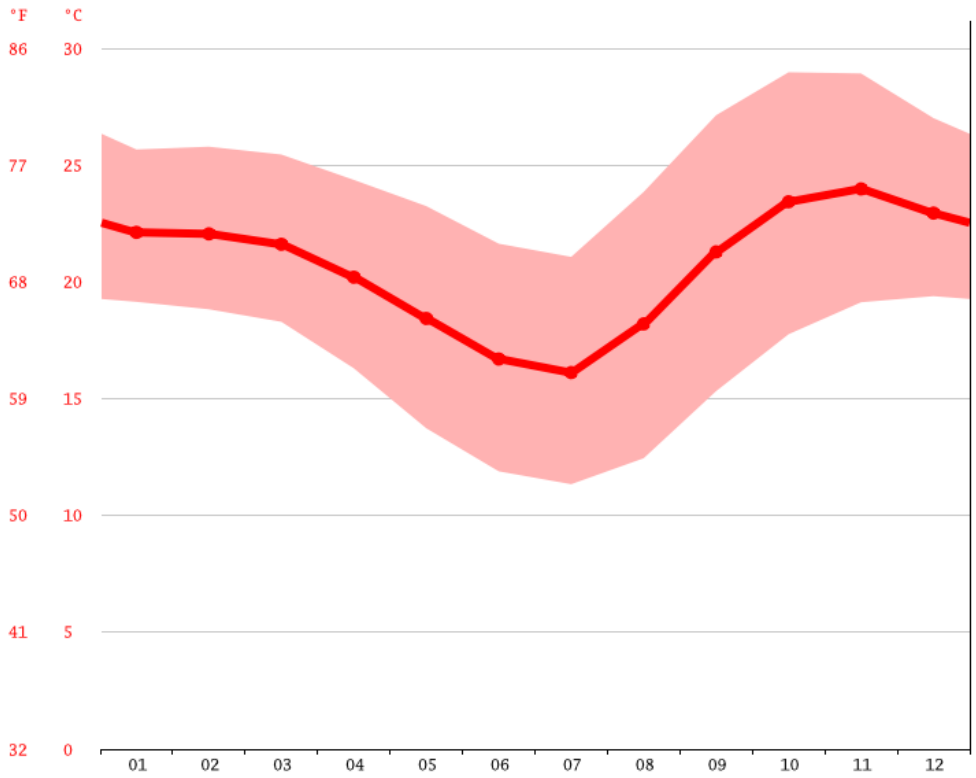


Figure 3: Hottest and coldest months in Blantyre

With an average temperature of 24.0 °C | 75.2 °F, November is the hottest month of the year. On average, the month of July is considered to be the coldest time of year with temperatures averaging at around 16.1 °C | 61.0 °F. (1999 to 2019) as indicated in Figure 3.

4.1.3. Disaster management.

Disaster management refers to the systematic approach of preparing for, mitigating, responding to, and recovering from natural or man-made disasters. In Blantyre city due to illegal settlement in hilly, mountains and river banks most houses are prone to natural or man-made disasters. Recently the city was affected with cyclone Freddy which claimed over 1000 lives especially those that illegally constructed houses in hilly areas. There is need to have strategies in place to mitigate man-made or natural disaster, these strategies encompass thorough risk assessments, integrating climate-resilient designs and construction standards within the city, establishing emergency response plans, defining roles and responsibilities, and engaging local communities in preparedness efforts. Furthermore, they involve partnerships with local authorities and NGOs, data-driven early warning systems, capacity-building initiatives, and contingency budgeting. Integrated seamlessly with environmental and social considerations, these measures not only mitigate risks but also foster community resilience and ensure sustainable development goals. Maintaining detailed records, transparent reporting, and ongoing evaluation form essential aspects, enabling adaptive responses and fostering a culture of preparedness and accountability within the project framework.

4.1.4.Security

Blantyre City, like many urban areas around the world, faced various security challenges. While Malawi is generally considered one of the more peaceful countries in the region, urban areas, including Blantyre, had concerns related to petty crimes such as theft, vandalism, pickpocketing, and occasionally more serious crimes.

Law enforcement agencies in Blantyre include police, private security agencies, community policing and occasional military which at times is involved in ensuring public safety. However, resources are sometimes limited, there are still challenges in maintaining law and order, especially in densely populated urban areas. Vandalism of water infrastructures, especially pipes, is one of the challenges faced by existing water kiosks. The project will establish full community involvement to ensure ownership of the structures and provide security features (such as smart sensors and burglar bars) to protect the water infrastructure from being vandalized.

4.1.5Flora and fauna

Blantyre City has also some wetlands commonly known as Dambos. Some of these are being cultivated for growing of horticultural plants which becomes a threat to some biodiversity in the sense that the areas act as habitat to small animals, birds and insects. The cultivation also encourages soil erosion during rainy season and reduces the water table during the dry season. However, some of the areas that have not been cultivated are rich in biodiversity like small animals, rodents, reptiles, birds, frogs, and dragonflies.

Specific biological environment of the 30 sites include flora and fauna which are evident at Pokopoko and Malabada kiosks. Pokopoko site also has some shrubs. Otherwise, the rest of site have bear ground. All sites will be vegetated after construction and rehabilitation works in order to prevent dust emissions, increased storm water runoff, and soil erosion

4.2.Social-economic Environment

4.2.1.Demographic and settlement pattern

The City of Blantyre, which is part of Blantyre District, is not only one of the largest cities but also the commercial capital of Malawi. Blantyre was declared a planning area in 1897 by Scottish missionaries and has experienced high population growth, with the population increasing from 109,461 in 1966 to 661,256 in 2008. The 2018 census showed that the Blantyre City had a population of 879,000 with 50.13% being males and 49.87% being females. The 2022 projections indicate that Blantyre City will have a population of about 995,000. Table 3 highlights population and projections for Blantyre.

Table 5: Population and projection figures for Blantyre, 2012 – 2022

Year	Population	Growth Rate
2022	995,000	3.43%
2021	962,000	3.22%
2020	932,000	2.98%
2019	905,000	2.96%
2018	879,000	2.81%
2017	855,000	2.89%

2016	831,000	2.85%
2015	808,000	2.93%
2014	785,000	2.88%
2013	763,000	2.83%
2012	742,000	2.91%

Source: NSO 2018

The growth rate is estimated at 3.4 percent between 2018 and 2022. The population of Blantyre represents 5.1 percent of the national population. The average population density is 3,509.93 persons per square kilometre (National Statistical Office, 2018). There are 14 unplanned settlements (aggregated) within the city and five planned low-income housing areas. Over 70 percent of the urban population live in unplanned areas, which occupy up to 23 percent of the land in the city. Table 4 shows the distribution of the population, ward by ward, as recorded during 2018 census.

Table 6: Population by ward in 2018

Area	Total	Less than 1 Year	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+
Blantyre City	**800,264**	**21,787**	**78,499**	**98,678**	**99,282**	**92,870**	**94,133**	**75,379**	**67,242**	**58,058**	**40,498**	**24,494**	**16,185**	**11,109**	**8,257**	**6,377**	**3,363**	**4,053**
Michiru Ward	83,987	2,305	8,338	10,426	10,554	9,968	9,922	7,783	7,008	6,102	4,305	2,560	1,628	1,110	739	624	307	308
South Lunzu Ward	53,831	1,293	5,083	6,484	6,730	6,534	6,076	4,741	4,206	3,970	2,935	1,888	1,193	829	676	504	286	403
Mapanga Ward	42,233	1,174	4,085	5,365	5,359	4,853	4,731	3,907	3,479	3,051	2,120	1,282	880	640	458	375	199	275
Nkolokoti Ward	57,763	1,688	5,813	7,381	7,440	6,799	6,869	5,336	4,783	4,132	2,744	1,690	1,102	699	480	396	186	225
Ndirande Matope Ward	33,549	874	3,325	4,109	4,020	3,816	3,988	3,379	2,944	2,464	1,672	946	650	469	376	246	140	131
Ndirande Makata Ward	28,468	808	2,723	3,562	3,638	3,539	3,281	2,590	2,335	2,080	1,417	804	549	354	294	243	109	142
Ndirande Gamulani Ward	35,822	1,074	3,790	4,654	4,534	4,107	4,425	3,264	2,997	2,479	1,709	1,010	679	398	284	192	103	123
Nyambadwe Ward	9,928	223	821	1,096	1,175	1,070	1,179	894	888	794	570	388	250	175	153	110	71	71
Mbayani Ward	69,764	2,027	7,015	8,984	8,942	8,176	8,459	6,728	5,757	4,895	3,363	1,959	1,230	795	577	411	212	234
Chilomoni Ward	28,214	668	2,490	3,206	3,294	3,370	3,273	2,696	2,423	2,216	1,565	891	705	483	349	239	161	185
Blantyre City Centre Ward	21,179	532	1,945	2,462	2,470	2,271	2,388	2,032	1,862	1,645	1,209	793	519	348	277	211	100	115
Namalimwe Ward	11,323	293	895	1,196	1,279	1,246	1,357	1,092	1,127	933	674	404	242	206	151	106	53	69
Limbe Central Ward	7,438	125	600	666	612	673	840	837	805	673	513	342	225	173	126	97	68	63
Mzedi Ward	38,474	1,224	4,287	5,298	5,271	4,409	4,424	3,472	3,043	2,547	1,707	968	586	443	276	244	108	167
Bangwe Ward	18,815	558	2,065	2,458	2,397	2,234	2,228	1,743	1,478	1,279	842	467	330	210	186	136	82	122
Bangwe Mthandizi Ward	19,942	497	1,947	2,413	2,514	2,382	2,246	1,842	1,694	1,448	998	629	420	300	206	180	109	117
Soche East Ward	9,590	166	607	763	830	988	1,251	1,103	1,024	874	617	350	275	218	178	142	101	103
Blantyre South Ward	26,317	661	2,444	3,011	3,131	2,964	3,055	2,535	2,306	2,016	1,445	940	590	446	313	244	101	115
Green Corner Ward	22,609	581	2,116	2,675	2,706	2,619	2,678	2,118	1,960	1,646	1,258	743	479	333	250	210	102	135
Soche West Ward	37,847	1,017	3,429	4,393	4,334	4,195	4,627	3,844	3,525	2,968	1,963	1,229	807	547	404	272	149	144
Namiyango Ward	48,642	1,302	4,952	6,112	6,187	5,775	5,680	4,567	4,000	3,286	2,212	1,452	1,007	689	567	428	206	220
Chigumula Ward	24,869	724	2,578	3,241	3,280	2,804	2,607	2,031	1,833	1,671	1,293	769	556	414	344	279	178	267

Misesa Ward	69,660	1,973	7,151	8,723	8,585	8,078	8,549	6,845	5,765	4,889	3,367	1,990	1,283	830	593	488	232	319

4.2.2.Land Administration

Land in the city is managed by three major landlords, namely: The Commissioner for Lands, Malawi Housing Corporation, and Blantyre City Council. The Commissioner for Lands is responsible for public land which has been subdivided and offered for development under leasehold titles that are usually for 99 years or shorter terms. The Malawi Housing Corporation owns public freehold land for purpose of subdivisions in residential and commercial development in the city. The Blantyre City Council has assumed the administration of Traditional Housing Areas (THAs) in the City.

4.2.3. Main economic activities

Some of the key industrial/ economic sites include but are not limited to Makata, Ginnery Corner, Maselema, Limbe, Chirimba, South Lunzu, Maone and Chitawira. It is estimated that Blantyre City offers 33% of the employment opportunities in general, 19% in Blantyre Central Business District (CBD) and 14% in Limbe CBD. The private sector provides about 45% of employment opportunities, with the public sector at 12% and 36% in self-employment with over 500,000 informal traders/vendors. In unplanned areas, 10% are in professional jobs, 4% in clerical, 13% drivers with 18% employed in the informal sector. Poverty stands at about 24% for the poor and about 5% for the ultra-poor. Poverty is accelerated by the absence of credit and steady increases in prices of basic requirements and unemployment. About 50% access microfinance credit prompting the city to provide investment land with incentives to encourage business investment and job creation. Blantyre City has a strong solid economic base for sustained economic growth and a diversified modern economy offers a wide range of employment opportunities. It has eight designated industrial areas which are Makata, Ginnery Corner, Maselema, Limbe, Chirimba, South Lunzu, Maone and Chitawira. These industrial areas are located along the banks of the main rivers or streams, with notable ones being Mudi, Naperi, Limbe, Nasolo, Lunzu and Chirimba.

Some sites are located within/ close to the markets (Pokopoko, Kandaya 3 and Luchenza kiosks). This may pose a risk of road traffic accidents due to interaction between the project construction activities and the markets patrons. A proper traffic management plan will be implemented to mitigate this risk. In addition, Pokopoko is close to Mudi River, thereby putting the river at risk of being contaminated by pollutants from construction activities.

4.2.4. Health situation and HIV and AIDs prevalence

Some of the major hospitals, health centers and clinics operating in Blantyre are Queen Elizabeth Central Hospital, Limbe, Zingwangwa, Chilomoni, and Ndirande Health Centres and Gateway, Chirimba and Makata Clinics just to mention but a few. These health facilities are run by both government and Blantyre City Council. The city also has private health facilities and clinics run by private sector, and churches. Blantyre has the full range of diseases including cholera, typhoid, tuberculosis (TB), measles, infectious hepatitis, malaria, and HIV and AIDS. Malaria is the leading cause of morbidity and mortality in the City, especially among children under five years old. Malaria accounts for 40 percent of all outpatient visits to health facilities. Pneumonia and diarrhea are the other leading causes of death in children under five years old. Despite the continuing presence of these diseases, overall, Malawi's health conditions appear to be improving. The impact areas are mainly affected by malaria, pneumonia, diarrhea, common injuries, chicken pox outbreaks and HIV and AIDS. Malaria is still the biggest health challenge reported in the city. Most of the malaria cases were reported in the low-income areas and the informal settlements.

Blantyre has a lot of people from different areas with diverse interests and health concerns. Most of these people go to the city with different types of diseases, others are referred from Blantyre rural health centres to Blantyre urban main hospitals such as Queen Elizabeth Central Hospital, Mwaiwathu Private Hospital and Blantyre Adventist Hospital

4.2.5. Education

Literacy is defined as the ability to read and write. Specifically, this analysis classifies all those who can read and write in Chichewa or English or any other language as being literate. Among males, almost 76 percent are literate while half of females are literate. Education services are provided by the government. However, since the year 2020, Blantyre Urban Education became part of Blantyre City Council and provides quality and relevant education to its learners to enable them acquire relevant knowledge, skills, expertise and competencies to perform effectively as citizens of Malawi. Blantyre City has 62 full public government primary schools, and 219 private primary schools. There is a total of 1,133 classrooms in the 62 public primary schools. The district has a total of 2,397 teachers of which 2,107 are female and 290 are male and there are 76,149 boys and 77,202 girls making an enrolment of 153,351 of which translate into a pupil: teacher ratio of 64:1. There are 29 public secondary schools. Out of these, 21 are Community Day Secondary Schools (CDSSs). Out of the five conventional secondary schools, one is a girls' national boarding secondary school, three are double shift day secondary schools and the remaining is a day secondary school. The combined enrolment for public secondary schools is 27,553 of which 13,555 are boys and 13,998 are girls.

All the earmarked 30 sites for the construction/ rehabilitation of the kiosks are not close to any school in the areas.

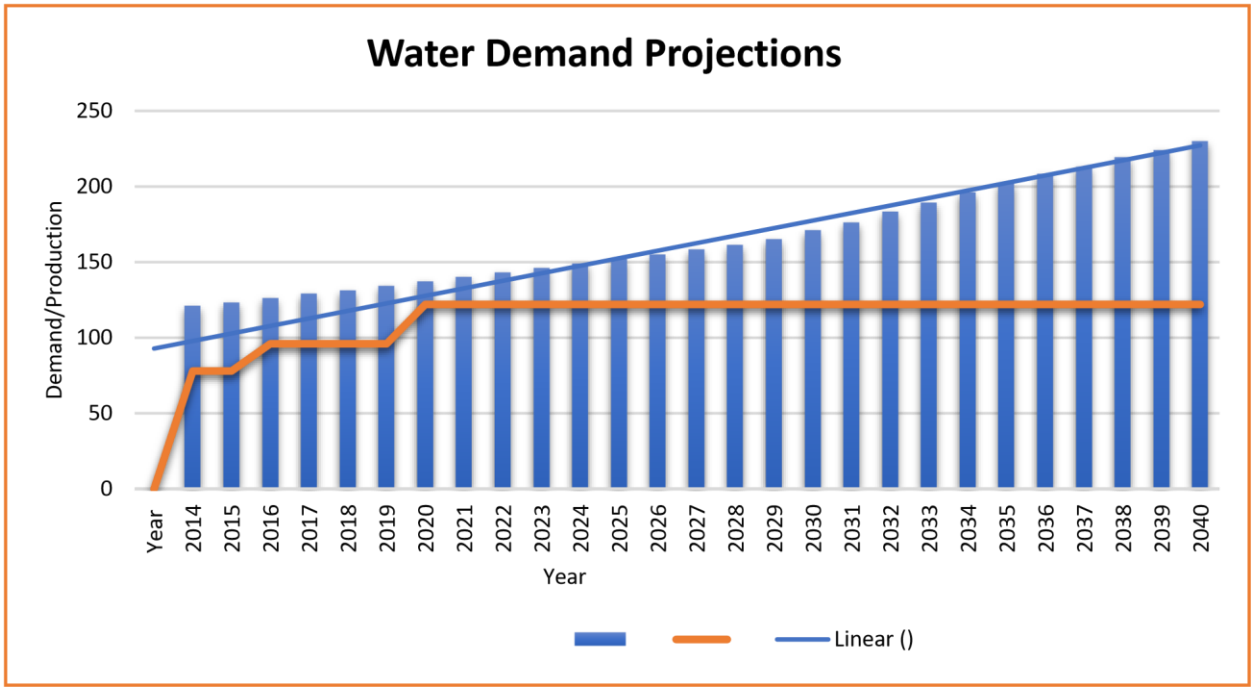
4.2.6. Energy and Water supply

Energy sources in Blantyre include electricity, fuel wood and paraffin. The Electricity Supply Corporation of Malawi (ESCOM) supplies electricity in most parts of the city. In Blantyre, only 26 percent of residents are connected to electricity. The electricity supply infrastructure is old and worn out resulting in frequent power outages and high maintenance costs. Further, the cost of electricity supply is high and inaccessible to the poor. The high reliance on charcoal and firewood for cooking and lighting, mainly by the urban poor, is the major cause of deforestation. The majority of the population cannot access electricity; hence they use fuel wood for heating and cooking; there is also a high demand for firewood for brick curing. Almost 80% of the population in the city use fuel wood in form of charcoal and firewood.

BWB is mandated to supply potable water to Blantyre City and surrounding areas with an estimated population of 1,400,000 (projected based on 2018 population census). This population is expected to continue growing at a high rate due to rural-urban influx, expansion of the city to the peripherals, high birth rate and reduced mortality rate due to improved health services among others.

The current production capacity has increased to 122 million litres with Mudi Treatment Works and Likhubula contributing an average of 6 million litres and 20 million litres per day respectively. A total of four new water storage reservoirs that were constructed increased the Board's storage capacity from 77.5 million litres to 97.5 million litres

The increased production has resulted in more water within the supply area and the storage reservoirs. As a result, some pipes that were not transporting water before are now conveying water almost all the time. However, the condition of the pipes has worsened as most pipes are very old with the largest proportion being comprised of AC pipes that were laid over 50 years ago. These pipes are currently not able to withstand high variations of water pressures experienced in the network resulting in high water losses. Figure 4 show a graph of water demand projections.



Key Projected Water Demand Daily Water Production Capacity

Figure 4: Water demand projection

During construction and rehabilitation of the 30 kiosks there shall be a need for water and energy to support project implementation. For water will be required supressing dust emission and energy is needed for concrete mixing and welding of grill doors/ frames and windows. This may create competition over use of these resources in the project areas. Therefore, the contractor will mitigate these issues by: 1) Securing water abstraction permits before abstracting water from a river/ stream or alternatively buy water from BWB for construction works and 2) Contractor will use a generator as source of energy for welding.

4.2.7. Waste management and Sanitation

BCC oversees waste management in the city. The Cleansing Services within the BCC's Department of Health and Social Services is responsible for waste collection and disposal. Waste management is largely focused towards planned areas. The informal urban areas, which include over 70 percent of the urban population, have little access to waste management services provided by the BCC, mostly serving the markets. Solid Waste Management in Blantyre City mainly involves primary collection, secondary collection and final disposal. Apart from the conventional system in managing solid waste stated above, there are some efforts to manage solid waste through resource recovery initiatives such as recycling, composting and waste to energy. Primary collection includes street and market cleansing, solid waste capture and containment. While

secondary collection involves emptying and transportation of the solid waste from the containment sites to the final disposal site. At the final disposal site, solid waste is mostly disposed of unsegregated and thereafter it is periodically spread and compacted using machinery particularly the bulldozer. BCC planning with regards to waste management (collection and disposal) is based on the fact that 70% of the residents in the city live in high-density areas and that the waste generation rate is pegged at 475 tons/day. Primary solid waste collection is a labour-intensive activity. The Council has an average of 800 employees responsible for solid waste management distributed in four (4) cleansing depots (zones), namely Blantyre, Limbe, Ginnery Corner and Soche. Tools provided for the primary collection of solid waste include local brooms, rakes, shovels, digging forks and wheelbarrows. Apart from the working tools, the employees are also provided with protective wear for their safety while carrying out their duties. Figure 5 shows the city's routine waste management activities.

Figure 5: Refuse Collection

Prior to its subsequent disposal, solid waste is contained in litter bins (street or household), skip bins in markets and open spaces in low income areas and bunkers in markets and some private institutions. Secondary collection includes emptying of the refuse storage facilities and transportation to the final disposal site. Solid waste collection in the City of Blantyre is mainly done using a fleet of 14 refuse collection vehicles. These vehicles are coordinated by a daily collection schedule guiding which routes to be collected on a particular day. Solid waste collection is done once a week for each residential area and every day in the Central Business District

(Blantyre and Limbe) and in some markets. Some private companies also provide refuse collection and transportation services for their institutional customers.

Collected solid waste is finally disposed of at Mzedi Dumpsite which is located some 5.5 km north of Limbe town, along the Blantyre Zomba road soon after Kachere Township. Mzedi dumpsite has a total area of about 23 hectares (including the buffer zone). It was established around 1992 and was designed as an open dumpsite where there are no mechanisms for the treatment of leachate and gaseous waste produced from the solid waste decomposition processes. Spreading and compaction of refuse at the dumpsite is done periodically by hired machinery in an effort to manage the available dumping space.

CHAPTER 5: IMPACT IDENTIFICATION AND THEIR MANAGEMENT MEASURES

This chapter provides a description of expected occurrence of beneficial and adverse impacts of the project, including direct and indirect impacts, for each feature of the environment in the project site. The chapter includes a discussion of the analytical methods used to predict impact and criteria used to judge impact severity and significance. The chapter concludes with a summary of those impacts considered to be of greatest significance and measures proposed to avoid, reduce and/or manage them.

5.1.Impact identification

The assessment considered the potential environmental effects of physical works and activities, including environmental changes that may result from the proposed undertaking. Specifically, the assessment started by identifying the issues through scoping and selecting valued environmental components (VECs) on which to focus the assessment. VECs are components of the environment that society values, and upon which the assessment is focused. Thereafter, the assessment identified environmental effects of project activities, by project phase, including those resulting from the interaction of the project with the environmental effects identified for past, present, and future projects that will be carried out, and changes to the project caused by the environment.

The VECs for this project were identified through a process whereby the features and activities (both planned and unplanned) associated with planning and designing, construction and operation phases of the project have been considered with respect to their potential impact with resources or receptors. This method identifies VECs and activities that could reasonably act as a source of impact and the vertical axis of a Potential Interaction Matrix (refer to Table 5) lists them.

