MALAWI

MINISTRY OF EDUCATION

SKILLS FOR A VIBRANT ECONOMY (SAVE) PROJECT

PROJECT CODE: P172627

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUILDING AT MALAWI UNIVERSITY OF BUSINESS AND APPLIED SCIENCES, LILONGWE CAMPUS

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Abbreviations and Acronyms

AIDS	Acquired immunodeficiency syndrome
BoQ	Bill of Quantities
CBO	Community-Based Organisations
cm	Centimetres
COVID-19	Coronavirus Disease 2019
CSC	Construction Supervision Consultant
DCDO	District Community Development Officer
DFO	District Forestry Officer
DGO	District Gender Officer
DHS	Director of Health Services
DLO	District Labour Office
DoB	Department of Buildings
DoDMA	Department of Disaster Management Affairs
DRMO	District Resilience Management Officer
DSWO	District Social Welfare Officer
E&S	Environmental and Social
EDO	Environmental District Officer
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EMA	Environment Management Act
ESCOM	Electricity Supply Corporation of Malawi
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environment and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESRS	Environmental and Social Risk Summary
ESS	Environmental and Social Standards
FGD	Focus Group Discussion
FSC	Feasibility Study Consultant
GBV	Gender Based Violence
GRM	Grievance Redress Mechanism
HEIs	Higher Education Institutions
HIV	Human Immunodeficiency Virus
ICT	Information and Communication Technology
IUCN	International Union for Conservation of Nature
KII	Key Informant Interviews
LMP	Labour Management Procedures
LWB	Lilongwe Water Board
m	Metres
MBS	Malawi Bureau of Standards
MDA	Ministries Departments and Agencies
MEPA	Malawi Environment Protection Authority
MERA	Malawi Energy Regulatory Authority

MIE	Malawi Institute of Engineers
MoE	Ministry of Education
MoGCDSW	Ministry of Gender, Community Development and Social Welfare
MoL	Ministry of Labour
MUBAS	Malawi University of Business and Applied Sciences
NCHE	National Council for Higher Education
NCIC	National Construction Industry Council
OHS	Occupation Health and Safety
OSHWA	Occupational Safety, Health and Welfare Act
PIT	Project Implementation Team
PIU	Project Implementation Unit
PPE	Personal Protective Equipment
SAVE	Skills for A Vibrant Economy
SGVH	Senior Group Village Headman
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
SHEA	Sexual Harassment Exploitation and Abuse
STIs	Sexually Transmitted Infections
T/A	Traditional Authority
USD	United States Dollar
WB	World Bank

Executive Summary

1. INTRODUCTION

The Government of Malawi, through the Ministry of Education (MoE) and the Ministry of Labour and Vocational Training, with funding from the World Bank, is undertaking the Skills for A Vibrant Economy (SAVE) Project. The Project is for 5 years (2022-2026). The project supports higher education institutions, National Technical Colleges and Community Technical Colleges to increase access, particularly for females, to labour market-relevant skills development programs, targeting priority areas of the economy. The Malawi University of Business and Applied Sciences (MUBAS) is one of the participating institutions that is implementing the project. The project has four components, however at the institution, the project focuses on 2 components, component 1, the project is Supporting Increased Access to Skills Development Programs in Higher Education through construction of a multipurpose building and Component 2, is Supporting Increase in Access to TEVET Skills Development. The project will also support ICT and increase access to skills training programs for 230 students. The Construction works for the proposed project are expected to commence in December 2024, following the completion of preparatory activities; and will be completed within 24 months. The project will be implemented with a budget of about USD 3.5 Million. The project is expected to employ approximately 60 people which include technical staff, unskilled labourers and drivers. It is estimated that at least 24 workers (40% of the people to be employed) will be women to attain the recommended gender balance in every category at any point of the project.

The construction activities in this project are expected to impact both the environment and the social fabric. An Environmental and Social Management Framework (ESMF) has been prepared to guide the project to manage environmental and social impacts. The ESMF was developed for the SAVE Project per the World Bank's Environmental and Social Standard 1. The ESMF requires that after subprojects have been identified, environmental and social due diligence be conducted to eliminate or reduce environmental and social negative impacts. The ESMF guided the preparation of this Environmental and Social Management Plan (ESMP) which has been prepared to identify the specific potential environmental and social risks and impacts of proposed Project activities and propose suitable mitigation measures to manage these impacts. It further maps out Malawi's laws and regulations and the World Bank policies applicable to the Project and describes the principles, approaches, implementation arrangements, and environmental and social mitigation measures to be followed. The ESMF can be found on the following link: https://www.education.gov.mw/index.php/edu-resources/category/3-save-project?download=9:environmental-and-social-management-framework-save-project

This ESMP should be read together with other plans including the Contractor's Environmental and Social Management Plan (CESMP), the Stakeholder Engagement Plan (SEP), the Labour Management Plan (LMP) and the Environmental and Social Commitment Plan (ESCP) developed for the SAVE project. The SEP document and others can be found on the following link: https://documents1.worldbank.org/curated/en/314131616158364147/pdf/Stakeholder-Engagement-Plan-SEP-Skills-for-A-Vibrant-Economy-Project-P172627.pdf

2. OBJECTIVE OF THE PROJECT

The SAVE Project Development Objective (PDO) aims to increase access to labour market-relevant skills development programmes in participating institutions, targeting priority areas of the economy, particularly for females. Specifically for the Malawi University of Business and Applied Sciences (MUBAS), the project aims to construct and operate a 2-storey building comprising a ground plus first floor at MUBAS- Lilongwe campus, to improve access to

market-relevant skills programs. The Project will utilize 0.6 ha of land out of the available 12.3 ha of land belonging to MUBAS.

3. NATURE AND SCOPE OF THE PROJECT

The project is about construction works and operation of a 2-storey building consisting of a Computer Lab, Resource Centre (including library and e-library), Offices, Classrooms, Boardrooms and Tuckshop (see Appendix 9 for project designs). The scope of the project includes planning and designing, construction, operational and demobilization activities. The main planning and designing activities include the identification of the land where the project will be carried out.

4. METHODOLOGY FOR PREPARATION OF THE ESMP

The process of developing the ESMP included Environmental and Social Screening, desk research, field investigations and stakeholder consultations to assess the current biophysical and socioeconomic conditions in the project area. Then the collected data was processed and used to identify and assess the positive and negative impacts of the project on the environmental and social aspects of the project area. The process also recognized suitable mitigation and enhancement measures for the anticipated impacts, along with the development of management and monitoring plans to address environmental and social effects.

5. SUMMARY OF ENVIRONMENTAL AND SOCIAL IMPACTS OF THE PROJECT

The potential environmental and social risks for the project activities were identified, and the corresponding mitigation measures are presented below.

5.1.Key Potential Positive Impacts

A. Increased employment opportunities

Proposed enhancement measures:

- Provide contracts with a clear scope of work, schedule and breakdown of payments.
- Provide equal employment opportunities to women and men (60:40 ratio of men to women).

B. Increased annual enrolment of students

Proposed enhancement measures:

- Set a 40:60 enrolment ratio for boys and girls to promote gender equality and girls' empowerment.
- Establish scholarships specifically for female students
- Allocating resources strategically based on students' needs and demands.

C. Improved national education standards

Proposed enhancement measures:

- Providing opportunities for lecturers to further their education.
- Use up-to-date teaching methods and technologies

D. Increased generation of revenue for MUBAS

Proposed enhancement measures:

- Employ qualified lecturers and tutors.
- Maintain high-quality education standards.

5.2.Key Potential Negative Impacts

A. Loss of farm land and livelihood.

Proposed mitigation measures:

- Offer small-scale farmers training in skills that align with local job markets.
- Invest in agricultural or conservation projects that provide equivalent benefits to those lost
- Organize events to connect displaced farmers with local businesses, NGOs, and potential employers

B. Loss of vegetation

Proposed mitigation measures:

- Limit vegetation clearing to the space required for construction.
- Rehabilitate cleared areas by planting trees, grass, flowers, and shrubs.
- Implement post-planting care for planted trees.

C. Improper disposal of construction, hazardous and general wastes

Proposed mitigation measures:

- Provide appropriate containers across the work areas for waste disposal and easy collection to a disposal site.
- Properly segregate and separate wastes to encourage reuse of some of the wastes e.g., cartons and paint containers.
- Restrict unauthorized public access to construction sites.

D. Increased occupation safety and health risks

Proposed mitigation measures:

- Provide appropriate personal protective equipment (PPE) to workers and monitor proper use.
- Restrict unauthorized public access to construction sites.

E. Increased demand for water and energy

Proposed mitigation measures:

- Usage of alternative sources of energy.
- Enforcing water-saving practices

F. Increased generation of construction waste

Proposed mitigation measures:

- Implement a waste management plan to minimize, reuse, and recycle construction waste.
- Ensure proper disposal of hazardous and non-hazardous waste in line with local regulations.

G. Noise and dust pollution during construction

Proposed mitigation measures:

- Implement dust suppression techniques such as regular watering of construction sites.
- Limit construction activities to specific hours to minimize noise impact on nearby communities.

H. Traffic congestion and safety risks

Proposed mitigation measures:

- Develop a traffic management plan to regulate vehicle movement in and around the site.
- Ensure proper signage and road safety measures to prevent accidents.

I. Disruption to local communities

Proposed mitigation measures:

- Engage with local communities through regular consultations to address concerns.
- Provide alternative access routes if construction affects nearby roads or pathways.

J. Potential cultural or archaeological heritage disruption

Proposed mitigation measures:

- Conduct a heritage impact assessment before construction.
- Halt construction activities immediately if any cultural artefacts or archaeological remains are discovered, and engage relevant authorities
- Apply the chance find procedure

K. Increased risk of communicable diseases (e.g., HIV/AIDS, COVID-19)

Proposed mitigation measures:

- Provide health awareness and education programs for workers and the local community.
- Implement health screening and monitoring procedures on-site.

L. Social conflicts between workers and local communities

Proposed mitigation measures:

- Promote local hiring where possible to reduce tension.
- Develop and implement a worker code of conduct that addresses respectful engagement with local communities.

M. Increased risk of gender-based violence (GBV), sexual exploitation and abuse (SEA), and sexual harassment (SH).

Proposed mitigation measures:

- Ensure that the Code of Conduct is signed and understood by all workers in line with issues of GBV, SH, and SEA
- Institute and implement a GBV/SEA/SH sensitive GRM for reporting and management of cases
- Provide signage/information on GBV/SH/SEA in local language

6. SUMMARY OF ENVIRONMENTAL AND SOCIAL MANAGEMENT AND MONITORING PLANS

The MUBAS, Lilongwe District Council and PIU are the main institutions that will be responsible for capacity building and monitoring the implementation of the ESMP. Monitoring will be conducted monthly through site visits, a Geo-Enabling initiative for Monitoring and Supervision (GEMS), and review of records. Reporting will be quarterly however there are special reports including incidence reports which will be submitted within 24 hours of the incidence occurrence. The estimated total cost of implementation of this ESMP is USD 31,000.

Stakeholders including MUBAS, Lilongwe District Council and contractors will be trained in environmental and social requirements through: Workshop Meetings, Mentorship Programs, On-site Training, In-house Training Programs and Toolbox Talks.

1 Introduction

1.1 Background

The Government of Malawi through the Ministry of Education and Ministry of Labour and Vocational Training, with funding from the World Bank is implementing the Skills for a Vibrant Economy Project (SAVE). The project aims to improve access to market-relevant skills programs in priority areas of the economy, ensuring equity in skills training with the empowerment of women and girls and vulnerable youth through targeted skills in priority areas of the economy and creating a conducive policy environment and strengthening systems and institutional capacity for skills development. The project has four components which focus on Technical, Entrepreneurial, and Vocational Education and Training (TEVET), Higher Education Reforms, Student loans, Industrial links, Digital technology and Safeguards, Capacity Building, and Technical Assistance among other systemic issues.

The Malawi University of Business and Applied Sciences (MUBAS) is one of the participating institutions. The project will support construction of a 2-storey multipurpose building at MUBAS. The construction activities in this project are expected to impact the environment and the social fabric. An Environmental and Social Management Framework (ESMF) has been prepared under the project to guide the project on how to manage environmental and social impacts. The ESMF was prepared for the SAVE Project in line with the World Bank's Environmental and Social Standard 1. The ESMF requires that after subprojects have been identified, environmental and social due diligence be conducted to eliminate or reduce environmental and social negative impacts. The ESMF guided the preparation of this Environmental and Social Management Plan (ESMP) which has been prepared to identify and evaluate the potential environmental and social risks and impacts of proposed Project activities. Furthermore, the ESMP propose suitable mitigation measures to manage these risks and impacts for sustainability and long-term benefits. The ESMP should be applied together with other plans prepared for the project, including:

- Stakeholder Engagement Plan (SEP);
- Environmental and Social Management Framework (ESMF);
- Labour Management Procedures (LMP);
- Environmental and Social Commitment Plan (ESCP);
- Chance Find Procedure;
- COVID-19 Guidelines for Schools in Malawi on Prevention and Management; and
- Project Implementation Manual.

The documents are accessible through the following link:
https://education.gov.mw/index.php/edu-resources/documents-and-publications/category/3-save-project

1.2 Objective of the Project

The SAVE Project Development Objective (PDO) aims to increase access to labour market-relevant skills development programmes in participating institutions, targeting priority areas of the economy, particularly for females. The construction of a 2-storey building at MUBAS, will enhance access to education facilities and improve access to market-relevant skills programs at the institution thereby directly supporting Enabler Number 5 of the Malawi 2063 Agenda. The Project will utilize 0.6 ha of land out of the available 12.3 ha of land belonging to MUBAS.

1.3 Nature and Scope of the Project

Under Component 1, the project will construct a 2-storey building consisting of a Computer Lab, Resource Centre (including a library and e-library), Offices, Classrooms, Boardrooms and a tuckshop (see Appendix 9 for project designs), in Component 2, the project among other things will support ICT, priority areas of the economy and increase access to skills training programs for 230 students.

The scope of the sub-project includes planning and designing, construction, operational and demobilization activities. The main planning and designing activities include the identification of the land where the project will be carried out. Currently, the land for the sub-project has been secured and is owned by the MUBAS. Other planning activities include the preparation of technical drawings whose key activities include:

a) Recruitment of Design Consultant;
b) Obtaining required approvals and licences;
c) Recruitment of Supervision Consultant;
d) Recruitment of Contractor;
e) Sourcing and purchasing of construction materials;
f) Setting out the buildings using approved plans and standards;
g) Construction of sub-structure of the buildings;
h) Construction of the super-structure of the buildings;
i) Solid and liquid waste management during the construction of the building and associated structures;
j) Maintenance works during the operation phase as may be required; and
k) Solid and liquid waste management during the operation phase.

The main construction activities will be the construction of the 2-storey building which will accommodate 230 students and 40 staff members. Construction activities for the project are expected to commence in December 2024. However, the project is expected to be completed by the 2026/2027 financial year.

1.4 Spatial Location and Land Size

The MUBAS- Lilongwe campus (14.083432°S, 33.829109°E) is located in Traditional Authority (T/A) Kalumba, Senior Group Village Headman (SGVH) Mwase in Nanjiri, Lilongwe District, Central Region of Malawi. There is a 2 km earth ring road from the M1 road leading to the project site. The SAVE project at the MUBAS will utilize 0.6 ha of land out of the available 12.3 ha of land belonging to the MUBAS (Appendix 1).

It is expected that 34 trees available on the project site will be cleared during the construction phase of the project. Species to be affected include; Popcorn Tree (*Senna spectabilis*), Quinine Tree (*Rauvolfia caffra*), Monkey Biscuit Tree (*Piliostigma thonningai*), Beechwood (*Gmelina arborea*), Octopus Cabbage Tree (*Cussonia arborea*), White Thorn (*Acacia polyacantha*), Sausage Tree (*Kigelia africana*) and Jacaranda Tree (*Jacaranda mimosifolia*), which is classified as Vulnerable Species by IUCN. The proposed project site is shown in the Topographic and Location Maps presented in Figures 1.1 and 1.2, respectively

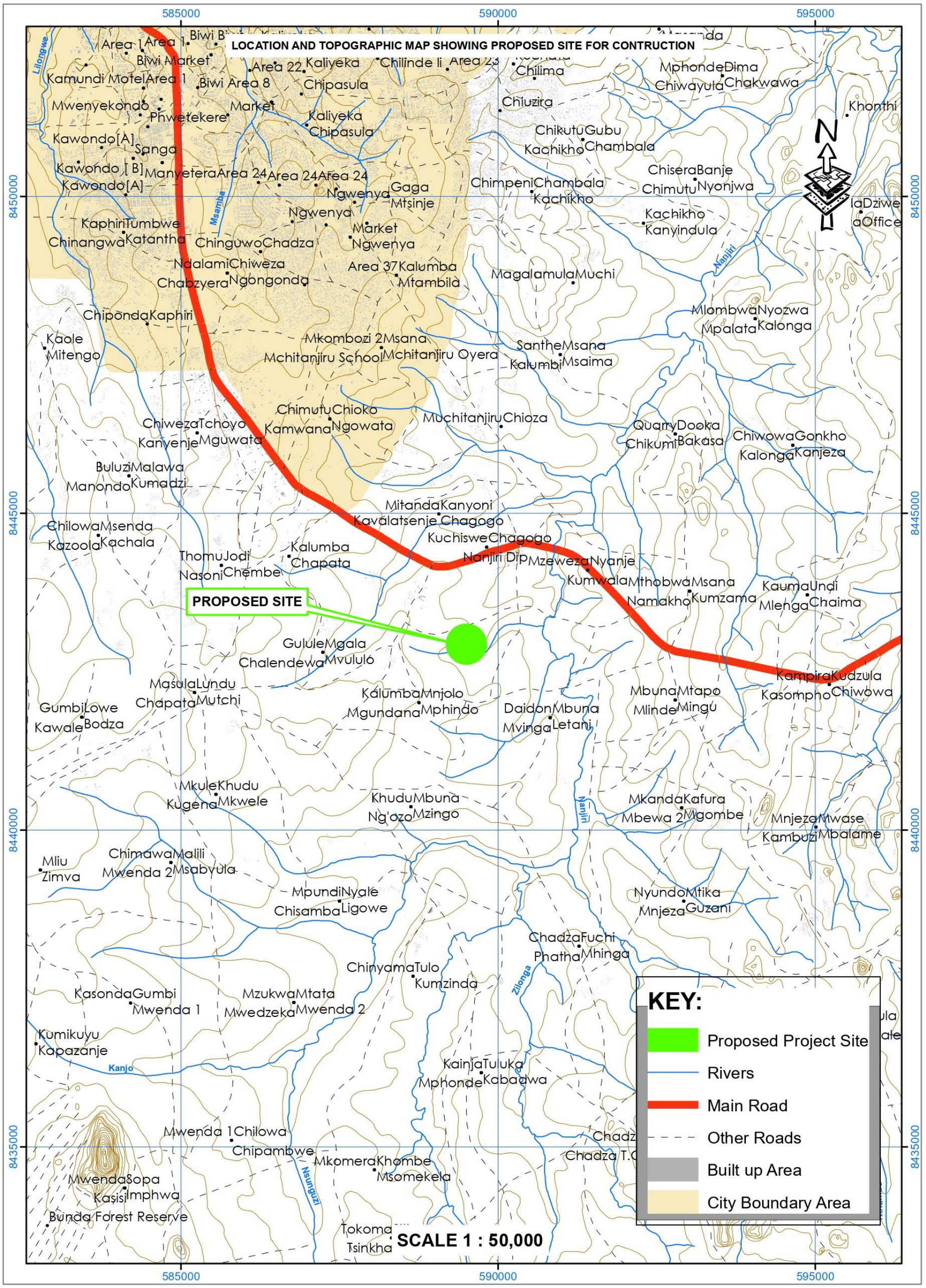

Figure 1.1: Topographic Maps of the Proposed Project Site

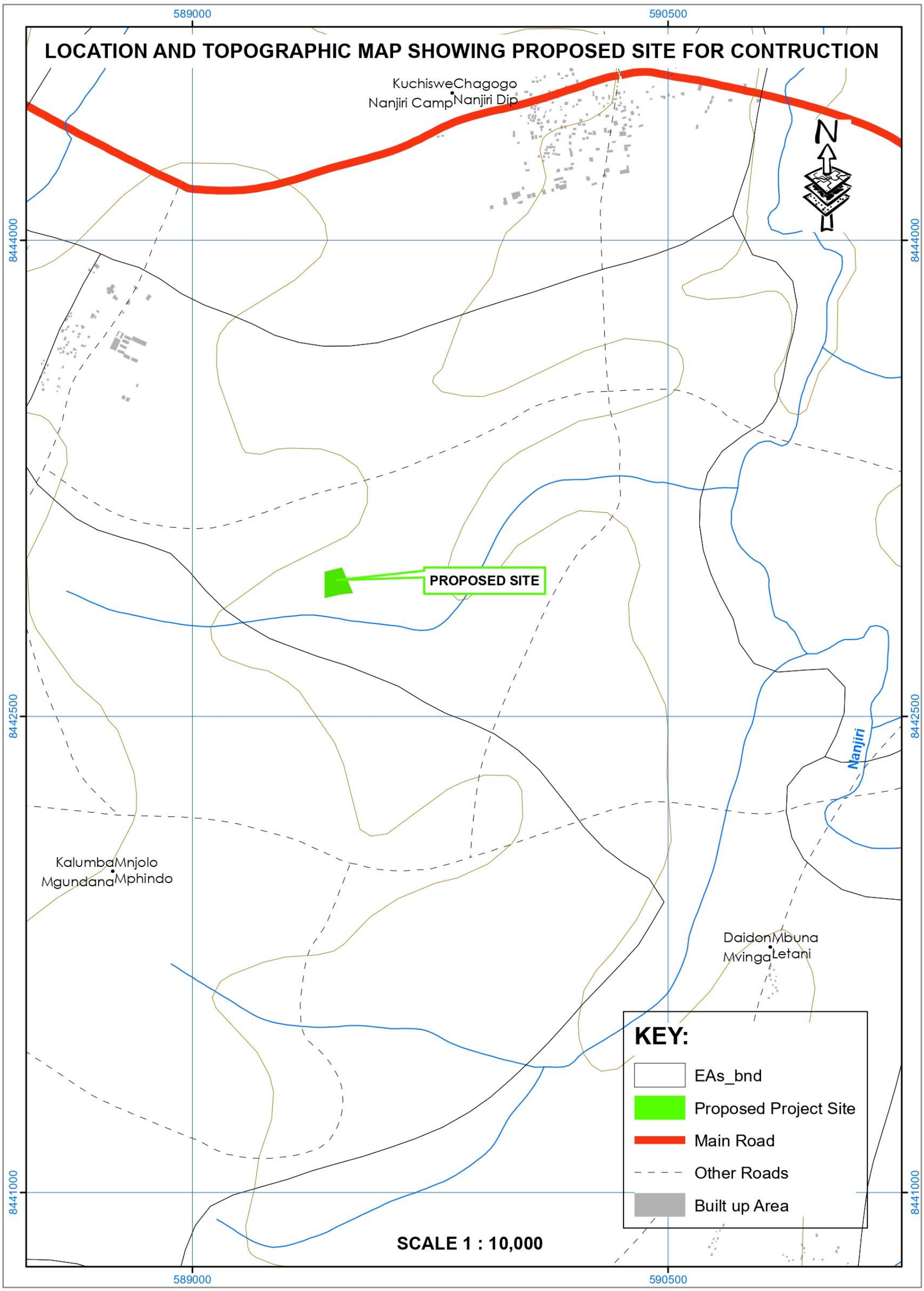

Figure 1.2: Location Map for the Proposed Project Site

1.5 Objective of the ESMP

This Environmental and Social Management Plan (ESMP) is developed to support the environmental and social safeguards provisions for the construction of a 2-storey building at the Malawi University of Business and Applied Sciences (MUBAS), Lilongwe campus in Nanjiri.

