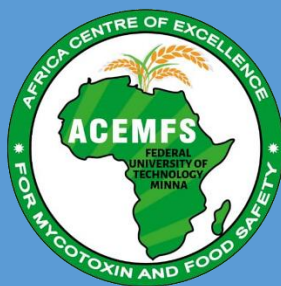


**C - E S M P F O R T H E
C O N S T R U C T I O N O F
A C E M F S , F U T M I N N A
C E N T R E B U I L D I N G ,
2 0 2 3**



THE WORLD BANK

C - E S M P

Prepared by Mahadi Services & Resources Limited

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Abbreviations

List of Abbreviations and Acronyms

ACE	- Africa Centre of Excellence
ACEMFS	- Africa Centre of Excellence for Mycotoxin and Food Safety
CO ₂	- Carbon Dioxide
C – ESMP	- Contractor’s ESMP
EA	- Environmental Audit
EIA	- Environmental Impact Assessment
EAs	- Environmental Assessment
EPC	- Engineering Procurement and Construction
ERP	- Emergency Response Plan
ESA	- Environmental Safeguard Audit
ESIA	- Environmental and Social Impact Assessment
ESMF	- Environmental and Social Management Framework
ESMP	- Environmental and Social Management Plan
ESO	- Environmental Safeguard Officer
ESP	- Exchange Sodium Percentage
FEPA	- Federal Environmental Protection Agency
FGD	- Focus Group Discussion
FGN	- Federal Government of Nigeria
FMinv	- Federal Ministry of Environment
FUTM	- Federal University of Technology, Minna
FPIU	- Federal Project Implementation Unit
HEMP	- Hazard and Effect Management Process
GPS	- Global Positioning System
HSE	- Health, Safety and Environment
H ₂ S	- Hydrogen Sulfide
IIF	- Incident and Injury Free
ISO	- International Safety Organization
NSG	- Niger State Government
NSEPA	- Niger State Environmental Protection Agency
NSURP	- Niger State Urban and Regional Planning
LF	- Lymphatic Filariasis
LGA	- Local Government Area
M & E	- Monitoring and Evaluation
MOU	- Memorandum of Understanding
NESREA	- National Environmental Standards and Regulations Enforcement Agency
NH ₂	- Hydrazine
NO ₂	- Nitrogen Dioxide
NTD	- Neglected Tropical Diseases
NIMET	- Nigerian Meteorological Agency
OP/BP	- Operational Policies / Bank Policies
PM	- Project Manager
PG	- Post Graduate

PIU	- Project Implementation Unit
PPDU	- Physical Planning Development Unit
PPE	- Personal Protective Equipment
PPP	- Public-Private Partnership
PMT	- Project Management Team
PSP	- Private Sector Partner or Private Sector Participation
PV	- Photovoltaic
REA	- Rural Electrification Agency
SDW	- Sanitary and Domestic Waste
SO2	- Sulfur Dioxide
SPS	- School of Postgraduate Studies
SSI	- Semi Structured Interviewed
ToR	- Terms of Reference
WB	- World Bank
WHO	- World Health Organization

EXECUTIVE SUMMARY

Introduction

Mahadi Services and Resources Ltd has been engaged by the Federal University of Technology (FUT), Minna to implement the construction of Centre Building for The Africa Centre of Excellence for Mycotoxins and Food Safety (ACEMFS), FUT, MINNA, in Niger State, Nigeria. The proposed sub-activities associated with the construction may result in moderate to significant adverse impacts on the physical and/or social environment of the construction location. To mitigate these impacts, the ACEMFS, FUT, MINNA has previously prepared a site-specific Environmental and Social Management Plan (ESMP) for the proposed works, including detailed costs for implementation of proffered mitigation measures, as well as responsibilities for monitoring. This document can be found on <https://acemfs.futminna.edu.ng/wp-content/uploads/2024/06/FINAL-ESMP-for-ACEMFS-FUT-Minna.pdf>.

To achieve a safe implementation of the proposed works, and to reflect the Contractor's commitment to implementing mitigation measures proffered in the prepared ESMP for the proposed works, Mahadi Services and Resources Limited, has now prepared this site-specific Contractor's Environmental and Social Management Plan (C-ESMP) for the proposed works. The C-ESMP reflects the Contractor's understanding of the prepared ESMP, and the specific Contractor's commitment to the implementation of the proffered mitigation measures, including the cost component for the implementation of the proffered mitigation measures and other supplementary contractor's measures to ensure a smooth and successful implementation of the construction works. It is noteworthy that this C-ESMP has been prepared in accordance with the ESMP for the proposed ACEMFS FUT MINNA Centre Building.

The Africa Centre of Excellence for Mycotoxin and Food Safety (ACEMFS) in Federal University of Technology, Minna – Nigeria, is one of the ACE Centres in Nigeria. There are presently 17 African Centres of Excellence in Nigeria.

Project Components and Objectives

Project Components

The Project has 3 components:

Component 1: Establishing new Africa Centres of Excellence and scaling up well-performing existing Africa Centres of Excellence (ACE) for development impact.

Component 2: Regional Partnerships and Scholarships.

Component 3: Enhancing Regional Policymaking, Monitoring, and Facilitation.

The **Project Development Objective** (PDO) of the ACE II Project is to improve the quality, quantity and development impact of postgraduate education in selected universities through regional specialization and collaboration.

The overall goal of the proposed Upgrade is “to strengthen the dimensions and capacity of FUTM to train high quality researchers and scientist who will recognize, understand and readily exploit the immense potentials of emerging modern global technology movements” through specific initiatives.

The ACEMFS primary focus areas of research is on three of the postgraduate programs (MTech. and PhD) in;

- I. Food safety,
- II. Toxicology,
- III. Molecular biology and Bioinformatics

The main aim of the Centre is to train personnel in food safety, toxicology, molecular biology & bioinformatics that will impart better food and feed safety culture and ensure safer foods for healthy living in Nigeria and across Africa.

As the proponent for the sub-projects, their central objectives are;

- To acquire knowledge required to create an interdisciplinary and experience based educational model that will prepare graduates on the rapidly emerging need for innovations at the nexus of food security, food safety, agricultural productivity and economics from local to global scales.
- To be able to foster impactful interdisciplinary research and implement solutions that will improve the quality of life of Africans through fit-for-purpose interventions fostering economic growth and access to sufficient safe food for all.
- To be able to address Africa’s shortage of expertise and applicable solutions to ensure a safe, controlled and sufficient food supply that will support economic growth and public health.

Need for C- ESMP

The proposed building project has been assessed to have potential adverse impacts that are site specific, limited in number, reversible and is thus a category B Project. The World Bank Safeguard Policies OP/BP 4.01 on Environmental Assessment and OP 4.11 on Physical and Cultural Resources have been triggered on this project.

The overall objective of the C-ESMP is to ensure Contractor’s compliance with applicable national environmental and social legal requirements and the World Bank’s environmental and social safeguards as stated in the site specific ESMP. Further, the C-ESMP aims to identify environmental and socio-economic benefits of the project as well as identifying potential adverse environmental and socio-economic impacts and Contractor’s responsibilities.

Applicable World Bank Operational Safeguards Policies

- Two of the World Bank Operational Safeguards Policies are triggered under this Project as described in table below:
- *Applicable ESS and Applicability to ACEMFS FUT Minna Project*

Triggered Policy	Reason for Application of Standard to the Project	How it will be addressed by the project
OP/BP4.01 Environmental Assessment	Proposed construction works will result in environmental and social impacts attributed to generation of waste, noise/air pollution, movement of heavy-duty vehicles & traffic issues, occupational health & safety risks, risks associated with labour influx, community health & safety risks amongst others. However, these impacts are limited, site specific and can be mitigated.	This ESMP contains measures to address the identified risks and includes other MSIPs like waste management plan, OHS plan, community health & safety plan amongst others.
OP/BP4.11 Cultural Physical Resources	During the excavation and earthworks, contractors may encounter physical and cultural resources such as artefacts, tombstones, historical/cultural landmarks	A Physical and Cultural Resources Management Plan has been included in annex 9 of this ESMP

Nigeria Legal and Institutional Framework

Legal and Institutional framework guiding this document includes;

Federal Ministry of Environment (FMEnv) Act. 1999 repelled from the Environmental Protection Agency Act of 1988 (FEPA Act) which was later changed to National Environmental Standards and Regulations Enforcement Agency (NESREA), which was established in 2007 to replace FEPA;. The following Regulations were made pursuant to the FEPA Act:

This C-ESMP Contains seven chapters with detailed Environmental and Social impacts the project may have on the University community. It equally contains Waste Management plan, Health management Plan and Code of conductors for Contractor and subcontractors.

Conclusion

Mahadi Service and Resources Ltd recognizes that it has a role to play and a responsibility in protecting and enhancing the environment in which the project is to be deployed to meet the needs of the communities without compromising the integrity of the environment and the major disruption of the socioeconomic set up of the project affected areas. This Social and Environmental Management Plan has therefore described in details the processes Mahadi Services and Resources Ltd will follow to maximize its compliance to statutory requirements as well as those of project sponsors and minimized the impacts of the project on the general environment

1.0. INTRODUCTION

1.1 Background

The Federal University of Technology Minna is planning to construct the Centre Building for Africa Centre of Excellence for Mycotoxin and Food Safety (ACEMFS) on her Gidan Kwano Campus, Minna, Niger State. The project is supported with financing from the World Bank and the French Development Agency (AFD) and guided by the Federal Government of Nigeria through the National Universities Commission and continentally by the Association of Africa Universities.

This construction would be executed by us Messrs Mahadi Services and Resources Ltd, a construction company incorporated in Nigeria.

The Construction activities would be supervised by Physical Planning and Development Unit, Federal University of Technology, Minna.

The Purpose of this document herein called Construction Environmental and Social Management Plan (ESMP) is to provide a consolidated summary of all Environmental and Social commitments relevant to the construction phase of this project and the responsibilities of our organization.

The ACEMFS is a part of the Africa Centre for Excellence for Development Impact which would be construction of new buildings or other facilities within the boundaries of the University campus. The proposed construction works involves civil works which involves the use of noisy and heavy construction equipment from site clearing to construction proper. Other materials are the use of cement, stones, tiles, woods, water, fuel, steel, sand etc. The proposed sub-activities to support the completion and functionality of this project may result in in moderate to significant adverse impacts on the physical and social environment of the location which is the University campus with a landmass of 10,626 hectares. Most of the land is farmed by the host community for agricultural produce with the permission of the University management.

To mitigate these impacts, the Africa Centre of Excellence for Mycotoxin and Food Safety(ACEMFS), Federal University of Technology, Minna has prepared a site-specific Environmental and Social Management Plan(ESMP) for the proposed works, costs of implementing proposed mitigation measures and the shared responsibilities and method of monitoring.

In addition to the prepared ESMP by ACEMFS for the proposed works and following a detailed review and adoption of the ESMP, We, Messrs Mahadi Services and Resources has now prepared a site/project specific Contractor's Environmental and Safety Management Plan (C-ESMP) for the proposed construction of Centre Building for ACEMFS, FUT MINNA.

This document, C-ESMP reflects our understanding of the prepared ESMP, the details therein and our commitment as contractor on the cost component for the implementation of the proffered mitigation measures for the proposed works and other complementary contractor's obligations to ensure a successful and timely implementation of the construction works.

This document, the C-ESMP has been prepared in accordance with the ESMP for the construction of Centre Building for Africa Centre of Excellence for Mycotoxin and Food Safety, Federal University of Technology, Minna located on the Gidan Kwano campus.

1.2 Objectives of the C-ESMP

This document the C-ESMP reflects the contractor's understanding of the site-specific ESMP prepared by ACEMFS for the purpose of the construction works. We take responsibility for the implementation of the mitigation measures clearly stated in the ESMP, hence the need to demonstrate our understanding of the provisions of the proffered mitigation measures.

1.3 Overview of the ESMP for the Proposed Construction

An ESMP has been prepared to guide the implementation of project activities for the Construction of Africa Centre of Excellence for Mycotoxin and Food Safety (ACEMFS), Federal University of Technology Minna under the World Bank funded Africa Centre of Excellence for Development Impact Projects.

The envisaged potential adverse impact on this project is site specific, minor and manageable. The ESMP report contains identified environmental, social and occupational health and safety (OHS) related potential impacts that would likely emanate from the construction of this project.

The aim of the ESMP is to provide a general view of the environmental and social conditions under which the project is implemented. This is prepared to provide a framework for environmentally and socially safe implementation of all project activities in accordance with the Federal Republic of Nigeria Environmental Impact Assessment (EIA) Act 1992, and the World Bank's Environmental and Social Framework (ESF). Mitigation measures have been proffered for avoiding, reducing or managing any associated adverse environmental and social impacts including Labour Influx, Violence Against Children (VAC), Sexual Exploitation and Abuse (SEA), Gender Based Violence (GBV) among others.

1.5 Contractor's Environmental and Social Management Plan (C-ESMP)

This document has been prepared as a project specific tool to ensure implementation of proffered mitigation measures for all environmental and social impacts associated with the construction of the Centre Building for ACEMFS, FUT MINNA under World Bank/AFD as contained in the ESMP prepared for this project.

This C-ESMP is aimed at the underlisted:

- 1- Ensure Contractors adherence and compliance to the environmental and social management plan (ESMP) for the proposed works.
- 2- Ensure our compliance to the contractual obligations as contained in the document
- 3- Ensure the achievement of the ESS objectives and
- 4- Provide scalable template for properly managing all environmental management and social related issues that may be triggered during the implementation of the project.

This C-ESMP therefore is a binding document for Mahadi Services and Resources Ltd for managing site-specific environmental and social impacts during project construction stage.

2 PROJECT DESCRIPTION

2.1 Overview of Proposed Project

The proposed project is the construction of Centre Building for Africa Centre of Excellence for Mycotoxin and Food Safety, Federal University of Technology Minna.

The ACEMFS, FUT MINNA is one of the various World Bank ACE impact projects in Nigerian Universities, the Centre was established with the aim of creating learning opportunities and research results that will address Africa's shortage of expertise in food safety and applicable solutions to ensure the safe, controlled and sufficient food supply that will support economic growth and public health, particularly in West Africa and Central Africa.

The Centre has students from thirteen African countries and provides specialized advanced research in mycotoxin, molecular biology, food safety etc.

The Construction of the Centre Building is necessitated as part of the disbursement from World Bank to provide a conducive learning environment and a safe social point for the users. It is a two suspended floor building on the administrative part and a single suspended floor slab on the academic part.

The details of space include 2 large research and teaching laboratories with ancillary rooms, four classrooms, reception area, ramps, offices, library, conference room, power room, stores and conveniences.

2.2 Proposed Project Activities

The main activities for the construction of Centre Building for ACEMFS, FUT MINNA are presented below:

- 1- Survey works
- 2- Site clearing and grading
- 3- Setting out
- 4- Excavation for foundation/footings
- 5- Reinforced concrete for foundation, columns, beams (at all floor levels)
- 6- Blockworks and plastering
- 7- Fabrication of steel trusses
- 8- Fabrication of windows and doors
- 9- Painting and finishing
- 10- Services
- 11- Labelling of spaces

12- External works

13- Supplementary works on site office and site store.

The project documents, including the technical design/bid drawings, bill of quantities, technical specification and ESMP guideline are set out as the bid/contract documents.

The activities shall be divided into three phases: (i) pre-construction activities; (ii) construction phase activities; and (iii) post construction activities as indicated in table 2.1

S/N	Phase	Project Activities	Proposed Duration (Week)
1	Pre-Construction	Mobilization to Site /Site Clearing (Site Establishment)	4
		Transportation of materials and equipment to site	
		Construction of temporary site office	
2	Construction	Ground works (Setting out, excavation and substructure i.e. building of foundation trench)	32
		Interiors, Internal walls Structure	
		Floorings	
		Water system, electricity Installations, Fit Out & Finishes	
		External Works including any landscaping work, growing of decorative and other plants, enhancement of the aesthetic, visual impact of the building and provision for fencing or boundary wall.	
3	post construction activities	Assemblage and installation of equipment's	5
		Commissioning	
		Operation/maintenance	

Construction Phase / Activities of the project

Design for Fire management and response: The design proposes installation of fire extinguishers at specific and easily accessible positions of the building, installation of smoke detectors, and fire hose reels at each exit route on all floor levels.

