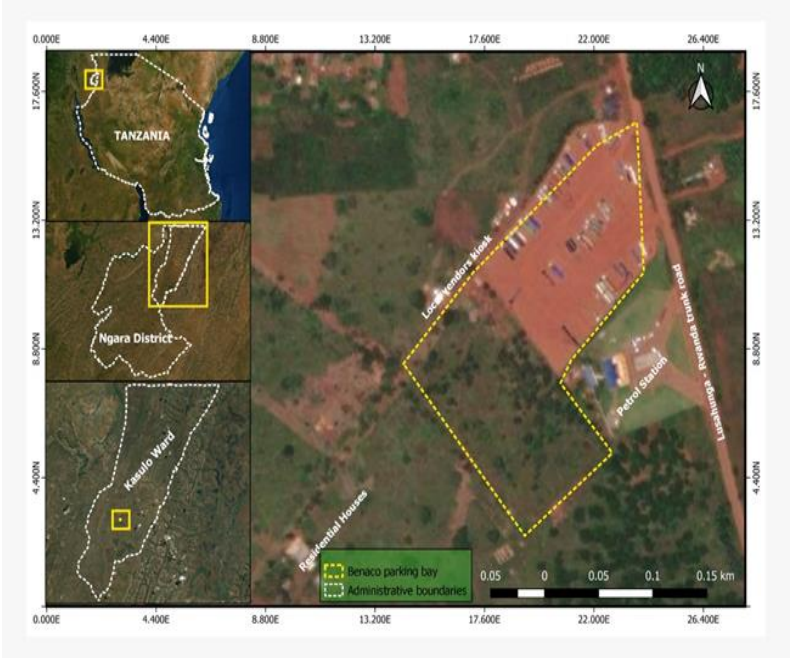
ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) FOR THE PROPOSED IMPROVEMENT AND EXPANSION OF BENACO PARKING BAY AND ANCILLARY FACILITIES LOCATED AT NGUVUKAZI HAMLET RWAKALEMERA VILLAGE, KASULO WARD, NGARA DISTRICT IN KAGERA REGION.

(IN THE FRAMEWORK OF WORLD BANK/NELSAP)

ESIA REPORT-Final Version



PROPONENT:

DISTRICT EXECUTIVE DIRECTOR
NGARA DISTRICT COUNCIL
P.O. BOX 30,
NGARA- KAGERA.
Telephone: +255 282226016
Fax: +255 282226152
Email: ded@ngaradc.go.tz

SUBMITTED TO:

NELSAP PROJECT MANAGER
P.O.BOX 6759,
KIGALI-RWANDA

CONSULTANT:

Gabriel Gibson (Lead Consultant) &
Marco Mchome (Assistant)
(Registered Environmental Experts No. 0460)
P.O.Box 35964,
Dar es Salaam-Tanzania
Location: Shekilango Road, Sinza Madukani,
Emirates Building, 2nd Floor.
Tel: +255 769 266443,
E-mail: gkabamba34@gmail.com

NELSAP-CU
NILE BASIN INITIATIVE
INITIATIVE DU BASSIN DU NIL

Submission Date: 06th /May/2022

EXECUTIVE SUMMARY

ES-1: Background

This ESIA report describes the proposed construction and expansion of Benaco Parking Yard located at Nguvu Kazi Hamlet, Rwakalemera Village, Kasulo Ward, Ngara District, Kagera Region in Tanzania. All the construction activities will be carried out in Ngara District under Local Area Development Program (LADP) through World Bank Fund. NELSAP/LADP is a benefit sharing program designed to enhance regional economic and social development in the project areas in Rwanda, Burundi and Tanzania.

During fiscal year of 2021/2022 Ngara District Council (hereinafter the Project Proponent) is expecting to receive funds from World Bank via NELSAP under LADP to undertake the proposed project for construction of Parking Bay at Nguvu Kazi Hamlet, Rwakalemera Village, Kasulo Ward, Ngara District in Kagera Region. Several components will be constructed within the proposed site including Parking Bay, servicing bay, office block, sanitary facilities and waste management systems. The land use in the proposed project site has been approved by Village Authority as well as Ngara District Council for the intended purpose. Construction of the parking bay and ancillary structures may require 55 personnel both skilled and unskilled while 5 technical personnel will be involved in professional works. The infrastructures that are to be constructed have been detailed in this report and social economic surveys of the area have been also explained. The project investment cost is USD 1,426,935.90.

Before undertaking the construction works it has been found necessary to carry out Environmental and Social Impact Assessment (ESIA) of the proposed trucks/Vehicles Parking Bay. Objective of ESIA study was to ensure that detrimental environmental and social impacts arising from the proposed construction, operations and decommissioning phases are identified and either eliminated or minimized to acceptable levels. The ESIA study also provided mitigation measures to the identified impacts, and established comprehensive management and monitoring plans. The ESIA study was commissioned to Gabriel Gibson (Team Leader and Registered Environmental Expert with Registration No. EIA-0460) by Ngara District Council.

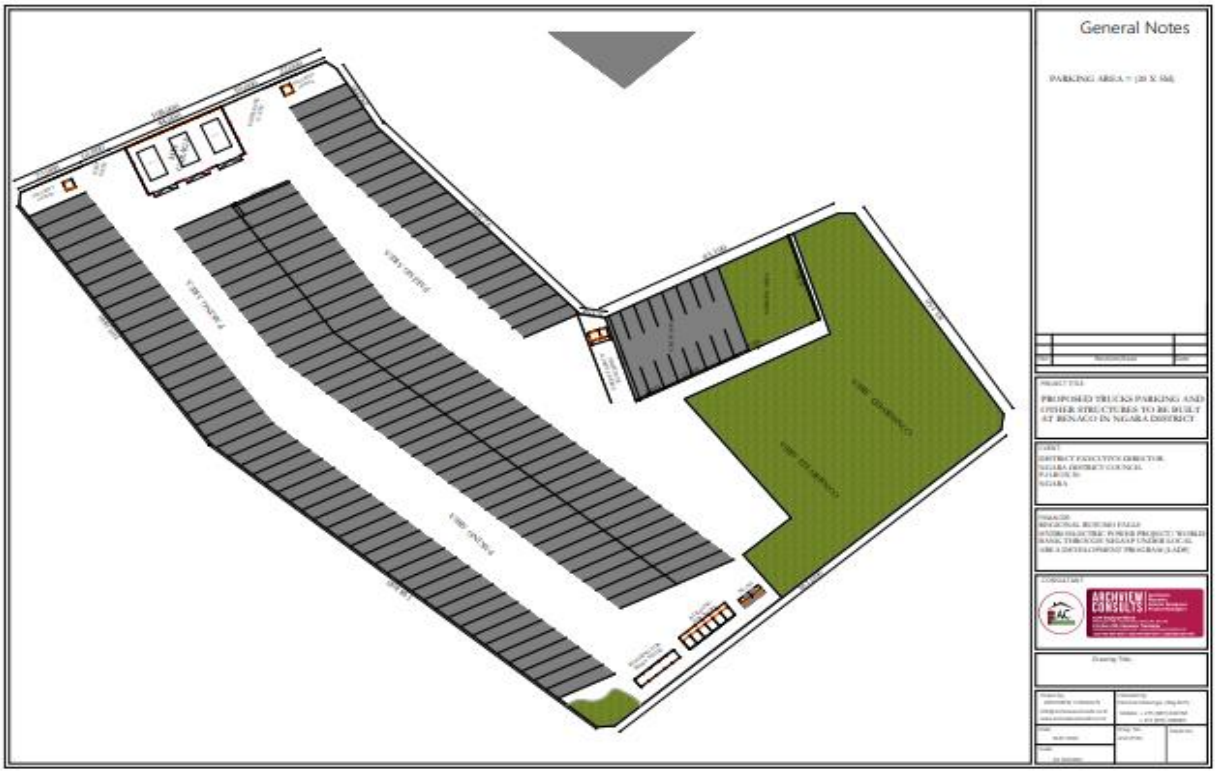
Principally, the ESIA study was conducted in accordance with the requirements of the Tanzania Environment Management Act Cap 191 (2004) and Environmental Impact Assessment and Audit Regulations No. 349 of 2005, as well as, (Environmental Impact Assessment and Audit) (Amendment) Regulations (G.N. No. 474) of 2018. Nevertheless; The World Bank Safeguard Policy applicable to this proposed project is *Environmental Assessment Policy (OP 4.01) coupled with IFC/WBG/WHO Guidelines: Occupational Health and Safety, IFC/WBG/WHO Guidelines: Air Emissions and Ambient Air Quality and IFC/WBG Guidelines: Noise Management, IFC/WBG/WHO Effluent Discharge Guidelines*

The proposed Establishment of Trucks Parking Bay and ancillary facilities project falls into Type B1-Mandatory projects that require full Environmental Impact Assessment hence preparation of scoping report, Terms of References for registration with NEMC and approval process,

undertaking of full ESIA and preparing the ESMP project that requires preparation of scoping report, Terms of References for registration with NEMC and approval process, undertaking of full ESIA and preparing the ESMP. From the World Bank perspective, the proposed project is classified as Category B because the proposed site is currently in use hence it's potential adverse environmental impacts on human populations or environmentally important areas—including wetlands, forests, grasslands, and other natural habitats—are zero or less adverse. In that regards this document presents the ESIA report for the proposed construction of Parking Bay and ancillary facilities at Nguvu Kazi Hamlet, Rwakalemera Village, Kasulo Ward, Ngara District in Kagera Region. Taken from the Centre of the existing parking bay, the GPS Coordinates of the project site are Latitude 2º30'22"S and Longitude 30º51'16"E.

Measures have been proposed to strengthen implementation of the ESMP presented in this report for the overall construction activities, operations and decommissioning phases. The ESMP has taken into account all the design and other changes that might occur upon construction of various structures that are to be implemented. Therefore, this report has taken into account the implementation of the mitigation measures proposed in which the overall social impacts of the project will be minimal, while opening up significant socio-economic opportunities for communities and the population of the area, as well as diverse benefits at the District, Regional and National levels.

General Layout Drawing for the Proposed Construction of Benaco Parking Bay



ES-2: ESIA Methodology

The methodologies used are in accordance with the Tanzania Environmental Assessment requirements and procedures as stipulated in the Environmental Management Act, 2004, the Environmental Management (Environmental Impact Assessment And Audit) (Amendment) Regulations, 2018, as well as other relevant Environmental Impact Assessment Guidelines. The general approached adopted are as follows:

Study Team: The study team led by ESIA expert included Sociologist, Environmental Scientist, EIA expert, Biodiversity Expert, Safety and Health expert and AutoCAD Technician.

Documents Review and Study: All data and information pertinent to this study were collected through direct observation, consultations and secondary data sources. Information and data collected include trucks passing through these trunk roads, trucks parking situation, sanitation situation, land use, demography, and other indicators related to environmental and socio-economic trends of the project area.

Field Visit: The ESIA study team visited and did the physical assessment on the proposed site for trucks parking bay, ancillary facilities and their core impact areas.

Stakeholder consultation: The stakeholder consultation which aimed among others at getting concerns and perceptions of the stakeholders regarding the project, and also suggestions directly from the affected communities on their preferred mitigation measures; was carried through Meetings with community and official consultation.

Project Impact assessment: The checklist method was used to identify the impacts and to recommend mitigation measures while significant impacts were identified by using the matrix method. The impact assessment entailed collection of baseline data, review of Policies, Legal and Institutional Framework for Environmental and Social Management, Identifying Environmental and Social Impacts, Predicting Environmental and Social Impacts, Determining the Significance of Impacts, and Identifying Mitigation and Management Options

ES-3: Policy and Legal Guidance

The study has consulted a number of policies and laws relevant to the project for guidance in order to ensure sustainability of the project in the area. The chapter also captures the relevant MEAs, international safeguards and guidelines requirements for such kind of the project in the area. Thus, the project during its entire course of the implementation shall refer to these cited documents. Among others; National Environmental Policy (1997), National Land Policy (1997), National Economic Empowerment Policy (2004), National Gender Policy (2000), Occupational Safety and Health Policy, 2012, National Water Policy, 2002, The National Employment Policy (1997), National Land Policy (1997), National Policy on HIV/AIDS (2001), National Child Development Policy 2008, The Gender Policy, 2000, The National Transport Policy of 2003.

Legal framework describing the Acts and regulations which are related to the intended project are Environmental Management Act (No.20. of 2004), Land and Land Village Act (URT, 1999b) (No. 4 of 1999 amended by No. 2 of 2004), The Constitution of Tanzania (1977), Occupation health and safety Act (No.5,2003), HIV and AIDS (Prevention and Control) act (no.28,2008), Standards Act, 2009, Water Resources Management Act No. 11 (2009), Employment and Labour Relations Act (2004), The Public Health Act 2009 , The Child Act 2009, The Contractors Registration Act, 1997, Environmental Management Act (Air Quality Standards) Regulations, 2007,The Environmental Management (Soil Quality Standards) Regulations, 2007, The Environmental Management (Water Quality Standards) Regulations, 2007, Environmental Management (Hazardous Waste Management) Regulations, 2019, Environmental Management (Fees and charges) (Amended) Regulations, 2021, Environmental management (Standards for Control of Noise and Vibration) Regulations, 2015, Land Registration Act R.E 2002, The Occupational Safety and Health (First Aid and Welfare Facilities) Rules 2015, The Electricity (Electrical Installation Services) Rules, 2015, Land Acquisition Act R.E 2002, The Fire and Rescue Services Act, R: E 200, Standards Act, 2009. Penal Code 1981 including Sexual Offences Special Provisions Act 1998 (SOSPA), Water Supply and Sanitation Act, 2019 (No. 5 of 2019)

Nevertheless; The World Bank Safeguard Policy applicable to this proposed project is *Environmental Assessment Policy (OP 4.01) coupled with IFC/WBG/WHO Guidelines: Occupational Health and Safety, IFC/WBG/WHO Guidelines: Air Emissions and Ambient Air Quality and IFC/WBG Guidelines: Noise Management, IFC/WBG/WHO Effluent Discharge Guidelines*

ES-4: Brief Description of the Proposed Development

Generally; the proposed project site has a coverage area approximately 8.77 Acres (35490.9m^2) with the capacity of accommodating 250-300 Vehicles/trucks per day after completion of construction and installations of all crucial structures and facilities. The proposed trucks Parking Bay project will consist of:

- Trucks Parking Space
- Security/ office block
- Oil-Water Separator & drainage systems
- Single block with Six cubes for shops
- Single building with cubes for food vendors *(Mama Lishe)*
- Sanitary Facilities, eg. Toilets, changing rooms, septic tanks, etc
- Road & Walkway
- Ornamental gardens

During the construction phase the area will be divided into two parts, the rear section will be used to park the vehicles and other crucial services while construction continues in the front section. When construction is complete, the vehicles will be parked in the front area and construction will start in the rear *(see appendix VIII)*

ES-5: Description of Project Environment

The site lies on Eastern side along Benaco - Rusumo trunk Road and has few existing infrastructures such as security block, solid waste management bins, toilet block (pit latrines) consisting of six cubes and storm water drainage system. Nevertheless, the storm water system drains the surface run-off from the parking bay to the trunk road's drainage system which lately discharges wastewater into public areas. This poses a devastating effect to the receiving environments including water bodies/waterways/streams, boreholes and shallow wells around or nearby the project area as the run-off water from the parking bay may contain traces of oil spills. The contaminated water may cause detrimental impacts to the human health and aquatic organisms. The elevated water storage tank for temporary storage and supply of water to the toilets was also observed onsite.

Generally; the site lies within the flat terrain with a relative elevation of 1520 AMSL and located in a typical urban setting environment whereby few exotic trees and vegetation are dominated in the surrounding area. The project site is typically owned by the Proponent, no any individual resides or running any business within hence there will be neither residential nor economic displacement.

Based on the state of the whole site there is no pristine environment that can promote thriving and existence of the species of conservation concern as per IUCN and CITES standards. Furthermore, there are no sensitive ecological receptors in the vicinity of the project area. Also, there were no cultural or archaeological objects that were noticed or observed during the study or reported earlier during the consultation stage with local community.

ES-6: Major Adjacent Developments

The proposed project site is demarcated by the Benako–Rusumo trunk Road (B3) on the Eastern side about 5meters. On the South, a roughly trapezium shaped parcel of land extends from the site to the bordering Ngara Oil petrol station while there is an undeveloped pocket of land with few scattered exotic trees on the West Side and residential houses to the North immediately from the project site boundary.

ES-7: Brief Description of the Proposed Project Activities

The following activities will be implemented during different phases of the proposed construction of the Trucks Parking Bay;

i. *Mobilization or Pre-construction Phase*: This phase entails seeking of all legal permits required by the law, mobilization of labour force, equipment. The contractor will establish working office and special area at site whereby all material fabrication activities will be undertaken. Other activities during this pre-construction phase include installation of sign boards and site clearance only at the designated areas.

ii. *Construction Phase:* The major construction activities include fencing of construction site, extraction and transportation of materials (sand, hard stones, cements, paving blocks, concrete blocks, aggregates, Iron sheets, timber, plumbing fixtures, etc). Major construction works will involve site clearance and leveling by using heavy duty equipments such as bulldozer, grader and compactor machineries, trenches and foundation excavation (using local/hand tools and modem equipment), erection of buildings and installation of electrical and plumbing systems and ancillary services. Testing for quality control of the supplied materials will be given high priority.

iii. *Demobilization Phase*: Major activities during this phase comprise decommissioning of temporary facilities which will be done and has to be contained in the works contract i.e. proper restoration of the site (e.g. removing of excess construction materials, restoration of disturbed areas to the required grades and removing all temporary structures). These will also involve clearance of all sorts of wastes including sewage, solid wastes (plastics, wood, metal, papers, etc), disposal of all wastes to the dumpsite and termination of temporary employments. Last activity is handover the completed project to the Proponent for commencement of operation phase.

iv. *Operation phase:* major activities during this phase including regular Parking Bay maintenance and all its facilities, revenues collection from customers.

v. *Decommissioning Phase:* This is the final demise of the building and parking yard services use value. The decommissioning entails demolition of the structures and other appurtenances. However, decommissioning of the project is not anticipated to be done in the near future.

ES-8: Stakeholders and their Involvement in the EIA Process

The main aim of the stakeholder consultation was to inform the stakeholders about the proposed project and incorporate their views in the design of the mitigation measures and Environmental and Social Management Plan (ESMP). The specific aims of the consultation process were to; reduce problems of institutional coordination; provide precise information about the project to the communities; obtained the main concerns and perceptions of the stakeholders regarding the

project; and obtain opinions and suggestions directly from the affected communities on their preferred mitigation measures. The public stakeholder village consultation meetings were conducted and intended to collect information regarding sources of livelihood, living standards, and views and perceptions of the communities regarding the proposed project. Stakeholders visited include villagers, Village Chairperson, Village Executive (VEO), Ward Executive officer (WEO). Other stakeholders included District Executive Director (DED), District Manager - Rural Water Supply and Sanitation Agency (RUWASA), District environmental Management Officer, District Land and Natural Resources Officer (DLNSO), District Livestock Officer (DLO), District Fire Office and all other related Departments at district level.

The study applied different participatory methods, namely interviews, one-to-one discussion and focused group discussions. The consultation was first conducted with the Ngara District Council (Proponent) to get the details of the proposed activities. Stakeholders consulted were informed on the proposed project and asked to raise their concern to the consultant.

ES-8.1: Result of Public Consultation

Generally, views from various stakeholders support the development of the proposed project in Kasulo Ward in view that;

S/No	Major issue, concern and recommendation	Description
1	Compliance to National laws	Prior to project commencement, the Proponent must acquire all legal permits
2	Conservation of project site's environments and its surroundings	Proponent and beneficiaries are advised to collaborate with other stakeholders by initiating various environmental conservation programs within and around the project area in all project phases.
3	Creation of employment	Employment opportunities will be obtained in the construction and operation periods and the priority will be given to local people.
4	Improvement in Business opportunities	The project design is giving priority to local vendors by establishing special block with cubes and nearby spaces for running small businesses whilst on the other hand, local suppliers will be given priority during construction phase
5	Negative Impacts such as Management of hazardous wastes, air and noise pollution; health hazards to workers and nearby community, Water pollution	The structural designs will consider sanitation facilities to eliminate or reduce the anticipated detrimental impacts

Stakeholders' participation Matrix

Date	Venue	Stakeholders	Participants
09.11. 2021	Ngara District Council Conference Room	Ngara District Council Departmental Staffs	24
09.11. 2021	Ngara LADP Office	Ag. Environmental Officer & LADP Coordinator	4
09.11. 2021	Ngara District TANESCO Office,	Ag Ngara District TANESCO Manager, TARURA	7
06.11. 2021	Rwakalemera Village Office	Direct and indirect project beneficiaries, and Village leaders.	183
Total			**218**

ES-9: ESIA Study Findings

Positive Impacts

Several positive and negative impacts are associated with the proposed project. Significant positive impacts include the following:

IDENTIFIED POSITIVE IMPACTS	ENHANCEMENT MEASURES
A. CONSTRUCTION PHASE	
A1. Employment Opportunities	▪ The Proponent shall be encouraged to employ local, unemployed yet willing to work hard, manpower to the extent viable subject to a maximum of 50% unskilled labour. This will ensure that local people are more benefited out of the project. ▪ In search for skilled labours, the Contractor must first look in the village/District before going on to other villages/Districts. ▪ Employment should be on equal opportunities for both gender ▪ Proponent shall not cause children under the age eighteen (18) to be employed or be engaged in any project activities
A2. Increased Income to Rwakalemera Villagers	▪ The Contractor must ensure that the laborers are paid as per Tanzania's Minimum wages ▪ Ensure all payments are timely completed ▪ The contractor should purchase the required and available materials from local vendors

IDENTIFIED POSITIVE IMPACTS	ENHANCEMENT MEASURES
A3. Increased Human Capital	▪ On the job-training to villagers when working with skilled projects' personnel
B. OPERATION PHASE	
B1. Enhanced Income, Employment Opportunities and Local Business	▪ Recruitment of skilled and non-skilled labours will be done with priorities to people from the area surrounding the project area. ▪ Establishment of local vendors huts "*Vibanda*" for food vendors "*Mama Lishe*" and other small businesses. ▪ Proponent shall not cause children under the age eighteen (18) to be employed or be engaged in any proposed project activities.
B2. Reduced accidents from fatigues as	▪ Truckers will get a permanent and safe place where they can pull over to take a break, eat a quick meal, sleep or finish up their logbooks
B3. Improved social amenities.	▪ Establishment of sufficient number of accommodation houses/guest houses as many drivers will need to have a rest ▪ Establishment of food vendors and other social services around the parking bay for easy accessibility ▪ Improvement of security systems within and nearby the parking bay.
B4. Improved environmental conservation proximity to the project site	▪ Part of the project site will be established with ornamental gardens for improving the general aesthetic view of the area ▪ Vegetation Regeneration proximity to the project area
B5. Restored clean site	▪ Collection and transportation of unwanted materials to the disposal site ▪ Allow community to take valuable building materials for example timber for reuse in construction of wastes

Negative Impacts and Mitigation Measures

The identified significant negative impacts and their proposed mitigation measures are outlined in the following tabulation:

IDENTIFIED NEGATIVE IMPACTS	MITIGATION MEASURES
A. CONSTRUCTION PHASE	
A1. Vegetation clearance	▪ The project site has already cleared and the soil is typically exposed and compacted hence less detrimental impact is anticipated. ▪ The problem could also be minimized by confining the construction activities within the proposed project site.

IDENTIFIED NEGATIVE IMPACTS	MITIGATION MEASURES
	▪ The Contractor shall avoid unnecessary clearing of vegetation beyond the proposed project site. ▪ All cleared and compacted areas should be scarified and planted with natural vegetation to stabilize the soil. ▪ The Contractor shall always ensure that the excavated areas are reinstated whenever possible
A2. Soil Erosion	▪ Compact the bare soil sufficiently to avoid loosened soil ▪ The problem could be minimized by confining the construction activities within the proposed project site. ▪ All cleared and compacted areas should be scarified and planted with natural vegetation to stabilize the soil. ▪ The Contractor shall always ensure that the excavated areas are reinstated whenever possible
A3. Air pollution due to dust and Carbon monoxide from vehicles exhaust	▪ The Contractor shall apply water on created dusty access roads during undertaking of construction works to minimize dust emission. ▪ The Contractor shall provide dust protection masks to construction workers. ▪ The Contractor shall ensure that appropriate construction machines that do not emit fumes and smokes are used for construction works ▪ The Contractor shall avoid as much as possible stockpiling of dusty construction materials or loose soils by ensuring that all materials brought to site are immediate utilized for construction works. ▪ The Contractor shall avoid use of old construction equipment/machinery which emit black smoke. All construction machinery/equipment and vehicles must be inspected during contract award to ensure that they do not emit black smoke. ▪ The Contractor shall operate and maintain vehicles and equipment in good working condition. ▪ The Contractor shall cover all trucks hauling dusty construction materials with tarpaulins during transportation. ▪ Regular monitoring of air pollutants to strengthen the control measures in case the concentration level exceeds the prescribed limits
A4. Population Influx (Labor Influx): Job seekers, Increased market and opportunities for local businesses	▪ Establish transparent recruitment procedures to avoid site followers in form of job-seekers ▪ Establish a recruitment policy that gives priority to local residents for less specialized services ▪ Recruitment procedures to be shared with the local authorities for further dissemination ▪ Opportunities for sub-suppliers and sub-contractors should be awarded to local firms which in turn employ local labour ▪ Conduct public health campaigns addressing issues of

IDENTIFIED NEGATIVE IMPACTS	MITIGATION MEASURES
	behavioral change, water and sanitation, malaria, HIV/AIDS, etc
A5. Generation of solid waste	▪ Sorting of the solid waste at the construction site in order to enhance reuse and recycling. ▪ Placing solid waste collection containers in areas of high generation rate. ▪ The non-reusable and non-recyclable wastes shall be collected and transported to the dumpsite for final disposal
A6. Generation of liquid waste	▪ Contractor may use the existing toilets during the construction period ▪ Pit latrines and/or septic tanks/soak-away pits at the site for liquid waste collection; regular emptying. ▪ All storage containers will be properly sealed and monitored to avoid any possible Oil spillage.
A7. Soil and Water Quality Contamination	▪ Control of soil erosion as described in B2 above ▪ Proper handling of generated solid and liquid waste. ▪ Trucks and other construction equipments should be serviced in a designated area with concrete surface ▪ All generated hazardous waste during construction of structures shall be temporarily stored at designated area comprised with primary and secondary containments prior to final disposal by the Authorized Contracted contractor ▪ No waste shall be disposed into waterways or streams ▪ Appropriate sites for temporary stockpiling of excavated/spoil materials and waste will be established.
A8. Generation of hazardous waste	▪ Separate all hazardous wastes from domestic waste during collection and transportation ▪ Areas for the storage of fuel and other flammable materials shall comply with standard fire safety regulations. ▪ All vehicle and equipment mechanical repair activities shall be conducted on a specific designated area. ▪ All generated hazardous waste during construction of structures shall be temporarily stored at designated area comprised with primary and secondary containments prior to final disposal by the Authorized Contracted contractor.
A9. Noise nuisance and Vibration	▪ The Contractor shall avoid use of construction equipment that generates laud noise due to poorly tuned engines or damaged exhaust pipes. The construction machinery must be properly tuned and exhaust pipes fitted with mufflers. ▪ The Contractor shall provide workers in the vicinity of strong noise with ear protection gears. ▪ The Contractor shall avoid prolonging construction works that produce high pitch noise within the residential areas during the dusk hours (18:00 – 06:00 hours)