Table 7: Potential impact interaction matrix

Receptor Component		Anticipated Environmental and Social Impacts																									
		Generation of Waste Water	Occupational Safety and Health	Risk of Forced Labour	Risk of Child Labour	Impact on Economy & Livelihood	HIV and AIDS	Risk of GBV SEA and SH	Resource Consumption	Soil contamination	Air Quality & Fugitive Emissions	Noise and Vibration	Water Contamination	Land Degradation	Waste Generation, separation &	Water & energy consumption	Conflict on use of Amenities	Traffic & Road Safety Risks	Increase in theft and vandalism	Community Health and Safety	Change of land use	Involuntary Resettlement	Impact on Flora	Asbestos, lead paint	PAP awareness of project	Community Grievance Redress
SN	**Project activity/Hazard**																									
1	**Planning Phase**																									
1.1	Design of Proposed Structures																									
1.2	Obtain necessary Approvals																									
2	**Construction Phase**																									
2.1	Land Take and Land Clearance																									
2.2	Excavation and Civil Construction																									
2.3	Equipment/Material/ Worker Transport																									
2.4	Source of primary materials																									

Receptor Component		Anticipated Environmental and Social Impacts																								
		Generation of Waste Water	Occupational Safety and Health	Risk of Forced Labour	Risk of Child Labour	Impact on Economy & Livelihood	HIV and AIDS	Risk of GBV SEA and SH	Resource Consumption	Soil contamination	Air Quality & Fugitive Emissions	Noise and Vibration	Water Contamination	Land Degradation	Waste Generation, separation &	Water & energy consumption	Conflict on use of Amenities	Traffic & Road Safety Risks	Increase in theft and vandalism	Community Health and Safety	Change of land use	Involuntary Resettlement	Impact on Flora	Asbestos, lead paint	PAP awareness of project	Community Grievance Redress
SN	**Project activity/Hazard**																									
2.5	Waste Storage and Disposal														■					■					■	■
2.5	Construction Workers Presence						■											■	■	■			■	■	■	■
3	**Operational Phase**																									
3.1	Operation of Facility		■			■	■								■	■			■	■						
3.2	Waste Storage and Disposal														■											

KEY	■	Scoped In	Positive Impacts
		Scoped Out	Scoped Out with Justification

5.1.1.Sites with specific risks

The risks/ impacts in Table 7 above are general because they are almost common in all the sites. However, there are some sites that have specific/ unique risks/ impacts which are not existent in the other sites. The notable sites are Pokopoko, Kandaya 3, Luchenza and Malabada kiosks. Pokopoko, Kandaya and Lucheza are located within market place. This poses a risk of road traffic accidents due to high presence of people at the market. Pokopoko is also close to Mudi River thereby posing a risk of polluting the River due to construction activities.

At Malabada and Pokopoko, there is vegetative cover (grasses and shrubs) which helps to control run off. Removal of these grasses would pose a risk of erosion. Specific mitigation measures of these risks are outlined in Table 8

5.2.Environmental and social impacts arising from project activities

5.2.1.Positive impacts

Planning and design phase

a) Creation of temporary employment opportunities (architects, engineers, and other experts)

During the planning phase, the developer will employ people to undertake various studies for the planning of the project, develop detailed project designs and carry out an environmental and social assessment of the proposed site.

Enhancement measures:

i. Maximise employment of professionals registered with relevant Malawian institutions and authorities;
ii. Give equal employment opportunities to both men and women; and
iii. Provision of terms and conditions which are in line with the employment Act of 2000.

Construction phase

a) Creation of temporary employment opportunities

The construction phase will provide employment (both skilled and unskilled) to people in the district including men, women, youth and the vulnerable from the surrounding communities.

Enhancement measures:

i. Prioritize the employment of people (including the youth) from respective project areas;
ii. Give equal employment to both men and women;
iii. Ensure salaries and wages to be paid to the local employees are above the minimum stipulated Government wages.

b) Creation of temporary market for goods and services

The project will be buying construction materials from the local market and will provide business for the local businesses. The people in the project area of impact will be selling food to construction workers, which will improve their incomes hence improved livelihood.

Enhancement measures:

i. Promote the procurement of construction materials and supplies from approved small-scale businessmen and entrepreneurs within the projects area, while not compromising the quality;
ii. Where practically possible ensure that locally produced materials are given priority over imported materials; and
iii. Purchase construction materials and supplies at competitive prices to ensure local businesses and entrepreneurs are making profits.

c) Skill transfer to local communities

Employment of local people from within the projects area of impact will facilitate capacity enhancement and the acquisition of specific skill sets through on the job and formal training. These skill sets may then be readily replicated after employment termination in other construction related projects.

Enhancement measures:

i. Maximise employment of local people particularly for the unskilled labour force;
ii. Make deliberate effort to pair skilled and unskilled workers during various construction assignments; and
iii. Formalise on-the-job trainings for local unskilled labour that also includes learning targets and performance monitoring.

Operation phase

a. Access to potable water by the communities

The project will increase water connections in the cholera prone area. This is expected to result in easy access to portable water; reduced distances to draw water and the associated drudgery of carrying heavy buckets of water. Additionally, the queuing time at water points will be reduced, which in turn will lead to increase productivity time for women and girls; the study established that it is mainly women and girls who draw water for the household.

Enhancement measures:

i. Proper maintenance of the kiosks;
ii. Conduct regular inspection of the pipelines to detect leaks, overflows and repair them;
iii. Employ adequate staff and ensure that they provide appropriate work inputs through proper work schedules; and
iv. Sensitize the water users on proper water management practices, water pricing and importance of payments of water bills in time

b. Improved sanitation, hygiene and health

Increased availability of treated water is expected to result in improved sanitation and hygiene. Treated water will be available to households, public places and markets, thereby enhancing sanitation and hygiene. Improved water quality for consumption will also reduce health risks to the people including expecting mothers and infants; and this will translate into financial saving through reduced cost for medical treatment.

Enhancement measures:

i. Sensitise communities on hygienic practices for handling water to avoid secondary contamination;
ii. Promote general sanitation practices amongst communities in the project area;
iii. Conduct trainings aimed at building the capacity of smart water kiosks committee;
iv. Monitor the quality of water and to promote health and hygiene at water points;
v. Support initiatives implemented by Community Based Organisations to promote health, sanitation and hygiene; and
vi. Ensure there is adequate and efficient drainage within the community water points.

c. Source of BWB Revenue

The construction and upgrading of the smart water kiosks will help BWB generate revenue from the sales obtained by Water Users Association (WUA) running the kiosks.

Enhancement measures:

i. Carrying out regular maintenance of the of the water supply system; and
ii. Conduct regular inspection of the pipelines to detect leaks, overflows and repair them.

d. Reduced incidences of water borne diseases such as Cholera

By constructing the smart kiosks, the beneficiaries will have unrestricted/unlimited access to safe portable water which will reduce incidence of emergencies like cholera.

Enhancement measures:

i. Carrying out regular maintenance of the of the water supply system;
ii. Sensitize the water users on proper water management practices; and
iii. Monitor the quality of water and to promote health and hygiene at water points.

e. Improved standards of living of people running the smart water kiosks

The kiosks to be constructed are run by Water Users Association (WUA's). These WUA's employ sale agents who receive monthly commission based on their water sales. These agents will be able to support their families financially.

Enhancement measures:

i. Employ sales agents from surrounding communities including and vulnerable groups;

ii. Carrying out regular maintenance of the of the water supply system; and
iii. Conduct regular inspection of the pipelines to detect leaks, overflows and repair them.

5.2.2.Negative impacts

Design and planning phase

a) Increased risk of accidents and exposure to hazardous material

Experts (design and supervision engineer) to be contracted will have to visit the sites earmarked for the construction of water kiosks, in the process they may be exposed to to various risks (being bitten by bees, snakes, wasps, etc), especially those related to outdoor works. These risks may lead to injuries if not prevented and/or avoided.

Mitigation measures:

i. Implement the Occupational Safety and Health (OSH) Plan annexed to ESMP in order to avoid, minimise, and mitigate the risk of accidents and exposure to hazards at workplace;
ii. Provide OSH orientation training and hazard specific training;
iii. Make available first aid kits during field and site inspections;
iv. Compensate injured persons in line with the Workers Compensation Act of 2000; and
v. Put appropriate measures to prevent field investigations during periods of harsh weather conditions.
vi. Specify in the bid/ contract negotiations that contractors should not use lead based paint and asbestos to avoid exposure to these hazardous substances

b) Risk of Sexual Harassment, and Sexual Exploitation and Abuse

The planning and design consultants' team to be engaged during this period will be in contact with the local community members. It is important that the experts and their teams hold themselves to the highest standards and not sexually exploit the vulnerable of the projects area of impact.

Mitigation measures:

i. Contractual clause should be presented that explains the consequences of any of sexual harassment, and sexual exploitation and abuse cases;
ii. Codes of conduct should be made part of the contract and be signed by all team members of the contractor; and
iii. Setup a grievance redress mechanism that integrates issues of GBV/SEA/SH.
iv. Develop a Code of conduct that integrates GBV/SEA/SH in English and translate into vernacular language.
v. On board training on GBV/SEA/SH for all workers.
vi. Community sensitization on GBV/SEA/SH
vii. Collaborate and network with District Social Welfare, District Gender Office and NGOs in implementation of GBV Action plan.

viii. Develop a comprehensive GBV/SEA/SH prevention and response plan
ix. Tool Box Talks on GBV/SEA/SH

c) Increased risk of natural emergencies such as flooding

The kiosks will be exposed to hash weather conditions such as floods which may lead to poor access of the kiosks by the communities and even damage of the kiosks by flooding water

Mitigation measures:

vii. Ensuring site location is outside some level of design flood areas
viii. Ensure the technical designs of the kiosk are provided with proper water drainage i.e. to withstand rainfall event with a 50 year return period
ix. The kiosk infrastructure should have a raised up foundation to prevent it from being inundated during flooding i.e. to withstand flood event with a 50 year return period

Construction phase

a) Loss of vegetation and change of land use

Most of the identified sites have bare grounds (except Pokopoko and Malaba kiosks) and the project is not expected to have any negative impacts on vegetation apart from the mentioned sites and change of land use from being idle to construction of new kiosks which may pose a risk of erosion due to disturbance of the land structure. Though to a lesser extent, land structure disturbance also extends to already existing kiosks as the project constructs/ renovates the kiosks drainage system.

Mitigation measures:

i. Limit vegetation clearance/ ground disturbance to demarcated areas only as handed over to the contractor by BWB; and
ii. Plant vegetative cover after completion of construction/ rehabilitation works even at the sites that originally had bear ground.

b) Increased risk of Soil erosion and sedimentation

Soil erosion will be induced by soil disturbing activities such as excavations, land clearing and grabbing, vehicle movement, open piling of materials.

Mitigation measures:

i. Stockpile soil away from the excavation works and water courses at the site;
ii. Install sediment traps on natural drainage paths at construction site;
iii. Restrict land clearing only to the proposed site for construction activities; and
iv. Compact and spray water on loose soil in all disturbed areas during construction phase

c) Increased generation of solid waste including hazardous waste

Various construction activities are expected to generate many types and varying quantities of wastes that include construction rubble and general waste as well as hazardous waste which can be detrimental to the environment and to the ecosystem.

Mitigation measures:

i. Provide adequate on-site waste receptacles such as bins for waste storage;
ii. Enforce waste separation at source by having well labelled (hazardous and non-hazardous) waste receptacles to encourage waste segregation
iii. Use the 3Rs (Reduce, Reuse and Recycle) principle, which should also be advocated to construction workers and operators of the facility;
iv. Use some construction rubbles for backfilling the foundation or rehabilitate road potholes
v. Dispose of waste at the dumpsite designated by Blantyre City Council
vi. Contain all hazardous waste in an isolated place and dispose of them in accordance with Government Guidelines E.g. Waste Management and Sanitation regulation (2008) in consultation with MEPA/Government district authorities

d) Increased generation of faecal waste

Presence of construction workers at the project sites will increase generation of faecal sludge/ risk of open defecation. It is anticipated that mobile toilets will be used throughout the project site. Potential impacts associated with the mismanagement of the sewage will be water pollution, localized land contamination and impacts to health.

Mitigation measures:

i. Provision of adequate mobile toilets to workers;
ii. Empty the mobile toilets into the existing sewerage treatment plant and clean the toilet before use; and
iii. Conduct routine monitoring of the mobile toilets to ensure that they are clean at all times.

e) Increased noise generation

A significant increase in noise will be generated through the use of machinery and equipment as well as the workers.

Mitigation measures:

i. Confine construction works to daylight hours unless permission is obtained from Supervision Committee; and
ii. Use well serviced machinery and equipment.
iii. Minimizing project transportation through community areas

f) Increased incidences of child labour

The impact of child labour exploitation in the project area is expected to be medium-term during this phase. Child labour may not necessarily be in the form of full-time employees, but may involve

the seasonal workers, who are difficult to account for. This calls for the proposed project to take serious measures to control and monitor that this does not happen in the proposed project areas.

Mitigation measures:

i. Sensitize local leaders, children and the community at large on prohibition of any forms of child labour at the project site;
ii. Display posters at the project site that warn and inform community members against child labour; and
iii. Put in place proper procedures for preventing child labour.
iv. The contractors should verify age of workers through National identification card
v. Collaborate and network with District labor office in implementation of Labor Management plan.

g) Increase in other labour related risks such as labour disputes and employment condition (i.e. paying workers below minimum wage) and influx of people to the sites looking for employment.

Mitigation measures

i. Sensitize workers about their labour rights.
ii. Have in place a worker's grievance redress committee
iii. Paying workers above minimum wage.
iv. Employ people from within the area.

h) Loss of land

Land issues will not arise for the upgrading of the existing kiosks; however, construction of new kiosk will require land; in all the 15 project sites for the new kiosks, the land has been offered voluntarily by the community**.**

Mitigation measures

i. Obtain signed permission from land owners before commencing the works as required by the MWSP`s RPF in Section 5.6.5 under voluntary land donation.

i) Increased air pollution/ dust emissions

Construction work produces dust because of material and vehicle movement, excavation works, land clearing and construction activities which may result in air pollution.

Mitigation measures

i. Control vehicle speed to reduce generation of dust;
ii. Install signage and speed humps in strategic areas, and
iii. Sprinkle water to earth roads or exposed land/ soils to suppress dust emission.

j) Increased risk of community safety including traffic accidents

The construction works will involve the movement of vehicles carrying various construction materials, this will increase traffic in the project area hence probability of accidents in the proposed project areas.

Mitigation measures:

i. Introduce speed limit of 40 km/h or less to construction vehicles;
ii. Develop and enforce use of Traffic Management Plan (refer to the generic Traffic Management Plan in Annex 8 which will guide preparation of specific TMP by contractor); and
iii. restrict access to the construction site through site hoarding.

k) Increased Occupational Safety and Health Risks

Workers involved in construction works will be exposed to various occupational risks due to manual handling/ lifting of objects, slip and fall, working at height, as the project activities will bring about hazards such as use of machinery and equipment.

Mitigation measures

i. Develop and enforce the use/ implementation of Occupation Health and Safety Plan (refer to generic Occupational Health and Safety Plan Annex 9 and OHS measures outlined in Section 3 in Labour Management Plan contained in Annex 6 which will be shared with the contractor to use in develop specific OHS plan that will suit the nature, scope and delivery method of this kiosk project. The contractor will also be shared environmental rules contained in Annex 3 of the project`s ESMF[2])
ii. Training of workers in all relevant risks including lifting and materials handling techniques in construction and decommissioning projects, including the placement of weight limits above which mechanical assists or two-person lifts are necessary
iii. Implementing good house-keeping practices, such as the sorting and placing loose construction materials or demolition debris in established areas away from foot paths
iv. Training and use of temporary fall prevention devices such as rails or other barriers able to support a weight of 200 pounds (91kgs) or fall arrest systems such full body harnesses and energy absorbing lanyards able to support 5000 pounds (2268kg), when working at heights equal or greater than two meters or at any height if the risk includes falling into operating machinery, into water or other liquid, into hazardous substances, or through an opening in a work surface
v. Provide workers with PPE and enforce its use;
vi. Put warning signs (written in English and local languages) at strategic sites; and
vii. Ensure availability of a fully stocked First-Aid Kit.

l) Risk of sourcing and using poor quality primary construction materials

[2]https://www.bwb.mw/Downloads/Environmental_and_Social_Management%20Framework_ESMF_Malawi_Water_and_Sanitation_Project_1_P178954.pdf

During construction of the water kiosks there is risk of sourcing and using poor quality materials from unscrupulous suppliers.

Mitigation measures

i. Verification of materials during/ before delivery
ii. Use of licensed suppliers
iii. Quality control tests on construction materials

m) Competition over use of existing resource (water and energy)

During construction there is need for water and energy to support construction works. For instance, dust emission, for concrete mixing, etc. and energy for running welding grill doors and frames and windows, etc.

Mitigation measures

i. Secure water abstraction permits before abstracting water from a river/ stream
ii. Buy water from BWB for construction works.
iii. Contractor will use generator as source of energy to weld grill doors

n) Increased risk of cases of sexual harassment and Gender Based Violence

Construction workers will have extra disposable income that may lead to the harassment and Gender Based Violence.

Mitigation measures:

i. Develop code of conduct for workers;
ii. Develop GBV and SEA plan;
iii. Encourage employees to report any Sexual Harassment and GBV related issues or suspected cases at the site;
iv. Employ over 80% of unskilled labour force from surrounding communities; and
v. Setup Grievance Redress Committees across the project impact area and implement project Grievance Redress Mechanism contained in Annex 10 to capture all project grievances including sexual harassment-related issues or suspected sexual harassment actions.

o) Increased risk of communicable diseases

Interactions between workers and the communities and even amongst themselves can increase the likelihood of spreading HIV and AIDS.

Mitigation measures:

i. Conduct HIV and AIDS awareness meetings;
ii. Use HIV and AIDS Information, Education and Communication materials on site;
iii. Distribution of condoms to workers.

Demobilization phase

a) Loss of employment

At the end of construction works, temporary employment of workers will have to be terminated and this will result in loss of jobs.

Mitigation measures

i. Give adequate notice to workers on the duration of the construction works; and
ii. Provide terminal benefits to workers.

b) Increased generation of waste including hazardous waste

At the end of construction and rehabilitation works some of the temporary structures will be demolished as such there will be an increase in solid wastes such as rubble including hazardous waste such as paint, anti-termites chemical, and cement, etc

Mitigation measures

iv. Disposal of waste at designated site;
v. Use rubble to rehabilitate access roads and degraded areas in the project area;
vi. Contain all hazardous waste in an isolated place and dispose of them in accordance with Government Guidelines E.g. Waste Management and Sanitation regulation (2008) in consultation with MEPA/Government district authorities

Operation phase

a) Increased risk of vandalism

There is potential risk of vandalism of water supply infrastructure by surrounding communities.

Mitigation measures

i. Involve the community to ensure ownership of the structures
ii. Sensitise community members against vandalism; and
iii. Develop bylaws to curb vandalism of water supply infrastructure.
iv. Provide security features (such as smart sensors and burglar bars) to protect the water infrastructure from being vandalized.

b) Risk of water leakage

During operation phase water leakage can occur due to high water pressure that can burst the water pipes, vandalism of the water infrastructure, poor repair and maintenance or use of poor quality materials during repair and maintenance. This may lead to increased non-revenue water and loss of funds.

Mitigation measures:

i. Carry out regular inspection to actively identify and rectify water leakages
ii. Use of good quality materials during repair and maintenance of the water infrastructure
iii. Sensitize communities against vandalism of the water infrastructure
iv. Sensitise communities to immediately report to BWB any noticeable water leakage

c) Increased generation of solid waste

Operation and maintenance phase activities will generate waste comprising mainly food waste, plastic, and wastepaper. Waste requiring treatment or disposal could include organic waste, domestic wastes that contain chemicals or other solid wastes which cannot be reused.

Mitigation measures:

v. Provide bins for disposal of waste by the sales agent;
vi. Train the sales agent on solid waste management; and
vii. Proper disposal of non- biodegradable waste in consultation with Blantyre City Council.

d) Increased risk of spread of communicable diseases such STIs, HIV and AIDS

It is anticipated that the operation of the kiosks will increase interaction of people in the area which could result in sexual encounters that can increase the likelihood of spreading HIV and AIDS.

Mitigation measures:

i. Develop and implement an HIV and AIDS policy and a prevention, treatment, care and support programme;
ii. Sensitize staff and learners on HIV and AIDS prevention;
iii. Free condoms to be made available to staff; and
Distribution of Information, Education and Communication (IEC) materials on STIs including HIV and AIDS

e) Risk of providing poor quality water

During operation and maintenance phase there is a risk of the water being contaminated during repair and maintenance, lack of or use of insufficient residual chlorine which may lead to sickness of consumers/ customers

.

Mitigation measures:

i. Flashing after repair and maintenance
ii. Regular sampling and testing the water after major repair and maintenance.
iii. Chlorine dosing to ensure recommended concentration of residual chlorine

5.2.2.1Site specific risks/ impacts and their mitigation measures

As indicated in Section 5.1.1 some sites have specific risks/ impacts because of their geographical position/ locations, being at or close to sensitive sites such as river and market hence have unique mitigation measures. Table 8 highlights the sites, risks and their mitigation measures.

Table 8: Site Specific Risks/ Impact and Mitigation Measures

#	Name of site	Risk	Mitigation
1	Pokopoko, Kandaya 3 and Luchenza - are located at/ near the market	Road traffic accident involving people who patronize the markets	-Deliver construction materials before or after the peak market hours -Site hoarding -Involvement of traffic police when need be

2	Pokopoko – the site is close to Mudi River	Pollution of Mudi River by discharge from construction activities	Construct a band around the site to prevent escape of any pollutants from construction site to the river
3	Malabada and Pokopoko – have vegetative cover (grasses and shrubs)	Loss of ground cover – grasses and shrub due to land clearing	-Limit land clearing to the area where the structure will be erected -Avoid putting excavated materials near the water course

CHAPTER 6: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN AND MONITORING PLAN

6.1.Environmental and Social Management and Monitoring Plan

The purpose of the ESMP is to provide practical mitigation and management measures to identified impacts and the monitoring activities that need to be undertaken. The ESMP outlines environmental impacts, mitigation, monitoring and institutional measures to be taken during project implementation and operation to avoid, reduce or eliminate adverse environmental and social impacts. The success of the ESMP rests with the different project stakeholders who are required to use the plan as a tool to guide implementation of measures. The ESMP is a dynamic document, which can be updated in the course of implementation of the project to ensure the measures proposed in the ESMP are feasible and effective.

The proposed environmental management plan is presented in Tabular format in Table 6. The table has been presented to show clearly the linkages between the predicted negative impacts and recommended mitigation measures, and on the other hand to show the link between recommended mitigation measures, the estimated budget for the activities and stakeholders responsible for the

implementation. In addition, the plan indicates the suggested period for implementation of the mitigation measures within the project cycle.