Drilling of Borehole: The source of water for the Centre is proposed to be primarily from a borehole which will be drilled for the Centre within the proposed site. The geophysical survey for drilling the boreholes for the nearby postgraduate hostels and Biochemistry Department reported that the depth is approximately 100 m depth. Hence, the depth of drill for the proposed borehole for the ACEMFS Centre may be about 150 m as recommended by NAFDAC for a standard quality borehole. For a good and sustainable result, a geophysical survey is recommended before and drilling. Additionally, the design proposes accessories for water supply into the Centre including an overhead water storage tank and reticulation.

Source of Electricity: The Centre proposed primary source of electricity is to link to the National grid (PHCN) and diesel-powered generator. The Centre is envisaged to have significantly high energy demand and consumption rate due to the functionalities of the proposed Centre with Laboratory Services. This necessitates the need for a stable and hybrid energy source for the Centre. However, a mini solar power arrangement is proposed for the Centre as to achieve its aims and objectives.

2.3 Proposed building design for ACEMFS, FUT MINNA

The ACEMFS, along with its collaborating departments is designed to accommodate the following features;

- 1- Centre Leader's office with secretary and waiting area (en-suite)
- 2- Deputy Centre Leader's office
- 3- En-suite office spaces for principal officers in the organogram attached, excluding the VC, Accountant office, Five offices for research groups, A Central e-Library Facility Restrooms (Male, female and exclusive users) Two classrooms with minimum of 50 sitting capacity at first floor. Two Seminar rooms with minimum of 50 sitting capacity at first floor. A conference hall for conference and events with video conferencing facilities, minimum of 100 sitting capacity at second floor.
- 4- Server room, Generator room



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CLIENT:
 ACEMFS, FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SHEET TITLE:
 PERSPECTIVE VIEW

CAD: Arc. OYIBO H.A.	ARCHITECT: Arc. OYIBO H.A.
SCALE: 1:200	DATE: JUNE, 2022

REVISIONS
 NO.

PROJECT TITLE:
 PROPOSED BUILDING FOR AFRICA CENTRE OF EXCELLENCE FOR MYCOTOXIN AND FOOD SAFETY, FUTMINNA

SHEET
 AR/



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REVISIONS
 NO.

PROJECT TITLE:
 PROPOSED BUILDING FOR AFRICA CENTRE OF EXCELLENCE FOR MYCOTOXIN AND FOOD SAFETY, FUTMINNA

SHEET
 AR/

2.4 Description of Project Location

Niger State was created in 1976 from the defunct North-west state and has on the GPS position is $9^{\circ}25'00''$ N- $9^{\circ}40'00''$ and longitude $6^{\circ}24'20''$ E- $6^{\circ}36'40''$ with its capital located in Minna having GPS position $9^{\circ}25'00''$ N- $9^{\circ}40'00''$ N and $6^{\circ}24'20''$ E- and Lat. 8.5504° E, Ref: fig. 1.1. The project site is located at Federal University of Technology, Main Campus, Gidan Kwano, Minna.

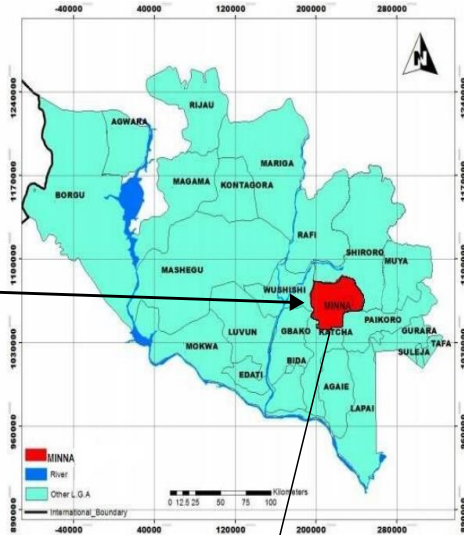
The Federal University of Technology, Minna, Nigeria that house the Centre was established on the 1st of February 1983 and was later backed by Decree No. 13 of 1986. It is a specialized University of Technology established with a view to give effect to the Nation's drive for the much-needed self-reliance in Science, Engineering and Technology. The State Government granted permission for the acquisition of 10 650 hectares of land along the Minna – Kateregi - Bida road as its permanent site, to cater for the inevitable expansion of the University. This acquisition was conveyed via a letter Ref NGS/981/18 of 23rd February 1983.

The site is relatively flat, slope gently eastward direction, hence can easily be drained and discharged into the natural stream eastward direction of the site. The site is accessed through the following roads (a) From the University gate to the roundabout to school of Life Sciences and extended to the subject site. The site can easily be connected to the electricity from the electric line that terminated at the School of Life Sciences 170 meters away from the subject site.

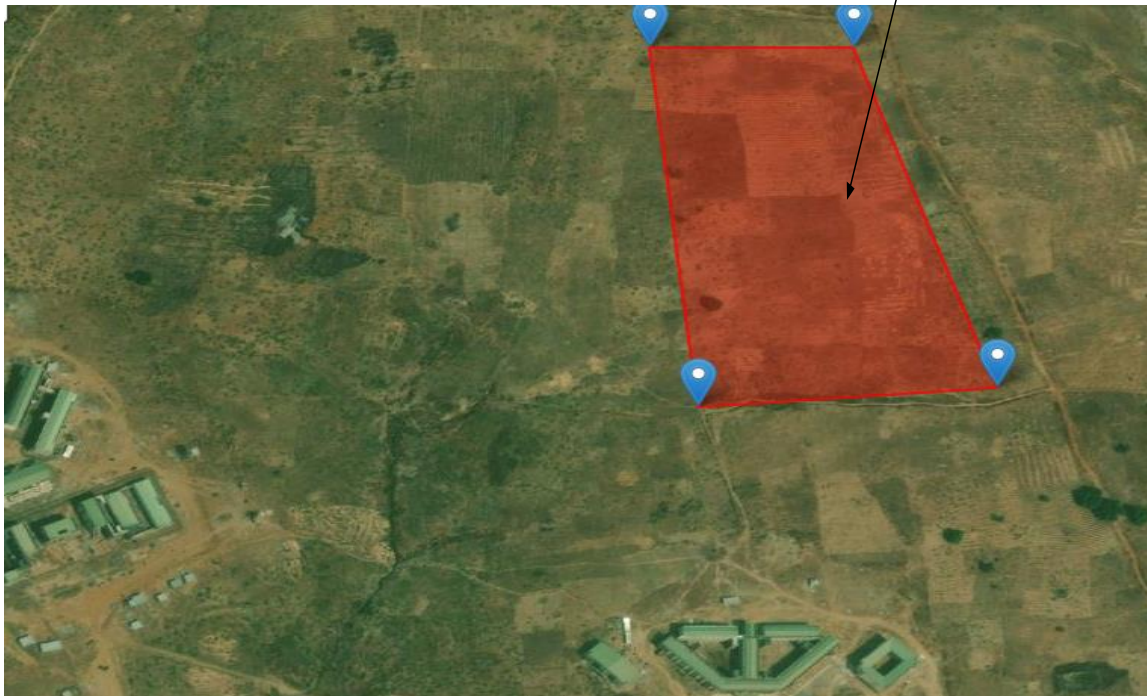
The climatic data of the site and other acquisition and allocation are well captured in the site specific ESMP prepared by ACEMFS, FUT MINNA.



Map of Nigeria showing Niger State



Map of Niger showing Minna



Aerial map showing proposed study ACEMFS FUT Minna, July 2022

3 Contractor's Methodology

3.1 Description of Contractor's methodology

STEP 1 - Mobilization of Contractor's personnel (*recruitment of unskilled and semiskilled labour from the community*), materials and equipment to site, identifying site boundaries (*identifying and training on code of conduct OHS training for personnel*), setting up site office, Campsite, prayer points, store, and workshop.

STEP 2 – Setting out and excavation, substructure works, superstructure works and roofing

Step 3 – finishing, services, external works, testing and commissioning, decommissioning

3.2 Plants and Equipment

The following is the list of plants and equipment to be mobilized by the Contractor to the project site for construction and implementation works. This equipment will be mobilized to the project site along with other equipment not herein stated but needed for the smooth implementation of the project upon instruction by the Site Engineer.

- a. Bulldozer
- b. Tipper Trucks
- c. Mini Compactors
- d. Concrete mixers
- e. Concrete vibrators
- f. Concrete Batching Plant
- g. Concrete pumping Machine
- h. Bar Bending machines
- i. hayyab
- j. Total Stations/ Survey Equipment
- k. Generator
- l. Concrete Cutting Machine
- m. Dewatering Pumps

3.3 Mobilization and Setting up of Labour Camp and Site Office

The Contractor, in collaboration with the Supervising Team from PPDU, FUT MINNA, will explore options for orderly accommodation on open space to setup suitable labour camp or campsite for site-based workers and equipment, through leasehold and proper documentation, as may be required. In addition to the above, the Contractor, with the collaboration of the ACEMFS FUT MINNA building project team will engage local services of residents along the project corridor and immediate communities as part of workforce. To ensure proper organization and engagement of workers from the local community, and to discourage "at the gate" recruitment of workers, the Contractor shall hire the service of recruitment officers. The contractor shall set up an onsite camp office to serve the purpose of onsite meetings with stakeholders, grievance redresser, and documentation purposes, etc. Mobilization of workers to site shall be by road means of transportation, and in a manner that does not pose threat to the project community.

Please note the Contractor shall engage mostly local labour for majorly, unskilled and semi-skilled jobs.

The camp that will be setup by the Contractor shall satisfy the following prerequisite:

- **Camp-based Waste Management:** The Contractor shall review and implement the measures proffered and costed in the Waste Management Plan (WMP) in the ESMP prepared for this project. This waste includes Laboratory waste, municipal solid waste, and other human waste.
- **Facilities and Amenities:** The Contractor shall ensure the provision of necessary facilities and amenities to the site to ease dependence on community-based infrastructures, and to ensure a clean and safe environment. These facilities include water and sanitation facilities, electricity, as well as clinical/first aid facilities among others.
- **Adequate Camp Site Preparation:** The Contractor shall ensure proper clearing of site and fumigation to reduce or eliminate chances of attacks from reptiles and poisonous insects. Additionally, the Contractor shall ensure perimeter fencing of campsite to ensure security and control.
- **Safety and Security:** Perimeter fencing of the camp and site office shall be undertaken by the Contractor. Also, provision of security gates and camp guards shall be made available.
- **Stock Piling:** Stockpile areas shall be in areas where trees can act as buffers to prevent dust pollution. Perimeter drains shall be built around stockpile areas. Sediment and other pollutant traps shall be located at drainage exits from workings.
- **Stacking of Equipment:** Equipment stacking area shall be overlay with impermeable membrane to avoid seepage of oil into soil and nearby water courses. Additionally, all measures proffered in the ESMP for the proposed works with regards equipment stacking shall be implemented.
- **Proper Handling of Hazardous Materials (specifically, storage):** All hazardous materials that require bulk purchase for implementation phase, that may require storage in site store shall be stored in a manner that is risk-proof to the environment and human health.
- **Provision of Camp-based awareness:** The Contractor shall provide adequate camp-based awareness for all site-workers based in the labour camp. This is to sensitize the workers on pertinent issues including use of drugs, proper use of facilities provided, personal and environmental hygiene, security, health and safety, and gender-based issues and COVID 19 awareness.

Other Regulations/Guidelines for Setting up the Campsite and Project Site office:

- i. All vessels (drums, containers, bags, etc.) containing oil/fuel/surfacing materials and other hazardous chemicals shall be bound to contain spillage. All waste containers, litter and any other waste generated during the construction shall be collected and disposed at designated disposal sites in line with applicable government waste management regulations.
- ii. All drainage and effluent from storage areas, workshops and campsites shall be captured and treated before being discharged into the drainage system in line with applicable government water pollution control regulations.

- iii. Used oil from maintenance shall be collected and disposed appropriately at designated sites or be re-used or sold for re-use locally.
- iv. Entry of runoff to the site shall be restricted by constructing diversion channels or holding structures such as banks, drains, dams, etc. to reduce the potential of soil erosion and water pollution.
- v. Construction waste shall not be left in stockpiles on the project site but removed and reused or disposed off daily.

3.4 Sequence of the Construction Works

The sequence of works implementation for the proposed works is presented below in ascending order, from the first to the last set of tasks to be implemented. This would also be captured in detail in the programme of works to be submitted to the supervising team.

1. Mobilization of Contractor's equipment, materials, and personnel to site

Materials needed include:

- Sand
- Gravels and stones
- Water
- Laterite
- Asphalt (coal tar)
- DPM
- Cement
- Hydrocarbon materials (fuel, diesel, engine oil, lubricating oils, etc.)
- Timber
- Zinc and other boarding up materials for site office
- BRC Mesh
- Ceramic tiles
- POP Cement and fibres
- Services materials (electrical and mechanical)
- Paints
- Reinforcement steel bars

The Contractor shall mobilize materials to the site from nearest available market and shall harness materials from approved borrow-pits and vendors. Patronage of unapproved vendors and markets by the PPDU, FUT MINNA for such materials shall be continuously discouraged for use by the Contractor.

Furthermore, the contractor shall setup a fair recruitment process for the engagement of community members and locals for such roles as unskilled and semi-skilled labour for the implementation. Other personnel shall be mobilized to site by the contractor taking into consideration emphasis of such in the in the ESMP.

2. Clearing of Site, Grading, Leveling and Filling

This involves the clearing of bushes, trees and unwanted vegetation and objects within the site premises. All vegetation clearing activities shall be carried out only where necessary, and site-specific. This task shall be undertaken in accordance to the measures and guidelines provided in the ESMP.

3 Setting Out and Excavation

A proper method for excavation shall be deployed to reduce air and noise pollution. Excavation shall be done strictly under the supervision of the Project Site supervisor so as to ensure compliance with the ESMP regarding quality of work, heritage site, antiquity, underground water and other mineral resources.

4 Sub-structures

All works at sub-structure shall be carried out in the open and during allowed working hours with the approval of the supervision team. Concrete mixers and poker vibrators to be deployed would be modern and less noisy. An equipped first aid box will always be available at the project site office. Routine emergency drills for site accidents. All workers must be dressed in their full PPE kits before accessing the project site.

5 Super Structure

All works would be carried out in line with the technical specification and approval of the supervising team. Workers would maintain good hygiene on the site, caution signs shall be displayed where needed, face masks and goggles would be incorporated into the PPE of workers for appropriate job orders.

6 Roof

All the guidelines as contained in the ESMP shall be abided observed.

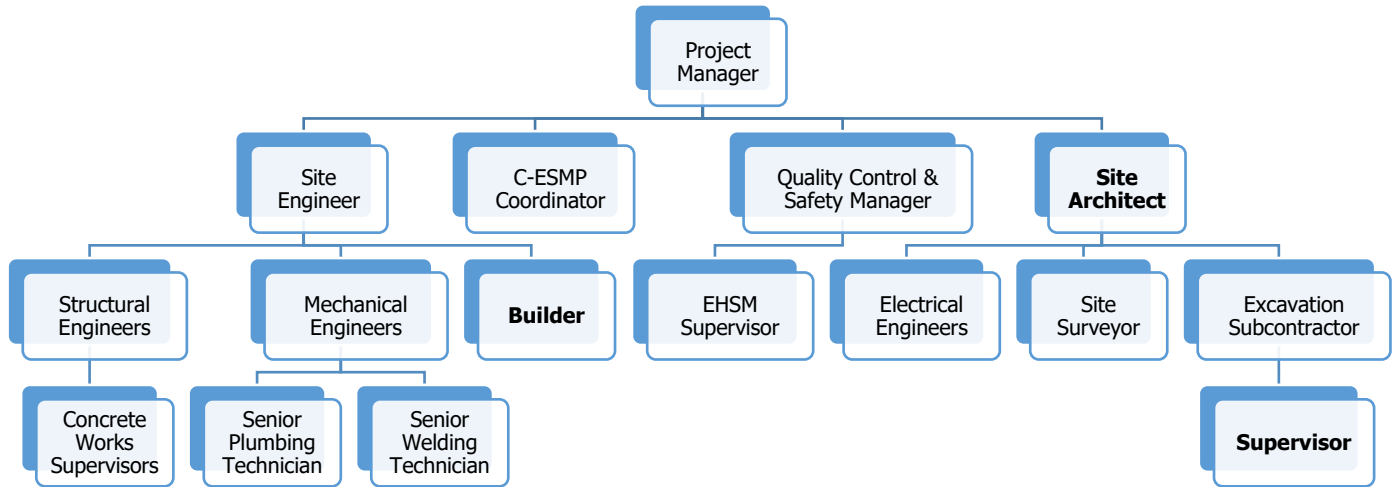
7 Finishing

All the guidelines as contained in the ESMP shall be abided observed.