IDENTIFIED NEGATIVE IMPACTS	MITIGATION MEASURES
A10. Creation of occupational health and safety risks	▪ The Contractor shall be caused to prepare and implement Health and Safety Management Plan (HSMP) ▪ The Contractor shall be caused to prepare and implement Emergency Preparedness and Response Plan (EPRP) ▪ The Contractor shall be caused to prepare and implement Traffic Management Plan (TMP) ▪ The Contractor shall be caused to conduct induction training in occupational health and safety rules for every employer of the construction workforce ▪ The Contractor shall be caused to conduct daily or weekly tool box meetings with specific occupational health and/or safety topic ▪ The Contractor shall be caused to conduct regular medical checks for the construction workforce ▪ The Contractor shall install safety signal devices and warning signs for the entirely project site ▪ The Contractor shall enforce mandatory use of Personal Protective Equipment (PPE) to all workforces. ▪ The Contractor shall strictly follow occupational health and safety procedures as required in Occupational Health and Safety Act No. 5 of 2003
A11.Creation of safety risks to local people	▪ The contractor shall regularly conduct community communication and engagement meetings with villagers so as to raise safety awareness to the people ▪ The Contractor shall ensure that excavated trenches are speedily backfilled and there shall be warning tapes placed around the construction sites. ▪ The Contractor shall entirely barricade with visible nets or tapes excavated trenches which found in highly populated area.
A12.Disruption of traffic flow	▪ The contractor required to use the existing roads as access roads ▪ Light materials should be locally carried from the offloading point to the project site. ▪ Wheelbarrows and other local equipment should be given priority to carry up construction materials and residues/remnants from site ▪ Where necessary; the problem will be mitigated by informing the members of the public about possible disruption of traffic movements along the access roads, and the inconveniences caused by the project construction activities. This can be through a conduct of consultative meeting with villagers so that the general public and particularly the road users can be made aware of the problem and proposed mitigation measures

IDENTIFIED NEGATIVE IMPACTS	MITIGATION MEASURES
A13. Risk of increased incidence of HIV/AIDS and STIs.	▪ The contractor shall provide employment priority to local unskilled laborers to minimize number of new comers ▪ The Contractor shall develop and implement HIV/AIDS and STIs prevention and control programme.
A14. Increased Risk of GBV, SEA and Harassment	▪ Regular training for workers on required lawful conducts in the project communities. ▪ Creation of partnership with local offices of the Ministry of Women Affairs and Youth Development, NGOs and community women groups to report workers' misconduct and complaints/reports on gender-based violence ▪ Provision of opportunities for workers to regularly return to their families or take advantage of entertainment opportunities away from rural host communities. ▪ Gender based equal opportunities in all project phases ▪ Create opportunities for employment of women in both management and casual placements ▪ All gender based employment must consider labor act (18+ Years and above)
A15. Child labour, forced labour and human trafficking	▪ Employment must consider labor act (18+ Years and above) ▪ Spread awareness among parents and surrounding communities ▪ Strict laws in place to prevent child, forced labors and human trafficking ▪ The Consultant Engineer with Proponent shall strictly make sure the Contractor adheres to Employment and Labour Relations Act (2004)
A16. Teenage Pregnancies	▪ Strictly enforcing labors to avoid sexual abstinence with teenagers ▪ Developing a community based approach which utilizes school sex education integrated with parent, church, and community groups ▪ Increasing teenage knowledge of contraception ▪ Providing counseling and medical and psychological health and education
A17. Land Degradation from Extraction and Use of Building Materials	▪ Depletion of resource cannot be avoided for developing this project. However, efficient extraction method will be used to minimize losses. All materials extraction sites shall be strictly supervised by Ngara district Council under environmental department in collaboration with other potential stakeholders
A18. Change of Landscape of the Area	▪ The problem could be minimized by confining the construction activities within the proposed project site ▪ Ensure management of excavation activities ▪ Light compaction will be necessary to stabilise the soil. ▪ Provide soil erosion ▪ In areas where construction activities have been completed and where no further disturbance would take

IDENTIFIED NEGATIVE IMPACTS	MITIGATION MEASURES
	place, rehabilitation and re-vegetation should commence as soon as possible. ▪ Prompt reclamation of exposed soils should be done. ▪ Construction during long rains period should be done with caution to avoid soil from being washed away. ▪ Topsoil excavated from buildings foundations should be stored for re use on other areas for rehabilitation
B. DEMOBILIZATION PHASE	
B1. Loss of Temporary Employment	▪ Adapt a project – completion policy: identifying key issues to be considered. ▪ Assist with re-employment and job seeking of the involved workforce. ▪ Compensate and suitably recommend the workers to help in seeking opportunities elsewhere. ▪ Offer advice and counseling on issues such as financial matters.
C. OPERATION PHASE	
C1. Risk of infrastructure vandalism	▪ Ngara District Council shall collaborate with prospective communities in creating community sense of ownership ▪ Security guards should be present all the time for safety of all properties within the premise
C2. Air pollution	▪ Higher NO and Nox levels emitted by vehicles and standby generator are minimized and lower CO2, CO, SO2 and HCs levels are maintained. These include the use of good quality fuels. i.e. low SO2, NOx fuel, good designed stacks, and regular maintenance and servicing of vehicles and diesel engine generator to trigger the recorded values below prescribed limits. ▪ Reduce fugitive dust from surfaces within the premise by paving and regular cleaning ▪ Project Proponent will conduct regular maintenance of all equipment on site at a servicing bay as a way of reducing emissions of noxious gases and improve working mechanisms and thus reduce noise of the moving parts; ▪ Maintenance of pavements to avoid dust emissions ▪ Prohibit unnecessary stopping and start-up of vehicles which produce fumes ▪ Regular use of low sulphur gasoline ▪ Regular monitoring of air quality and ambient air quality
C3. Underground water pollution due to Oil Leakages and Oil Spill	▪ All machinery must be keenly observed not to leak oils on the ground ▪ Maintenance must be carried out in a designated area

IDENTIFIED NEGATIVE IMPACTS	MITIGATION MEASURES
	and where oils are completely restrained from reaching the ground. Such areas should be covered to avoid storm from carrying away oils into the soil or water streams. Waste water/ wash water from these areas should be properly disposed. ▪ Regular monitoring of the oil water separator outflow is required ▪ Water containing soaps and other detergents must not enter the oil water / separator as it will place the hydrocarbons in suspension, rendering the oil water separator ineffective. ▪ Regular monitoring of effluent quality will be instituted ▪ Establishment of primary and secondary containments for oil storage before final disposal ▪ Sludge from Oil water separator will be collected by certified waste oil handling contractors authorized by relevant authority
C5. Generation of solid waste	▪ Sorting of the solid waste at the site in order to enhance reuse and recycling ▪ The non-reusable and non-recyclable wastes shall be collected and transported to the dumpsite for final disposal.
C6. Generation of Liquid waste	▪ Establishment of primary and secondary containments for oil storage before final disposal ▪ Pit latrines and/or septic tanks/soak-away pits at the site for liquid waste collection; regular emptying ▪ Regular monitoring of the oil water separator outflow is required. ▪ Sediment traps may be used in order to avoid sediment-laden water from entering the storm water system/surrounding watercourses ▪ Water containing soaps and other detergents must not enter the oil water / separator as it will place the hydrocarbons in suspension, rendering the oil water separator ineffective. ▪ Regular monitoring of effluent quality will be instituted
C6. Soil Erosion	▪ All cleared and compacted areas should be scarified and planted with vegetation to stabilize the soil.
C7. Creation of public health risks	▪ Proper management of solid and liquid waste generated from the project site ▪ Consideration of hygienic environment to food vendors surrounding the parking yard ▪ Preparing health guidelines for all local vendors within and around the project site
C8. Creation of occupational health and safety risks	▪ A site-specific Health and Safety Management Plan (HSMP) shall be prepared and implemented Provide and enforce use of protective gears ▪ Provide regular training to all staffs on health and safety

IDENTIFIED NEGATIVE IMPACTS	MITIGATION MEASURES
	matters especially new employees. ▪ Provide First Aid facilities and train some workforce on emergency response measures. ▪ Provide regular medical check-ups for the workers. ▪ Draw up and establish health and safety regulations, and formulating preventive measures for accidents and other human health and safety hazards. ▪ Provide proper safety signs within the premises. ▪ Monthly HSE inspections ▪ District Council shall follow occupational health and safety procedures as required in Occupational Health and Safety Act No. 5 of 2003.
C9. Child labour, forced labour and human trafficking	▪ Employment must consider labor act (18+ Years and above) ▪ Spread awareness among parents and surrounding communities ▪ Strict laws in place to prevent child, forced labors and human trafficking ▪ The Consultant Engineer with Proponent shall strictly make sure the Contractor adheres to Employment and Labour Relations Act (2004)
C10. Teenage Pregnancies	▪ Strictly enforcing labors to avoid sexual abstinence with teenagers ▪ Developing a community based approach which utilizes school sex education integrated with parent, church, and community groups ▪ Increasing teenage knowledge of contraception ▪ Providing counseling and medical and psychological health and education
C11. Traffic and non-traffic occupational accidents	▪ Eliminate dead-end parking areas, so there's always a flow-through of traffic along aisles (the driving lanes facilitating access to parking spots ▪ Locate aisles and rows of parking parallel to the long dimension of the site ▪ Established “Entrance” and “Exit” ways with sufficient width as per national and international standards. ▪ Placing Safety signs especially Speed Limit within the parking bay in all strategic areas ▪ The developer should conduct regular alcoholic test to all drivers served by the parking bay
C12. Spreading of HIV, other STIs and Covid-19 among workers and visitors in the project area	▪ The Proponent will provide diagnosis and treatment for tuberculosis and sexually transmitted infectious diseases that are common among people with HIV. ▪ The Proponent will support voluntary HIV counseling and testing. ▪ Engage a qualified/registered Service Provider to establish and run an HIV/AIDS Awareness and Prevention Program.

IDENTIFIED NEGATIVE IMPACTS	MITIGATION MEASURES
	▪ Deployment of locally available labor to avoid causing a large influx. ▪ Safety, health and environment induction courses-awareness
C13. Risks of Fire and Explosions	▪ Provide fire hazard signs such as “No Smoking” signs, EXIT, Fire Extinguishers/, Emergency Assembly as well as in case of any fire incidence and emergence contact numbers should be provided. ▪ The compound should be kept clean and free from fire hazards and litter ▪ Install fire control appliances (portable fire extinguisher; both CO2, dry powder and water type, and sand buckets) and employees should be adequately instructed periodically in the use of the various fire appliances. ▪ Regular maintenance of electrical wires to prevent electrostatic ▪ Conduct regular drills/simulations to sensitize the worker once a year ▪ Regular repair and maintenance program for all equipment ▪ Make sure better lighting arresters are installed in a right places ▪ Workers shall be trained on fire emergency response by authorized officers from Fire and Rescue Force Office. The training program will be in every year to keep the workers up to dated
C14. Noise pollution and vibration	▪ Good site management will be enforced; ▪ Heavy equaipments to be installed on concrete bunds ▪ Best practice - methods of working will be developed and observed; ▪ Hours of working will be restricted, workers to work by shifts ▪ Maintenance of vehicles and machinery to avoid noise.
C15. Disruption of traffic flow	▪ Provide clear entry , exit ways, indicate relevant traffic signs “give Way” ▪ Provide adequate parking within the parking yard ▪ Establishment of adequate driveways within the premises
C16. Environmental pollution from Leaks and Spills	▪ Maintenance must be carried out in a designated area and where oils are completely restrained from reaching the ground. Such areas should be covered to avoid storm from carrying away oils into the soil or water systems. Waste water/ wash water from these areas should be properly disposed. ▪ Regular monitoring of the oil water separator outflow is required. ▪ Water containing soaps and other detergents must not enter the oil water / separator as it will place the hydrocarbons in suspension, rendering the oil water

IDENTIFIED NEGATIVE IMPACTS	MITIGATION MEASURES
	separator ineffective. ▪ Regular monitoring of effluent quality will be instituted ▪ Primary and secondary containments shall be established at the service bay for oil storage before taken by authorized recyclers
C17. Increased Risk of GBV, SEA and Harassment	▪ Regular training for workers on required lawful conducts in the project communities. ▪ Creation of partnership with local offices of the Ministry of Women Affairs and Youth Development, NGOs and community women groups to report workers' misconduct and complaints/reports on gender-based violence ▪ Provision of opportunities for workers to regularly return to their families or take advantage of entertainment opportunities away from rural host communities. ▪ Gender based equal opportunities in all project phases ▪ Create opportunities for employment of women in both management and casual placements ▪ All gender based employment must consider labor act (18+ Years and above)
E. DECOMMISSIONING PHASE	
D1. Loss of Aesthetics due to Abandoned Project Facilities	▪ At decommissioning, the proponent will either sell the parking yard to any interested bidder or convert it to another use or disassemble all infrastructures and structures in an environmentally sound manner to restore the environment into its original appearance.
D2. Solid waste generation from demolition activities	▪ Waste separation, reuse/recycling and disposal through appropriate techniques as per Ngara District Council
D3. Air pollution from Dust	▪ Provision of appropriate and adequate PPE to the workers along with strict enforcement on the use of gears ▪ Water sprinkling through mobile tanker at regular intervals in all areas where demolition activities are progressing
D4. Noise and Vibration	▪ Personal protective equipment (PPE) shall be properly selected, operated and maintained to minimize noise ▪ All demolition works are advised to be carried out during the day time ▪ Best practice - methods of working will be developed and strictly observed ▪ Light machineries should be applied during demolition activities whilst operators/workers in various sections with significant noise levels shall be provided with ear plugs
D5. Loss of Employment due to Closure of the Project	▪ Prepare workers for forced retirement by providing skills for self-employment, and wise investment of the retirement benefits; ▪ Ensure that all employees are members of the Social Security schemes; ▪ Consider redeploying employees in other relevant

IDENTIFIED NEGATIVE IMPACTS	MITIGATION MEASURES
	projects.
D6. Creation of safety risk impacts to local people	▪ Comprehensive Decommissioning Plan shall be established to guide prior to undertake any activities ▪ The Developer shall ensure that all non-degradable solid wastes are well collected and safely disposed off-site ▪ The Developer shall ensure that all materials which are re-usable or recyclable are treated accordingly in other places. ▪ All fine earth materials will be enclosed during transportation to the designated disposal site to prevent dust generation along the route. Trucks used for that purpose will be fitted with tailgates that close properly and with tarpaulins to cover the materials. ▪ Protection and well-being of the nearby communities shall be ensured by minimizing their vulnerabilities to dust, noise generated by the machinery on-site. ▪ Measures to suppress dust shall be applied to include watering the area vulnerable for dust in the specific potential dust area within the project area
D7. Creation of occupational health and safety risks to workers	▪ Comprehensive Decommissioning Plan shall be established to guide prior to undertake any activities ▪ Workers at the site should use appropriate protective gears such as boots, respiratory masks etc. ▪ The contractor shall insist on their workers to use the gears properly ▪ Fatal accidents shall be reported to OSHA within 24hrs of occurrence so as to prevent further recurrences by doing investigation ▪ All respective government authorities should be involved prior to decommissioning activities
D8. Degradation of vegetation impacts	▪ Developer will improve the aesthetic view of the area by replanting native trees, this will be possible if the project site will not be in other usage

ES-10: Environmental and Social Management Plan (ESMP)

A number of mitigation and enhancement measures have been proposed to address the identified potential negative and positive impacts. These have been used to develop an Environmental and Social Management Plan (ESMP) for construction, operation and decommissioning phases of the project. Programs for both internal and periodic external environmental monitoring have been proposed with an overall objective of ensuring that mitigation measures are implemented effectively. Environmental monitoring will be carried out to ensure that all construction and operation activities comply and adhere to environmental provisions and standard specifications. The activities and indicators that have been

recommended for monitoring are presented in Environmental Monitoring Plan (EMP). Also, the EMP has roles for each and every partner involved in different phases of the project (NELSAP PIU, Project Proponent, Contractors, supervising engineers etc.)

ES-11: Environmental and Social Monitoring Plan (ESMP)

The systems for implementation and monitoring of ESMP has been developed in chapter 9 of this report which is to be implemented as complimentary to the Environmental and Social Management Plan to monitor the impacts of the proposed project and the mitigation measures and to provide a permanent record of such monitoring. Nonetheless, an Environmental and Social Monitoring Plan has been created to track the effectiveness of the ESMP's environmental protection and socioeconomic objectives. It helps the ESMP by keeping track of environmental performance and allowing adjustments to be made to reduce environmental and socioeconomic consequences throughout the project's life cycle. Cost estimates for ESMP implementation and monitoring have been presented, with a total cost of TSH 32,300,000 projected.

Unit / Personnel	Responsibilities
National Environment Management Council (NEMC)	• Conduct environmental compliance monitoring and enforcement to ensure that project proponent is efficiently implement approved ESMP • Undertake screening of the project to determine level of ESIA study • Reviewing and approval of the project ESIA reports submitted by Ngara DC • Reviewing of the annual environmental and social audit reports submitted by Ngara DC;
Ngara District Council/Proponent	• Holds final responsibility for the environmental and social performance of the project • The Client will be represented by Consultant who will be in charge of the supervision works, and overseeing the contract from initiation stage to completion of construction activities at various proposed sites; • The Client has to procure a contractor who will be responsible for the implementation of the entire project activities; • Responsible for ensuring the site development is implemented according to the requirements as stipulated in ESMP; • Ensure that sufficient resources are available to the other role players to efficiently perform their tasks as indicated in ESMP; • Overall management of all project activities; • Receive and supervise the implementation of the recommendations of the environmental report from the Consultant; • Cooperate with Consultant to periodically supervise contractors' activities; and • Carry out annual environmental and social audits of the project and submit the subsequent reports to NEMC for review and approval. • Ensure availability of key staffs for social, environmental, health and safety monitoring during project phases
NELSAP PIU	• To provide support to the District where required to facilitate the implementation of LADP activities. • Ensure timely availability and reliability of funding for agreed and approved

Unit / Personnel	Responsibilities
	LADP activities and related interventions. • Ensure timely processing of the direct payments to contractors and consultants on behalf of the district. • Monitoring and evaluation of the progress of LADP activities implemented by the district. • Liaise closely with Ngara DC in preparing a coordinated response on environmental and social management aspects of the project; • Carrying out safeguards due diligence; and • Preparation of quarterly environmental and social performance reports for the project.
World Bank	• Financing the entire project activities • Overall ESMP supervision and monitoring • Provision of technical support and guidance to Ngara DC, NELSAP PIU, Contractor and Supervising Engineer • Recommending on additional measures to strengthening the ESMP implementation performance
Consultant (Supervision Engineer)	• monitoring and supervision of the construction works including overseeing implementation of ESMP • administer all construction works, progress review and monitor the works undertaken by the Contractor and implementation of ESMP to ensure compliance with contract specification and contractual requirements • Cooperate with Ngara DC to periodically supervise contractors' activities. Scheduled meetings held between the contractor, Ngara DC representative and Consultant. • Include, among its staff, an environmental officer who will oversee the implementation of the ESMP and report to Ngara DC and NELSAP PIU.
Contractor	• responsible for implementation of construction works and ensure compliance with environmental requirements; • Contractor shall prepare/update a Contractor's ESMP (C-ESMP), and ensure that the measures related to environmental and social safeguards are fully carried out as stipulated; • Preparing/Updating the project's Environmental Health and Safety Management Plan; • Conduct general training on occupational health, safety and environment to the construction workforce • Reporting arising works that are detected by Environmental Officer to Consultant and Ngara DC representative for further actions. • Prepare and implement covid-19 contingency plan, prepare and implement emergence preparedness plan, prepare and implement traffic management plan,

ES-12: Project Alternatives

The choice of site has been dictated by a number of factors listed below:

a) Availability of alternative site. In this respect if the proponent has several sites to choose from then assessment of site alternatives make sense. Since the project proponent considers decision made by direct project beneficiaries due to a number of factors then consideration of alternative sites was thought to be an academic exercise.
b) The proposed project is within the premises where there is an existing and parking yard
c) The proposed site is at the centre of two trunk roads heading Rwanda and Burundi hence is well accessible by both.
d) Alternative Technologies gives an opportunity to the proponent to consider other technologies which are relatively better than the technology already deployed (under consideration). The technology with less socio, economic and environmental damages will always be placed on top of all other technologies. On this specific project, the selected technology is the least destructive to the environment and communities while providing substantial positive economic returns. Hence, there are no any other alternative technologies under consideration.
e) No-Project alternative is considered as not a plausible alternative.

ES-13: Conclusion and Recommendations

ES-13.1: Conclusion

Ngara district council is growing fast as other districts in the country, for that case the council is strategically planning to meet social and economic needs of its population and supporting infrastructures. Benaco Mini-Town is along the trunk road heading to Rwanda and approximately 20Km prior reaching Rusumo boarder but also closely to the junction of Burundi trunk road. A large number of vehicles pass through these trunk roads whilst before crossing the border most of them park at Benaco Mini-Town with various reasons such as trucks servicing/maintenance, resting of trucks' drivers, acquiring social amenities, etc. There is a local designated area for parking which is incapable of accommodating a large number of vehicles and which does not meet the national and international standards. Most of the trucks are parking along the road, a situation which may result into accident, road damage and environmental pollution in contrary to Cap 167 of The Roads Act No. 13 of 2007 (Specifically on the Road Safety, Restriction on the use of roads), Occupational Health and Safety Act No. 5 of 2003, The Environmental Management (Hazardous Waste Control and Management) Regulations, 2008 and other related Acts and Regulations. The local communities in Benaco Mini-Town and the nearby areas have given the priority to establishment of a parking bay so as to mitigate the problems that might stem from the current situation. However; the established parking bay will stimulate economic growth and improving living standards of the surrounding communities by providing various economic opportunities including taxes paid to Village and District levels

The identified significant negative impacts associated with the proposed project are related to the proposed construction works, operation and decommissioning phases and observed to be of limited scope. Nevertheless, the identified negative impacts could be minimized or prevented through implementation of recommended mitigation measures. In this regards the project proponent will ensure that the recommended mitigation measures are fully implemented during construction and operation phases. It can therefore be concluded that the proposed Benaco Parking Bay project does not pose severe environmental threat to the community, endangered species and natural habitats; hence it is socially acceptable, economically viable, and environmentally sustainable.

ES-13.2: Recommendations:

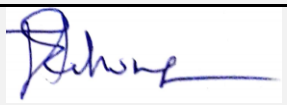
From this ESIA, it is evident that the proposed Benako Parking Bay is associated with both positive and negative impacts during construction, operation and decommissioning phases of the project. The following recommendations are made to enhance the viability of the project:

- The project shall be continued as planned as it is economically and socially viable
- Ngara District Council and Supervision Engineer shall oversee activities of the Contractor in implementation the developed impact mitigation measures described in the EIA report
- In order to enhance public health of people, Ngara District Council shall establish either landfill or solid waste collection routes at Rwakalemera Village and nearby villages. Implementation of appropriate solid waste management practices will eliminate risk of water pollution by haphazard dumping
- The proposed mitigation and enhancement measures (the ESMP) should be implemented in order to minimize and/ or avoid the identified adverse environmental and social impacts of the proposed project. The ESMP should be provided as part of the Contractor's contract.
- The EMP should also be implemented to track the effectiveness of mitigation and enhancement measures and hence further improvement of the mitigation plan. Monitoring will be used as a means of ensuring compliance with national or international standards.
- The parking yard must establish and/or operationalize a unit within the proposed management structure to coordinate implementation of environmental and social obligations.
- The proponent is advised to hire a qualified contractor to supervise implementation of the proposed construction phase of the parking yard

SIGNED DECLARATION OF EXPERTS

This Environmental and Social Impact Assessment (ESIA) report has been prepared by team of competent and registered Environmental Experts who are dully certified and registered by the National Environment Management Council (NEMC) of United Republic of Tanzania as an Environmental and Social Impact Assessment (ESIA) and Environmental Auditing (EA) Assessors**.** We are hereby certifying that the particulars given to this report are correct and true to the best of our knowledge and abide with the Environmental Management Act, 2004 Cap 191 and Environment Impact Assessment and Audit Regulations, 2005 - G.N. No. 349.

ESIA Registered Experts

S/N	Name	Responsibility	Signature
1	Gabriel Gibson	Certified Environmental Impact Assessment Expert –(Team Leader)	
2	Marco Mchome	Certified Environmental Impact Assessment Expert (MSc in Environmental Impact Assessment and Management (Ass.Team Leader)	

Non-Registered Supporting Staffs

1	Fredrick Jailos	Geography & Environmental Studies & Health and Safety Specialist
2	Sharlon Kishenyi	BSc: Environmental Management and Climate Change
3	Eng. Hemed Mussa	Civil Engineer
4	Kelvin Shirima	MSc Geographical Information System
5	Mr. Mugisha G. Kabamba	Sociologist
6.	Joseph John Mrianga	MSc. In Natural Resources Management

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACRONYMS AND ABBREVIATIONS

AMSL	Above Mean Sea Level
CRB	Contractors Registration Board
dBA	Decibel
DED	District Executive Director
DIZ	Direct Impact Zone
EA	Environmental Audit
EMA	Environmental Management Act
EPRP	Emergency Preparedness and Response Plan
ESIA	Environmental & Social Impact Assessment
EIAAR	Environmental Impact Assessment and Audit Regulation
EIS	Environmental Impact Statement
EMP	Environmental Monitoring Plan
ERB	Engineers Registration Board
ESMP	Environmental and Social Management Plan
GBV	Gender Based Violence
GN	Government Notice
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HSMP	Health and Safety Management Plan
IUCN	Union for Conservation of Nature
IUCN	International Union for Conservation of Nature
KPH	Kilometer per Hour
LADP	Local Area Development Program
NBS	National Bureau of Statistics
NPH	National Population and Housing Census
NEMC	National Environmental Management Council
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NGOs	Non-Government Organizations
NSGRP	The National Strategy for Growth and reduction of Poverty
OHS	Occupational Health and Safety
OSHA	Occupational Safety and Health Authority
OP	Operational Policy
PAPs	Project Affected Persons
PPE	Personnel Protective Equipment
PLHAS	People Living with HIV/AIDS
RRHP	Regional Rusumo Falls Hydroelectric Project
RUWASA	Rural Water Supply Authority
STD/STI	Sexual transmitted Diseases/Sexual Transmitted Infections
TANESCO	Tanzania Electric Supply Company
TARURA	Tanzania Rural and Urban Road Agency
TMP	Traffic Management Plan
TBS	Tanzania Bureau of Standards
ToR	Terms of Reference
URT	United Republic of Tanzania
VEO	Village Executive Officer
WBG	World Bank Group
WEO	Ward Executive Officer

ACKNOWLEDGMENT

Team of consultants is very grateful to the World Bank as well as NELSP/LADP and Ngara District Council for their full cooperation rendered throughout the preparation of this report. Special thanks are expressed to all stakeholders of the proposed Construction of the Parking Yard around visited areas in Ngara District including Rwakalemera Village and Kasulo Ward for their vital contributions and their assistance during various project's consultations. For invaluable recognition and their willingness, their names, designations were recorded and appended to this ESIA report. Team of consultants would like to recognize the contributions of the Ngara District Staffs who have provided great support in logistic, consultations arrangement and in documents provision. Their critical review of the survey process provided an impetus for the completion of the study for which this ESIA report is concerned.

CHAPTER ONE: INTRODUCTION

1.1 Background and Nature of the Project

The proposed Local Area Development Program (LADP) is a benefit sharing program designed to enhance regional economic and social development in the project areas in Rwanda, Burundi and Tanzania. This has been resulted from the Regional Rusumo Falls Hydroelectric Project (RRHP) as one of the priority regional projects in the Nile countries and aims at development of low-cost power generation and regional electricity trade as a means to improving productivity and to promoting economic growth in the region. The LADP project area is located in Ngara District in Tanzania, Kirehe and Ngoma Districts in Rwanda and in communes of Giteranyi (Muyinga Province) and Busoni (Kirundo Province) in Burundi.

The proposed RRHP consists of the construction of: (i) a run-of-river hydropower facility with envisaged installed capacity of 80 MW to be equally shared between the three countries. The power station and associated hydraulic infrastructure is currently under construction and is situated at the Rusumo Falls, where the Kagera River forms the boundary between Tanzania and Rwanda, and (ii) transmission facilities connecting the power plant to the national grids of Rwanda, Burundi and Tanzania. The RRHP project is financed by World Bank (WB) together with African Development Bank (AfDB) with the estimated cost of US$340 million for the Power plant and US$ 120 million for the Transmission lines.