Table 9: Environmental and Social Management Plan for construction and upgrading of kiosks

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
Positive Impacts							
Planning and design phase							
1	Creation of temporary employment opportunities	Maximise employment of professionals registered with relevant Malawian institutions and authorities.	Percentage of Malawians employed	10	Planning phase	PIU BWB	Part of project cost
		Give equal employment opportunities to both men and women	Percentage of women employed	4			
		Provision of terms and conditions which are in line with the employment Act of 2000	Records of terms and conditions	All			
Construction Phase							

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
1	Creation of temporary employment	Prioritize the employment of people (including the youth) from respective project areas	Percentage of youth and women in workforce	40	During Construction Phase	Contractor	Project cost
		Give equal employment to both men and women;					
		Ensure salaries and wages to be paid to the local employees are above the minimum stipulated Government wages and paid on time.	Percentage of workers paid above the minimum wage				
2	Creation of temporary market for	Promote the procurement of construction materials and	Percentage of construction materials	NA	During Construction Phase	Contractor	Part of project cost

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
	goods and services	supplies from approved small-scale businessmen and entrepreneurs within the projects area, while not compromising the quality	purchased from local suppliers				
		Where practically possible ensure that locally produced materials are given priority over imported materials	Procurement records	NA			
		Purchase construction materials and supplies at competitive prices to ensure					

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		local businesses and entrepreneurs are making profits					
3	Skills transfer to local communities	Maximise employment of local people particularly for the unskilled labour force;	Percentage of locals in workforce	NA	During Construction Phase	Contractor	Part of Project cost
		Make deliberate effort to pair skilled and unskilled workers during various construction assignments; and	Percentage of unskilled workers being trained				
		Formalise on-the-job trainings for local unskilled labour that also includes learning targets					

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		and performance monitoring.					
Operation and Maintenance Phase							
1	Access to potable water by the communities	Proper maintenance of the kiosks	Records of maintenance	NA	During operation and Maintenance Phase	WUA BWB	5,000,000
		Conduct regular inspection of the pipelines to detect leaks, overflows and repair them;	Inspection records	4 per annum			
		Sensitize the water users on proper water management practices, water pricing and importance of payments of water bills in time	Sensitisation records	4 per annum			
		Employ adequate staff and ensure that they provide	Number of employees	5 per site			

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		appropriate work inputs through proper work schedules					
2	Improved sanitation, hygiene and health	Sensitise communities on hygienic practices for handling water to avoid secondary contamination	Sensitisation records	4 per annum	During operation and Maintenance Phase	WUA BWB	3,000,000
		Promote general sanitation practices amongst communities in the project area	Hygienic State of the facilities	NA			
		Conduct trainings aimed at building the capacity of water kiosks committee	Training records	1			
		Monitor the quality of water and promote	Monitoring records	At least 4 per annum			

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		health and hygiene at water points					
		Support initiatives implemented by Community Based Organisations to promote health, sanitation and hygiene	State of the supported initiatives	NAA	During operation and Maintenance Phase	WUA BWB	600,000
		Ensure there is adequate and efficient drainage within the community water points	Availability of drainage	NA			
3	Source of BWB revenue	Carry out regular maintenance of the of the water supply system;	Frequency of maintenance	NA	During operation and Maintenance Phase	WUA BWB	5,000,000
		Conduct regular inspection of the pipelines to detect leaks,	Inspection records	4 per annum			

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		overflows and repair them					
4	Reduced incidences of water borne diseases such as Cholera	Carry out regular maintenance of the of the water supply system;	Frequency of maintenance	NA	During operation and Maintenance Phase	WUA	5,000,000
		Sensitize the water users on proper water management practices	Sensitisation records	4 per annum			
		Monitor the quality of water and to promote health and hygiene at water points	Monitoring records	4 per annum			
5	Improved standards of living of people running the smart kiosks	Employ sales agents from surrounding communities including and vulnerable groups	Number of sales agents employed	NA	During operation and Maintenance Phase	WUA	5,000,000

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		Carrying out regular maintenance of the of the water supply system	Maintenance records	NA			
		Conduct regular inspection of the pipelines to detect leaks, overflows and repair them	Inspection records	4 per annum	During operation and Maintenance Phase	WUA	5,000,000
Negative Impacts							
Design and planning phase							
1	Increased risk of accidents and exposure to hazardous materials	Implement the OHS Plan annexed to the ESMP in order avoid, minimize and mitigate the risk of accident and exposure to hazards at work place	Availability of OSH guidelines	1	Planning phase	BWB, PIU	300,000

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		Provide OSH orientation training and hazard specific training;	Number of OSH training conducted	1 per site		PIU	500,000
		Make available first aid kits during field and site inspections;	Availability of first aid kit	1	Planning phase	PIU	50,000
2	Risk of Sexual Harassment, Sexual Exploitation and Abuse	Contractual clause should be presented that explains the consequences of any of sexual harassment, and sexual exploitation and abuse cases	Availability of the clause	NA	Planning phase	PIU	Part of Project cost
		Codes of conduct that integrates issues of	code of conduct	NA			

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		GBV/SEA/SH should be made part of the contract both in English and vernacular language and be signed by all team members of the contractor					
		Setup a grievance redress mechanism that integrates issues of GBV/SEA/SH	GRM platforms with GBV champions				
3	Increased risk of flooding	-Ensure the technical designs of the kiosk are provided with proper water drainage thatcan withstand rainfall	Presence of drain to drain out water from the kiosk	BWB/ Supervising Engineer	Each Kiosk	Design phase	Part of project cost

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		event with a 50 year return period The kiosk infrastructure should have a raised foundation to prevent it from being inundated during flooding I.e. to withstand flooding event with a 50 year period	Presence of raised up foundation				
Construction Phase							
1	Loss of vegetation and change of land use due to soil disturbance that may lead erosion	Limit vegetation clearance soil disturbance to demarcated areas only as handed over to the contractor by BWB Plant vegetative cover after completion of	Presence of vegetative cover at all sites	NA	During Construction Phase	Contractor	2,000,000

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		works in all sites.					
2	Increased risk of soil erosion and sedimentation	Install sediment traps on natural drainage paths at construction site;	Presence of sediment traps		During Construction Phase	Contractor	500,000
		Restrict land clearing only to the proposed site for construction activities	Area of land cleared	NA	During Construction Phase	Contractor	500,000
		Compact and spray water on loose soil in all disturbed areas during construction	Area compacted	NA			
		Stockpile soil away from the excavation works at the site	Distance from excavated areas	NA			

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
3	Increased Generation of solid waste including hazardous waste and lack of waste separation	Provide adequate on-site waste receptacles such as bins for waste storage	Number of bins provided on site	2	Construction Phase	Contractor	250,000
		Waste separation (hazardous and non-hazardous) with well labelled bins and disposal of hazardous waste to designated sites as advised by relevant authorities	Number of bins containing hazardous waste	1			
		Dispose waste at Designated disposal site	Disposal records	NA			

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		Use some construction rubble to rehabilitate degraded areas	State of the degraded area	NA	Construction Phase	Contractor	300,000
4	Increased generation of faecal waste	Provide mobile toilets for the workers.	Number of mobile toilets	1	Construction Phase	Contractor	400,000
		Empty the mobile toilets into existing sewage treatment plant and clean the toilet before use	State of the toilets	NA			
		Conduct routine monitoring of the mobile toilets to ensure that they are clean at all times	State of the toilets	NA			
4b	Hazardous waste such as oil leak, fuel spill from gen set or fuelling vehicles, paint,	-Regularly services project vehicles and static machines to avoid leakages.	Presence of service records Availability of spill kits		Construction phase	Contractor	3,000,000

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
	asbestos coated materials, etc.	-Have spill kits to take care of spills -Use of asbestos free materials – through proper selection and inspection of construction materials					
5	Increased noise generation	Confine construction works to daylight hours unless permission is obtained from Supervision Committee Use well serviced machinery	Number of noise complaints	NA	Construction Phase	Contractor	Part of project cost
		Work with school committees and other structures in the community to support management of construction	Number of community structures engaged		Construction phase	Contractor	Covered in other community engagement activities

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		activities (i.e. noisy activities) that may affect learners					
6	Increased incidences of child labour	Sensitize local leaders, children and the community at large on prohibition of any forms of child labour at the project site	Number of sensitization meetings on child labour	2	Construction Phase	Contractor	450,000
		Display posters at the project site that warn and inform community members against child labour	Number of posters displayed	4 posters per site			
		Put in place proper procedures for reporting and	Records of complaints on child labour				

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		addressing child labour					
	Increase in other labour related risks such as labour disputes and employment condition (i.e. paying workers below minimum wage) and influx of people to the sites looking for employment.	Sensitize workers about their labour rights. Have in place a worker's grievance redress committee Paying workers above minimum wage. Employ people from within the area.	sensitized on labour rights presence of Workers GRC Number of people employed from within the area Number of workers		Construction phase	Contractor	1,000,000
7	Loss of land	Obtain permission from landowners before	Number of land agreement / consent forms signed	15	Before construction	PIU, BWB	200,000

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		commencing civil works					
8	Increased air pollution/ dust emissions	Sprinkle water to earth roads or exposed land/ soils to suppress dust emissions	Frequency of water application	3	During Construction Phase	Contractor	2,000,000
		Control vehicle speed to reduce generation of dust through speed humps and installation of vehicle tracker, drivers sign Code of Conduct to comply with speed limit	Availability of vehicle tracker	NA			
		Use of PPE by construction workers	Percentage of workers using PPE	100%			

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		Install signage and speed humps in strategic areas	Availability of signage and humps	NA			
9	Increased risk of community safety including traffic accidents	Introduce speed limit of 40km/h or less Designate speed limit to construction vehicles; put up signage	Availability of speed limits signage		During Construction Phase	Contractor	3,100,000
		Restrict access to construction site (site Hoarding) to prevent access by community.	Presence of the hoarding fence	All sites			
		Enforce use of Traffic Management Plan	Traffic management plan available	1			
10	Increased risk of cases of sexual harassment	Develop Code of Conduct that integrates issues of GBV/SEA/SH for workers;	Code of conduct available and signed	1	During Construction Phase	Contractor	3,000,000

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
	and Gender Based Violence						
		Develop GBV and SEA Prevention Plan;	GBV and SEA prevention plan available	1			
		Conduct on-board training/ sensitization and public awareness meetings on GBV/ SEA/SH	Number of people trained Number of meetings conducted	All contract workers Surrounding community			
		Employ over 80% of the unskilled labour force from surrounding communities;	Number of labourers from communities				
11	Increased risk of spread of communicable diseases	Conduct HIV and AIDS awareness meetings;	Number of awareness meeting conducted	3	During Construction Phase	Contractor	2,000,000
		Distribution of condoms to workers	Number of condoms distributed				
		Orient workers on Cholera prevention	Number of workers trained	All workers			

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		through handwashing after latrine use, before eating any food, etc					
		Purchase and place water buckets and soap for handwashing in strategic position for workers use	Number buckets and soap bottles/ tablets available	All sites			
		Use HIV and AIDS Information, Education and Communication materials on site;	Number of IEC materials used				
12	Increased Occupational Safety and Health Risks	Develop and enforce of C`ESMP, Occupation Health and Safety Plan annexed to this ESMP	OSH plan available on site	1	During Construction Phase	Contractor, BWB	2,000,000

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		Train workers on the relevant risks;	Number of trainings	3			
		Provide workers with PPE and enforce its use	Availability of PPE				
		Put warning signs (written in English and local languages) at strategic sites;	Signage displayed on site	5			
		Training workers on conducting task risk assessments, including requirements for work permits for high risk works such as working in confined space, excavations, working at hieght, hot works, etc	Presence of risk assessment for high risk works and a permit for the same				

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		Ensure availability of a fully stocked First-Aid Kit	Availability of a First -Aid Kit	1			
13	Risk of sourcing and using poor quality construction materials	Verification of materials during/ before delivery Use of licensed suppliers Conduct quality control tests on construction materials	Evidence of valid license from suppliers Results of control test	All suppliers Relevant materials	Construction phase	Contractor under supervision of engineer Supervising engineer	Within project cost

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
14	Competition over use of existing resource (Water and energy)	Secure water abstraction permits before use of water from a stream/ river or alternatively buy water from BWB Contractor to use generator as source of energy	Availability of permits Availability of contractors own source of energy			Contrctor	Part of project cost
15	Generation of waste including hazardous waste	Contain all hazardous waste in isolated place and dispose of them in consultation with MEPA or Government district authorities in line with waste management and sanitation	Proof of consultation with MEPA on hazardous waste		Construction phase	Constrictor	1,000,000

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		regulations (2008)					
16	Change of land use can disturb the soils structure and lead to erosion	Limit soil disturbance to the site for erecting the kiosk and its drainage -Plant vegetative cover to stabilize the soil	Presence of vegetative cover after completion of construction works	All sites	Construction phase	Contractor	Already covered above
Demobilization phase							
1	Loss of employment	Give adequate notice to workers on the duration of the construction works	Availability of warning notice	1	During demobilisation Phase	Contractor	Part of Project Cost
		Provide terminal benefits to workers	Payment records	NA			
2		Disposal of waste at	Area free of rubble	NA		Contractor	2,000,000

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
	Increased generation of waste	designated and approved site			During demobilisation Phase		
		Use rubble to rehabilitate access roads in the project area					
Operation phase							
1	Increased risk of vandalism	Sensitize community members against vandalism	Number of sensitization meetings	3	During operation Phase	WUA/ BWB	2,500,000
		Community involvement to ensure ownership	Number of key community members involved				
		Provide security features	Number of security features per kiosk	1			
		Develop bylaws to curb vandalism of water kiosk infrastructure	Bylaws available	1			
2	Risk of water leakage	Carry out regular inspection to actively identify	Number of inspections conducted	All kiosks	Operation phase	BWB	

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		and rectify water leakages					
		Use of good quality materials during repair and maintenance of the water infrastructure					4,000,000
		Sensitize communities against vandalism of the water infrastructure	Number of sensitisation done				Covered in other sensitisations
		Sensitise communities to immediately report to BWB any noticeable water leakage	Number of sensitisation done & report on leakage				Covered in other sensitisations
3	Increased generation of solid waste	Provide bins for disposal of waste by the sales agent	Number of bins provided	1	During operation Phase	BWB, BCC	850,000

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		Train the sales agent on solid waste management;	Number of trainings conducted	2			
		Proper disposal of non-biodegradable waste in consultation with Blantyre City Council	Availability of disposal records	NA			
4	Increased risk of spread of communicable diseases	Conduct HIV and AIDS awareness meetings;	Number of awareness meeting conducted	3	During Construction Phase	BWB, BCC	500,000
		Distribution of condoms to workers	Number of condoms distributed				
		Inspect and ensure good drainage system around the kiosks for runoff and spills	Percentage of kiosks with poor water drainage	0	Construction and operation phase	BWB & BCC	Covered in other supervisions and inspection
		Use HIV and AIDS Information,	Number of IEC materials used	NA	During Construction Phase	BWB, BCC	500,000

No.	Impact	Enhancement/ Mitigation Measure	Output indicators	target	Time frame	Responsibility for implementation of Enhancement/ Mitigation Measures	Estimated Cost (MK)
		Education and Communication materials on site;					
		Sensitize staff and learners on HIV and AIDS prevention	Sensitisation records	4 per annum			
5	Risk of providing poor quality water	Flushing after repair & maintenance Regular sampling & testing of the water Chlorine dosing to ensure recommended concentration of residual chlorine	Report on sampling and testing of the water	Once a week	Operation phase	BWB	Already embedded in BWB operation cost
Total							56,500,000

6.1.1. Incidents management

All incidents/ accidents must be recorded and reported. An accident is an event that has unintentionally happened, that results in damage, injury or harm. An incident is an event has unintentionally happed, but this may not result in damage, harm or injury. Therefore, every accident can be an incident. However not all incidents can be termed as an accident.

When an incident occurs, it must be reported within 24 hours using the reporting forms contained in Annex 11a and 11b. Immediately the accident investigation must start to identify the cause of the incident and measures that when implemented will prevent the incident from recurring.

6.2.Institutional roles and responsibilities

Implementation Arrangements

The successful implementation of this ESMP lies on the concerted efforts from various key stakeholders and these include MEPA, Blantyre Water Board, MWSP- PIU, Blantyre District Council, Blantyre City Council Contractor and Water Users Association (WUAs). The responsibilities of each of the key role-players have been provided as follows:

Blantyre Water Board with MWSP-PIU will be responsible for coordinating, planning, implementing and monitoring environmental and social issues. In addition, the PIU will ensure that financial resources for capacity building and implementation of the ESMP are allocated. Further, the PIU will conduct inspections and monitoring of the activities, as well as reviewing monthly and incidence reports from the contractors.

Supervising Engineer will ensure the following: 1) timeline management; 2) budget management; 3) contractor management; 4) quality control; 5) regulatory compliance by contractor; 6) design reviews; 7) risk management; 8) safety oversight; 9) documentation and reporting and final inspection and handover.

Contractors will develop contractors ESMP (CESMP) and associated auxiliary management plans and ensure their implementation and compliance. In addition, the contractor will ensure that all workers have signed *'Code of Conduct'* and are compliant to it. The contractor will be responsible for the orientation of the WUA and shall facilitate involvement of the water committee members in the supervision work and during the installation works. The contractor will also be responsible to report all incidents using incident reporting forms contained in Annex 11a and 11b and, prepare and submit to monthly report using the reporting template contained in Annex 12

Blantyre City Council and Blantyre District Council will work with PIU to monitor the implementation of the CESMP and auxiliary plans. Therefore, Blantyre District Council's Environmental Officer will work with the MWSP-PIU Safeguards Team in monitoring the implementation of the ESMP.

Water User Association (WUA) will be responsible for carrying out regular maintenance of the water supply according to the operational and maintenance (O & M) manual. In addition, the WUA will:

- Ensure coordination between the communities and contractor during the construction phase;

- Ensure there is proper management of the water supply infrastructure after the project has phased out including carrying out maintenance work, enforcing water abstraction regulations, carry out catchment management activities,
- Participate in supervision of works at the site; and
- Monitor the implementation of CESMP, among other functions

Malawi Environmental Protection Authority (MEPA) will conduct inspections and monitor compliance with the implementation of the ESMP during the construction and operation phase of the project.

Capacity Building

The successful implementation of the environmental and social safeguards depends on the capacity of the implementing stakeholders. The following training requirements have been planned to facilitate capacity building of the implementing stakeholders in order for them to effectively execute the roles and functions they have been assigned under this project. Table 7 provides areas that require training and target audience including time frame and responsible institution to deliver.

Table 10: Required training on Environmental and Social Safeguards

#	Type of Training	Targeted Stakeholder	Responsible Institution	Time Frame
1	ESMP and Auxiliary Management Plans	Contractor; Blantyre District DESC, WUA	PIU/ BWB	Planning, Construction Phase
2	Occupational Safety and Health	Contractor; Blantyre District DESC, WUA	PIU/ BWB	Construction; Operation and Maintenance Phases
3	Grievance Redress Mechanism	Contractor; Blantyre District DESC, WUA	PIU/ BWB	Construction; Operation and Maintenance Phases
4	Operational and Maintenance of the kiosks	WUA	Contractor, PIU/ BWB	Construction; Operation and Maintenance Phases
5	Code of Conduct, labour rights and awareness on STI including HIV and AIDS	Contractor	PIU/ BWB	Construction; Operation and Maintenance Phases
7	GBV, SEA, SH and Child Labour	Contractor, Blantyre DESC	Ministry of Gender	Construction; Operation and Maintenance Phases

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7.1.Conclusion

The ESMP has identified the measures to manage the identified impacts that will arise during the project implementation in various identified cholera prone areas in Blantyre City. The ESMP is aimed at ensuring proper management of the environment and socio-economic components throughout the project cycle.

As stated in the ESMP, negative impacts associated with the proposed project activities can be suitably managed and mitigated through the implementation of the recommended measures. It is recommended that the developer will be responsible for monitoring activities that will be carried out during project preparation, construction, operation and maintenance and demobilization phases to ensure that the mitigation and rehabilitation measures described in this report are adhered to.

7.2.Recommendations

The Environmental and Social Management Plan (ESMP) in this report describes the environmental and social impacts of the project and outlines corresponding management measures that should be implemented to mitigate the potential adverse environmental impacts that have been identified. The project should therefore comply with all local and international laws and regulations, which seek to ensure that the project is implemented in an environmentally sound manner while safeguarding the safety, health and welfare of the workers and the surrounding community. In this regard, it is recommended that:

- The project should adopt and implement the recommendations advanced in this report;
- The Project must ensure that safety and health issues are given the necessary attention and
- The developer should ensure that those who will be involved in the implementation of the project are trained in their roles and responsibilities with regards to the ESMP.

REFERENCES

Government of Malawi (2016), **The Constitution of the Republic of Malawi,** Office of President and Cabinet;

Waste Management and Sanitation Regulation (2008)

Government of Malawi (2020) **Malawi 2063**, National Planning Commission, Capital City Lilongwe.
Government of Malawi (2002), **Malawi National Land Policy**, Ministry of Lands, Housing and Urban Development;
Government of Malawi (1998) **National Decentralization Policy,** Ministry of Local Government and Rural Development;
Government of Malawi (2004), **National Environment Policy**, Ministry of Natural Resources, Energy and Mining;
Government of Malawi (2016), **Land Act,** Ministry of Lands, Housing and Urban Development;
Government of Malawi (2016), **Customary Lands Act,** Ministry of Lands, Housing and Urban Development;
Government of Malawi (1970), **Lands Acquisition Act,** Ministry of Lands, Housing and Urban Development;
Government of Malawi (2017), **Lands Acquisition (Amendment) Act,** Ministry of Lands, Housing and Urban Development;
Government of Malawi (2016), **Physical Planning Act,** Ministry of Lands, Housing and Urban Development;
Government of Malawi (2017), **Public Roads (Amendment) Act,** Ministry of Lands, Housing and Urban Development;
Government of Malawi (2017), **Land Survey Act,** Ministry of Lands, Housing and Urban Development;
Government of Malawi (1967), **Registered Land Act,** Ministry of Lands, Housing and Urban Development;
Government of Malawi (2017), **Registered Land (Amendment) Act,** Ministry of Lands, Housing and Urban Development;
Government of Malawi (2007), **Forestry Act,** Ministry of Natural Resources, Energy and Mining;
Government of Malawi (2017), **Forestry (Amendment) Act,** Ministry of Natural Resources, Energy and Mining;
Government of Malawi (1996), **Environment Management Act,** Ministry of Natural Resources, Energy and Mining;
Government of Malawi (1998), **Local Government Act,** Ministry of Local Government, Lilongwe;
Government of Malawi (2017), **Local Government (Amendment) Act,** Ministry of Local Government, Lilongwe;
Government of Malawi (1948), **Public Health Act,** Ministry of Health;
Government of Malawi (1997), **Occupational Safety, Health, and Welfare Act,** Ministry of Labour, Youth, Sports, and Manpower Development;
Government of Malawi (2012), **Gender Equality Act,** Ministry of Gender, Children, Disability and Social Welfare;
World Bank (2017) Environmental and Social Framework;
Government of Malawi (2013) Water **Resources Act,** Ministry of Water Development;
National Statistical Office, 2008. Population and Household Survey

ANNEXES

Annex 1: Terms of reference for the ESMP

TERMS OF REFERENCE OF ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF SAMRT KIOSKS UNDER CHOLERA EMERGENCY RESPONSE PLAN

1. Provide a brief description of the nature and location of the proposed project with respect to the name of the proponent, postal address, aim and objectives of the project, the spatial location of the site with aid of appropriate topographical maps of the area (at least at a scale 1:50,000); the estimated cost of the project, the size of land for the project sites, the number of people to work on the project (provide a breakdown of males and females, locals and non-locals).

2. Provide a site specific visible map of the area (scale 1: 50,000) showing the proposed site and (1:10,000) showing existing establishments in the area and surrounding areas including natural endowments like rivers and streams. A site plan for the project should be provided. All maps should be in colour to portray the themes clearly and must be printed on A3 paper.

3. Provide a brief description of the existing biophysical characteristics and the socio-economic environmental status of the proposed area.

4. Briefly review the legal framework pertaining to the proposed project and indicate their impacts on the project. Reference should at least be made to Environment Management Act, Energy policy, Gender Policy. New Land Acts, Water Resources Act, National Water Policy, Malawi National Land Policy, Public Health Act, Occupational Safety, Health and Welfare Act, Mines and Minerals Act, and other policies and pieces of legislations.

5. Briefly describe main activities to be undertaken in the implementation of the proposed project. In the description include the type of machinery to be used, expected type and amount and quantity of mineral samples to be obtained from the drilling exercise and the distance of the project from environmental sensitive areas; nature and estimated quantity of wastes (both solid and liquid) that will be generated, circularity to waste management i.e. state the means of reducing waste to a minimum by reusing and recycling of waste, facilities for appropriate waste disposal that cannot be recycle or reused, including estimated costs for the activities.