The objective of the ESMP is to assess and mitigate potential negative environmental and social risks and impacts of the project, consistent with the Environmental and Social Standards (ESSs) of the World Bank ESF and national requirements.

More specifically, the ESMP aims to

a. identify and assess key potential environmental and social impacts including those on gender, which may be caused by the proposed construction works;
b. propose measures that would enhance the positive effects of the proposed constructions and operation activities on both the environment and social components including gender issues in specific sites;
c. propose measures that will avoid, minimise, mitigate and compensate for the anticipated negative impacts of the proposed constructions and operation activities on both the environment and social components, including gender concerns in specific sites;
d. identify the staffing requirements, as well as the training and capacity building needed to successfully implement the provisions of the ESMP;
e. address mechanisms for public consultation and disclosure of project documents, as well as redress of possible grievances; and
f. establish the budget requirements for the implementation of the ESMP.
g. promoting good practices that enhance the project's long-term environmental and social benefits

1.6 Approach and Methodology for Preparing the ESMP

The development of this ESMP has been undertaken in accordance with Part V of the Environment Management Act, 2017 and in line with the Guidelines of Environmental Impact Assessment (1997) and the requirements of the World Bank Environmental and Social Standards (ESS). Key tasks of the ESMP development are described in the following sections.

1.6.1 Environmental and Social Screening

Screening of the proposed project was conducted by the Environmental District Officer (EDO) for Lilongwe on 29th August 2022; where the proposed project was categorised under list 'B'. This was followed by feasibility studies where a project brief was prepared and submitted to MEPA, from which a conclusion was drawn that the proposed project requires an ESMP not an ESIA.

1.6.2 Environmental and Social Screening

Screening of the proposed project was conducted by the Environmental District Officer (EDO) for Lilongwe on 29th August 2022; where the proposed project was categorised under list 'B' of the EIA Guideline. This was followed by feasibility studies where a project brief was prepared and submitted to MEPA, from which a conclusion was drawn that the proposed project requires an ESMP not an ESIA.

1.6.3 Literature Review

This involved the review of existing literature related to the project. The literature that was reviewed included: The Constitution of the Republic of Malawi (1995), Environment

Management Act (2017); National Construction Industry Act (1996); Physical Planning Act (2016); Water Resources Act (2013); Water Works Act (1995); Public Health Act (1948); Occupational Safety, Health and Welfare Act (1997); Employment Act (2000); National Water Policy (2005); National Environment Policy (2004); Malawi National Land Policy (2002); Malawi 2063; among other pieces of relevant legislation and policies. In addition, a review of other Environmental and Social Impact Assessment reports related to infrastructure development projects in higher learning institutions were reviewed. These documents have been included in the reference section.

The Consultant reviewed documents with socio-economic and ecological information and data for the project area and which included; the Lilongwe Urban Profile, Lilongwe District Council Socio-Economic Profile; Soil Atlas; Species Fact sheet; and Maps and Satellite Images for the project area. The reviewed documents have been included in the reference section.

The Consultant also reviewed project documents which included: the SAVE Project Environmental and Social Management Framework (ESMF), the Project Environmental and Social Screening Report, the Stakeholder Engagement Plan, Labour Management Procedures, the Environmental and Social Commitment Plan (ESCP), and the World Bank Environmental and Social Framework (ESF). A full list of documents that were reviewed during the preparation of this ESMP is included in the Bibliography section.

1.6.4 Field Investigations

Field investigations were conducted in December 2023 to be acquainted with the layout and setting of the project sites. Field investigations within the project site and surrounding areas were undertaken on biophysical aspects to describe the vegetation, fauna and biodiversity within and around the project site. Interviews were conducted with local community leaders and members who possessed knowledge of the area to understand land use and important environmental and social features. The investigations facilitated data collection through observations, visual measurements of distances and quantification of flora, and consultation with representatives of the Developer, Lilongwe District Council and local communities.

1.6.5 Stakeholder Consultations

The SAVE Project Stakeholder Engagement Plan (SEP) was developed to help guide stakeholder consultation. During the development of this ESMP, different meetings (interviews and/or focus groups) with stakeholders were conducted to incorporate their input. The information provided was documented and will be taken into consideration when making project decisions.

The purpose of the stakeholder consultation was to inform the community, district and national level stakeholders about project plans, obtain the views of different people on the proposed project, to determine how the project will affect them and how best it can be implemented to minimize adverse environment and social impacts. Stakeholder consultations were undertaken to elicit concerns and views on the potential impacts of the project and to inform mitigation and enhancement measures.

Each consultative meeting began with briefing the stakeholders at the various levels about the project information about the proposed construction and operation of the 2-storey building. Afterwards, stakeholders were asked to provide their views and concerns regarding the potential positive and negative impacts of the project on the community's socioeconomics and

biophysical environment. The stakeholder consultation summaries and register of people consulted are presented in Appendices 3 and 4, respectively.

2 Detailed Description of the Proposed Sub-Project

The proposed project is being implemented by the Ministry of Education and Ministry of Labour and Vocational Training. The MUBAS will be responsible for coordination, supervision, and overall management of MUBAS sub-project activities. This section provides a comprehensive and detailed description of the project and its related activities.

2.1 Sub-project Components

The program scope consists of the four components contributing to the Project Development Objective (PDO), Component 1: Supporting Increased Access to Skills Development Programs in Higher Education. Component 2: Supporting Increase in Access to TEVET Skills Development. Component 3: Tertiary Education System Strengthening, Project Management, M&E and Communications. 4: Contingent Emergency Response. Under component 1 the project will support MUBAS, Lilongwe campus construction of a ground plus 1-storey building comprising of Computer Lab, Resource Centre (including library and e-library), Offices, Classrooms, Boardrooms and Tuckshop. The infrastructure layout plans and designs are presented in Appendix 9.

It is expected that the project will commence after this ESMP is approved by the Malawi Environmental Protection Authority (MEPA) and cleared by the World Bank. Consequently, all processes and approvals will be conducted prior to or during the commencement of the subproject.

2.2 Design Elements of the proposed 2-storey building

The proposed design elements for structures of the proposed 2-storey building are shown in table 2.1.

Table 2.1: Proposed structures in the proposed 2-storey building

S/N	Description of the building or structure	Capacity (Sq. Metre)	Number to be constructed	Details
A.	**GROUND FLOOR**			
1.	Computer Lab	110	1	For engineering lessons
2.	Resource Centre (including library and e-library)	90	1	To provide students and staff with access to rare and out-of-print materials that might be difficult or impossible to locate in physical library.
3.	Executive Boardroom (PHD Class)	72	1	To conceptualise, create, and refine projects.
4.	Tuckshop	11	1	To serve goods and food commodities to members of staff and students.
5.	Reception	8	1	For extending formal welcome to visitors of the University
6.	Back store	6	1	For storage of university's administrative files

S/N	Description of the building or structure	Capacity (Sq. Metre)	Number to be constructed	Details
7.	ICT Storage room	14	1	For storage of electronics and other valuable ICT equipment
8.	Server room	14	1	To house critical ICT equipment, including servers, switches, routers, and storage devices
9.	Offices	28	2	For accommodating University staff
		22	1	
		19	1	
10.	Lavatory (Gents and Ladies section)	64	1	For hygienically passing of human waste
B.	**FIRST FLOOR**			
11.	Classrooms	56	2	These will be used by students for lectures
		45	1	
		44	1	
12.	Boardroom	36	1	For meetings
13.	Offices	29	1	For accommodating University staff
		28	3	
		26	1	
14.	General Storage Archive	28	1	For storage of university files
15.	Staff kitchen	16	1	For preparing meals
16.	Reception	8	1	To extend a formal welcome to visitors of the University
17.	Lavatory (Gents and Ladies section)	64	1	For hygienically passing of human waste

2.3 Project Activities

The description of the main project activities has adopted a lifecycle approach to project planning, construction and operation. Hence, the activities are divided into the following phases: planning and designing, construction, demobilization, operation and maintenance, and decommissioning.

2.3.1 Planning and Design Phase

A Project Design Consultant will be identified to carry out topographic and geotechnical studies, prepare site plans and technical drawings and prepare budgets and timelines. The Design Consultant will supervise the recruitment of the Contractor and supervise construction activities to ensure that they are in line with the designs.

2.3.2 Construction Phase

The construction phase will commence with the engagement of the Construction Works Contractor. The Contractor will proceed with the following activities: erection and commissioning of campsite (at the onset), recruitment of construction workers, mobilization of construction equipment and supplies, site clearance, and finally construction of the 2-storey

building and associated structures. Liquid and solid waste management activities are also expected to be carried out.

2.3.3 Demobilization Phase

Demobilization will come after the completion of construction activities in order to vacate the site. Activities are expected to include scaling down of workforce; removal of temporary structures such as perimeter construction fence, removal of construction machinery and surplus construction materials, cleaning the site and disposal of wastes at a place authorised by the Lilongwe District Council.

2.3.4 Operation and Maintenance Phase

In this phase, the Sub-project Proponent is expected to conduct maintenance activities including cleaning common areas, repairing items that are broken, painting walls as well as waste management activities. Both liquid and solid waste (including e-waste) are expected to be generated from day-to-day operations of the 2-storey building which will comprise of Computer Lab, Resource Centre (including library and e-library), Offices, Classrooms, Boardrooms and Tuckshop.

2.3.5 Decommissioning Phase

Currently, there is no anticipation that the structure will be decommissioned. However, if decommissioning is to be carried out, a decommissioning plan including an Environmental and Social Management (ESMP) will have to be prepared and approved by the authorities before the commencement of decommissioning activities.

2.4 Material and Equipment Requirements for Project Activities

Construction of substructures and superstructures of the 2-storey building will require machinery such as crawler dozers for clearing the project sites and excavators for digging foundations. Concrete mixers and vibrator pokers will be required for the concrete works. Tippers will be used for movement of materials such as quarry stones, gravel and sand.

Table 2.2 presents some of the major plant, equipment and materials that will be required for the construction works of the 2-storey building. The table also gives the project inputs and output/ by-products that are to be expected from the use of the equipment and material.

Table 2.2: Summary of main inputs and outputs from the proposed project

S/N	Input/ Equipment/ material	Use of the equipment or material	Source of the material	Output or product/ by-product
A.	**EQUIPMENT**			
1.	Crawler Dozer	Clearing the construction site	To be provided by the Contractor	Cleared and levelled construction site/ dust, noise pollution
2.	Excavator	Excavation of foundation trenches	To be provided by the Contractor	Excavated foundation trenches/ dust and noise pollution
3.	Compactor	Compaction of the foundation at the construction site	To be provided by the Contractor	Compacted foundation/ noise pollution

S/N	Input/ Equipment/ material	Use of the equipment or material	Source of the material	Output or product/ by-product
4.	Concrete mixer	Mixing concrete	To be provided by the Contractor	Well mixed concrete/ noise, air pollution
5.	Tippers and trucks	Transportation of construction materials such as fine/coarse aggregate, sand and cement.	To be provided by the Contractor	Various construction materials/ dust and noise pollution
6.	Vibrating pokers	Concrete compaction	To be provided by the Contractor	Well compacted concrete/ noise
7.	Carpentry tools	For carpentry works during construction	To be provided by the Contractor	Complete constructed formworks for concrete work
8.	Plumbing and brick laying tools	For plumbing and brick laying works during construction	To be provided by the Contractor	Laid brick/ masonry structures
B.	**MATERIALS**			
9.	Fine and coarse aggregate	For concrete formulation	To be sourced locally. Coarse aggregate could be sourced from nearby quarries in Nanjiri or Nathenje	Completed structures
10.	Sand and gravel	For concrete formulation and other construction works	To be procured from suppliers	Completed structures
11.	Cement	For concrete formulation and other construction works	To be sourced locally or outside the country depending on quantity, quality and cost factors.	Completed concrete/block work structures
12.	Water	For concrete formulation and other construction works	To be sourced from approved suppliers	Polluted water
13.	Reinforcement metal bars	For concrete reinforcement	To be sourced locally or outside the country depending on quantity, quality and cost factors	Reinforced concrete structures
14.	Cement blocks	For various construction structures	To be made or sourced locally	Block structures

2.5 Employment Opportunities

The project is expected to employ approximately 60 people and will include technical staff, unskilled labourers and drivers. It is estimated that at least 24 workers (40% of the people to be employed) will be women to attain the recommended gender balance in every category at any point of the project. Out of the project workers to be employed during the construction phase, approximately 65% are expected to be employed as unskilled labourers from the surrounding communities. There will also be employment opportunities during the operation and maintenance phase as the new infrastructure will require for daily operations.

Both the Contractor and the MUBAS will be required to provide a safe working environment to employees. In addition, employees will be trained on the safe use of equipment and potential hazards, and the precautionary measures to be followed. Further to this, they will be provided with protective wear for safety, as required by the Occupational Safety, Health and Welfare Act.

2.6 Waste Management and Sanitation

2.6.1 Solid Waste and Sanitation

During the construction phase, construction waste will be reused; for example, soils from the excavation will be used for levelling the landscape while empty packaging materials e.g., cartons, buckets/tins of paint and cement bags will be shared with community members for use. Wastes, which cannot be reused, will be disposed of at an approved site (Area 38), in collaboration with Lilongwe District Council, in a manner that they cannot degrade or harm the environment.

For domestic waste, the Contractor will provide bins at the construction site. When full, a pickup truck will be used to carry the bins and dispose of the waste at the designated dumping site. It is estimated that 0.5 kg of solid waste is generated per capita per day (World Bank Group, 2018). It is therefore expected that about 30 Kg of solid waste will be generated per day with 60 construction workers on site. A skip will have to be provided on-site for temporary storage of solid waste.

For sanitation, the contractor will be required to provide mobile latrines separate for men and women. The ratio of toilets to workers shall be 1:20 as required by the National Sanitation Policy. Similarly, the contractor may construct two toilets, one for males and the other for females. These latrines could be demolished after the construction phase or maintained if they are of good standard.

During the operation and maintenance phase, the offices, classrooms, engineering workshops, boardrooms and laboratories will have separate solid waste collection bins for food waste, paper waste, plastic waste, general waste and e-waste from the buildings and the surroundings. Temporary storage and collection will be provided for bins. The wastes will be collected and disposed of by a private waste collection company to be engaged by the Proponent. It is estimated that about 135 kg of solid waste will be generated per day with 230 students and 40 staff members available on campus.

2.6.2 Liquid Waste and Sanitation

During construction activities, liquid waste will be generated from human use as well as from construction-related activities. It is expected that about 70m^3 of liquid waste will be generated per day during this phase.

During the operation and maintenance phase, structures in the 2-storey building will have separate ladies and gents' toilets which will be connected to a septic tank and the MUBAS will be required to facilitate and maintain the emptying of the tanks when full. This will help to avoid neighbouring environmental contamination. The latrines will be those made of tile floor with a vent pipe for controlling flies thereby making them more sanitary and safer. The construction of latrines in this project will be in line with the Occupation Safety, Health and Welfare Act (1997) which requires the provision of separate toilets, washing facilities and change rooms to be provided in workplaces having both male and female employees. In this regard, there will also be separate sanitary facilities for both male and female students.

It is expected that one of the toilets for both male and female employees and students will be designed for use by physically disabled staff or students. The toilets will be designed to allow access by wheelchair and that handrails will be available as support for those with walking difficulties. It is also expected that latrines for female staff and students will include a hygiene changing space. The construction materials required for these structures will include hollow core blocks (cement masonry units), reinforced concrete, timber trusses, and corrugated metal roof sheets.

It is estimated that 40L of liquid waste is generated per capita per day in an institution setting (Turpie et al., 2019). It is therefore expected that the projected 60 construction workers will generate about 2.4m^3 of liquid waste per day during the construction phase and 10.8m^3 of liquid waste will be generated per day during the operation and maintenance phase, with 230 students and 40 staff members available on campus.

2.7 Water Supply

The project area has one borehole that is used for drinking, washing and cooking. The borehole was installed in 1973 and is managed by a local water committee. This borehole is used by all the 8 villages in SGVH Mwase and women and girls are responsible for collecting. Because of the long distances to the borehole, some people resort to using water from unprotected wells and streams (Chabwezi and Chaola) even for drinking and cooking after treating it with chlorine. The water from unprotected wells and streams is also used for irrigation and livestock. It is expected that the 2-storey building will be utilizing water supply from Chabwezi and Chaola streams. For portable water, MUBAS management is at an advanced stage of engaging Lilongwe Water on the water supply issue. It is anticipated that the building will be connected to the Lilongwe water board water system.

2.8 Energy

The project area is connected to the Electricity Supply Corporation of Malawi (ESCOM) power grid. The majority of households are not connected as they are unable to pay for the electricity connection fee. Most of the households use firewood and maize husks for cooking and solar energy for lighting and charging phones. It is however expected that the 2-storey building will be connected to the power grid for electricity since MUBAS management is already in the process of engaging with ESCOM on the same.

3 Environmental and Social Policies, Regulations and Laws

This chapter provides background information on Malawi Government policy and the legal framework applicable to this project. It outlines the relevant sectoral policies and legislations that are relevant to providing a technical and legal framework that will ensure the sustainable construction and operation of the 2-storey building at the MUBAS, Lilongwe campus. In addition, it summarises applicable World Bank Environmental and Social Standards (ESS).

3.1 Malawi Policy Framework

Table 3.1 below presents the Malawi policy framework relevant to the development project at MUBAS, Lilongwe campus.