In Tanzania, Ngara District is one of the seven districts of Kagera Region in the very west of mainland Tanzania. The district is bordering the Republics of Rwanda and Burundi and the distance from Ngara to Dar es Salaam is 1,600 km and 350 km to the regional headquarters (Bukoba). The district remains remote and development actors are not many. Ngara District covers an area of approximately 3,744Km2; it is divided into four divisions, 22 Wards and 75 villages. About 90% of the Ngara households depend on agriculture and livestock production for their livelihoods. The LADP is seen by the district authorities and the population as an opportunity to address key community development challenges. The district has identified several/various most critical socio-economic areas for the Local Area Development Program (LADP phase II) support including construction of the parking Bay and its ancillary facilities at Benako area.

Therefore, this ESIA report is focused in carrying out an Environmental and Social Impact Assessment for the proposed construction and expansion of the Benako Parking Bay at Nguvu Kazi Hamlet, Rwakalemera Village, Kasulo Ward, Ngara District, Kagera Region in Tanzania. The Project is part of an overall Kagera Basin Integrated Development Framework, which is part of the Nile Basin Initiative.

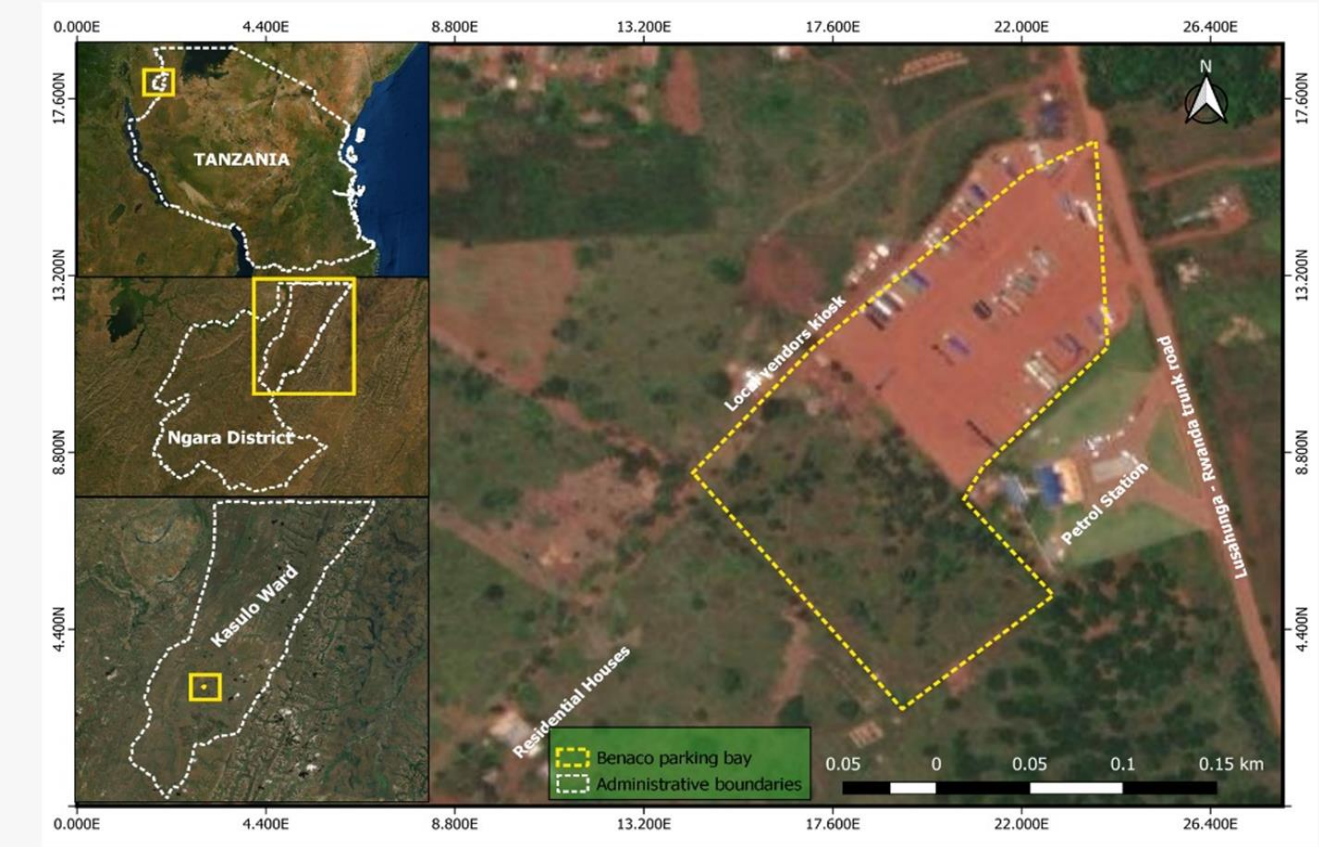


Figure 1: Proposed Project Site Map-Benaco Parking Bay

1.2 Project Rationale

Ngara district council is growing fast as other districts in the country, for that case the council is strategically planning to meet social and economic needs of its population and supporting infrastructures. Benaco Mini-Town is along the trunk road heading to Rwanda and approximately 20Km prior reaching Rusumo boarder but also closely to the junction of Ngara CBD trunk road. A large number of vehicles pass through these trunk roads whilst before crossing the borders most of them park at Benaco Mini-Town with various reasons such as trucks servicing/maintenance, resting of trucks' drivers, acquiring social amenities, etc. There is a local designated area for parking which is incapable of accommodating a large number of vehicles and which does not meet the national and international standards. Most of the trucks are parking along the road, a situation which may result into accident, road damage and environmental pollution in contrary to Cap 167 of The Roads Act No. 13 of 2007 (Specifically on the Road Safety, Restriction on the use of roads), Occupational Health and Safety Act No. 5 of 2003, The Environmental Management (Hazardous Waste Control and Management) Regulations, 2008 and other related Acts and Regulations. The local communities in Benaco Mini-Town and the nearby areas have given the priority to establishment of a parking bay so as

to mitigate the problems that might stem from the current situation. However; the established parking bay will stimulate economic growth and improving living standards of the surrounding communities by providing various economic opportunities including taxes paid to Village and District levels

1.3 EIA Requirements

The First Schedule of the Environmental Impact Assessment (EIA) and Audit Regulations, 2005, made under Regulation 6 (1), categorizes this project as a Type B1 (other projects) - Project requiring a mandatory EIA; that is, the project is likely to have significant adverse environmental impacts and that in-depth study is required to determine the scale, extent and significance of the impacts and to identify appropriate mitigation measures. According to the "List of Projects Requiring EIA (Mandatory List)" in the First Schedule, Item 14 (iii) titled Building and Civil Engineering Industries, particularly no. *(iii) is the most relevant to this undertaking: (iii) Construction and expansion/upgrading of roads, harbours, ship yards, fishing harbours, air fields, and ports, railways and pipelines.*

Furthermore; World Bank (WB) requires Environmental and Social Impact Assessment (ESIA) to be conducted to assess whether is likely to cause significant potential harm (if any) to the surrounding environment before any actual activity is started in the proposed Construction of Parking Bay. The proposed project is categorized as Category B in the Environmental and Social Screening Procedures (ESSP) used by World Bank to categorize initiative based on environmental opportunity/risk and determines depth of environmental analysis needed. The World Bank Safeguard Policy applicable to this proposed project is *Environmental Assessment Policy (OP 4.01) coupled with IFC/WBG/WHO Guidelines: Occupational Health and Safety, IFC/WBG/WHO Guidelines: Air Emissions and Ambient Air Quality and IFC/WBG Guidelines: Noise Management, IFC/WBG/WHO Effluent Discharge Guidelines*

In order to meet the requirements of WB and NELSAP/LADP, the ESIA process has also been carried out in compliance with the applicable WB Safeguard Policy on Environmental Sustainability. This report fulfills both requirements of the WB, environmental legislations of the United Republic of Tanzania and other international environmental requirements.

1.4 Objectives of ESIA

The purpose of this ESIA study was to systematically assess the potential environmental impacts of LADP activities at targeted parking Bay through a comprehensive Environmental Impact Assessment (EIA), in compliance with relevant laws and policies of the Government of Tanzania. In additional this ESIA process was carried out in order to provide a monitoring guideline for the project management to act upon during construction activities.

The main objectives of this ESIA study were to;

i. Establish a detailed documentation prevailing baseline conditions before project construction commences;
ii. Identify the anticipated environmental impacts of the project and the scale of the impacts;

iii. Propose mitigation measures to be taken during and after the implementation of the project;
iv. Document the consultation process undertaken to inform potential project stakeholders as well as the attitude of the stakeholders towards the project;
v. Consider stakeholders' views and suggestions on project's design;
vi. Consider different alternatives to the project to meet the intended objectives and discuss alternative methods for developing the project to ensure that the project is justified from a broader environmental and social perspective, and
vii. Develop an Environmental and Social Management Plan (ESMP) with mechanisms for monitoring and evaluating the compliance and environmental performance which shall include the cost of mitigation measures and the time frame of implementing the measures.

1.5 Approach and Methodology

1.5.1 Approach

This ESIA Report has been prepared in line with NEMC and WB Environmental and Social Assessment Guidelines, Tanzania's Environmental Management Act (2004), EIA and Audit Regulations (2005), its subsequent regulations of 2018(G.N. No. 474 of 2018.

The approach applied by environmental experts was to divide project area into Direct Impact Zone (DIZ) and the Area of Influence (AI). The Direct Impact Zone is the area that will be immediately and directly affected by the actions undertaken during the Parking Bay construction, operations phases and post-operation phase of the project. This area includes the site itself and marginal zones up to 60 meters on all sides from the project's boundaries.

The DIZ was determined on the basis of the following factors:

- The distance of travel of noise, dust, vibrations and exhaust fumes from operating machineries, trucks from the site boundary; and
- Marginal zones and developments from the site within 60m as it is within this distance that impacts are likely to be felt.

The AI is the area beyond the DIZ where most of the environmental impacts will be induced or influenced by the project activities. It is not subject to direct contact with the site, but is directly or indirectly affected by the presence of the proposed project site. Areas for borrow pits, waste dump, wastewater receptors are also considered as Areas of Influence.

1.5.2 Methodology

The ESIA study team included an EIA expert, Sociologist, Environmental Scientist, Biodiversity Expert, Safety and Health expert and AutoCAD Technician. The team was led by the environmentalist who is also an EIA expert. The names of the members of the study team and their responsibilities are provided in the page xxi.

1.5.2.1 Documents Review and Study

Information and data were collected by direct observation, through consultations and secondary data sources. Information and data collected include water supply situation, sanitation situation, land use, demography, and other indicators related to environmental and socio- economic trends of the project area.

The consultant reviewed various relevant documents to be familiar with relevant issues pertaining to the study. The review of documents included: The Environmental Impact Assessment and Audit Regulations, 2005, The Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations, 2018, Ngara District Socio-Economic Profile 2015; Ngara District Strategic Plan 2011/2012–2015/2016; National Bureau of Statistics, Population Distribution by age and sex, 2012; and National Bureau of Statistics, Key Findings 2011/2012 Household Budget Survey. Other documents included Status of Livelihood Restoration Program, Geographical info, and maps of project areas, Summary report for LADP activities (June –2018-August,2020), Environmental and Social Impact Assessment (ESIA) for the proposed Rusumo Falls Hydroelectric Project - Dam & Power Plant Component Report July, 2013, and Feasibility Report for Local Area Development Projects in Ngara District, October 2019.

1.5.2.2 Field Visit

The main objective of the field visit was to gather information relevant for the study. Field studies involved walking on the project site for assessing the existing situation of the proposed site and the nearby surroundings. The ESIA study team visited and did the physical assessment on the proposed site and their core impact areas.

The fieldwork was carried out from 05th November/ 2021 – 10th November/ 2021

Activities carried out during field studies included:

- Interviews and consultation with stakeholders,
- Indoor village consultation meetings,
- Appraisal of environmental conditions of the project site and areas that might be impacted by the project – hydrology, flora, fauna, and
- Appraisal of land use and assessment of other relevant socio-economic parameters.

During the field visits, consultation with relevant stakeholders was also conducted. Particular attention was paid to the impact on the livelihood of the people living within or in the immediate vicinity of the proposed Parking Bay

1.5.2.3 Stakeholders Consultation

The main aim of the stakeholder consultation was to inform the stakeholders about the proposed project and incorporate their views in the design of the mitigation measures and Environmental and Social Management Plan (ESMP). The specific aims of the consultation process were to; reduce problems of institutional coordination; provide precise information about

the project to the communities; obtained the main concerns and perceptions of the stakeholders regarding the projects; and obtain opinions and suggestions directly from the affected communities on their preferred mitigation measures.

- **Meetings with Community:** The public stakeholder village consultation meetings were conducted and intended to collect information regarding sources of livelihood, living standards, and views and perceptions of the communities regarding the proposed projects. Stakeholders visited include villagers, Village Chairperson and Village Executive Officer (VEO). The minutes for community meetings undertaken during village consultative meeting are attached in **APPENDIX II**.

- **Official Consultation:** The ESIA team met government officials who include District Executive Officer (DED), District Environmental Management Officer (DEMO), District Community and Development Officer (DCDO), District Planning Officer (DPLO), District Medical Officer (DMO), District Health Officer (DHO), District Primary Education Officer (DPEO), District Secondary Education Officer (DSEO), District Water Engineer (DWE), District Agricultural, Irrigation and Cooperative Officer (DAICO), District Trade Officer (DTO), District Land and National Resources Officer (DLNRO) and District Livestock Officer (DLO), LADP coordinator Ngara DC, and NELSAP representative. Other stakeholders from various agencies who work within Ngara included District Manager – TANESCO and District Manager – TARURA. The names and signatures of the consulted stakeholders are as attached in **APPENDIX III**. The visited stakeholders had opportunities to express their views/concerns regarding the project.

1.6 Project Impact Assessment

Impact assessment was done by superimposing project elements onto the existing social and environmental conditions in the project area. The checklist method was used to identify the impacts and to recommend mitigation measures. Significant impacts were identified by using the matrix method. A key guiding assumption in this study is that the project will be designed, constructed, operated and maintained with due care for safety and environmental matters using current and practical engineering practice and/or Best Available Technology Not Entailing Excess Cost (BATNEEC). The implementation schedule of the mitigation measures is summarized in the Environmental and Social Management Plan (ESMP).

During environmental assessment the environmental impacts have been evaluated for various alternatives. The impact assessment entailed the following:

(a) Collection of Baseline Data

The collection of baseline data was conducted in parallel subsequent to defining the scope of the ESIA. These data allows the study team to determine whether more detailed information on environmental and social conditions in the project area and surroundings are needed and where such information can be obtained.

Both primary and secondary data were collected. Primary data were collected by direct measurement, observations and using semi-structured interviews with respective and targeted parties. Secondary data were obtained from various relevant sources of information such as District profile and many other official and non-official documents.

(b) Review of Policies, Legal and Institutional Framework for Environmental and Social Management

This allowed the study team to update and enhance their understanding of national policies, legislation and institutional arrangements for environmental and social management in Tanzania and relevant international procedures to ascertain the optimal management of impacts.

(c) Identifying Environmental and Social Impacts

This was undertaken by compiling a contender list of key impacts such as loss of flora and fauna, settlement patterns, social and cultural systems, water resources and land tenure systems.

(d) Predicting Environmental and Social Impacts

The environmental and social impacts were identified and their potential size and nature were predicted. The prediction of impacts specified the impact's causes and effects and its consequences for the environment and the social aspects.

(e) Determining the Significance of Impacts

The key activity was to evaluate the significance of impacts, engineering judgments were made about which impacts found in the study area were considered important and therefore need to be mitigated. Criteria like *likelihood*, *reversibility* and *severity* of the impact were used. Also the *scale of the impact* in terms of *spatial* and *temporal* was also taken into account.

(f) Identifying Mitigation and Management Options

The options for dealing with identified and predicted impacts were considered. This enabled the study team to analyze proposed mitigation measures. A wide range of measures have been proposed to prevent, reduce, remedy or compensate for each of the adverse impacts evaluated as being significant. Analysis of the implications of adopting different alternatives was done to assist in clear decision-making.

1.7 Report Organization

Chapter One - Introduction: Provides the introduction on the background information of the proposed project, its development objectives and scope, project rationale and the methodology used to conduct ESIA.

Chapter Two - Project Description: Describes the general project description, in which there is a description of the location and relevant components of the project and their activities.

Chapter Three – Legislative Framework and International Guidelines: Illustrates policies including World Bank safeguard policies, and legal framework, which are relevant to Tanzania environment and legislation applicable to the project.

Chapter Four – Description of Baseline Situation: Gives the baseline information relevant to the project. It also gives information on Environmental characteristics, which details the physical and socio-economic environment and general environmental condition of the project area.

Chapter Five - Stakeholders Participation, Issues and Concerns: Express the consultation exercise at the project area detailing the list of stakeholders consulted and issues raised.

Chapter Six - Analysis of Alternative: Describes the project alternatives in terms of sites location, technological choices.

Chapter Seven - Identification and Assessment of Impacts: Describes the positive and negative environmental impacts of the project that are likely to be generated from different phases of the project (pre-construction, construction, operation and decommissioning phases), and their level of significance.

Chapter Eight - Mitigation and Enhancement Measures: Gives the enhancement and mitigation measures for the positive and negative impacts of the project. The chapter also summarizes the grievance procedure and mechanism to be followed.

Chapter Nine – Environmental and Social Management Plan: Presents the proposed environmental and social management plan designed to evaluate the implementation and performance of the mitigation measures. The chapter also explains the environmental, health and safety practices and procedures including the management plan especially during construction phase.

Chapter Ten – Monitoring Plan: Contains the proposed institutions to carry out the monitoring activities, the monitoring indicators, time frame and the proposed budget for monitoring.

Chapter Eleven – Decommissioning Plan: The chapter gives activities to be performed after completion of proposed construction works so as to restore site at least to original condition.

Chapter Twelve - Conclusion and Recommendations: Gives the conclusion and recommendations of the study, presenting the environmental and social acceptability of the project, taking into account the impacts, measures and recommendations identified during the assessment process.

Chapter Thirteen - References: Presents a list of the references used during the preparation of the ESIA Study.

CHAPTER TWO: PROJECT LOCATION AND DESCRIPTION

2.1 Project Location

Ngara District is one of the seven districts of Kagera Region of Tanzania. The district is considered to be in the highlands of Tanzania. The total area for Ngara district is 3,744 Km^2. The district lies on the West of mainland Tanzania between latitudes 2º45″ South and longitudes 30^0 64″ East. It is bordered to the North by Karagwe District, to the East by Biharamulo District, to the South by the Kigoma Region, to the Northeast by Muleba District and to the West by the countries of Rwanda and Burundi.

The proposed project site is located at RwakalemerA Village, Kasulo Ward, Ngara District in Kagera Region. The proposed site lies on the north eastern side of the Benaco Mini Town and Lusahunga–Rusumo trunk road, within Rwakalemera Village land in Kasulo administrative Ward. Taken from the Centre of the existing parking yard, the GPS Coordinates of the project site are Latitude 2º30’22”S and Longitude 30º51’16”E.

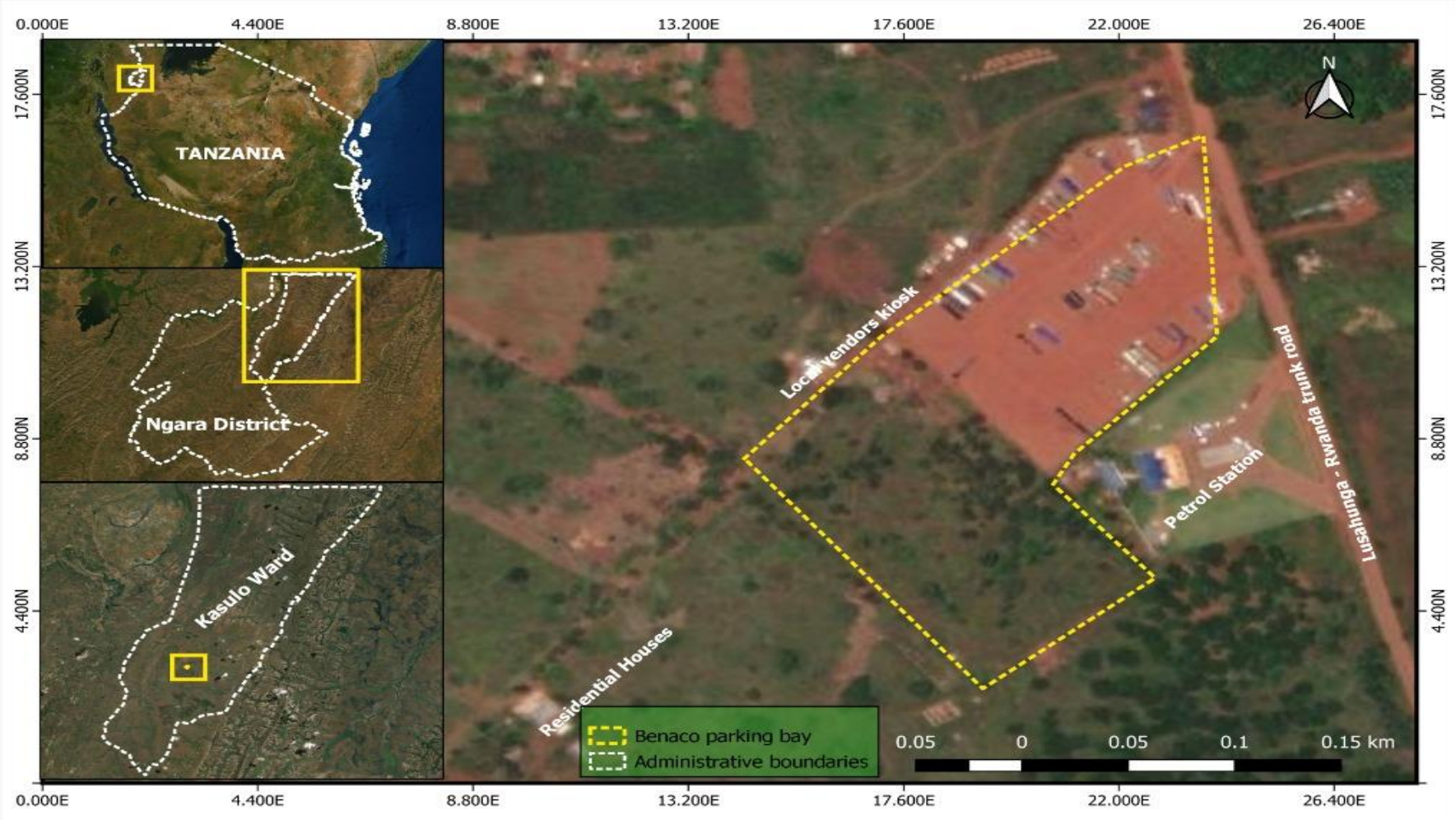


Figure 2: KML Map shows Proposed Project Site-Benaco Parking Bay

(Source; GIS Expert; November/2021)

2.1.2 Accessibility of the project Site

The project site is accessible mainly through Lusahunga - Rusumo trunk Road. It is approximately 23km from Ngara CBD and taking Rusumo – Nyakasanza trunk Road (B3), 20km. The proposed site lies within Nguvu Kazi Hamlet at the Centre of Benaco area. The topography of the access road alignment is generally characterised by flat terrain.

Figure 3; Photos showing project accessibility- Rwakalemera Village

Source: Consultant's field photo, 5th/November/ 2021

2.2 Project Site Description

Generally; the proposed site lies on Eastern side along Lusahunga - Rusumo trunk road, characterized with flat terrain with a relative elevation of 1520 AMSL and dominated by Sandy Clay Loam Soil-type. Within the proposed project site there is an existing local parking bay with a capacity of accommodating approximately 170 trucks in a day. The existing parking bay comprised with few infrastructures such as security block, solid waste management bins, toilet block (pit latrines) consisting of six cubes, elevated water storage tank with a capacity of 1000Litters and storm water drainage system. Nevertheless, the storm water system drains the surface run-off from the parking bay to the trunk road's drainage system which lately discharges wastewater into public areas. After completion of the proposed parking bay its capacity will be increased to accommodate approximately 250-300 trucks per day.

The site is specifically in a developed area (Town Centre). The proposed site is surrounded by commercial blocks mostly local vendors. Indigenous species and exotic vegetation have long been cleared to pave way for human developments. The project site coverage is 8.77 Acres (35,490.9m²).

Based on the state of the whole site there is no pristine environment that can promote thriving and existence of the species of conservation concern as per IUCN and CITES standards. Furthermore, there are no sensitive ecological receptors in the vicinity of the project area. Also, there were no cultural or archaeological objects that were reported earlier during the

stakeholders' consultation and likewise during assessment none of the objects were observed or found at site.

Figure 4: General overview at the Proposed Project Site –Nguvu Kazi Hamlet

Source: Consultant's Field Photo - 05th November/ 2021

2.3 Land Ownership

The proposed project site is legally owned by Ngara District Council under Land and Land Village Act (URT, 1999) (No. 4 of 1999 amended by No. 2 of 2004). The project site has a total coverage area approximately 8.70 Acres with sufficient size to accommodate all proposed structures and infrastructures. Preliminary consultations with District Executive Office, Village Government Authority and Villagers during the fieldwork revealed that all parts have agreed to provide it for project implementation. *(See the attached Local Consent Appendix I & Title deed Appendix III)*.

During the study no any residential buildings or commercial activities undertaken by local people observed within the project site hence there will be no relocation of residents or any business.

2.4 Major Adjacent Developments

The proposed project site is demarcated by the Lusahunga–Rusumo trunk Road (B3) on the Eastern side. On the South, a roughly trapezium shaped parcel of land extends from the site to the bordering Ngara Oil petrol station, there are scattered residential houses and trees on the West Side whilst on the North side there are local vendors and residential houses.

Table 1: Distance to the Closest Land Uses

S/N	Side	Existing Feature	Estimated Distance from Project site (M)
1.	East	Lusahunga–Rusumo trunk Road (B3)	Immediate from the site
2.	West	Scattered residential houses and exotic trees	50
3.	North	Local vendors followed up by residential houses	25-40 respectively
4.	South	Ngara Oil petrol station	40 respectively

Source: Consultant's Field visit, November, 2021

Figure 5: Photos for Land uses Adjacent to the Project Site-Benaco Parking Bay

Source: Consultant's Field Photo, 07th November, 2021

2.5 Other Amenities

2.5.1 Power Supply

The proposed project area is nearby the residential-commercial area which is already connected with the electrical line from TANESCO. However; the project site will be served by TANESCO power line in all project phases whilst during operation phase the Proponent expects to install a backup diesel powered generator with a capacity of 200kVA. Electricity cost is estimated to be 100 USD per month. The genset to be installed will be designed to comply with the EC directive for machinery safety and Noise Emissions, fully enclosed in an acoustic canopy. The Genset will have the following specifications: Prime Power for 50Hz will be 200Kva, Voltage range for 50Hz is 380-415 Volts AC; will have a length of 3.98m, width of 1.2m, height of 2.47m; weight (without fuel) will be 4644kg while fuel consumption will be 4.5 /hr for 100% prime power, emissions of 100% load for NOx (Oxide of Nitrogen) will be 6.4g/kWh, PM(Particulate matter) 0.2 (g/kwh) while CO (Carbon Monoxide) will be 3.5g/kWh; Noise will be 78dBA at 1m away from Genset and 70dBA at 7M away from genset.

2.5.2 Manpower

Construction of the parking bay and ancillary structures may require 55 personnel both skilled and unskilled while 5 technical personnel will be involved in professional works. A labour force of 15 people is expected to be employed during operation phase. Therefore, a total of 70 people will be employed during construction and operation phases.

During the construction phase, the Contractor will not establish employees' accommodation camp hence only onsite office will be established to provide various services to employees,

service providers, security purpose as well as to local community. All workers will be living in their households since the project site is located within urban setting environment (Benaco Centre).