6. Propose an Environmental and Social Management Plan (ESMP) for the project. The ESMP should be in tabular form and should specify the predicted impacts, mitigation measures/enhancement measures. Also indicate the budget for the recommended schedule when these measures will take place.

7. Propose an Environmental and Social Management and Monitoring Plan by which all mitigation measures recommended in Environmental and Social Management Plan will be monitored. The Environmental and Social Monitoring Plan should include the activities, frequency of monitoring, the key monitoring indicators, resources required and the authorities responsible for monitoring the exercises.

8. Undertake stakeholder consultations to ensure key interested and affected stakeholders are involved in coming up with the ESMP. Incorporate their views in the report and indicate a record of consultations in the appendices as part of the report.

9. Submit 5 hard copies and a soft copy of the ESMP to the Acting Director General of Malawi Environment Protection Authority. Submit a copy of the ESMP to the District Commissioner and EDO for Blantyre District Council

Annex 2a: Completed E & S Screening form for new kiosk

LUCHENZA KIOSK - NEW

ANNEX 4: ENVIRONMENTAL AND SOCIAL SCREENING FORM (ESSF)
Environmental and Social Screening Form for the Screening of Potential Environmental and Social Impacts of MWSP-1 Activities

1. Introduction

This Environmental and Social Screening Form (ESSF) has been designed to assist in the evaluation of planned construction, rehabilitation, and expansion activities under MWSP-1. The form will assist in the identification of any environmental and social impacts and their mitigation measures. It will also assist in the determination of requirements for further environmental and social work as needed.

The form helps to determine the characteristics of the prevailing local bio-physical and social environment with the aim of assessing the potential impacts of the construction and rehabilitation activities on the environment by the activity.

The ESSF will also assist in identifying potential socio-economic impacts that will require mitigation measures and/or resettlement and compensation.

2. Guidelines for Screening

The evaluator should undertake the assignment after:

1. Gaining adequate knowledge of baseline information of the area.
2. Gaining knowledge of proposed project activities for the area.
3. Having been briefed / trained in environmental and social screening

The form is to be completed by the PIU Environmental and Social Specialists.

PART A: GENERAL INFORMATION

Sub project Name	Construction /Rehabilitation and Upgrading of Metering System of Smart water Kiosk Under the Cholera emergency preparedness and response
Estimated Cost (MK)	K500 Million (300 000 USD) - 30 Kiosks
Sub project Site	Luchenza Kiosk
Sub project Objectives	• To increase access to safe water • To promote hygiene • To reduce cholera transmission • To support health care system • Community resilience
Proposed Main Activities:	• Construction of new Kiosk
Name of Evaluator/s	• Vitumbiko Mutthali, Lucy Msiyadunga • Pilirani Kasambala, Fazil Latiff • Priscilla Matyya, Matthews Kampeza
Date of Field Appraisal	16 July, 2023

PART B: BRIEF DESCRIPTION OF THE PROPOSED ACTIVITIES

Provide information on the type and scale of the construction/rehabilitation activity (e.g. area, land required and approximate size of structures)

- Area 13.272 m^2 (3.587m by 3.7m)
- Land required = 25 m^2
- Approximate size of structures = 3.7m (L) by 3.5m (W) by 2.7m height

Provide information on the construction activities including support/ancillary structures and activities required to build them, e.g. need to quarry or excavate borrow materials, water source, access roads, etc.

- Excavation and Sub-Structure works
- Frame and upper Floors
- BLOCK work - External walls
- Roofing
- Finishes - windows, doors, plastering, Flooring, painting, and ceilling Finishes
- Joinery Fittings
- Exernal works such as storm - water drainage and soak away
- Installation of Cold - water pipes and Fittings
- Disporsal of rubble and other waste from the construction site
- Soft landscape to restore beauty to original or better quality

Describe how the construction/rehabilitation activities will be carried out. Include description of support/activities and resources required for the construction/rehabilitation.

- procurement of Contractor
- Site handover
- Mobilization
- Contractor submit Programme of works including but not limiting to excavation and sub-structure works, Frame and upper Floors, Block work - External walls, Roofing, Finishes - windows, doors, plastering, Flooring, painting and ceilling Finishes, joinery Fittings, external works such as storm - water drainage and soak away, installation of Cold - water pipes and fittings, disporsal of rubble and other waste from construction site and soft landscape to restore beauty to original or better quality.
- Supervision of works by Blantyre water Board
- Project Completion
- Defects liability period
- Site handover

Resources Required

- sand
- General building materials such as cement, hollow blocks, cement and aggregates
- Diesel (for the operation of the generator and machine)
- Construction water
- Equipement (Tippers, scaffolding materials, hand tools, smart metering system light passenger vehicles.

PART C: ENVIRONMENTAL AND SOCIAL BASELINE INFORMATION OF THE SUB PROJECT SITE BRIEF DESCRIPTION

Category of Baseline Information	Brief Description
GEOGRAPHICAL LOCATION * Name of the Area (District, T/A, Village) * Proposed location of the sub project (Include a site map of at least 1:10,000 scale/or coordinates from GPS)	• Blantyre District • TA Machinjiri • Chiumba village • 36L 0722701 UTM 8246833
LAND RESOURCES * Topography and Geology of the area * Soils of the area * Main land uses and economic activities	• Flat • Loam soil • Residential area • Near Panjanji Chakani market
WATER RESOURCES * Surface water resources (e.g. rivers, lakes, etc.) quantity and quality * Ground water resources quantity and quality	• Wells • Not available
BIOLOGICAL RESOURCES * Flora (include threatened/endangered/endemic species) * Fauna (include threatened/endangered/endemic species) * Sensitive habitats including protected areas e.g. nature reserves and forest reserves	• Not applicable (bare ground) • Not applicable
CLIMATE * Temperature * Rainfall	• 16.25°C to 26.3°C annually • 105.96mm annually
SOCIAL * Number of people potentially impacted * Type and magnitude of impacts (i.e. impact on land, structures, crops, standard of living) * Socio-economic overview of persons impacted	

PART D: SCREENING CRITERIA FOR IMPACTS DURING SUB-PROJECT IMPLEMENTATION, AREAS OF IMPACTS AND IMPACTS EVALUATION AND POTENTIAL MITIGATION MEASURES

Screening Criteria for Social and Environmental Impacts

Item	Areas of Impacts			Impacts Evaluation						Potential Mitigation Measures
	Is this subproject site/activity within and/or will it affect the following environmentally sensitive areas?			Extent or coverage (on site, within 3-5km or beyond 5km)			Significance (Low, Medium, High)			
		No	Yes	On Site	Within 3-5km	Beyond 5 km	Low	Medium	High	
1.0	Screening Criteria for Social and Environmental Impacts									
1.1	National parks or game reserve	✓	–	–	–	–	–	–	–	–
1.2	Wetlands	✓	–	–	–	–	–	–	–	–
1.3	Productive traditional agricultural /grazing lands	✓	–	–	–	–	–	–	–	–
1.4	Areas with rare, endangered or other interest flora or fauna	✓	–	–	–	–	–	–	–	–
1.5	Areas with outstanding scenery/tourist site	✓	–	–	–	–	–	–	–	–
1.6	Within steep slopes	✓	–	–	–	–	–	–	–	–
1.7	Forested or near forest or will impact forest	✓	–	–	–	–	–	–	–	–
1.8	Along lakes, beach or river	✓	–	–	–	–	–	–	–	–
1.9	Near industrial activities	✓	–	–	–	–	–	–	–	–
1.10	Near human settlements		✓	✓			✓			Awareness Campaigns
1.11	Near cultural heritage sites	✓	–	–	–	–	–	–	–	–
1.12	Within prime surface run off	✓	–	–	–	–	–	–	–	–

4

			no	yes	on site	within 5 km	Beyond 5 km	Low	medium	high	potential mitigation measures
1.13	Will the subproject discharge to or otherwise impact water bodies?										
2.0	Screening Criteria for Impacts during Implementation and Operation										
	Will the Implementation and operation of the subproject within the selected site generate the following externalities/ costs/impacts?										
2.1	Deforestation	✓	–	–	–	–	–	–	–	–	–
2.2	Soil erosion and siltation	✓	–	–	–	–	–	–	–	–	–
2.3	Siltation of watercourses, dams	✓	–	–	–	–	–	–	–	–	–
2.4	Environmental degradation arising from mining of construction materials		✓			✓	✓				• use of eco-friendly building materials • source construction materials from licenced suppliers

		NO	Yes	On site	within 2to 5km	Beyond 5km	Low	medium	high	Potential mitigation measures
2.5	Damage to wildlife species and habitat	✓	-	-	-	-	-	-	-	-
2.6	Increased exposure of communities to agrochemical pollutants	✓	-	-	-	-	-	-	-	-
2.7	Hazardous wastes, (Pipes, etc.), PCB's, pollution from unspent PV batteries	~~Done~~	✓	✓			✓			• Hazardous materials will be properly collected transported and stored in appropriate containers with clearly visible labels • Equipment and work areas will be regularly espected for signs of leaks and spills. spill containment and cleanup kits will be available ~~where~~
2.8	Nuisance - smell or noise		✓	✓			✓			• The contractor would ensure keeping noise levels from construction vehicles and machinery within safe limits. • provision of PPE's, ear muffs / ear plugs to workers.
2.9	Reduced water quality	✓	-	-	-	-	-	-	-	-
2.10	Increase in costs of water treatment	✓	-	-	-	-	-	-	-	-
2.11	Soil contamination		✓	✓			✓			Contractor will ensure that storage of

		no	yes	on site	within 2km SKM	Beyond 5 km	Low	medium	High	potential mitigation measures
										Fuel, paint and oil Containers, oil filters, oily parts and oily rags on impervious Floor • Contractor will ensure that placement of fuel Containment and proper decantation arrangement to avoid its Spillage and leakage on Floor • Contractor will ensure that the presence of Spill response kit at the project site & to remove Spills from the Floor
2.12	Loss of soil fertility	✓	—	—	—	—	—	—	—	—
2.13	Salinization or alkalinisation of soils	✓	—	—	—	—	—	—	—	—
2.14	Reduced flow and availability of water	✓	—	—	—	—	—	—	—	—
2.15	Long term depletion of water resources		✓	✓			✓			• If piped water is used by the Contractor, water bills should be paid to BWB
2.16	Incidence of flooding		✓	✓			✓			• Ensure the technical designs of the kiosk are provided with Proper water drainage • Ensure use of standard materials and Competent expertise For technical aspects • The Kiosk infrastructure Should a raised foundation to prevent it from being inundated during flooding

		No	Yes	On site	Within 3 to 5km	Beyond 5km	Low	Medium	High	Potential mitigation measures
	Will the Implementation and operation of the subproject activities within the selected site generate the following socio-economic costs/impacts?	✓	—	—	—	—	—	—	—	—
3.0 Screening Criteria for Social and Economic Impacts										
3.1	Loss of land/land acquisition for human settlement, farming, grazing	✓	—	—	—	—	—	—	—	—
3.2	Loss of assets, property, houses, agricultural produce, etc.	✓	—	—	—	—	—	—	—	—
3.3	Loss of livelihood	✓	—	—	—	—	—	—	—	—
3.4	Require a RAP or ARAP	✓	—	—	—	—	—	—	—	—
3.5	Loss of cultural sites, graveyards, monuments	✓	—	—	—	—	—	—	—	—
3.6	Disruption of social fabric	✓	—	—	—	—	—	—	—	—

		no	yes	on site	within 3km	beyond 5km	low	medium	high	potential mitigation measures
3.7	Interference in marriages for local people by workers		✓	✓			✓			• Awareness campaigns
3.8	Spread of STIs and HIV and AIDS, due to migrant workers		✓	✓			✓			• Awareness campaig • Enforcing HIV and AIDS policy
3.9	Increased incidence of communicable diseases		✓	✓			✓			• The Contractor will ensure and strictly implement SOP'S regarding Covid-19 including daily body temperature check, daily dis infection, quarantine management and access management and PPEs.
3.10	Health hazards to workers and communities		✓	✓			✓			• Workers should be Provide with appro te work specific PPE • Only skilled workers will be allowed to work at the Construction site • Provision of first aid kits
3.11	Changes in human settlement patterns	✓	–	–	–	–	–	–	–	–

4.0	Consultation (comments from beneficiaries and other project affected peoples)	◦The people were happy that water is being brought close to them ◦The people appreciated that they will have access to safe portable water	

PART E: OVERALL EVALUATION OF THE SCREENING PROCESS ON THE SITE AND PROJECT ACTIVITY

The screening aims at categorizing the sub-projects into one of the following environmental and social categories. The Environmental Specialist in charge of the screening will propose the environmental category in consultation with the Social Specialist as necessary. Screening will also help to propose whether a proposed sub program will further require a full-fledged Resettlement Action Plan (RAP), per procedures outlined in the Resettlement Policy Framework.

Category A: A MWSP-1 sub-project would be categorized as A if it would likely result in one or more major adverse environmental impacts. Category A projects require a full ESIA. However, the MWSP-1 is not expected to have any Category A subprojects.

Category B: MWSP-1 Category B subprojects have potential environmental impacts that are less severe than under Category A and can readily be mitigated as follows:

Category B1: For MWSP-1 Category B1 subprojects, no further environmental assessment work is required; however, the subproject must fully apply the relevant, generic mitigation measures specified in the ESMF, including the Environmental Rules for Contractors and Chance Finds Procedures. Examples of MWSP-1 subproject types that are likely to be classified as Category B1 include:

- Installation of new household water connections
- Construction of communal water points(kiosk)
- Installation of new sewerage connections
- Construction of public toilets

Category B2: For MWSP-1 Category B2 subprojects, further environmental assessment work is required, specifically the preparation of a separate Environmental and Social Management Plan with tailored, site-specific environmental mitigation measures (not just the generic ones).

It is possible that for a few MWSP-1 Category B2 subprojects--where in-depth, site specific fact-finding would be needed to ascertain the likely environmental (including social) impacts--a subproject-specific ESIA would also be required. The

scope of such an ESIA would be limited to the environmental and related social issues of specific concern, as identified in the screening process. For any Category B2 subprojects with their own ESIA, the ESMP will comprise a portion of the ESIA.

o Examples of MWSP-1 subproject types that are likely to be classified as Category B2 include:

- Replacement/upgrading of existing water and sewer pipelines with larger diameter pipelines
- Construction of water transmission mains
- Construction of solar PVs for Blantyre pumping stations
- Construction of storage reservoirs (tanks)
- Rehabilitation and upgrading of sewage treatment plants
- Construction of solid waste management landfill

Category C: MWSP-1 activities are classified as Category C if they do not involve civil works and if no significant environmental issue has been identified and no specific mitigation measures are required. In such cases, subproject implementation can proceed without reference to additional environmental requirements.

- Examples of MWSP-1 Category C activities include:
  - Water loss reduction measures
  - City-wide sanitation marketing campaign
  - Institutional capacity strengthening activities

The PIU Environmental and Social Specialists will be responsible for assigning the appropriate environmental category to the subprojects consistent with the requirements of ESSF, and based on the criteria provided in this ESMF.

If Resettlement Action Plans (RAPs) are prepared, these would be reviewed and approved by the Commissioner for Lands, consistent with the Resettlement Policy Framework as well as the World Bank, prior to initiating compensation and commencement of project activities

Completion by PIU	
Is This Project Likely To Need An ESIA	YES/NO
List A/B Paragraph Numbers	
Date Exempted	
Date Forwarded To MEPA	

Completion by MEPA	
Date Received from District Assembly:	
Dated Reviewed:	
Date of Submission of Project Brief	
Date of Submission of ESIA Reports	

framework as well as the World Bank, prior to initiating compensation and commencement of project activities

Completion by PIU	
Is This Project Likely To Need An ESIA	YES (NO)
List A/B Paragraph Numbers	
Date Exempted	
Date Forwarded To MEPA	
Name & Signature of Environmental and/or Social Specialist/s	Morris Tengatenga

Completion by MEPA	
Date Received from District Assembly:	
Dated Reviewed:	
Date of Submission of Project Brief	
Date of Submission of ESIA Reports	
Date of Approval/Rejection	

NOTES:

- Once the Environmental and Social Screening Form is completed it is analyzed by the Environmental and Social Specialist/s from the PIU who will classify it into the appropriate category based on a predetermined criterion and the information provided in the form.
- All projects' proponents exempted from further impact assessment must be informed to proceed with other necessary procedures.
- Any project recommended for a specific ESIA will have to follow the procedures outlined in section 24 and 25 of the Environmental Management Act, and the Malawi Government's Guidelines for Environmental Impact Assessment Appendix C, page 32.

Annex 2b: Completed E & S Screening form for kiosk to be rehabilitated

CHAKANA 2 KIOSK - REHAB

ANNEX 4: ENVIRONMENTAL AND SOCIAL SCREENING FORM (ESSF)

Environmental and Social Screening Form for the Screening of Potential Environmental and Social Impacts of MWSP-1 Activities

1. Introduction

This Environmental and Social Screening Form (ESSF) has been designed to assist in the evaluation of planned construction, rehabilitation, and expansion activities under MWSP-1. The form will assist in the identification of any environmental and social impacts and their mitigation measures. It will also assist in the determination of requirements for further environmental and social work as needed.

The form helps to determine the characteristics of the prevailing local bio-physical and social environment with the aim of assessing the potential impacts of the construction and rehabilitation activities on the environment by the activity.

The ESSF will also assist in identifying potential socio-economic impacts that will require mitigation measures and/or resettlement and compensation.

2. Guidelines for Screening

The evaluator should undertake the assignment after:

1. Gaining adequate knowledge of baseline information of the area.
2. Gaining knowledge of proposed project activities for the area.
3. Having been briefed / trained in environmental and social screening

The form is to be completed by the PIU Environmental and Social Specialists.

PART A: GENERAL INFORMATION

Sub project Name	Construction / Rehabilitation and upgrading of Metering System of Smart water kiosk under the Cholera emergency preparedness and response
Estimated Cost (MK)	K500 million (300 000 USD) - 30 KIOSKS
Sub project Site	Chakana 2 KIOSK
Sub project Objectives	• TO increase access to safe water • TO promote hygien • TO reduce cholera transmission • To support health care system • Community resilience
Proposed Main Activities:	Rehabilitation of existing Kiosk
Name of Evaluator/s	Vitumbiko Munthali, Lucy Msiyadungu Pilirani Kasambala, Fazil Latiff Pricilla Matyu, Matthews Kampesa
Date of Field Appraisal	18 July, 2023

PART B: BRIEF DESCRIPTION OF THE PROPOSED ACTIVITIES

Provide information on the type and scale of the construction/rehabilitation activity (e.g. area, land required and approximate size of structures)

- Area 13.272 m^2 (3.587m by 3.7m)
- Land required = 25m^2
- Approximate Size of Structures = 3.7m (L) by 3.5m (W) by 2.7m height

Provide information on the construction activities including support/ancillary structures and activities required to build them, e.g. need to quarry or excavate borrow materials, water source, access roads, etc.

- The minor / rehabilitation works shall involve: Installation of vending machine, water storage tank, painting works and drainage works.

Describe how the construction/rehabilitation activities will be carried out. Include description of support/activities and resources required for the construction/rehabilitation.

- Procurement of Contractor
- Site handover
- mobilisation
- Contractor Submit programme of works including but not limiting to installation of vending machine, water storage tank, painting works and drainage works.
- Supervision of works by Blantyre Water Board
- Project Completion
- Defects liability period
- Site handover

Resources Required

- Sand
- General building materials such as cement hollow blocks, Cement and aggregates
- Diesel (For generator)
- Construction water
- equipments (Tippers, scaffolding materials, hand tools, Smart metering system and light passanger vehicles.

PART C: ENVIRONMENTAL AND SOCIAL BASELINE INFORMATION OF THE SUB PROJECT SITE BRIEF DESCRIPTION

Category of Baseline Information	Brief Description
GEOGRAPHICAL LOCATION	
* Name of the Area (District, T/A, Village)	• Blantyre district • TA Machinjiri
* Proposed location of the sub project (Include a site map of at least 1:10,000 scale/or coordinates from GPS)	• Village : Chakana • 36L 0719078 • UTM 8254546
LAND RESOURCES	
* Topography and Geology of the area * Soils of the area * Main land uses and economic activities	• Flat • Loam • Residential area • No economic activities observed.
WATER RESOURCES	
* Surface water resources (e.g. rivers, lakes, etc.) quantity and quality * Ground water resources quantity and quality	• Piped water • Borehole
BIOLOGICAL RESOURCES	
* Flora (include threatened/endangered/endemic species) * Fauna (include threatened/endangered/endemic species) * Sensitive habitats including protected areas e.g. nature reserves and forest reserves	• Not applicable (Bare land) • Not applicable
CLIMATE	
* Temperature * Rainfall	• 16°c to 33°c annually • 977mm annually
SOCIAL	
* Number of people potentially impacted * Type and magnitude of impacts (i.e. impact on land, structures, crops, standard of living) * Socio-economic overview of persons impacted	• Not Applicable

PART D: SCREENING CRITERIA FOR IMPACTS DURING SUB-PROJECT IMPLEMENTATION, AREAS OF IMPACTS AND IMPACTS EVALUATION AND POTENTIAL MITIGATION MEASURES

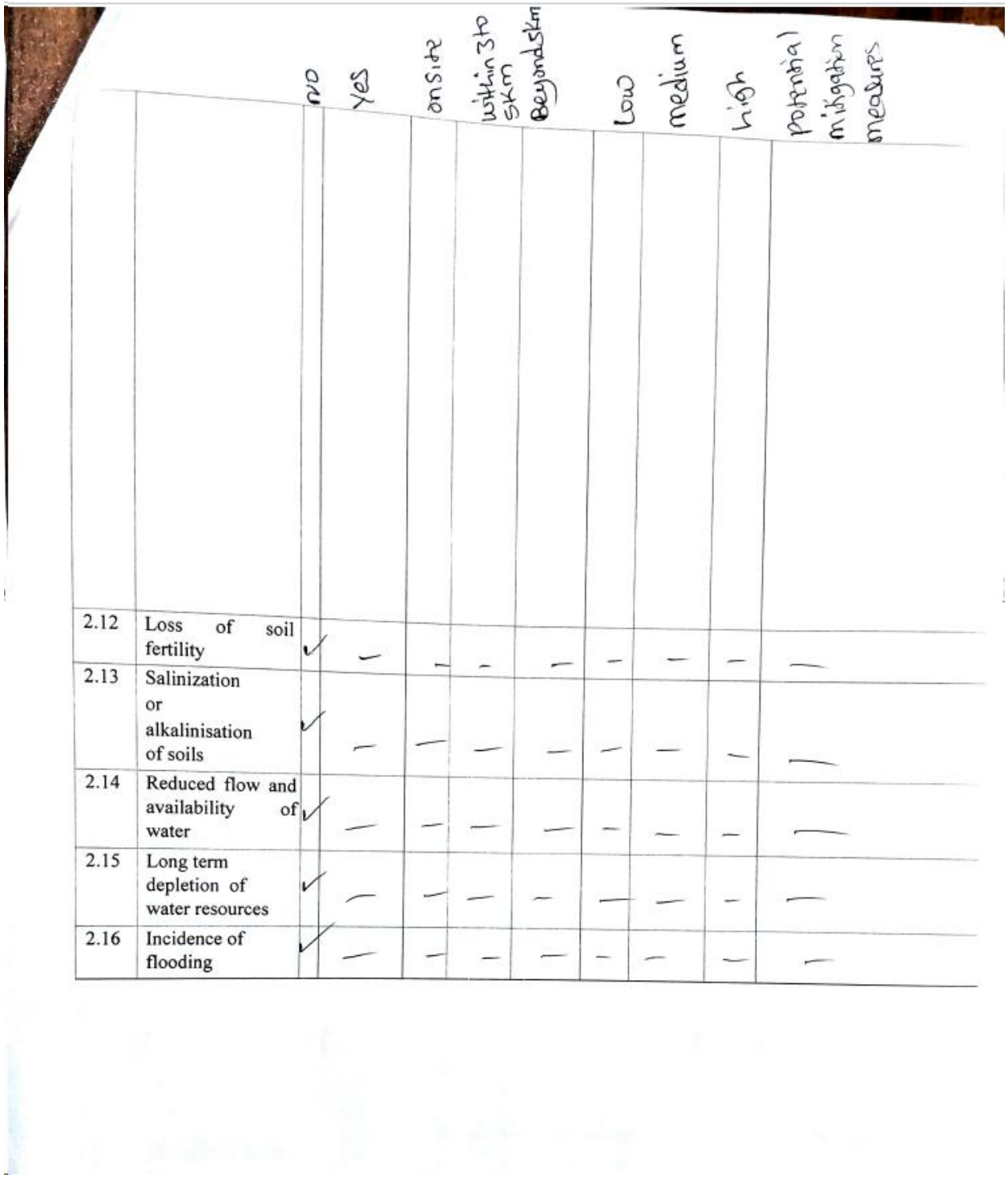
Screening Criteria for Social and Environmental Impacts