Table 3.1: Malawi Policy Framework

S/N	Law	Description and Relevance to Project Activities
3.1.1	The National Environmental Policy (2004)	The overall policy goal is to promote sustainable social and economic development through sound management of the environment (section 2.1). Section 1.3 of the policy calls for the integration of environmental concerns into national, district and community level planning processes to ensure that economic growth is balanced with social and environmental concerns and also focuses on the sustainable management of natural resources including land, water, forests, and biodiversity. *The MUBAS, the Contractor and MEPA should collaborate to implement environmentally friendly practices. This includes efficient resource management and conservation efforts to protect local flora and fauna.*
3.1.2	HIV & AIDS Policy (2022)	The policy highlights that HIV and AIDS impact on the country is quite significant and affects a range of socio-economic activities. The goal of the policy is to accelerate efforts to end AIDS as a public health threat by 2030 (section 2.1). *The MUBAS and the Contractor should implement HIV and AIDS workplace policy as a guide to implementing the interventions.*
3.1.3	National Gender Policy (2015)	The broad policy goal is to reduce gender inequalities and enhance the participation of women, men, girls and boys in socioeconomic development processes (Section 2.1). Section 1.2 of the policy recognises Gender Based Violence (GBV), especially violence against women, girls and vulnerable groups as a severe impediment to social well-being and poverty reduction. *The Contractor should implement strategies to ensure that at least 60% of the workforce is female and 40% is male and vice versa. Additionally, measures should be taken to prevent gender-based violence within the project team.*
3.1.4	National Forestry Policy (2016)	The goal of the Policy is for the conservation, establishment, protection and management of trees and forests for the sustainable development of Malawi (Section 2.1). The National Forestry Policy provides a framework for the

		conservation and management of forest resources and ecosystem services *In this regard, the Contractor will replace trees cut during the construction phase in consultation with the Department of Forestry, the MUBAS management and the communities, as necessary.*
3.1.5	National Education Policy (2016)	The policy aims to promote equitable access to education and improve the relevance, quality governance and management of the education sector (section 2.2). *The SAVE project at the MUBAS will expand equitable access to higher education, particularly for female students. This will increase the number of women pursuing higher education.*
3.1.6	National Construction Industry Policy (2015)	Section 3.7 (a) of the policy recognizes that the Construction Industry greatly contributes to deforestation, noise, dust and chemical pollution, soil erosion and physical disruption. The priority areas of the policy are: • Regulation of the Construction Industry – promoting classification and registration of all persons engaged in the construction industry. • Enhancing Standards and Quality in procurement, design and implementation of projects. *The MUBAS must only work with contractors certified with NCIC. To maintain the quality and standards of infrastructure to ensure Social and Environmental sustainability.*
3.1.7	National Sanitation Policy (2008)	The overall goal of the National Sanitation Policy is to promote improved sanitation and safe hygiene practices for improved health and socioeconomic development for the people of Malawi (section 2.4). *The MUBAS and the Contractor must ensure that liquid and solid management encourages reduction, recycling and reuse of waste, before final disposal and that appropriate waste management facilities are provided and used.*
3.1.8	National Energy Policy (2018)	The goal of the policy is to increase access to affordable, reliable, sustainable, efficient and modern energy for every person in the country (section 2.1) *In line with the policy, the MUBAS shall provide alternative sources to the national grid source such as Solar Energy and Gensets.*

3.2 Malawi Legal Framework

Table 3.2 below presents legal frameworks relevant to the project.

Table 3.2: Legal Framework

S/N	Law	Description and Relevance to Project Activities
3.2.1	The Constitution of the Republic of Malawi (1995)	The Constitution of the Republic of Malawi of 1995 is supreme over any legal policy or Act in Malawi. Section 13, part d, accords for managing the environment and sustainable development of natural resources to prevent degradation; provide a healthy living and working environment for the people of Malawi; accord full recognition to the rights of future generations; and to conserve and enhance the biological diversity of Malawi. Under Section 13 (e), it is the responsibility of the state to achieve gender equality for women. *The Constitution of the Republic of Malawi binds all executive, legislative and judicial organs in Malawi and it is of paramount importance that the project complies with the constitution. The project also has to promote gender equality and human rights*
3.2.2	Environment Management Act (2017)	The act provides a legal basis for the protection and management of the environment and the conservation and sustainable utilization of natural resources in any activities including the project. Section 31 (2) of the Act recognises the need for the preparation of an Environmental and Social Impact Assessment before project implementation for all proposed projects which may significantly affect the environment or use of natural resources. *Environmental and Social Impact Assessments were carried out and the MUBAS and its Contractor must ensure that mitigation and enhancement measures to protect and manage the environment are implemented; and must conserve and sustainably utilize natural resources.*
3.2.3	Occupational Safety, Health and Welfare Act (1997)	Section 66 provides for the procedure for accidents causing injury or death from doing his normal duties. Section 55 stipulates measures relating to confined space and section 56 provides for fire preventive measures. *The MUBAS and the Contractor will conduct Risk assessments to identify occupational health and safety hazards and risks and Prepare Risk Control plans.*
3.2.4	Water Resources Act (2013)	Section 40 (1) of the Act stipulates that any person wishing to abstract and use water shall apply to the Authority in the prescribed form for a licence. *The MUBAS will be required to obtain a water abstraction license from the National Water Resources Authority prior to the abstraction of water for use during construction and/or dust suppression.*

S/N	Law	Description and Relevance to Project Activities
3.2.5	The Forestry Act (2017)	Section 46 provides that unless under a license, no person shall cut, take, ferry, destroy, uproot, collect, and remove forest produce from a forest reserve, customary land, public land, or protected areas. *The MUBAS and the Contractor must get a permit before cutting of trees at the proposed site. Further, the Contractor is compelled to replant all the trees cut in line with the relevant provisions of the law.*
3.2.6	The Public Health Act (1948)	Part X of the Act requires developers to provide adequate sanitary and health facilities to avoid the harmful effects of waste on public waters. *The MUBAS and the contractor must comply with environmental regulations by providing adequate sanitary and waste management facilities. This will help prevent pollution of public waters.*
3.2.7	The Gender Equality Act (2013)	Section 11 (1) stipulates that an appointing or recruiting authority in the public service shall appoint no less than forty per cent (40%) and no more than sixty per cent (60%) of either sex in the public service. *The project will ensure that both sexes are given equal opportunities and where possible, the 60:40 rule should be observed.*
3.2.8	Child Care, Protection and Justice (Amendment) Act, 2015	Part II, sections 79, 80 and 89 of the Act prohibits child betrothal, forced marriage, and harmful practices against children. Section 6 of the Act provides for the protection of children from undesirable practices such as child abduction, child trafficking, harmful cultural practices, and forced marriage. The Act states that a person who, unlawfully takes, retains or conceals a child without the consent of the parent or any other person who has lawful custody of the child, commits an office and shall be liable to imprisonment. *The implication on the proposed Project is that activities such as employing and/or using in any way, underage children to undertake any activity deemed unfit, abducting the child and forcing the child to get married should not be tolerated as they contravene the provisions of this Act.*
3.2.9	National Construction Industry Act (1996)	Part VI–Section 20. (1) requires registration prior to carrying out business in the construction industry in Malawi. (2) prohibits a person from carrying out business of a category of which he is not registered. *The MUBAS must work with contractors certified with NCIC, in order to maintain the quality and standards of infrastructure to ensure Social and Environmental sustainability.*
3.2.10	HIV and AIDS Prevention and Management Act (2018)	Section 6 (1) prohibits discrimination on a basis related to HIV or AIDS. Section 7 gives rights to persons living with HIV to access medication necessary for anti-retroviral therapy or treatment.

S/N	Law	Description and Relevance to Project Activities
		The MUBAS and the Contractor should implement HIV/AIDS-positive policies. This includes providing access to medication and conducting awareness campaigns.
3.2.11	Employment Act (2000)	Section 54 (1) of the Act reinforces and regulates minimum standards of employment with the purpose of ensuring equity necessary for enhancing industrial peace, accelerated economic growth and social justice. The Act further prohibits discrimination based on ethnicity, sex, political, language and religious differences; surety must also be made that all employees are subject to equal pay based on normal working hours. *The MUBAS and the Contractor must adhere to labour standards. This includes paying at least the minimum wage, ensuring fair labour practices, and prohibiting child labour.*
3.2.12	Environment Management (Waste Management and Sanitation) Regulations, 2008	Section 7 of the Regulations requires any person who generates or collects solid waste to separate hazardous waste from the general or municipal solid waste. Section 8 further says that every generator of waste shall be responsible for the safe and sanitary storage of all general or municipal solid waste accumulated on his or her property. *The MUBAS and the Contractor must properly manage and dispose of waste generated by the project. This includes separating general and hazardous waste and obtaining necessary permits.*

3.3 National Environmental and Social Assessment and Permitting

The Malawi Environment Protection Authority (MEPA) is a government institution established through the Environment Management Act (EMA) No. 19 of 2017, as a principal agency for the protection and sustainable management and utilization of the environment and natural resources. One of the core functions of MEPA is to review and approve ESMPs, and other relevant environmental assessments in accordance with EMA.

According to the Guidelines for EIA in Malawi, the ESIA process begins with the screening stage where MEPA determines whether the proposed project is prescribed under List A (EIA is mandatory) or List B (may require an EIA).

Screening of the proposed project was conducted by the Environmental District Officer (EDO) for Lilongwe on 29th August 2022; where the proposed project was categorised under list 'B'. This was followed by feasibility studies where a project brief was prepared and submitted to MEPA, from which a conclusion was drawn that the proposed project requires an ESMP not an ESIA.

3.4 World Bank Environmental and Social Standards and World Bank Group Environmental, Health and Safety Guidelines

3.4.1 World Bank Environmental and Social Standards

The World Bank's environmental and social standards applicable to project activities are summarized in Table 3.3 below.

Table 3.3: Relevant World Bank ESS

S/N	E&S Standard	Description and Relevance to Project Activities
1.	ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	ESS1 guides the production, implementation and monitoring of ESMP, ESIA and other related instruments to avoid, reduce, mitigate and compensate the impacts of the project. It presents a typical categorization system that consists of three or four risk categorizes, which correspond to high, substantial, moderate, or low risk. ESS1 implies that Borrowers need to identify any potential environmental and social risks and impacts that could arise during the project and propose mitigation measures. *The proposed project falls under the Moderate Risk Projects, therefore, the ESMP has been prepared for the project before the commencement of construction activities to ensure that the project is environmentally and socially sound and sustainable. The environmental and social assessment have been adequately done to identify potential risks and impacts of the project and mitigation measures have been proposed in section 4.2.*
2.	ESS 2: Labour & Working Conditions	ESS2 recognises the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. The implication of ESS2 is that Borrower has to establish a Grievance Redress Mechanism, promote OHS measures develop and implement written labour management procedures that promote equal employment opportunities, and safeguard against forced and child labour. *Considering that the project will attract a considerable amount of workforce, then ESS2 applies. A deliberate effort will be made to ensure that women comprise at least 40% of the labour force. Labour management procedures for the project have already been developed and mitigation measures for OHS hazards and risk of child labour have been proposed in the ESMP.*
3.	ESS 3: Resource Efficiency and Pollution Prevention & Management	This ESS3 recognises that economic activity and urbanisation often generate pollution of air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels. ESS3 implies that the Borrower has to implement resource-efficient designs; implement technically and financially feasible measures for improving efficient consumption of resources (energy, water, and raw materials); avoid the release of pollutants; assess the volume of water use; and segregate different types of waste for appropriate/ sound disposal and management *The project will potentially generate air, water, and land pollution and consume natural resources (e.g. sand, quarry, and wood resources) that may threaten people, ecosystem services, and the environment at the local level. Air will be polluted from dust, noise and exhaust gas emissions from construction equipment. Water will be contaminated by run-off containing silt, debris; and liquid and solid waste from the*

S/N	E&S Standard	Description and Relevance to Project Activities
		construction site, and oil leakage and spillages from construction equipment. The MUBAS has, therefore, prepared this ESMP with measures to manage the above impacts.
4.	ESS 4: Community Health & Safety	The ESS4 addresses the health, safety, and security risks and impacts on project-affected communities and recognises that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. ESS4 implies that the Borrower has to evaluate the risks and impacts of the project on the health and safety of the affected communities during the project life cycle *Project activities of the proposed Project will present community health and safety risks like; (i) improper disposal of construction, hazardous and general wastes (ii) pollution from liquid waste; and (iii) air pollution. These risks have been evaluated in the report and their mitigation measures have been proposed in section 4.2.*
5.	SS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	ESS 6 recognizes that protecting and conserving biodiversity, maintaining ecosystem services, and sustainably managing living natural resources are fundamental to sustainable development. The requirements set out in this Standard have been guided by the Convention on Biological Diversity, which defines biodiversity as "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems. *In the context of the proposed project site, impacts on all levels of biodiversity have been assessed as an integral part of the Environmental and Social Assessment study in order to avoid or minimize adverse impacts to biodiversity. It is expected that about 34 fully established trees and 28 regenerating shoots will be cleared on the site in preparation for construction works. The MUBAS has an obligation to avoid, reduce, and offset such impacts throughout the project's implementation.*
6.	ESS 10: Stakeholder Engagement & Information Disclosure	ESS10 recognises the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. It stipulates that effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation. ESS10 implies that the Borrower has to develop a stakeholder engagement plan, foster inclusive and participatory decision-making, establish a Grievance Redress Mechanism and disclose project information. *The Stakeholder Engagement Plan was developed and preparation of the ESMP involved engaging institutions within the Project impact area and selected public institutions who expressed their views on the proposed Project. Channels for*

S/N	E&S Standard	Description and Relevance to Project Activities
		information disclosure and grievance redress mechanisms for the project were also already established.

3.4.2 World Bank Environmental, Health and Safety (EHS) Guidelines (General EHS Guidelines)

The World Bank Group (WBG), and Environmental, Health and Safety Guidelines (General EHS Guidelines) are implementation tools for WB's performance standards. The EHS Guidelines contain the performance levels and measures that are normally acceptable to the World Bank Group and they are generally considered to be achievable in new facilities at reasonable costs by existing technology.

Of special interest are the EHS guidelines for (i) Construction and Decommissioning, (ii) Occupation Health and Safety, (iii) Community Health and Safety; and (iv) Water and Sanitation. The Construction and Decommissioning guidelines provide specific guidance on prevention and control of community health and safety impacts that may occur during new project development, at the end of the project life cycle, or due to expansion or modification of existing facilities. On the other hand, Occupational Health and Safety guidelines provide guidance and examples of reasonable precautions to implement in managing principal risks to occupational health and safety. The Community Health and Safety guidelines address some aspects of project activities taking place outside of the traditional project boundaries but related to the project operations, as may be applicable on a project basis.

The WB EHS guidelines are directly applicable to projects funded by the World Bank Group as such, they are directly applicable to the MUBAS project. The EHS Guidelines have therefore been used as guides for environmental and social impact mitigation management.

3.5 Gaps between the Malawi Legal Framework and the World Bank Environmental and Social Framework

The underlying principle in this ESMP is that project implementation should be based on the requirements that are most stringent- Malawi legislation or World Bank Environmental and Social Standards.

Table 3.4 below provides details on the gaps that exist between national legal instruments and the World Bank ESS.

Table 3.4: Relevant World Bank ESS and Key Gaps with the National Framework

World Bank ESS provisions	Malawi Legislation	Gaps Identified	How the gaps have been or will be addressed (if applicable)
ESS 1: Assessment and Management of Environmental & Social Risks and Impacts	Environmental Management Act (2017) EIA Guidelines (1997)	Environmental Management Act (2017) and EIA Guidelines (1997) do not indicate the need to prepare ESMF for projects. Only the ESIA process is discussed.	Preparation of the SAVE ESMF
ESS 2: Labor and Working Conditions	The Labor Relations Act (1996) Occupational Safety,	The national legislation does not mention the need to develop Labor	The project has followed ESS2 and developed Labor Management

World Bank ESS provisions	Malawi Legislation	Gaps Identified	How the gaps have been or will be addressed (if applicable)
	Health and Welfare Act, (1997) Employment Act (2000)	Management Procedures, including the requirement for a grievance redress mechanism to be established as early as possible in the project development phase.	Procedures with relevant provisions and GRM to bridge the gap
ESS 3: Pollution Prevention and Resource Efficiency	Environment Management Act (2017); Environmental Management (Waste Management and Sanitation) Regulations, (2008)	The national legislation mostly focuses on pollution prevention and less on aspects of resource efficiency.	The project will follow provisions of ESS3 on resource efficiency including efficient use of raw materials; and optimization of energy and water usage
ESS 4: Community Health and Safety	Public Health Act (1948); Occupational Safety, Health and Welfare Act (OSHWA), 1997	Issues of public health are highlighted in the public health acts, and issues of safety and health are also highlighted in the OSHWA. However, none of these clearly tackle issues of community safety.	Implementation of ESS4 as well as the World Bank Environmental, Health and Safety Guidelines addresses potential risks and impacts on project affected communities.
ESS 10: Stakeholder Engagement & Information Disclosure	EIA guidelines (1997); Local Government Act (1998)	The national legislation addresses issues of stakeholder engagement but presents no provision for development of the GRM	The SAVE project has developed a stakeholder engagement plan including a GRM for the project

4 Potential Environmental and Social Risks, Impacts, Standard Mitigation Measures and Impact Analysis

4.1 Impact Evaluation

Project impacts are assessed to:

- Determine their overall significance
- Decide whether they are acceptable / require mitigation measures or whether they are completely unacceptable.

Each of the five factors considered under the stated criteria in Table 4.1 was graduated into 5 stage scales and assigned a value ranging from the smallest to the highest impact, which is 0 to 3. Then each impact is assigned one of the values under the five factors under consideration. The values can be positive or negative depending on whether they are beneficial or detrimental to the biophysical and socioeconomic environment. For example, a score of -3 means a negative impact of the highest degree of adversity while a score of +3 means a positive impact with the highest degree of potential benefit. If the impact is believed to be negligible or has no effect at all on a biological and social environment, it was then assigned a value of "0".

Table 4.1: Scoring Matrix

Extent or Magnitude of impact		**Score**
Site	Impact confined to a small area within the project area	1
Local	Impact is limited within the radius of 3-5 km of the project area	2
Regional	The impact extends beyond the borders of the project area to influence other areas as a whole	3
Significance of the impact		
Low	Where the impact has a relatively small effect on the biophysical and socioeconomic environment and is very difficult to detect it	1
Moderate	Where the impact is or can be measured but does not necessarily alter biophysical and socioeconomic environmental processes	2
High	The impact is very likely to alter biophysical and socioeconomic processes and hence needs mitigation measures	3
Probability of occurrence of the impact		
Possible	The impact may occur but at a probability of less than 35%	1
Probable	The impact is very likely to occur at a probability of between 35% and 65%	2
Definite	The impact will occur (unavoidable) at a probability of greater than 65%	3
Duration of impact		
Short	Impact lasts for a period of less than 5 years	1
Long	Impact continues at any point for a period between five to ten years	2
Permanent	Impact never lasts once it occurs	3
Reversibility		
Reversible	Environment can repair itself naturally as a result of the impact	1
Reversible	Environment will require human input to repair	2
Irreversible	Impact will cause the environment never to repair	3

The values are then added to make a composite score (impact severity) for each impact using all five factors. The composite score is a proxy value that provides decision and, policymakers

a basis for comparing the severity of impacts across different biophysical and socio-economic environments. For this project, severity is defined as shown in Table 4.2 below.

Table 4.2: Definition of Severity of Impacts

Positive Impact		**Negative Impacts**	
Score	**Definition**	**Score**	**Definition**
+1 ≤ +5	Low	-1 ≤ -5	Low
+6 ≤ +10	Medium	-6 ≤ -10	Medium
+11 ≤ +15	High	-11 ≤ -15	High

Table 4.3 shows the scoring of the anticipated impacts of the project on the biophysical and socioeconomic environment. On overall, a greater part of the negative impacts is of medium level while the positive impacts are medium to high.