2.5.3 Water Supply

Water supply in the area is obtained from the gravity piped water supply scheme under BENGUKA (Benako Nguvu Kazi-Kasulo) Authority. The Proponent will install two overhead water tanks with the total capacity of 10,000Litters for domestic and operational usage. It is anticipated that, 2000Liters per day will be used during construction and 4,000Liters per day during operation phase

2.5.4 Fire fighting

Currently; Ngara District has Fire and Rescue Services/Force Unit with insufficient firefighting equipments. The service is available from Bukoba Municipal Council - Head Quarters of Kagera Region, some 183km from Ngara District.

At the project site, provision for firefighting will include fire extinguishers which will be placed at each designated area. Also to adapt an emergency response plan for the entire project during operational phase like availability of emergency switch, fire alarm, provision of fire hazard signs such as “No Smoking “ as precautions. District Fire Master will supervise the exercise.

2.6 Project Components

The proposed parking Bay will have the following major components and facilities;

Table 2: Project Components

S/N	COMPONENT	QUANTITY	UNIT	DIMENSIONS/SIZE
1.	Trucks Parking Space	1	M^2	15,270
2.	Security/ office block	1	M^2	22
3.	Oil-Water Separator & drainage systems	1	M^2	5
4.	Min garage area			624
5.	Single block with Six cubes for shops	1	M^2	104
6.	Single building with cubes for food vendors (*Mama Lishe*)	1	M^2	55
7.	Sanitary Facilities, eg. Toilets, changing rooms, septic tanks, etc	1	M^2	58
8.	Road & Walkway			10,591
9.	Ornamental gardens	N/A	N/A	7,589

Total Plinth Area			**34,318**
Plot Ration			**97.3%**
Total Project Land			**35,281**

Source: Project's Proponent, November/ 2021.

2.7 Project Activities

2.7.1 Mobilization Phase

This phase entails Topographical Survey, Soils and Materials Investigation, design and architectural drawings, land acquisition and various legal permits as required by the law. Mobilization of labour force, equipment as well as identification of material storage and material preparation, Identification of borrow sites, and sources of other construction materials.

Duration

The duration of this phase is estimated to be One (1) Month

2.7.2 Construction Phase

Construction phase will include the following structures;

- Trucks Parking Space
- Security/ office block
- Oil-Water Separator & drainage systems
- Min garage area
- Single block with Six cubes for shops
- Single building with cubes for food vendors *(Mama Lishe)*
- Sanitary Facilities, eg. Toilets, changing rooms, septic tanks, etc
- Road & Walkway
- Ornamental gardens
- Wastewater/Storm water management Systems

During the construction phase the area will be divided into two parts, the rear section will be used to park the vehicles and other crucial services while construction continues in the front section. When construction is complete, the vehicles will be parked in the front area and construction will start in the rear *(see appendix VIII)*

2.7.2.1 Activities during Construction Phase

Clearing of vegetation: this involves uprooting of plants/trees and grasses in a confined areas as preparatory works prior to construction activities.

Excavation: Excavation of top soil will be carried out using excavator machine, loader and grader machineries. Most of this soil will be utilized in general landscaping of the compound particularly on leveling stage

Leveling: This will be done for the purpose of shaping the surface for architectural activities. The leveling will consider gentle slopes which will support the draining of surface water ie. Storm water, wastewater, etc. .

Building the Foundation: The foundation will be built using stones, concrete, cement and steel bars. The foundation is for erecting office building, trucks' repair area (garage), sanitary facilities such as toilets and changing rooms, solid and liquid waste management systems, storage room and ancillary facilities. The process will generate some noise, smoke and dust especially from the operating machineries and cement respectively. However, workers will be sensitized on the use of personal protective equipment and management of air pollution from construction machinery.

Construction of Oil-Water Separator: The proposed Parking Yard's Oil Interceptor design generally comprises of three retention chambers designed to remove coarse sediments and retain oils. The first chamber is used for sedimentation and removal of large debris. This chamber contains a permanent pool of water and a well screened orifice which allows regulated flow into the second chamber. The second chamber is used for oil retention and also contains a permanent pool of water. An inverted elbow pipe permits regulated flow from this chamber into the third chamber. The inverted pipe collects water from deep in the permanent pool leaving oil contaminants floating on the surface until it is removed or absorbed by sediment particles when they settle. The third chamber is used to collect and disperse flow into the storm water drain network through the installed valve. The uncontaminated Liquid waste is being discharged to public sewerage systems whilst waste oil is collected by an authorized agency for proper management.

Erection of Walls for buildings: Walls will be built of stones and columns. Ample time will be given for layers of stones and concrete in the columns to cure. This will ensure the structure is strong and compact.

Concrete and bricks Pavements: concrete, asphalt or concrete bricks are expected to be used during the construction of parking yard/Bay. All driveways of trucks/vehicles and parking area must be paved with concrete bricks.

Doors and Windows: All external door openings for the proposed parking Bay's buildings shall be fixed with steel doors. Grills will be used to reinforce them. Window openings shall be closed with steel aluminum casement and with ordinary 4mm thick glass

Electrical works: Electrical works involve installation of the Power Distribution Box, control panel, and all power supplying cables and equipment. All electrical works are done by qualified electricians so as to avoid faulty connections which may later cause fire outbreaks and short circuiting of the site equipment.

Plumbing System: The internal water supply will be one of cold water system. Since the supply is under pressure, the whole water supply system will be designed to be leak proof and provide with valves to control the flow of water. To ensure reliable water supply, the proposed parking bay will be connected to a water storage tanks with the capacity of 10,000litters in total.

Painting: all the erected building will be painted different colors as proposed by the proponent for the interior and exterior overall look. This assists the long-lasting of the structure/building by keeping the elements from entering through the wood.

Finishing

- **Landscaping:** The areas of the site that will remain bare shall be landscaped with flowers and grass. The top soil will also be treated with organic manure to encourage faster and improved plant growth.

- **Building a perimeter fence:** A perimeter fence will be constructed for security purposes. This wall will be enhanced with flowers along the perimeter.

- **Emergency appliances:** Safety devices like fire horse/extinguishers and sand buckets will be put in central place. Fire alarm and emergency shutdown switch will be installed at security room for prompt response. The proponent with the help of Firefighting specialist and contractor will map out and mark a fire assembly point. The proponent under District Fire Department is in charge of emergencies and will have contacts with other agencies for fast response. Areas will be, arced accordingly e.g. power rooms and slippery floors.

The contractor shall be held solely and entirely responsible for the completion and the safety of the works and shall indemnify the proponent against all claims that may arise as a result of carrying out the works.

Duration

The duration of this phase will be Five (5) months

Types, Amounts and Sources of Project Requirements

The materials for construction will be derived from authorized areas whereby only licensed person will be allowed to collect materials. The authorized areas in Ngara include Kamatenderi area for stones, Kabiranzwili and Rulenge for sand. Types and sources of project requirements during the construction phase are shown in Table 3 whilst the quantities of materials will be indicated in the Bill of Quantities (BOQ).

Table 3: Types and sources of project requirements during the construction phase

Requirements	Type	Source
Raw Materials	Aggregates	• Ngara (Subcontract to local suppliers)
	Sand	• Ngara (Subcontract to local suppliers)
	Water	• BENGUKA Water Supply Authority and other nearby streams/sources
	Cement	• Ngara or Kahama
	Reinforcement bars	• Ngara or Kahama
	Iron Sheets	• Ngara or Kahama
	Brick blocks	• Ngara or Kahama
	Timber	• Ngara or within Kagera Region
Energy	Electricity	• TANESCO/Generator
	Fuel	• Benaco/Ngara fuel stations
Manpower	Skilled	• Contractor
	Unskilled	• Local People
Equipments	Excavator	• Contractor
	Wheel loader	• Contractor
	Wheel burrows	• Contractor
	Water Bowsers	• Contractor
	Bull dozer	• Contractor
	Grader Machine	• Contractor
	Roller Compactor	• Contractor
	Concrete vibrator	• Contractor
	Concrete mixer	• Contractor
	Tippers	• Contractor

Transportation

Materials (fine and course aggregates) from quarries will be transported by trucks to the construction site. Water will be moved by water bowsers. Other materials like cement, timber, aluminum sheets, steel tress, and reinforcement bars will be transported by Lorries to the construction site from authorized local vendors/suppliers.

Storage

Some of the materials from borrow sites will be used directly after delivery and as such no piling up is expected. Other materials like aggregates and sand will be stored at the specific designated area with all safety hazards pre-cautions prior to be used. Cement and reinforcement bars will be stored in special storage rooms. Timber will directly be used and consequently there will be no stockpiling of timber at the project site area.

Types, Amounts and treatment/disposal of Wastes

Types, amounts and treatment/disposal of wastes during the construction phase are shown in Table 4:

Table 4: Types, amounts and treatment/disposal of wastes during the construction phase

Waste	Types	Amount	Treatment/ Disposal
Solid Waste (Degradable)	Vegetation (exotic Trees, Grasses) and remnants of timber.	About $10m^3$ of biomass (Clearance for erection of project facilities)	Source of energy for cooking at villages nearby.
	Food remains, cardboards and papers	4kg/day (based on generation rate of 20g/day/ person for 55 people)	Sorted properly and Temporarily stored in a designated collection cage/point before collected by Authorized dealer
Solid Waste (Non-Degradable)	Cut Soil	$7m^3$	Soil will be utilized in general landscaping of the compound particularly on leveling stage
	Scrap metals, drums, used tiles	Minimum	Sold to Recyclers
	Tins, glasses and plastics	Minimum	Taken to the dumpsite at Ngara by Authorized Dealer
Liquid waste	Sewage	$2.0m^3$/day (Based on 55 people, 36l/capita/day water consumption and 80% becomes wastewater)	Septic tank –Soak away system
	Oils and greases	Minimum (trucks and equipments maintenance will be done at proper garages or designated area	Sold to Authorized recyclers

2.7.3 Demobilization Phase

After completion of all construction activities, contractor has to demobilize and leave the site clean and neat for operation phase. Contractor's demobilization phase will involve clearing of all site activities in terms of tying up of all site facilities and demobilization of all construction equipment. Disposal off any remaining unwanted material and wastes will also be carried out during this demobilization phase.

After the demobilization, the contractor will hand over the works to the project Proponent for the operation and maintenance phase.

Duration

Demobilization stage will last for a period of two (2) months.

Table 5: Types and sources of project requirements during the demobilization phase

Requirements	Type	Source
Energy	Electricity	Tanesco
	Fuel	Ngara vending stations
Manpower	Skilled	Contractor
	Unskilled	Local People
	Wheel barrows	Contractor
	Motor grader	Contractor
	Plate compactor	Contractor
	Tippers	Contractor

Types and treatment/disposal of Wastes

The demobilization of the temporary structures will result mainly into solid wastes such as timber, iron sheets and rubbles from demolitions. Timber and iron sheets will be sold to people in the nearby communities for reuse while the rubbles will be used in reinstating nearby roads or being disposed in a dump site.

2.7.4 Operation Phase

The actual usage of the Parking bay and its ancillary facilities is expected to commence immediately after the construction works. The completed project will be directly managed by Ngara district council. The design period is 30 years, after which regular rehabilitation will be needed. During this time, Ngara district council will carry out routine maintenance.

2.7.4.1 Activities during Operation Phase

During the operations the project activities will include;

- Trucks/Vehicles parking
- Trucks/Vehicles maintenance and washing at the garage and washing bay respectively
- Revenues collections
- Regular rehabilitation of disturbed areas and maintenance of the infrastructures
- Establish monitoring and evaluation system of the constructed parking yard on the regular basis.
- Conduct inspections of the constructed structures to make sure they are in compliance with safety, Health and Environmental standards

Duration

The duration of this phase will be thirty (30) years.

Types, Amounts and Sources of Project Requirements

Types and sources of project requirements during the operational phase are shown in Table 6:

Table 6: Types and sources of project requirements during the operational phase

Requirements	Type	Source
Material	Water	BENGUKA and other nearby streams/sources
	Maintenance equipments	Contracted contractor
Manpower	Skilled	Ngara District Council
	Unskilled	Local People
HSE Monitoring	Periodic Occupational Measurements such as Noise Levels, Air quality, Ambient Air quality, emissions, effluent quality, vibration, etc	Contracted expert

Transportation

Types and quantities of materials for rehabilitation/maintenance will be determined by nature of the problem at the site. Fine and course aggregates will consistently be sourced from the designated quarry sites and will be transported by trucks to the site. Water will be moved by water bowser or supplied by BENGUKA depending on the volume required for rehabilitation or maintenances. Other materials like cement, timber and reinforcement bars will be supplied by nearby local vendors.

Storage

In this operation phase, few materials will be required for rehabilitation works. Some of the materials will be used directly after delivery while the remained will be stored to the existing storage room. Bulk materials like aggregates, sand, etc will be stored at the designated area within the premise with precautions to HSE.

Types, Amounts and treatment/disposal of Wastes

Types, amounts and treatment/disposal of wastes during the construction phase are shown in Table

Table 7: Types, amounts and treatment/disposal of wastes during the operation phase

Waste	Types/Source	Amount	Treatment/ Disposal
Solid Waste (Degradable)	Vegetation especially Grasses cleared from Ornamental gardens	About $1m^3$ / month	Collected and disposed by the contracted dealer
	Food leftovers	2kgs/day	Collected and disposed by the contracted dealer
	Scrap papers	200Mg	Collected and disposed by the contracted dealer
Solid Waste (Non-Degradable)	Scrap metals, drums	Minimum	Sold to Recyclers
	Empty oil cans, filters, tyres, empty water bottles	Minimum	Taken to the dumpsite at Ngara by the contracted dealer
	Sludge from Oil-Water separator	Minimum	Taken to the dumpsite at Ngara by the contracted dealer
Liquid waste	Oils and greases	Trucks and equipments maintenance	-Establishment of primary and secondary containments -Sold to recyclers
	Wastewater from cleaning of the operation site, cleaning of the spare parts, oil spills at the parking area, cleaning servicing area/garage. This waste carries silt, sediment oil and grease.	No. of trucks serviced	-Drained to Oil-Water separator - --Collected Oils Sold to recyclers –-Uncontaminated effluents are discharged to Public Sewerage system -Regular monitoring of effluent quality (Laboratory analysis)
	Liquid waste from sanitary facilities and Domestic wastewater	$2m^3$ /Day	Septic tank and soak away pits
Gaseous Waste	Gaseous emission mainly hydrocarbon (HCO); carbon dioxide (CO_2)	No. of trucks served	- Air Pollutions shall be monitored continuously especially hydrocarbons -Other Air Pollutions parameters shall be monitored annually.

2.7.5 Decommissioning Phase

This is the final demise of the building and parking yard services use value. The decommissioning entails demolition of the structures and other appurtenances. However, decommissioning of the project is not anticipated to be done in the near future.

2.7.5.1 Activities during Decommissioning Phase

Demolition Works: Upon decommissioning, the project components including buildings, pavements, drainage systems, and perimeter fence and a lot of solid waste will be produced. Some of the waste will be reused for other construction works or if not reusable, disposed of appropriately by licensed waste disposal company.

- **Dismantling of Equipment and Fixtures:** All equipment including electrical installations, finishing fixtures partitions, among others will be dismantled and removed from the site during decommissioning of the project. Priority will be given to reuse of these equipment in other projects. This will be achieved through resale of the equipment to other building owners or contractors.

- **Site Restoration**: Once all the waste resulting from demolition and dismantling works is removed from the site, the site will be restored through refilling of the topsoil and re-vegetation using indigenous plant species. This will be done after acquiring demolition permit from relevant authority and experts.

2.8 Accident Prevention and Management Action Plan

Strict safety measures will be put in place in order to prevent accidents during the entire project cycle. The general safety measures appropriate for construction will be observed during site ground preparation, building and assembly of equipment and systems. All workers on site wear protective gears to include reflective vests, helmets, safety boots and leather gloves among other PPEs.

All measures will be undertaken to ensure that workers and the general public are safe. The entire site will be fenced off and there will be security guard round the area. The contractor will be required to follow strict environmental and safety guidelines.

2.9 Emergency Plans in Case of Accident and Fire

In case of fire hazards; a fire plan will be developed for the site to include safety of workers and all stakeholders including the safety of the general public. The project design has incorporated measures to reduce congestion within the site by providing enough space for parking. Appropriate traffic flow procedure (inlet and outlet gates) will be enough to accommodate the vehicles movements. The paved driveways from main road to the parking yard will be built in a required standard.

Appropriate fire extinguishers will be readily available near the parking areas and around the administration block whilst there will be designated fire equipments storage room. Adequate number of safety and fire-fighting equipments will be provided at the vulnerable locations as per the guidelines. The proposed project will incorporate the provision of dry chemical powder type

extinguishers; carbon dioxide type extinguishers; and fire blankets. The firefighting equipment will be located strategically within the proposed project.

Workplaces shall be provided with appropriate fire escape routes. A secure emergence assembly point will be designated.

2.10 Project Budget and Life Span

The proponent will invest a total of $ 1,426,935.90 to this particular project. The expected lifespan of the project is not expected to the near future

CHAPTER THREE: LEGISLATIVE FRAMEWORK AND INTERNATIONAL GUIDELINES

3.1 Introduction

Environmental Regulations in Tanzania are vested in two main Institutions namely; The National Environmental Management Council (NEMC) and Division of Environment (DoE) under the office of the vice president. The NEMC to its capacity is undertaking enforcement, compliance, and review and monitoring of Environmental Impact Assessment (EIA) and Environmental Auditing (EA).The DoE provides policy and technical backup and executes the overall mandate of the Ministry as required.

Thus, in Tanzania project development and implementation normally requires consideration of Environmental concerns as outlined in the National Environmental Policy.

The Environmental compliance and guidelines are entailed in the EIA and Audit regulations of 2005, as well as (Environmental Impact Assessment and Audit) (Amendment) Regulations of 2018. The Environmental Impact Assessment Guidelines prescribe the process, procedures and practices for conducting an EIA and preparing the EIA reports.

3.2 Policy and Legal Framework

A number of policies, instruments, and laws support environment and social management and the environmental and social impact assessment processes in Tanzania. The Environmental Management Act (EMA) No. 20 of 2004, The National Environmental Policy (1997) and the National Environmental Action plan (1994) are the key instruments that cover environmental and social management in all the sectors of development.

Apart from the National Environmental Policy, there are a number of sectoral policies that consider Environmental Impact Assessment as one of the planning tools for facilitating and promoting sustainable development. These policies envisage that by integrating environmental and social considerations in the decision making process it is possible to avoid or minimize impacts associated with project implementation and that may have negative effects to the Environment. They also provide directives on the management of the project in order to ensure minimum impacts on the concerned natural resources and welfare of the society.

In addition, there are a number of legal and regulatory frameworks that the construction project must comply with. The Environmental Management Act, (No.20) 2004 is the principal legislation governing all environmental management issues in the country.

Within each sector, there are sectoral legislations that deal with specific issues pertaining to the environment.

3.2.1 Policy Framework

Policy	Purposes
National Environmental Policy (1997)	The National Environment Policy provides a framework for environmental protection in Tanzania. The policy requires that project development be done in a way that does not compromise the environmental integrity. It stipulates that the chosen technologies should be environmentally sound, socially acceptable and economically viable. Relevant provisions of this policy to the Stone quarry and aggregates project operations are: • Sections 28 and 29, which state that in all projects, environmentally sound technologies (i.e. those that generate no or low waste or protect environment) should be used). • Section 48 (c), which advocates for technologies that use water efficiently and provides wastewater treatment. • Section 56 (f), which states that workers' health should be adequately protected from environmental health hazards. Since the project expects to use minimum water in all phases hence to generate wastewater, therefore the project design considered wastewater treatment prior to be discharged into public sewerage systems.
National Land Policy (1997)	The National Land Policy advocates for the protection of land resources from degradation for sustainable development. Among other things, the policy requires that project development take due consideration of land capability, ensures proper management of the land to prevent erosion, contamination and other forms of degradation. Important sections of the policy relevant to the proponent are 2.4 (on use of land to promote social economic development) and section 2.8 (on protection of land resources). The proposed project is going to use available land resources such as stones and sand for construction of parking bay and ancillary facilities which will in-turn promote socio-economic development of rural communities
National Community Development Policy (1996)	Policy recognizes the need to improve community livelihoods through involvement of communities towards attaining government aim of self-reliance. The policy emphasizes among other issues on poverty eradication (through households training and group production activities), provision of basic needs of the community (food, nutrition, education, health, sanitation, water, etc). Implementation of the proposed project is part of government effort in eradication of poverty by ensuring income generation to the government and local villagers.
National Policy on HIV/AIDS (2001)	This policy provides a framework for leadership and coordination of the National multi-sectoral response to the HIV/AIDS epidemic. One of the major objectives of the policy is to strengthen the role of all sectors, public, private, NGOs, faith groups, CBOs and other specific groups to ensure that all stakeholders are actively involved in HIV/AIDS work and to provide a framework for coordination and collaboration. The policy recognizes that HIV infection shall not be grounds for discrimination in relation to education,

Policy	Purposes
	employment, health and any other social services. Pre-employment HIV screening shall not be required. For persons already employed, HIV/AIDS screening will be done voluntarily and no employee shall be forced to check his/her health regarding to HIV/AIDS. HIV infection alone does not limit fitness to work or provide grounds for termination. HIV/AIDS patients shall be entitled to the social welfare benefits like other patients among the employees. HIV/AIDS information and education targeting the behaviour and attitudes of employees and employers alike shall be part of HIV/AIDS intervention in the workplace. The project proponent shall adhere to the policy by not entertaining any form of discrimination to People Living with HIV
National Economic Empowerment Policy (2004)	The Policy is intended to address economic empowerment needs of the individual citizens of Tanzania and local companies. The Policy takes on board all economic actors including farmers, livestock keepers, fishermen, employees, traders as well as other groups of individuals in various economic activities. The Policy puts in place the general guidelines for the formulation of strategies to be used by respective sectors depending on the prevailing circumstances. In this respect, each sector is enjoined to come up with concrete implementation strategies. As this policy touches even the agricultural and production sector which this project has a bearing, the proponent shall adhere to it
National Gender Policy (2000)	The policy provides guidelines to ensure gender sensitive plans, programmes and strategies are available in all sectors and institutions. It is emphasizing on gender equality, and establishing strategies on poverty eradication through ensuring that both women and men get access to existing resources for their development. It values the role played by women in bringing about development in the society. The project proponent will ensure that women and men are given equal employment opportunities during project implementation, whenever possible.
Occupational Safety and Health Policy, 2012	The main objective of the Policy is to promote the right of workers to a safe and healthy working environment, in order to contribute to the improvement of workers well-being and national productivity. The policy provides general direction for the occupational health and safety of stakeholders to adopt a management system that is effective in reducing the incidence of work related injury and disease.
National Water Policy, 2002	The main objective of this policy is to develop a comprehensive framework for sustainable development and management of the Nation's water resources and putting in place an effective legal and institutional framework for its implementation (URT, 2002). The policy aims at ensuring that beneficiaries participate fully in all stages of water resource developments. It also recognizes the fundamental but intricate linkages between water and socio-economic development, including environmental requirements. The Policy illustrates on

Policy	Purposes
	the importance of water for domestic use, agriculture, livestock keeping, mining, energy, fisheries, environment, human health, wildlife and tourism, forestry, navigation and trans-boundary requirements. This project is determined to enhance water resources conservation, effective management of water system and pollution control by establishing Drainage systems and Oil-Water Separator.
The National Employment Policy (1997)	The major aim of this policy is to promote employment mainly of Tanzania Nationals. Relevant sections of this policy are (i) 10, which lays down strategies for promoting employment and section 10.1 is particularly focusing on industry and trade sectors (ii) 10.6 which deals with employment of special groups i.e. women, youth, persons with disabilities and (iii) 10.8 which deals with the tendencies of private sectors to employ expatriates even where there are equally competent nationals. The proponent shall promote this policy by employing many Tanzania especially the indigenous surrounding the project area with equal gender based opportunities.
National Child Development Policy 2008	The policy describes on the Right for Protection concerns the prevention of wicked and evil actions which are done to children. Such protection and security is needed in all stages of growth of children, before and after being born. So, a child needs security and protection against heavy duties and occupations, which are incongruent with the age or to be neglected; illegitimate / criminal abortions; to be oppressed; not to be taken into consideration. However; the Proponent will consider this by not engaging children under 18Years in any activities during project phases. .

3.3 Applicable Legal Framework

The National Laws, which are relevant for environmental management in relation to this project include:

S/N	Act	Purposes
i	Environmental Management Act (No.20. of 2004)	The Environmental Management Act, Cap 191 seeks to provide legal and institutional framework for sustainable management of the environment in the implementation of the National Environmental Policy. The Environmental Management Act provides for continued existence of the National Environmental Management Council (NEMC). Under this Act, NEMC is mandated to undertake enforcement, compliance, review and monitoring of environmental impact assessment and has a role of facilitating public participation in environmental decision

S/N	Act	Purposes
		making, exercise general supervision and coordinating over all matters relating to the environment. The Act also requires the Council to determine whether the proposed project should be subjected to an EIA, approves consultants to undertake the EIA study, invites public comments and also has the statutory authority to review EIS and recommend to the Minister for approval and issuance of EIA certificate. This new Act imposes an obligation on Proponents to conduct an ESIA prior to the commencement of the project to determine whether the project may/or is likely to have, or will have a significant impact on the environment. Article 82 makes EIA mandatory to all projects that fall under the EIA mandatory list (Schedule 2). Proponent has complied with relevant provisions of the Act in carrying out this EIA. Other caps where proponent should be aware on them are: Environment Management Act Cap 72 which emphasize on land users and occupiers shall be responsible for the protection, improvement and nourishment of the land and for using it in an environmentally sustainable manner as may be prescribed by the minister. Section 201 among others; as a corporate body, the Act requires the Proponent to comply with other licensing bodies including National Environmental Council (NEMC) and to acquire the clearance certificate.
ii	Land and Land Village Act (URT, 1999b) (No. 4 of 1999 amended by No. 2 of 2004)	The Acts relate to land-use planning processes and land-use management and guidance to land ownership in Tanzania. However, the laws declare the value attached to any piece of land and as such any land rights transfer is subject to compensation. Under the Government Standing Order on expropriation for public utility, the holder of a Right of Occupancy is guaranteed a free enjoyment of the land and is entitled to compensation if dispossessed by the Government for public use.
iii	The Constitution of Tanzania (1977)	The mother law recognizes the basic rights for its people as outlined in Part III section 14 and 24 (Act No. 15 of 1984). Section 14 states that every person has the right to life – that every person has the right to live and to the protection of his / her life by the society in accordance with the law Section 24 stipulates that every person is entitled to own property and has a right to the protection of his property held in accordance with the law. However, there are certain limitations upon enforcement and preservation of basic rights, freedom and duties as stipulated in the Act No. 15 of

S/N	Act	Purposes
		1984 Section 6 and Act No. 34 of 1994. The national constitution must be observed by the project proponent, especially in matters concerning human rights as stipulated in the constitution.
vi	Occupation health and safety act (no.5,2003)	The Act requires assurance of safety to workers during project construction, operation and demolition. Safety should be ensured against any mechanical machinery (cranes, chains, vehicles, etc), chemicals (fumes from generators, etc), liquid and hazardous materials (electrical installations and apparatus, toxic materials, wastewater, etc) and fire. It is indicated that, for the assurance of workers safety, safety provisions will include fire extinguishers, first aid facilities, water supply and sanitary facilities, etc. The Contractor shall therefore address all these issues stipulated in this Act. The project proponent will cause her contractor to safeguard health and safety of construction workers through presence of safety drills, warning signs, provision of Person Protective Equipment (PPE), installation of well-equipped first aid kit, and conduct of regular health check-ups.
v	HIV and AIDS (Prevention and Control) act (no.28,2008)	The Act generally requires that adequate information on the acquisition, transmission, prevention and post-infection of HIV/AIDS to be provided to the public including workers at workplaces. It also made provisions for appropriate treatment, care and support using available resources to people living with or at risk of HIV and AIDS. Section 4(1) requires every person, institution and organization living, registered or operating in Tanzania, to promote public awareness on causes, modes of transmission, consequences, prevention and control of HIV and AIDS. The project proponent will cause her contractor to prepare and implement program for prevention of HIV/AIDS transmission.
vi	Standards Act, 2009	The Tanzania Bureau of Standards is the designated national authority for developing all kinds of national standards, including environmental standards. The TBS Act establishes the National Environment Standards Committee (NESC), which is responsible for developing environmental standards. The National Environment Management Act 2004 recognises the existence of the NESC. Part X enumerates

S/N	Act	Purposes
		the types of environmental standards to be established, they include water quality, discharge of effluent into water, air quality, control of noise and vibration pollution, sub-sonic vibrations, soil quality, control of noxious smells, light pollution, and electromagnetic waves and microwaves. Relevant national environmental standards include: i. TZS 932:2006: ACOUSTICS - General Tolerance Limits for Noise This standard specifies limits of environmental noise. It also describes the methodology and standard equipment used for measuring noise. ii. TZS 837: 2004Air Quality standards The proponent will endeavour to adhere to this standard by planning to buy modern machines with little noise level.
vii	Water Resources Management Act No. 11 (2009)	This Act provides for institutional and legal framework for sustainable management and development of water resources; outlines principles for water resources management; for prevention and control of water pollution; and provides for participation of stakeholders and general public in implementation of the National Water Policy. Its main objective is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways that among others meets the basic human needs of present and future generations, prevents and controls pollution of water resources and protects biological diversity especially the aquatic ecosystems. The proposed project is planned to abstract water from BENGUKA and other nearby water sources, thus Ngara District Council adheres to provisions of the Act by carrying out EIA of the proposed Parking Bay and its facilities.
viii	Employment and Labour Relations Act (2004)	The Act provides for core labour rights and establishes basic employment standards, provides framework for collective bargaining, and provides for prevention and settlement of disputes. The Act provides fundamental rights and protection e.g. prohibition of Child Labour, forced labour and discrimination in the workplace. It also sets employment standards. Act also characterizes a contract for an employee as follows; (i) A contract for an unspecified period of time; (ii) A contract for a specified period of time for professionals and managerial cadre, (iii) A contract for a specific task. The Act also states that an employer shall supply an employee, when the employee commences employment, with the

S/N	Act	Purposes
		following particulars in writing: (a) Name, age, permanent address and sex of the employee; (b) Place of recruitment; (c) Job description; (d) Date of commencement; (e) Form and duration of the contract; (f) Place of work; (g) hours of work; (h) Remuneration, the method of its calculation, and details of any benefits or payments in kind, and (i) Any other given matter. Therefore, project proponent should make sure that all the requirement of this Act are adhered and promotes equal opportunity in employment and strives to eliminate discrimination in any employment.
ix	The Public Health Act 2009	The Act provide for the promotion, prevention and maintenance of the public health with a view to ensuring the provision of comprehensive, functional and sustainable public health services to the general public and to provide for other related matters.
x	The Child Act 2009	The Act provides for reform and consolidation of laws relating to children and stipulates the right of the children in protecting and maintaining welfare of the child. The law among other issues protects the child against abuse which means contravention of the rights of the child causes physical, moral or emotional harm including beatings, insults, discrimination, neglects, sexual abuse and exploitative labour. The Act also protects the child from hazardous work, the works that places a child at risk to suffer physical or mental injury. The Act also prohibit exploitative labour which means a person should not employ or engage a child in any kind of exploitative labour, night works, forced labour and sexual exploitation.
xi	The Contractors Registration Act, 1997	The Act establishes the Contractors Registration Board (CRB). CRB has a mandate to register contractors, regulate the conduct of the contractors and for related matters. Among other things CRB is required to take legal action against unregistered contractors who undertake construction; installation, erection or alteration works; ensure that all construction sites are hoarded; and labour laws, occupational health and safety regulations in the construction industry are adhered to. On executing its construction activities Proponent therefore shall appoint a registered contractor and make sure that the provisions of the Act are adhered to. Among other things the registered contractor shall be able to adhere The Workers' Compensations Act of 2008.
xii	Environmental Management Act (Air Quality Standards)	These regulations have been made under sections 140, 145 and 230 (2) (s) of the Environmental Management Act, 2004.