4 C-ESMP Structure & Responsibilities

4.1 Contractor's Management Structure

The Contractor's environmental and social management structure is represented in the schematic below.



Contractor's Management Structure

4.2 Contractor's Environmental and Social Management Team

In order to ensure successful implementation of this C-ESMP, an environmental and social management team is set up to facilitate proactive compliance to mitigation measures of environmental and social risks during project implementation. The project manager heads the team and has vast knowledge and experience in implementation of similar projects as well as sound knowledge of environmental and social framework (ESF) and environmental and social standards (ESSs) of the World Bank. The team is also furnished with a C-ESMP Coordinator to ensure adequate compliance. The following list represent the various members of the team:

1. Project Manager
2. Site Architect
3. Site Engineer
4. Quality Control & Safety Manager
5. Site Surveyor
6. Builder
7. C-ESMP Coordinator
8. Environmental, Health and Safety Officer
9. Earth and Excavation Works Supervisors
10. Concrete Works Supervisors

11. Subcontractors
12. All Employees
13. Community Liaison Officer (CLO)

Project Manager

The project manager is the topmost member of the team and shall have the overall responsibility for the project. Specifically, he shall:

- Be responsible for the complete implementation of the C-ESMP.
- Coordinate with consultants, subcontractors and suppliers.
- In accordance with the contract and the C-ESMP, manage environmental safety of the construction site, including the subcontractors' construction.
- Ensure proper site-workers' awareness and routine training and education on the C-ESMP content and procedures.
- Ensure that engineers, supervisors, foremen, operators and construction workers are familiar with and implement all relevant environmental and social mitigation/control measures.
- Periodically review all environmental and social measures to assess their ongoing applicability and effectiveness.
- Encourage all employees to maintain acceptable standards of health, safety and environmental work practices and foster awareness of health, safety and environmental matters; and
- Encourage the reporting of incidents, events and other concerns and ensure appropriate feedback on proposed corrective actions.

Site Engineer and Site Architect

The site engineer shall have oversight of all construction activities within the project site. He shall:

- Ensure proper understanding and compliance to standard site-based safety practices.
- Ensure strict and continuous compliance and observance of all clauses in this C-ESMP through project implementation.
- Ensure proper reporting of all incidents and/or accidents (if any) within the project site, as well as ensure the proper understanding of the accurate reporting procedures by site workers.
- Take active participation in any site-based investigation.
- Develop a scheme for identifying faulty equipment and equipment that are out of service and require inspection and servicing.
- Keep proper and up-to-date record of all site activities and inspections.
- Provide close supervision and coordination of other engineers including the structural, mechanical and electrical engineers.
- Ensure prompt provision and availability of resources for the project to achieve project development objectives (PDOs); and
- Ensure compliance to all plant and equipment handling and stacking measures and procedures in this C-ESMP; and

- Participate in incident and non-compliance investigations and provide preventive or corrective measures accordingly.

C-ESMP Coordinator

The C-ESMP Coordinator is a strategic leadership role in the implementation of this C-ESMP. The C-ESMP Coordinator shall act as the functional and technical project personnel on all matters regarding the implementation and communication of this C-ESMP. He shall:

- Provide supervisory expertise to all employees with regards the implementation of this C-ESMP and to ensure full compliance throughout the project implementation phase of the project.
- As may be required, undertake development and review of this C-ESMP.
- Provide exemplary leadership to all staff and employees on compliance to this C-ESMP.
- Provide technical and advisory support to supervisors and site engineers on matters relating to the implementation of this C-ESMP; and
- Provide report of all environmental and social issues in connection to the project to the Safeguards Officers of ACEMFS, FUT MINNA.

Environmental, Health and Safety (EHS) Officer

He shall:

- Strategize adequate and continuous ways of distributing and communicating HSE procedures to all site personnel.
- Develop an adequate and routine HSE training program to foster safety culture among all site workers.
- Lead and conduct accident or near-miss investigations and develop effective corrective measures to ensure such incidences are not repeated.
- Continuously discourage unsafe behavior and communicate with site engineers to ensure provision of safe working conditions.
- Continuously encourage the use of complete personal protective equipment (PPE) by all workers especially by using them always and properly himself.
- Conduct health and safety inspections and prepare reports of all operations.
- Recommend control measures and advise on the standard of PPE issued to employees.
- Immediately contact the project manager if situations are found that require immediate rectification or the stopping of operations; and
- Notify the project manager if the corrective action agreed upon after any site inspection is not implemented by the arranged date.

Earth and Excavation Works Supervisors

The earth and excavation work supervisors shall ensure that all related works are conducted in full accordance with the Contractor's guidelines on excavation and deposit as contained in this C-ESMP.

Concrete Works Supervisors

He shall:

- Promote implementation in a manner to attain zero-arm implementation of all concrete related works throughout the project implementation phase;
- Ensure minimal environmental and social impact from concrete works;
- Ensure proper cement, gravel and water mixture;
- Ensure zero-discharge into nearby water course.

Employees and Subcontractors

Throughout the project implementation phase, all employees and subcontractors shall conduct their specific duties in accordance to all laid down procedures in this C-ESMP. They shall also ensure self-compliance to all environmental and social management guidelines, and health and safety procedures as stated in this C-ESMP. Additionally, all subcontractors shall submit their personal Environmental, Health and Safety Management System (EHSMS) in accordance with the terms of their subcontract to the Mahadi Services and Resources Limited.

Community Liaison Officer (CLO)

He shall:

- Provide guidance on socio-cultural aspects of the project looking at social accountability and correspondence with the stakeholders;
- Provide translation when required;
- Complaints/Disputes are to be directed to the CLO where are predominately in the native language. These complaints are to be formally recorded of issue and eventual resolution; and
- Report all complaints or disputes to the Project Manager or delegate when required.

5 Environmental and Social Impacts

5.1 Overview

The proposed works is unlikely to cause any significant adverse environmental and social impact other than those already identified and mitigated for in the site specific ESMP. The range of environmental, social and occupational health and safety issues associated with the proposed Centre Building Construction are described in a matrix table for the Contractor's Environmental and Social Management Plan (C-ESMP). Since the project consists mainly of civil works, majority of the environmental and social impacts and health and safety hazards are expected to arise during the construction phase of the project. The C-ESMP matrix table also covers potential impacts as perceived during the pre-construction phase of the project implementation.

All identified adverse impacts shall be mitigated for in accordance to the proposed mitigation measures provided in the prepared ESMP report for the proposed works. Peculiar issues as health

and safety, management of project site and facilities, codes of conduct, waste management and emergency response have been fully addressed in the annexes of this C-ESMP.

5.2 Environmental Impact and Social Impact

The impacts have been identified in the prepared ESMP and presented in phases (pre-construction, construction, and decommissioning)

C-ESMP Matrix

Preconstruction Phase

S/ No	Activities	Potential Impact	Mitigation Measures	Responsibility for Mitigation	Mitigation Cost (NGN)	Parameters to be measured	Method of measurement	Performance indicator	Sampling Location	Monitoring Frequency	Institutional Responsibility (Monitoring)	Costs (NGN)
A. Environmental & OHS Impacts												
1A	Movement of materials, vehicles, and equipment to site	Air pollution from exhaust fumes of vehicles, equipment can lead to health risks such as Respiratory Tract	Ensure that all vehicles are serviced; undergo vehicle emission testing (VET) and vehicle exhaust screening (VES). Use fuel efficiency techniques, catalytic	Contractor	200,000	SO ₂ , NO _x , CO, VOC, PM _{2.5} , PM ₁₀ Type of vehicles/sites	In-situ measurement Site inspection	Air Quality Parameters are within permissible limits as documented by NESREA ¹ Evidence of VET and VES Evidence of compliance	Project area and within 1km Project area	Bi-monthly Weekly Before movement of vehicles	ACEMFS E&S Team Dept of Planning Development, Works & Services (PPDU) FRSC AEPB	200,000

¹ National Environmental (Air Quality Control) Regulations, 2014

		<p>Infections (RTIs)</p> <p>Worsen road condition</p> <p>Destruction existing landscape and structures of FUTM</p>	<p>converters etc. on machinery</p> <p>Use road worthy vehicles/ maintain regularly</p> <p>Limit area of movement and use closest access route (ARi-1 and AR-1) from the school gate. See Figure 5</p>			Access route marked out						
2A	Land and site clearing, staging area	<p>Minimal vegetation cover removal</p> <p>Vegetative waste</p>	<p>Limit land clearing to specific zone needed for the construction work.</p> <p>Collaborate with FMU/AEPB for onsite waste removal</p>	Contractor	30,000	<p>Cleared area</p> <p>Vegetative waste onsite</p>	Site inspection	Contractor compliance	Project site & area	Before and during land clearing	ACEMFS E&S Team AEPB	Covered in 1A above
3A	Creation of Staging area	Temporary removal of topsoil, Oil	Segment a safe and specific area for	Contractor	80,000	Soil Quality	Visual observation	Soil Quality parameters are within	Equipment Staging Area	Bi-monthly	ACEMFS E&S Team	Covered in 1A

	for equipment	leakages from stacked equipment and discoloration of topsoil	equipment parking Service equipment and install a non-permeable membrane/ drip pan					FME _{env} permissible limits			PPDU AEPB	
		Minimal noise impacts	Retrofit vehicle exhausts with sound-control or sound-proofing devices Maximize off-work hours, especially for activities with potentially high noise generation	Contractor	50,000	No. of complaints from nearby offices	Noise measurement	Evidence of Compliance	Project Area	Weekly	ACEMFS E&S Team AEPB	Covered in 1A
4A	Sourcing and mobilization of construction materials to site	Debris may fall off from trucks or other lighter materials like sand may be	Use tarpaulin material to properly cover conveying truck.	Contractor	30,000	Use of tarpaulin to cover truck conveying materials to site	Inspection	Contractor's compliance	Along access road to site	During mobilization	ACEMFS E&S Team PPDU	50,000

		<p>blown into the environment causing dust and disturbance on roads and to other road users.</p> <p>Protruded metals, rods, woods, roofing sheets may constitute hazard and nuisance to other road users who may not notice the protrusion. Also, these materials may fall off from the vehicle and may lead to road accidents.</p>	<p>Ensure that materials are tightly packed and belted firmly to avoid rolling off the truck.</p> <p>Convey materials using most suitable trucks.</p> <p>Ensure caution tapes are attached to the ends of protruded rods /woods in transit to notify oncoming vehicles and road users.</p>									

Use of belts to secure materials in position

Use of caution tapes attached to protruded rods/woods.

4A	Mobilization to site and clearing activities	Risk of accidents and injuries to contractor workers Respiratory diseases to Workers due to inhalation of exhaust fumes and dusts Noise Pollution	Submit and implement company HSE Manual/ Implement site specific Occupational Health and Safety Management Plan (OHSMP) see annex 5 for sample The OHSMP will entail: - Provision of Hazard Communication Procedures (HAZCOM); Job Hazard Analysis (JHA); OHS Training program Provision of adequate first aid, first aiders, PPE, safety signages Ensure qualified HSE officer on every team	Contractor	100,000	Compliance with OHSMP No of workers Trained on HSE/OHS No of accidents , incidents or injuries Noise level Availability and use of appropriate PPEs First Aid Kits	Site inspection Consultation	HSE/OHS Training reports and list of attendees Evidence of Compliance to OHSMP Evidence of use of PPEs, caution signs onsite, well-stocked first aid kits Compliance with Security	Project area	Weekly	ACEMFS E&S Team, PPDU	Covered in 1A
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			Workers should get a daily induction/tool box before work commences Use reflective tapes and signage integrated in all worksites for safety at night			Security Management Plan		Management Plan				
	Sub-Total (Environmental & OHS)				485,000							250,000
	B. Social Impacts											
1B	Movement of materials and equipment to staging area	Obstruction to access route for staff of FUTM, EFCC HQ, FMC, and students of FUTM Disturbances from increased noise levels	Limit movement to off-peak hours (peak hours are: 7:30AM – 10:00AM; and 4:00PM – 5:30PM; Mondays – Fridays) Liaise with the personnel at the security checkpoint for	Contractor Project level GRC	150,000 for GRM	No of locals recruited GRCs established, compliant boxes on site	Site inspection Recruitment records	No of complaints received Contractor's compliance Documentation from consultations Implementation of GRM and sensitization	Project vicinity	Weekly Monthly	ACEMFS E&S team GRC	100,000

		<p>Grievance from poor recruitment of local labour for semi- & unskilled labour by contractor</p> <p>Grievance for women who may not be able to satisfy stringent recruitment requirements</p>	<p>traffic management.</p> <p>Ensure collaboration with community leadership for recruitment of local labour.</p> <p>Establish effective GRM for receiving and resolution of complaints</p> <p>Special consideration and less stringent recruitment requirement for women and PWD to encourage women participation</p> <p>Ensure adequate sensitization of the GRM</p>			<p>No. of sensitizations held and No. of community members sensitized</p>		attendance sheet				
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			process and the Complaint form									
2B	Land and site clearing, staging area	Delay in removal of vegetative wastes from site, which may lead to pollution	Collaborate with FMU and AEPB for timely removal of waste materials from site	Contractor FMU	Same as 2A above	MoU with FMU /AEPB	Site inspection	Signed MoU Timely removal of vegetative waste from site	Cleared area and surrounding	Staging	ACEMFS E&S Team	covered in 2A above
3B	Labor Influx	Potential for SEA/SH/GBV Potential for spread of STDs, sexual relations with community members, onsite vendors, female students and staff	Sourcing of local workforce from project community (Gidan Kwano) All contractors' workers to be trained/sensitized and sign Code of Conduct (CoC) (see annex 7 for sample CoC) and zero tolerance for sexual integration	Contractor Contractor, ACEMFS GBV Officer, GBV Experts/ Service Providers ACEMFS GRM/GBV Officer	Same as 1B above 100,000	No. of local labour Number of trained/sensitized Personnel Signed Code of Conducts	Attendance list / training report Observation/ review of CoCs List of GBV focal persons	Compliance to SEA/SH measures Signed Code of Conducts Available GBV-GRM	Project vicinity	Bi-weekly	ACEMFS Gender/GBV Officer ACEMFS GBV Officer	80,000

			<p>with students, staff, community</p> <p>ACEMFS to establish a GRM equipped to handle GBV cases with reporting channels that are easily accessible and community members feels safe reporting to</p> <p>ACEMFS to establish collaboration with Federal Ministry of Women Affairs and local NGOs for responding to and managing</p>	<p>ACEMFS</p> <p>ACEMFS GBV Officer, GBV Experts/ Service Providers</p> <p>Contractor / ACEMFS E&S Team</p> <p>Contractor</p>	<p>Captured as part of 1B above</p> <p>20,000</p> <p>150,000</p>	<p>Established GBV-GRM</p> <p>MoU</p> <p>Attendance List/ sensitization reports</p>	<p>List of identified NGOs</p> <p>Review sensitization report/ attendance list</p> <p>Observation</p>	<p>MOU Signed</p> <p>Sensitization conducted</p> <p>Evidence of signages onsite/ project communities</p>				
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			<p>GBV related grievances</p> <p>ACEMFS to sensitise school staff, Community leaders, women group, youth group on SEA/SH preventive measures and response plan</p> <p>Signages against tolerance for SEA/SH/GBV to be installed along the project communities/corridor</p> <p>Use of minors (below 18) will be prohibited and stated in the CoC</p>	Contractor		<p>Signages onsite</p> <p>Designated toilets</p>	Observation	Separate toilets available for male and female				
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			Ensure separate toilets for male and females’ workers with locks									
4B	Labor Influx	Risk of social conflicts between the local community and the construction workers, which may be related to religious, cultural or ethnic differences, or based on competition for local resources	Provision of information regarding Worker Code of Conduct in English and local language(s), Provision of cultural sensitization training for workers regarding engagement with local community. Consultations with and involvement of local communities. Contractors to provide resources for	Contractor GRCs	50,000	Reports/ Complaints Worker’s welfare	Review grievance logbook, interviews / consultations Observation, workers GRM/ Complaints	Absence of complaints	Project vicinity	Weekly	ACEMFS E&S Team	Covered in 3B above

			workers including water, health, toilet (WASH)									
5B	Movement of vehicles and operationalization of equipment	Health & safety risks such as accidents	Ensure contractor drivers adhere strictly to traffic management plan (TMP) and road safety rules. see annex 5 for sample: Avoid night hours for fleet movement, use trained drivers, ensure drivers do not use substances, comply with fleet management standards, vehicles should not be overloaded with materials, use of flagmen and safety cautions in built up areas,	Contractor FRSC	150,000 (Driver's training)	Training Records No of Complaints	Review of training records Accident/incident reports Grievance records	Drivers trained by FRSC on road safety and fleet management Installed caution and safety signs in strategic places Absence of traffic incidents	Project site/ Communities	Weekly	ACEMFS E&S Team FRSC	50,000

			limit movement during religious activities such as Fridays etc.									
7B	Onsite storage / staging area	Theft of construction materials and equipment from staging area	Engage onsite security personnel Liaise with FUTM chief security officer (CSO)	Contractor ACEMFS	150,000	Engaged security personnel Incidents of theft	Security/ incident reports	Letter of engagement for security personnel Absence of incidents	Staging area	During staging area	ACEMFS E&S Team FUTM CSO	30,000
	Sub-Total (Social)				770,000							260,000
	Total Preconstruction Phase (Environmental & OHS and Social)				1,255,000							510,000