Table 4.3: Evaluation of Potential Project Impacts

ID	**Potential Impact** / **Assessment**	**Extent**	**Significance**	**Probability**	**Duration**	**Reversibility**	**TOTAL SCORE**	**Severity before enhancement/mitigation measure**	**Severity after enhancement/mitigation measure**
1.	**ASSESSMENT OF POSITIVE IMPACTS**								
1.1.	**Positive Impacts During Planning and Design Phase**								
1.1.1.	Increased employment opportunities	+3	+1	+2	+1	+2	**+9**	Medium	High
1.2.	**Positive Impacts During Construction Phase**								
1.2.1.	Increased employment opportunities	+3	+1	+3	+1	+2	**+10**	Medium	High
1.2.2.	Increased trade opportunities	+2	+2	+2	+1	+2	**+9**	Medium	Medium
1.2.3.	Promotion of skills transfer in construction related activities	+2	+1	+2	+1	+2	**+8**	Medium	High
1.3.	**Positive Impacts During Demobilisation Phase**								
1.3.1.	Improved visual appearance	+1	+1	+2	+1	+2	**+7**	Medium	High
1.3.2.	Reduced occupational health and safety risk	+1	+2	+3	+1	+2	**+9**	Medium	High
1.3.3.	Reduced public health and safety risks	+2	+2	+3	+1	+2	**+10**	Medium	High
1.4.	**Positive Impacts During Operation and Maintenance Phase**								
1.4.1.	Increased annual enrolment of students	+3	+2	+1	+3	+1	**+10**	Medium	High
1.4.2.	Increased employment opportunities	+3	+2	+2	+1	+1	**+9**	Medium	High
1.4.3.	Increased business opportunities	+2	+2	+1	+2	+1	**+8**	Medium	High
1.4.4.	Increased generation of revenue for the MUBAS	+1	+1	+2	+3	+2	**+9**	Medium	High

ID	Potential Impact / Assessment	Extent	Significance	Probability	Duration	Reversibility	TOTAL SCORE	Severity before enhancement/mitigation measure	Severity after enhancement/mitigation measure
1.4.5.	Increased tax revenues for the government	+1	+1	+1	+3	+2	**+8**	Medium	High
1.4.6.	Improved national education standards	+3	+1	+2	+2	+2	**+10**	Medium	High
1.4.7.	Enhanced infrastructure development	+1	+1	+2	+3	+2	**+9**	Medium	High
2.	**ASSESSMENT OF NEGATIVE IMPACTS**								
2.1.	**Negative Impact During Planning and Design Phase**								
2.1.1.	Risk of poor / inadequate building designs	-1	-2	-1	-3	-2	**-9**	Medium	Low
2.1.2.	Loss of farm land and livelihood	-1	-2	-2	-3	-2	**-10**	Medium	Low
2.1.3.	Lack of integration of climate resilient designs	-1	-2	-2	-3	-2	-10	Medium	Low
2.2.	**Negative Impacts During Construction Phase**								
2.2.1.	Loss of vegetation	-1	-2	-3	-1	-2	**-9**	Medium	Low
2.2.2.	Increased air pollution from dust generation and particulate matter emissions	-2	-2	-3	-1	-2	**-10**	Medium	Low
2.2.3.	Increased noise and vibrations disturbances	-1	-2	-2	-1	-2	**-8**	Medium	Low
2.2.4.	Increased risk of soil contamination	-1	-1	-2	-1	-2	**-7**	Medium	Low
2.2.5.	Increased risk of soil erosion and sedimentation	-1	-2	-2	-1	-2	**-8**	Medium	Low
2.2.6.	Risk of Water Resources Depletion	-2	-2	-2	-1	-2	**-9**	Medium	Low
2.2.7.	Improper disposal of construction, hazardous and general wastes	-1	-3	-3	-1	-2	**-10**	Medium	Low
2.2.8.	Increased occupational health and safety risks	-1	-2	-2	-1	-2	**-8**	Medium	Low
2.2.9.	Increased community health and safety risks	-2	-2	-2	-1	-2	**-9**	Medium	Low
2.2.10	Risk of social conflicts between construction workers and communities	-1	-1	-1	-1	-1	**-5**	Low	Low
2.2.11	Risk of theft of construction materials	-1	-1	-1	-1	-2	**-6**	Medium	Low
2.2.12	Increased risk of spread of communicable diseases	-2	-2	-1	-1	-2	**-8**	Medium	Low

ID	Potential Impact / Assessment	Extent	Significance	Probability	Duration	Reversibility	TOTAL SCORE	Severity before enhancement/mitigation measure	Severity after enhancement/mitigation measure
	including Cholera and COVID-19								
2.2.13	Increased risk of spread of HIV and AIDS and STIs	-3	-3	-1	-1	-2	**-10**	Medium	Low
2.2.14	Increased risk of Gender-Based Violence, Sexual Exploitation and Abuse, and Sexual Harassment	-2	-3	-1	-1	-2	**-9**	Medium	Low
2.2.15	Disturbance of traffic along the access roads leading to the construction site	-2	-2	-2	-1	-2	**-9**	Medium	Low
2.2.16	Increased risk of child labour and abuse	-2	-2	-1	-1	-2	**-8**	Medium	Low
2.3.	**Negative Impacts During Demobilisation Phase**								
2.3.1.	Loss of income source	-3	-2	-3	-1	-2	**-11**	Medium	Low
2.3.2.	Risk of inadequate restoration of the project site post-construction	-2	-2	-1	-1	-2	**-8**	Medium	Low
2.3.3.	Improper disposal of remaining construction waste and materials	-2	-2	-2	-1	-2	**-9**	Medium	Low
2.4.	**Negative Impacts During Operation and Maintenance Phase**								
2.4.1.	Increased generation of waste	-1	-2	-2	-2	-2	**-9**	Medium	Low
2.4.2.	Disturbance of the ecosystem	-1	-1	-2	-3	-2	-9	Medium	Low
2.4.3.	Increased demand for water and energy	-1	-2	-3	-3	-2	**-11**	High	Medium
2.4.4.	Increased risk of water pollution	-1	-3	-1	-2	-2	**-9**	Medium	Low
2.4.5.	Increased risk of occupational safety and health hazard	-1	-2	-1	-2	-2	**-8**	Medium	Low
2.4.6.	Risk of fire	-1	-3	-1	-3	-2	**-10**	Medium	Low
2.4.7.	Risk of Sexual Exploitation and Abuse/ Sexual Harassment	-3	-2	-2	-3	-2	**-12**	High	Low
2.4.8.	Risk of social conflicts between the MUBAS community and surrounding villages	-2	-2	-1	-2	-2	**-9**	Medium	Low
2.4.9.	Noise pollution	-2	-2	-1	-3	-2	**-10**	Medium	Low

ID	Potential Impact / Assessment	Extent	Significance	Probability	Duration	Reversibility	TOTAL SCORE	Severity before enhancement/mitigation measure	Severity after enhancement/mitigation measure
2.4.10	Increased risks of climate change and human-induced disasters	-2	-1	-1	-3	-2	**-9**	Medium	Low

4.2 Environmental and Social Risk Management and Monitoring

The construction and operation of a 2-storey building at the MUBAS, Lilongwe will generate both positive and negative impacts on the biophysical and socio-economic environment. This section describes the potential impacts and their proposed mitigation measures to ensure that project activities in all phases are conducted in an environmentally and socially acceptable and sustainable manner. Table 4.4 below presents environmental and social risks, mitigation measures; and roles and responsibilities for entities responsible for implementation and monitoring implementation of mitigation measures.

Table 4.4: Environmental and Social Management and Monitoring Plan

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
1.	**PLANNING AND DESIGN PHASE**							
1.1.	**Positive Impact during the Planning and Design Phase**							
1.1.	• Procurement of Consultancy services • Surveys (Topographical, Geotechnical etc) • Procurement of Contractors	Increased employment opportunities	• Advertise employment opportunities through many outlets • Adverts should include statements encouraging women and youth to apply • Provide equal employment opportunities to women and men who qualify (60:40 ratio of men to women). • Provide contracts to employees with a clear scope of work, schedule and breakdown of payments. • Adhere to the labour laws for Malawi throughout recruitment.	Throughout Planning Phase	MUBAS	PIU	N/A	N/A
1.2.	**Negative Impact during the Planning and Design Phase**							
1.2.	• Inadequate feasibility studies and multicriteria analysis for the project. (e.g. topographic and geotechnical surveys; and ESMP) for the 2-storey building • Architectural and engineering designing (e.g exclusion of the	Risk of poor/ inadequate building designs	• Engage registered and experienced design professionals (i.e. Architects, Engineers and Surveyors) to avoid or minimise the risk; • Design to following relevant building standards i.e. National Construction Industry Council (NCIC) and National Council for Higher Education (NCHE) specifications; • Integrate climate-resilient components in the designs;	Throughout Planning Phase	Contractor FSC, CSC	MUBAS PIU Department of Buildings (DoB)	350 for advertising	N/A

[1]1 USD is equivalent to MWK 1,734[1] as of 11th July 2024

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
	element of user friendliness- including people living with disabilities) • Procurement of works		• Integrate disability friendly components in the designs; • The developer should consider including a "lactating bay/room" for nursing employees • Conduct thorough design reviews; and • Seek input from stakeholders including users of the 2-storey building.					
2.	**CONSTRUCTION PHASE**							
2.1.	**Positive Impacts during the Construction Phase**							
2.1.	• Construction of the 2-storey building and associated structures	Increased employment opportunities	• Advertise employment opportunities through multiple media outlets; • Provide contracts to employees with a clear scope of work, schedule, and breakdown of payments; • Provide equal employment opportunities to women and men that qualify (60:40 ratio in line with the National Gender Policy); • Treat and pay workers fairly for the services rendered; and • Adhere to the labour laws for Malawi throughout the recruitment.	Quarterly	Contractor CSC DLO	MUBAS PIU Community Leaders	600 for advertising employment opportunities	450
2.1.	• Execution of works • Presence of workers	Increased trade opportunities	• Purchase as many local materials as possible for construction of the 2-storey building; • Source materials from licenced suppliers; • Pay the building material suppliers within the agreed times; • Promote entrepreneurship skills amongst the local communities;	Quarterly	MUBAS, Contractor, selected Community Based Organisations (CBOs) working in the project area,	MUBAS PIU CSC Community Leaders	500 for sensitization	300

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
			• Sensitize local traders to provide quality goods and services; • Encourage workers to pay for goods and services as required and avoid buying on credit; • Sensitize businesspersons to improve stock by ensuring that they have all the supplies required; • Sensitize the businessperson to clean vending and marketplaces and dispose of the wastes appropriately; and • Inform women and youth of the business opportunities.		Community Leaders			
2.1.1	• Joint execution of works between skilled and unskilled workforce and strategic mentorship during construction works of a 2-storey building.	Promotion of skills transfer in construction-related activities	• Employ people from communities surrounding the project area to the extent feasible; • Provide equal employment opportunity to both men and women (60:40 ratio in line with the Gender Policy and Gender Equality Act); • Encourage local artisans to register with relevant professional bodies (i.e. NCIC, MERA and MIE) after acquiring new skills; • Maintain records of employment and training for all staff members employed and provide employees with certificates/ official letters of employment;	Monthly	Contractor MUBAS PIU CSC	MUBAS PIU Supervising Engineer CSC Community Leaders	Cost for advertisement included in 2.1.1	Cost included in 2.1.1
2.2.	**Negative Impacts During Construction Phase**							
2.2.1	• Site preparation (site clearing, excavations)	Loss of vegetation	• Limit vegetation clearing to the space required for construction; • Engage Lilongwe DFO for	Quarterly	Contractor MUBAS DFO	MUBAS DFO PIU	450 for procuremen	N/A

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
	• Land Surveys and mapping		assessment of affected vegetation; • Rehabilitate cleared areas by planting trees, grass, flowers and shrubs; • Offset the cut trees by planting trees or supporting tree-planting activities in consultation with DFO; and • Implement post-planting care for planted trees.			Community Leaders	t and transportation of seedlings and allowances for DFO staff	
2.2.1	• Ferrying aggregate from Terrastone Quarry Site / Masters Stone Breakers to the construction site using the 2Km unpaved access ring road from the M1 road • Excavation, backfilling, and cement mixing	Increased air pollution from dust generation and particulate matter emissions	• Use efficient and serviced machineries • Erect barriers around work sites to break or reduce wind and dust movement; • Cover all transported materials with tarpaulins to prevent fugitive dust; • Observing speed limits (20Km/hr) when moving on unpaved roads; • Dust suppression by water spraying on unpaved access roads; • Handle sand and cement properly to limit dust generation. • Replacing older vehicles with newer, more fuel-efficient alternatives • Implementing a regular vehicle maintenance and repair program	Throughout construction phase	Contractor MUBAS	MUBAS Supervising Engineer Community Leaders	To be included in Contractors' BOQ	N/A
2.2.1	• Movement of construction vehicles to and from the construction site through the villages (Mwase,	Increased noise and vibration disturbances	• Minimize needless vehicle movement; • Limit the number of noisy activities; • Limit noisy activities to daytime hours; • Use appropriate and well-maintained noise mufflers on	Throughout construction phase	Contractor	MUBAS Supervising Engineer Community Leaders	To be included in Contractors' BOQ	N/A

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
	Kanzengo, Chaweka, Kaponda, and Masoatenganji) • Operation of noisy construction machinery (pokers, jackhammers, and drills)		vehicles and machinery; • Ensure that equipment is regularly serviced and maintained; • Designate specific routes for construction vehicles, avoiding residential or sensitive areas; • Provide ear protection materials for the workers in noisy areas and ensure their correct usage; and					
2.2.4	• Operation of construction machinery and vehicles on-site • Maintenance of construction machinery and vehicles • Use of pesticides to control termites and other pests	Increased risk of soil contamination	• Surface all vehicle servicing and fuel /oil storage areas with concrete or some appropriate impervious material; • Line surfaces where painting is to take place; • Spray pesticides only in required areas; • Use well-trained and experienced staff on activities requiring the use of paint, solvents, oils, pesticides and other contaminants; • Separate waste oil containers, put them in a leak-proof container or bag and properly dispose of them; • Discard waste oil containers in approved disposal sites, as recommended by the council; and • Use environmentally friendly chemicals as much as possible.	Throughout construction phase	Contractor	MUBAS PIU Supervising Engineer	Part of Contractor's operations budget	N/A
2.2.5	• Excavations leading to loose soils that are prone to erosion	Increased risk of soil erosion and sedimentation	• Excavation activities must be limited to construction areas; • Backfill excavated areas immediately after excavation to	Quarterly	Contractor	MUBAS, PIU Supervising Engineer	Part of the Contractor's operations budget	N/A

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
	and sedimentation		limit exposure of loose soils; • Use excavated soil to fill eroded sites around the university campus and communities; and • Dispose of the excavated soil at sites recommended by the District Council.			Environmental District Officer		
2.2.(	• Excessive use of water for construction purposes, affecting local water availability	Risk of Water Resources Depletion	• Conduct a detailed water needs assessment before construction begins to identify the total water requirements and potential sources; • Install systems to collect and store rainwater, which can be used for non-potable purposes on site, reducing dependence on other water sources; • Implement systems to recycle water used in construction processes, such as for concrete mixing or dust suppression; • Establish guidelines for groundwater extraction and monitor water levels to prevent over-extraction; and • Design drainage systems that mimic natural water flow patterns and prevent disruption to existing watercourses.	Quarterly	Contractor	MUBAS PIU Supervising Engineer	Part of the Contractor's operations budget	N/A
2.2.1	• Generation of construction, hazardous and general waste	Improper disposal of construction, hazardous and general wastes	• Provide appropriate containers across the work areas for waste disposal and easy collection to disposal site; • Properly segregate and separate wastes to encourage the reuse of some of the wastes e.g., cartons and	Quarterly	Contractor	MUBAS, PIU Supervising Engineer Environmental District Officer	800 for Bins	N/A

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
			paint containers; • Remove waste bins as soon as they are full and dispose the wastes appropriately at a designated disposal site; • Properly landscape and rehabilitate the site after completing construction works; and • The Contractor should implement a Waste Management Plan.					
2.2.8	• Operation of construction machinery on-site • Handling of hazardous chemicals • Carrying out general construction works	Increased occupational health and safety risks	• Provide a first aid kit and train workers on its application; • Conduct daily toolbox talks before the commencement of work; • Train workers on prevention and managing incidents; • Install warning and safety signage in all high-risk areas of the project; • Workers must wear protective gear; • Store and handle hazardous materials as prescribed by the manufacturer; • Implement a continuous hazard identification and risk assessment process throughout the project stages to identify and mitigate risks; • Establish an Emergency Response Plan (ERP) for accidents, fire, and chemical spills, and conduct regular emergency drills; and • Develop a system for monitoring OHS performance, including incident reporting and corrective actions to ensure continuous improvement.	Monthly	Contractor	MUBAS PIU Supervising Engineer DHS	6,000 for PPE	950

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
2.2.9	• Movement of construction vehicles to and from the construction site through the villages (Mwase, Kanzengo, Chaweka, Kaponda, and Masoatenganji) • Poor management of site, equipment, materials, chemicals and waste • Disposal of hazardous materials	Increased community health and safety risks	• Conduct safety awareness and sensitisation meetings with community members, to keep them informed about project activities, potential hazards, and safety measures; • In addition to warning signs and hoarding fences, implement security personnel or monitoring systems to ensure unauthorized access to the construction site is strictly controlled; • Implement comprehensive traffic management plans that include clearly marked detour routes and signage to redirect traffic safely around construction sites; • Restrict the public from going to the construction site by putting warning signs and erecting a site-hoarding fence. • Visitors to the site must wear protective gear. • Ensure that all visitors to the site are informed about safety protocols and required to undergo a safety briefing before entering the construction area; • Implement traffic and speed control measures including limiting vehicle speeds to 10 km/ hr at the university campus. • Trenches and pits over 1 m deep or wherever soil conditions dictate should be shored and secured	Monthly	Contractor	MUBAS PIU Supervising Engineer DHS	Cost for PPE included in 2.2.8	Included in 2.2.8

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
			against accidental entry by public. • Check and control levels of noise, dust, fumes and smoke at the sites and maintain records of compliance with local environmental standards and EHS guidelines; • Establish a transparent incident reporting system for community members to report accidents or near misses and ensure prompt responses to any concerns raised; • Notify and report to the PIU and the regional OSH Department of any incident or accident that occurs involving the community members, related to the construction works.					
2.2.	• Social interaction between Contractor workers and community members from Mwase, Kanzengo, Chaweka, Kaponda, and Masoatenganji villages • Utilisation of water, energy and other resources • Illicit sexual relationships	Risk of social conflicts between Contractor workers and communities	• Recruiting people from surrounding areas to reduce tension; • Contractor Workers' Code of Conduct should be included and signed in individual employee contracts, in the language they understand; • Sensitize workers on the risks of indulging in extra-marital affairs; and • The GRM should be flexible enough to accommodate uptake of grievances from local communities. • Facilitate regular community meetings to discuss project activities and address concerns. • Provide cultural sensitivity training for contractor workers to respect local customs and values. Establish	Quarterly	Contractor MUBAS	MUBAS Community Leaders	Part of Contractor's operations budget	N/A

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
	and marriage breakages • Sexual abuse and exploitation		a clear conflict resolution mechanism for immediate addressing of issues. • Implement a system for monitoring social dynamics and gathering feedback from workers and residents. • Clearly communicate employment opportunities and selection criteria to ensure transparency. • Invest in community development programs that benefit both workers and residents. • Ensure the GRM is well-publicized and inform community members about its existence and usage. • Establish a feedback loop for addressing grievances and communicating outcomes to the community. • Regularly monitor and evaluate contractor compliance with the Code of Conduct, addressing any violations swiftly.					
2.2.	• Presence of Contractor workers and members from the surrounding communities on the construction site	Risk of theft of construction materials	• Employ more security guards to enhance security capacity at the construction site; • Provide access control to the construction site with 24hr surveillance; • Provide support to local/community policing efforts i.e., providing whistles and airtime; • Report and prosecute all cases of theft; and	Quarterly	MUBAS Contractor Community Leaders	MUBAS PIU Community Leaders	Part of Contractor's operations budget	N/A

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
			• Include Community Policing Officers in Grievance Redress Committees.					
2.2.	• Social interaction between Contractor workers and community members	Increased risk of spread of communicable diseases including Cholera and COVID-19	• Conduct sensitizations on COVID-19 and other communicable diseases including Cholera to workers and communities; • Provide hand-washing and proper waste disposal facilities.	Quarterly	Contractor DHS Community Leaders	MUBAS PIU	1000 for sensitization and sanitation equipment	800
2.2.	• Social interaction between Contractor workers and community members	Increased risk of spread of HIV and AIDS and STIs	• Conduct sensitization on HIV/AIDS and STIs to workers and communities; • Provide condoms (both male and female) and encourage their use; and • Provide voluntary counselling and testing (VCT) services.	Quarterly	Contractor DHS	MUBAS PIU Community Leaders	400 for condoms Cost for sensitization included in 2.2.12	Included in 2.2.12
2.2.	• Interaction between Contractor workers and community members	Increased risk of gender-based violence (GBV), sexual exploitation and abuse (SEA), and sexual harassment (SH).	• Conduct awareness campaigns on GBV, SH, and SEA risks to workers, MUBAS staff, students, and surrounding communities • Institute and implement a GBV/SEA/SH sensitive GRM for reporting and management of cases • Ensure that the Code of Conduct is signed and understood by all workers in line with issues of GBV, SH, and SEA; • Provide separate restrooms and change room facilities for men and women; and • Provide signage/information on GBV/SH/SEA in local language.	Quarterly	Contractor MUBAS DGO DSWO	MUBAS PIU Community Leaders	600 for awareness campaigns	N/A