S/N	Act	Purposes
	Regulations, 2007	They are aimed at setting minimum standard of air quality as well as prohibit emission of hazardous substances, chemicals and materials or gas. They also provide for emission limits, highest permissible quantity (emission), and special tolerance limits of emissions from special factories such as cement factories and exhaust emissions of motor vehicles and emissions from mining operations. In its parking bay operations, the proponent shall abide by these regulations including adhering to permissible weight concentration (Emission limits) from the atmosphere to a receptor as set out in the first schedule of the regulations.
xiii	The Environmental Management (Soil Quality Standards) Regulations, 2007	These regulations have been made under Section 143, 144 and 230 (2) (s) of the Environmental Management Act, 2004. They are aimed at, among other things, prescribe minimum standard of soil quality to maintain, restore and enhance the inherent productivity of soil in the long term. Section 21(1) stipulates that no person is allowed to discharge effluent from industrial, commercial or any other trade into soil without a consent duly granted by the National Environment Management Council or any other person designated by the council for that purpose. The proponent shall make every effort to adhere to these regulations in its Parking Bay operations.
xiv	The Environmental Management (Water Quality Standards) Regulations, 2007	These regulations have been made under Section 143, 144 and 230 (2) (s) of the Environmental Management Act, 2004. They are aimed at, among other things, setting permissible limits for municipal and industrial effluents, special permissible limits for chrome tanning industries, special tolerance limits for vegetable industry, special tolerance limits for fertilizer industry, taste, colour and smell of potable water and Chemical and physical limits for quality of Drinking Water Supplies. Of relevance to the proposed Stone quarry and aggregates project is the first schedule particularly Table A and B which stipulate permissible limits for industrial effluents. The proponent shall adhere to the regulations by ensuring that contaminated water from the parking bay is properly managed so as to avoid environmental degradation.

S/N	Act	Purposes
xv	Environmental Management (Hazardous Waste Management) Regulations, 2019	These regulations have been made under section 110(4) and (5), 128, 133 (4), 135 and 130 of the Environmental Management Act, 2004. These regulations apply to all categories of hazardous waste and to generate, storage, disposal and their movement into and out of mainland Tanzania. These regulations require that any person dealing with hazardous waste in Tanzania be guided by following principles of environment and sustainable development: • The precautionary principle • Polluter pays principle, and • The producer extended responsibility Parking yard and associated operations is not associated with production of hazardous wastes. However, if it happens hazardous wastes are in the project site the proponent shall take stoke of this regulations in handling them
xvi	Environmental Management (Fees and charges) (Amended) Regulations, 2021	The National Environment Management Council (NEMC) is a body corporate established by Environmental Management Act Cap 191 to undertake enforcement, compliance, and review and monitoring of environmental impact assessments, environmental research, raising awareness and collecting and disseminating environmental information. Sections 99 (1) (b) and 101 (1) of the EMA and Regulations 46 (4) and 57 (1) of the EIA and Audit Regulations, 2005 mandate the Council to monitor operations of any industry, project or undertaking with a view to determining its immediate and long term effects on the environment. In order to enforce this requirement, the Environmental Management (Fees and Charges) (Amended) Regulations, 2021 stipulates, “Annual charges for environmental compliance monitoring and audit”, payable to the Council by all Proponents whose projects have been issued with environmental certificates. Proponent complies with provision of this regulation by paying annual fees.
xvii	Environmental management (Standards for Control of Noise and Vibration) Regulations, 2015	The objectives of the regulations are to set standards for the Control of Noise and Vibrations Pollution from various sources. The regulation is applicable among other areas to the construction sites, plants, machinery, motor vehicles, and aircraft, including sonic booms, industrial and

S/N	Act	Purposes
		commercial activities. The regulation strictly forbids the making or causing of any loud and unnecessary noise that annoys, disturbs, injures or endangers the comfort, health or safety of others and that of the environment. Proponent observes these regulations by carrying construction activities only at day hours.
xviii	Land Registration Act R.E 2002	The Act to provide registration of title deeds for and parcels, Senior Assistant Registrar and every Assistant Registrar in the office of the Registrar-General to be Assistant Registrars under section 4 of this Act.* The Minister shall appoint a Registrar of Titles to perform the duties and exercise the powers imposed and conferred by this Act and may appoint a Deputy Registrar and any number of Assistant Registrars, who shall be subject to the directions of the Registrar of Title. The proponent has adhered to this law whereby the Title deed has been registered by registrar
xix	The Occupational Safety and Health (First Aid and Welfare Facilities) Rules 2015	Section 4.-(1) states that, "The employer shall provide for each workplace such equipment, supplies, facilities, first aid attendants and services as adequate and appropriate for": a) Promptly rendering first aid to workers and any other persons within the workplace premises if they suffer an injury at work; and b) Transporting injured workers to medical treatment. While section (2) states that "For the purpose of complying with subsection (1), the employer shall conduct an assessment of the circumstances of the workplace, including Occupational Safety and Health (First Aid and Welfare Facilities) Rules, 2015" a) The number of workers who may require first aid at any time; b) the nature and extent of the risks and hazards in the workplace, including whether or not the workplace as a whole creates a low risk of injury; c) the types of injuries likely to occur; d) any barriers to first aid being provided to an injured person; e) number of first aid boxes and trained first aiders at a proportion that ten to fifty employees shall have one first aid box and two trained first aiders;

S/N	Act	Purposes
		f) first aid box or cupboard as prescribed in the First schedule shall be distinctively marked “FIRST AID” having only appliance or stocks of first aid equipment; g) The time that may be required to obtain transportation and to transport an injured person to medical treatment. The proponent shall comply with these rules by observing all instructions given under various sections of the rule.
xx	The Electricity (Electrical Installation Services) Rules, 2015	Pursuant to section 8(1) (h) of the Electricity Act, Cap.131 EWURA has prepared the Electricity (Electrical Installation Services) Rules, 2015 which were gazetted on 11th September, 2015 through Government Notice Number 404 of 2015. The Rules provide for, among other things, the procedure for issuance of electrical installation license and Certificate to successful applicants. The Electrical installation license will be renewed every two years. The proponent shall observe these rules during and after project electricity installation.
xxi	Land Acquisition Act R.E 2002	Land shall be deemed to be required for a public purpose where it is– • Government scheme, for the development of agricultural land or for exclusive Government use, for general public use, for any for the provision of sites for industrial, agricultural or commercial development, social services or housing; • For or in connection with sanitary improvement of any kind, including reclamations • For or in connection with the laying out of any new city, municipality, Town or minor settlement or the extension or improvement of any existing city, municipality, Town or minor settlement; • For or in connection with the development of any airfield, port or harbor; • For or in connection with mining for minerals or oil; • For use by any person or group of persons who, in the opinion of the President, should be granted such land for agricultural development. The proponent’s land for this project is falling in the first bullet of the above options since it is a right plot for the

S/N	Act	Purposes
		proposed development.
xxii	The Fire and Rescue Services Act, R: E 2007	According to the Act, among others, the functions of the force are to: (a) Extinguish fire (b) grade cities, Districts, Towns and villages into various fire and rescues services levels (c) conduct fire inspection and investigations for purposes of obtaining information relating to the causes of fire and loss inflicted by fire (d) Conduct studies on investigation of arson and accidental fire (e) Conduct training for fire department personnel, other officers and voluntary fire fighters (f) Prepare fire statistics and fire service information (g) Conduct fire tests on protection facilities, equipment and materials. In section 3(1) (g) it covers premises of facility used as a place for storage flammable liquids, gas or chemicals, The Act also obliges the owners and managers of the structures to set aside places with free means of escape, and install fire alarm and detection systems, or such other escape and rescue modalities in the event of fire.The proposed facility is highly fire risk undertaking. To comply with the Act, the proponent shall put measures such as installation of fire extinguishers and emergency preparedness and response strategy have been provided for the safety of the facility.
xxiii	Penal Code 1981	The Sexual Offences Special Provisions Act 1998 (SOSPA) amended the sexual offences division of the Penal Code. The Penal Code with its laws specifying that for the crime of rape, evidence of resistance such as physical injuries to the body is not necessary to prove that sexual intercourse took place without consent. It also specified that men who abuse a position of authority or trust to commit rape will be subject to the maximum penalty. The Penal Code strictly prohibits all forms of sexual offences in Tanzania. The Proponent in collaboration with Consultant Engineer and Contractor will adhere to this Penal Code during all project phases.
xxiv	Water Supply and Sanitation Act, 2019 (No. 5 of 2019)	The objective of this Act is to promote and ensure the right of every person in Tanzania to have access to efficient, effective and sustainable water supply and sanitation services for all purposes by taking into account the fundamental principles of, amongst others- (a) creation of an enabling environment and appropriate incentives for the delivery of reliable, sustainable and affordable water supply

S/N	Act	Purposes
		and sanitation services; (b) delegation of management functions of water supply and sanitation services to the lowest appropriate levels; (c) transferring ownership of water supply schemes in rural areas to the respective communities and enabling all the beneficiaries and stakeholders to participate effectively in the management of community water supply schemes; (d) promotion of public sector and private sector partnership in provision of water supply and sanitation services; and (e) protection of water resources, public health and interests of customers. Moreover; the developer and the respective facility will be responsible to abide with this Act in all project phases.
xxv	Road Act No. 13, 2007	Part V, section 31 (1), (2) and (3) describe about road safety to road users. The Act postulates that the Road Authority shall insure that the necessary road furniture are erected on the public roads under its jurisdiction as may be prescribed in the regulations or any other written law. Any person who damages, removes or obscures road furniture commits an offence and shall be liable on conviction. Section 32(1) described that; The road authority shall prescribe speed limits in respect of all roads or sections and failure to comply with speed limits is committing an offence. Nevertheless; the Developer in collaboration with TANROADS will install Road Safety signs in all potential locations and insure maximum safety to all parking Bay's users.

3.4 Institutional Framework for the Management of Environment

3.4.1 Overall Management Responsibility

The institutional arrangement for environmental management in Tanzania is well spelt out in the EMA (2004). There are seven (7) institutions mentioned by the act, of which the Minister Responsible for the Environment is the overall in-charge for administration of all matters relating to the environment as provided for in Section 13(1) of the Act.

The legal institutions for environmental management in the country include;

- National Environmental Advisory Committee;
- Minister responsible for Environment;
- Director of Environment;
- National Environment Management Council (NEMC);
- Sector Ministries;
- Regional Secretariat;

- Local Government Authorities (City, Municipal, District, Township, Ward, Village, sub-village "Mtaa and Kitongoji")

3.4.2 National Environmental Advisory Committee

The National Advisory Environmental Committee is comprised of members with experience in various fields of environmental management in the public and private sector and in civil society. The committee advises the Minister on any matter related to environmental management. Other functions include:

- Examine any matter that may be referred to it by the Minister or any sector Ministry relating to the protection and management of the environment;
- Review and advise the Minister on any environmental plans, environmental impact assessment of major projects and activities for which an environmental impact review is necessary;
- Review the achievement by the NEMC of objectives, goals and targets set by the Council and advise the Minister accordingly;
- Review and advise the Minister on any environmental standards, guidelines and regulations;
- Receive and deliberate on the reports from Sector Ministries regarding the protection and management of the environment;
- Perform other environmental advisory services to the Minister as may be necessary.

3.4.3 Minister Responsible for Environment

The Minister is responsible for matters relating to environment, including giving policy guidelines necessary for the promotion, protection and sustainable management of the environment in Tanzania. The Minister approves an EIA and may also delegate the power of approval for an EIA to the Vice President's Office – Division of Environment (VPO-DoE), Local Government Authorities or Sector Ministries. The Minister also:

- Prescribes (in the regulations) the qualifications of persons who may conduct an EIA;
- Reviews NEMC reports on the approval of an EIA;
- Issues an EIA certificate for projects subject to an EIA;
- Suspends an EIA certificate in case of non-compliance.

3.4.4 Director of Environment

The Director of Environment heads the Office of the Director of Environment and is appointed by the President of the United Republic of Tanzania. The functions of the Director of Environment include:

- Coordination of various environmental management activities undertaken by other agencies;
- Promotion of the integration of environmental considerations into development policies, plans, programs, strategies, projects;
- Undertaking strategic environmental risk assessments with a view to ensuring the proper management and rational utilization of environmental resources on a sustainable basis for the improvement of quality of human life in Tanzania;
- Advise the Government on legislative and other measures for the management of the environment or the implementation of the relevant international environmental agreements in the field of environment;
- Monitoring and assessing activities undertaken by relevant Sector Ministries and agencies;

- Preparation and issuing of reports on the state of the environment in Tanzania through relevant agencies;
- Coordination of issues relating to articulation and implementation of environmental management aspects of other sector policies and the National Environment Policy

3.4.5 National Environmental Management Council (NEMC)

The NEMC's purpose and objective is to undertake enforcement, compliance, review and monitoring of EIA's and to facilitate public participation in environmental decision-making. As far as EIA is concerned, NEMC is the processor and for that matter the engine for the environmental assessment of development projects. The Environmental Management Act (2004) confers powers on NEMC to;

- Registers experts and firms authorized to conduct EIA;
- Registers projects subject to EIA;
- Determines the scope of the EIA;
- Set-ups cross-sectoral TAC to advise on EIA reviews;
- Requests additional information to complete the EIA review;
- Assesses and comments on EIA, in collaboration with other stakeholders,
- Convenes public hearings to obtain comments on the proposed project;
- Recommends to the Minister to approve, reject, or approve with conditions specific EIS;
- Monitors the effects of activities on the environment;
- Controls the implementation of the Environmental Management Plan (EMP);
- Makes recommendations on whether to revoke EIA Certificates in case of non-compliance;
- Promotes public environmental awareness; and
- Conducts Environmental Audits

3.4.6 Sector Ministries

The existing institutional and legal framework the Sector Ministries are required to establish Sector Environmental Sections headed by the Sector Environmental Coordinator. The Ministry of Water (MoW) has already established an Sector Environment Office, with the responsibilities among others to ensure environmental compliance by the Sector Ministry; liaise with the DoE and the NEMC on matters involving the environment and all matters with respect to which cooperation or shared responsibility is desirable or required; refer to the NEMC any matter related to the environment; and to oversee the preparation of and implementation of all EIA's required for investments in the water sector

3.4.7 Local Government Authorities

Under the Local Government Act of 1982 (Urban and District Authorities), Local Government Authorities include the City Councils, Municipal Councils, District Councils, Town Councils, Township, Kitongoji, Ward, Mtaa and Village. All administrative levels have Environmental Management Committee of each jurisdiction. The Environmental Management Act (2004), provides for City, Municipal, District and Town Councils to be headed by Environmental Inspectors who are responsible for all environmental matters in the respective jurisdiction

3.5 International Guidelines

3.5.1 World Bank Safeguard Policies

World Bank has various safeguard policies which governs and ensures that Bank operations do no harm people and the environment. The Bank undertakes screening of each proposed project to determine the appropriate extent and type of Environmental Assessment (EA) to be undertaken and whether or not the project may trigger other safeguard policies. The policies require the borrower (country or private sector) to ensure compliance of environmental and social safeguards to projects that the Bank provides credit. The safeguard policies provide mechanisms for incorporation of environmental and social issues during project implementation. Thus, the proposed project activities may trigger following Bank policy: Environmental Assessment (OP/BP 4.01), as illustrated in the following sub section.

3.5.1.1 Environmental Assessment (OP/BP 4.01)

The World Bank Environmental Assessment Policy (OP. 4.01) requires Environmental Assessment (EA) of projects/programs proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus improve decision making The OP 4.01 requires EA process to takes into account the natural environment (air, water, and land); human health and safety; social aspects (involuntary resettlement, indigenous peoples, and cultural property) and trans-boundary and global environmental aspects.

This policy helps to ensure that the environmental and social safety and sustainability of investment projects is adhered. It also intends to ensure that Bank financed projects are environmentally sound and sustainable and decision making is improved through appropriate analysis of actions and their likely environmental impacts. The policy also promotes environmentally sustainable development by supporting the protection, conservation, maintenance, and rehabilitation of natural habitats and their functions. The proposed construction activities involved assessment of the negative and positive impacts and recommendation made to activate measures that will minimize negative impacts or compensate for adverse impacts. Therefore, the borrower must ensure that appropriate safeguard measures to mitigate potential risks and impacts are addressed prior to commencement of works and during implementation of the construction activities as stated in the ESMP.

The proposed project is under EIA study as required by OP 4.01. The EIA study aimed at identifying environmental and social impacts and thereafter development of mitigation measures to eliminate or reduce the adverse project impacts to acceptable level.

3.6 Environmental, Health and Safety Guidelines

The EHS guidelines are applied in World Bank projects in order to ensure best practice in environmental management during implementation. The implementation of this construction / rehabilitation will require applying the EHS guidelines in all aspects of environment, occupational health and safety, community health and safety, and construction and decommissioning as referred to *www.ifc.org/ehsguidelines.* The EHS Guidelines are technical reference with general and industrial-specific examples of Good International Industry Practice as defined in IFC's performance standards. The EHS Guidelines and International Finance

Corporation (IFC) performance standards have been used as reference in the environmental assessment and implementation of mitigation measures. The following four (4) sections of the EHS guidelines (Source: www.ifc.org/ehsguidelines) shall be used during implementation of this project which includes:

a) **Environmental -** Air Emissions and Ambient Air Quality: The proposed construction activities will apply this guideline in activities that generate emissions to air at any stage of the project life-cycle. Emissions of air pollutants can occur during construction activities of a project. This guideline provides an approach and specific guidance to the management of significant sources of emissions and impacts that may arise due to these emissions.

   Wastewater and Ambient Water Quality: This guideline applies to projects that have either direct or indirect discharge of process wastewater, wastewater from utility operations or storm water to the environment. Process wastewater may include contaminated wastewater from utility operations, storm water, and sanitary sewage. It provides information on common techniques for wastewater management, water conservation, and reuse. There are particular activities which involve wastewater which shall apply these sections of guidelines to incorporate necessary actions to avoid, minimize, and control adverse impacts to human health, safety, or the environment.

   Hazardous Materials Management: This guideline applies to projects that use, store or handle any quantity of hazardous materials which represent a risk to human health, property, or the environment due to their physical or chemical characteristics. The Contractor shall therefore apply this guideline in case of any use of hazardous material during construction phase.

   Noise: The contractor shall follow this guideline to control noise from construction vehicles and machineries which bring chaos to workers and public. The noise level guidelines and noise reduction options are illustrated in the guideline.

b) **Occupational Health and Safety -** This section explains various elements that are applicable to the construction / rehabilitation activities which are general facility design and operation which includes fire precautions, portable water supply safe access and first aid; communication and training, physical hazards, chemical hazards, biological hazards, use of PPE and monitoring. The contractor as well as health and safety officer shall ensure the implementation of this guideline in the proposed project.

c) **Community Health and Safety -** The guideline contains different sections related to the proposed project which are structural safety of project infrastructure, traffic safety, disease prevention and emergency preparedness and response. The project shall apply these guidelines to protect the surrounding community from the core project area risks and impacts.
   Structural safety of project infrastructure: This section describes hazards posed to the public while accessing project facilities and their management actions. The hazards include physical trauma associated with failure of building structures; burns and smoke inhalation from fires; injuries suffered as a consequence of falls or contact with heavy equipment;

respiratory distress from dust, fumes, or noxious odors; and exposure to hazardous materials.

Traffic safety: This applies mostly during operation of project equipment on private or public roads. Safety measures to protect workers and road users have been described in the section.

Disease prevention: This section describes the communicable and vector-borne diseases which are threat to public health and health of workers, recommended interventions at project level and the control strategy.

Emergency preparedness and response: This section describes the emergency preparedness and response plan that covers basic elements such as communication systems, emergency response procedures, emergency resources, and training.

Construction and Decommissioning - The guideline provides information on prevention and control of community health and safety impacts that may occur during implementation, at the end of the project life-cycle, or due to expansion or modification of existing project facilities, in different areas of environment (Noise and vibration, soil erosion, sediment mobilization and transport, air quality, solid waste, wastewater discharges), Occupational health and safety (work in heights, slips and falls, moving machinery and other site hazards) and Community health and safety (general site hazards, disease prevention and traffic safety). These guidelines are highly recommended

3.7 IFC/WBG Guidelines

3.7.1 Effluent Discharge Guidelines

This guideline applies to projects that have either direct or indirect discharge of process wastewater, and wastewater from utility operations to the environment. Process wastewater may include contaminated wastewater from utility operations and sanitary sewage. It provides information on common techniques for wastewater management, water conservation, and reuse. This report has incorporated the necessary measures to avoid, minimize and control adverse impacts to human health, safety and environment.

General Liquid Effluent Quality

Discharge to Surface Water

Discharges of process wastewater, sanitary wastewater, wastewater from utility operations to surface water should not result in contaminant concentrations in excess of local ambient water quality criteria or, in the absence of local criteria, other sources of ambient water quality.

Project-specific performance levels for wastewater effluents should take into account the following considerations:

- Process wastewater treatment standards consistent with applicable Industry Sector EHS Guidelines. Projects for which there are no industry-specific guidelines should reference the effluent quality guidelines of an industry sector with suitably analogous processes and effluents;

- Compliance with national or local standards for sanitary wastewater discharges or, in their absence, the indicative guideline values applicable to sanitary wastewater discharges is shown in Table 8

Sanitary Wastewater

Sanitary wastewater from project sites may include effluents from domestic sewage, food service, and other facilities serving site employees. Recommended sanitary wastewater management strategies include:

- Segregation of wastewater streams to ensure compatibility with selected treatment option (e.g. septic system which can only accept domestic sewage);
- Segregation and pretreatment of oil and grease containing effluents;
- If sewage is to be discharged to surface water, treatment to meet national or local standards for sanitary wastewater discharges or, in their absence, the indicative guideline values applicable to sanitary wastewater discharges is shown in 8 below;
- If sewage is to be discharged to a septic system, treatment to meet applicable national or local standards for sanitary wastewater discharges is required.
- Sludge from sanitary wastewater treatment systems should be disposed in compliance with local regulatory requirements, in the absence of which disposal has to be consistent with protection of public health and safety, and conservation and long term sustainability of water and land resources.

Table 8: Indicative Values for Treated Effluent Discharges

Pollutants	Units	Guideline Value
PH	pH	6 – 9
BOD	mg/l	30
COD	mg/l	125
Total Nitrogen	mg/l	10
Total Phosphorus	mg/l	2
Oil and grease	mg/l	10
Total suspended solids	mg/l	50
Total coliform bacteria	MPN[b]/100ml	400[a]

Notes:

[a]Not applicable to centralized, municipal, wastewater treatment systems which are included in EHS guidelines for water and sanitation

[b]MPN – Most probable number

Source: www.ifc.org/ehsguidelines

3.8 Noise Level Guidelines

Noise prevention and mitigation measures should be applied where predicted or measured noise impacts from a project facility or operations exceed the applicable noise level guideline at

the most sensitive point of reception. The preferred method for controlling noise from stationary sources is to implement noise control measures at source. Methods for prevention and control of sources of noise emissions depend on the source and proximity of receptors. Noise reduction options that should be considered include selecting equipment with lower sound power levels; installing vibration isolation for mechanical equipment; limiting the hours of operation for specific pieces of equipment or operations, especially mobile sources operating through community areas; re-locating noise sources to less sensitive areas to take advantage of distance and shielding; and reducing project traffic routing through community areas wherever possible.

Regular monitoring is required to provide information necessary to determine impacts from noise and vibration associated with the Project.

The objectives of the noise and vibration monitoring program are to ensure that:

- The objectives of the Noise and Vibration Management Plan are being met;
- Ambient noise does not exceed applicable noise criteria at sensitive receptors;
- Vibration levels do not exceed the applicable criteria and does not cause damage to structures;
- To gather data such that any potential noise and vibration impacts are identified and appropriate mitigation measures are put in place.

Noise impacts should not exceed the levels presented in Table 9 or result in a maximum increase in background levels of 3 dB at the nearest receptor location off-site.

Table 9: Noise Level Guidelines

	One Hour L_{Aeq} (dBA)	
Receptor	**Daytime 07:00 – 22:00**	**Nighttime 22:00 – 07:00**
Residential; institutional; educational	55	45
Industrial; commercial	80	60

Source: www.ifc.org/ehsguidelines

3.9 WHO Ambient Air Guidelines

This guideline provides an approach to the management of significant sources of emissions, including specific guidance for assessment and monitoring of impacts. It is also intended to provide additional information on approaches to emissions management in projects located in areas of poor air quality, where it may be necessary to establish project-specific emissions standards.