Construction Phase

S/ No	Activities	Potential Impact	Mitigation Measures	Responsibility for Mitigation	Mitigation Cost (NGN)	Parameters to be measured	Method of measurement	Performance indicator	Sampling Location	Monitoring Frequency	Institutional Responsibility (Monitoring)	Costs (NGN)
	C. Environmental & OHS Impacts											
1C	Movement of vehicles	Increase in particulate matter, vehicular	Use road worthy vehicles and conduct	Contractor		Air Quality	Site inspection / observation	Compliance with air quality	Project vicinity	Bi-weekly Monthly	ACEMFS E&S Team, PPDU	200,000

		emissions which could cause air pollution & eye / respiratory diseases for contractor workers	routine maintenance Provide PPEs including eye protectors, nose masks to be worn by workers		300,000 for PPEs	Vehicle quality PPEs availability and usage by contractors' personnel	Vehicle inspection and maintenance reports Use of PPEs	standards (see 1A) Vehicle Maintenance records Compliance to use of PPEs		Daily	FMU/AEP B	
2C	Civil Works	Indiscriminate defecation or open defecation by construction workers	Provision of WASH & toilet facilities for workers	Contractor	Same as 3B	Evidence of useable toilets	Site Inspection	Contractors compliance Absence of open defecation by workers	Project site Around project site	Weekly	ACEMFS E&S Team, Supervising Consultant FMU/AEP B	Covered in 3B
3C	Civil works, use of materials and machinery	Land degradation and increased susceptibility from sourcing	Ensure sourcing of earth materials from registered quarries and licensed construction	Contractor	Part of contract cost	Primary supplier E&S checklist List of licensed vendors	Site inspection Completed E&S checklists and periodic	Compliance to E&S requirements	Project site	Monthly	ACEMFS E&S Team	Covered in 1c above

		of materials	vendors/ building materials market nearby with appropriate quarry lease to prevent illegal sand mining.				compliance monitoring					
5C	Civil works, Roofing, fixing of doors, Wall finishing and painting	Accidental spillage of lubricants and paints chemical	Buy only required quantity Collect slurry into labelled container Ensure workers use protective PPEs	Contractor	50,000 (labelled waste collection containers) Same as 1C	Number of waste collection containers PPEs available	Site inspection Observation Incident reports	Contractor's Compliance Use of appropriate PPEs Absence of incidents	Project Site	Weekly	ACEMFS E&S Team Supervision Consultant	Covered in 1C
		Accumulation of solid wastes including construction waste and debris Generation of human waste (fecal waste)	Ensure proper sorting; storage and final disposal of waste, liaise with FMU/AEPB to collaborate with a licensed waste operator.	Contractor FMU/AE PB/ Licensed waste operator	250,000	Waste Management on site Waste Manifest	Site inspection Verification of documents	Good waste management practices Evidence of waste disposal records	Project site	Weekly	ACEMFS E&S Team, FMU PPDU	Covered in 1C

		Burning of e-waste and debris as poses risks of air pollution leading to health diseases such as RTIs	Implement Waste Management Plan (see annex 4). Ensure recycling of removed materials from site through approved recycling facilities to conserve resources. Ensure no waste is left behind at project site after construction			Manifest for waste reuse						
6C	Civil works, material handling, machinery usage	Worker's accidents such as Injuries, explosions, electrical fires, leakages, falls from height,	OHS training and education, implementation of OHSMP: Provision of Hazard Communication Procedures (HAZCOM); Job Hazard	Contractor	200,000	Compliance with OHSMP No of workers Trained on HSE/OHS	Consultation with workers Site Observation Incident Reports	HSE/OHS Training reports and list of attendees Evidence of Compliance to OHSMP	Project site	Weekly	ACEMFS E&S Team, Supervision Consultant PPDU	Covered in 1C

		slips, release of hazardous energy, deaths etc.	Analysis (JHA); OHS Training program Provision of adequate first aid, first aiders, PPE, safety signages (Hausa and English languages). Ensure qualified HSE officer on every team Workers should get a daily induction/tool box before work commences, use of hazard signs			/ Training reports No of accidents , incidents or injuries Availability and use of appropriate PPEs First Aid Kits		Evidence of use of PPEs, caution signs onsite, well-stocked first aid kits Absence of incidents/accidents				
	Sub-Total (Environmental & OHS)				800,000							200,000
	D. Social Impacts											
1D	Civil works, material handling, machinery usage	Health & safety risks such as accidents	Limit movement to off-peak hours (peak hours are: 7:30AM – 10:00AM; and 4:00PM – 5:30PM;	Contractor	Same as 1 and 5B	Training Records No of Complaints	Review of training records Review of compliance to TMP	Drivers trained by FRSC on road safety and fleet management	Project site	Monthly	ACEMFS E&S Team,	Covered in 1c

			<p>Mondays – Fridays)</p> <p>Ensure contractor drivers adhere strictly to road safety rules. Liaise with the personnel at the security along the route and in the school for traffic management. Avoid night hours for fleet movement, use trained drivers, ensure drivers do not use substances, comply with fleet management standards, vehicles should not be overloaded with materials, use of flagmen and safety</p>			<p>Grievance records</p>	<p>Accident/incident reports</p> <p>Review of Grievance records</p>	<p>Installed caution and safety signs in strategic places</p> <p>Absence of traffic incidents</p> <p>Absence of complaints</p>				
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			cautions in built up areas, limit movement during religious activities such as Fridays etc.									
2D	Civil works, material handling, machinery usage Movement of vehicles, materials, and equipment	Fugitive Dust may likely affect the FUTM immediate community health & safety especially during digging, excavation and drilling Noise: disturbance in a serene environment may affect their daily work schedule, psychology and peace of mind	Construction should be maximised during off peak periods/weekends/holiday Vehicles conveying materials should be covered with tarpaulin Ensure all vehicles and machines undergo service before being brought to site with continuous	Contractor	-	Air quality Vehicles with tarpaulin Noise level Complaints/ Grievances	In-situ measurement Vehicle inspection Consultation with FUTM staff and workers at the recreational centre	Air quality is within permissible limits Contractor's Compliance Absence of grievances/resolved grievances	Project vicinity and its corridor	Weekly	ACEMFS E&S Team,	-

			<p>regular maintenance.</p> <p>Retrofit vehicles/ equipment with sound mufflers</p> <p>Ensure vehicles/ equipment not in use are turned off</p> <p>Ensure the GRM is effective to allow for associated complaints</p>		lines, sensitization on GRM							
3D	Recruitment of workers	Unfair and discriminatory recruitment practices which may be exploitative, cause conflicts,	Comply with and implement the Labour Management Plan in the ESMP including:	Contractor	-	<p>Consultations with workers</p> <p>Recruitment records</p> <p>Complaints/</p>	<p>Review: Minutes of meetings, Grievance records, recruitment records</p> <p>Consultations/ interviews</p>	<p>Compliance to LMP</p> <p>Minimal complaints</p> <p>Resolved strike actions</p>	Project site	Monthly	ACEMFS E&S Team	50,000

		potential litigation. Poor terms and conditions of employment which could lead to poor wages, unsafe work conditions, suboptimal welfare etc.	inclusive recruitment especially for women and PWD, safe work conditions, provision of basic amenities etc. Workers will have freedom of association and should be sensitised on the available grievance redress channels			grievances Workers strike action Dismissal records		Workers are not victimized for association/unions				
4D	Staging Area, equipment and material parking	Obstruction to free movement within the FUTM premises	Limit parking to selected zones	Contractor	-	Area selected In-school access route	Site inspection Review of grievance logs	Contractor Compliance Absence of complaints/resolved complaints	Project site	Monthly	ACEMFS E&S Team PPDU	-

						Grievance records						
6D	Continuous civil works	Risk of Child Labour which can lead to Violence Against Children and litigation against existing child protection laws	Ensure that children and minors are not employed directly or indirectly on the project by requesting legal proof of age during recruitment process Implement sensitization campaign against child labour Regular stakeholders' meetings All employees and contractor must sign the code of conduct	Contractor ACEMFS Gender Officer	-	Categories of employees Number and reports of campaigns and meetings Signed Code of Conduct Prepared & approved CESMP	Documentation Consultations	Contractor Compliance Absence of underaged children Number of complaints	Project vicinity	Bi-monthly	ACTEL E&S Team Federal Ministry of Women Affairs Partnering NGO	Covered in 1C

7D	Civil works, movement of vehicles conveying materials and equipment	Labour Influx; which may lead to conflicts amongst locals and employees; competition for limited resources such as water, materials etc.	Engage local workforce especially as unskilled workers Provide basic amenities for workers like water, health, toilets etc. implement labour influx plan	Contractor	650,000 (supplementary costs)	Number of local workforce Availability of basic amenities	Contract Verification Site inspection Document verification	Contractor compliance to E&S LMP Number of local employees	Project site	Monthly	ACEMFS E&S Team PPDU	Covered in 1C
8D	Labor Influx and presence of Followers	Occurrence of onsite/off-site, social vices (Fights, harassments, theft, vandalism, drug use etc.) Threat to health and	Sourcing of local workforce from project communities All contractors' workers to be sensitized and sign Code of Conduct (CoC) (see annex 7 for sample CoC) and zero	Contractor Contractor in liaison with GBV Experts	Same as 3B 200,000 (Training cost)	Number of trained Personnel Code of Conducts GBV-GRM	Attendance list / training report Observation / review of CoCs Consultations with PAPs/ List of GBV focal persons	Compliance to SEA/SH Action Plan Signed Code of Conducts Available GBV-GRM	Project site	Monthly	ACEMFS E&S Team ACEMFS Gender/GBV Officer Ministry of Women Affairs Partnering NGO	100,000

		<p>safety of locals</p> <p>Increase in SH/SEA</p> <p>use of minors</p> <p>use of cultural norms</p> <p>Potential for spread of STDs, sexual relations with community members, female students and staff</p> <p>Use of illicit drugs</p>	<p>tolerance for sexual integration with students, staff, community</p> <p>Prohibition of drug and alcohol use by workers while on the job through awareness & sensitization on side effects of drug use</p> <p>Provide cultural sensitization training to improve awareness of and sensitivity of workers to local cultures, traditions, and lifestyles.</p>	<p>Contractor</p> <p>SPIU</p> <p>Gender Officer/GBV</p> <p>Focal persons</p>		<p>Attendance List/ Training reports</p> <p>Monitoring Reports</p> <p>Signages onsite</p> <p>Reports/complaints</p>	<p>Review List of Service Providers</p> <p>Review training report/ attendance list</p> <p>Observation</p>	<p>MOU Signed between the SPIU and the Service Providers</p> <p>Sensitization conducted</p> <p>Evidence of signages onsite/ project communities</p> <p>Absence of minors as workforce</p>				
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			<p>Ensure implementation of the GBV-GRM protocol and appoint GBV focal persons in the project sites</p> <p>Ensure effective services from GBV service providers in the project area to enable survivors access to quality care</p> <p>Sensitise staff, Community leaders, women group, youth group on SEA/SH preventive measures and response plan</p>									
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			Signages against tolerance for SEA/SH/GBV to be installed along the project communities/corridor									
9D	Onsite storage / staging area	Theft of construction materials and equipment from staging area	Engage onsite security personnel Liaise with FUTM chief security officer (CSO)	Contractor ACEMFS	250,000	Engaged security personnel Incidents of theft	Security/incident reports	Letter of engagement for security personnel Absence of incidents	Staging area	During staging area	ACEMFS E&S Team FUTM CSO	50,000
	Sub-Total(Social)				1,400,000							400,000
	Total Construction Phase (Environmental & OHS and Social)				2,200,000							910,000

Decommissioning

- 1- Grievances from non-fulfillment of contractor's commitment to community members who worked as contractor's personnel.
- 2- Grievances from non-fulfillment of contractor's commitment on making good University items used for preliminaries.

- 3- Grievance from unused resources such as sand, gravels and stones that may constitute nuisance to the University community.
- 4- Grievances from land degradation due to traffic from heavy equipment and vehicle

- 5- Risk of accidents between contractor's vehicles and other road users
- 6- Slight traffic build-up if decommissioning is carried out during peak traffic days along the road
- 7- Noise generation from running construction vehicles.

6 Decommissioning Plan

6.1 Introduction

At the end of the life of a facility, there is need for decommissioning and restoration of the site to a safe condition that minimizes potential residual environmental impact and permits re – instatement of activities. Decommissioning is however the strategic approach to deactivating a project or facility from service.

The nature of a facility process(s), operational practices and waste management system employed during the facility's operation may result in contamination of the environmental media within and around the facility. Site decommissioning involves but is not limited to engineering and safety practices. When decommissioning a site, the process of closing, dismantling, remediation of contamination, reclamation, evaluation and decision-making is in consideration to human health and safety, potential (negative) effects on the environment and ensuring compliance with all environmental stated laws and regulations.

The decommissioning shall be implemented by Mahadi Service and Resources Limited, with the supervision of the PPDU and ACEMFS, FUT MINNA

6.2 Decommissioning Options

Decommissioning projects/facility options suitable for the proponent shall be stated in the decommissioning plan. The options include:

- A. **Project/ Facility mothballing** – the termination of a facility with the intention to maintain building structures, and machineries in state suitable for re-use upon reactivation by which access to the industrial site shall be monitored and controlled by government agencies to ensure compliance with applicable regulations while rehabilitating and treating contamination at the site.
- B. **Partial facility decommissioning** - This shall be applicable if a part/section of the facility is to be shut down or when the facility is very large and complex. Partial decommissioning shall also be used for complete decommissioning if the environmental and financial cost of complete decommissioning is too high.
- C. **Complete site decommissioning** - Complete facility decommissioning of a facility is the total closure of an industrial site. It involves the application of all the principles and regulations necessary to protect human health and safety, and minimize environmental hazards.

For this project, Contractor will harness Option C: Complete Site Decommissioning.

6.3 Considerations for Decommissioning

- Removal of structures on or beneath the ground,
- Disposal or secure isolation and/or treatment of contaminated equipment in-situ or off-site,
- Remediation of aesthetics (back-fillings, stained soil removal, waste disposals, etc.) and containment control of contaminant and general site clean-up.
- Access controls for physical structures remaining on-site that are unsafe or hazardous to humans or animals
- Remediation of aesthetically unacceptable portions of the site (filling of pits, removal of stained soil and odourous material, levelling of mounds, disposal of waste rock) etc.
- Clean-up of the site to a level which will provide long-term environmental protection and will be safe for the intended future use
- Registration on title to the property of any contaminants, wastes or structures left on site that restricts future land use or that require periodic monitoring to ensure continued integrity
- Submission to the applicable regulatory agency and other required jurisdictions of a report confirming that decommissioning and clean-up has been completed

6.4 Facility/Infrastructure Rehabilitation

- Consultation shall be made with PPDU and ACEMFS FUT MINNA to determine whether they could be useful if left in place. In this instance, the transfer of the responsibility of maintaining such facility shall be considered to avoid any conflicts between interested parties.
- Consideration shall be made on the feasibility of transferring other fixed assets with beneficial re-use to third parties.
- Where practical; safe and useful options exist, which are agreed to by the parties, formal transfer of responsibility (for maintenance and legal compliance) of specifically defined remaining infrastructure and equipment to identified third parties.
- The proponent shall obtain the express approval of the relevant regulatory authorities and potentially affected landowners before a decision is made to leave any equipment on site for third party use. Provision shall be made to ensure that this infrastructure or equipment does not pose a safety hazard.
- Prepare specific options analysis for the final decommissioning of the facilities.