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
2.2.	• Movement of construction vehicles to and from the construction site • Traffic Diversions	Disturbance of traffic along the access roads leading to the construction site.	• Schedule movement of construction vehicles to avoid peak traffic hours; • Develop and implement a traffic management plan; • Where feasible, designate specific routes for construction traffic and ensure that they are clearly marked and separated from public traffic; and • Inform the public about the construction and potential traffic disruptions.	Quarterly	MUBAS Contractor Community Leaders	MUBAS PIU Supervising Engineer Community Leaders	To be included in Contractors' BOQ	N/A
2.2.	• Execution of works during construction of the 2-storey building and associated structures	Increased risk of child labour and abuse	• Include a clause against employing children in the construction works contract and enforce it; • Use of identity cards (IDs) to verify ages during recruitment especially for unskilled labour; • Sensitize the community on the dangers of child labour; • Encourage the community to report to the authorities in cases of child labour; • Encourage children to be in school; • Include child safeguarding policy in the contracts with contractors; and • Inspect the construction site regularly to check for child labour.	Quarterly	Contractor CSC DLO	MUBAS PIU Community Leaders	Cost for awareness campaigns and sensitization included in 2.2.14	Included in 2.2.12
3.	**DEMOBILISATION PHASE**							
3.1.	**Positive Impacts during Demobilisation Phase**							
3.1.	• Removal of construction equipment,	Improved visual appearance	• Provide workers with appropriate and adequate PPE when conducting cleaning activities;	Twice during demobilisation phase	Contractor	MUBAS PIU Community Leaders	500 for PPE	900

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
	materials and rubble. • Landscaping		• Remove any remaining construction debris on site; • Dispose construction wastes in approved areas in a safe manner; • Landscape unpaved areas with grass and flowers as appropriate; and • Reuse construction material (earth) for backfilling and landscaping					
3.1.1	• Cessation/ discontinuation of construction works • Demobilisation of construction equipment, machinery and temporary structures • Efflux/ outflow of construction workers community	Reduced occupational health and safety risks	• Provide workers with appropriate and adequate PPE when conducting cleaning activities • Community awareness on health and safety risks; and • Adhering to health and safety guidelines	Twice during demobilisation phase	Contractor	MUBAS PIU Community Leaders	200 for community awareness	Included in 3.1.1
3.1.1	• Cessation/ discontinuation of construction works • Demobilisation of construction vehicles and machinery • Site clearance and rehabilitation	Reduced public health and safety risks	• Remove any remaining construction machinery and vehicles on site; • Dispose construction wastes in approved areas in a safe manner; • Restrict the public from going to the construction site by putting warning signs and erecting a site-hoarding fence; • Developing a demobilisation plan that considers OHS issues • Rehabilitating all trenches and borrow pits created by the project	Twice during demobilisation phase	Contractor	MUBAS PIU Supervising Engineer DHS	Part of Contractor's operations budget	Included in 3.1.1

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
3.2.	**Negative Impacts during Demobilisation Phase**							
3.2.	• Laying off of workers	Loss of income source	• Sensitize workers on the duration of the project during orientation before they commence work; • Providing training on preparation for demobilization and promotion of the employees with agencies and future employers; and • Training of local employees in skills that enable them to take up new employment readily.	Once during demobilisation phase	Contractor	MUBAS PIU Community Leaders	Part of Contractor's operations budget	300
3.2.	• Inadequate rehabilitation and abandonment of borrow pits affecting local aesthetics and environmental conditions.	Risk of inadequate restoration of the project site post-construction	• Fill up and close pits after the construction works; • Rehabilitate all work sites; • Source construction materials (e.g., sand and quarry) from licensed suppliers; and • Avoid making deep pits during the construction period	Once during demobilisation phase	Contractor	MUBAS PIU Community Leaders	Part of Contractor's operations budget	Included in 3.1.1
3.2.	• Poor/ improper disposal of remaining construction waste	Improper disposal of remaining construction waste and materials	• Develop a comprehensive waste management plan. • Train workers on proper waste disposal practices. • Establish designated areas for waste storage on-site, clearly marked for different types of waste. • Engage a licensed waste disposal company for the removal and disposal of hazardous and non-hazardous waste • Dispose wastes at sites designated by the District or City Council	• Once during demobilisation phase	• Contractor	MUBAS PIU Community Leaders	Part of Contractor's operations budget	Included in 3.1.1
4.	**OPERATION AND MAINTENANCE PHASE**							
4.1.	**Positive Impacts during Operation and Maintenance Phase**							

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
4.1.	• Operation of the 2-storey building comprising Computer Lab, Resource Centre (including library and e-library), Offices, Classrooms, Boardrooms and Tuckshop	Increased annual enrolment of students	• Set a 40:60 enrolment ratio for boys and girls to promote gender equality and girls' empowerment; • Simplifying enrolment processes; • Ensure that course offerings reflect diverse perspectives and include content relevant to women's experiences; • Establish scholarships specifically for female students; • Allocating resources strategically based on students' needs and demands; and • Investing in the professional development of staff members to advance their teaching skills.	Annually	MUBAS NCHE	MUBAS MoE	To be included in institution's operational budgets	To be included in institution's operational budgets
4.1.	• Recruitment of staff (e.g lecturers, tutors, cleaners and security guards)	Increased employment opportunities	• Ensure that well qualified members of staff are employed; • Provide equal employment opportunities to women and men that qualify (60:40 ratio in line with the National Gender Policy); • Provide contracts to employees with a clear scope of work, schedule, and breakdown of payments; and • Placing the employed staff on pension scheme and other fringe benefits.	Annually	MUBAS	DCDO Community Leaders	To be included in institution's operational budgets	To be included in institution's operational budgets
4.1.	• Accommodation renting by students enrolled at the campus • Purchase of goods and services by staff and students	Increased business opportunities	• Sensitize local business persons about the available business opportunity around the MUBAS; • Sensitize local business persons to provide high quality products and private hostels for business sustainability; and	Bi-annually	MUBAS	DCDO Community Leaders	To be included in institution's operational budgets	To be included in institution's operational budgets

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
			• Encourage students and staff to buy products from local traders.					
4.1.4	• Operation of the 2-storey building	Increased generation of revenue for the MUBAS	• Employ qualified lecturers and tutors; • Maintain high-quality education standards; and • Continuous learning and innovation to enhance knowledge and skills to module delivery.	Annually	MUBAS	MUBAS NCHE MoE	To be included in institution's operational budgets	To be included in institution's operational budgets
4.1.5	• Remission of taxes by MUBAS	Increased tax revenues for the government	• The MUBAS to remit taxes and levies to the appropriate authorities on time. • The MUBAS to purchase materials from suppliers with valid tax clearance certificate. • The MUBAS to ask for Value Added Tax receipts when procuring goods and services.	Annually	MUBAS	Malawi Revenue Authority	To be included in institution's operational budgets	To be included in institution's operational budgets
4.1.6	• Daily teaching and learning activities at the MUBAS, Lilongwe campus	Improved national education standards	• Regularly conduct maintenance of the building and associated structures to uphold it at high standards; • Provide opportunities for staff to improve their knowledge and skills; and • Use up-to-date teaching methods and technologies.	Bi-annually	MUBAS	MUBAS MoE NCHE	To be included in institution's operational budgets	To be included in institution's operational budgets
4.1.7	• Operation of the 2-storey building comprising Computer Lab, Resource Centre (including	Enhanced infrastructure development around the MUBAS Lilongwe campus	• Sustainably managing and maintaining the 2-storey building and the related infrastructure; and • Design to be following the National Construction Industry Council (NCIC) and any other relevant standards such as NCHE.	Annually	MUBAS	NCHE NCIC	To be included in institution's operational budgets	To be included in institution's operational budgets

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
	library and e-library), Offices, Classrooms, Boardrooms and Tuckshop							
4.2.	**Negative Impacts during Operation and Maintenance Phase**							
4.2.	• Presence of staff and students for daily teaching and learning activities • Repairing of infrastructure • By-products including e-waste from computer lab and server rooms	Increased generation of waste	• Sensitize staff and students on indiscriminate waste disposal; • Provide appropriate containers across the campus for waste disposal and easy collection; and • Sell or recycle metal waste to tinsmiths or vendors for reuse or resale.	Quarterly	MUBAS	MUBAS EDO Lilongwe City Council	To be included in institution's operational budgets	To be included in institution's operational budgets
4.2.	• Operation of the 2-storey building	Increased demand for water and energy	• Consideration of designs that minimize and optimize energy use such as security lights that are equipped with photocell sensors • Usage of alternative sources of energy such as solar and wind energy • Enforcing energy-saving practices • Consideration of designs that maximize rainwater harvesting • Enforcing water-saving practices	Monthly	MUBAS	Ministry of Energy	To be included in institution's operational budgets	To be included in institution's operational budgets
4.2.	• Use of septic tanks for wastewater	Increased risk of water pollution	• Regularly empty the septic tanks when necessary; and • Inspect and repair any leakages to	Monthly	MUBAS	MEPA EDO	To be included in institution's	To be included in institution'

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
	management at the MUBAS Lilongwe campus which is about 1 Km from Nanjiri River		prevent contact between sewage waste and water sources/ land.			Community Leaders National Water Resources Authority	operational budgets	s operational budgets
4.2.4	• Use of materials/equipment from laboratories and engineering workshops • Utilization of existing building electrical installations	Increased risk of occupational health and safety hazards	• Health and safety procedures must be written and posted in sections of the 2-storey building; • Placing fire-fighting equipment/ mechanisms in strategic positions of the 2-storey building; • Carrying out regular inspections and maintenance of electrical installations and possible accident spots; and • All stairs must have handrails to protect against accidents.	Monthly	MUBAS	MBS DoB MoL- OSH Department	To be included in institution's operational budgets	To be included in institution's operational budgets
4.2.5	• Utilization of existing building electrical installations	Risk of fire	• Install fire alarm system • Install smoke detectors • Install fire-fighting equipment • Ensure regular maintenance of fire-fighting equipment • Appliances to be used in the building must be authorised by the MUBAS Management	Monthly	MUBAS	MBS DoB MoL- OSH Department	To be included in institution's operational budgets	To be included in institution's operational budgets
4.2.6	• Interaction between the MUBAS staff and students as well as surrounding villages in SGVH Mwase	Risk of Sexual Exploitation and Abuse (SEA) / Sexual Harassment (SH)	• Include a clause in the MUBAS staff contracts against sexual exploitation, abuse and harassment; • All staff to sign and adhere to Code of Conduct; • Sensitize the MUBAS staff, students and the surrounding communities on SEA and SH;	Quarterly	MUBAS DSWO DGO	DSWO DGO Community Leaders	200 for sensitizations	To be included in institution's operational budgets

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
			• Implement a GRM that students and communities can utilize to report issues related to SEA and SEA; • Discipline employees involved in sexual exploitation, abuse and harassment.					
4.2.	• Social interaction between the MUBAS community and people from SGVH Mwase • Illicit sexual relationships and marriage breakages • Exploitation and abuse	Risk of social conflicts between the MUBAS community and surrounding villages	• Sensitize the MUBAS staff, students and community members on the risks of indulging in extra-marital affairs to prevent conflicts; • Institute grievance redress mechanisms that local people can use to lodge complaints related to conflict with the MUBAS community has occurred.	Quarterly	MUBAS	DSWO DGO Community Leaders	To be included in institution's operational budgets	To be included in institution's operational budgets
4.2.	• Presence of students and staff causing long-term operational noise affecting the surrounding communities	Noise pollution	• Design buildings with noise-reducing features like double-glazed windows and sound proof material; • Position noisy facilities (away from quiet zone; • Limit the use of loudspeakers and sound amplification systems outside of designated times; • Implement traffic calming measures in and around the campus to reduce speed and noise from vehicles; • Communicate with local residents about planned activities and noise levels; • Regularly monitor noise levels on	Quarterly	MUBAS	DoB MoL- OSH Department	To be included in institution's operational budgets	To be included in institution's operational budgets

S/N	Activity	Risks and Impacts	Enhancement / Mitigation Measures	Frequency of Monitoring	Responsible Entity		Management cost/year (USD)*[1]	Monitoring cost/year (USD)*[1]
					Enhancement / Mitigation	Monitoring		
			campus and in surrounding areas to identify problem spots; • Promote awareness among students and staff about noise levels and respectful behaviours in shared spaces.					
4.2.9	• Construction of substructure, super structure, drainage system and paved surfaces	Increased risks of climate change and human-induced disasters	• Construct structural strong building with a strong foundation as well. • Install a gutter to collect rainwater; the water should be directed to soak-away pit. • Construct an appropriate drainage system for the university. • Implement wind engineering measures and techniques that includes installing extra nails, using reinforced joints, using more binding wires for the roof frame, etc. • Plant trees and other vegetation around the university to act as barriers against severe winds and to reduce movement of flooding water. • Regularly inspect and conduct maintenance of the buildings. • Develop a disaster emergency preparedness and recovery plan for the university. • Conduct awareness and sensitizations on disaster management and mitigation.	Annually	MUBAS	District Resilience Management Officer (DRMO) Department of Disaster Management Affairs (DoDMA)	To be included in institution's operational budgets	To be included in institution's operational budgets
TOTAL ESTIMATED COST							**11,800**	**3,700**

5 Implementation Arrangements

5.1 Implementation Arrangements

Implementation of the ESMP and the Monitoring Plan requires shared responsibilities among various stakeholders. The key stakeholders include the Project Implementation Unit (PIU), the MUBAS as the Project Proponent and its Contractors, the Malawi Environment Protection Authority and the Lilongwe District Council.

Table 5.1 below summarizes the roles and responsibilities regarding the implementation arrangements for Environmental and Social Management.

Table 5.1: Implementation Arrangements

Responsible Party	Roles and Responsibilities
The MUBAS	• Ensure that the Project complies with the Government of Malawi's environmental laws and regulations; • Undertake environmental and social management capacity-building activities and orientation and awareness training for contractors • Establish a Grievance Redress Mechanism, as described in the SEP, to receive and facilitate resolution of affected peoples' concerns, complaints, and grievances about the Project's environmental and social performance • Ensure that the ESMP approval and all required approvals and permits have been obtained prior to the commencement of construction activities on the site; • Ensure that MEPA has been notified of the date on which construction activities will commence before the commencement of any activity; • Ensure that the recommendations of the ESMP are included in the construction works contract; and • Ensure that the operation of the project is undertaken in line with the requirements of the operational phase ESMP.
Contractor	• Ensure implementation of all applicable environmental mitigation measures during all works on site including the ESMP and LMP; • Ensure that all employees, suppliers, agents etc. are fully aware of the environmental requirements detailed in the ESMP; • Conducting capacity building for the construction workers about the implementation of the ESMPs; • Ensure that the works on the site are conducted in an environmentally controlled manner; • Inform the Project Proponent and MEPA should environmentally conditions on the site deteriorate, e.g. dumping, pollution, littering and damage to vegetation etc.; and • Conduct instructions issued by Inspectors from various institutions including MEPA, required to comply with the ESMP.

Responsible Party	Roles and Responsibilities
Lilongwe District Council	The district offices including Environment, Labour, Gender, Youth and others must work with the Project Proponent in monitoring the implementation of the ESMP; and
Ministry of Education (MoE) – SAVE PIU	• Planning and implementation of the ESMP • Ensuring that social and environmental protection and mitigation measures in the ESMP are incorporated into site-specific Environmental and Social Action Plans. • Ensuring that the District Environment Sub-Committee (DESC) guided by the Environmental District Office is provided with relevant resources to oversee the implementation of the ESMP. • Supervision and monitoring of the progress of activities of contracted consulting engineers for the implementation of different components of the ESMP. • Responsible for modifications to the ESMP when unexpected changes are observed during implementation. vi. Reporting of incidents (Authorities, World Bank) • Ensure submission of periodic environmental and social management and monitoring reports to the World Bank • Provision of permits related to site activities e.g. working at height, confined space, and Incident Investigations. • Promote improved social and environmental performance through the effective use of management systems • Promote external communication with other implementing partners, government ministries and agencies, and non-government organizations on matters of mutual interest related to environmental management under project development
Supervision Engineer/ Consultant:	Work with the PIU to supervise the works and ensure mitigation measures and any necessary corrective actions are being followed for the smooth execution of the works. The monitoring results will be used to improve project implementation and provide information for project supervision. MEPA will use the legal mandate to monitor project activities' implementation and enforce compliance with national and international laws and regulations.
MEPA	• Reviewing this ESMP and issuing approval to proceed with the development; and • Conduct inspections and monitor compliance with the implementation of the ESMP during the construction and operation phase of the project.
Community Leaders	Taking part in the management and monitoring of specific enhancement/mitigation measures.

5.2 Proposed Training and Capacity Building

The capacity-building programs will enable the stakeholders to effectively monitor construction and related activities in compliance with national and international laws, regulations, and

guidelines. The capacity building programs will target the MUBAS Project Implementation Team (PIT), the MUBAS staff members, the Contractor; as well as Community Leaders that will be responsible for implementation of mitigation measures identified in this ESMP.

Table 5.2 outlines a list of the required training, the target audience including the responsible institution and the required level for implementation of the training.

Table 5.2: Proposed Training and Capacity Building Approach

Level	Responsible Party	Training Method	Audience	Proposed Themes	Estimated Cost (USD)
Local/Site Level	SAVE PIU	• Workshop Meeting	• Project Staff • Construction Supervision Engineer / Consultant • MUBAS PIT • Contractor(s)	• ESF Requirements • Roles and responsibilities for environmental and social issues • Occupational health and safety • Labour requirements • Emergency prevention and preparedness and response arrangements to emergency situations • Managing GBV/SEA risks • Training for education establishment employees, students and local • communities, particularly women: • The function of the GRM and Grievance Redress Committees • GBV/SEA provisions and referral pathways • Road safety and community health and safety	2,000
	MUBAS PIT	Seminar/ Mentorship Meeting	GRM Committee	• Environmental and Social Framework requirements • ESMP implementation • Grievance Redress Mechanism (GRM) • Code of Conduct	1,000
	Contractor	On-site Training	Contractor Workers	• Environmental and Social Framework requirements • ESMP implementation • Grievance Redress Mechanism (GRM) • Code of Conduct	680

Level	Responsible Party	Training Method	Audience	Proposed Themes	Estimated Cost (USD)
Community Level	MUBAS PIT	Community Training	Community Leaders Community GRM Committee Members	• Grievance Redress Mechanism (GRM) • GBV, SHEA and Child Labour	520
TOTAL ESTIMATED COST					**4,200**

5.3 Estimated ESMP Implementation Budget

Table 5.3 lists estimated cost items for the implementation of the ESMP, which have been included in the overall project budget:

Table 5.3: Summary ESMP Implementation Budget

S/N	Activity/Cost Item	Potential Cost/ Year (USD)
1.	Implementation of site-specific ESMPs and other site-specific plans	15,500
2.	Capacity building training (venue, travel, refreshments, etc.)	4,200
3.	Software for data collection/supervision/monitoring/grievance redress	200
4.	Printing of awareness-raising materials/grievance redress materials	900
5.	Cost of obtaining clearances or permits (EIA scrutiny and workplace registration)	200
6.	Travel budget for environmental and social staff site visits	8,000
7.	Supervision Engineer/ Consultant site visits	2,000
TOTAL		**31,000**

6 Stakeholder Engagement, Grievance Redress Mechanism, Disclosure and Consultations

6.1 Stakeholder Engagement

The SAVE project Stakeholder Engagement Plan (SEP) was developed based on the World Bank's Environmental and Social Standard 10 on Stakeholder Engagement. (https://documents1.worldbank.org/curated/en/314131616158364147/pdf/Stakeholder-Engagement-Plan-SEP-Skills-for-A-Vibrant-Economy-Project-P172627.pdf).

Guided by ESS10 and SAVE Project SEP, a wide range of stakeholders were consulted during the development of this ESMP. The consultations were conducted through Key Informant Interviews (KII) and Focus Group Discussions (FGD) to incorporate the input of different stakeholders at national, district, and community levels. In addition, the MUBAS students and members of staff were also consulted and were used for conducting stakeholder consultations.

Main/ key outcomes from the stakeholder engagement meeting have been presented below and a detailed account of the issues raised during stakeholder consultations is presented in Appendix 3.

1. **Development of ESMP:**
   - **Recommendation:** The development of the ESMP should consider all environmental issues including vegetation and waste management.
   - **How the issues have been addressed:** Environmental issues were comprehensively considered during the study.
2. **Building Design:**
   - **Issues:**
     a) The building should be disability friendly;
     b) The developer should also consider including a "lactating bay/room" for nursing employees
     c) The building should be climate change and disaster-resilient

   - **How the issues have been addressed:** The issues raised have been recommended in Table 4.4 (S/N 1.2.1) for the Developer to consider.

3. **Employment Opportunities:**
   - **Expectations:**
     a) The project is welcomed due to expectations for employment opportunities for local people.
     b) Deliberate efforts should be made to employ women who qualify. When a 60:40 gender ratio has failed despite all efforts, the Contractor should document why it has failed

   - **How the issues have been addressed:** The issues raised have been recommended in Table 4.4 (S/N 2.1.1) for the Developer to consider.

4. **Social Disruptions:**
   - **Issues:** Concerns were raised about the risk of Disruption of marriages, Gender-Based Violence, Child Labour and the spread of HIV & AIDS due to the influx of non-local workers.