Item	Areas of Impacts	Impacts Evaluation								Potential Mitigation Measures
	Is this subproject site/activity within and/or will it affect the following environmentally sensitive areas?			Extent or coverage (on site, within 3-5km or beyond 5km)			Significance (Low, Medium, High)			
		No	Yes	On Site	Within 3-5km	Beyond 5 km	Low	Medium	High	
1.0	Screening Criteria for Social and Environmental Impacts									
1.1	National parks or game reserve	✓	–	–	–	–	–	–	–	–
1.2	Wetlands	✓	–	–	–	–	–	–	–	–
1.3	Productive traditional agricultural /grazing lands	✓	–	–	–	–	–	–	–	–
1.4	Areas with rare, endangered or other interest flora or fauna	✓	–	–	–	–	–	–	–	–
1.5	Areas with outstanding scenery/tourist site	✓	–	–	–	–	–	–	–	–
1.6	Within steep slopes	✓	–	–	–	–	–	–	–	–
1.7	Forested or near forest or will impact forest	✓	–	–	–	–	–	–	–	–
1.8	Along lakes, beach or river	✓	–	–	–	–	–	–	–	–
1.9	Near industrial activities	✓	–	–	–	–	–	–	–	–
1.10	Near human settlements		✓	✓			✓			Awareness Campaigns
1.11	Near cultural heritage sites	✓	–	–	–	–	–	–	–	–
1.12	Within prime surface run off	✓	–	–	–	–	–	–	–	–

4

		No	Yes	On site	Within 3to 5km	Beyond 5km	Low	Medium	High	Potential mitigation measures
1.13	Will the subproject discharge to or otherwise impact water bodies?		-	-	-	-	-	-	-	-
2.0	Screening Criteria for Impacts during Implementation and Operation									
	Will the Implementation and operation of the subproject within the selected site generate the following externalities/ costs/impacts?									
2.1	Deforestation	✓	-	-	-	-	-	-	-	-
2.2	Soil erosion and siltation	✓	-	-	-	-	-	-	-	-
2.3	Siltation of watercourses, dams	✓	-	-	-	-	-	-	-	-
2.4	Environmental degradation arising from mining of construction materials		✓			✓		✓		• use of eco-friendly building materials • Source construction materials from licenced suppliers

		N/D	Yes	On site	Within 3km	Beyond 5km	Low	Medium	High	Potential Mitigation measures
2.5	Damage to wildlife species and habitat	✓	–	–	–	–	–	–	–	–
2.6	Increased exposure of communities to agrochemical pollutants	✓	–	–	–	–	–	–	–	–
2.7	Hazardous wastes, (Pipes, etc.), PCB's, pollution from unspent PV batteries		✓	✓			✓			• Hazardous materials will be propery Collected transported and stored in appropriate and stored in appropriate Containers with clearly visible labels. • Equipment and work areas will be ~~regularly~~ regularly espected for signs of leaks and spills. spill containment and clean up kits will be available.
2.8	Nuisance - smell or noise		✓	✓			✓			• Regularly Service and maintain equipment. • provide ear ~~eye~~ muffs for the workers in noise areas. • notify the public of upcoming local events.
2.9	Reduced water quality	✓	–	–	–	–	–	–	–	–
2.10	Increase in costs of water treatment	✓	–	–	–	–	–	–	–	–
2.11	Soil contamination	✓	–	–	–	–	–	–	–	–



		no	yes	on site	within 3 to 5km	Beyond 5km	Low	medium	high	potential mitigation measures
2.12	Loss of soil fertility	✓	–	–	–	–	–	–	–	–
2.13	Salinization or alkalinisation of soils	✓	–	–	–	–	–	–	–	–
2.14	Reduced flow and availability of water	✓	–	–	–	–	–	–	–	–
2.15	Long term depletion of water resources	✓	–	–	–	–	–	–	–	–
2.16	Incidence of flooding	✓	–	–	–	–	–	–	–	–

		NO	YES	ONSITE	WITHIN 3 to 5 KM	BEYOND 5 KM	LOW	MEDIUM	HIGH	POTENTIAL MITIGATION MEASURES
	Will the Implementation and operation of the subproject activities within the selected site generate the following socio-economic costs/impacts?	✓	–	–	–	–	–	–	–	–
3.0 Screening Criteria for Social and Economic Impacts										
3.1	Loss of land/land acquisition for human settlement, farming, grazing	✓	–	–	–	–	–	–	–	–
3.2	Loss of assets, property, houses, agricultural produce, etc.	✓	–	–	–	–	–	–	–	–
3.3	Loss of livelihood	✓	–	–	–	–	–	–	–	–
3.4	Require a RAP or ARAP	✓	–	–	–	–	–	–	–	–
3.5	Loss of cultural sites, graveyards, monuments	✓	–	–	–	–	–	–	–	–
3.6	Disruption of social fabric	✓	–	–	–	–	–	–	–	–

		NO	Yes	on site	Within 5km	Beyond 5k	Low	medium	high	Potential mitigation measures
3.7	Interference in marriages for local people by workers		✓	✓			✓			• Sensitise Contractors and Sorrounding communities.
3.8	Spread of STIs and HIV and AIDS, due to migrant workers		✓	✓			✓			• Sensitize workers and Surrounding Communities on the risk of indulging in casual sex. • providing both male and female condoms to workers. • Develop and implement a work place policy on HIV and AIDS.
3.9	Increased incidence of communicable diseases		✓	✓			✓			• The Contractor will ensure and strictly implement SOP'S regarding Covid-19 including daily body temperature check, daily dis infection, quarantine management, area acess management and PPEs.
3.10	Health hazards to workers and communities		✓	✓			✓			• Workers Should be provide with appropiate work specific PPE • only skilled workers will be allowed to work at the Construction site • provision of First aid kits
3.11	Changes in human settlement patterns	✓	—	—	—	—	—	—	—	—

4.0	Consultation (comments from beneficiaries and other project affected peoples)	• The people were happy that water is being brought close to them • The people appreciated that finally they will have safe portable water

PART E: OVERALL EVALUATION OF THE SCREENING PROCESS ON THE SITE AND PROJECT ACTIVITY

The screening aims at categorizing the sub-projects into one of the following environmental and social categories. The Environmental Specialist in charge of the screening will propose the environmental category in consultation with the Social Specialist as necessary. Screening will also help to propose whether a proposed sub program will further require a full-fledged Resettlement Action Plan (RAP), per procedures outlined in the Resettlement Policy Framework.

Category A: A MWSP-1 sub-project would be categorized as A if it would likely result in one or more major adverse environmental impacts. Category A projects require a full ESIA. However, the MWSP-1 is not expected to have any Category A subprojects.

Category B: MWSP-1 Category B subprojects have potential environmental impacts that are less severe than under Category A and can readily be mitigated as follows:

Category B1: For MWSP-1 Category B1 subprojects, no further environmental assessment work is required; however, the subproject must fully apply the relevant, generic mitigation measures specified in the ESMF, including the Environmental Rules for Contractors and Chance Finds Procedures. Examples of MWSP-1 subproject types that are likely to be classified as Category B1 include:

- Installation of new household water connections
- Construction of communal water points(kiosk)
- Installation of new sewerage connections
- Construction of public toilets

Category B2: For MWSP-1 Category B2 subprojects, further environmental assessment work is required, specifically the preparation of a separate Environmental and Social Management Plan with tailored, site-specific environmental mitigation measures (not just the generic ones).

It is possible that for a few MWSP-1 Category B2 subprojects--where in-depth, site specific fact-finding would be needed to ascertain the likely environmental (including social) impacts--a subproject-specific ESIA would also be required. The

scope of such an ESIA would be limited to the environmental and related social issues of specific concern, as identified in the screening process. For any Category B2 subprojects with their own ESIA, the ESMP will comprise a portion of the ESIA.

o Examples of MWSP-1 subproject types that are likely to be classified as Category B2 include:

- Replacement/upgrading of existing water and sewer pipelines with larger diameter pipelines
- Construction of water transmission mains
- Construction of solar PVs for Blantyre pumping stations
- Construction of storage reservoirs (tanks)
- Rehabilitation and upgrading of sewage treatment plants
- Construction of solid waste management landfill

Category C: MWSP-1 activities are classified as Category C if they do not involve civil works and if no significant environmental issue has been identified and no specific mitigation measures are required. In such cases, subproject implementation can proceed without reference to additional environmental requirements.

- Examples of MWSP-1 Category C activities include:
  - Water loss reduction measures
  - City-wide sanitation marketing campaign
  - Institutional capacity strengthening activities

The PIU Environmental and Social Specialists will be responsible for assigning the appropriate environmental category to the subprojects consistent with the requirements of ESSF, and based on the criteria provided in this ESMF.

If Resettlement Action Plans (RAPs) are prepared, these would be reviewed and approved by the Commissioner for Lands, consistent with the Resettlement Policy Framework as well as the World Bank, prior to initiating compensation and commencement of project activities

Completion by PIU	
Is This Project Likely To Need An ESIA	YES/(NO)
List A/B Paragraph Numbers	
Date Exempted	
Date Forwarded To MEPA	

Completion by MEPA	
Date Received from District Assembly:	
Dated Reviewed:	
Date of Submission of Project Brief	
Date of Submission of ESIA Reports	

Framework as well as the World Bank, prior to initiating compensation and commencement of project activities

Completion by PIU	
Is This Project Likely To Need An ESIA	YES/NO
List A/B Paragraph Numbers	
Date Exempted	
Date Forwarded To MEPA	
Name & Signature of Environmental and/or Social Specialist/s	Morris Tengatenga

Completion by MEPA	
Date Received from District Assembly:	
Dated Reviewed:	
Date of Submission of Project Brief	
Date of Submission of ESIA Reports	
Date of Approval/Rejection	

NOTES:

- Once the Environmental and Social Screening Form is completed it is analyzed by the Environmental and Social Specialist/s from the PIU who will classify it into the appropriate category based on a predetermined criterion and the information provided in the form.
- All projects' proponents exempted from further impact assessment must be informed to proceed with other necessary procedures.
- Any project recommended for a specific ESIA will have to follow the procedures outlined in section 24 and 25 of the Environmental Management Act, and the Malawi Government's Guidelines for Environmental Impact Assessment Appendix C, page 32.

Annex 3: One of the signed consent for the land earmaked for SWKs

MANGO KIOSK

KUVOMEREZA A BLANTYRE WATER BOARD (BWB) KUGWIRA NTCHITO

YAWO OPANDA KUDODOMETSEDWA

Boma/ Mzinda..BLANTYRE....Mfumu yayikulu (TA)/ Ward..KAPENI.....Gulupu/ MAKATA
Taunishipi.....NDIRANDE.....

Ine (Ife) CHE KATE ZAMULANI......... (Dzina/Maina komanso lembani kuti ndinu akazi kapena amuna) mwini/ eni ake a malo, zomera/ mitengo/ nyumba/pololi, mbeu ndi zina (tchulani) .... monga mmene afotokozera mmusimu:

KUPEREKA MALO AULELE KUTI BLANTYRE WATER BOARD AMANGE MALO OTUNGIRA MADZI AUKHONDO MU MDELA LATHU.

Ndavomereza/ tikuvomereza mosakakamizidwa kuti a BWB agwire ntchito yomwe yatchulidwa mmusimu ndipo sadzayimbidwa mulandu wina ulionse

KUMANGA MALO OTUNGIRA MADZI AUKHONDO KUGULITSA MADZI KWA ANTHU ONSE A MDELA LINO. KUCHOKERA PA MALO ATAMANGIDWEPO.

Sayini ya mwini/eni ake	K Gamulani
Keyala/ Nambala ya foni	0888115092
Tsiku	31/10/23
Mboni (Dzina ndi sayini)[1]	NOEL KAMUNGA
Keyala/ Nambala ya foni	0999262450
Oyimila BWB (Dzina ndi sayini)	0999289094 LUCY MSIYADUNGU SOCIAL & GENDER OFFICER
Tsiku	31/10/2023
Mboni (Dzina ndi siyini)	IKEKWATO MOYO

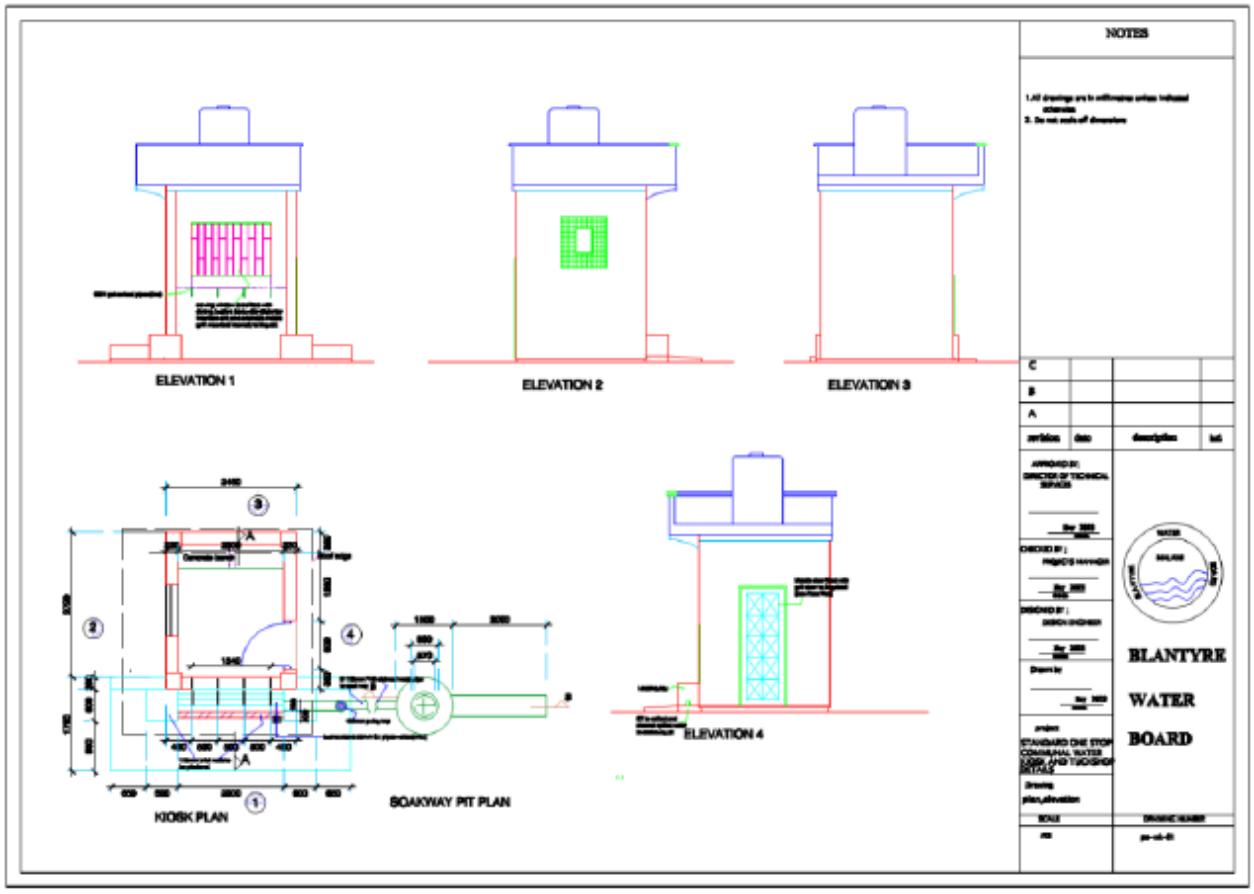
G.V.H. SONANJEMAKATA S.YA KAPENI ... BLANTYRE

[1] Mboni akhale a mfumu a mmudzi, ngati palibe akhale wapampando wa komiti ya WUA/ Khasala wa dela limenero. Kumbali ya BWB, asayine ndi mtsogoleri wa Pulojecti,/ Ijiniya wa pulojekiti kapena ofisala wa za chikhalidwe ndi kuona kuti pasakhale kusiyana pakati pa amuna ndi a akazi ndipo mboni akhale ofisala wina aliyese yemwe adalembedwa ntchito ndi BWB kwa muyaya

Annex 4: Issues/ concerns raised by stakeholders and responses provided

SN	COMMENT RAISED	RESPONSE GIVEN
1	**Creation of job opportunities for the local people within the project area.** In all the proposed project sites the community were looking forward to getting employment especially for the youth that were staying idle in their communities.	During construction the contractor will employs a minimum of 6 unskilled workers from the project area at each site and provide equal employment opportunity to both men and women by employing a minimum of 40 percent of females in the work force at each site.
2	**Theft of building materials:** The communities at all the sites pointed out that theft of building materials had been experienced in previous similar public projects	The Water User Association (WUA) will work in close collaboration with the existing community security structures and the Police to ensure construction materials are protected
3	**Spread of sexually transmitted infectious (STIs) including HIV & AIDS:** The community mostly pointed out that construction workers come to their areas without their families which results in them engaging in sexual relationships with the locals.	The project will put in place mitigation measures to sensitize the workers and surrounding community members. The construction workers will also be provided with appropriate PPE.
4	**Unplanned pregnancies and child marriages among female students:** The communities at all sites raised up the concern attributing it to the high poverty levels in the selected locations/ sites that would see females including young girls easily enticed by construction workers into sexual affair/ early marriage because of their high incomes.	The project will develop an induction program including a code of conduct for all workers which the workers will be required to sign prior to starting work. The code of conduct will address issues which will include (i) zero tolerance of illegal activities such as child labour, sexual exploitation and abuse, defilement, child prostitution, sexual harassment of women, gender-based violence, purchase or use of illegal drugs, fighting;(ii) Disciplinary measures and sanctions (e.g. dismissal) for infringement of the code of conduct and/or company rules; and (iii) Commitment / policy to cooperate with law enforcement agencies investigating alleged perpetrators of SEA, defilement, GBV and others.
5	**Risk of accidents to workers:** The community at all sites expressed concern that when people get injured at the construction sites, they are left to seek treatment on their own and don't get any support from the contractors.	The project will develop an Occupational Health and Safety approach, which aims to avoid, minimize, and mitigate the risk of workplace accidents. This would include training construction workers on safety, using safe machinery and equipment, and providing necessary personal protective equipment (PPE). It was also mentioned that it is a requirement that all contractors have insurance to cover for injuries according to the laws of the country. Furthermore, the project will set up a GRM so that people can raise any complaints such as these.

Annex 5: Design drawings for the Smart Water Kiosks



Annex 6: Labour Management Plan

1.0. Introduction

MWSP is expected to utilize hired labour force during construction/ rehabilitation and upgrading of kiosks to Smart Water Kiosks (SWKs) across Blantyre City. The Project recognizes that sound worker-management relationships, fair treatment of workers, promotion of gender equality and protection from Gender Based Violence (GBV) and provision of safe and healthy working conditions enhances development benefits of a project. This generic Labour Management Plan (LMP) for the Kiosk Project is developed in order to guide/ help the contractor in preparation of specific LMP that will suit the nature, scope and methodology to be used in delivering the project.

The objectives of this labour management plan are to:

- To promote safety, health, and welfare of workers at workplace.
- To promote the fair treatment, non-discrimination, and equal opportunity of project workers.
- To protect project workers, including vulnerable workers such as women, persons with disabilities and migrant workers, contracted workers and primary supply workers
- To prevent the use of all forms of forced labour and child labour;
- To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law;
- To provide project workers with accessible means to raise workplace concerns.

This LMP applies to all Project workers whether full-time, part-time, temporary, or migrant workers. The LMP is applicable to the Project in the following manner:

1. People employed or engaged directly by PIU to work specifically in relation to the Project.
2. People employed or engaged by contractors to perform work related to core function of the project, regardless of location.
3. People employed or engaged by the primary suppliers under this project.

2.0 Anticipated Labour Use in the Project

2.1 Characteristics of Project Workers

This project is expected to utilize contractors, consultants and primary supply workers as human resources which are available at national, district and community levels.

a) Contracted Workers and Short-term Consultants

The project will engage contractors and supervising engineer (consultants) to undertake certain assignments such as construction of the kiosks and supervising the works respectively.. Both contracted workers and consultants will be guided by specific contractual agreements between them and PIU. The timing of the scheduled works and deliverables will be stipulated in their respective contracts; with short-term consultants, engaged on fixed number of days depending on the type and amount of work. Under contractor, workers from the locality/ area of project impact should be given priority for both skilled and unskilled labour.

b) Migrant Workers

The project shall require the contractors to engage workers from the locality of the project's impact area**.** However, where skilled workers are not available in the locality, it is expected that workers from nearby communities or other parts of the country or other country in case of expatriate labor will be involved.

c) Primary Supply Workers

Primary suppliers are formal businesses who are required to supply procured materials and/or produce materials subject to high standards as stipulated by Project's procurement Unit. As part of the environmental and social assessment, any new supplier will be vetted regarding compliance with taxes, certification, licensing, and Public Liability Certificate. Only primary suppliers that meet the relevant requirements of this LMP including identifying potential risks of child labor to ensure that all workers are at least 18 years old will be involved. Issues of forced labor and safety which may arise in relation to primary suppliers will also be under consideration.

3.0 Assessment of Key Potential Labour Risks

Significant use of labour is mostly expected to arise during construction. However, during operation and maintenance, labour services will also be outsourced by beneficiary Committees/WUA or District Councils.

The safety and health risks to which the workers, may be exposed from each type of work will therefore be assessed. Even the ability to prevent or eliminate such risks or, if the risk cannot be prevented or eliminated, measures to protect workers, from exposure will be explored. This will be done through conduction of risk assessment.

a) Key Labour Risks

Potential risks that may arise from the nature of activities to be undertaken include:

- Occupational Safety and Health risks during construction and operation;(e.g., Slips and trips; Fall from height; Cuts and bruises from sharp objects; Ergonomic hazards due to lifting of heavy loads).
- Risk of communicable diseases including COVID-19, Malaria and Cholera to workforce.
- Non-compliance with labor laws and regulations by the contractors.
- Influx of migrant workers.
- Gender Based Violence (GBV),Sexual Harassment, Sexual Exploitation and Abuse (SEA).
- Violence against Children; (Child labor, Defilement, Child Marriage).
- Risk of contracting HIV and AIDS and STIs.
- Risk of exposure to hazardous materials and wastes
- Risk of excess exposure to noise and vibrations
- Increased competition over resources due to influx of labor
- Discrimination and exclusion of vulnerable groups.
- Labor conflicts and poor work conditions

The project will address these risks through the site specific risk and hazard assessments that were conducted and incorporation of mitigation measures for the identified risks into the environmental and social management plan. Some of the mitigation measures includes provision of appropriate and adequate Personal Protective Equipment (PPE) to workers. The risk of child labour will be mitigated through certification of workers' age. This will be done by using the legally recognized documents such as National Identification Card and Birth Certificate. In circumstances where these documents are not available, the Affidavit of Birth will be used. Further, awareness raising sessions will be conducted regularly to the communities to sensitize on prohibition and negative impact of child and forced labor. The table below presents a summary of the possible mitigation measures for the potential identified risks.