Emissions of air pollutants can occur from a wide variety of activities during the construction, operation, and decommissioning phases of a project. These activities can be categorized based on the spatial characteristic of the source including point sources, fugitive sources, and mobile

sources and, further, by process, such as combustion, materials storage, or other industry sector-specific processes

Where possible, facilities and projects should avoid, minimize, and control adverse impacts to human health, safety, and the environment from emissions to air. Where this is not possible, the generation and release of emissions of any type should be managed through a combination of:

- Energy use efficiency
- Process modification
- Selection of fuels or other materials, the processing of which may result in less polluting emissions.

Projects with significant sources of air emissions, and potential for significant impacts to ambient air quality, should prevent or minimize impacts by ensuring that:

- Emissions do not result in pollutant concentrations that reach or exceed relevant ambient quality guidelines and standards9 by applying national legislated standards, or in their absence, the current WHO Air Quality Guidelines10 (see Table 10), or other internationally recognized sources;

- Emissions do not contribute a significant portion to the attainment of relevant ambient air quality guidelines or standards. As a general rule, this Guideline suggests 25 percent of the applicable air quality standards to allow additional, future sustainable development in the same air shed

Table 10: WHO Ambient Air Quality Guidelines

	Averaging Period	Guideline Value in mg/m^3
Sulfur dioxide (SO_2)	24 hour 10 minute	125 (Interim target-1) 50 (Interim target-2) 20 (guideline) 500 (guideline)
Nitrogen dioxide (NO_2)	1-year 1-hour	40 (guideline) 200 (guideline)
Particulate Matter PM_{10}	1-year	70 (Interim target-1) 50 (Interim target-2) 50 (Interim target-3) 20 (guideline)
	24-hour	150 (Interim target-1) 100 (Interim target-2) 75 (Interim target-3) 50 (guideline)

Particulate Matter $PM_{2.5}$	1-year	35 (Interim target-1) 25 (Interim target-2) 15 (Interim target-3) 10 (guideline)
	24-hour	75 (Interim target-1) 50 (Interim target-2) 37.5 (Interim target-3) 25 (guideline)
Ozone	8-hour daily maximum	160 (Interim target- 1) 100 (guideline)

Source: WHO Air Quality Guidelines

3.10 Occupational Health and Safety Guidelines

Reasonable precautions must be implemented during project life cycle so as to protect the health and safety of workers. Contractors must have the capability to manage the occupational health and safety issues of the employees. Preventive and protective measures should be introduced according to the following order of priority:

- Eliminating the hazard by removing the activity from the work process. Examples include substitution with less hazardous chemicals, etc;
- Controlling the hazard at its source through use of engineering controls. Examples include local exhaust ventilation, isolation rooms, machine guarding, etc
- Minimizing the hazard through design of safe work systems and administrative or institutional control measures. Examples include job rotation, training safe work procedures, lock-out and tag-out, workplace monitoring, limiting exposure or work duration, etc.
- Providing appropriate personal protective equipment (PPE) in conjunction with training, use, and maintenance of the PPE.

The following should be considered during design and operation:

(i) At Workplace

- Permanent and recurrent places of work should be designed and equipped to protect OHS.
- Surfaces, structures and installations should be easy to clean and maintain, and not allow for accumulation of hazardous compounds.
- Fire resistant, noise-absorbing materials should, to the extent feasible, be used for cladding on ceilings and walls.
- Heavy oscillating, rotating or alternating equipment should be located in dedicated buildings or structurally isolated sections.

- Passages to emergency exits should be unobstructed at all times. Exits should be clearly marked to be visible in total darkness. The number and capacity of emergency exits should be sufficient for safe and orderly evacuation of the greatest number of people present at any time, and there should be a minimum two exits from any work area.

(ii) Fire Precautions

- Equipping facilities with fire detectors, alarm systems, and fire-fighting equipment. The equipment should be maintained in good working order and be readily accessible. It should be adequate for the dimensions and use of the premises, equipment installed, physical and chemical properties of substances present, and the maximum number of people present.
- Provision of manual firefighting equipment that is easily accessible and simple to use
- Fire and emergency alarm systems that are both audible and visible

(iii) Potable Water Supply

- Adequate supplies of potable drinking water should be provided with a sanitary means of collecting the water for the purposes of drinking
- Water supplied to areas of food preparation or for the purpose of personal hygiene (washing or bathing) should meet drinking water quality standards.

(iv) First Aid

- The employer should ensure that qualified first-aid can be provided at all times. Appropriately equipped first-aid stations should be easily accessible throughout the place of work
- Eye-wash stations and/or emergency showers should be provided close to all workstations where immediate flushing with water is the recommended first-aid response
- First aid stations and rooms should be equipped with gloves, gowns, and masks for protection against direct contact with blood and other body fluids
- Remote sites should have written emergency procedures in place for dealing with cases of trauma or serious illness up to the point at which patient care can be transferred to an appropriate medical facility.

(v) OHS Training

- Provisions should be made to provide OHS orientation training to all new employees to ensure they are apprised of the basic site rules of work at / on the site and of personal protection and preventing injury to fellow employees.
- Training should consist of basic hazard awareness, site specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Any site-specific hazard or color coding in use should be thoroughly reviewed as part of orientation training.

(vi) Noise

No employee should be exposed to a noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection. In addition, no unprotected ear should be exposed to a peak sound pressure level (instantaneous) of more than 140 dB(C).

- The use of hearing protection should be enforced actively when the equivalent sound level over 8 hours reaches 85 dB(A), the peak sound levels reach 140 dB(C), or the average maximum sound level reaches 110dB(A). Hearing protective devices provided should be capable of reducing sound levels at the ear to at least 85 dB(A).

- Although hearing protection is preferred for any period of noise exposure in excess of 85 dB(A), an equivalent level of protection can be obtained, but less easily managed, by limiting the duration of noise exposure. For every 3 dB(A) increase in sound levels, the 'allowed' exposure period or duration should be reduced by 50 percent.

- Prior to the issuance of hearing protective devices as the final control mechanism, use of acoustic insulating materials, isolation of the noise source, and other engineering controls should be investigated and implemented, where feasible

- Periodic medical hearing checks should be performed on workers exposed to high noise levels

(vi) Vibration

Exposure to hand-arm vibration from equipment such as hand and power tools, or whole-body vibrations from surfaces on which the worker stands or sits, should be controlled through choice of equipment, installation of vibration dampening pads or devices, and limiting the duration of exposure.

(vii) Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) provides additional protection to workers exposed to workplace hazards in conjunction with other facility controls and safety systems. PPE provides the worker with an extra level of personal protection. Table 11 presents general examples of occupational hazards and types of PPE available for different purposes. Recommended measures for use of PPE in the workplace include:

- Active use of PPE if alternative technologies, work plans or procedures cannot eliminate, or sufficiently reduce, a hazard or exposure
- Identification and provision of appropriate PPE that offers adequate protection to the worker, co-workers, and occasional visitors, without incurring unnecessary inconvenience to the individual
- Proper maintenance of PPE, including cleaning when dirty and replacement when damaged or worn out. Proper use of PPE should be part of the recurrent training programs for employees

Table 11: Occupational hazards and types of PPEs the Working Site

Objective	Workplace Hazards	Suggested PPE
Eye and face protection	Flying particles, molten metal, liquid chemicals, gases or vapors, light radiation.	Safety Glasses with side-shields, protective shades, etc
Head protection	Falling objects, inadequate height clearance, and overhead power cords	Plastic helmets with top and side impact protection
Hearing protection	Noise	Hearing protectors (ear plugs or ear muffs)
Foot protection	Falling or rolling objects, pointed objects. Corrosive or hot liquids	Safety shoes and boots for protection against moving and falling objects, liquids and chemicals
Hand protection	Hazardous materials, cuts or lacerations, vibrations, extreme temperatures	Gloves made of rubber or synthetic materials, leather, steel, insulating materials, etc
Respiratory protection	Dust, fogs, fumes, mists, gases, smokes, vapors	Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapors and gases). Single or multi-gas personal monitors, if available
	Oxygen deficiency	Portable or supplied air (fixed lines) On-site rescue equipment
Body/Leg protection	Extreme temperatures, hazardous materials, biological agents, cutting and laceration	Insulating clothing, body suits, aprons, etc. of appropriate materials

(viii) Monitoring

The occupational health and safety monitoring program should include:

- Safety inspection, testing and calibration: This should include regular inspection and testing of all safety features and hazard control measures focusing on engineering and personal

protective features, work procedures, places of work, installations, equipment, and tools used. The inspection should verify that issued PPE continues to provide adequate protection and is being worn as required. All instruments installed or used for monitoring and recording of working environment parameters should be regularly tested and calibrated, and the respective records maintained.

- Surveillance of the working environment: Employers should document compliance using an appropriate combination of portable and stationary sampling and monitoring instruments. Monitoring and analyses should be conducted according to internationally recognized methods and standards. Monitoring methodology, locations, frequencies, and parameters should be established individually for each project following a review of the hazards. Generally, monitoring should be performed during commissioning of facilities or equipment and at the end of the defect and liability period, and otherwise repeated according to the monitoring plan.
- Training: Training activities for employees and visitors should be adequately monitored and documented (curriculum, duration, and participants). Emergency exercises, including fire drills, should be documented adequately. Service providers and contractors should be contractually required to submit to the employer adequate training documentation before start of their assignment.

3.11 IFC/WBG Performance Standards on Biodiversity Conservation

According to Performance Standard 6 of the World Bank's International Finance Corporation (IFC) (2012) protecting and conserving biodiversity, maintaining ecosystem services, and sustainably managing living natural resources are fundamental to sustainable development. The requirements set out in this Performance Standard have been guided by the Convention on Biological Diversity, which defines biodiversity as "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems."

This Performance Standard addresses how clients can sustainably manage and mitigate impacts on biodiversity and ecosystem services throughout the project's lifecycle including (i) protect and conserving biodiversity; (ii) maintain the benefits from ecosystem services; and (iii) promote the sustainable management of living natural resources through the adoption of practices which integrate conservation needs and development priorities.

As a matter of priority, the standards provides, the proponent should seek to avoid impacts on biodiversity and ecosystem services. When avoidance of impacts is not possible, measures to minimize impacts and restore biodiversity and ecosystem services should be implemented. Given the complexity in predicting project impacts on biodiversity and ecosystem services over the long term, the proponent should adopt a practice of adaptive management in which the implementation of mitigation and management measures are responsive to changing conditions and the results of monitoring throughout the project's lifecycle.

3.12 International Conventions

The United Republic of Tanzania Government has signed and ratified several international conventions, including those on biodiversity, climate change, desertification and protection of the ozone layer. The conventions and their relevance to the proposed parking yard project are listed in the table below.

Table 12: International Conventions and Treaties with Relevance to the Proposed Park Bay Project

S/No	Name of Convention	Description of the Convention	Relevance to This Specific Project
1.	Convention concerning the Protection of Workers Against Occupational Hazards in the Working Environment due to Air Pollution, Noise and Vibration, adopted in 1977.	To ensure safe working environment for workers.	The proponent to implement a Occupational Health and Safety program in accordance with Tanzania laws and World Bank guidelines.
2.	The United Nations Convention on Conversation of Biological Diversity signed in 1992.	This convention was agreement on developing national strategies for the conservation and sustainable use of biological diversity.	In the course of its operations, the proponent shall ensure that the provisions of the Convention are observed.
3.	Africa Convention on the Conservation and Natural Resources (1968)	This convention intends to promote conservation efforts by requiring contracting States to adopt the measures necessary to ensure conservation, utilization and development of soil, water, flora and fauna resources in accordance with scientific principles and with due regard to the best interests of the people.	The proponent shall support Tanzania's Commitment by promoting conservation efforts in all of its operations.

CHAPTER FOUR: ENVIRONMENTAL AND SOCIAL BASELINE INFORMATION

4.1 Introduction

This chapter presents information on existing environmental and socioeconomic condition of the proposed project area. It discusses aspects pertaining to geology and soils, climatic conditions, hydrology, ambient air quality and noise levels as well as land use. Further, the chapter presents details related to flora and fauna as well as socio-economic environment.

4.1.1 Administrative Units

Administratively, Ngara district council is divided into 4 divisions and 22 wards, 75 villages (see Table 5 which indicates project village) and 391 hamlets distributed unevenly. Among the divisions, Nyamiaga division covers largest part of land of the district approximately to 33.40 percent followed by Rulenge division with 27.56 percent of the total land and Kanazi division covers 24.81 percent. Finally, Murusagamba division follows which has smallest land covering 14.23 percent. The Nyamiaga Division where the project site is found has the total land approximately 1250.51 Square Kilomiters. It has seven (7) wards, 21 Villages and 127 hamlets. Moreover; the project site is located in Rwakalemera Village with five (5) hamlets.

4.1.2 Administrative Set Up

The village government is run with a complete governance structure comprised of village chairperson, Village Executive Officer (VEO) and elected members of the village council whilst there is Ward Office comprised of Ward Executive Officer (WEO) and its Ward Council members. Both Governance levels are directly responsible to the District Executive Director of Ngara District Council.

Table 13: Village with LADP Project

Division	Ward	Village	No. Of Sub Villages
Nyamiaga	Kasulo	Rwakalemera	5

Table 14: Land Area and Administrative Units of the proposed project

Division	Land Area (Sq. km)	No. of ward	No. of Villages	No. of Hamlets	Percent of Land Area
Nyamiaga	1250.51	7	21	127	33.40

4.2 Physical Environment

4.2.1 Climatic Condition

4.2.1.1 Rainfalls

Ngara District receives adequate annual rainfall. The rainfall pattern is bi-modal, which occurs between September/October and March/May. Rainfall averages between 800 mm in Bushubi (in Rulenge and Murusagamba Divisions) and 1,400 mm annually in Bugufi (Nyamiaga and Kanazi Divisions) areas.

Rwakalemera village which falls in Nyamiaga Division has four climatic seasons, two dry seasons from June to September and January to February with two rainy seasons from October to December and from March to May. During dry seasons there are sometimes strong winds/hazy air and temperatures vary between 18^0C and 30^0C depending on the time of day or night. During the rainy seasons, sudden and heavy downpours may occur daily, lasting from a few minutes to several hours. The rain is sometimes associated with strong winds, floods, mud, fog and temperatures may range between 12^0C and 28^0C.

4.2.1.2 Temperature

Temperatures range between 12ºC - 28ºC. The region consists of series of hilly running North-South and parallel to the lakeshore. September and October are the hottest months with temperature going as high as 28°C while July is the coldest month with minimum temperature of 14°C.

4.2.1.3 Wind Patterns

During the field visit, much areas of Ngara District were cool with wind speed being less than 10KPH. Wind speed across the Ngara District was between 2.0KPH to 9KPH. The wind direction was from East to West. Much of the Ngara District area including the proposed project site experiencing slight winds of less than 10 km/hr with the cores of minimum speeds and the northeastern highlands depicted low to medium NDVI due to dry conditions that has persisted over the areas (Ngara District Profile, 2015).

4.2.1.4 Noise Level

Five stations for noise levels were accomplished using a portable Clas Ohlson digital sound level meter type 36-1604, model ST-805 with measurement range of 30 to 130 dB (A), A-weighted factor deciBel. The meter meets ANSI S1.4 type 2 standards and conforms to IEC 651 type 2. Its accuracy is ±1.5 dB of reading. The meter is calibrated using electrical calibration with built in oscillator (1 kHz sine wave). On taking measurement, the instrument was held vertically at a breathing height of 1.0–1.5m above the ground level. Five runs were recorded at each sampling station and their hourly average value was used as representative value and then compared with local standards and international guidelines. Moreover, the peak (maximum) noise levels associated with parking bay activities were also targeted and recorded during the study period.

The major source of noise at the project site and its nearest receptors were from trucks/cars and motorcycles movements passing through the trunk road and others which parked within the bay,

other noise sources include people's noise and Socio-economic activities alongside the project site. Referring to table 15 below, the hourly equivalent sound level was in the range of 48.0 to 57.3 LAeq, dB (1h) for both measuring points. The hourly minimum noise level was in the range of 37.7 to 46.2 dB (A), while the maximum hourly noise level was in the range of 57.2 to 67.7 dB (A).

All measured sampling points were recorded with noise level within the limit value established by local standards for noise exposure at daytime. Referring to local [EMR (2010)] standard all assessed points were recorded with equivalent sound level LAeq (1h) which is below ceiling limit value of 60 LAeq dB for normal environment at day time.

Table 15 below describes the summarized minimum, equivalent and maximum noise levels at all Sampling Points within the project site.

Table 15: Average Noise Level

Category	Measuring Location	GPS Coordinates		Session			Source of Noise
				Daytime			
		Latitude (°S)	Longitude (°E)	Min, dB(A)	LAeq, (1h)	Max, dB(A)	
Lusa hunga-Rusumo Trunk road	A1: Along the road(western Side of the project site)	2°30'20"	30º51'16''	43.2	57.2	67.7	- Trucks/motorcycles movements at the trunk road -People's noise -Socio-Economic activities
	A2: Adjacent to Ngara Oil Fuel service station (Northern side)	2°30'24"	30º51'17''	42.1	55.1	65.5	- Trucks/motorcycles movements at the trunk road and to the fuel station -People's noise -Socio-Economic activities
Within the project site (Centre)	At the Centre of the project site	2º30'23''	30º51'19''	43.2	57.0	63.3	- Trucks/motorcycles movements at the trunk road -People's noise -Socio-Economic activities

Boundary	Eastern side of the project site	2º30'27''	30º51'24''	37.7	48.0	57.2	-Trucks/motorcycles movements at the trunk road and to the fuel station -Insects and birds
Offsite (about 10m from project site)	Southern side of the project site (Food vendors and residential houses)	2º30'23''	30º51'17''	46.2	51.1	66.6	-Trucks/motorcycles movements at the trunk road and to the fuel station -People's noise -Socio-Economic activities
	Western side (Adjacent to the trunk road)	2º30'23''	30º51'17''	46.2	57.3	60.0	
Noise Guidelines	**Local standard: (EMR , 2010) for normal environment at day time**			**60**			

Source: *Project site field measurement: November/ 2021: N.M=Not Mentioned*

4.2.1.5 Ambient Air Quality Emissions Levels

4.2.1.5.1 Ambient Particulate Matters (PM2.5 and PM10 Sizes) Concentration

At project site there is no major point sources of dust fumes or particles during measurements and measurements was affected with weather conditions (winter and rainy season) that's why there are slightly dust levels in assessed locations. The dust meter used sampled or detected dust particles suspended in breathing air in which the employees/workers breathe in when they are working on the respective area.

All surveyed locations were recorded with ambient particulate matter (PM2.5 and PM10) within the limit value established by both Local standards: EMR (AQS), 2007] and International Guideline: WHO [2005] for ambient particulate matter.

Referring to the dust results summarized in the table 16 below, the averaged maximum ambient particulate matter of PM2.5 with 7.8 µg/m^3 value and PM10 with 15.2 µg/m3 value were recorded at parking bay area and to the trunk road while the averaged minimum dust level of PM2.5 with 2.2 µg/m3 and PM10 with 3.4 µg/m3 were recorded at undeveloped area within the project site. The dust levels recorded at parking bay area was contributed by movements of trucks/vehicles within and adjacent to the trunk road.

The Local Standard: EMR (AQS), 2007] states that, the ambient particulate matter guideline for PM10 size shall not exceed 60–90 µg/Nm3 (0.05–0.116 mg/kg). By comparing the guideline value with results, it is evident that all assessed four sampling points were recorded with PM10 ambient particulate matter within the ceiling limit.

On the other hand, the World Health Organization (WHO: 2005) Air Quality Guideline states that, the ambient dust emission levels for PM2.5 and PM10 should not exceed 25 µg/m3 and 50 µg/m3 respectively for 24–hour mean. By comparing the results with the Standard, it is evident that all assessed six locations were recorded with PM2.5 and PM10 ambient particulate matters within the ceiling limit.

Table 16; Summary on ambient particulate matter (dust) concentrations for assessed stations

Category	Measuring Location	GPS Coordinates (UTM)		Session	
				Daytime	
		Latitude (S)	Longitude (E)	$PM_{2.5}$ [µg/m^3]	PM_{10} [µg/m^3]
Lusa hunga-Rusumo Trunk road	Along the road(western Side of the project site)	2°30'20"	30º51'16''	5.0	9.6
	Adjacent to Ngara Oil Fuel service station (Northern side)	2°30'24"	30º51'17''	3.2	5.8
Within the project site	At the Centre of the project site	2º30'23''	30º51'19''	3.3	3.7
	Eastern side of the project site	2º30'27''	30º51'24''	2.2	3.4
	Overall Minimum Value			**2.2**	**3.4**
	Overall Mean Value			**4.6**	**8.4**
	Overall Maximum Value			**7.8**	**15.2**
Dust Guidelines	**Local standard: EMR (AQS), 2007]**			**N.M**	**60-90**
	International Guidline (WHO, 2005)			**25**	**50**

Source: Tanzania Bureau of Standards, 2009

4.2.1.5.2 Ambient Gaseous Emission Concentration

At project site there is no major point sources of gaseous emissions. Referring to the results summarized in table 17, all locations found with enough oxygen (O2) level of 20.9 % at all measured sampling points, this range value is normal and naturally present in air environment but it decreases from day to night. All surveyed locations were recorded with CO2 which ranging from 0.03 to 0.04 % (300 to 400 ppm). The CO2 level of 0.02% (200 ppm) is normal and naturally existing in air environment. The points detected with 0.0 Hydrogen Sulfide (H2S), sulfur dioxide (SO2), Nitrogen oxide (NO), nitrogen dioxide (NO2) and Methane (CH4).

Furthermore, parking bay sampling points were recorded with carbon monoxide (CO) gaseous emission levels ranging from 1.0 to 2.0 ppm due to combustion emissions of trucks movements. The local (EMR (AQS), 2007] has offered the ambient gaseous emissions limits of the following parameters. Carbon monoxide (CO) emission limit for 15 minutes time–weighed exposure should be 100 mg/Nm3 (87 ppm) and 10 mg/Nm3 (9 ppm) for 8 hours exposure. For sulfur oxides (SOx) limit should be 0.5 mg/Nm3 (0.2 ppm) for 10 minutes. And for nitrogen oxides (NOx) limit should be 150 µg/Nm3 (0.15 mg/Nm3, 0.12 ppm for NO or 0.08 ppm for NO2) for 24–hours average and value 120 µg/Nm3 (0.12 mg/Nm3, 0.10 ppm for NO or 0.06 ppm for NO2) for 8 hours exposure.

Comparing the averaged results with Local standard EMR [(AQS), 2007] and International (WHO, 2005) standards, it is evident that, all measured sampling points has gaseous emissions which is within both standards used for comparison.

Table 17; Summary on ambient gaseous concentrations for assessed sampling points

Category	Measuring Location	Gaseous Parameter	GPS Coordinates (UTM)		Session			Standards	
			Latitude (S)	Longitude (E)	Day			EMR [(AQS), 2007]	WHO [2005]
					Minimum	Average	Maximum		
Lusa hunga-Rusumo Trunk road	Along the road(western Side of the project site)	CO2 (%)	2°30’20”	30º51’16’’	0.02	0.02	0.02	N.M	
		NO2 (ppm)			0	0	0	N.M	0.2
		CO (ppm)			0	0	0	9	N.M
		SO2 (ppm)			0	0	0	0.5	0.25
		O2 (%)			20.9	20.9	20.9	NM	N.M
		CH4 %			0	0	0		
		H2S (ppm)			0	0	0	N.M	0.03
		NO (ppm)			0	0	0	0.12	N.M
	Adjacent to Ngara Oil Fuel service station (Northern side)	CO2 (%)	2°30’24”	30º51’17’’	0.02	0.02	0.02	N.M	
		NO2 (ppm)			0	0	0	N.M	0.2
		CO (ppm)			0	0	0	10	N.M
		SO2 (ppm)			0	0	0	0.5	0.25
		O2 (%)			20.9	20.9	20.9	NM	N.M
		CH4 %			0	0	0		
		H2S (ppm)			0	0	0	N.M	0.03
		NO (ppm)			0	0	0	0.12	N.M
Within the project site	At the Centre of the project site	CO2 (%)	2º30’23’’	30º51’19’’	0.02	0.02	0.02	N.M	
		NO2 (ppm)			0	0	0	N.M	0.2
		CO (ppm)			0	0	0	10	N.M
		SO2 (ppm)			0	0	0	0.5	0.25

		O2 (%)			20.9	20.9	20.9	NM	N.M
		CH4 %			0	0	0		
		H2S (ppm)			0	0	0	N.M	0.03
		NO (ppm)			0	0	0	0.12	N.M

Source: *Air Quality field measurement: November/ 2021: N.M=Not Mentioned*

4.3 Topography

Generally; the proposed site lies on Eastern side along Lusahunga - Rusumo trunk road, characterized with flat terrain with a relative elevation of 1520 AMSL. Observation on village topography gives an indication that the site is feasible option for the proposed parking bay since its landscape is friendly for trucks movements and ancillary services.

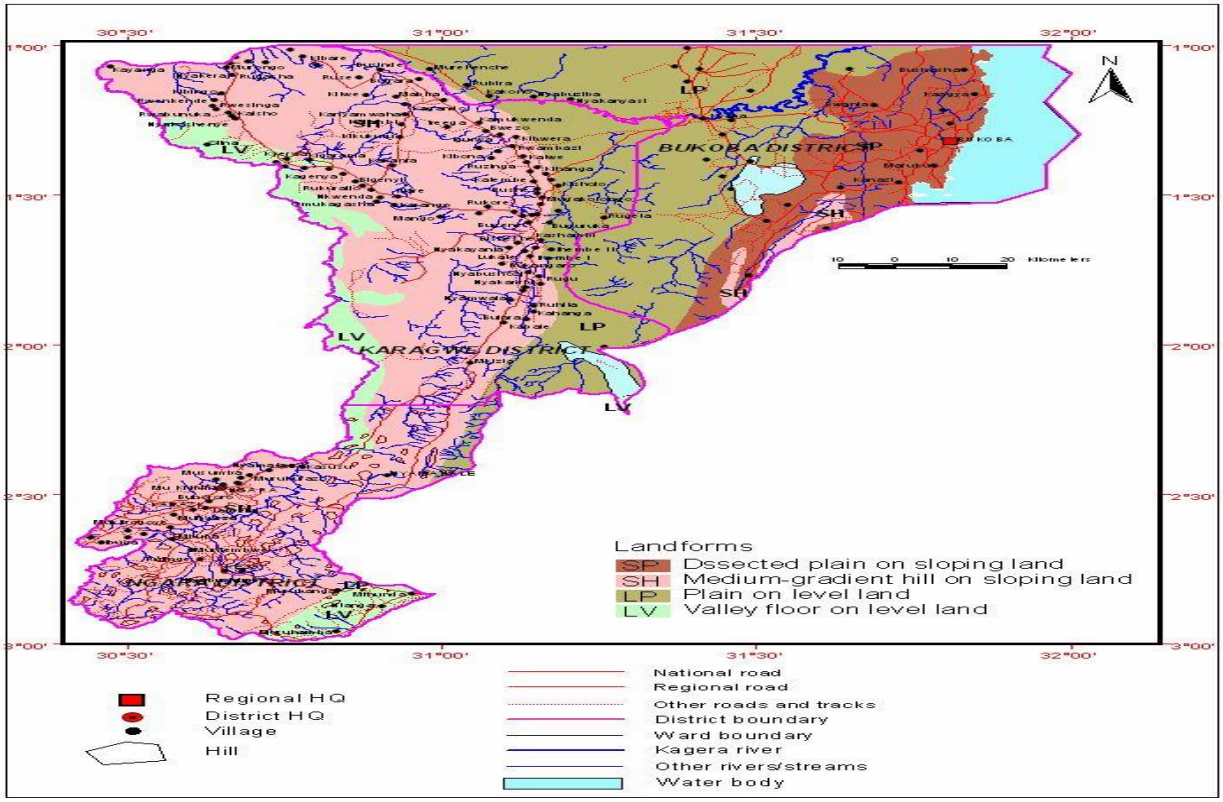


Figure 6: Major Landforms of Kagera Region, Including Ngara District

Source: GIS Database for the Lower Kagera Basin, Tanzania (http://www.fao.org/tempref/agl/agll/kageradocs/03methodologies_results/tz_mbogoni_gis.pdf

4.4 Soils and Geology

In Ngara district the soils range from shallow (less than 50 cm) to very deep (more than 120 cm). Most of them have either dark red to red or brown to yellowish red clay sub soil, and deeply weathered, medium to strongly acid and have a low natural reserve of nutrients. Their capacity of retaining nutrients is also low. In most areas deep soils which are good or productive are found in the low lands where most of the crops are grown (Ngara District Profile, 2015). The project site is generally flat terrain and is characterized by Sandy Clay Loam Soil-type with 80cm deep.