- **How the issues have been addressed:** Mitigation measures for above mentioned risks have been proposed in Table 4.4 for the Developer to consider.

5. **Social Welfare:**
   - **Expectation:** Stakeholders stressed the importance of workplace health and safety and management of community hazards, provision of potable water, labour rights in line with national labour laws; and presence of workplace policy and codes of conduct.
   - **How the issues have been addressed:** The issues raised during the consultation have been considered and incorporated in ESMP.

6. **Involvement of District Authorities:**
   - **Expectation:** The developer or Contractor should consult and involve the District Council or relevant Ministries throughout project implementation.
   - **How the issues have been addressed:** A stakeholder engagement plan for the SAVE Project included the District Council and Government Ministries, Departments and Agencies (MDAs) as Interested Parties. These have been consulted during ESMP development and engagement will be on going thought project implementation.

7. **Awareness and sensitisation:**
   - **Expectation:** Awareness campaigns should be conducted around the project area on the project and its implications, Child Protection, Gender Based Violence (GBV) and Sexual Exploitation, Abuse and Harassment (SEAH) etc.
   - **How the issues have been addressed:** Mitigation measures in Table 4.4 have included elements of awareness raising and sensitisation on the above-mentioned subjects.

6.2 The Project Grievance Redress Mechanism

6.2.1 Processes and Institutional Arrangements of the GRM

The Grievance Redress Mechanism (GRM) for the SAVE Project shall be established at two levels. These include the:

A. Institutional & Community Level:

There shall be two committees at the Institutional & Community Level.

- ✓ **Institutional & Community Grievance Redress Management Committees (ICGRMC)** has been established by MUBAS to manage grievances at the Institutional & Community level. For the purpose of this GRM, a community comprises the Group Village Headman area where MUBAS is located. The committee comprises MUBAS staff representatives, affected community representatives, one women's representative, and one representative from VDC. The Group Village Head may to attend, where necessary. The committee is the lowest and an entry point of grievances at the institutional and community level. The committee at this level shall record, vet and hear cases as submitted to them by project-affected persons. If the aggrieved party is satisfied with the resolution, the case will be closed. For an effective GRM, the MUBAS should ensure that the following five main steps are achieved whenever handling grievances. These steps include; grievance reporting, complaint handling and assessment, case resolution and closure, registry update and GRM monitoring and evaluation.
- ✓ **Workers Grievance Redress Management Committee (WGRMC)** will be established to manage work related grievances. Membership has to comprise of two workers'

representatives, MUBAS representative, Contractor representative and a representative from the District Labor Office.

All unclosed cases from these Institutional & Community Level Grievance Redress Management Committees shall be referred to Project Implementation Unit Grievance Redress Management Committee (PIUGRMC).

B. PIU Level

✓ **Project Implementation Unit Grievance Redress Management Committee (PIUGRMC)**
In the event that the case was not closed at Institutional & Community Level, the case will be referred to the PIUGRMC. The PIUGRMC shall hear the case and review the decisions made earlier by the two lower committees. If the aggrieved party shall accept the resolution made, the case shall therefore be closed at this level.

Referral grievances will be investigated in detail to determine the cause of the unsatisfactory outcome and to attempt to resolve and close the grievance. When a complainant is not satisfied with the resolution offered by the Project Grievances Redress Committee, the grievance can be referred to other institutions, for example the District Labour Office in the case of employment grievances or the courts of law. Where the case was not closed at this level, the aggrieved party shall be advised to seek justice from other institutions (for example the District Labour Office in the case of employment grievances or the Court of Law. The decision made by the Court of Law shall be final.

6.2.2 Grievance Reporting and Grievance Recording

The grievance redressal committee will have to make available multiple ways for grievance reporting. Complaints of grievances may be reported in different ways including but not limited to the following:

- **Face-to-Face**: this includes verbal or written submissions through face-to-face interactions with members of grievance redressal committees.
- **Grievance Box**: these will have to be placed in strategic places around the MUBAS campus.
- A **GRM Focal Person's Phone Number** with WhatsApp and text facilities (Dr. Witness Kuotcha: +265 994 70 07 66)
- A GRM Focal Person's **Email Address**. (wkuotcha@mubas.ac.mw)

6.2.3 Responding to and Resolving Complaints

Complainants should be attended to and responded to within a maximum period of two weeks after receipt of the complaint regardless of whether a decision has been reached. The Safeguards Specialist appointed by the MUBAS will be the designated officer responsible for responding. The complainant should be informed that their complaint has been received and that:

i. If the complaint is upheld, advise the complainant what action will be taken.
ii. If a complaint is not upheld, the complainant must be informed of this, the reason why, their right to recourse and where to take the complaint to.
iii. If a decision has not been reached by the committed timeframe, the complainant will be provided with a progress report and an indication of a likely date of conclusion.

6.2.4 Assessment of a Complaint / Grievance Received

When a complaint is received, an assessment shall be done to determine whether the complaint or grievance is related to the 2-storey building project implementation or not. If the complaint is not related to the project the complainant shall be advised to channel their complaint to the relevant institution. If the complaint or grievance is related to the project, the GRM committee shall hear the case and make the necessary follow-ups to establish the truth of the matter. The outcome of the analysis shall be communicated to the complainant within a period of 14 days.

6.2.5 Resolution and Closure

Where a resolution has been arrived at and the complainant accepts the resolution, the complainant shall be required to sign the resolution and closure section in the Grievance Resolution Agreement Form. A member of the GRM committee (preferably the Chairperson or Secretary) shall also be required to counter sign. This shall signify that the complaint or grievance which was presented, has been fully discussed and closed. In case of a referral, the same members shall be required to sign signifying that the case was not closed and has been referred to another entity.

6.2.6 Registry and Monitoring

All grievances received should be recorded into a publicly accessible register for grievances that can easily be tracked and monitored. The register will present a database showing the number of complaints:

i. that have been received
ii. for which an agreement has been reached
iii. for which an agreement has not yet been reached
iv. that have been resolved
v. that have gone to mediation.

The information provided in the database is expected to help the project team to improve the grievance redress mechanism and to better understand how to address adverse impacts of the project. Each complaint shall have an individual reference number that can be tracked and whose recorded actions are complete. The grievance registry should contain a record of the person responsible for the complaint and should have dates for the following events:

i. The date the complaint was reported;
ii. The date of and information on proposed corrective action sent to the complainant (if appropriate);
iii. The date the complaint was closed out; and
iv. The date the response was sent to the complainant.

7 Comments on Infrastructure Layout Plans and Designs

7.1 Infrastructure Layout Plans

The wastewater management system has not been covered in the site layout plans presented to the Consultant. The designs do not indicate the location of septic tanks. However, the Consultant proposes the following design considerations:

a) Design of the wastewater management facility(s) should consider that the proposed 2-storey building is just one structure to be incorporated within a Master plan which will later house additional individual structures with independent wastewater management demands. It is therefore pertinent for the wastewater management facility(s) of the 2-storey building to be cognisant of future development plans and accommodate the same, to avoid double handling while promoting efficiency maximization of resources.
b) The location options for wastewater management facility(s) of the 2-storey building can include:
    - Nearby "out of the way" positioning of wastewater management facilities; servicing only the current proposed development
    - Strategic positioning of "oversized" wastewater facilities further from the 2-storey building guided by environmental conditions and elevations to achieve the lowest possible location of the wastewater management facilities in order to accommodate most / all future developments within the parcel
c) In the case where septic tanks are preferred, national guidelines for on-site sanitation systems should be followed. These, among others, include:
    - They should not be constructed within 3 m of any building or plot boundary;
    - Should not be constructed within 30 m of any groundwater source or surface water source
    - The base should be at least 15 cm thick

7.2 Designs

a) While it is generally recommended for a server room to be positioned in a more internal location, the Consultant proposes the following design consideration:
    - Swapping of the server room with the storage room to effectively allow for easy operations and maintenance of the air conditioner outdoor units and efficient heat exchange (to maintain required server room temperatures) with minimal disruptions.
    - The outdoor unit requires drainage facilities for condensate. Positioning the outdoor unit on the exterior wall would simplify the necessary pipework for the drainage.
b) Bathroom and toilets: it is recommended that windows or vents should be included along the ducks to improve ventilation.

8 Conclusion and Recommendations

8.1 Conclusion

This ESMP study for the proposed construction of a 2-storey building (a ground plus 1-storey building comprising of Lecture Hall, Offices, Classrooms, Engineering Workshops, Boardrooms and Laboratories) has been prepared in accordance with EIA guidelines for Malawi as well as the World Bank's Environmental and Social Standards. The study has determined the potential positive and negative environmental and social impacts that would emanate from the implementation of the project during the planning and design, construction, demobilization and operation and maintenance phases. The study used various approaches including literature review, field surveys/observations, stakeholder consultations; using meetings and interviews to gather information on the physical, biological, and social related impacts of the proposed project. In addition, the study also utilized expert and professional judgments to identify and evaluate potential environmental and social impacts.

The ESMP has shown that the construction of the 2-storey building at MUBAS, Lilongwe campus will potentially generate localized negative impacts on the biophysical and socio-economic environment while positive impacts, ranging from moderate to high will be generated from the implementation of the project. The cost for implementing the Environmental and Social Management Plan is estimated to be **USD 31,000** (1 USD is equivalent to MWK 1,735**)** per year.

8.2 Recommendations

The implementation of the project will influence the environmental and social components positively or negatively hence the development of this ESMP. The ESMP will guide the users in managing, minimizing, mitigating, and monitoring the environmental and social impacts that will emanate from the planning and design, construction, demobilization and operation phases. The study recommends the following based on the impacts identified (both positive and negative), as well as enhancement and mitigation measures:

- Ensure that all the necessary approvals and permits (see appendix 6) are obtained prior to the implementation of the project; and that all conditions of approval are complied with throughout the project cycle.
- The Contractor should prepare a Construction Environmental and Social Management Plan (C-ESMP) before commencement of construction works.
- Construction of septic tanks should consider the underground water sources in the area.
- During construction, the contractor should avoid clearing the Vulnerable *Jacaranda mimosifolia* species that were observed at the project site. Where they are removed, they must be replanted.
- Provide adequate security during the entire construction period as well as the operation phase of the project.
- Provide regular awareness and community sensitization campaigns on safety measures at the project; and
- Ensure that funds are available for the implementation of environmental management and monitoring activities.

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APPENDICES

Appendix 1: Land Title Deed for MUBAS

REPUBLIC OF MALAWI

REGISTERED LAND ACT
(Chapter 58:01)

Land Certificate

Registration District
LILONGWE

Title No.
CHITSIME-25/1/6

This is to certify that **MALAWI UNIVERSITY OF BUSINESS AND APPLIED SCIENCES OF PRIVATE BAG 303, CHICHIRI BLANYTRE 3** is now registered as the absolute proprietor of the land comprised in the above-mentioned title, subject to the entries in the register relating to the land and to such of the overriding interests set out in section 27 of the Registered Land Act as may for the time being subsist and affect the land.

GIVEN under my hand and the seal of the
LILONGWE District Registry
This 5TH Day of AUGUST, 2024

ANTHONY TCHOKOLA NZIMA
Land Registrar

At the date stated on the front hereof, the following entries appeared in the register relating to the lease:

PART A---PROPERTY SECTION
(Easements, etc.)

APPROXIMATE AREA : **12.341 HECTARES**
MAP SHEET. NO.: **WV8841R & DP.2110/2022**
SD/26833

PART B---PROPRIETORSHIP SECTION
(Inhibitions, Cautions and Restrictions)
NIL

PART C---INCUMBRANCES SECTION
(Sub-leases, charges, etc)
NIL

ANTHONY TCHOKOLA NZIMA
Land Registrar

Appendix 2: Environmental and Social Screening Form for MUBAS Sub-project

Environmental and Social Screening Form for Screening of Potential Environmental and Social Impacts of SAVE activities

Government of the Republic of Malawi

Ministry of Education, Science and Technology

Skills for a Vibrant Economy (SAVE) Project

Environmental & Social Screening Form

Guidelines: Site inspection of project site. The evaluation results to be a consensus of at least three officials.

Project Name: Construction of a 2 storey Building under SAVE	District.: Lilongwe
Project Location: GVH: Muoase T/A Kalumbe	Nature/Size
Name & Signature of Evaluator: K. Chidziwisano	Date of Field Evaluation: 29/08/2022

W. Kwotcha, C Khaliforo - A. Kalemba G. Simwaka

		Appraisal	Stage of EHS potential impact/risk/issue		Significance	Potential Mitigation Measures
		Yes / No	Construction	Operation	Low, medium, high	
1.0	Environmental Screening					
	Will the project generate the following impacts					
1.1	Loss of trees/ vegetation/ biodiversity	✓	✓		✓	Plant trees and ornamental plants around project site selective clearing
1.2	Soil erosion/siltation in the area	✓	✓		✓	provision of drainage system proper task scheduling Backfill excavations immediate
1.3	Pollution to land- diesel ,oils	✓	✓		✓	Proper storage & disposal of used oils
1.4	Dust emissions and increased particulate matter	✓	✓		✓	-Frequent watering - PPE provision to workers - Regular vehicle maintenance - Hoarding project site
1.5	Solid waste generation	✓	✓	✓	✓	Promotion of reuse principle provision of sanitary facilities Proper waste disposal
1.6	Liquid wastes and waste water generation	✓	✓	✓	✓	Provision of septic tanks provision of sanitary facilities
1.7	Introduction of hazardous chemicals and wastes	✓	✓		✓	Proper handling, storage & disposal of chemicals -use of environmental friendly chemicals that are recommended - Minimize use of hazardous chemicals

	water					
1.9	Rubble/heaps of excavated soils	✓	✓		✓	Reuse Immediate collection and disposal at designate site
1.10	Invasive tree species	✓				
1.11	Long term depletion of water	✓				
1.12	Reduced flow of water sources	✓				
1.13	Nuisance from noise and vibrations	✓	✓		✓	Timely and regular vehicles servicing Proper site location
1.14	Loss of soil fertility	✓				
1.15	Incidence of flooding	✓				
1.16	Increased Energy use	✓		✓		use of alternatives energy source such as solar sensitization on efficient use
1.17	Increased demand and/or portable water use	✓	✓	✓	✓	provision of water usage efficient equipment
1.18	Increase emergence of man-made and natural disasters e.g. fires etc.	✓	✓	✓	✓	proper handling and storage of flammable equipment provision of fire fighting equipment
2.0	Cultural, Social and Economic Screening					
	Will the project generate the following negative social and economic impacts?					
2.1	Loss of land to households	✓				
2.2	Loss of properties – houses, structures	✓				
2.3	Loss trees, fruit trees by households	✓				
2.4	Loss of crops by people	✓				
2.5	Loss of access to river/forests/grazing area	✓				
2.6	Impact cultural site, graveyard land	✓				
2.7	Conflicts over use of local water resources	✓				
2.8	Disruption of important pathways, roads	✓				
2.9	Loss communal facilities –churches	✓				
2.10	Loss of livelihood system	✓				
2.11	Blockages to footpath/roads	✓				
2.12	Bring resettlement	✓				

2.12	Bring resettlement issues		✓			
2.13	Spread of HIV/AIDS and other STIs	✓	✓	✓	✓	Sensitization meetings on HIV/AIDS for workers, students condom provision, VCT services
2.14	Spread of Covid-19	✓	✓	✓	✓	observance on Covid 19 preventive measures
2.15	Occupational safety and health issues	✓	✓		✓	Sensitization on risks & hazards PPE provision Avoid risky tasks
2.16	Increase exposure of Hazardous chemicals and wastes	✓	✓		✓	proper handling, storage & disposal of chemicals
2.17	Safety issues with respect to poor building designs		✓			
2.18	Exclude other users especially disabled and vulnerable with respect to poor building designs		✓			
2.19	Increased GBV and SEA	✓	✓	✓	✓	Sensitization on GBV & SEA Functional GRM
2.20	Increased violence against children		✓			

Overall evaluation of Screening Exercises.

The results of the screening process would be either the proposed sub - projects would be exempted or subjected to further environmental and resettlement assessments. The basis of these options is listed in the table below:

Review of Environmental Screening	Tick	Review of Social and Economic Screening	Tick
1. The project is cleared. No serious impacts. (When all scores are "No" in form)), though the bids/contracts still would have standard EHS clauses	✓	1.The project is cleared. No serious social and economic impacts, (Where scores are all "No", "few" in form) though the bids/contracts still would have standard clauses on addressing emerging social and economic issues	✓
2. There is need for further assessment -ESMP or ESIA (when some score are "Yes, High" in form), as determined by MEPA		2.There is need for resettlement/ compensation. (When some score are "Yes, High" in form) including need for ESMP or ESIA as determined by MEPA	

Approval by Environmental officer/	**Approval by Director of Planning and Development**
Name: Tadala Sendezera	Name: William Chirwa
Signature Date 30/08/22	Signature Date 30/08/22

Appendix 3: Consultation Summaries / Outcomes

Stakeholder Operational Level	Theme	Key Consultation Feedback
National Level MEPA, MOE, Ministry of Gender, Community Development and Social Welfare (MoGCDSW), Ministry of Labour- Occupation Safety and Health (OSH) Department, National Water Resources Authority, Ministry of Water and Sanitation- Department of Water Resources, Ministry of Water & Sanitation; Department of Water Supply, Ministry of Water & Sanitation; Department of Water Supply, Regional Lands Office, Lilongwe	Environmental Management	• The development of the ESMP should consider all environmental issues including vegetation and waste management • The project should acquire all permits before the project commences e.g. A water abstraction permit if boreholes will be drilled • The project must ensure that all substances/materials that can potentially contaminate water resources (surface and underground) are properly managed • The project should not lead to catchment degradation. • The ESMP should include the new land laws applicable to the project The number of expected employees should be highlighted to estimate solid and liquid waste generation during the construction phase
	Social Issues and general project issues	• Social issues must be considered in the ESMP. These issues include Gender-Based Violence, Child Labour, HIV & AIDS Management, Labour Management and Grievance Redress Mechanisms, among others. • The project will increase the quality of education at MUBAS due to the introduction of modern teaching and learning infrastructure • The building should be disability friendly • The project will result in increased intake

Stakeholder Operational Level	Theme	Key Consultation Feedback
		• The building should be disability-friendly (walkways, toilets, lecture rooms, washrooms etc.)
	Gender And Prevention of Sexual Exploitation and Abuse	• Awareness campaigns should be conducted around the project area on the project and its implications, Child Protection, Gender Violence (GBV) Sexual Exploitation, Abuse and Harassment (SEAH) etc. • The Contractor should aim to achieve a 60:40 gender ratio when offering employment opportunities. Deliberate efforts should be made to employ women who qualify. When a 60:40 gender ratio has failed despite all efforts • The contractor is supposed to have a workplace policy and codes of conduct to ensure that minorities are safeguarded against GBV and SEAH; • There should be safeguards to ensure that children are protected; • The contractor should allocate resources to ensure that an impregnated girl child is maintained. • In addition, issues related to gender and labour must be incorporated into the ESMP • As a safeguard intervention, the developer can facilitate the creation of safe spaces for women and children where issues concerning them can be freely discussed and reported to relevant authorities. • The developer should also consider including a “lactating bay/room” for nursing employees. The area can also be used by caregivers to look at toddlers whilst their mothers are lecturing

Stakeholder Operational Level	Theme	Key Consultation Feedback
	Labour Issues	• The project should strictly follow the labour laws for Malawi when employing people. • Contractors must provide contracts to workers, even for those doing piece work with clear written agreement
	Coordination	• Relevant government authorities must also be included in the list of monitoring institutions • The Contractor should document why it has failed. • The developer or Contractor should consult and involve the District Council or relevant Ministries throughout project implementation
District Level Lilongwe District Council (District Environmental Subcommittee) Bwaila District Hospital	Environmental Management	• The consultant should identify different types of waste that will be produced from the laboratories to determine informed means of waste management • Currently, there are plans by the Lilongwe Water Board (LWB) to increase the water supply coverage in the project area. • The most common diseases in the project area include HIV and AIDS, Cholera, Scabies, Malnutrition, Malaria, Upper Respiratory Tract Infections including Pneumonia in children and Sexually Transmitted Infections (STIs).
	Social Issues and general project issues	• The project should follow building standards regulations which include; • Use of a registered and certified architect and engineer for the preparation of designs • The project site is located near several villages, making occasional conflicts between construction workers, students, and residents likely. To mitigate