Item	Potential Risks	Mitigation measures
1	**Occupational Safety and Health Risks during construction**	• Provide appropriate Personal Protective Equipment (PPE) to workers; • Provide regular Occupational Health and Safety (OHS) training including safe work practices and emergency procedures to both old and new workers and training on task risk assessment and incident reporting; • Enforce the use of PPE by workers; • Provide appropriately equipped and accessible first-aid stations at the work place • Put appropriate warning signs in areas with high risk of safety; • Use of dust control methods such as covers, water suppression on loose materials and surfaces, or increased moisture content for open materials storage piles, to reduce particulate matter and dust exposure, • Develop Standard Operating Procedures (SOPs) to avoid risks, including putting in place an evacuation plan and drills to practice the procedure and plan. Provide firefighting equipment that is easily accessible and simple to use • Double insulate / grounding all electrical equipment used in environments that are, or may become, wet; to ensure protected circuits • Conduct detailed identification and marking of all buried electrical wiring prior to any excavation work • Manage outdoor work, temperature-related stress by monitoring weather forecasts to provide advance warning of extreme weather, scheduling work accordingly and adjustment of work and rest periods according to temperature stress management procedures and safety awareness during storms e.g. prevention from lightning strike by avoiding shelter under trees among other things • Incorporate rest and stretch breaks into work processes, and conducting job rotation • Put in place fall prevention / protection measures e.g. use of safety belts. • Facilitate the formation of Occupational Safety, Health Welfare Committee at each construction site. • Develop OHS Management Plan and ensure its full implementation during construction phase.
2	**Risk of communicable diseases. COVID 19, Cholera and Malaria to workforce,**	• Sensitize workers, on different communicable diseases and ways of preventing them; • Encourage workers and communities to go for voluntary screening/ medical check-up/testing;

		• Provide Information, Education and Communication materials on different communicable diseases • Provide adequate supplies of potable drinking water • Provide clean eating areas where workers are not exposed to hazardous or noxious substances including germs • Provide adequate lavatory facilities • Eliminate unusable impounded water • Promote use of repellents • Provision of hand washing facilities and soap • Enforce the use of face mask • Encourage social distance
3	**Non-compliance with labor laws and regulations by Contractors**	• All project workers including contractors personnel should sign a Code of Conduct and contract before commencement of construction works, which contains among other issues, labor related laws and regulations; and • Sensitize workers on labor related issues and regulations to ensure that they comply.
4	**Increased risk of influx of migrant workers – Competition over local resources**	• Engage all non-skilled labor force from surrounding communities to minimize the risk of migrant workers and associated negative impacts. In situations that the required skills are found within the surrounding communities these should be given priority.
5	**Gender Based Violence**	• Sensitize workers and surrounding communities on dangers and prevention of Gender Based Violence; • Provide equal employment opportunities to men, women, youth and people living with disabilities; • Prepare, adopt and implement worker's code of conduct.
	• Sexual Harassment, • Rape	• Sensitize workers and surrounding communities on issues of Sexual harassment and rape • Put in place robust Grievance redress mechanisms and make it known to workers and surrounding communities/ • Implement a Workplace Policy on Sexual Harassment
	• Discrimination	• Provide equal opportunities to men, women, youth and people living with disabilities
6	**Violence against Children–**	• Sensitize surrounding communities on issues of violence against children; • Employ people that are aged 18 and above;
	• Sexual Exploitation and Abuse (SEA)	• Sensitize workers and surrounding communities on issues of SEA • Restrict under-aged to do business on the project site • GRM comprehensively integrate issues of SEA • Put in place and make known reporting mechanisms for SEA
	• Child labor	• Sensitize surrounding communities on issues of Child labor

		• Employ people that are aged 18 and above • Restrict under-aged to do business on the project site • Restrict workers from buying merchandise from children • Put in place and make known reporting mechanisms for child labour • Display warning signage on child labour at strategic places
7	**Risk of contracting HIV and AIDS and other STIs -Risk extended to both workforce and local community**	• Sensitize workers, and surrounding communities on HIV and AIDS and other STIs; • Provide free condoms to workers; and • Provide Information, Education and Communication materials to workers.
8	**Risk of Contracting COVID-19**	• Raise awareness on COVID-19 best practices for construction sites to workers. Implement COVID-19 best practices for construction sites.
9	**Sexual Exploitation and Abuse – Both for workforce and local communities,**	• Prepare and implement GBV and SEA Action plan; • Carry out community sensitization; • Prepare, adopt and implement workers code of conduct. • All workers to sign a code of conduct
10	**Discrimination and exclusion of vulnerable groups;**	• Development of Grievance Redress Mechanism (GRM); • Implement a deliberate policy for gender equality; and • Develop deliberate mechanism to monitor participation of vulnerable groups in all activities
11	**Labor disputes and conditions of employment.**	• Establishment of Workers Grievance Redress Mechanism (WGRM); and • Implementation of this LMP.
12	**Increased competition over resources due to influx of labor**	• Employ more locals • Conduct sensitization of workers on the need to bring along their resource to avoid competition on the existing resource.
13	**Risk of exposure to hazardous materials and wastes**	• Avoiding and minimize the use and release of hazardous materials, for example, non-hazardous materials can substitute asbestos in building materials. • Preventing uncontrolled releases of hazardous materials to the environment e.g. paint, oils etc. Indoor secure storage, and sealed containers rather than loose storage • Hazard communication and training programs to prepare workers to recognize and respond to workplace chemical hazards.
14	**Risk of exposure to excess noise and vibrations**	• Ensure exposure to noise by workers should not exceed 85 dB (A) for a duration of more than 8 hours per day without hearing protection. • Choose equipment that is associated with low vibration and noise production, • Install vibration dampening pads or devices,

		• Limit duration of exposure of vibration per individual worker

4.0 Brief Overview of Labour Related Legislation

4.1 Occupational Safety Health and Welfare Act (1997)

The Occupational Safety Health and Welfare Act (1997) provides a framework for the conditions of employment in workplaces as regards to safety, health and welfare of workers. The Act directs the prevention of accidents occurring to persons employed or authorised to go into the workplaces or the general public; through implementation of identified mitigation measures for the identified potential hazards to safety and health. General safety facilities stipulated for most work places include the following: adequate ventilation, cleaning materials and cleanliness of workplaces, lighting, washing facilities, change rooms for workers, sanitary conveniences and first aid kits. Both employers and employees are sensitized on basic procedures for proper use and operations of the welfare and safety facilities within workplaces. Non – compliance or negligence on use of work safety facilities is an offence under sections 82 and 83 of the act. Penalties include a fine of up to MK200, 000.00- and 12-months imprisonment of the offenders.

Section 56 and 57 provide guidelines for prevention fire out breaks, and control of incidences of fire outbreaks within work places. Section 57 stipulates some recommended means of fire escapes from work places. Among the means are properly labeled exit points which must be kept free of obstruction at all times, emergency escape door and emergency assembly points. Section 58 stipulates the provisions of protective clothing (such as gloves, foot wear, screens and goggles, ear muff and head covering) to protect workers from excessive exposure to nuisances with some work activities. And section 59 stipulates the provisions for breathing masks to employees against excessive emissions of dust and fumes.

In order, to ensure that the working environment is free of health and safety risks and hazards the project shall ensure that proper mechanisms are put in place such as proper documentation and reporting of accidents and also provision of preventive and protection measures.

4.2 Employment Act (2000)

The employment Act of 2000 reinforces and regulates minimum standards of employment with the purpose of ensuring equity necessary for enhancing industrial peace, accelerated economic growth and social justice; and for matters connected therewith and incidental thereto. Part II of the Act states fundamental principles guiding the Act, and these include:

Section 4(1) - Prohibition against forced labour
Section 5(1) - Anti-discrimination
Section 6(1) - Equal pay
Section 7 - Remedies for infringement of fundamental rights

Part IV of the Employment Act prohibits child labour and provides restrictions on employment of young persons as stated in sections 21(1) and 22(1) as follows:

"*21. (1) subject to subsection (2), no person under the age of fourteen shall be employed or work in any public or private agricultural, industrial or non-industrial undertaking or any branch thereof.*
22. (1) No person between the age of fourteen and eighteen years shall work or be employed in any occupation or activity that is likely to be - (Hazardous work)
(a) harmful to the health, safety, education, morals or development of such a person; or
(b) prejudicial to his attendance at school or any other vocational or training programme."

Therefore, when employing people for the implementation of the project activities, Contractor will have to ensure that that the provisions of this Act are complied with.

4.3 The Labor Relations Act (1996)

The Labour Relations Act promotes sound labour relations through the protection and promotion of freedom of association, encourages effective collective bargaining and promotes orderly and expeditious dispute settlement, conducive to social justice and economic development.

Part V of the Act stipulates dispute settlement procedures by presenting ways and channels of dispute resolution. Furthermore, it encourages the establishment of internal dispute handling machinery as a primary platform to receive and handle workplace matters before the involvement of a third party.

Pertaining to this project, Contractor will utilize the Project's Grievance Redress Mechanism and facilitate the formation of Workers Grievance Redress Management Committees to provide an opportunity for reporting and settlement of grievances from workers. In addition, Occupational Safety, Health and Welfare Committees shall be instituted at each construction site in order to promote contact and dialogue.

4.4 Workers Compensation Act (2000)

The Workers Compensation Act of 2000 provides for compensation for injuries suffered or diseases contracted by workers in the course of their employment or for death resulting from such injuries or diseases. Section 4 (1) states that if an injury, other than the contraction of a scheduled disease, arising out of and in the course of employment is caused to a worker, the employer shall, subject to this Act, be liable to pay compensation in accordance with this Act.

To comply with this Act, Contractor will ensure that all eligible occupationally injured workers are compensated accordingly. Contractor will be required to report to the nearest Labor Office every occupational accident that incapacitates a worker from earning wages for at least 7 days within 21 days of occurrence as stipulated in section 24 of Workers Compensation Act. As a means to check Contractor's compliance on this regulation, workers under the Project and their safety committees will be sensitized on the provisions of the Workers Compensation Act.

4.5 Gender Equality Act (2013)

The Gender Equality Act, 2013, among other things, promotes gender equality, equal integration, influence, empowerment, dignity and opportunities, for men and women in all functions of society, to prohibit and provide redress for sex discrimination, harmful practices and sexual harassment. Section 7 of this Act sets a provision for workplace policy to address issues of sexual harassment. Sexual harassment may be in a form of physical conduct like rape, verbal conduct like comments on a worker's appearance and nonverbal conduct like whistling. The main objective of this section is to eliminate all forms of sexual harassment emanating from work environments. It encourages the formation of grievance redress mechanism where sexual harassment cases are to be reported and through which all perpetrators are disciplined accordingly. Since victims of abuse are at risk of becoming trapped in a cycle of abuse, matters of sexual harassment need to be dealt with seriously, expeditiously, sensitively and confidentially. Employers have a mandate to protect all employees from sexual victimization, vengeance for reporting sexual grievances and false accusations.

To address all sexual harassment issues, Contractor will implement a Workplace Policy on Sexual Harassment as provided under part 7.1 of Gender Equality Act 2013. This Act requires that persons subjected to sexual harassment exhaust internal sexual harassment procedures before commencement of prosecution or civil proceedings in the court of law. In view of this, the project will integrate GBV/ SEA/ SH into its GRM and implement mitigation measures using GBV Action Plan..

4.6 Gender Policy (2015)

The Gender Policy aims at guiding gender mainstreaming and women empowerment initiatives for attainment of gender equity and equality in Malawi. The policy emphasizes on inclusive approach in all developmental matters.

Policy Priority Area 7 talks of Gender Based Violence. The GBV which is especially violence against women, girls and the vulnerable groups, has been recognized by the Malawi Government as a severe impediment to social wellbeing and poverty reduction. If national development is to be achieved, then eradication of GBV is critical. For this reason, the policy statement requires that: laws and policies be formulated and enforced to eliminate GBV and human trafficking; response and access to socio-economic services are improved to address gender-based violence and human trafficking; and knowledge, attitudes and practices on Gender Based Violence are improved.

To mitigate GBV during the implementation of the Project, the contractor shall be tasked to address the risks of GBV through; conducting compulsory training and awareness to workers advising them to refrain from unacceptable conduct toward community members, specifically women. These trainings can be repeated from time to time; enlighten workers about national laws that make sexual harassment and gender-based violence a punishable offence; and adopt a policy to cooperate with law enforcement agencies in investigating complaints about GBV.

Policy Priority Area (PPA) 5 talks of Gender in Governance and Human Rights. This PPA states of women's active participation in politics and decision making positions is a right and ensures good governance, transparency and accountability. Women and men should be equally represented in politics and decision-making positions to fully realize democracy and achieve sound governance and sustainable development in Malawi.

Deliberate actions need to be adopted to make sure that women and youth are included in decision making positions and in economic activities. For this reason, Contractor will give priority to women with construction skills to take part in civil works activities. In the same scenario, all committees for the project, will have a quota for women inclusion.

4.7 HIV/AIDS (Prevention and Management) Act (2017)

This Act make provision for the prevention and management of HIV and AIDS; to provide for the rights and obligations of persons living with HIV or affected by HIV and AIDS; to provide for the establishment of the National AIDS Commission; and to provide for matters incidental thereto or connected therewith. This Act specifies the following among other issues;

- Responsibilities of Minister with regards to HIV/AIDS issues, prevention and management
- Prohibition of harmful practices that can expose others to contracting HIV/AIDS
- Issues of Subjecting another to a harmful practice(s)
- HIV and AIDS discrimination
- Rights and duties of persons living with or vulnerable to contracting HIV
- Rights of persons affected with HIV
- Right to privacy and confidentiality
- HIV transmission and testing

Subject to section 26, a person who is living with HIV or vulnerable to contracting HIV, has right to (a) dignity, physical integrity, life and health; (b) practice a profession of choice; (c) compensation associated with the restriction of his enjoyment of his rights; and (d) free medication, at a State medical institution, necessary for anti-retroviral therapy or treatment of an HIV related disease. Additionally, the law prohibits

discrimination on a basis related to HIV or AIDS**.** This implies that even those living with HIV or vulnerable to HIV infection will be accepted to be employed within the project without discrimination. For those already infected, shall be allowed to access treatment according to law.

Furthermore, this Act, recognized modes of transmission of HIV as through (a) sexual activity; (b) mother to child during pregnancy, labour, delivery or breastfeeding; (c) transfusion of infected blood; (d) transplant of an infected organ; (e) contact of broken skin or mucus membrane with infected blood, blood products or tissue; and (f) contact of broken skin or mucus membrane with contaminated wet objects. Relevant to this project, sexual activity as the main modes of transmission of HIV within the project sites is recognized. The project should therefore engage in sensitization on dangers of engaging in sexual activities and harassment among workers and also with community members surrounding the work sites. This shall include provision of condoms to enable prevention of infections in places where the project will be implemented.

The act also specifies on modes of HIV testing to include (a) Voluntary Counseling and Testing; (b) routine testing; (c) diagnostic testing; (d) compulsory testing; and (e) any other mode of HIV testing that the Minister may prescribe. With regards to this project, efforts should be put in place to enable voluntary counseling and testing and routine testing.

Through this Act, Contractor will ensure that no worker is discriminated or denied to practice a profession of choice due to their HIV status. Additionally, copy of HIV/AIDS workplace policy should be in place in all worksites. This policy will then facilitate actions for prevention and management of HIV/AIDS at workplace.

4.8 Malawi National HIV and AIDS Policy (2003)

The Malawi National HIV and AIDS policy's main goal is to prevent HIV/AIDS infections, to reduce vulnerability to HIV and AIDS, to improve the provision of treatment, care and support for people living with HIV and AIDS and to mitigate the socio-economic impact of HIV and AIDS on individuals, families, communities and the nation.

Chapter 7 of the Policy observes that in workplaces unfair discrimination against people living with HIV and AIDS has been perpetuated through practices such as pre-employment HIV and AIDS testing, dismissal for being HIV and AIDS positive and the denial of employee benefits if known to be infected. HIV and AIDS affects every workplace. Absenteeism and death impact on productivity, employee benefits, production costs and workplace morale.

The project will have the potential to create job opportunities to the locals that will make them have disposable income and this can lead to sexual interaction between workers and with the surrounding communities which will likely cause spread of HIV and AIDS. As a way of implementing the Malawi National HIV and AIDS policy, Contractor will implement an HIV/AIDS workplace policy and prevention, treatment, care, support and impact mitigation programmes as one way of effectively reducing and managing the impact of HIV and AIDS in the work place

4.9 Malawi Public Health (Coronavirus and Covid-19) Prevention, Containment and Management Rules (2020)

On 7 August 2020, the Government of Malawi gazetted Public Health (COVID-19) prevention, containment and management rules which came into force on Saturday 8 August 2020. The rules contain general preventive measures to contain the escalation of COVID-19 in various sectors including the work place. The measures states in these COVID-19 rules include mandatory wearing of face masks in public places, physical distancing of at least one meter from each other and washing hands with soap. The measures also include restrictions to gatherings of more than fifty people except for national assembly and meetings to discuss

COVID-19. Observations have shown that Workplaces are amongst places where COVID-19 spread has thrived and spread of COVID-19 among workers has been common.

During the course of the Project implementation, the COVID-19 guidelines for construction sites have to be strictly followed in all sites, including any other rules and regulations which may be introduced by Government in a bid to prevent and/or contain and manage COVID-19 spread among workers

4.10 International Labour Organization (ILO) and United Nations (UN) Conventions

Malawi is a signatory to International Labor Organization (ILO) and United Nations (UN) Conventions. Such being the case, most of the provisions in the ILO Conventions are incorporated in Malawi's labor related legislation. These include:

- ILO Convention 87 on Freedom of Association and Protection of the Right to Organize;
- ILO Convention 98 on the Right to Organize and Collective Bargaining;
- ILO Convention 29 on Forced Labor;
- ILO Convention 105 on the Abolition of Forced Labor;
- ILO Convention 138 on Minimum Age (of Employment);
- ILO Convention 182 on the Worst Forms of Child Labor;
- ILO Convention 100 on Equal Remuneration;
- ILO Convention 111 on Discrimination (Employment and Occupation).
- ILO Convention 155 on Occupational Safety and Health
- ILO Convention 187 on Promotional Framework on Occupational Safety and Health

4.11 Labour and Working Conditions

This section outlines requirements on occupational safety and health for this project. It emphasizes non-discrimination and equal opportunity; provides for the treatment of direct, contracted, primary supply workers and officials of Contractor participating in the project. It also provides for protection of vulnerable workers such as women, persons with disabilities and children from labour. Additionally, it spells out the need for a grievance mechanism for the project workers as an accessible means to raise workplace concerns.

With regards to Occupational safety and health requirements, employers and supervisors are obliged to implement all reasonable precautions to protect the health and safety of workers. This LMP provides guidance and examples of reasonable precautions to implement in managing principal risks to occupational health and safety; and it is advisable that PPPC should hire contractors that have the technical capability to manage the occupational health and safety issues of their employees, extending the application of the hazard management activities through formal procurement agreements. Preventive and protective measures should be introduced according to the following order of priority: (a) Eliminating the hazard by removing the activity from the work process. Examples include substitution with less hazardous materials, using different processes and ways of doing things, etc; · (b) Controlling the hazard at its source: through use of engineering controls. Examples include local exhaust ventilation, isolation rooms, machine guarding, acoustic insulating, etc; · (c) Minimizing the hazard through design of safe work systems and administrative or institutional control measures. Examples include job rotation, training safe work procedures, lock-out and tag-out, workplace monitoring, limiting exposure or work duration, etc. · (d)Providing appropriate personal protective equipment (PPE) in conjunction with training, use, and maintenance of the PPE. The application of prevention and control measures to occupational hazards should be based on comprehensive job safety or job hazard analyses. Trainings of designated members of project implementation committees responsible for overseeing occupational health and safety issues should therefore be an integral part of project

implementation. The training should also include transfer of skills on how to set up OHS management plan/procedures for the project.

To ensure equal opportunity among workers, issues of discrimination based on gender, disabilities and other issues e.g. disease are prohibited while supporting the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law.

Work related Grievance mechanism is also an important component. GRM provide a platform of raising workplace concerns and its respective ways of redressing the grievances. A grievance mechanism will have therefore to be provided for all workers under the project implementation. Measures will have to be put in place to make the grievance mechanism easily accessible to all project workers and design ways to address concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned, without any retribution, and carried out in an independent and objective manner. Table below gives highlights of provisions under the national labour related pieces of legislation.

	Provision	**Labour Legislation**
1	Fundamental employee rights, non-discrimination	This is provided for under Part II of the Labour Relations Act (1996)
2	Contractual arrangements, terms and working conditions of workers	This is provided for under Part V and VI of Employment Act (2000)
3	Working hours	This is provided for under Part VI of Employment Act (2000) specifically Sections 36 which is on 'Normal working hours, weekly rest etc"; and Section 37 on 'Maximum daily working hours'.
4	Salaries and wages and frequency of payments	This is provided for under Part VII of Employment Act (2000) specifically on Sections 50 to 55
5	Leave provisions – annual, maternity, sick and holidays	This is covered in Employment Act (2000) specifically under Part VI (sections 40,44,45,46 and 47)
6	Retrenchment/termination of contract arrangements	This is provided for Under Part V Sections 28, to 31 of the Employment Act of 2000, Employment (Amendment) Act 2010
7	Prohibition against all forms of child labour	This is provided for under Part IV of the Employment Act of 2000 on 'Employment on young persons' specifically in sections 21 to 24 and in Child Care, Protection and Justice Act of 2010.
8	Prohibition against forced labour	This is provided for under Part II of Employment Act (2000), specifically on section 4
9	Freedom or association and labor unions;	This is provided for under Part II of the Labour Relations Act (1996)
10	Dispute resolution/grievance management systems	This is provided for under Part V of the Labour Relations Act (1996)
11	Safety provisions	Covered under Part V and VI of the Occupational Safety, Health and Welfare Act of 1997
12	Health and employee welfare provisions	This is provided for under Part IV and VI of the Occupational Safety, Health and Welfare Act of 1997

5.0 Gender Based Violence and Sexual Exploitation and Abuse (GBV and SEA)

Gender-based violence is violence directed against someone on the basis of gender, it is rooted in gender inequality, and it is a human rights violation. It can affect both males and females, but majority of the victims are women and girls. It can involve physical, verbal, emotional, sexual and psychological abuse, threats, coercion and deprivation.

Sexual Abuse

The actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions. It includes sexual slavery, pornography, child abuse and sexual assault.

SEA

The actual or attempted abuse of someone's position of vulnerability (such as a person depending on you for survival, food rations, education, transport, or other services), differential power or trust, to obtain sexual favors, including but not only, by offering money or other social, economic or political advantages. It includes trafficking and prostitution.

The subproject has potential to cause GBV and SEA. SEA and harassment may take place at workplace when individuals who are charged with responsibility of employing or supervising others lure members of opposite sex to have sex with them in exchange for employment or some favors.

Other GBV/SEA incidences may arise especially in situations whereby particular workers have received salaries or wages and are forced to surrender the cash to spouses or cases of forced sexual relationships in return for employment. The payments may also be used to lure adolescents, students, and children into unsafe sexual practices.

The project will carry out GBV and SEA risk assessment at all specific project impact areas to develop and implement GBV/SEA action plans for mitigating GBV and SEA issues. The mitigation actions shall include regular sessions to create awareness of GBV/ SEA/SH and its negative effects among workers and nearby local communities. In all cases, the incidents of GBV/SEA/SH will be reported and dealt with through a GRM procedure, which has protocols to manage information sharing and confidentiality of the survivors and alleged perpetrators.
Nevertheless, since GBV/SEA/SH cases are substantively different from other complaints that are typically handled through the normal workers or project grievance redress mechanisms, such cases will need a specific channel within the project GRM for their management (depending on whether the offender is a worker or not). All in all, information will have to be treated as confidential. The specially formed GRM committee will be oriented on how to approach and refer GBV/SEA survivors to a safe and ethical GBV/SEA service provider. Consequently, some of the GBV/SEA cases such as those on rape which are criminal in nature will be reported to police directly and immediately.. All cases, however, will be reported to the PIU within 48 hours.