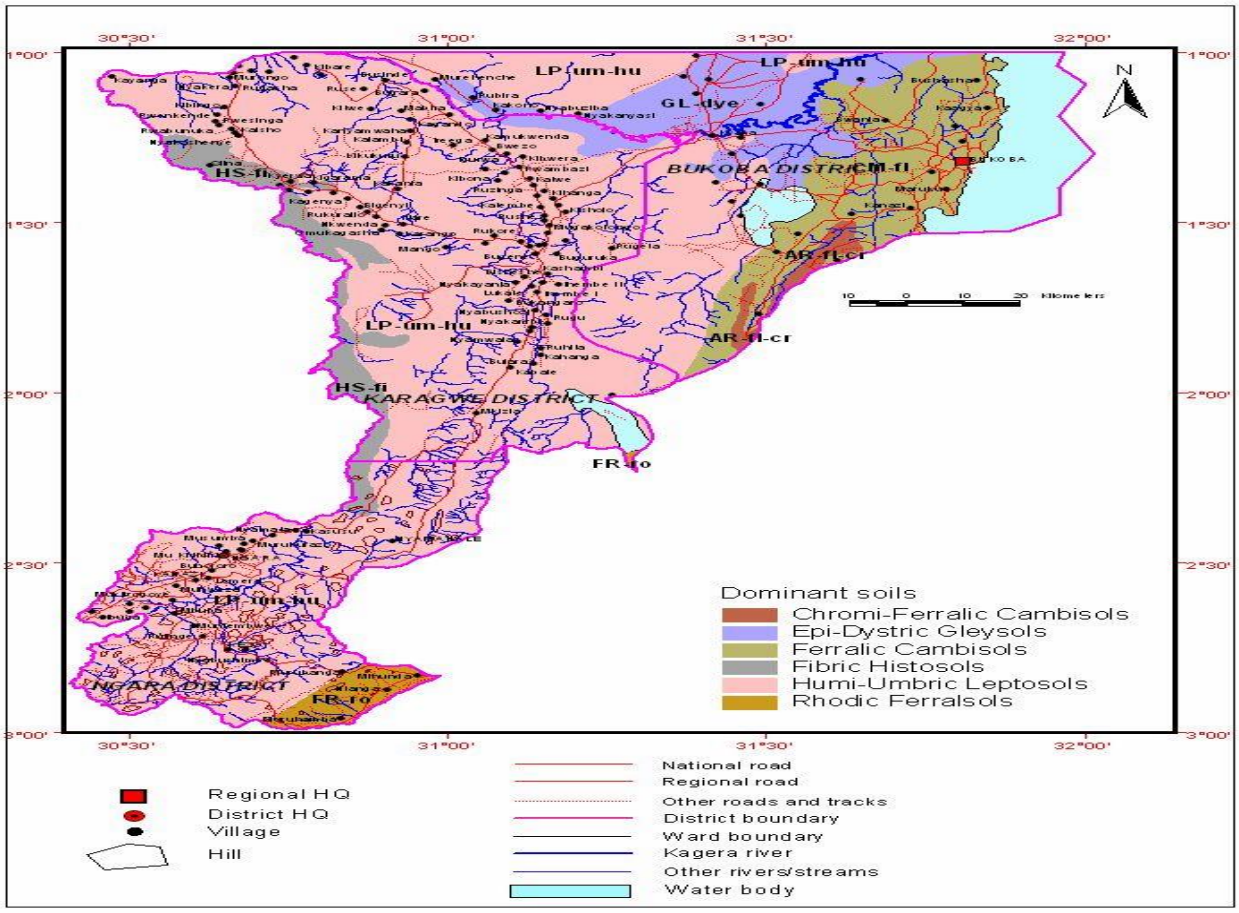


Figure 7: Major Soils in Kagera Region, Including Ngara District

***Source**: GIS Database for the Lower Kagera Basin, Tanzania (http://www.fao.org/tempref/agl/agll/kageradocs/03methodologies_results/tz_mbogoni_gis.pdf)*

4.5 Hydrology

Surface water characteristics: There is no permanent or temporary surface water course crossing the project area.

Ground water characteristics: The water table in the project area is high and water is found at a depth ranging from 15.00m to 20.00m below the ground surface within the drilled depth. (Source: District profile; 2015)

4.6 Land Uses

The land of Ngara district is loamy, clay, stretched with some hills, divided into arable land which is suitable for crop production while normal forests are used for grazing. Some areas are of high lands with rocks, stones and gravels which is not fertile for crops production. The largest land area of the Ngara district is used for grazing followed by settlement, arable land and National Park which were formally known as Burigi and Kimisi game reserves currently are known as Chato-Burigi National Park as illustrated in figure 8.

The proposed project site is 100% occupied by local operating parking bay and all vegetation species have already cleared during the initial stage of its establishment whilst adjacently there are Lusahunga-Rusumo trunk road, vending huts and few institutional buildings. Based on the survey conducted by the Consultant in November, 2021, most of the houses found within Rwakalemera village consist of a cluster of low-rise buildings made of improved building materials such as burnt bricks, pitched roof with corrugated iron sheets, timber, wooden doors and cement floors. Institutions found at Rwakalemera village include Police, schools, religious dominations, and several NGOs. Generally; the project site is located within the urban setting environment dominated by human socio-economic activities.

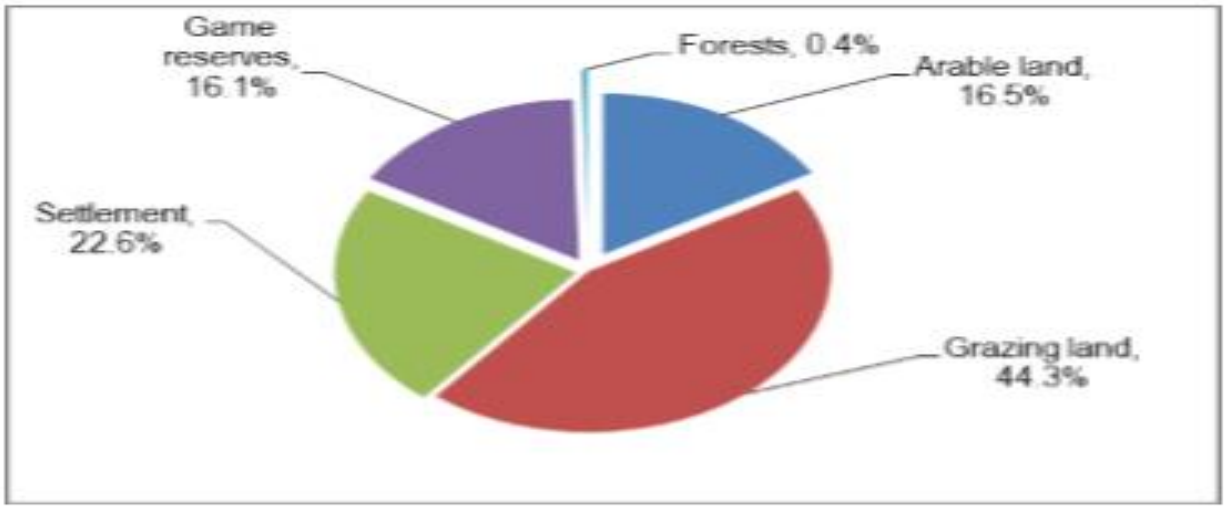


Plate 8: Land use pattern Ngara district 2015

Source: Ngara District Council Socio-Economic Profile, 2015

Figure 9: Photos showing Land use within the project site-Nguvu Kazi Hamlet

Source: Consultant's Field Photo, November/ 2021

4.7Biological Environment

4.7.1 Flora

Generally; within the proposed project site there are neither trees nor vegetation covers whilst some parts of the surrounding environments are dominated by exotic trees and grassland types adaptive to low land and sub montane habitat. This suggests that there will be less damage of the vegetation type during construction phase. Dominant tree species adjacently to the project site are *Eucalyptus ssp*, Azanza garckeana, and short grasses (shown in Plate 10 below).

Furthermore , the species of tree identified during the survey were also crosschecked against the IUCN list of species of special scientific and conservation interests and further revealed that there no endemic or endangered species which need special attention during project execution. The contractor is advised to confine all its activities only in the specified area for facility location.

Figure 10: Eucalyptus ssp (Left) and Azanza Garckeana (Right) adjacently to the project site

Source: Consultant's Field Photo, November/ 2021

4.7.2 Fauna

The proposed project site was surveyed using methodologies identified in Duthie 2000 coupled with the consultation of the local community. The consultation with the local community revealed availability of rabbits nearby the project site. The clearance of the nearby trees and vegetation will to some extent affect habitat and pattern of the food web for this organism. Signs indicating action of ants/termites were observed to the vegetation covers surrounding the project site as shown in Plate below.

The presence of local parking bay, town Centre, Lusahunga-Rusumo trunk road and the associated socio-economic activities within and nearby proposed project site may have probably contributed in the limited number of particular species of organism's multiplication and distribution due to noise generated in this areas and fear of human. Therefore, through observation and interviews it was confirmed that no specific animals sign which suggest the availability of big animals in the area and nearby areas. It is also envisaged that no any fauna will be disturbing the construction activities as the site is not nearby the wildlife areas.

Figure 11: Termite Activity (anthill) observed at the project site

Source: Consultant's Field Photo, November/2021

4.8Socio-Economic Environment

4.8.1 Population and Housing

According to 2012 Population and Household Census, Ngara District had a population of 320, 056 (152,443 Male and 167, 613 Female). Average Household size was 4.7 and Annual Growth rate of 3.2. Kasulo Ward had a population of 18,432 – 9064 male and 9368 female.

Based on the annual growth rate of 3.2 per annum, the district is currently estimated to have a population of 411,777, an increase of 29% in the space of 8 years (2012 – 2020). Kasulo ward is estimated to have a population of 23,713.

Table 18: Ngara District Population Composition: 2012 Actual vs 2020 Projected Population

2012 Ngara District Population			2012 Kasulo Ward Population			2020 Ngara District Population Projection			2020 Kasulo Ward Population Projection		
Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
152,443	167,613	320,056	9,064	9,368	18,432	196,130	215,647	411,777	11,661	12,052	23,713
3.2	3.2	3.2	3.2	3.2	3.2						

Source: NBS, NPHC, 2013.

Table 19: Population Distribution in the Project Area.

			Population				Sex Ration
				Total Number			
Division	Ward	Name of Village	Households	Males	Females	Total	
Nyamiaga	Kasulo	Rwakalemera	1,150	2,892	3,210	6,102	90.1

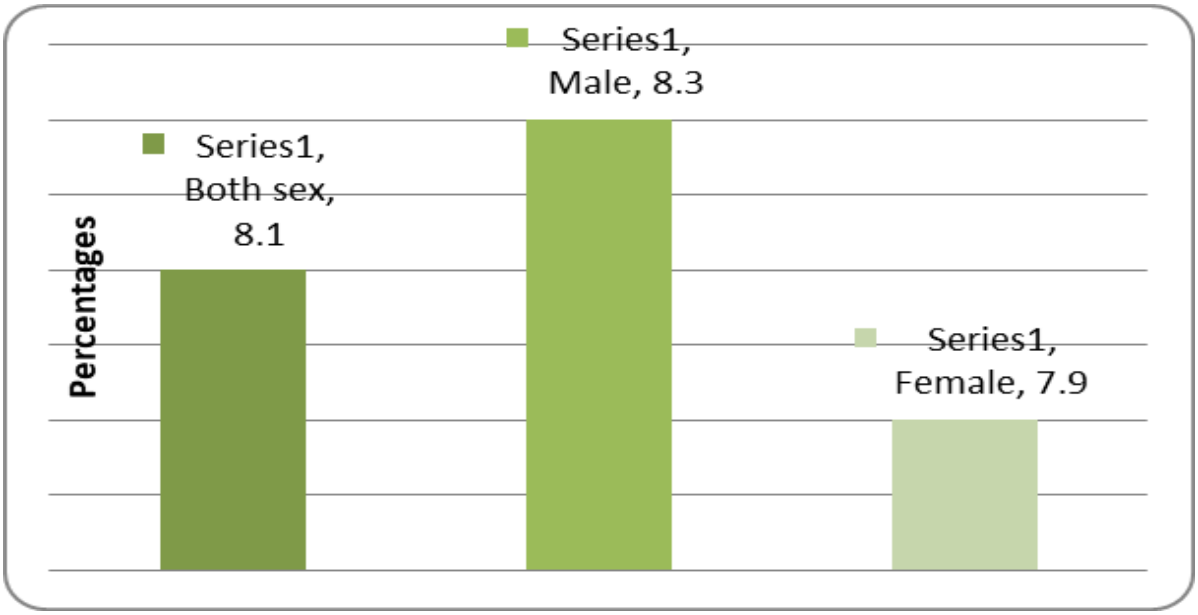
Source: Village Council Records November, 2021

Generally, Ngara District is one of the areas that might require great attention because had been receiving refugees from Burundi since 1993 and Rwanda in 1994 during the Great Lakes Refugee Crisis. A number of refugee camps were established to accommodate refugees and to date some of the camps have been closed. Despite of the recorded population data from existing district profile, consultant updated population data from respective Village.

4.8.2 HIV/AIDS Infections Status

The impact of HIV/AIDS pandemic have also replicated to the high rates of orphans experienced in the 2012 population census. Ngara District Council is among the councils in Kagera region with average rates of orphans of 8.1 percent. Orphan males were more than orphan females. There is a need for the council management to conduct a survey in order to know the current status of orphan hood and factors contributing to have higher rates of orphans and come up with solutions.

Figure 12: Percentage Distribution of Orphans by Sex, Ngara District Council, 2012 Census.



Source: NBS, Population and Housing Census, Kagera region, 2012

4.9 Economic Activities

This section provides baseline information on economic activities in the project area as per requirements of EIA and EA regulations. These activities may not have direct impact to the proposed project, but may in one way or another influence activities, employments and income to the communities around the project area, district and regional and large.

4.9.1 Agriculture

The main economic activities in the proposed project village are agriculture, employment, livestock keeping, and small scale enterprises. Agricultural crops include both food and cash crops. The main food crops are beans, bananas and maize. Other food crops include cassava, sweet potatoes, yams and vegetables. However, surplus production of food crops is sold to earn cash income to the households. Presence border and its associated activities is the essence of constructing the parking bay which will create employment opportunities to the villagers. In addition, parking bay's operations will enhance running of small scale businesses such as food vending and petty trading, retail shops, kiosks and food stalls that are regarded as alternative sources of income to the households. The table below presents agricultural land productivity in Ngara District.

Table 20: Agricultural Land Uses in Ngara District

Agricultural land uses	Size (Ha)	Proportion
Total District's land Size	374,400	
District's arable land	303,483	81%
Arable land which is currently in use	64,940	21%
land size suitable for Irrigation	5,000	2%
Non - arable land	70,917	19%

Source; Ngara DC Website: www.ngaradc.go.tz

4.9.2 Livestock Keeping

Livestock keeping is the second most important economic activity after agriculture in Ngara DC. Most of the livestock keeping are cattle, sheep, goats and chicken. The Hangaza and Tutsi tribes are dominating in livestock keeping. Most of them develop scattered settlements in the district searching for green pastures. Also they practice shifting grazing around the district and nearby areas. Within the project village, livestock keeping is practiced at low level since it is an urbanized area hence experiencing challenges in grazing.

4.9.3 Other Economic Activities

Kagera Region Investment Guide (2019) mentions other economic activities in Ngara district to include local trade and businesses, tourism, mining (Kabanga Nickel Project) and cross border trade.

4.10 Economic Infrastructure

4.10.1 Transport Services

Roads

The truck road (T03) Isaka - Lusahunga - Rusumo passes across the village on its way to Rwanda. This road is in double surface treatment bituminous standard and was constructed late 1980's. Due to recurrent traffic loads, heavy down pour and ageing some of T03 road sections have been deteriorated such that there is significant number of pot holes that causing difficult passage of transit trucks. On the other hand the village has a total of 28km gravel local roads which are well maintained and passable throughout the year.

Railway

Rwakalemera village including Ngara District is not serviced with railway transport. According to the Feasibility Study Report prepared by East African Community in 2010 there is plan for construction a railway line from Isaka to Kigali (in Rwanda) via Rusumo village. It is envisage that constructions of Isaka - Rusumo - Kigali railway line will easy transportation of passengers and goods at Rusumo village and in Ngara District at large

4.10.2 Electricity

TANESCO is the sole supplier of electrical power at Rwakalemera village. Electricity supply in the village is not yet stable and faces a number of problems such as intermittent power supply, low voltage and rationing. In one way or another, these problems affect production of goods and services in the village. In order to eliminate problems related to power supply there is on-going Rusumo Hydro Power Generation Project under NELSAP which will produce about 80 MW to be equally shared between Tanzania, Rwanda and Burundi.

4.10.3 Telecommunication

There has been a recent improvement in telecommunications within Rwakalemera village. Six mobile phone service providers namely Airtel, tiGO, Zantel Vodacom, Halotel and TTCL are in operational at Rwakalemera village. With the exception of a few areas, almost all parts of the village can be reached by the mobile telecommunication networks. Radio and Television (TV) broadcasts already reached Rwakalemera village. TBC Taifa and Radio Kwizera are examples of radio broadcasts that can be received at Rwakalemera village

Nevertheless, like other parts in Tanzania the access of some television network at Rwakalemera village is subject to payment of monthly pre-paid service charges imposed at different rates depending on televised company and user requirement.

4.11Social Services Infrastructure

4.11.1 Health Facilities

Ngara district, like other rural councils in the region, experiences shortages of health facilities, practitioners such as Medical officer, assistant medical officers (AMOs), nursing officers, pharmaceutical technologist, laboratory technologist, nutritionist, assistant laboratory technologist, pharmaceutical technologist assistant, clinical officers (COs), dental surgeon, dentist, nurses, physiotherapist, environmental health officers, assistant environmental health officers, health assistant, medical attendant, radiologist and radiographic assistants. These shortages cause unnecessary loss of people's lives due to incomplete treatment of preventable diseases. Top ten diseases in Ngara district are ARI, Malaria, Diarrhea, Pneumonia, intestinal worms, other diagnosis, skin disease, eye condition, emergency surgical condition and ear condition.

Ngara district is still improving the health sector by constructing and renovating health facilities, especially dispensaries and health centers. Ngara district had remained with only 60 health facilities in the last five years covering with 6 health centers and 54 dispensaries. It is obvious that, the available facilities cannot serve the ever increasing population of the district. The council authority should continue motivating the community to participate in current initiative of construction more health facilities in order to meet health strategies as stipulated in the Policy. Implementation of the LADP projects in the health sector, which include dispensary and health centers is expected to improve the situation in the district. There is one Government health center located at Nyakaliba Village namely Lukole Health Centre, and Kasulo Dispensary while there is Laoudes Dispensary which is located at Rwakalemera Village and is privately owned.

Therefore, in case of any medical emergency during construction and operation phase the medical assistance may be obtained in these nearby health facilities.

4.11.2 Educational Services

Ngara District has 120 primary schools – 115 under public ownership while 5 are private owned. Also, there are 29 secondary schools of which 23 are public schools while and the other 6 are private owned.

Primary school pupils' enrollment dropped from 66,704 in 2013 to 61,164 in 2015 which was 8% decrease. The main reason attributed to the decrease of enrolment was the parents' financial inabilities to cover school/education expenses including fees. In 2018 the enrolment increased by 38% compared to that of 2015. The increase was said to be due to the introduction of the new Government policy of free education for primary and secondary education.

The proposed LADP I & II projects on construction of building facilities for primary schools (Kyenda, Kasulo, and Mukubu) and secondary schools (Nyamiaga, Rwakalemera and Bukiriro) are likely to improve the delivery of education services in the villages and the district at large.

4.11.3 Ethnic Groups

Ngara District council is among the eight district councils in Kagera region; experiencing slow population growth by natural birth and moderate population growth by migration. As a result, more ethnic groups are found in the council. However, among all people, the council has three main ethnic groups namely Hangaza, Shubi and Haya. Hangaza being the main ethnic group occupy most wards of the council, while Shubi occupy most of the Rulenge division and Haya are found mostly in Bugufi i.e. Kanazi and Nyamiaga Divisions especially in the high altitudes

4.11.4 Sanitation Services

With the exception of town centres such as Ngara Town, more than 90% of the households in the rural areas of the district use traditional pit latrines. There is an ongoing campaign in the district to ensure that each household owns and uses a latrine. The fact that only about 0.02% of the households is without toilets indicates success of the campaign.

4.11.5 Water Supply

The National Water Policy requires every person to get water within short distance from an improved source of water, such as piped water, protected boreholes, dug wells and springs. The region, therefore mainly uses different types of water sources including shallow wells, bore holes, charcoal dams and surface water such as springs, lake, river and rain water harvesting. The Village where the proposed project is located depend water from Benako-Nguvu Kazi (BENGUKA) spring water.

Table 21: Number and Type of Rural Water Sources by Ward, Ngara DC; 2015

Water Source	Working	Percent Working	Not Working	Percent Not Working	Total	Percent Source
Charcoal	0	0	0	0	0	0
Spring	176	84.2	33	15.8	209	29.2
Shallow wells	236	112.9	50	17.5	286	39.9
Rain Water Harvesting	78	37.3	6	7.1	84	11.7
Bore Holes	24	11.5	4	14.3	28	3.9
Piped Scheme	38	18.2	7	15.6	45	6.3
	Permanent	Percent	Season	Percent		
River water	64	100	0	0	64	8.9
Lake	0	0	0	0	0	0
Dam	0	0	0	0	0	0
Total	**616**	**86.0**	**100**	**14.0**	**716**	**100**

Source: Compiled data from district executive director's office, Water Supply and Sanitation Department, 2017

4.11.6 Financial Services

Only two financial institutions are operating in Ngara DC which is NMB and CRDB Bank. There is also a Microfinance institution which is operating in the district. This is an indication the council is in need of more financial institutions as there is an increase of number of formal and informal small scale businesses. Also the District council has some credit facilities targeted to women and youth. These credit facilities are provided to individuals as well as group for economic activities. Moreover, the increase in Mobile Money transactions such as Tigo pesa, Hallo Pesa, Mpesa and Airtel money has accelerated the growth of the financial services in the Ngara Town and Ngara District. Within the project Village there is no any operating financial institute rather they depend on mobile networks for monetary transactions.

4.12 Income Poverty Rate, Poverty Gap and GINI Coefficient

The Poverty Gap is an estimate of how far the poor are below the poverty line, expressed as a percentage of the poverty line. The GINI coefficient is a measure of equality of the income distribution. A measure of 100 corresponds with complete inequality; a measure of 1 corresponds with complete equality. District poverty and GINI estimates show a negative correlation, indicating that low poverty rates are associated with a high inequality in income distribution.

According to the 2015 REPOA report (Where are the poor poverty map), Ngara District Council was among the low income councils on Tanzania Mainland in regard to the least number of people living below the basic needs poverty line. The Report indicates 41.7 percent of Ngara DC residents live below the basic needs poverty line.

The situation is different as regards to the GINI Coefficient Rate. All councils had better inequality and variation in the distribution of wealth in Kagera region

4.13 Database for Monitoring

To facilitate easy follow up and monitoring of socio-economic activities and development processes in general at the village level functional departments of Ngara District Council should be encouraged to track and keep in their databases data of their particular performance indicators at village level.

Each functional department should be required to update data using the variables contained in the Socio-Economic Profile of the District so as to enable one to make updated interpretation of the variables contained therein.

CHAPTER FIVE: STAKEHOLDERS CONSULTATION AND ANALYSIS

5.1 Introduction

The Environmental Management Act 2004 provides directives and guidelines on public participation during the EIA process. Regulation 17 under Part IV of the EIAAR 2005 stresses that "the Proponent or proponent shall in consultation with the Council, seek the views of any person who is or is likely to be affected by the project". Section 89 of the EMA No. 20 of 2004 provides directives on public participation issues and its importance in ESIA. The EIA and Audit Regulations of 2005, provides further details and procedures for public participation in environmental assessments. Nevertheless; World Bank Environmental and Social Standards (ESS10: Stakeholder Engagement and Information Disclosure) recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation. Generally; Stakeholders involvement ensures all interested and affected parties are involved in the project.

Consultations with stakeholders were carried out by consultant with the assistance from counterpart staffs from Ngara District Council. Consultation took place in the project community. Interviews were conducted with village government officials, local people representatives, Ngara District officials and Regional level officials.

5.2 Stakeholders Consultation Methods

5.2.1 Semi-Structured Interviews with Key Informants

Semi-structured interviews were conducted with key informants at the, village, district and regional levels. At the district level semi-structured interviews were conducted with District Executive Officer and functional departmental staffs namely District Planning Officer (DPLO), District Land and Natural Resources Officer (DLNSO), District Manager - RUWASA, District Environmental Management Officer (DEMO), District Livestock Officer and Fire Department. At regional level the semi-structured interviews were conducted with Occupational Safety and Health Authority (OSHA).

At the village level semi-structured interviews were conducted with Village Chairperson, Village Executive Officer (VEO) Ward Executive officer (WEO) and other Village Council members with representatives from Villagers. These interviews enabled the consultant to have in-depth information on the socio-economic, political and cultural conditions of the people in the proposed project areas. The knowledge gained from the interviews helped the consultant to make evaluation of the socio-economic and cultural impacts.

5.2.2 Indoor Village Consultation Meetings

In the village, with the proposed project, the consultant made an indoor consultation meeting with the village council members and village influential persons. Subjects of discussion included

the village social, economic, political, and cultural aspects including life styles of the community people and main ethnic groups of the village.

5.2.3 Public Village Consultation Meetings

Before conducting meeting, letters were sent to the selected villages in Ngara district with the proposed project. These letters were sent prior to the commencement of the study. The main aim of the stakeholder village consultation meetings was to inform the stakeholders about the proposed project and incorporate their views in the design of the mitigation measures. The specific aims of the consultation process were to; reduce problems of institutional coordination; provide precise information about the project to the communities; obtained the main concerns and perceptions of the stakeholders regarding the projects; and obtain opinions and suggestions directly from the affected communities on their preferred mitigation measures. The public stakeholder village consultation meetings were also intended to collect information regarding sources of livelihood, living standards, and views and perceptions of the communities regarding the proposed projects.

5.3 Consultation Process and Stakeholders Consulted

The overall goal of the consultation process was to disseminate Project information and to incorporate the views of stakeholders in the design of the environmental mitigation measures, management plan and monitoring plan. The specific aims of the consultation process were to improve project design and hence minimize conflicts and delays in implementation; Increase long term Project sustainability and ownership; and to gather the information needed to complete the assessment. Stakeholders consulted include those at village, district and regional levels. Stakeholders consulted include those at village and district level. List of Stakeholders consulted and minutes during village meetings is as shown in Appendix 1.