6.5 Recycling and Reuse:

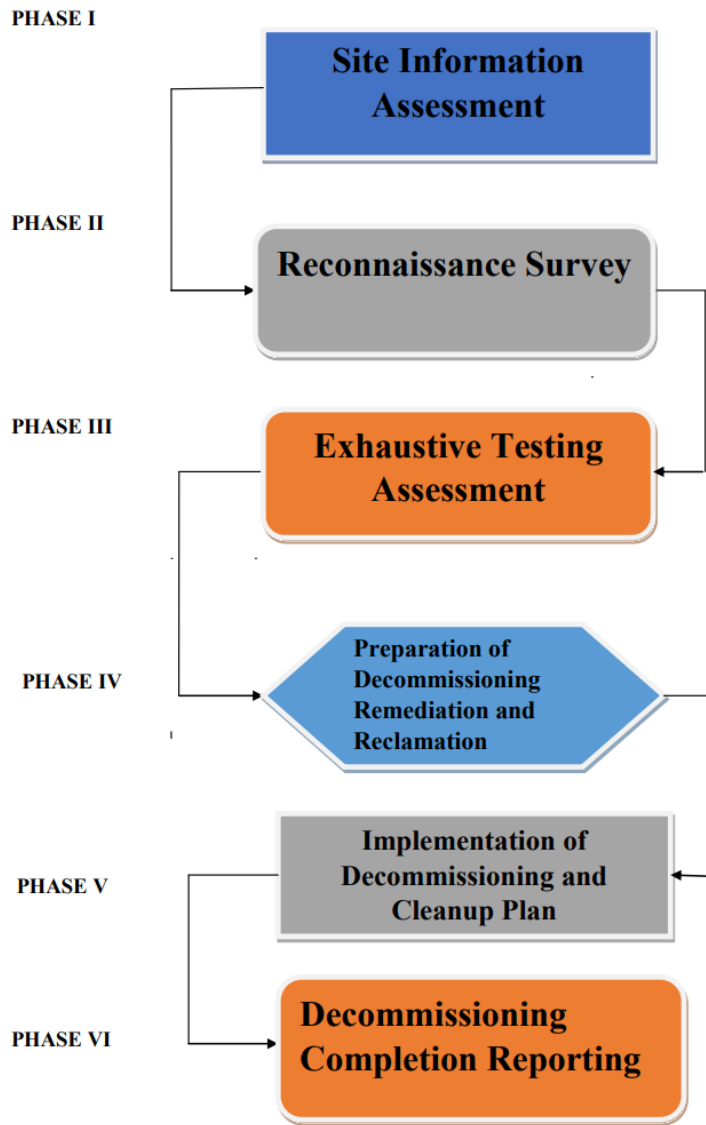
- Identify suitable recycling and disposal options for the equipment and materials that are dismantled, in line with best management principles of the waste hierarchy.
- Recycling and reuse of materials is to be maximized to the greatest extent possible, subject to safety and pollution considerations.
- Maintain a detailed record of all suitable recycling materials,
- Much reasonable practical, and subject to considerations about safety and pollution, provide host community with first choice concerning acquisition of recyclable or reusable infrastructure, non – polluting waste (such as wood), parts and equipment.

6.6 Contaminated land management and waste disposal

It shall be necessary to adopt standard management practice for the remediation and appropriate waste disposal. These shall include but not limited to the following:

- An assessment report which identifies all areas of contaminated land, the nature of the contamination and the necessary measures to contain and remediate these plans shall be carefully carried out.
- Specifications shall include bioremediation where feasible or other measures to remediate the area in accordance with Nigerian legislation and good industrial practice, as well as the removal of hazardous waste
- Appropriate disposal of liquid and solid waste i.e. wastewater, garbage, metals and glass shall be in accordance with Nigeria legal standards and other appropriate standards and guidelines applicable at the time.
- Prepare an inventory of all hazardous materials and wastes to be disposed of and specify the method of disposal in accordance with the state ministry of environment,
- Evacuation of demolition waste by appropriate authorised waste management personnel.

6.7 Phases in project Decommissioning



7 Monitoring & Reporting

7.1 Contractor's Monitoring Plan

The Contractor's monitoring plan for the implementation of the ESMP prepared for this project and this supplementary C-ESMP is presented in the matrix below. This plan is in conjunction with the monitoring plan and responsibilities of monitoring as detailed in the ESMP Report. Additionally, all mitigation measures stated in the ESMP Report shall be adopted in conjunction with those stated in this C-ESMP by the Contractor for mitigating all identified adverse project impact throughout project construction.

Contractor's Monitoring Plan

Key Issues	Method of Verification	Duration/ Frequency	Supervisor
Topsoil and Subsoil	<ul style="list-style-type: none"> In-situ Soil Quality Measurement Visual observation 	Weekly throughout project implementation	Site Engineer C-ESMP Coordinator
Surface and Groundwater Quality	<ul style="list-style-type: none"> In-situ water quality measurement Visual observation 	Weekly throughout project implementation	Site Engineer C-ESMP Coordinator

Waste Management	<ul style="list-style-type: none"> Visual checks and observation Routine inspection 	Weekly throughout project implementation	Site Engineer HSE Officer
GBV, VAC, & SEA	<ul style="list-style-type: none"> Visual observation Records Interview 	Monthly throughout project implementation	Project Manager Site Engineer Social Development Specialist HSE Officer CLO
Labour Influx	<ul style="list-style-type: none"> Recruitment protocol for local personnel 	Monthly throughout project implementation	Project Manager Site Engineer Social Development Specialist HSE Officer CLO
Grievances	<ul style="list-style-type: none"> Interviews 	Monthly throughout project implementation	Project Manager Site Engineer GRM Specialist C-ESMP Coordinator CLO
Health and Safety	<ul style="list-style-type: none"> Visual Observation; Routine Inspections; and Interviews. 	Weekly	Site Engineer HSE Officer C-ESMP Coordinator

7.2 Reporting

The progress of this C-ESMP implementation, including any problems detected during the inspections will be recorded and reported to the Project Manager, including the solution management, on a weekly basis. Records will take a number of forms including:

A. Monitoring Data

Data collated from monitoring activities will be properly filed and documented using a document management system for the provided for the Project.

B. Inspection Records

A number of activities will be inspected weekly using a prepared checklist (See Annex 1). These will be reviewed during site meetings and project audits.

C. Others Content

In the Monitoring Plan Report, the following should be included:

- i. Status of implementation of relevant environmental mitigation measures pertaining to the works.
- ii. Key environmental and social problems encountered and actions taken to rectify problems.
- iii. Summary of non-compliance notifications issued during the month.
- iv. Summary of environmental and social complaints received and actions taken.
- v. Key environmental and social issues to be addressed in the coming month.

Annex 1 : Contractor's Emergency Response Plan

Emergency Contact

Emergency contact person for any emergency situation is the contractor's project manager, who will be available 24 hours a day for seven days a week.

Emergency Procedures

In the event of an emergency, the following procedures will be taken:

- As part of a proactive approach to emergency, the Contractor shall provide routine emergency response drills to all site workers, and proper indication of muster point.
- Notify the incident to Contractor's Project Manager immediately, and circulate the emergency situation within the Contractor's Environmental and Social Management Team (CESMT).
- CESMT shall initiate an environmental response to deal with the emergency situation in accordance with the C-ESMP procedures and guidelines.

- The Plant Engineer shall ensure that all plant, equipment and materials are kept in a safe state to prevent further environmental damages or injuries (in a situation that the emergency is plant-based);
- The Contractor's Management Team shall ensure that all the staff and project personnel are safe;
- Proactive evacuation of all personnel and equipment from the site if necessary. (See the map below for Evacuation Route). The Contractor shall provide an onsite booster point. All project workers and project related personnel shall be made aware of the booster point, and rollcall shall be undertaken by the designated site personnel to ensure that no project personnel is missing or trapped.
- Inform the incident to external parties if required.

Annex 2: Traffic Management Plan

Traffic Management Plan (TPM)

In general, a Traffic Management Plan is required for all projects that could have an impact on:

- MOBILITY - including interruptions to pedestrians, cyclists and vehicular traffic; and
- COMMUNITY - including interruptions to surrounding businesses, residents and school buildings from construction activity and worker parking needs.

Components of the Traffic Management Plan

The proposed TMP for the proposed works shall address the following:

Contractor shall designate a TMP Supervisor who will oversee traffic management along the school gate to the diversion into the temporary access road to the site beside the University Chapel under construction.

Traffic Management Plan for the project will address the following:

- a) Safety Signage:** Safety signage shall be put up along the main carriage way from the University Gate, the diversion point beside the Chapel down to the project site. This would inform motorists that there is a construction about to begin or ongoing off the main road. These signages will indicate that there are “Men at Work”. Caution is most required by motorists moving from the campus to Lunko Village a few kilometers away from the site.
Road Diversion Signage: Diversion signages are required at the University Chapel junction.
- b) Communication:** Mahadi Services and Global Limited with support from the PPDU and ACEMFS, FUT MINNA, will implement a communication protocol that will provide a stepwise approach to informing residents about traffic plan alterations 48hrs before they are implemented. Communication with communities will be directly facilitated by the Contractor’s Community Liaison Officer (CLO) and the Secretary of each respective Community Association. Additionally, communications shall be made with the University Security Services department and Unions a week prior to notifying the general populace.

The Contractor shall ensure that all construction activities are performed in accordance with the approved Traffic Management Plan (TMP) for the assignment.

Every submission of traffic management report shall include a traffic management plan checklist. The checklist prepared for the proposed works is presented below.

PROJECT INFORMATION:					
Date:					
Name of Project:					
Address of Project:					
Developer:					
Construction Schedule and Phasing		<i>(Please tick accordingly)</i>			
COMPONENT		Y	N	N/A	COMMENTS
1.	Mobility Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.	Community Impact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.	Work Zone Traffic Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.	Communication Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.	Resident parking signage fee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Annex 3: Waste Management Plan

This waste management plan is Contractor’s approach to handling and managing wastes generated from the project implementation. It provides an overview of the integral components of the Contractor’s waste management plan for the Project. Considering that waste generation will be a major issue during project implementation, emphasis is therefore laid on this subject matter.

Objectives of the Waste Management Plan (WMP)

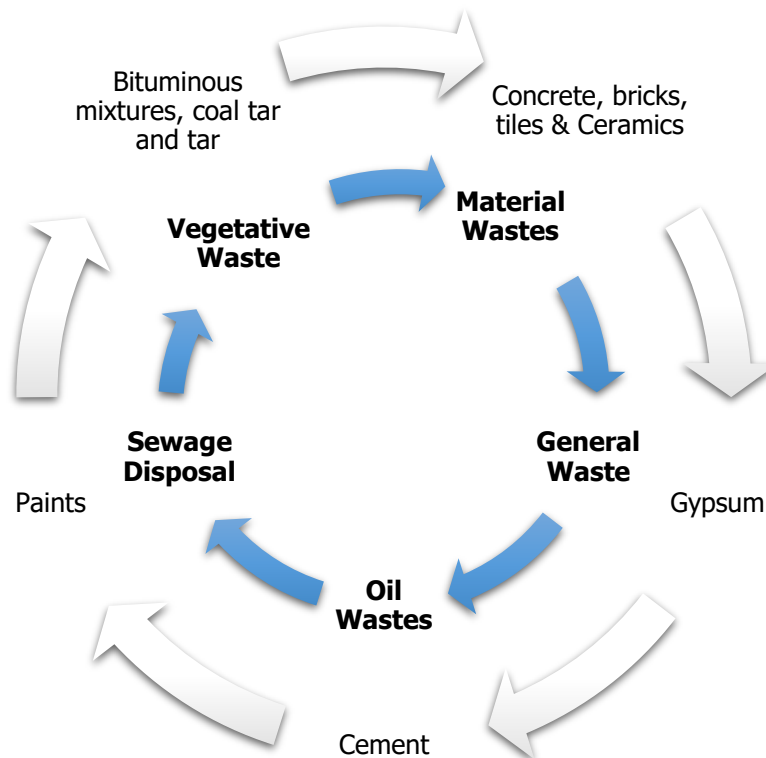
The following are the objectives of the WMP:

- i. Ensure reduction of construction and human wastes.
- ii. Liaise with and meet the environmental requirements of FME, Niger State State Ministry of Environment (SME), Niger State Environmental Protection Agency (NISEPA) and other national and international waste management guidelines.
- iii. Establish, implement and maintain waste segregation aimed at enhancing recycling.

- iv. Ensure that Mahadi Services and Resources Ltd, in collaboration with the ACEMFS FUT MINNA are responsible for effective waste handling and disposal process, which shall be monitored by relevant waste disposal authorities; and
- v. Provide detailed information on waste management including the amount and type of waste to be generated, the sources, and the existing waste management practices and proffer mitigation measures, which will involve:
 - Sensitization amongst the project workers and labourers on the need for effective waste management in and around the pumping stations throughout the project activities.
 - Community sensitization and mobilization on the adverse consequences of poor waste management.

Waste types

The construction works will produce vast amount of waste from the construction activities. The following are some of the materials that can be expected to be generated during construction: silt, vegetation stripping, packing materials, containers for various construction materials, asbestos, plastics, waste oil, filters, lubricants and hydraulic fluids, food, sewage, etc. These wastes are generally categorized into different classes presented in the figure below:



It is necessary to ensure that wastes generated during construction are handled in a way that protects human, animal and environment health and complies with applicable regulations.

Measures for Waste Management

The following fundamental principles of waste management shall be followed throughout project implementation of the proposed construction works:

- The contractor shall minimize the production of waste that must be treated or eliminated by reusing materials that may be reusable for other construction purposes;
- Control placement of all construction waste to NISEPA approved disposal sites (>300 m from rivers, streams, lakes, or wetlands). Dispose all wastes in authorized areas, metals, used oils, and excess material generated during construction, incorporating recycling systems and the separation of materials.
- Identify and demarcate equipment maintenance areas (>15m from rivers, streams, lakes or wetlands).
- Identify, demarcate and enforce the use of within-site access routes to limit impact to site vegetation.
- Install and maintain an adequate drainage system to prevent erosion on the site during and after construction.
- Erect erosion control barriers around perimeter of cuts, disposal pits, and roadways.
- Spray water on dirt roads and stockpiled soil to reduce wind-induced erosion and particulates dispersal, as needed.
- Identify and demarcate locations for stockpiles and borrow pits, ensuring that they are 15 meters away from critical areas such as steep slopes, erosion-prone soils, and areas that drain directly into sensitive water bodies.
- Establish and enforce daily site clean-up procedures, including maintenance of adequate disposal facilities for construction debris.

The management of other kinds of waste that will be generated is highlighted below:

Material waste (concrete, stones, mixtures, cement)

- There will be a designated temporary collection facility for washing of containers or trucks that contain cement wastes. This will be monitored by the HSE officer.
- Sediment run-off will be drained into collection containers (>300 m from rivers, streams, lakes, or wetlands).
- Silt will be collected in a temporary collection container and re-used for cement mixing after drying. Where silt cannot be used in concrete works, excess could be used pothole filling or sent to KSEPA for final disposal.
- Concrete waste, including wastewaters from batching or cleaning, will only be disposed of at approved and designated disposal sites with containment facilities.
- All cement-contaminated wastewater from cleaning or mixing is to be considered toxic and must be prevented from entering any watercourse or drainage channel for at least 48 hours to allow the water to reach neutral pH level.