Stakeholder Operational Level	Theme	Key Consultation Feedback
		this, the project should actively engage all stakeholders throughout its duration. • The project should follow building standards regulations which include; ✓ Use of a registered and certified architect and engineer for the preparation of designs ✓ The designs to be issued an engineering certificate number 1 ✓ The 2-storey building should not be less than 3 metres from the perimeter fence for issues of accessibility during emergencies ✓ The 2-storey building should at least be 6 metres away from access roads
	Coordination	• Roles of the district council may include monitoring of waste management and labour inspections including issues to do with child labour, occupation health and safety, minimum wage e.t.c
Project Area Level Community Leaders and Members from Senior Group Village Headman Mwase, Sapitwa Bricks and Build General Dealers,Al Mahmood Foundation Trust, Chrismack Limited, and MUBAS students (Lilongwe campus	Environmental Management	• The project has the potential to escalate the risk of cases of theft in the area • The project should ensure that noise levels are monitored during construction

Stakeholder Operational Level	Theme	Key Consultation Feedback
	Social Issues and general project issues	• The communities are aware of the proposed project and that they are ready to be engaged • Community members expect employment opportunities and that members with relevant qualifications and experience should be given employment opportunities • The project should consider procuring construction materials from nearby suppliers who are licensed • The project will bring together people from diverse cultures and this will have the potential for disrupting values and beliefs.
	Gender And Prevention of Sexual Exploitation and Abuse	• Disruption of marriages by migrant workers is also a potential negative impact • Gender-Based Violence and Sexual Exploitation and Abuse may be expected

Appendix 4: Consultation Registers

STAKEHODER CONSUTATION REGISTER

DATE	Name	Institution/	Position	Contacts	Signature
10/01/2024	Misheck Ndumbo	MoGCDSW	Social Welfare	Cell: 0888575526 Email: mndombom@gmail.com	[signature]
10/01/2024	Y. Mtimuni	NWRA	Snr. Hydrologist	Cell: 0995872857 Email: yamikani.mtimuni@nwra.mw	[signature]
10/01/2024	M. Myaba	NWRA	Hydrogeologist	Cell: 0888586956 Email: mike.mnyaba@nwra.mw	[signature]
10/01/2024	Tiyamike Salanjira	MEPA	SEO	Cell: 0999600444 Email: tsalanjira@yahoo.com	[signature]
10/01/24	SHADRICK MAGOMBO	MOL-DSH	CIH	Cell: 0999419252 Email: shadmagombo@gmail.com	[signature]
10/1/24	Solomon Kalima	Forests/ Department of Water Resources	Chief Hydrologist	Cell: 0999155490 Email: solomonkalima@gmail.com	[signature]
10/01/24	Richard Bambala Nyasulu	MOL-Area 3	Lands Officer	Cell: 0999953119 0884205335 Email: richardnyasulu21736@gmail.com	[signature]
				Cell: Email:	

ENVIRRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUIDING AT MUBAS, LILONGWE CAMPUS

DATE:……………………………………

STAKEHOLDER CONSUTATION ATTENDANCE REGISTER

Date	Name	Position	Institution/Department	Contacts	Signature
12.01.24	JOSEPH KANYANGALA	DIHNC	Educ Govt	Cell: 0999393223 Email: josephkanyangalo@yahoo.com	[signature]
12/1/24	Ignatius Kaulendo	DFO (FISH)	Fisheries	Cell: 0999493943 Email: ikaulendo@yahoo.com	[signature]
12/1/24	Fazayi Kafanikhale	ADFO (Forestry)	Forestry	Cell: 0995337673 Email: Kafanikhalefc@gmail	[signature]
12/1/24	CHIMWEMWE THOMAS	DCO	LANDS	Cell: 0998785403 Email: Chimwemwestanly@gmail.com	[signature]
12/1/24	MACmillan NZUWALA	PPHO	LLDHO	Cell: 0999862724 Email: nzuwalamac@gmail.com	[signature]

ENVIRRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUIDING AT MUBAS, LILONGWE CAMPUS

DATE:……………………………………..

STAKEHOLDER CONSUTATION ATTENDANCE REGISTER

Date	Name	Position	Institution/Department	Contacts	Signature
12-01-24	Raphael Munthali	Chief Engineer	Public works – LLDC	Cell: 0993309315 Email: [illegible]munthali@yahoo.com	[illegible]
"	Veronica Badiya	DSHUC	Edue West	Cell: 0994540056 Email: veronica.badiya@gmail.com	[illegible]
"	Sophie Moyo	ADLO	LLDC	Cell: 0999 308668 Email:	S.M
"	Bonface Chimwaza	CEO	LLDC	Cell: Email:	[illegible]
				Cell: Email:	

ENVIRRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUIDING AT MUBAS, LILONGWE CAMPUS

DATE:……………………………………..

STAKEHOLDER CONSUTATION ATTENDANCE REGISTER

Date	Name	Position	Institution/Department	Contacts	Signature
12/01/24	Tamandani Sendera	Env. Off	LLDC	Cell: 0888944150 Email: tamandanisendera@gmail.com	[illegible]
12/01/24	Esther Mtambo	~~[illegible]~~ NO	LLDC	Cell: 0884092148 Email: esmtambo@gmail.com	[illegible]
12/01/24	Rebecca Budiq	EO	LLDC	Cell: 0991309270 Email: budiqrebecca5@gmail.com	[illegible]
12/01/24	Sheila Simboto	EO	LLDC	Cell: 0990319472 Email: simbotasheila@gmail.com	[illegible]
"	WESTON MASAUTEO	ADLO	LLDC	Cell: Email:	[illegible]

ENVIRRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUIDING AT MUBAS, LILONGWE CAMPUS

DATE:……………………………………..

STAKEHOLDER CONSUTATION ATTENDANCE REGISTER

Date	Name	Position	Institution/Department	Contacts	Signature
12/01/24	Rute Chiotha	IAO	Irrigation	Cell: 0991494747 Email: rutechiotha80@gmail.com	
12/01/24	Agatha Mhango	CDO	Comm. Dev.	Cell: 0993694466 Email: agathamhango@gmail.com	
"	Tada'a Sendeza	EDO	Environment	Cell: 0999306648 Email: tsendezera2017@gmail.com	
"	MARVEL NAKANGA	DWDO	Water Dev.	Cell: 0999270206 Email: [illegible]	
				Cell: Email:	

STAKEHODER CONSUTATION REGISTER

DATE	Name	Institution/	Position	Contacts	Signature
12/01/24	Dr. [illegible] Makaula	Ministry of Education (DODEL)	Chief Education Officer	Cell: 0888210783 Email: [illegible]	
12/01/24	Dr Anthony Chafuwa	LL DHO MoH	DMO	Cell: 0993960977 Email: achafuwa001@gmail.com	
12/01/24	Peter Chipeta	Ministry of Water and Sanitation	Deputy Director (Water Supply)	Cell: 0999899119 Email: chipeta99@yahoo.co.uk	
				Cell: Email:	
				Cell: Email:	
				Cell: Email:	
				Cell: Email:	
				Cell: Email:	

STAKEHODER CONSUTATION REGISTER

DATE	Name	Institution/	Position	Contacts	Signature
10/01/24	Dr [illegible] Makakula	Ministry of Education (DODEL)	Chief Education Officer	Cell: 0888210783	[illegible]
				Email: fbmakaula@gmail.com	
				Cell:	
				Email:	
				Cell:	
				Email:	
				Cell:	
				Email:	
				Cell:	
				Email:	
				Cell:	
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				Email:	
				Cell:	
				Email:	

ENVIRRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUIDING AT MUBAS, LILONGWE CAMPUS

DATE: 29-12-2023

STAKEHOLDER CONSUTATION ATTENDANCE REGISTER

Date	Name	Position	Institution/Department	Contacts	Signature
29-12-23	Alfred Phiri	Supervisor	Sapitwa GD	Cell: 0989868226	[illegible]
				Email:	
"	BASHEER SHAYISAAYI	TEACHER/ TUTOR	AL MAHMOUD FOUNDATION TRUST	Cell: 0993 942624	[illegible]
				Email:	
29/12/23	CHRISTOPHER KABAMBO	OPERATIONS DIRECTOR	CHRISMACK LTD.	Cell: 0999953207	[illegible]
				Email:	
				Cell:	
				Email:	
				Cell:	
				Email:	

ENVIRRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUIDING AT MUBAS, LILONGWE CAMPUS

DATE: 29/12/2023……………………

STAKEHOLDER CONSUTATION ATTENDANCE REGISTER

Date	Name	Position	Institution/Department	Contacts	Signature
29/12/2023	JGEWD RICHARD	SGVH MWASE	MWASE	Cell: Email: 0992133739	[signature]
29/12/2023	KASAMUNDADANI	SVH MWASE	MWASE	Cell: Email: 0994925067	V.S [signature]
29/12/2023	ALESS KAPEYA	V HKaponda	Kaponda	Cell: Email:	[signature]
29/12/2023	ELEIELSI	GHH masongi	mosongo	Cell: Email: [illegible]	[signature]
29/12/2023	NEPIYALA	medisoni	KAZENGO	Cell: Email: 099449026	[signature]

ENVIRRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUIDING AT MUBAS, LILONGWE CAMPUS

DATE: 29/12/2023……………………

STAKEHOLDER CONSUTATION ATTENDANCE REGISTER

Date	Name	Position	Institution/Department	Contacts	Signature
29/12/2023	RAWEKA	V.H CHAWEKA	MWASE	Cell: Email: —	[signature]
29/12/2023	D. Kenamu	V.H Chaweka		Cell: 0999241256 Email:	[signature]
29/12/2023	B. Mnyotho	V.H. Mwase	Mwase	Cell: 0993551926 Email:	[signature]
29/12/2023	E Sogolani	M	Chaweka	Cell: Email:	[signature]
29/12/2023	Isaac	gad:	MUBAS	Cell: 0983084725 Email:	[signature]

ENVÍRRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUIDING AT MUBAS, LILONGWE CAMPUS

DATE: 29/12/2023

STAKEHOLDER CONSUTATION ATTENDANCE REGISTER

Date	Name	Position	Institution/Department (Village)	Contacts	Signature
29/12/2023	OGILI Gailisi	Community Member	Mwase	Cell: Email:	G K
29/12/2023	Olliveta Kalumbu	Community Member	Kanzengo	Cell: 0992324888 Email:	O. Kalumbu
29/12/2023	Philipina Mnyontho	Community Member	G V H Mwase	Cell: 0995220333 Email:	P. mnyontho
29/12/2023	Matrider William	Community Member	Mwase S.G	Cell: 0984248427 Email:	M.W
29/12/2023	Zione	Community Member	Kuzego	Cell: Email:	Z. Kotomtho

ENVIRRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUIDING AT MUBAS, LILONGWE CAMPUS

DATE: 29/12/2023

STAKEHOLDER CONSUTATION ATTENDANCE REGISTER

Date	Name	Position	Institution/Department	Contacts	Signature
29/12/2023	Esinta	Community Member	Kanzengo	Cell: Email:	E. Chiwaula
29/12/2023	Eneresi	Community Member	Kanzengo	Cell: Email:	E. Kopsiti
29/12/2023	Loda	Community Member	Chaweka	Cell: 0998671132 Email:	L Kasafoka
29/12/2023	ANES LAZARO	Community Member	S.G Mwase	Cell: Email:	A. Z
29/12/2023	DORECE MILION	Community Member	Mwase S.G	Cell: 0991214745 Email:	D. M

ENVIRRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUILDING AT MUBAS, LILONGWE CAMPUS

DATE: 29/12/2023

STAKEHOLDER CONSUTATION ATTENDANCE REGISTER

Date	Name	Position	Institution/Department	Contacts	Signature
29/12/2023	EVENESS JAILOS	Community Member	MWASE G.V	Cell: 0991697654 Email:	E.J
29/12/2023	MALITA MALAMULO	Community Member	KAPONDA V.H	Cell: Email:	M.M
29/12/2023	MALITA PATHERETU	Community Member	CHANEKA V.H	Cell: Email:	M.P
29/12/2023	KHANDA MANDALA	Community Member	MASDATENGENJ. G.H	Cell: Email:	K.M
29/12/2023	ELEMES. CHIPETU	Community Member	MASDATENGENJ. G.H	Cell: Email:	E.C

ENVIRRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUILDING AT MUBAS, LILONGWE CAMPUS

DATE: 29/12/2023

STAKEHOLDER CONSUTATION ATTENDANCE REGISTER

Date	Name	Position	Institution/Department	Contacts	Signature
29/12/2023	ESTERE J.P.	Community Member	MASDATENGENJ. G.H	Cell: Email:	E.J
29/12/2023	LIFINESS KAPANDA	Community Member	CHANEKA V.H	Cell: Email:	L.K
29/12/2023	ERINA FERIZ	Community Member	KAPONDA V.H	Cell: 0994988474 Email:	E.F
29/12/2023	JOICE KACHUTE	Community Member	KAPONDA V.H	Cell: 0999422097 Email:	T.K
29/12/2023		Community Member		Cell: Email:	

ENVIRRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUIDING AT MUBAS, LILONGWE CAMPUS

DATE: 29/12/2023

STAKEHOLDER CONSUTATION ATTENDANCE REGISTER

Date	Name	Position	Institution/Department	Contacts	Signature
29/12/2023	AGATA KAMKWAMBA	Community Member	MWASE S.G	Cell: 0984243427 Email:	A.K
29/12/2023	MBABZI NGWALA KAPONDA	Community Member	MWASE G.V	Cell: Email:	M.K
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ENVIRRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUIDING AT MUBAS, LILONGWE CAMPUS

DATE: 29/12/2023

STAKEHOLDER CONSUTATION ATTENDANCE REGISTER

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ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUILDING AT MUBAS, LILONGWE CAMPUS, NANJIRI

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24/01/24	Gracious Memba	MUBAS	
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"	Kettie Mwangofi	MUBAS	
"	Maria Chiwira	MUBAS	
"	Atiness Nicodimo	MUBAS	
"	Ritchman Mbelwatu	MUBAS	
"	Ellena Katute	"	
"	Martha Chikaluda	"	
"	Wisdom Chiyophiro	"	
"	Trevor Chandaza	MUBAS	
"	Yamikani Matholo	MUBAS	
"	Deriesh Nepiyais	MUBAS	
"	Kettie Mwalweni	MUBAS	

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR THE CONSTRUCTION OF A 2-STOREY BUILDING AT MUBAS, LILONGWE CAMPUS, NANJIRI

STUDENTS CONSULTATION REGISTER

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"	Fortune Banda	"	
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"	Collins Kabriga	"	
"	Andrew Mponda	"	
"	Tiyamike Namanja	"	
"	Praise Sabo	"	
"	Eunice Mawonu	"	
"	Vivien Sibma	"	
"	Brian Chimdeka	"	

Appendix 5: ESMP Consultant

Name	Proposed Position and Qualification	Key Role	Experience
Kent Kafatia, Snr R. Eng.	• MSc. in Water and Waste Engineering • BSc. in Chemical Engineering (Environmental) • BSc. in Environmental Science & Forestry • BSc. in Forestry • PGD. in Integrated Environment and Water Management.	ESMP Expert	36 years' ESIA Experience

Appendix 6: Environmental Social Health and Safety Issues to be Considered

Here is checklist of documents and protocols to be produced or obtained by the Contractor

S/N.	DESCRIPTION	TO BE TAKEN
1	Contractor's Environmental and Social Management Plan (C-ESMP).	The contractor should prepare the Contractor's Environmental and Social Management Plan (C-ESMP)
2	Implementation of the Management Strategies and Implementation Plans (MSIPs).	The contractor should prepare the relevant MSIPs. e.g • Code of Conduct (CoC) which will be signed by all workers under this project, the CoC should be in both local and English; • Labour Management Plan • Traffic management Plan • Waste Management Plan • Emergency Preparedness and response plan • Occupational Health and Safety management plan • Public Health and Safety management plan • Camp Site Management Plan • GBV reporting protocol • Water Resources Protection and Management Plan • Noise and Vibrations management plan • Sexual Harassment Prevention and Response Plan • Grievance Reporting and Resolution forms • Vehicles Service Stickers • Water Volume Sheets
3	Permits and agreements.	The Contractor should acquire and share relevant permits and agreements: e.g. i. Workplace Registration certificate from the Ministry of Labour; ii. Waste Disposal Permit; iii. Water abstraction license/permit from National Water Resources Authority (NWRA); iv. Approval for potable water supply to the site v. Electricity Approval vi. Sand mining permit from District Council; vii. All Land Deeds (borrow pits, use of land for keeping materials, campsite, etc); viii. Protocols for Handling, Storage and Transportation of Hazardous Waste (if any); and ix. Protocols for Handling, Storage, and Transportation of General Waste

Appendix 7: Waste Management Plan

1. INTRODUCTION

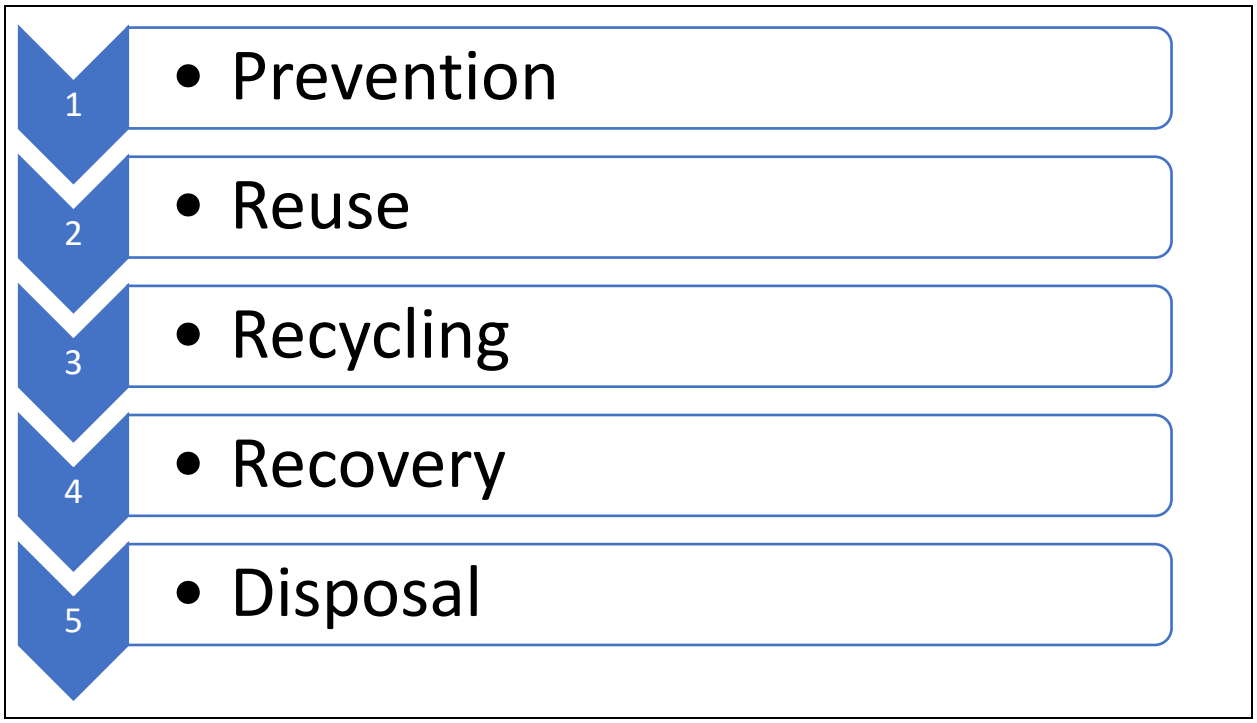
The Waste Management Plan (WMP) addresses management of all solid and wastewater, including hazardous and non-hazardous waste, produced as a result of project activities within the University's Campus. The WMP covers the construction and operational phases. This plan constitutes the draft which will require amendment and updating during construction and operation phases of the Project.

2. PURPOSE

The WMP aims to provide guidelines on waste reduction, segregation, collection and disposal practices in accordance with international best practices, to avoid deterioration of the natural environment and negative impacts on the health and safety of communities in the Project Area. The Project is committed to apply the waste hierarchy and will seek to be a zero-waste discharge facility. This plan is the primary tool to guide employees towards waste management.

3. WASTE MANAGEMENT OPTIONS - WASTE HIERARCHY

The waste hierarchy presents waste management stages commencing with the most preferable option to the least preferable option. Waste prevention is the most preferred option of prevention, followed by reuse, recycling, recovery and is safe disposal as the last option.



Waste Management Hierarchy

These stages are described in more detail below:

A. Prevention

Waste Generators should ensure there is minimal wastage. This could be achieved through reduction of construction mistakes, ordering the right quantities of materials, getting the right-size materials for the job, proper storage of materials, trying out new building methods and choosing building products with minimal packaging.

Waste Generators should be committed to avoiding the generation of waste and not using hazardous materials. Where the use of hazardous materials is unavoidable, efforts should be made to identify replacement materials that are non-hazardous.

B. Re-use

Waste Generators should be required to prepare a maintenance management plan which seeks to ensure that all equipment is regularly checked and maintained and refurbished or repaired. In addition, Waste Generators should seek to sell and buy used items, donating them for free or exchanging them.