6.0 Policies and Procedures

This section outlines the main policies and procedures to be followed during Project implementation especially during construction and operations. When need arises, this section will be updated.

6.1 General Policies and Procedures

The project implementation will be guided by all national labour related laws presented in Chapter 5 including the International Labour Organization (ILO) conventions to which Malawi is a party.

The principles and procedures presented below represent the basic requirements but should not be considered an exhaustive list of requirements. As specified in the legal framework presented in Chapter 5 of this document, employment of project workers will be based on the principles of non-discrimination and equal opportunity. There will be no discrimination with respect to any aspects of the employment relationship,

including recruitment, compensation, working conditions and terms of employment, access to training, promotion or termination of employment.

The following minimum requirements shall therefore guide the recruitment and management of project workers:

- Recruitment procedures will be transparent, public, and non-discriminatory, and open with respect to ethnicity, religion, sexuality, disability or gender.
- All vacancies for recruitment of skilled and unskilled workers, security personnel, contractors and consultants, will be advertised through posts and public announcements in all the project impact areas e.g. notice boards, churches/ mosques, online and any other places deemed accessible by people. Clear job descriptions will be provided in advance of recruitment and will explain the skills required for each post.
- All contract workers will have written contracts describing terms and conditions of work and will have the contents explained to them. Workers will sign the employment contract.
- Unskilled labour will be preferentially recruited from the affected communities:
- Where notice of termination of contract is applicable, a party to terminate the contract will give the other party notice prior to date of contract termination in accordance with section 29 of Employment Act, 2000.
- The contracted workers will not be required to pay any hiring fees.
- Depending on the origin of the employer and employee, employment terms and conditions will be communicated in a language that is understandable to both parties.
- In addition to written documentation, an oral explanation of conditions and terms of employment will be provided to workers who may have difficulties in understanding the documentation.
- Interpretation will be provided for workers as necessary. It is noted that language-related problems are not expected; and
- All workers will be at least 18 years old.

A worker's code of conduct will be developed and implemented. The code of conduct aims at preventing and/or mitigating social risks within the context of the project.

6.2 Occupational Health and Safety (OSH) compliance

The requirements of the Occupational Safety, Health, and Welfare Act, 1997 will be complied with through conducting site-specific risk assessments and development of appropriate risk prevention and mitigation measures (OHS management plan/procedures). Where risk is evident, the project will seek to eliminate, control, and minimize the hazard before prevention by provision of personal protective equipment (PPE). This will be coupled with training of workers by contractors, on the use of PPE. The table below provides some of the mandatory PPE for specific workers:

Type of PPE		**Type of workers**
	Hard Hat/helmet	All construction workers
	Gum Boots/safety boots	All construction workers and Security Personnel
	Reflectors	All construction workers and Security Personnel
	Dust Masks	Construction workers particularly those involved in land clearing, trenching and excavation and concrete mixing
	Gloves	All Construction workers
	Earmuffs	Construction workers particularly operating heavy machinery including steel cutters, carpenters, etc.
	Safety Goggles	Construction workers particularly those involved in land clearing, trenching and excavation, concrete mixing and welding
	Cloth or surgical masks	All workers in the Programme for control of spread of COVID-19
	First Aid Kit	Accessible to all workers
	Overalls/ Work suits	All construction workers
	Raincoats	All Security Personnel and other construction workers

During operations and maintenance, measures that deal with and/or prevent OHS risks will also have to be implemented. During this stage, the anticipated risks are mainly those related to natural disasters/events or man-made events (e.g., fires, etc.). It is therefore important to ensure that workplace structures should be designed and constructed to withstand the expected risks and area(s) should be designated for safe refuge, if appropriate. Standard Operating Procedures (SOPs) should also be developed for the project, including an evacuation plan.

6.3 Welfare Facilities on Construction Site

The contractor will be required to always ensure that the following minimum welfare facilities are provided in all the construction sites under the project:

- Constant supply and accessibility of safe drinking water.
- Availability of changing rooms and lockers.
- Shelter and facilities for rest.
- Sanitary and toilet facilities.

- Washing facilities.
- Canteen/facility for meals

6.4 Responsibilities and Reporting OHS Incidents and Accidents

Immediate reporting of OSH significant events and accidents is an integral part of the project implementation as per the Occupational Safety, Health, and Welfare Act, 1997 and Bank's ESS 2. The Contractor has the responsibility for reporting incidents and accidents to all PIU and other relevant authorities within 48 hours.

With respect to reporting incidents and accidents, the following procedures have to be followed:

- Promptly notify PIU of any incident or accident related to the Project which has, or is likely to have, a significant adverse effect on the environment, local communities, the public or workers.
- Provide sufficient detail regarding the incident or accident, indicating immediate measures taken or that are planned to be taken to address it, and any information provided by any contractor and supervising entity, as appropriate.
- Subsequently, as per the developer request, prepare a report on the incident or accident and propose any measures to prevent its recurrence.
- Notify the appropriate authorities within stipulated legislative timeframes after learning of the incident or accident with the submission of any required subsequent report.

Other than incident/accident-based reporting, regular reporting of OHS issues also has to be undertaken. This can be done through preparing and submitting regular monitoring reports to the developer. This should be done in tandem with reporting of other aspects of the project e.g., status of implementation of the project, functioning of the grievance mechanism(s) etc.

7.0 Age of Employment

The Employment Act (2000) sets the minimum age of persons to enter employment in Malawi as 18. This is also stipulated in the International Labour Organization Convention (138) on minimum age. These two legal instruments prohibit the employment of underage children. However, according to Section 21 of the Employment Act, children between the ages of 14 and 18 are allowed to participate in light work so long as it does not interfere with the child's education or harm the child's health or physical, mental, spiritual, moral or social development. Under the Project, children under the age of 18 will **NOT** be employed to work in the project activities because the activities are not regarded as light work. National Identity card will be used to verify the age of workers. The following procedure will be followed if a child is found employed by contractors/suppliers:

- Underage workers identified will be removed; and
- The culprits of child labour shall be reported to relevant authorities where child labour issues are handled e.g.to the Labour Office.

All these conditions will be included in the codes of Conduct which will be signed by Contractors to ensure that the conditions are not only enforceable but are also legally binding. Further, awareness raising sessions will be conducted regularly to the communities to sensitize them on prohibition and negative impact of child and forced labour.

8.0 Contractor Management

The project anticipates contraction of construction service providers to be engaged in the construction. The contractors will have personnel who will be involved in the works in various institutions.

To ensure fair competition and transparency, the selection of contractors will be based on the Government of Malawi's Public Procurement and Disposal of Assets Authority (PPDA) procedures which regulate the engagement of contractors. This includes:

- Competitive bidding through transparent open advertising.
- Short listing and selection of contractors and
- Contractual signing.

Contractors will be required to develop and sign a contractors' ESMP that will also include issues of code of conduct, GBV, SEA,SH child labour and GRM at contractor's worksite. Similarly, it will ensure that issues concerning subcontracting are done with the consent of the Government. In ensuring that there is compliance with the requirements of this LMP by contractors the project will regularly monitor and evaluate activities of contractors in line with the projects M & E and ESM frameworks. The project will also strengthen awareness among workers to ensure that they are aware of their entitlements

9.0 Code of Conduct

The code of conduct aims at preventing and/ or mitigating social risks within the context of the project. The social risks that may arise include but not limited to GBV/SEA/SH; Discrimination; HIV/AIDS infection and prevention and Occupational Health and Safety.

Contractors who will be engaged under the project will be required to develop and implement a code of conduct that will commit them to create and maintain an environment which prevents social risks. The developed code of conduct will be reviewed by PIU. The contractor will be required to communicate clearly to all those engaged on the project the behaviors which guard against any form of abuse and exploitation to prevent social risks.

Annex 7: Chance Find procedure

Introduction

Chance Find Procedures outline, step by step, what needs to be done when projects come across archaeological sites, historical sites, remains and objects, including graveyards or individual graves during excavations or construction. This procedure responds to Environmental and Social Standard (ESS) 8, Physical Cultural Resources. This ESS addresses physical cultural resources which are defined as movable or immovable objects, sites, structures that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings and may be above or below the ground. The implication this ESS in this project is that the construction of new kiosks will involve excavation of trenches for foundation. Therefore, it is probable that a physical cultural resource can be found, hence the need for a procedure to outline how this can be handled.

In case of any chance finding, the following procedure will be implemented:

a) Stop the construction or excavation activities in the area of the chance find;
b) Delineate the discovered site or area;
c) Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the Department of Antiquities take over;
d) Notify the Social Specialist of Malawi Water and Sanitation Project Implementation Unit or the Project Manager who in turn will notify the responsible officer in the Departments of Antiquities immediately (within 24 hours or less);
e) Responsible officer from the Department of Antiquities would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archeologists. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
f) Decisions on how to handle the finding shall be taken by the responsible authorities at the Department of Antiquities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
g) Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the Department of Antiquities to Blantyre Water Board; and
h) Construction work could resume only after permission is given from the responsible local authorities or department responsible for culture or antiquities concerning safeguard of the heritage.

Annex 8: Traffic Management Plan

Introduction

Any project which generates or relocates traffic (including bicycle or pedestrian traffic), influences travel speeds, travel modes, traffic composition or traffic patterns, and is likely to result in new or changed road safety risks, needs to be assessed. The assessment will help in identifying issues/ risks/ impacts and their mitigation measures that will be monitored throughout the project implementation period so as to ensure traffic and road safety of workers and the general public. This generic Transport Management Plan (TMP) is prepared for this project in order to guide/ help the contractor in preparation of specific TMP that will suit the nature, scope and methodology to be used in delivering the project.

Project Types and traffic risks

There are at least four types of projects where traffic and road safety risks arise:

Type A-Transport: This category includes transportation projects involving road construction or rehabilitation (e.g., highways, rural roads), urban transport projects (e.g., Bus Rapid Transit or metro systems), and projects that create or modify road infrastructure (e.g., access roads) associated with ports, railways, or aviation.

Type B-Other: Transport (non-road infrastructure improvement) and non-transport projects which change speeds, traffic mix or volume, vulnerable road user (pedestrians, bicyclists, motorcyclists) mix, volume, routes or facilities. Examples may include policy changes on speed limits or vehicle importregulations, or the opening of a facility which draws trucks or pedestrians, etc.

Type C-Construction only: Projects with road safety impacts during construction only; and

Type D-Vehicle procurements: Projects with vehicle procurements as the only influence on roadsafety (e.g., fleets or even project vehicles).

Table1: Guiding Questions for Identifying Overall Project Traffic and Road Safety Risk

At Risk Group	During Project Implementation Phase	During Project Operation Phase
Project Workers	- What are the operating speeds and traffic environment at project's constructions areas? - Are the workers protected from traffic by safety barriers? (e.g., if construction workers are near traffic and operating speeds arenot managed down to 30km/h, in the absence of safety barriers effectively protecting workers the risk is high).	Should be recognized that these issues apply during construction as well as for maintenance work during road operations
At Risk Group	**During Project Implementation Phase**	**During Project Operation Phase**

	- What is the complexity of civil works? - What is the experience andcapacity of the contractor(s) and IA in managing similar work zones? - What is the level of traffic enforcement in the country ingeneral, and the project areas in particular?	
Affected Communities	- Who are the affected-communities and where are they located relative to the project road or sites? - How much exposure will affected-communities have to construction traffic, not just at the work site buton haul routes, etc.? - Are there particularly vulnerable sites such as schools and hospitalsaffected by the construction site orhaul routes? - What will be the impact on mobility and accessibility of communities given current usage and mobility needs?	Extent to which infrastructure improvements can mitigate any increase in speeds likelyto arise. Provision of facilities to protect vulnerable users. How the mobility and accessibility of communities will be affected during the operation phase
Road Users	- To what extent will construction impact on road users, particularly vulnerable ones (i.e., pedestrians, cyclists, motorcyclists)? - Does the current level of traffic enforcement create a general deterrence atmosphere leading to general obedience to traffic regulations?	Baseline FSI risk along the project roads-and likely FSI risk from improved facilities Road safety management capacity and institutional framework Road safety infrastructure facilities Speed management potential. Vehicle safety levels Use of restraint systems by occupants Post-crash care Traffic growth and composition
Overall Project Traffic and Road Safety Risk	- Summarize the Risks during project Implementation focusing on highest risk areas	Summarize the Risks during Project Operation focusing on highest risk areas

Road Safety During Construction

Construction activities themselves should usually be considered a high-risk. Working on roads and roadsides poses significant risks to workers and motorists, because of changed roadway conditions, disrupted traffic flow, limited working space, and movement of construction and publicvehicles near workers and worksites. Consequently, the safe and effective management of traffic and the process needed to keep road-users safe construction, as an essential requirement

of any work undertaken on roads (whether on the roadway, shoulder or roadside).

Table 2: Risk Table for Managing Traffic During Construction

HIERACHY OF SAFETY CONTROLS *Consider the practicability of control measures, from left to right* *Select the most predictable given the circumstances and level of hazard record the reason if ahigher-level control measure is not considered practical*			
Safety hazard/ risk factors	Elimination/ Substitution	Isolation/ Engineering	Administrative (Behavioural)
• Clearance to traffic • (Clearance between the edge of a lane carrying traffic and the worksite. Roadworks vehicle, equipment and pedestrians	• Road closure • Detour onto other roads • Side track past the works	• barriers • Lane closure adjacent to work area • Vehicle-mounted attenuators	• Speed reduction • Warning signs/ Variable Message Signs (VMS) • Delineation of travel path
• High speed through worksite	• Road closure • Detour onto other roads • Side tracks past the roadworks	• Safety barriers • Lane closure adjacent to work area • Portable traffic signals • Vehicle mounted attenuators	• Speed reduction • Warning signs/ VMS • Traffic controller • Temporary road humps
• Poor advance sight distance to worksite (<200 meters)	• Road closure • Traffic diversion past the works	• Vehicle mounted attenuators • Lead and/ or tail vehicle(s)	• Extra advance warning signs/VMS • Speed reduction • Delineation of travel path
• Poor observation by motorists of directions/ instructions	• Road closure • Traffic diversion past the works	• Lane closure adjacent to work area • Portable traffic signals	• Speed reduction • Police presence • Extra signs/VMS • Temporary roadhumps Re-assess • information provided
• Narrow pavement width with no escape route (<2.9 meters width)	• Road closure • Traffic diversion past the Works	• Safety barriers	• Speed reduction • Delineation of travel path

Safety hazard/ risk factors	Elimination/ Substitution	Isolation/ Engineering	Administrative (Behavioural)
• Presence of workers at the worksite	• Road closure • Traffic diversion past the works	• Safety barriers • Increased separation from vehicular traffic	• Speed reduction • Warning signs • Delineation of travel path and worksite
• Excavation adjacent to traffic	• Road closure • Traffic diversion past works	• Different construction method • Safety barriers	• Speed reduction • Delineation of travel path

Annex 9: Occupational Health and Safety Plan

OCCUPATIONAL HEALTH AND SAFETY PLAN

1.Introduction

The Construction and Upgrading of kiosks to Smart Water Kiosks (SWKs) acknowledges the impact of safety on people's lives in various settings, including work, family and society. The project emphasizes the importance of continuously improving working conditions, preventing risks that may lead to accidents or incidents, and effectively managing the work environment. This plan is prepared at project (kiosk) level and will guide/ help the contractor in preparation of specific OHS plan that will take into consideration of the nature, scope, and methodology to be used in delivering the project.

2.1. Legal requirements

Occupational Safety, Health, and Welfare Act (1997), places the responsibility for worker safety, health, and welfare on employers, while employees are also expected to take reasonable care for their own and others' safety. Blantyre Water Board (BWB) has developed an Occupational Health and Safety Plan for the Water Kiosk construction and rehabilitation activities in compliance with legal requirements. The plan includes provisions for personal protective equipment (PPE), first aid, and registration of the construction camp as a workplace, as mandated by relevant sections of the Act.

3.0. Measures and Actions for Risk Prevention

3.1. Hazard Identification, Risk Assessment and Determining Controls

The Contractor will carry out hazard and risk assessments for each of the project activities. The results of these assessments will be incorporated into the hazard register of the assessment of hazards and risks for the execution of the project. Hazard and risk assessments will be carried out for a given set of works or work area. Risk assessment reviews are critical processes that must be completed before each activity on site. Project hazard and risk review sessions will be established and included in our planning. These sessions may include some or all of the following methods for managing hazards and risks.

A formal hazard review will be performed on any work that has the potential to affect or create a principal hazard. A principal hazard is associated with catastrophic risk and has the potential to cause multiple fatalities, or significant environmental damage or to adversely affect the plant operation.

3.2. Critical Works

Critical works are those that have high potential of causing serious incidents. The following works fall into the category of critical works:

- Working at height.
- Excavations (≥1.5m)
- Hot works.
- Confined space works;
- Lifting operations.

All critical works will be issued a work permit by the safety officer before commencement, when necessary.

3.3. Hierarchy of Risk Control

A hierarchy of control measures to eliminate or minimise the risk should be followed in the following order of priority:

Firstly, try to eliminate the hazard. If this is not possible, prevent or minimise exposure to the risk by one or a combination of:

- Substituting a less hazardous material, process or equipment
- Redesigning equipment or work processes Isolating the hazard
  (Note: These measures may include engineering methods)

As a last resort, when exposure to the risk is not (or cannot be) minimized by other means:

- Introduce administrative controls
- Use appropriate Personal Protective Equipment (PPE)

3.2. Remedial Action Items

The Hierarchy of Control will be used when deciding upon the action to be taken to eliminate or reduce the risk of a hazard. The most appropriate form of control is elimination with the least effective being the PPE.

3.3. Initial risk assessment

Risk analysis will be required and done for all activities. It is developed with the document risk and opportunities register.

4.0. Implementation and Operation

4.1. Resources, Roles, Responsibility, Accountability and Authority

An organizational chart detailing the management structure for the project shall be compiled as required by the Health and Safety specification. All the activities will be defined, namely resources, roles and responsibilities on the Method Statements for each activity.

The project leaders shall provide strong, visible leadership and commitment, and ensure that this commitment is translated into the necessary resources, to develop, operate and maintain the Health and Safety Management System and to attain the policy and strategic objectives. Management shall ensure that full account is taken of QHSE Policy requirements and shall provide support for all actions taken to protect health and safety.

All project leaders will create and sustain a project culture that supports the health and safety Management System based on:

- Giving Health and Safety priority status over other primary project objectives. Management through effective leadership shall visibly recognise and reward when and where this is successfully applied. Clear guidelines and supporting behaviours shall be established to enable management to act without hesitation in support of this strategy;
- Belief in the management desire to improve health and safety performance. Targets shall be set for improvement in all areas of Health and Safety. These targets will necessarily include both input (lead) indicators and output (lag) indicators. Some characteristics of the effective performance indicators that fully support and guide the implementation of the Project Health and Safety System are: “measurability”, “trend ability” and “target ability”.
- Acceptance of individual responsibility and accountability for health and safety performance. Health and safety performance shall be included as a factor in the appraisal and reward of staff. Expected health and safety performance and behaviours for individuals shall be established. The consequences of success or failure to achieve these performances and behaviour expectations shall be clearly defined and the application of these outcomes demonstrated.

- Participation and involvement at all levels in the health and safety process development. Employees of both the project and its subcontractors will be involved in the creation and maintenance of such supportive culture;
- All the Subcontractors appointed for the Project shall be compiled on the Project Subcontract Appointment Register and this document shall be the base for the induction planning for subcontractors.

All project leaders shall pursue effective leadership through;

- Ownership
- Planning of tasks and resources within the framework of policy and objectives
- Resource allocation;
- Assignment of responsibilities; authority and accountability (standards, job descriptions);
- Support for innovation (reward for innovation);
- Coordination of planning across the project and agreed delegation of actions (action planning process);
- Ensuring that decisions are followed through and performance assessed against predetermined criteria (Project Management review Group, close out of actions and KPI's);
- Determining the effectiveness of the project's management system (management review – progress reports);
- Identifying, planning and implementing opportunities for improvement (audit schedule, actions plan);
- Communication of the project values and policies unambiguously throughout the organisation and ensuring understanding and acceptance of these (letters and workshops);
- Ensuring that all work is done safely; being prepared to delay or stop activities where controls are not in place to manage identified hazards or unsafe conditions exist where there is a danger to the persons concerned or others;
- Ensuring that employees identify hazards and plan work before commencement to ensure that it is carried out safely.

Safety Culture and Leadership

- Leadership plays a crucial role in instilling safety culture;
- Visible felt leadership in H&S motivates employees to take part in H&S.

What employees expects from leadership

- If you stop a task for a safety reason, we will back you up;
- If you bring up a safety concern, we will address it promptly. It will not go into a black hole.
- If there is an injury, we will conduct an Incident Investigation in such a way that the person is NOT blamed. We need to learn so that we can eliminate the next injury.

What message should leadership convey to employees

- If it is not safe, do not do it, and do not have your co-worker do it either;
- If you see something that is unsafe, speak up immediately, there and then, to your supervisor, no matter whom - no matter what;
- If you are not sure of something or do not understand something, speak up and ask.

4.2. Competence, Training and Awareness

The Project`s goal of health and safety training is to provide a mechanism for contractors to understand health and safety hazards, and how to protect themselves and others. Safety and health training programs include determining the training needs for employees. All of the training is designed for the type of work and potential hazards employees may be exposed to. All of contractor's employees will be thoroughly trained to perform their jobs safely and productively. Contractor's training will be documented and reviewed as necessary to ensure consistent safe and healthy work practices. All training will be recorded on the Attendance Register. Contractors-workers training will be documented and reviewed as necessary to ensure consistent safe and healthy work practices. Training topics will be changed according to the progress of the work and the relevant safety-related events identified on the work fronts.

4.3. Induction

Induction courses are presented to the individuals who partake in the activities of the project. All individuals will be requested to sign a compliance register on the Attendance Register at the end of the induction course. Course material is presented to the individuals for constant personal repetition and inquiry prevention.

4.4. Safety Meetings

The project safety team is a group that represents the interests of workers throughout the worksite. The team will include the most senior person in each discipline alongside a worker representative. Any day-to-day problems that are reflected in the safety management system must be immediately reported through the responsible persons.

Safety committee meetings will be conducted monthly. The minutes of the meetings will be distributed to all participants as well as to all non-present personnel in order to ensure communication to all personnel on the worksite

4.8. Toolbox Talks

Each day before the start of a work shift, a Toolbox talk will be held. All site personnel will be involved in these meetings where the issues arising at other management and safety meetings will be communicated. Toolbox meetings will focus on discussion on hazards specific to the relevant area of the Project as well as any recent incidents in the workplace.

The themes will be changed according to the progress of the work and the relevant safety related events identified in the work fronts.

4.9. Communication, Participation and Consultation

In the monthly report, the Safety and Health, Monitoring Report will be presented with all information related to safety and health performance. Communication on issues related to safety management is one of the fundamental elements to promote a safe working environment on the project site. Regular structured meetings are necessary to ensure that effective communications take place between project management and workers.

4.10. Housekeeping

- Site work should be performed during daylight hours.
- Good housekeeping must be maintained at all times in all areas of the project.
- Common paths of travel should be established and kept free from debris or the accumulation of materials.
- Keep access to aisles, exits and emergency equipment free from any obstruction
- Specific areas should be designated for the storage of materials

- Tools, equipment and materials shall be stored in an orderly manner.
- As work progresses, unessential materials must be neatly stored or removed from the work area.
- Waste shall be removed from the site area and disposed of correctly.
- All spills shall be quickly cleaned up.

4.11. Personal Protective Equipment

The project and its subcontractors must provide their workers with PPE in accordance with the client's requirements. The following should form part of the PPE:

- Helmets;
- work suit/ coverall;
- High visibility vests;
- Protective Gloves;
- Dust Masks;
- Ear Protector;
- Boots;
- Eye protectors where drilling or grinding will be done;
- PPE identified in the risk assessment of the activity to be carried out, e.g. use of adequate hearing protection when using vibrating plates.