General Waste

- A total of 15 Nos of 200 L red coloured mild steel garbage drums have been provided onsite and in strategic locations which are emptied twice weekly.
- All organic and inorganic materials will be placed and/or disposed of so as not to directly or indirectly impact any watercourse or groundwater. The placement and disposal of all such products and materials will be done in an environmentally acceptable manner.
- Solids, sludge and other pollutants generated as a result of construction or those removed during the course of treatment or control of wastewaters will be disposed of in a manner that prevents their direct or indirect re-entry into any watercourse or ground waters.
- Any waste material that is inadvertently disposed in or adjacent to watercourses will be removed immediately in a manner that minimizes adverse impacts, and the original drainage pattern should be restored.
- All wastes that are not designated, as combustible waste on-site will be recycled, disposed of in any of the Niger State's approved dumpsites, landfills or waste treatment facilities (where they exist).
- Waste materials shall be placed and stored in suitable containers. Storage areas and containers will be maintained in a sanitary condition and shall be covered to prevent spreading of wastes by water, wind or animals.
- All food wastes shall be collected and stored in containers at appropriate locations and should be emptied at regular intervals and the collected waste should be transported to Government designated waste management facilities.

Oil waste

- Ensure that all equipment maintenance activities, including oil changes, are conducted within demarcated maintenance areas designated for such.
- Ensure that oil or other lubricants are never dumped on the ground, in designated areas.

Sewage Disposal

- It is highly imperative to channel sewage facilities to avoid getting into the ground water, soil or even resulting to other types of nuisance to the environment.
- Suitable sanitary waste collection and disposal facilities or systems should be made available at the pumping stations, camps, work areas, workshops, stores, and offices.
- All temporary toilets will be placed in environmentally acceptable areas, and will be equipped with approved septic tanks having safe drainage that are emptied only into approved treatment plants or sewage tanker truck.
- The temporary toilet facility will be secured to avoid or minimize damage from animals or vandalism. Additionally, these toilet facilities shall be properly designated "Male Only" and "Female Only" respectively.

Vegetative waste

- Vegetation when cleared can be used for livelihood enhancement (basket making etc) or used as fodder for livestock feeding.
- Furthermore, they can be used for compost production or disposed of by NISEPA.

Annex 4: Hazardous Waste Management Plan (HWMP)

Mahadi Services and Resources Ltd, in addition to the site-specific waste management plan which serves as the Contractor's framework for handling and managing all project generated and related wastes, has developed a Hazardous Waste Management Plan (HWMP) for the purpose of the implementation of the Construction of the proposed works. This section presents the Contractor's site-specific hazardous waste management plan for this project.

Objectives

The objectives of this HWMP includes:

- To provide guidance for effective waste management from source to final disposal with the intent to reduce harmful health and environmental impacts of hazardous wastes, in accordance with national legislation, regulations and other applicable laws, permits, and standards.
- To improve awareness to employees and contractors in preventing pollution from source by reducing, recovering, reusing, recycling and proper disposal through correct waste segregation practices.
- To ensure minimal risks through identification of waste streams, and operational controls.

Definition and Scope

Hazardous waste is waste that has the potential, even in low concentrations, to have a significant adverse effect on public health and the environment because of its inherent toxicological, chemical and physical characteristics. For the scope of this project, hazardous materials shall consist of the following:

- **Hydrocarbon Waste:** Waste oil including used engine oil, transmission oils, hydraulic oils and other lubricant oil; Crankcase oil and filters
- **Oil Contaminated Materials:** these include oily rags, cardboards, pellets, redundant hydraulic hoses and other service parts and materials
- **Empty hydrocarbon containers,** drums, cans and plastic containers
- **Chemical Wastes:** Cement, Paints

Contractor's Framework for Hazardous Waste Handling

The handling of all hazardous waste shall be supported by adequate resources and effective implementation to minimize the impacts on human health, aquatic and wildlife and the receiving environment. Mahadi Services is committed to responsible management of waste and minimizing waste to landfills; by reducing, reusing, recycling and treating waste before final disposal.

All hazardous waste shall be identified into waste streams, from source and stored in durable containers appropriate to the type of waste. Secondary containment shall be used to store

hazardous wastes to minimize potential risks. These secondary containment areas shall be designed and constructed to contain all liquid hazardous waste stored in them.

Onsite collection and transfer of hazardous waste shall be conducted in a manner appropriate to the hazardous nature of the waste and consideration of containers, vessels and equipment. Offsite transportation of hazardous waste shall be conducted by an appropriate service provider capable of handling hazardous waste. Disposable hazardous waste shall be disposed at a managed facility capable of handling such waste, in accordance and collaboration with the NISEPA. **Monitoring of waste activities onsite and offsite and record keeping shall form part of the implementation programme on waste management.**

Management of Hydrocarbon Wastes

All hydrocarbon wastes including used engine oil, transmission oils, hydraulic oils and other lubricant oil shall be drained and stored in designated waste oil tanks within a bounded area until removed from site for refining and reuse (where applicable). This shall be done in accordance and collaboration with the KSEPA and other relevant waste management agencies within the state.

Management of Oil Filter Wastes

All used oil filters shall be carefully collected, and remnant oil shall be properly drained; after which the container shall be crushed to reduce its size/volume and then stored in a skip with a drainage rack and removed from site for refining and reuse (or given to local industries with specialty in such materials and in the reuse of such materials, as recommended by the NISEPA or other relevant government agency). The drained oil is stored with the waste oils in the waste oil tank provided by the Contractor, and properly bounded off.

Management of Contaminated Hydrocarbon Materials

Hydrocarbon contaminated materials such as oily rags, cardboards, pellets, redundant hydraulic hoses and other service parts and materials shall be stored off in segregated skips, and removed from site to a managed hazardous waste site or any designated waste site by the NISEPA. The Contractor shall ensure safe, healthy and proper collection of all contaminated material within and outside the project site. The contractor shall completely avoid irregular and uncontrolled disposal of such contaminated materials anywhere within or outside the project site. The contractor shall be responsible for ensuring that no contaminated material strays outside the designated and properly bounded spot for collecting such materials, by ensuring regular and routine inspection of the project site and its immediate environment.

Management of Empty Hydrocarbon Containers

Empty hydrocarbon containers, drums, cans and plastic containers shall be stockpiled and reused for waste grease and other hydrocarbon liquid wastes as necessary, surplus shall be removed as scrap metal waste.

Management of Chemical Wastes

All chemical wastes including paints, cement, asbestos, etc. shall be properly managed as provided in this section.

Paint thinners, strippers and other solvents generated in small volumes site wide shall be evaporated and residue transferred into a labelled container for disposal offsite at a managed hazardous waste site.

Empty containers of hazardous chemicals such as cement bags, paint containers and cans, etc. shall be collected, stockpiled, segregated and disposed appropriately. Empty cans of paint, aerosols, degreasers, vanish, etc. shall be assessed for scrap-metal waste before final disposal. Containers in good condition shall be reused to store waste if necessary.

Temporary Waste Storage Facilities

The following onsite temporary storage facilities shall be used to store hazardous waste until they are removed from the site or transferred to treatment facilities as the case may be. The following onsite facilities shall be provided.

1. Oil tankers are used for the storage of waste oils
2. Bounded containment storage areas for the storage of skips, drums and other hazardous wastes
3. Skips and several containers for the temporary storage of wastes

Annex 5: Health & Safety Plan (HSP)

In accordance with the Environmental and Social Management Plan (ESMP) prepared for the proposed works, the Contractor shall ensure that a safe and healthy work environment is provided for all construction and project related workers. The Contractor shall ensure the following to avoid or minimize all forms of occupational accidents and injuries to workers.

1. The contractor shall ensure that all project workers are made to undergo OHS training prior to participation in any project related work.
2. The Contractor shall prohibit the use of drug and alcohol by workers while on the job.
3. Ensure provision of adequate first aid, first aiders, PPE (for Contractor's workers and visiting personnel), signages (English and Hausa).
4. Ensure restriction of unauthorized access to all areas of high risk activities
5. Provision of specific personnel training on worksite OHS management
6. Ensure that staging areas for contractor equipment are adequately delineated and cordoned off with reflective tapes and barriers
7. Any uncovered work pits shall have appropriate signage and protection around them
8. Workers should get a daily induction/toolbox before going on the site and a refresher of what happened on site a day before
9. Adequate safety signage on construction sites should be installed to alert community/drivers/pedestrians
10. Ensure adequate lighting and/or reflective tapes and signages integrated at worksites for safety at night
11. Ensure appropriate security measures in place to prevent harassment or kidnapping of workers
12. Provide perimeter fencing with corrugated iron sheets, caution tapes, indication cones and safety signs.
13. Ensure proper inspection of all food and drinks by food vendors on site to ensure that all edible and consumable substances meet required standard as provided by the NAFDAC and WHO. Additionally, onsite food vendors shall be registered with the Contractor, who shall issue approved vendors with pass cards that grants them entrance to the worksite and campsite. Only these vendors shall be allowed to provide food and drink substances to the workers.

Description of HSE trainings

Our HSE trainings have been classified into the Daily and Weekly as shown below.

Code	Title	Duration	Frequency	Responsibility (ies)
Daily Training				
N/A	Daily toolbox meetings	30 mins	Daily	HSE Officer
Weekly Trainings				

General Training Title: HSE Training on Managing Potential Hazards				
HSES – 001	Bypassing Safety controls Standard	40 Mins	Weekly	HSE Officer
HSES – 002	Confined Space Standard	40 Mins		HSE Officer
HSES – 003	Driving Standard	40 Mins		FRSC HSE Officer
HSES – 004	Energy Isolation Standard	40 Mins		HSE Officer
HSES – 005	Hot Work Standard	40 Mins		HSE Officer
HSES – 006	Line of Fire Standard	40 Mins		HSE Officer
HSES – 007	Safe Mechanical Lifting Standard	40 Mins		HSE Officer
HSES – 008	Work Authorization Standard	40 Mins		HSE Officer
HSES – 009	Working at Height Standard	40 Mins		HSE Officer

*** Weekly trainings hold every Friday**

Annex 6: Code of Conduct

The Contractor shall ensure that the following Code of Conduct are signed by the necessary personnel, and copies made available at the necessary documentation stations, as a personal commitment to ensuring compliance to all project site-based procedures and policies. They are:

14. Contractor’s Code of Conduct
15. Individual/Employee’s Code of Conduct
16. Employer’s Code of Conduct
17. Manager’s Code of Conduct

This section provides the different Codes of Conduct to be signed by the different project personnel depending on their level of engagement and operation.

CONTRACTOR'S CODE OF CONDUCT

The company is obliged to create and maintain an environment which prevents Gender Based Violence (GBV) and Sexual Exploitation & Abuse (SEA) issues. The company is also required to maintain an environment where the unacceptability of GBV and actions against children are clearly communicated to all those involved in the project. In order to prevent GBV and SEA, the following core principles and minimum standards of behaviour will apply to all employees without exception:

1. GBV/SEA constitutes acts of gross misconduct and are therefore grounds for sanctions, penalties and/or termination of employment. All forms of GBV/SEA including grooming are unacceptable, be it on the work site, the work site surroundings, project neighbourhoods or at worker's camps. Prosecution of those who commit GBV or SEA will be followed.
2. Treat women, children (persons under the age of 18), and men with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
3. Do not use inappropriate language or behaviour towards women, children and men. This includes harassing, abusive, sexually provocative, derogatory, demeaning or culturally inappropriate words, gestures or actions.
4. Sexual activity with children under 18—including through digital media—is prohibited. Mistaken belief regarding the age of a child and consent from the child is not a defense.
5. Sexual favours or other forms of humiliating, degrading or exploitative behaviour are prohibited.
6. Sexual interactions between contractor's and consultant's employees at any level and member of the communities surrounding the work place that are not agreed to with full **consent** by all parties involved in the sexual act are prohibited. This includes relationships involving the withholding/promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex – such sexual activity is considered “non-consensual” within the scope of this Code.
7. All employees are required to attend an induction training course prior to commencing work on site to ensure they are familiar with the GBV/SEA Code of Conduct.
8. All employees must attend a mandatory training course once a month for the duration of the contract starting from the first induction training prior to commencement of work to reinforce the understanding of the institutional GBV and SEA Code of Conduct.
9. All employees will be required to sign an individual Code of Conduct confirming their agreement to support GBV and SEA activities.

I do hereby acknowledge that I have read the foregoing Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to GBV and SEA. I understand that any action inconsistent with this Code of Conduct or failure to take action mandated by this Code of Conduct may result in disciplinary action.

FOR THE COMPANY

Signed by _____

Title: _____

Date: _____

MANAGER'S CODE OF CONDUCT

Managers at all levels have particular responsibilities to create and maintain an environment that prevents GBV and SEA. They need to support and promote the implementation of the Company Codes of Conduct. To that end, Project Managers are required to sign up to Codes of Conduct applicable to their managerial duties within the context and also sign the Individual Codes of Conduct. This commits them to support and develop systems that facilitate the implementation of this action plan and maintain a GBV-free, child-safe and conflict-free work environment. These responsibilities include but are not limited to:

Mobilization

1. Establish a GBV/SEA Compliance Team from the contractor's and consultant's staff to write an Action Plan that will implement the GBV and SEA Codes of Conduct.
2. The Action Plan shall, as a minimum, include the
 - i. Standard Reporting Procedure to report GBV and SEA issues through the project Grievance Redress Mechanism (GRM);
 - ii. Accountability Measures to protect confidentiality of all involved; and,
 - iii. Response Protocol applicable to GBV survivors/survivors (including access to support coping and post-trauma management strategies) and perpetrators.
 - iv. Engagement of the services of social service providers (NGOs) with requisite skill in the prevention and management of GBV and SEA.
3. Update the Action Plan to reflect feedback and ensure the Action Plan is carried out in its entirety.
4. Provide appropriate resources and training opportunities for capacity building so members of the compliance team will feel confident in performing their duties. Participation in the Compliance team will be recognized in employee's scope of work and performance evaluations.
5. Ensure that contractor, consultant and client staff are familiar with the RAAMP GRM and that they can use it to anonymously report concerns over GBV and SEA.
6. Hold quarterly update meetings with the compliance team to discuss ways to strengthen resources and GBV/SEA support for employees and community members.
7. In compliance with applicable laws and to the best of your abilities, prevent perpetrators of sexual exploitation and abuse from being hired, re-hired or deployed. Use background and criminal reference checks for all employees.
8. Ensure that when engaging in partnership, sub-grant or sub-recipient agreements, these agreements
 - a) incorporate this Code of Conduct as an attachment;
 - b) include the appropriate language requiring such contracting entities and individuals, and their employees and volunteers to comply with this Code of Conduct; and
 - c) expressly state that the failure of those entities or individuals, as appropriate, to take preventive measures against GBV and SEA, to investigate allegations

thereof, or to take corrective actions when GBV/SEA has occurred, shall constitute grounds for sanctions and penalties.

Training

1. All managers are required to attend an induction manager training course prior to commencing work on site to ensure that they are familiar with their roles and responsibilities in upholding the GBV/SEA Codes of Conduct.
2. Provide time during work hours to ensure that direct recruits attend the mandatory induction training which covers GBV/SEA training required of all employees prior to commencing work on site.
3. Managers are required to attend and assist with the NGO-facilitated monthly training courses for all employees. Managers will be required to introduce the trainings and announce results of consequential evaluations.
4. Collect satisfaction surveys to evaluate training experiences and provide advice on improving the effectiveness of training.

Prevention

1. All managers and employees shall receive a clear written statement of the company's requirements with regards to preventing GBV/SEA in addition to the training.
2. Managers must verbally and in writing explain the company and individual codes of conduct to all direct recruits.
3. All managers and employees must sign the individual 'Code of Conduct for GBV and SEA, including acknowledgment that they have read and agree with the code of conduct.
4. To ensure maximum effectiveness of the Codes of Conduct, managers are required to prominently display the Company and Individual Codes of Conduct in clear view in public areas of the work space. Examples of areas include waiting, rest and lobby areas of sites, canteen areas, health clinics.
5. Managers will explain the GRM process to all employees and encourage them to report suspected or actual GBV/SEA
6. Managers should also promote internal sensitization initiatives (e.g. workshops, campaigns, on-site demonstrations etc.) throughout the entire duration of their appointment in collaboration with the compliance team, service providers and in accordance to the Action Plan.
7. Managers must provide support and resources to the compliance team and service provider NGOs to create and disseminate the internal sensitization initiatives through the Awareness-raising strategy under the Action Plan.