C. Recycling

Waste Generators should seek to turn waste into a new substance or product, such as composting of organic wastes to a standard that meets quality controls. This compost could be sold or given to farming communities around the construction and operations sites to facilitate improvements in soil conditions and hence their production levels.

D. Recovery

Recovery of waste is usually most successful when done in bulk. Therefore, a centralised recovery facility is preferable. The common forms of recovery include composting, anaerobic digestion, incineration with energy recovery, gasification and pyrolysis which produce energy (fuels, heat and power) and materials from waste. It is recommended that composting should be considered for organic solid waste and sludge that will be generated at MUBAS

E. Disposal

Disposal is deemed the last resort and must occur in an environmentally responsible manner. Disposal results in waste going to landfill or to incineration without energy recovery and is the least preferred environmental option. However, when wastes must go for disposal, this must occur at a suitably designed sanitary waste disposal site.

4. WASTE CATEGORIES GENERATED IN THE PROJECT

Solid waste generation at MUBAS during the project life cycle will generally include domestic waste, commercial waste, construction and demolition debris, sanitation residue and wastewater. These wastes will be in solid or semi-solid form and will potentially include very low quantities of industrial hazardous wastes and bio-medical waste. All industrial hazardous waste and biomedical waste must be disposed of properly by the respective industries and cannot be included in the general waste management system. The main waste categories anticipated are:

- ✓ Biodegradable waste (food and kitchen waste, green waste such as vegetables, leaves and fruits; and sludge)
- ✓ Recyclable material (paper, glass, bottles, cans, metals, certain plastics, etc.); and
- ✓ Inert waste (construction and demolition waste, dirt, rocks, street sweeping, drain silt, debris, etc.)

The sources of waste and waste generators and the anticipated content of the solid waste generated are presented in table below.

Sources of waste, waste generators and content

Source	Typical waste generators	Solid waste content
Domestic	Dwelling units	Food waste, paper, cardboard, plastics, textiles, leather, yard waste, wood, glass, metals, consumer electronics, batteries, limited household hazardous wastes and sewage wastes.
Commercial and Institutional	Stores, lecture rooms, cafeteria, market, office buildings	Paper, cardboard, plastics, wood, food wastes, glass, metals, special wastes, hazardous wastes
Construction and demolition	New construction sites, road repair, renovation sites, demolition of building structures	Wood, steel, concrete, rubble, dirt etc.

Wastewater	Water and wastewater treatment plants	Drain silt, landscape and tree trimmings, general wastes and sludge.

5. WASTE TREATMENT OPTIONS

The primary options for the treatment of solid waste include:

- ✓ Anaerobic Digestion;
- ✓ Composting (windrow, aerated static pile, in-vessel and vermi-composting);
- ✓ Incineration with or without energy recovery;
- ✓ Pyrolysis and gasification;
- ✓ Plasma pyrolysis and pelletisation; and
- ✓ Reuse Derived Fuel (RDF) for mixture waste.

Depending on the nature of waste, different methodologies will be considered.

6. PROPOSED WASTE MANAGEMENT INFRASTRUCTURE AT MUBAS

Solid disposed will be placed in strategic places at the campus and then legally dumped at Area 38 dumpsite.

7. SOLID WASTE MANAGEMENT IN THE PROJECT AREAS

All Waste Generators within Project Areas will be required to segregate waste at source to ensure the value of the wastes are optimised through recovery, reuse and recycling. By providing an enabling environment the success rate of correct waste practices being implemented are increased. Segregation should be by generators and into three main waste streams:

- ✓ Wet (biodegradable);
- ✓ Dry (plastic, paper, metal and wood); and
- ✓ Domestic hazardous wastes (diapers, napkins, empty containers of cleaning agents, mosquito repellents etc.).

Collection of the segregated waste is to be undertaken by an authorised waste collector. As a minimum wet and dry wastes should be segregated (2-bin system) by the waste generators

Construction and demolition waste should be stored separately. Opportunities to repurpose this waste as secondary aggregate to the construction industry should be investigated to ensure this waste is either utilised in the Project Sites or is sold as a product to the construction industry. No construction or demolition waste should be disposed of to landfill. No hazardous wastes shall be permitted to be disposed of outside the boundary of the Project Sites unless being transported to a sanitary landfill. The District Council must place the responsibility of safe disposal of hazardous waste on the generator. It will be the generators responsibility to ensure that the waste collector which will be transporting the waste for disposal is licenced to do so. In addition, the Generator will need to provide evidence in writing from the receiving disposal site of its capacity to recycle or dispose of the waste in an environmentally sound manner. Proof of safe disposal should be provided to the Lilongwe District Council, such as a waste disposal ticket issued and date stamped by the sanitary landfill. This waste stream is anticipated to be small, limited to cleaning materials and small quantities of bio-medical waste since most of the processing to be undertaken on site is for the water supply and waste management and therefore hazardous process materials should be limited.

During the operation phase, this waste will be taken directly to the treatment sites. Primary collection of solid waste will occur using segregated bins or containers which will be placed on the streets for collection. This waste will be taken to a solid waste intermediate storage facility. The use of an intermediate site allows for the optimisation of transport devices and manpower which in addition allows for timely collection of waste from source and onward treatment. Secondary transportation

occurs from the storage area to the landfill site. The dry waste such as paper and plastic and cardboard and glass are to be recycled.

Waste collection from generators within the university campus will need to occur on a daily basis in order to prevent garbage containers overflowing and waste littering the streets. To maintain a hygienic environment regular waste clearance is required.

8. PERFORMANCE MONITORING

Site inspections must be performed on regular basis by qualified personnel from the University Inspections will ensure that all commitments in this Waste Management Plans are being enforced and that specific waste management elements are verified.

8.1. Data Collection

Implementation of the waste hierarchy principles requires that destinations and quantities of residual matter are monitored. A register of waste material should be maintained to ensure the measurement of eliminated waste and of residual matter sent for reuse, recycling and reclamation.

8.2. Waste Audit

After a year of operation, a waste audit should be performed, on all waste data collected, to identify waste streams and fate and develop ways to reduce waste production.

9. RESPONSIBILITIES

The roles and responsibilities inherent to the Waste Management Plan are presented in Table below

Roles and Responsibilities

Entity	Responsibilities
MUBAS	- Enforce the Waste Management Plan. - Contractually obligate the Waste Generators to meet the requirements of the Waste Management Plan. - Manage the Solid Waste Management Area or appoint an appropriate contractor. - Manage the Wastewater Treatment plant or appoint an appropriate contractor.
Contractors	- Provide a minimum of two garbage receptacles to allow for wet and dry waste segregation. An additional bin for hazardous waste is highly recommended. - Develop a site-specific Waste Management Plan for the activities the Contractor is undertaking. - Site-specific Waste Management Plan must be aligned with the full site waste management plan and must be approved by the MUBAS prior to work commencing. - Educate all members of staff on the waste hierarchy. - Educate all members of staff on site-specific Waste Management Plan - Education is to be provided to each staff member prior to commencement of work, and regular refresher sessions are to be undertaken in the form of toolbox talks or training sessions throughout the contract period.

10. RECORD KEEPING

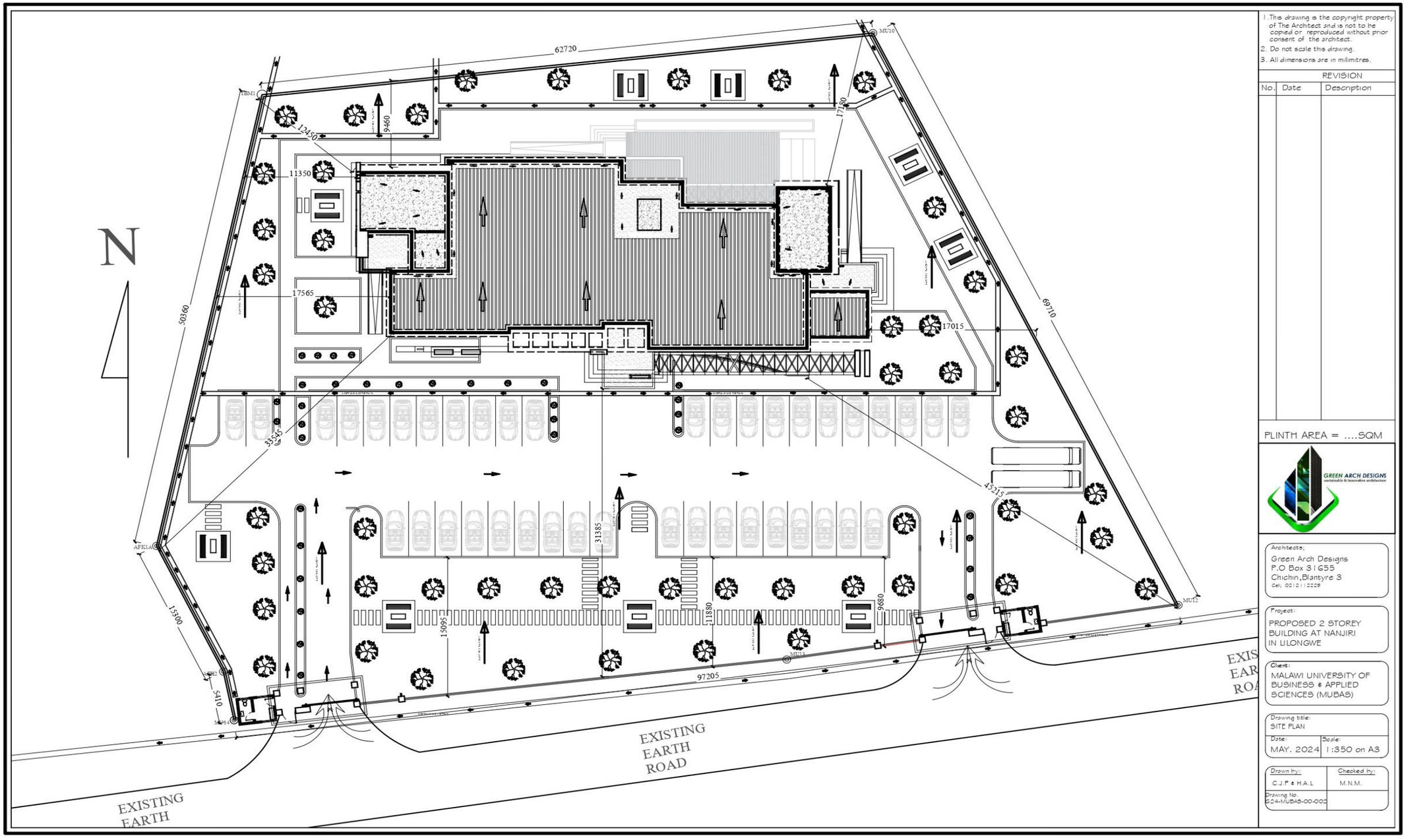
Data on waste production and disposal should be gathered continually via logbooks and registers. Records should be maintained on site and made available to the authorities and any other party contracted to audit or assess the waste management practices on site. The data should include the final destination of each waste stream and where disposal has occurred. Proof of safe disposal will be required, such as a date stamped waste disposal ticket issued by a sanitary landfill. A cost should be paid for safe disposal of wastes. Evidence of waste disposal should also be maintained.

Appendix 8: Chance Finding Procedures

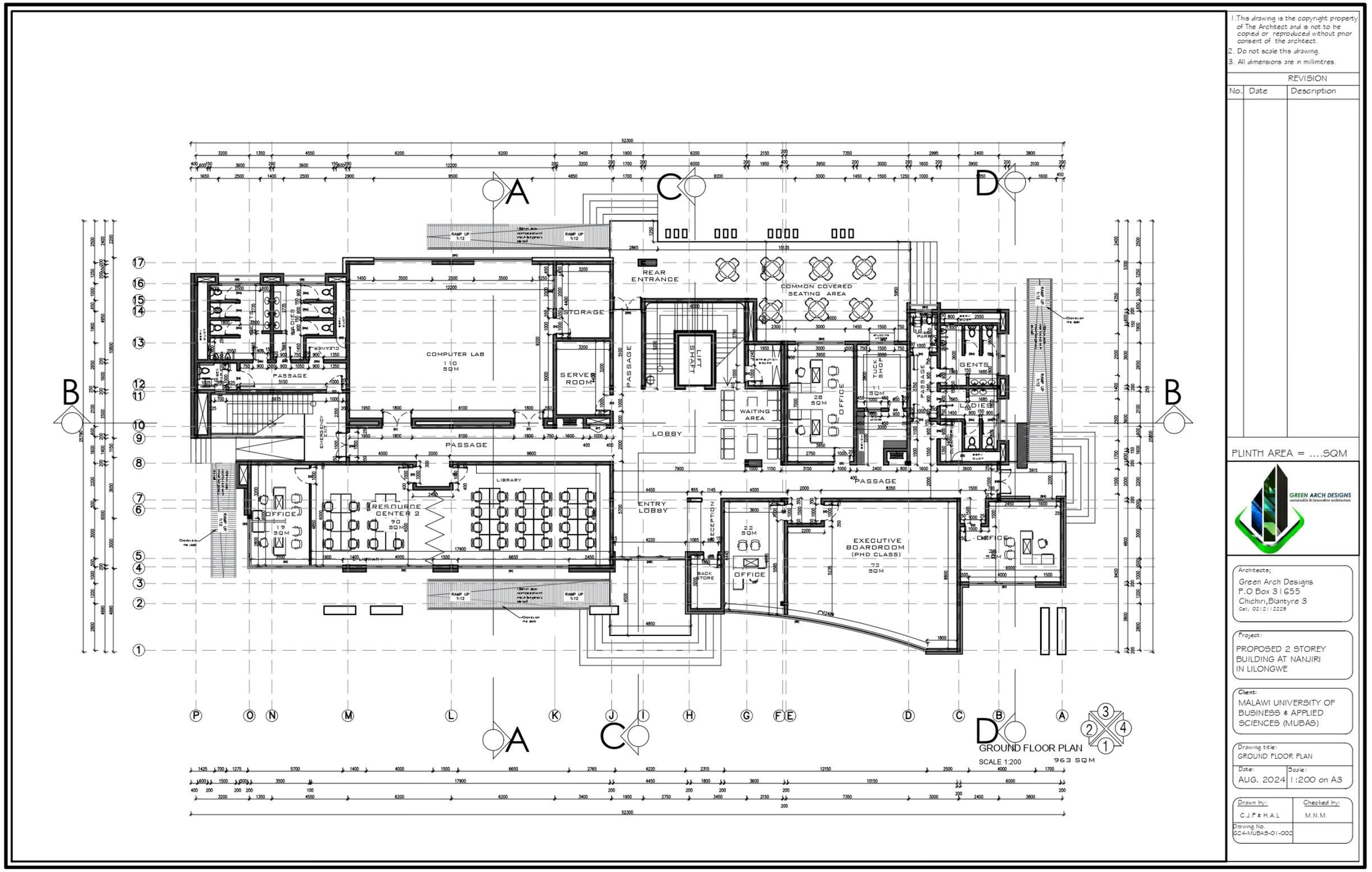
If the Contractor discovers archaeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall do the following:	
Step 1	Stop the construction activities in the area of the chance find;
Step 2	Delineate the discovered site or area;
Step 3	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 Museums and Monuments take over;
Step 4	Notify the Clerks of works who in turn will notify the Project Implementation Unit (PIU). The PIU will notify Director of Department Museums and Monuments immediately (within 24 hours or less);
Step 5	Responsible local authorities and the Malawi Department Museums and Monuments would then 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 archaeologists of Department Museums and Monuments. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage, namely the aesthetic, historic, scientific or research, social and economic values
Step 6	Decisions on how to handle the finding shall be taken by the Director of Department Museums and Monuments. This could include changes in the layout (such as when finding irremovable remains of cultural or archaeological importance) conservation, preservation, restoration and salvage.
Step 7	Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities.
Step 8	Construction work may resume only after Director of Department Museums and Monuments concerning safeguard of the heritage gives permission.

Appendix 9: Infrastructure Layout Plans and Designs

Infrastructure Layout Plan



Proposed Ground Floor Plan



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No.	Date	Description

PLINTH AREA = ...SQM

GREEN ARCH DESIGNS
sustainable & innovative architecture

Architects:
Green Arch Designs
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Chichiri, Blantyre 3
Cell: 0212112228

Project:
PROPOSED 2 STOREY BUILDING AT NANJIRI IN LILONGWE

Client:
MALAWI UNIVERSITY OF BUSINESS & APPLIED SCIENCES (MUBAS)

Drawing title:
GROUND FLOOR PLAN

Date:	Scale:
AUG. 2024	1:200 on A3

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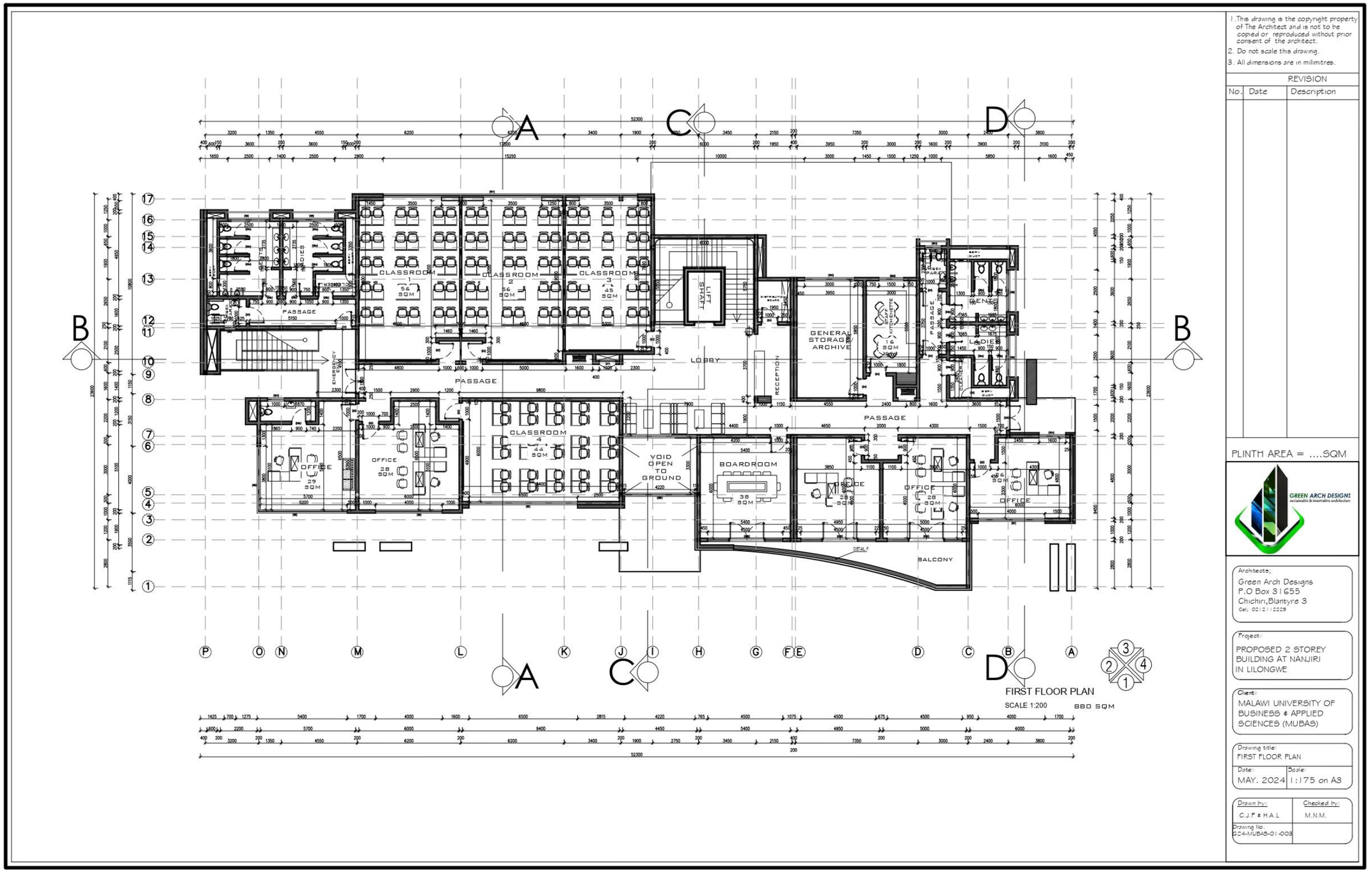
C.J.P & H.A.L	M.N.M.
Drawing No. GG4-MUBAS-01-002	

Proposed First Floor



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REVISION

No.	Date	Description

PLINTH AREA = ...SQM

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sustainable & innovative architecture

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Project:
PROPOSED 2 STOREY BUILDING AT NANJIRI IN LILONGWE

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MALAWI UNIVERSITY OF BUSINESS & APPLIED SCIENCES (MUBAS)

Drawing title:
FIRST FLOOR PLAN

Date:	Scale:
MAY. 2024	1:175 on A3

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Drawing No. 224-MUBAS-01-008	