The distribution of PPE to workers, subcontractors or visitors must be documented in the PPE distribution form, ensuring that the people that received PPE will be informed about the use, maintenance and limitations of the delivered PPE.

4.12. First Aid Management

Contractors will provide possible first aid boxes in or near workplaces. These (s) must be accessible for the provision of first aid to victims in the workplace. Considering the type of expected accidents, the nature of the activities carried out, and the number of workers in the places and work, the project must ensure that the contents of the first aid boxes are in accordance with the minimum and adequacy required by local legislation.

The place where the first aid box (s) will be located will be clearly marked, as well as the identification of the person responsible for the same. All injuries involving cuts, open wounds or the like occurring in places where dangerous, toxic, corrosive or similar substances and / or preparations are manufactured, processed, used or handled, must be reported and the victim cannot resume before the wound has not been washed at least with water and soap or diluted disinfectant.

4.13 Existing Overhead and Underground Services

Plan and manage work near electric overhead power lines so that risks from accidental contact or close to proximity to the lines are adequately controlled. Safety precautions will depend on the nature of the work and will be essential even when work near the line is of short duration. Safety can be achieved by a combination of measures:

- Planning and preparation
- Eliminating the danger
- Controlling the access
- Controlling the work

Way leaves must be obtained from the electrical department if work is to be performed in the area that has underground electrical cables. Risk assessment must be carried out to identify all potential risks.

4.14 Intoxicated persons

- Subject to Local Legislation, Contractor, as the case may be, shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a workplace.
- Subject to Local Legislation, no person at a workplace shall be under the influence of or have in his or her possession or partake of or offer any other person intoxicating liquor or drugs.
- The Contractor shall, in the case where a person is taking medicines, only allow such person to perform duties at the workplace if the side effects of such medicine do not constitute a threat to the health or safety of the person concerned or other persons at such workplace.
- The consumption of and the possession without permission of any intoxicating substance, excluding prescribed medication and then only when certified by a medical practitioner, is prohibited by the provisions of the company policy.
- When an employee is found to have the substance in their possession, they will be taken to the police station for investigation.
- When an employee is found to be under the influence of substances, he/she will be taken to hospital for medical examination.
- Any employee who is found to have exceeded the company's legal blood concentration levels will be disciplined in line with the company's business code of ethics.

5.0 Emergency and Contingency Plan

As per the Emergency Response, Incident, Investigation and Reporting Procedure, the site accident and incident plan incorporate the technique of search and rescue and first aid application. Contractor has to ensure that is defined and communicated where the nearest hospital or clinic is located and the emergency contact number.

All employees entering a site shall have completed and hold a valid Induction, in accordance with Attendance Register at the end of the induction course. All people other than project employees entering a site shall complete the Visitors Entry Control. Visitors to any projects-controlled work area must comply with the health and safety requirements as stated to them.

5.1 Public safety

Care will be taken regarding access control of the construction site, which will be maintained during the construction activities. Sufficient hoarding will be placed around the project site with the necessary symbolic safety signs posted. Unauthorized personnel will not be entertained within the area of responsibility during this project.

5.2 Community Safety

There is need to establish and maintain an effective health and safety management system for the communities around the project sites and areas ensuring the following key requirements:

- Maintaining Water Quality and availability;
- Structural Safety of Project Infrastructure;
- Life and Fire Safety (L&FS);
- Traffic Safety;
- Transport of Hazardous Materials;

- Communicable Diseases;
  Community Notification if a local community may be at risk from a potential emergency arising at the facility with details of the nature of the emergency including protection details.

7.0 Monitoring Program

All employees shall undergo medical fitness assessments for construction work if required by the client or local legislation. These evaluations will be conducted by occupational health practitioners. All substances should be classified according to the severity of the risk they pose. The health and safety indicators will be registered on the Safety Health Status Report.

Contractors shall subject its OHS activities to monitoring by Project Management Team, Department of Occupation Safety, Health and Welfare, Malawi Environment Protection Authority (MEPA) to ensure compliance to the relevant national and local legislation and any other requirements.

Contractors shall introduce Safety Health and Environment (SHE) Compliance Register that will be used as a guideline and the compliance status of each requirement will be entered into 'the compliance status column'. Where a non-compliance is reflected, this must be raised as a non-conformance in the Non-conformance System and the procedure for corrective and preventive measures followed.

An incident reporting and investigation will be in accordance with the Emergency Response, Incident, Investigation and Reporting Procedure and recorded on the incident investigation Report, focus on:

- A process to review the effectiveness of incident investigation action plans;
- The conducting of first – aid needs and emergency response risk assessments;
- A return-to-work program (restricted duties), rehabilitation program, trauma counselling and;
- Processes to ensure the appropriate authorities are notified in the event of a reportable incident.

Annex 10: Grievance Redress Mechanism

Introduction

The project's procedures for the redress of grievances and complaints from PAPs are explained in detail here. The grievance and complaints about expropriation, resettlement, construction activities, social issues and any other subjects related to the project from the start of project till the end of the monitoring should be

redressed for effective implementation. In this respect, all grievances and complaints will be recorded and processed in all stages of the project implementation.

10.2.1 The Aim of the Grievance Redress Procedure

The aim of Grievance Redress Procedure is to settle or redress any individual grievance or complaint of PAPs promptly, fairly and as much as possible in a manner that is acceptable to all parties. The general approach is to seek a solution to the problem in the earliest stage and avoid taking complaints to courts for redress. The following should be considered in application of this approach:

- Provide straightforward and accessible ways to PAPs for making complaints or resolving any disputes that may arise due to the project,
- Identify and implement appropriate and mutually acceptable actions to address complaints, • Ensure that complainants are satisfied with outcomes of the corrective actions,
- Avoid the tendency to resort to judicial proceedings.

To address Gender Based Violence/SEA/SH, the GRM Committee will be required to:

a) Protecting the confidentiality of survivors, recognizing them as principle decision-makers in their own care and treating them with agency, dignity and respect for their needs and wishes;
b) Adopt risk-based approaches that aim to identify key risks of GBV and to undertake measures to prevent or minimize harm;
c) Engage community partners—local leaders, civil society organizations, gender and child advocates— as resources for knowledge on local level risks, effective protective factors and mechanisms for support throughout the project cycle particularly for workers in the vicinity of schools and other places where women and girls would gather (markets, rivers);
d) Adapt and adjust mitigation measures to respond to the unique drivers and context in any given setting;
e) Ensure operations integrate mechanisms for regular monitoring and feedback to track effectiveness and to build internal knowledge of what works to prevent, mitigate and respond to GBV/SEA/SH; and
f) Assist the GBV/SEA/SH survivors to access support from the victim support unit.

Grievances are useful indicators of a project performance. A high number of grievances may point out a need to adjust work practices or procedures in order to mitigate adverse impacts or conflicts with the PAPs. In this respect, the effectiveness of the related procedures will be evaluated in all stages of implementation.

10.2.2 Duties and Responsibilities

There will be three levels in the grievance management procedure. The first level being the Community Grievance Redress Committee, then the City/District Grievance Redress Committee and the last one will be the Project Grievance Redress Committee after which external remedies will be sought if the complainant is still not satisfied.

The best solutions to conflicts are generally achieved through localized mechanisms that consider specific issues as well as cultural context, local customs and the project conditions. It is therefore in this regard that the project will use existing city/district institutional structures in the management of grievances. The Grievance Redress Mechanism system shall be established at three levels. The Community Grievance Redress Committee (CGRC), the City/District Grievance Redress Committee (C/DGRC), the Project

Grievance Redress Committee (PGRC) and then external remedies through the formal courts or other legally accepted preferred options. The PGRC shall be the topmost and last internal tribunal in handling grievances. The public shall be well sensitized to the existence of these structures. However, for every Project workplace where implementation shall be taking place, there shall be an additional committee known as the Workers Grievance Redress Management Committee (WGRMC). This particular committee will manage all issues raised by the workers in the course of their work and it will report directly to the PIU when grievances have not been settled.

10.2.3 Types of Grievances

The anticipated types of grievances likely to include:

a) Damage to buildings and assets,
b) Disruption or damages to local roads,
c) Closure of passageways,
d) Damages to lands outside the project demarcated working area,
e) Reinstatement of immovable assets after temporary use (establishment of easement rights, rental or temporary occupation),
f) Nuisance from dust, noise and vibration,
g) Disruption or damages to water sources and infrastructures,
h) Destruction of wells that are water sources for the local communities,
i) Increase in the traffic load,
j) Health problems, injuries and accidents,
k) Misconduct of project personnel/workers, and
l) Unfair selection practice of employees for project-related jobs.
m) Gender Based Violence
n) Sexual harassment
o) Sexual Exploitation and Abuse

10.2.4 Procedure for Receiving and Responding to Complaints, Grievances, Appeal and Claiming Process

All types of complaints, appeals and claims related to the project will be received by the GRCs are stipulated in the SEP and as indicated below:

Step 1: Contact and Dialogue between the complainant and the 'respondent'. Where applicable and possible, the first step in the GRM should be contact and dialogue to reach an amicable position before it is formally lodged with a GRC. For example, an aggrieved worker and a contractor can enter into a dialogue to find an amicable solution. Or PAPs can first approach the concerned implementing agency ('accused' office) to try and reach a negotiated position or for guidance on the matter at hand. A third party (e.g., local leaders) can be engaged to mediate the process. Regardless of the outcome, the issue can be reported to relevant committee for record purposes.

Step 2: Lodge a complaint. The PAPs should formally lodge a complaint with the relevant Grievances Redress Committee. For example, if the issue concerns a number of villagers in a village, the complaint should be lodged with Community Grievances Redress Committee. Where the complaint is against a City/District Council, for example, the grievances can be lodged with the National Project Grievances Redress Committee. At each level of Grievances Redress Committee, there will be a Grievance Log and Resolution Form to record the complaint. Each grievance will be assigned a number. The Secretary of the

Committee will complete the Form or will help the complainant to fill in the Form. Both the Secretary and the Complainant and their witnesses (one for the Committee and one for the Complainant) will sign the Form (Complaint section of the Form) to confirm that what has been recorded is true reflection of the grievance as reported by the Complainant. A copy of the Form shall be forwarded to the Project Implementation Unit for record purposes.

Step 3: Assessment, Response and Closure. Within 7 days of receiving a complaint, the Grievance Redress Committee will meet to consider the grievance and provide a response to the complaint. The Committee shall assess whether the complaint or grievance is related to MWSP activity project or not. For non-MWSP related grievances, the Committee will advise appropriate institutions with which to lodge the complaint. For MWSP complaints or grievances, the Committee shall first of all make necessary follow ups to establish the truth of the matter and to confirm that the complaint is indeed genuine. The outcome of the analysis shall be communicated to the Complainant.

The Committee shall be required to complete Resolution section of the Grievance Log and Resolution Form to provide clear decision that has been arrived at in respect to the complaint. A copy of the Form shall be forwarded to the Project Implementation Unit for record purposes.

Where the grievance involves two parties (e.g., a project contractor and a worker or a community or in case of corruption allegations), a Hearing can be arranged as a matter of natural justice to accord both parties to present their side of the story. The outcome of the analysis of the Hearing by the Committee shall be communicated to both parties (the Complainant and the 'Respondent).

Closure. Within 7 days of receiving response from the Grievance Redress Committee, the complainant, shall be required to sign the Closure section of the Grievance Log and Resolution Form to confirm that the response is satisfactory and that the grievance is resolved and closed. Where the grievance involves two parties (e.g., a project contractor and a worker or a community or in case of corruption allegations), both the Complainant and the Respondent', shall be required to sign the Closure section of the Grievance Log and Resolution Form. A copy of the form shall be forwarded to the Project Implementation Unit for record purposes. An electronic database will be established for this purpose.

Step 4: Appeal. Within 7 days of receiving response from the Grievance Redress Committee, the Complainant or the 'Respondent', shall be required to sign the Appeals section of the Grievance Log and Resolution Form to confirm intention to appeal to the next higher Grievances Redress Committee. The Committee retains a copy while another copy is given to the complainant to present to the appeal Committee (the next higher Committee). A copy of the Form shall be forwarded to the Project Implementation Unit for record purposes.

GRIEVANCE COMPLAINT FORM

MWSP - 1

SUB PROJECT NAME **…….** **CONTACT NUMBER 01895000**

1. Complainant's Information		
Names and Titles (Dr/Mr/Ms/Mrs.)	Addresses:	E-mail:
	Contact Tel.	Location:
Please indicate how you prefer to be contacted (e-mail, mobile, etc.):		
2. Description of the problem:		
3. How are you affected:		
(a) What harm do you believe the MWSP/World Bank-financed project caused or is likely to cause to you?		

(b) Why do you believe that the alleged problem resulted from the MWSP activities?		
(c) Do you have any other supporting documents that you would like to share as proof of the alleged problem?		
4. Previous Efforts to Resolve the Complaint **Please tick the relevant box [√]** (a) Have you raised your complaint with any other authorities? No □ Yes □		
i. **If Yes** (Please, provide the following details): When?		
ii. How and with whom were the issues raised?		
iii. Please describe any response received from and/or any actions taken by the project level grievance mechanism. Please also explain why the response or actions taken are not satisfactory.		
(b) **If No**, Why?		
(i) How do you wish to see the complaint resolved?		
5. Name of the person recording the complaint:	**Signature:**	**Date:**

GRIEVANCE RESOLUTION FORM MWSP

SUB PROJECT NAME:
……
CONTACT NUMBER 01895000

RESPONDENT DETAILS		**COMPLAINANT DETAILS**	
Full name		Full name	
Address:		Address:	
Phone No.		Phone No.	
Email:		Email:	
Date of complaint resolved		Location	
SUMMARY OF RESOULTION			
(a) Brief description of Complaint:			
(b) Brief description of Resolution			
SIGNATURES			

Respondent Signature		**Complainant** Signature	
Name of Respondent		Name of Complainant	
Date		Date	
Designation			
Witness Signature		**Witness** Signature	
Name of Respondent's Witness		Name of Complainant's Witness	
Date		Date	

Annex 11a: Incident Reporting Form

Part B: To be completed by Contractor and submitted to client within 24 hours

B1: Incident Details			
Date of Incident:	**Time:**	**Date Reported to PIU:**	**Date Reported to WB:**
Reported to PIU by:	**Reported to WB by**:	**Notification Type**:	
Full Name of Main Contractor:		**Full Name of Subcontractor**:	

B2: **Type of incident (please check all that apply)**

Fatality ☐ Lost Time Injury ☐ Displacement Without Due Process ☐ Child Labor ☐ Acts of Violence/Protest ☐ Disease Outbreaks ☐ Forced Labor ☐ Unexpected Impacts on heritage resources ☐ Unexpected impacts on biodiversity resources ☐
Environmental pollution incident ☐ Dam failure ☐ Other ☐

1see definitions attached to this form

B3: Description/Narrative of Incident

Please replace text in italics with brief description, noting for example:

I. *What were the conditions or circumstances under which the incident occurred (if known)?*

II. *Are the basic facts of the incident clear and uncontested, or are there conflicting versions?*

III. *What are those versions?*

IV. *Is the incident still ongoing or is it contained?*

V. *Have any relevant authorities been informed?*

B4: Actions taken to contain the incident

Short Description of Action	Responsible Party	Expected Date	Status

For incidents involving a contractor:
Have the works been suspended (for example, under GCC8.9 of Works Contract)? Yes ☐; No ☐;
Trading name of Contractor (if different from B1):

Please attach a copy of the instruction suspending the works.

B5: What support has been provided to affected people

-

Definitions of Incident Types

The following are incident types to be reported using the environmental and social incident response process:

Fatality: Death of a person(s) that occurs within one year of an accident/incident, including from occupational disease/illness (e.g., from exposure to chemicals/toxins).

Lost Time Injury: Injury or occupational disease/illness (e.g., from exposure to chemicals/toxins) that results in a worker requiring 3 or more days off work, or an injury or release of substance (e.g., chemicals/toxins) that results in a member of the community needing medical treatment.

Acts of Violence/Protest: Any intentional use of physical force, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, deprivation to workers or project beneficiaries, or negatively affects the safe operation of a project worksite.

Disease Outbreaks: The occurrence of a disease in excess of normal expectancy of number of cases. Disease may be communicable or may be the result of unknown etiology.

Displacement Without Due Process: The permanent or temporary displacement against the will of individuals, families, and/or communities from the homes and/or land which they occupy without the provision of, and access to, appropriate forms of legal and other protection and/or in a manner that does not comply with an approved resettlement action plan.

Child Labor: An incident of child labor occurs: (i) when a child under the age of 14 (or a higher age for employment specified by national law) is employed or engaged in connection with a project, and/or (ii) when a child over the minimum age specified in (i) and under the age of 18 is employed or engaged in connection with a project in a manner that is likely to be hazardous or interfere with the child's education or be harmful to the child's health or physical, mental, spiritual, moral or social development.

Forced Labor: An incident of forced labor occurs when any work or service not voluntarily performed is exacted from an individual under threat of force or penalty in connection with a project, including any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor-contracting arrangements. This also includes incidents when trafficked persons are employed in connection with a project.

Unexpected Impacts on heritage resources: An impact that occurs to a legally protected and/or internationally recognized area of cultural heritage or archaeological value, including world heritage sites or nationally protected areas not foreseen or predicted as part of project design or the environmental or social assessment.

Unexpected impacts on biodiversity resources: An impact that occurs to a legally protected and/or internationally recognized area of high biodiversity value, to a Critical Habitat, or to a Critically Endangered or Endangered species (as listed in IUCN Red List of threatened species or equivalent national approaches) that was not foreseen or predicted as part of the project design or the environmental and social assessment. This includes poaching or trafficking of Critically Endangered or Endangered species.

Environmental pollution incident: Exceedances of emission standards to land, water, or air (e.g., from chemicals/toxins) that have persisted for more than 24 hrs or have resulted in harm to the environment.

Dam failure: A sudden, rapid, and uncontrolled release of impounded water or material through overtopping or breakthrough of dam structures.

Other: Any other incident or accident that may have a significant adverse effect on the environment, the affected communities, the public, or the workers, irrespective of whether harm had occurred on that

occasion. Any repeated non-compliance or recurrent minor incidents which suggest systematic failures that the task team deems needing the attention of Bank management

Annex 11b: Incident Reporting Form

Part C: To be completed by Contractor (following investigation & submitted to client within 4 days of incident occurrence)

C1: Investigation Findings
Please replace text in italics with findings, noting for example: *I. where and when the incident took place,* *II. who was involved, and how many people/households were affected,* *III. what happened and what conditions and actions influenced the incident,* *IV. what were the expected working procedures and were they followed,* *V. did the organization or arrangement of the work influence the incident,* *VI. were there adequate training/competent persons for the job, and was necessary and suitable equipment available,* *VII. what were the underlying causes; where there any absent risk control measures or any system failures,*

C2: Corrective Actions from the investigation to be implemented (To be fully described in

Action	Responsible Party	Expected Date

Part C cont.: To be completed by Contractor (following investigation)

C3a: Fatality/Lost time Injury information

Immediate cause of fatality/injury for worker or member of the public (please check all that apply) [2]**:**

1. Caught in or between objects ☐ 2. Struck by falling objects ☐ 3. Stepping on, striking against, or struck by objects ☐ 4. Drowning ☐ 5. Chemical, biochemical, material exposure ☐ 6. Falls, trips, slips ☐ 7. Fire & explosion ☐ 8. Electrocution ☐ 9. Homicide ☐ 10. Medical Issue ☐ 11. Suicide ☐ 12. Others ☐
***Vehicle Traffic:* 13. Project Vehicle Work Travel ☐ 14. Non-project Vehicle Work Travel ☐**
15. Project Vehicle Commuting ☐ 16. Non-project Vehicle Commuting ☐ 17.Vehicle Traffic Accident (Members of Public Only) ☐

Name	Age/DOB	Date of Death/Injury	Gender	Nationality	Cause of Fatality/Injury	Worker (Employer)/Public

[2]See definitions attached to this form

C3b: Financial Support/Compensation Types (To be fully described in Corrective Action Plan template)

1. Contractor Direct ☐ 2. Contractor Insurance ☐ 3. Workman's Compensation/National Insurance ☐
4. Court Determined Judicial Process ☐ 5. Other ☐ 6. No Compensation Required ☐

Name	Compensation Type	Amount (US$)	Responsible Party

C4: Supplementary Narrative

Definition of fatality/injury immediate causes

1. **Caught in or between objects:** caught in an object; caught between a stationary object and moving object; caught between moving objects (except flying or falling objects).
2. **Struck by falling objects:** slides and cave-ins (earth, rocks, stones, snow, etc.); collapse (buildings, walls, scaffolds, ladders, etc.); struck by falling objects during handling; struck by falling objects.
3. **Stepping on, striking against, or struck by objects:** stepping on objects; striking against stationary objects (except impacts due to a previous fall); Striking against moving objects; Struck by moving objects (including flying fragments and particles) excluding falling objects.
4. **Drowning:** respiratory impartment from submersion/emersion in liquid.
5. **Chemical, biochemical, material exposure:** exposure to or contact with harmful substances or radiations.
6. **Falls, trips, slips:** falls of persons from heights (e.g., trees, buildings, scaffolds, ladders, etc.) and into depths (e.g., wells, ditches, excavations, holes, etc.) or falls of persons on the same level.
7. **Fire & explosion:** exposure to or contact with fires or explosions.
8. **Electrocution:** exposure to or contact with electric current.
9. **Homicide:** a killing of one human being by another.
10. **Medical Issue:** a bodily disorder or chronic disease.
11. **Suicide:** the act or an instance of taking, or attempting to take, one's own life voluntarily and intentionally.
12. **Others:** any other cause that resulted in a fatality or injury to workers or members of the public.

Vehicle Traffic

13. **Project Vehicle Work Travel:** traffic accidents in which project workers, using project vehicles, are involved during working hours and which occur in the course of paid work.
14. **Non-project Vehicle Work Travel:** traffic accidents in which project workers, using non-project vehicles, are involved during working hours and which occur in the course of paid work.
15. **Project Vehicle Commuting:** traffic accidents in which project workers, using project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.
16. **Non-project Vehicle Commuting:** traffic accidents in which project workers, using non-project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.
17. **Vehicle Traffic Accident (Members of Public Only):** traffic accidents in which non-project workers/members of the public are involved in an accident while travelling for any purpose.

Annex 12: Contractor`s monthly reporting form

MALAWI WATER AND SANITATION PROJECT (MWSP-1)

Insert photohere

MONTHLY SAFEGUARDS PROGRESS REPORT

Executive Summary
Table of content
List of Figures

List of Tables

Acronyms

Introduction

SAFEGUARDS ACTIVITIES DURING THE REPORTING PERIOD

Sn	All Planned activities	Implemented	Progress
1.			
2.			

Sn	Planned but not implemented	Reason for delay	Actions to be taken	Timeline
1				
2				
3				

CAPACITY BUILDING ACTIVITIES

Date	**Target Group**	**Training Title**	**Participants**		**Total**
			Male	**Female**	

COMMUNITY ENGAGEMENT

Activity	**Target audience**	**Number of Participants (M/F)**

GRIEVANCE REGISTERED AND HOW THEY WERE RESOLVED

Sn	Stakeholder	Nature of Grievance (s)	Total Grievances	Status	Remarks/ Comment(s)
	(e.g. institution, community members, local leaders, etc.)			Resolved/ unresolved	

INCIDENTS REGISTERED AND HOW THEY WERE RESOLVED

#	Stakeholder involved	Nature of Incident	Cause of incident	Status	Remarks/ Comment(s)
	community members, employee			closed/ opend	

CHALLENGES

Challenge	Mitigation Measures

PLANNED ACTIVITIES FOR THE NEXT IMPLEMENTATION PERIOD

Sn	Activity	Lead	Timelines

PHOTOS TAKEN IN THE REPORTING PERIOD