Response

1. Managers will be required to provide input, final decisions and sign off on the **Standard Reporting Procedures and Response Protocol** developed by the compliance team as part of the Action Plan.
2. Once signed off, managers will uphold the **Accountability Measures** set forth in the Action Plan to maintain the confidentiality of all employees who report or (allegedly) perpetrate incidences of GBV/SEA (unless a breach of confidentiality is required to protect persons or property from serious harm or where required by law).

3. Once a sanction has been determined, the relevant manager(s) is/are expected to be personally responsible for ensuring that the measure is effectively enforced, within a maximum timeframe of **14 days** from the date on which the decision was made.
4. Managers failing to comply with such provision can be in turn subject to disciplinary measures, to be determined and enacted by the company's CEO, Managing Director or equivalent highest-ranking manager. Those measures may include:
 - i. Informal warning
 - ii. Formal warning
 - iii. Additional Training
 - iv. Loss of up to one week's salary.
 - v. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
 - vi. Termination of employment.

I do hereby acknowledge that I have read the foregoing Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to GBV and SEA. I understand that any action inconsistent with this Code of Conduct or failure to take action mandated by this Code of Conduct may result in disciplinary action.

FOR THE EMPLOYER

Signed by _____

Title: _____

Date: _____

INDIVIDUAL CODE OF CONDUCT

I, _____ (*name of employee*), acknowledge that preventing Gender-based Violence (GBV) and Sexual Exploitation & Abuse are important. GBV/SEA activities constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or termination of employment. All forms of GBV or SEA are unacceptable either on the work site, neighbouring project communities, or at worker's camps. Prosecution of those who commit GBV/SEA will be followed as appropriate according to applicable laws. I also acknowledge the need to maintain peaceful relationships and interactions with residents of project areas.

Specifically, I agree that while working on projects of the Construction of ACEMFS Building, FUT MINNA in Niger State, I will:

- i. Maintain conflict-free relationships with residents of project areas *when such relationships and interactions become necessary*.
- ii. Consent to police background check.
- iii. Treat women, children (persons under the age of 18), and men with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- iv. Not use language or behaviour towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- v. Not participate in sexual activity with children—including grooming or through digital media. Mistaken belief regarding the age of a child and consent from the child is not a defence.
- vi. Not engage in sexual favours or other forms of humiliating, degrading or exploitative behaviour.
- vii. Not have sexual interactions with members of the communities surrounding the work place and worker's camps that are not agreed to with full consent by all parties involved in the sexual act. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered “non-consensual” within the scope of this Code.
- viii. Attend and actively partake in training courses related to HIV/AIDS, GBV and SEA as requested by my employer.
- ix. Report through the GRM or to my manager suspected or actual GBV and/or SEA by a fellow worker, whether in my company or not, or any breaches of this code of conduct.

With regard to children under the age of 18:

- i. Wherever possible, ensure that another adult is present when working in the proximity of children.
- ii. Not invite unaccompanied children into my home, unless they are at immediate risk of injury or in physical danger.

- iii. Not sleep close to unsupervised children unless absolutely necessary, in which case I must obtain my supervisor’s permission, and ensure that another adult is present if possible.
- iv. Use any computers, mobile phones, or video and digital cameras appropriately, and never to exploit or harass children or to access child pornography through any medium (see also “Use of children’s images for work related purposes”).
- v. Refrain from physical punishment or discipline of children.
- vi. Refrain from hiring children for domestic or other labor which is inappropriate given their age or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury.
- vii. Comply with all relevant local legislation, including labour laws in relation to child labour.

Use of children’s images for work related purposes

When photographing or filming a child for work related purposes, I must:

- i. Before photographing or filming a child, assess and endeavour to comply with local traditions or restrictions for reproducing personal images.
- ii. Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film will be used.
- iii. Ensure photographs, films, videos and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner. Children should be adequately clothed and not in poses that could be seen as sexually suggestive.
- iv. Ensure images are honest representations of the context and the facts.
- v. Ensure file labels do not reveal identifying information about a child when sending images electronically.

I understand that it is my responsibility to use common sense and avoid actions or behaviour that could be construed as GBV or SEA or breach this code of conduct. I do hereby acknowledge that I have read the foregoing Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to GBV and SEA. I understand that any action inconsistent with this Code of Conduct or failure to take action mandated by this Code of Conduct may result in disciplinary action and may affect my ongoing employment.

Signed by _____
(Employee)

Title:

Date:

Signed by _____
(Employer/Manager)

Title:

Date:

Annex 7: Labour Camp/Project Site Management Plan

The Labour Camp/Project Site Management Plan for the construction of the proposed works for construction of Centre Building for ACEMFS, FUT MINNA shall to a minimum address specific activities that will be undertaken to minimize the impacts resulting from siting a workers' camp on the local project communities.

Camp Siting Location

The Contractor shall ensure to site workers camp at a designated and approved location and satisfy the criteria established for setting up a campsite. The Campsite is located on the project site at Gidan Kwano capus of FUT MINNA with a 300 – 500 m distance from the nearest community.

Provision of Onsite Social and Health Care Facilities

Provision of basic onsite social and medical facilities such as first aid, basic health care center, recreational center, food service, etc. in order to reduce pressure on community facility.

Campsite Safety and Security

Provision of 24 hours security stationed at the Campsite to ensure the security and safety of construction workforce and construction equipment.

Campsite Waste Management

Adequate waste management of sewage and other forms of waste within the campsite. The Campsite shall be equipped with independent toilet facilities for male and female workers respectively, in order to discourage irregular waste disposal. Furthermore, standards must be instituted for personal and public hygiene among project workers. Additionally, project workers shall be properly trained on personal hygiene.

Establishment of and Training on Workers on Code of Conduct

The Supervising Engineer SPIU shall ensure that Contractors establish a workers' Code of Conduct (CoC). The CoC will help mitigate some of the social and environmental impacts of labour influx such as risk of social conflict, Increased risk of illicit behaviour and crime, Increased burden on and competition for public service provision, Wastewater discharges, Increased demand on freshwater resources, and Inadequate waste disposal and illegal waste disposal sites etc., will help keep workers (local/foreign) in check on the rules and regulations binding their engagement. Contractors to ensure provision of training to workforce on code of conduct and ensure strict compliance. Measures provided for in the ESMP to deter illicit behaviour and other social vices are adequately enforced.

Training programs

Conduct and ensure key staff, including contractors, receive training regarding the likelihood, significance and management of influx-related issues such as HIV/AIDS, GBV, SEA, VAC etc.

Carry out Regular Monitoring

The ACEMFS FUT MINNA shall monitor for change throughout the project cycle to ensure compliance and on mitigation effectiveness from projects/contractors. Ensure a documented monitoring program that tracks key social outcomes, changes and issues at regular intervals throughout the project lifecycle.

Stock Piling: Stockpile areas shall be located in areas where trees can act as buffers to prevent dust pollution. Perimeter drains shall be built around stockpile areas. Sediment and other pollutant traps shall be located at drainage exits from workings.

Stacking of Equipment: Equipment stacking area shall be overlay with impermeable membrane to avoid seepage of oil into soil and nearby water courses. Additionally, all measures proffered in the ESMP for proposed works with regards equipment stacking shall be implemented.

Proper Handling of Hazardous Materials (specifically, storage): All hazardous materials that require bulk purchase for implementation phase, that may require storage in camp site shall be stored in a manner that is risk-proof to the environment and human health.

Provision of Camp-based awareness: The Contractor shall provide adequate camp-based awareness for all site-workers based in the labour camp. This is to sensitize the workers on pertinent issues including use of drugs, proper use of facilities provided, personal and environmental hygiene, security, health and safety, and gender-based issues.

Other Regulations/Guidelines for Setting up the Camp Site:

- i. All vessels (drums, containers, bags, etc.) containing oil/fuel/surfacing materials and other hazardous chemicals shall be bound in order to contain spillage. All waste containers, litter and any other waste generated during the construction shall be collected and disposed at designated disposal sites in line with applicable government waste management regulations.
- ii. All drainage and effluent from storage areas, workshops and camp sites shall be captured and treated before being discharged into the drainage system in line with applicable government water pollution control regulations.
- iii. Used oil from maintenance shall be collected and disposed appropriately at designated sites or be re-used or sold for re-use locally.
- iv. Entry of runoff to the site shall be restricted by constructing diversion channels or holding structures such as banks, drains, dams, etc. to reduce the potential of soil erosion and water pollution.
- v. Construction waste shall not be left in stockpiles along the road, but removed and reused or disposed of on a daily basis.
- vi. If disposal sites for clean spoil are necessary, they shall be located in areas, approved by the SE, of low land use value and where they will not result in material being easily washed into drainage channels. Whenever possible, spoil materials should be placed in low-lying areas and should be compacted and planted with species indigenous to the locality.

Annex 8: Standard Safety Signs at Construction Site



Annex 9: Sample of Decommissioning Checklist

COMPLETE the checklist for any voluntary decommissioning project certified. **Important: this checklist is for decommissioning projects. Clean-up checklist is proposed for contamination information (if any).**

GENERAL INFORMATION

Facility Owner Name: _____

Facility Site Address: _____

Facility Owner Phone Number: _____

Licensed Service Provider (ECP)

Company Name: _____

License Number

Expiration Date

- ✓ **Check each item that is complete and correct (i.e. true).** By checking any of the boxes in the checklist, you are indicating that the statement applies to this project. If there are any exceptions to the statement, please note them in the comment area provided. If the statement does not apply, please do not check box. *Important:* This checklist must be signed by the supervisor with responsibility for this project.

Check one of the following three statements – A, B, or C.

- A. The decommissioning was performed after (*specify date*)
- B. The decommissioning was performed prior to (*specify date*) by a licensed service provider (*facility decommissioning*) and (*state number of samples*) soil samples were collected in general conformity with ISO 10381-1:2002.
- Service Provider Name: _____
- License No.: _____
- C. The decommissioning was performed prior to (*specify date*) by an unlicensed contractor or no soil samples were originally collected at time of decommissioning. If this box is checked as yes, then this checklist is used to document current site assessment actions taken to comply with the requirement of ISO 14000.

Check all the statement below that are true.

1. The facility was decommissioned using a national code of practice.
2. The facility was cleaned to the maximum extent practicable. Disposal receipts for the facility contents are included in the report.
3. A site assessment was concluded that meets the requirements of the ISO 14000 Standards.
4. A site sketch, drawn approximately to scale, has been made of this site which clearly shows:
The location of all buildings and other key features, both man-made and natural;
The name of adjacent streets and properties;
The location of all excavations;
The location of all equipments including those that were decommissioned as well as those that remain on the site; and
All soil and water sample locations including sample depths.
5. All soil and/or water samples have been collected, coded, stored, shipped, and analyzed as required and chain-of-custody forms have been filled out (ISO/10381-1:2002, ISO/TC/147/SC6)
6. A report has been prepared which includes a detailed description of everything that was observed and performed at the site, and that meets the requirement of (ISO 14004: 2016)

“By my signature below, I state the information contained in this report is true and complete to the best of my knowledge.”

Name of person preparing report: _____

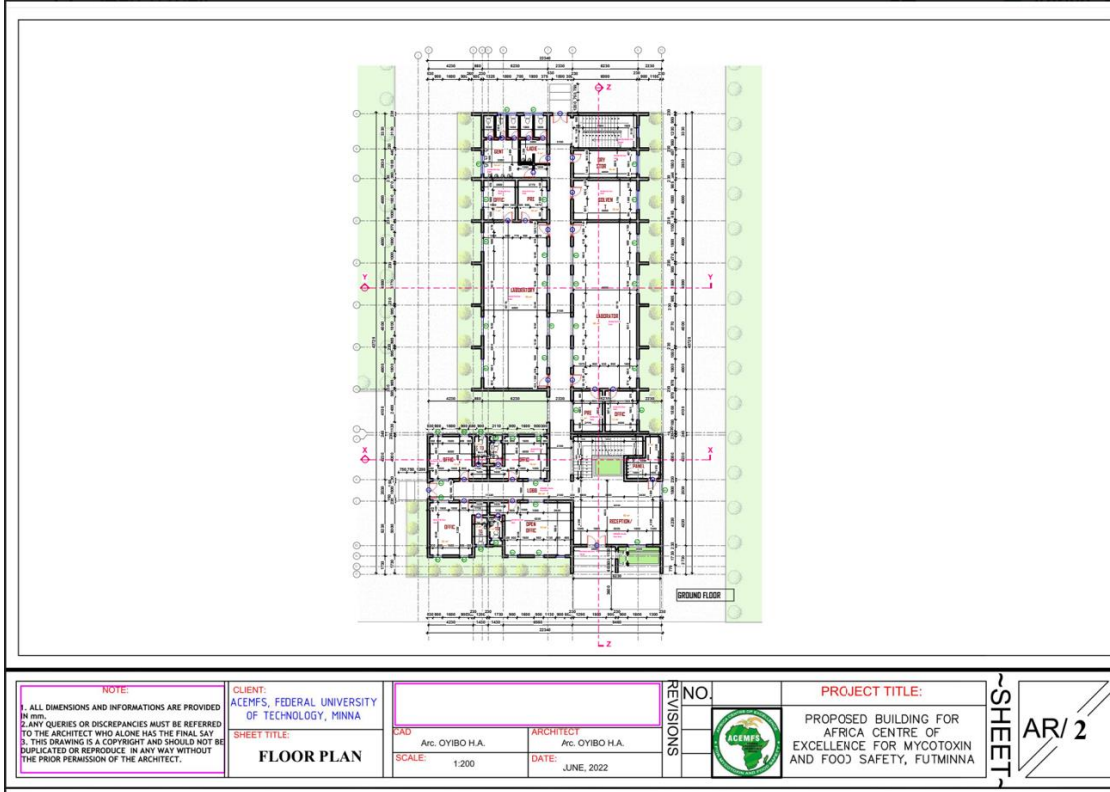
Signature: _____

Date: _____

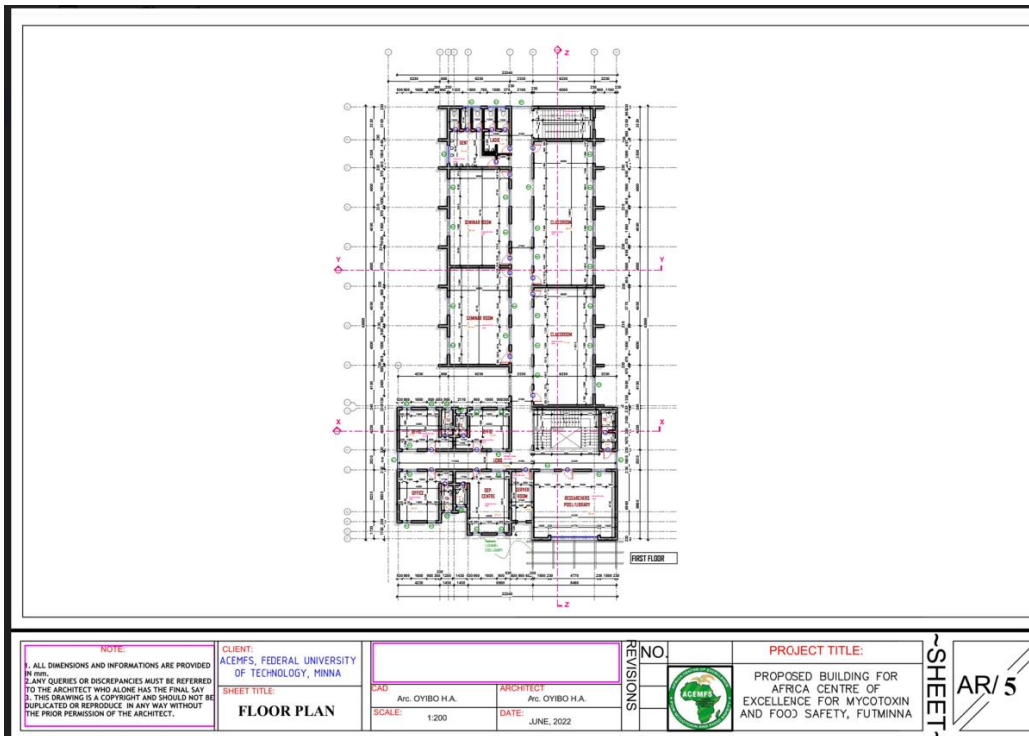
Supervisor License No.: _____

Expiration Date: _____

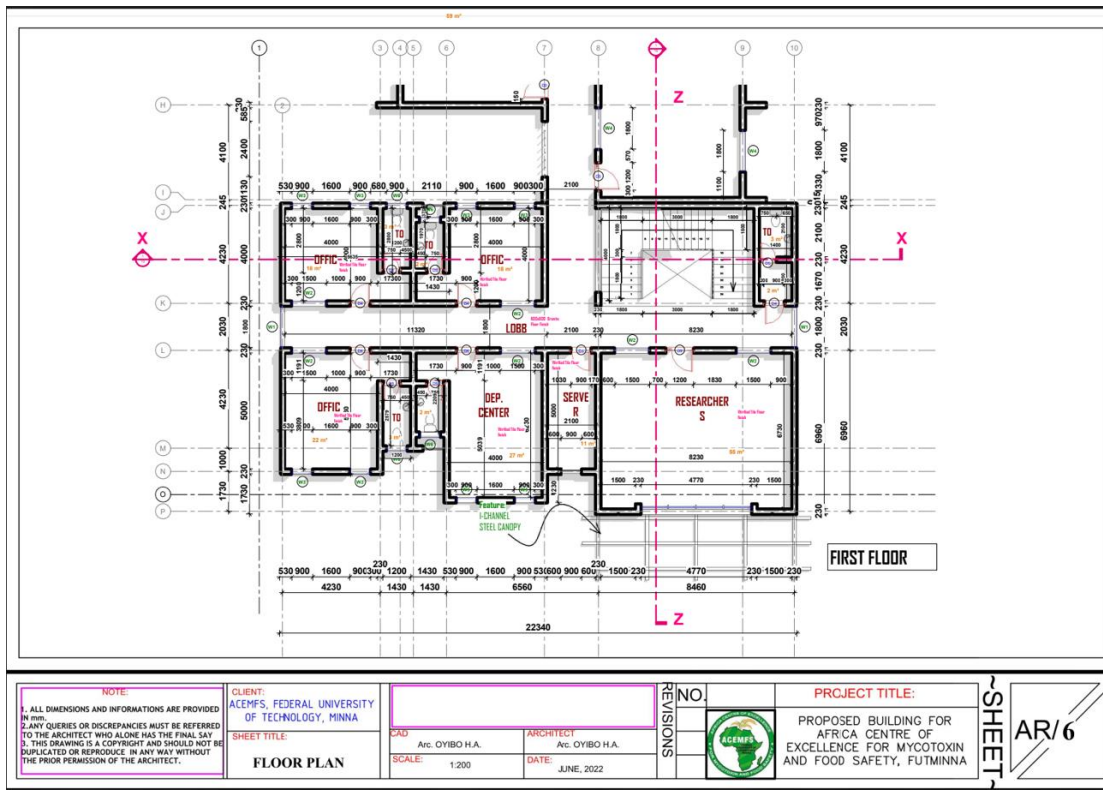
Annex 10: Proposed Building Plan



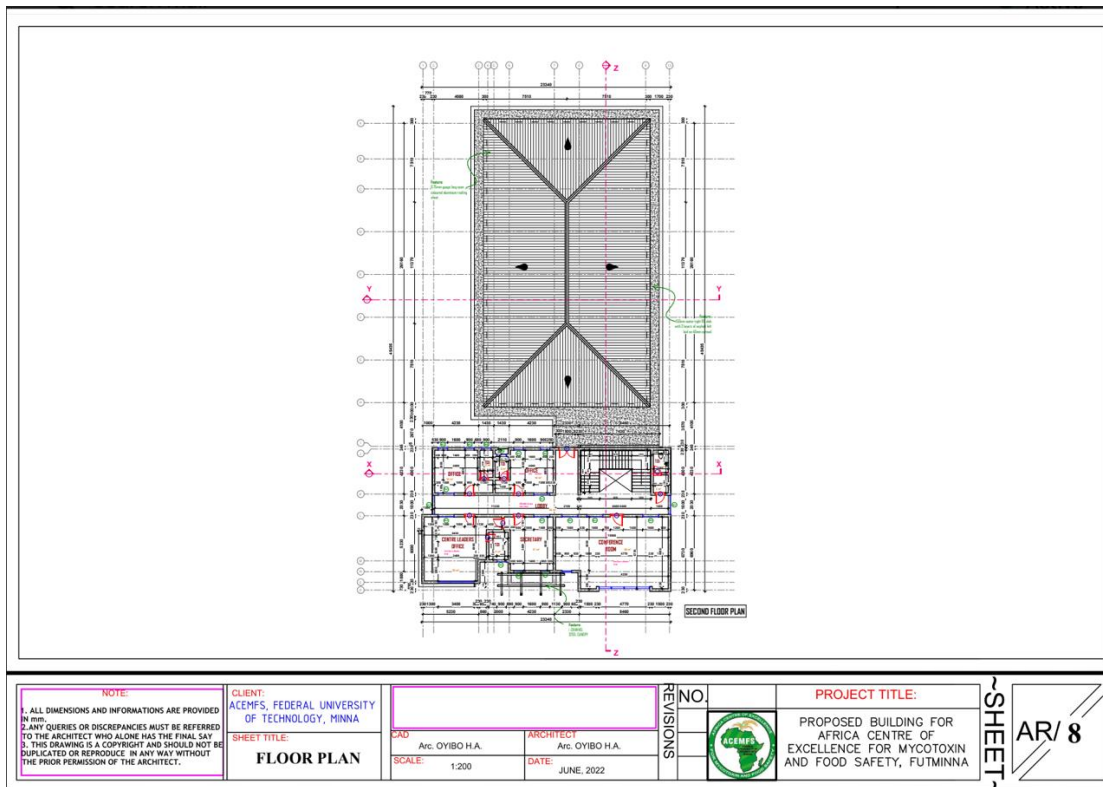
Ground Floor Plan



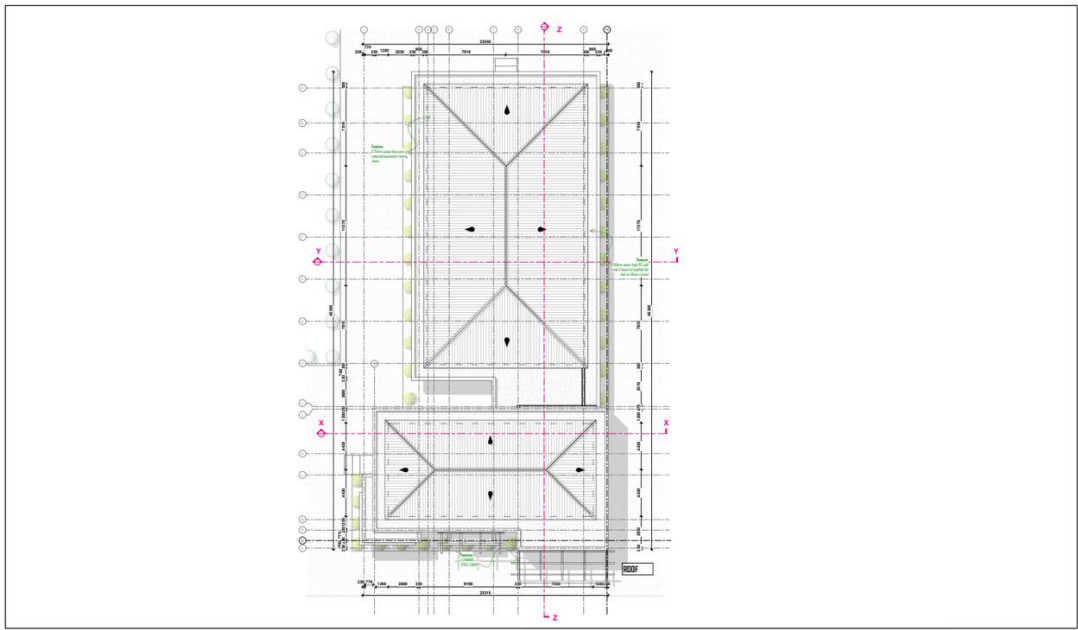
First Floor Plan



Callout of First Plan

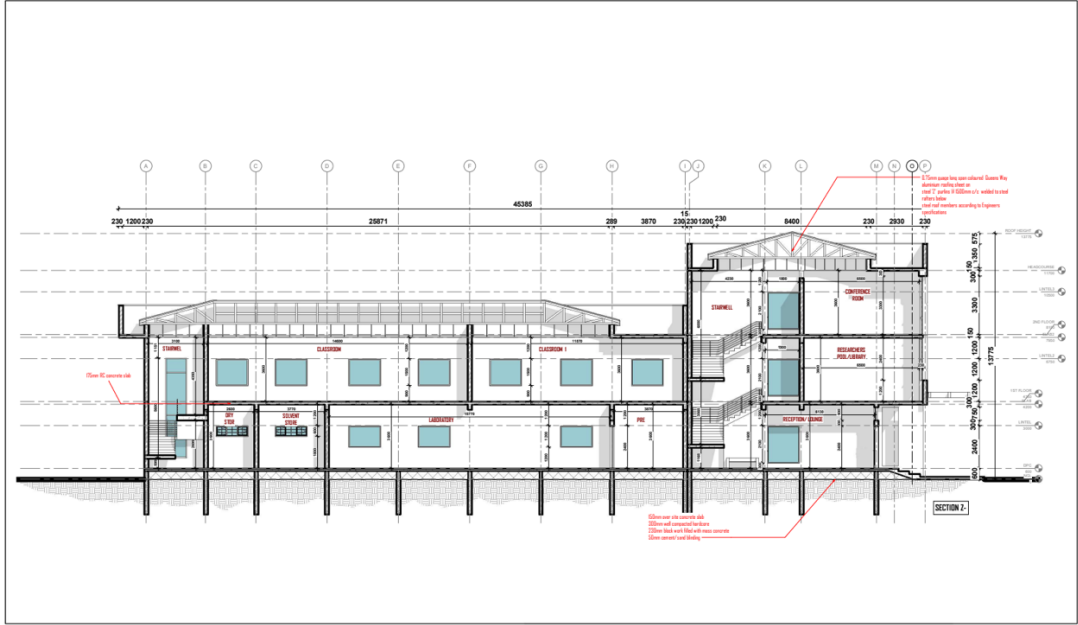



Second Floor Plan



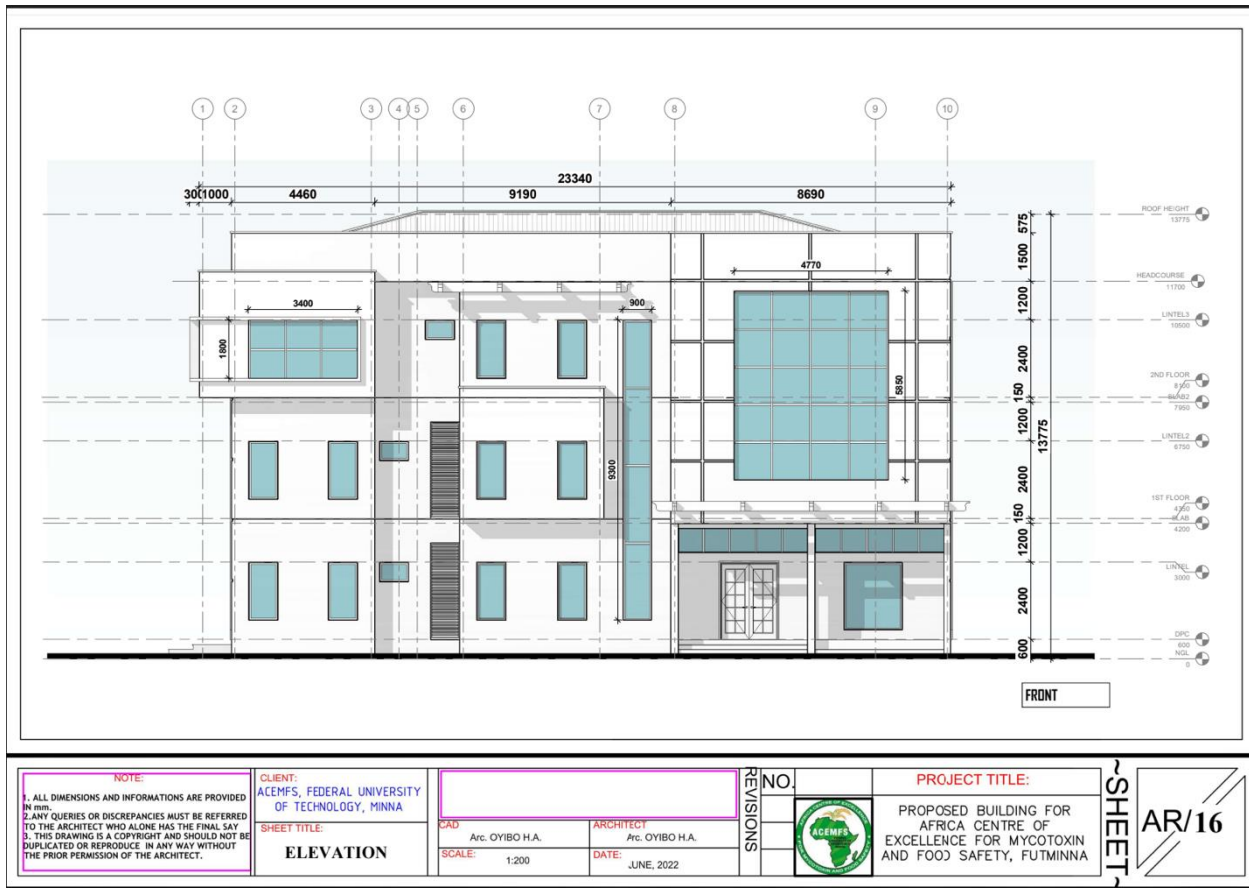
<p>NOTE:</p> <p>1. ALL DIMENSIONS AND INFORMATIONS ARE PROVIDED IN METERS.</p> <p>2. ANY QUERIES OR DISCREPANCIES MUST BE REFERRED TO THE ARCHITECT WHO ALONE HAS THE FINAL SAY.</p> <p>3. THIS DRAWING IS A COPYRIGHT AND SHOULD NOT BE DUPLICATED OR REPRODUCED IN ANY WAY WITHOUT THE PRIOR PERMISSION OF THE ARCHITECT.</p>	<p>CLIENT: ACEMFS, FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA</p>	<p>NO</p> <p>REVISIONS</p>		<p>PROJECT TITLE:</p> <p>PROPOSED BUILDING FOR AFRICA CENTRE OF EXCELLENCE FOR MYCOTOXIN AND FOOD SAFETY, FUTMINNA</p>	<p>SHEET</p> <p>AR/10</p>
	<p>SHEET TITLE: ROOF PLAN</p>			<p>CAD: Arc. OYIBO H.A.</p> <p>ARCHITECT: Arc. OYIBO H.A.</p> <p>SCALE: 1:200</p> <p>DATE: JUNE, 2022</p>	

Roof Plan



<p>NOTE:</p> <p>1. ALL DIMENSIONS AND INFORMATIONS ARE PROVIDED IN METERS.</p> <p>2. ANY QUERIES OR DISCREPANCIES MUST BE REFERRED TO THE ARCHITECT WHO ALONE HAS THE FINAL SAY.</p> <p>3. THIS DRAWING IS A COPYRIGHT AND SHOULD NOT BE DUPLICATED OR REPRODUCED IN ANY WAY WITHOUT THE PRIOR PERMISSION OF THE ARCHITECT.</p>	<p>CLIENT: ACEMFS, FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA</p>	<p>NO</p> <p>REVISIONS</p>		<p>PROJECT TITLE:</p> <p>PROPOSED BUILDING FOR AFRICA CENTRE OF EXCELLENCE FOR MYCOTOXIN AND FOOD SAFETY, FUTMINNA</p>	<p>SHEET</p> <p>AR/15</p>
	<p>SHEET TITLE: SECTION</p>			<p>CAD: Arc. OYIBO H.A.</p> <p>ARCHITECT: Arc. OYIBO H.A.</p> <p>SCALE: 1:200</p> <p>DATE: JUNE, 2022</p>	

Section Through the Building



Front Elevation