Table 22: Consulted Stakeholders

Date	Venue	Stakeholders	Participants
09.11. 2021	Ngara District Council Conference Room	Ngara District Council Departmental Staffs	24
09.11. 2021	Ngara LADP Office	Ag. Environmental Officer & LADP Coordinator	4
09.11. 2021	Ngara District TANESCO Office,	Ag Ngara District TANESCO Manager, TARURA	7
06.11. 2021	Rwakalemera Village Office	Direct and indirect project beneficiaries, and Village leaders.	183
Total			**218**

Figure 13: Consultation meeting with village council members and DC Departments

Source: Site Visit November/2021

5.3 Stakeholders' Major Concerns, Comments and Recommendations

Stakeholders' major concerns, comments and recommendations are presented in the Table 23 below. Responses to the same are given in the last column of same table

Table 23: Concerns and Issues from Stakeholders' Consultations

S/N	Stakeholder	Issue/concern
1	District Executive Director (DED)	- Wider stakeholder consultations and community involvement with regard to land issues should be done before construction. The council will work very closely with the Ministry of land to make sure that the land acquisition issues are completed as soon as possible. - In order to avoid delays of the implementation of the proposed project, there should a memorandum of understanding between World Bank, NELSAP and Ngara DC
2	District Environmental Management Officer (DEMO)	- The issue was how environment can be protected to avoid environmental degradation. The district has managed to have bylaws which govern. The bylaws have been adopted from Environmental and Management act No.20 of 2004. - As a department for environment has managed to prepare monitoring strategies which will govern contractor from extracting construction materials. All materials must be sources from the designated areas. - Ward Executive Officers have been given bylaws which govern them on how communities are required to take care of their environment as per set guidelines. The issue still in question due to irresponsible leaders. - Management of solid waste is still a problem though the project design considered it. - Environmental Education should be properly provided to local residents and staffs for management and sustainability.
3	District Community and Development Officer (DCDO)	- Community development had to be involved from the initial stage of the project development. - Each department should know that community development is a crosscutting issue that should be shared to the department too; DCDO has to be involved at early stages of the project to have better community participation.

S/N	Stakeholder	Issue/concern
4	District Land and Natural Resource Officer (DLNRO)	- The department is well informed about this proposed project. Currently we are processing land acquisition and building permit before commencing further stages. - The proposed area has no any conflict since it is willingly provided by Village Leaders through Village General Assembly. - The law on land ownership should be fully disseminated and land coverage should be well allocated to have a certificate and legal right on land provided.
5	District Planning Officer (DPLO)	- Education on proper land use plan should be given to all communities and to instruct them not to offer lands illegally to investors without prior permission.
6	Fire and Rescue Force Office-Ngara.	- Collaboration is needed for all stakeholders of have firefighting network and brigade with the same trainings to workers - Communication on security issues should be on regular basis - Site operation and safety procedure should be observed - Mitigation to eliminate / manage risks should be in place
7	Kasulo Ward & Rwakalemera Village Officials	- Employment should be given to the local people surrounding the project site - Local suppliers to be given priority during construction stage - The contractor should extract construction materials in an environmentally friendly ways. - They should participate in programs of developments of the Village - They should consider the safety of their workers

Source: Consultant's Field Data, November/2021

5.4 Summary of Key Concerns

A number of issues and concerns emanated from the stakeholders consulted. Key issues raised were in relation to the potential impacts of the proposed project on the environment and surrounding communities as well as the district at large. Table 24 below gives a summary of the major issues.

Table 24: Summary of Stakeholder' Key Concerns

S/No	Major issue, concern and recommendation	Description
1	Compliance to National laws	Prior to project commencement, the Proponent must acquire all legal permits
2	Conservation of project	Proponent and beneficiaries are advised to collaborate with

S/No	Major issue, concern and recommendation	Description
	site's environments and its surroundings	other stakeholders by initiating various environmental conservation programs within and around the project area in all project phases.
3	Creation of employment	Employment opportunities will be obtained in the construction and operation periods and the priority will be given to local people.
4	Improvement in Business opportunities	The project design is giving priority to local vendors by establishing special block with cubes and nearby spaces for running small businesses whilst on the other hand, local suppliers will be given priority during construction phase
5	Negative Impacts such as Management of hazardous wastes, air and noise pollution; health hazards to workers and nearby community, Water pollution	The structural designs will consider sanitation facilities to eliminate or reduce the anticipated detrimental impacts

Source: Consultant's Analysis from Stakeholders Consultation

CHAPTER SIX: ASSESSMENT OF IMPACTS AND IDENTIFICATION OF ALTERNATIVES

6.1 Introduction

This chapter describes an assessment and analysis of the physical, biological and human environment impacts identified during ESIA. Since the proposed construction activities are in groupings that fall under similar geographical area, impacts were assessed in terms of their magnitude (size) and significance (importance) and actions necessary to mitigate them. Impacts' monitoring requirements are summarized in a section of this report. The proposed project is expected to have some impacts on certain aspects of the physical, biological and human environment of the proposed project area. These impacts may occur during construction or operation or during decommissioning phases. These impacts may be beneficial (positive) or negative.

6.2 Impacts Identification and Analysis

Impact identification is a process designed to ensure that all potential significant impacts are identified and taken into account in project design and implementation. A number of 'tools' are available to assist in impact identification. The simplest, and most frequently used, are checklists of impacts, although matrices, network diagrams and map overlays are also commonly used. In this study, a checklist and matrix methods were used. The checklists, developed from previous experiences, provide lists of potential impacts associated with specific activities. They provide a quick method of identifying the impacts and in such help also practitioners to avoid overlooking some of potential of the impacts associated with a particular activity. The matrix provides a rather systematic way of evaluating the identified impacts.

The Impact Identification Checklist was used for identification of impacts associated with the proposed project at different phases. The identification of impacts was based on the interaction between project activities during pre-construction or mobilization, construction, decommissioning or demobilization of the project and the characteristics of the project environment that could be affected. The main receptors of impacts associated with the anticipated project include human livelihood, public health and safety, physical environment (hydrology, surface water quality, soils, geology, vibration, air quality and noise) and biophysical environment (vegetation characteristic and fauna). In general, parking bay construction is for public interest, it has significant positive socio-economic impacts to the national, regional and local levels. Therefore; the project is accelerated to have potential impacts whilst on the other hand the proposed project contributes negative impacts to the general environments.

6.3 Potential Impacts during Mobilization and Construction Phase

Construction phase shall begin with the site preparations for construction works to take place. Construction Impacts have the potential to create nuisance for residents in the neighborhood, however these shall be managed within acceptable limits. In addition the construction impacts are also temporary in nature.

6.3.1 Potential Positive Impacts

6.3.1.1 Employment Opportunities

Both direct and indirect forms of employment shall arise from the project initiation. Direct employment will be mainly through skilled and unskilled laborers whose workforce shall be needed to construct the parking bay and the ancillary infrastructures. Employment opportunities will be a benefit both in economic and social sense. In the economic sense it means abundant unskilled labour will be used in economic production. Several workers including casual laborers, masons, carpenters, joiners, electricians and plumbers are expected to work on the site for a period that the project will start to the end. Apart from casual labour, semi-skilled and unskilled labour and formal employees are also expected to obtain gainful employment during the period of construction. *This impact is considered to be direct, positive, short-term and of moderate significance.*

6.3.1.2 Increased Income to Rwakalemera Villagers

There is an expectation that majority of unskilled labours will be employed from residents of Rwakalemera village. This will increase the income to local people who might have the opportunities to be employed by the contractor. However, some of the villagers, especially women will also get opportunity to sell food items to the construction workforce, thus increase income at the household level. *This impact is considered to be direct, positive, short term and of high significance*

6.3.1.3 Benefit to Local Producers and Suppliers of Construction Materials

Construction of the parking bay and ancillary infrastructures has considered the use of local laborers and local available materials at Benaco Mini-Town. This is economically and socially viable hence streamed as the efforts to improve the standards of living for local suppliers. *This impact is considered to be direct, positive, short term and of low significance.*

6.3.1.4 Increased Human Capital

Villagers may gain new skills and knowledge from the people outside the village coming to seek employment in the project. *This impact is considered to be direct, positive, short-term and of moderate significance.*

6.3.2 Potential Negative Impacts

6.3.2.1 Air Pollutions (Fugitive Dust and Exhaust Emissions)

The proposed construction activities will involve trench and foundation excavations, transportation construction materials, as well as, handling of cement bags. This is likely to

generate dust in and around construction site. Exhaust emissions from the trucks, machinery and construction equipment are likely to generate mixture of toxic gases such as carbon monoxide (CO), nitrogen oxides (NOX), Oxides of sulphur (SOX), Hydrocarbons (HC) and Suspended Particulate Matter and possibly Lead (Pb). Dust and exhaust emission may create nuisance and in extreme cases may lead into adverse health impacts. *This impact is considered to be direct, negative, long term and of high significance.*

6.3.2.2 Soil erosion

Clearance of vegetation due to construction activities will leave considerable soil surface to be exposed and can be easily eroded by runoff. Movement of heavy equipment to the site may lead into soil compaction and soil erosion. *This impact is considered to be direct, negative, long term and of high significance*

6.3.2.3 Population Influx (Labor Influx)

In many cases, labor influx is compounded by an influx of other people (followers) who follow the incoming workforce with the aim of selling them goods and services, or in pursuit of job or business opportunities. The influx of workers and followers can lead to adverse social and environmental impacts on local communities, especially if the communities are rural, remote or small. Such adverse impacts may include increased demand and competition for local social and health services, as well as for goods and services, which can lead to price hikes and crowding out of local consumers, increased volume of traffic and higher risk of accidents, increased demands on the ecosystem and natural resources, social conflicts within and between communities, increased risk of spread of communicable diseases, and increased rates of illicit behavior and crime. These impacts need to be well mitigated. *The impact is considered to be negative of short-term duration with high significance*.

6.3.2.4 Increased Risk of GBV, SEA and Harassment

Males seeking employment in the project are likely to come there without their spouses. Women and girls are at risk of gender-based violence from such males seeking forced social relationships. Victims of violence can suffer sexual and reproductive health consequences, including forced and unwanted pregnancies, unsafe abortions, traumatic fistula, sexually transmitted infections including HIV, and even death. *This impact is considered to be direct, negative, short term and of high significance*

6.3.2.5 Generation of Liquid Waste

Contractor's workforce to be involved for construction of parking space, buildings sanitary and ancillary facilities will generate liquid waste consists of grey water, urine and faecal matters. If not properly managed, the anticipated liquid waste from construction workers can significantly impair aesthetic value of the proposed site and cause threat to public health. *This impact is considered to be direct, negative, short term and of high significance.*

6.3.2.6 Generation of Solid Wastes

It is obvious that the proposed project construction activities will be associated with production of solid wastes. These waste streams are likely to be generated from fabrication and domestic activities of the workers at the construction site. The type of solid wastes likely to be generated during construction activities include vegetation residues, garbage, pieces of wood, excess soil materials, cement paper bags, pieces of bricks, plastic materials (bottles and bag), broken pipes, pieces of metals and paint containers. All these if not well handled can cause environmental pollution and health risk to workers and nearby community. *This impact is considered to be direct, negative, short term and of high significance*

6.3.2.7 Generation of hazardous waste

Repair and maintenance activities of construction machinery and equipment will produce significant quantity of hazardous wastes including used oil filters, scrap metals, waste oils, greases and used batteries. However, construction of structures such as buildings will result into generation of hazardous wastes including sharp objects (e.g. broken nails) and waste containers used for material packaging. Improper handling of the generated hazardous wastes can lead into soil contamination, underground water pollution and public health threat

6.3.2.8 Vegetation clearing

Since the proposed site has already cleared all vegetation covers and the anticipated impacts to be zero or less but still all construction activities must be confined in the project site to avoid distortion of nearby vegetation. *This impact is considered to be direct, negative, short-term and of low significance*

6.3.2.9 Change of Landscape of the Area

Part of the project site has characterized by exotic trees and shrubs hence construction activities in such an environment will definitely change the natural appearance of the place. *This impact is considered to be direct, negative, long-term and of low significance*

6.3.2.10 Noise Nuisance and Vibration

Construction activities are expected to produce point source noise, which is defined as noise that remains in one place for extended period of time. For example, noise which will be generated from trucks, jackhammers, or excavators working in one location. Noise from a point source spreads spherically over distance, and travels in all directions equally from the source. Noise nuisance may also occur due to operation of construction machinery / equipment and movement of trucks transporting construction materials to the site. The significant noise is expected from operation of noise creating equipment like grader machinery, bulldozer, excavators and concrete mixture. *This impact is considered to be direct, negative, short term and of low significance*

6.3.2.11 Soil and Water Quality Contamination

Project related with removing of earth materials could lead to soil and ground water quality degradation. Contaminated soil or ground water in the path of the project could be disturbed by

excavation resulting in a potential transfer of the contaminants to surface waters. The excavated area, if linear could act as a conduit to extend groundwater contamination to new areas. Spills of hazardous materials in excavated areas during construction could introduce contaminants to ground water. The machines on site may be containing moving parts which will require continuous oiling to minimize the usual corrosion or wear and tear. Possibilities of such oils spilling and contaminating the soil and water on site are real. Likewise, moving vehicles on site may require oil change. *It is expected that the impacts will be mild, local, and they will occur mostly during the construction stage (short term)*

6.3.2.12 Disruption of Traffic Flow

According to the project location and accessibility, Lusahunga-Rusumo trunk road will mainly be used for the entire construction period. The movement of construction vehicles/trucks to and from the construction site may result into disruption of traffic flow, hence risk of accidents along the access road. During construction, there will be frequent turning of trucks from and to the construction site. This could result into disruption of movement of traffic along the access road and if no measures are taken it could result into accidents. *This impact is considered to be direct, negative, short term and of medium-term significance*

6.3.2.13 Creation of occupational health and safety risks

During construction of the proposed project, it is expected that construction workers are likely to have accidental injuries and hazards as a result of handling hazardous waste. Because of the intensive engineering and construction activities including erection and fastening of roofing materials, metal grinding and cutting, concrete work, steel erection and welding among others, construction workers will be exposed to risks of accidents and injuries. At times, such injuries may be from accidental falls from high elevations, injuries from hand tools and construction equipment cuts from sharp edges of metal sheets and collapse of building sections among others. Personal Protective Equipment (PPE) will accordingly be provided. Furthermore, during construction phase, workers are also likely to be exposed to diseases from building materials. It is therefore recommended that before the construction commences, there is need for the materials to be well inspected according to the occupational health and safety standards.

With clear instructions, safety measures, awareness training and protective equipment in place there are no features of the Project that would result in a higher potential for accidents, malfunctions, and unplanned events resulting in harm to workers, the public, or the environment to occur.

With the anticipated considerable number of workers and visitors, the social interaction among them may not be avoided and will be of high significance. Considering the nature with which HIV/AIDS is contracted and spread, this makes a significant contribution to the pandemic. The beneficiaries of some of the activities within the facilities especially youth and women are the most venerable group to that social interaction due to their social economic background. With the mitigation measures in place, the residual impact is none to insignificant.

Other public health hazards could occur due to high congestion of people into a small area where disease like TB, eye disease, upper respiratory tract infections and spread of COVID 19 etc. may occur.

Also at the work place environment there are several issues on occupational health and safety has to be comply with which include the following;

- **Ergonomics hazards** (long standing hours, long working hours, working in confined space and lightning hazards.)
- **Biological hazards:** Physical risk factors to which workers are exposed on construction site include noise from vehicles, extreme air temperatures (hot and cold) during the seasons with extreme temperatures characteristic of a project area risk factor include contact with the bacteria, viruses, fungi which the construction workers come into contact due to diversity of people.

The impact is considered to be negative of short-term duration with high significance.

6.3.2.14 Risk of increased incidence of HIV/AIDS and STIs.

The main health risk associated with the project relates to the HIV/AIDS epidemic. Considering the socio-economic as well as geographical characteristics of the project area, there exist a number factors (including poverty) that either may influence high infection rate, or deter efforts to combat the epidemic. For example, the problem of low or irregular incomes among young women aged 15 – 45 years is the HIV/AIDS risk factor, which can influence high infection rate in the project area. It is expected that the project will increase interaction between people in the cause of livelihood sustenance or social relaxation.

6.3.2.15 Land Degradation from Extraction and Use of Building Materials

Most of the building materials such as hard core, ballast, rough stone and sand required for construction of the proposed project will be obtained from quarries and sand harvesters who extract such materials from natural resource banks such as rivers and land. Since substantial quantities of these materials will be required for construction of the development, the availability and sustainability of such resources at the extraction sites will be negatively affected as they are not renewable in the short term. In addition, the sites from which the materials will be extracted may be significantly affected in several ways including landscape changes, displacement of animals and vegetation, poor visual quality and opening of depressions on the surface leading to several human and animal health impacts. *This impact is considered to be direct, negative, long term and of high significance*

6.3.2.16 Child labour, forced labour and human trafficking

Child labour, forced labor and human trafficking are the results of many factors, including poverty, social norms condoning them, lack of decent work opportunities for adults and adolescents, migration and emergencies. These factors are not only the cause but also a consequence of social inequities reinforced by discrimination. The project Proponent,

Contractor, Consultant engineer and other stakeholders need critical attention to abide with employment Act No.6 (2004)

6.3.2.17 Teenage Pregnancies

Teenage pregnancies are a global problem as well as Tanzania in particular but occur most often in poorer and marginalized communities. Early pregnancies remain the major contributors to maternal and child mortality whilst complications relating to pregnancy and childbirth are the leading cause of death for girls aged 15-18. Adolescent pregnancy can also have negative social and economic effects on girls, their families and communities such as drop out of schools, limiting opportunities for future employment, perpetuating poverty cycle, etc. Nevertheless; the proposed project will cause high socio interactions both during construction and mostly during operation phase. Trucks' drivers who are mostly Men and other service providers will highly interact with local community at Rwakalemera Village (Benaco area) the state that may cause sexual interaction and sexual infidelity.

6.4 Demobilization Phase

6.4.1 Positive Impacts

6.4.1.1 Restored Clean Site

It is anticipated that soon after completion of construction works for the proposed Parking Bay project, the Contractor will be caused to remove all unwanted and left over materials from the site. Similarly, all loose soil found within excavated areas either within or along the project site will be backfilled and properly compacted to allow uninterrupted use of land by the general public. *This impact is direct, positive, long term and of medium significance.*

6.4.1.2 Vegetation Regeneration

Proper backfilling of the excavated areas within and along the project site will allow vegetation growth and thus contribute to improve scenic beauty of the surrounding hence it will support regeneration of planted vegetation which had been uprooted during project construction stage. *This impact is direct, positive, long term and of medium significance.*

6.4.2 Negative Impacts

6.4.2.1 Loss of income generating opportunities by local people

The local people who will be benefiting from the project during construction phase through selling of their commodities and services to the construction workers will lose the created potential market during previous phase. This situation will result into loss of household income to Rwakalemera villagers. *This impact is direct, negative, long term and of high significance.*

6.4.2.2 Loss of Temporary Employment

Laborers who will be employed during the construction phase will lose job after decommissioning of the project phase. Some labours may change job and be employed to work on industries that will emerge and some may leave the place for other jobs in other areas. In most cases most laborers employed during construction phase are semi-skilled laborers that move to seek for similar jobs in other areas. *This impact is rated as moderately significant with wide spread impact occurring over short period of time.*

6.5 Potential Impacts during Operational Phase

The operation of the proposed parking yard and associated facilities will potentially be related to changes in the biophysical and socio-economic environment within and around the project area.

6.5.1 Positive Impacts during Operation Phase

6.5.1.1 Enhanced Income, Employment Opportunities and Local Business

The existence of a parking bay with its facilities is likely to attract other service providers in the area, provide considerable employment opportunities and spur local business. This will in turn boost income of the local people consequently improving the welfare of the local community. *This impact is a direct, positive, long term and of high significance.*

6.5.1.2 Increase in Revenue

There will be positive gain for the revenue system arising from the parking yard services through parking fees, taxes and duties. This is in addition to the annual rates to be paid to the council. *This impact is a direct, positive, long term and of high significance*

6.5.1.3 Improved Security

Sufficient security arrangements at the proposed development project will ensure higher the level of security enhancement around the project area. *This impact is a direct, positive, long term and of medium significance*

6.5.2 Potential Negative Impacts

The proposed development will cause significant disturbances within the area which shall be kept at controllable levels.

6.5.2.1 Air pollution

The main sources of air pollution include evaporative losses of Volatile Organic Compounds (VOCs) of fuel combustions, exhaust emissions from trucks parked at the yard and generator. Petroleum products contain volatile organic compounds (VOCs) that evaporate from parked trucks. Major harmful effects of VOCs from parking yard would include:

- Enhancing the formation of ozone and fine particulates in the atmospheres thus causing smog
- Presenting a potential health risk to the public as it contains benzene, a carcinogen and

- A nuisance to people in the vicinity

Similarly, emission of exhaust gases (carbon dioxide (CO2), carbon monoxide (CO), and nitrogen oxides (NOX) from vehicles transporting and refilling fuel are also inevitable. The impact of air pollution is considered to be negative of long-term duration and high significance.

6.5.2.2 Environmental pollution from Leaks and Spills

Among the most significant environmental issues from parking yard operations are oil leakages/spills from trucks/vehicles at parking area, servicing and washing bays particularly during replacement and parts repairing. Experience has shown that oil spills from trucks servicing and storage areas are the principal sources of soil and ground water contamination.

Fuel leakage and spills will have impacts to the water resources (e.g. groundwater wells or surface water reservoirs used for potable water purposes) and might also affecting the soil quality. Hydrocarbons escaping from containment may enter the soil directly beneath the site or around its perimeter and have detrimental effect on the flora and fauna within the contaminated area.

Nevertheless; Engine and transmission lubricating oils, both new and used, are stored on site in metal containers and storage tank. The quantities vary from day to day in consideration of number of repaired vehicles. The compositions of automotive lubricating oils contain more additives. Contaminants in used oils are mainly heavy metals and products of combustion, for example: lead from fuel, copper from engine bearings, a range of metals from other parts of the engine unburnt fuel products of combustion, for example polycyclic aromatic hydrocarbons

Polymerized glycols and others are the main constituents of brake fluid. Brake fluids are changed at regular intervals during vehicle servicing, and waste fluid is generated during repair work on brake systems. Brake fluid shall not be dumped into septic systems, gutters, and storm systems or onto the ground. It should not be disposed of in the trash. Used brake fluid is a hazardous waste and cannot be released into the environment. *Therefore, the impact is then considered to be negative of short-term duration with high significance*

6.5.2.3 Risks of Fire and Explosions

There are potential impacts to worker and community safety as well during the operation phase due to the risk associated with presence of electrostatic, handling of fuel, vehicles diesel tanks and fuel spillage at a garage. Petroleum products are highly inflammable and the accidents could occur from mis-handling, poor storage of the products and human error, which may result into fire hazards. Fire and explosion hazards within a site may result from the presence of combustible gases and liquids, oxygen, and ignition sources during offloading and dispensing activities, and / or leaks and spills of flammable products. Possible ignition sources include sparks associated with the buildup of static electricity, lightning and open flames.

6.5.2.4 Disruption of traffic flow

According to the project design there is one major access road (Lusahunga-Rusumo trunk road) which is connected with entrance and exit ways at the parking bay. Regular movements of

vehicles/trucks to and from the parking bay may result into disruption of traffic flow, hence risk of accidents within or along the access road. During operation, there will be frequent turning of trucks from and to the parking bay, servicing bay and washing bay. This could result into disruption of movement of traffic within and along the trunk road and if no measures are taken it could result into accidents. *This impact is considered to be direct, negative, long-term and of medium-term significance*

6.5.2.5 Generation of solid waste

Solid wastes to be generated from the parking bay are food leftovers, empty water bottles, normal office papers and trash, filters, metal scrapers, used tyres and batteries, empty oil tins, contaminated spill cleanup materials and contaminated soils since the trucks grabbing soils and other contaminated wastes on tyres. Mismanagement of solid waste could be a source of blockage of drainage systems within the parking bay. Blockage of drainage system could in turn result in flooding of the project site whilst mismanagement of this waste may lead into environment pollution hence creates health risks and poor aesthetic of the project site. *Then the impacts is considered negative, long term and of medium significance*

6.5.2.6 Generation of liquid Waste

The most significant source of liquid effluents include storm water runoff from parking area, automobile repair area, washing bay as well as sanitary effluents. Also the liquid waste may include waste lubricating oil, solvents for parts cleaning, oily rags from automobile repair operations, waste oil and oily solids from sediment traps from oil-water separator. *Therefore, the impact is then considered to be negative of long-term duration with high significance*

6.5.2.7 Noise pollution and vibration

During Operation, sound emissions are not expected to differ greatly from that associated with other similar commercial activities on the area. Residential properties are situated approximately 32metres from the parking yard's boundary, and thus any sound emissions associated with the operation of the Project should be attenuated to near background levels by the time they reach the nearest residential receptor. Therefore, the potential for sound emissions from the Project to adversely affect nearby residences or the general public is expected to be very low, and likely largely confined to the Project site.

The principal sources of noise at the parking yard will be traffic movement and diesel generator running only during power outage. It is, therefore, concluded that the existing noise level, beyond the premises, will remain practically unaffected and would be within commercial-residential area noise level standards. Mitigation measures will be required to reduce the impact for those who are potential for a prolonged exposure above allowable limits and for protection of other people working around the parking yard. *The impact is then considered to be negative of short-term duration and low significance.*

6.5.2.8 Underground water pollution due to Oil Leakages and Oil Spill

The parking area is at an open space. The whole area is paved by concrete pavements. Due to frequent movements of vehicles/trucks lead to dismantling of paved surface. The loosed surface can be perished away and left the soil exposed. Any leakages and spills from vehicles/machines can lead into soil contamination. Failure to schedule regular maintenance of the concrete surface can lead into completely dismantling of concrete paved surface. Furthermore, discharged contaminated effluents from Oil-Water separator and the generated waste oil from automobile repair and washing bay if not well managed may lead into soil and underground water contamination through percolation process. *The impact is considered negative, short term and of medium significance*

6.5.2.9 Soil erosion

Soil erosion is expected to be less severe during the operation phase due to a paucity of earthwork activities and re-vegetation of exposed soils. However, erosion and gully formation may occur during heavy rains, in area with no proper drainage channels with inclined land. *The magnitude of the impact on geology and soils is relative low negative.*

6.5.2.10 Creation of public health risks

Sludge that can be generated from trucks/vehicles parking yard operations especially cleaning of storage tanks and which will be collected from oil interceptors needs proper disposal. Other solid wastes are normal office papers and trash, filters, empty water bottles, metal scrapers and empty oil tins. Food leftovers from food vendors is another source of organic solid wastes that are mainly collected and disposed through the contracted contractor at waste disposal logon whilst the metal scrapers are being collected by recyclers. Poor management of these solid wastes may cause detrimental impacts hence public health risk

The pollution impact that may result from poor disposal of solid waste is considered negative, long term and of high significance.

6.5.2.11 Creation of occupational health and safety risks

Occupational exposures may be most likely related to thermal contact with maintenance/repair activities at the garage lot and at open spaces of the parking area. Moreover, community health and safety issues associated with the operation of parking yard are generally negligible for well-designed and managed facilities. These may include potential public exposure to spills, fires, and explosions.

6.5.2.12 Increased Risk of GBV, SEA and Harassment

Many trucks' drivers are likely to be Males who are seeking employment in the project are likely to come there without their spouses. Women and girls are at risk of gender-based violence from such males seeking forced social relationships. Victims of violence can suffer sexual and reproductive health consequences, including forced and unwanted pregnancies, unsafe abortions, traumatic fistula, sexually transmitted infections including HIV, and even death. *This impact is considered to be direct, negative, short term and of high significance*

6.5.2.13 Child labour, forced labour and human trafficking

Child labour, forced labor and human trafficking are the results of many factors, including poverty, social norms condoning them, lack of decent work opportunities for adults and adolescents, migration and emergencies. These factors are not only the cause but also a consequence of social inequities reinforced by discrimination. The project Developer and the respective facility need critical attention to abide with employment Act to promote child human rights.

6.5.2.14 Risk of infrastructure vandalism

Parking Bay commonly experience vandalism and theft of various properties during operation phase. For the proposed parking bay project these acts of vandalism may take a number of forms including fuels theft from trucks storage tanks, theft of valuable spare parts and other mechanical accessories leading to an increase in the maintenance costs and state of trepidation to clients. Vandalism and theft acts will totally jeopardize the proposed parking bay and subsequently cause directly loss of revenue to village and District Government as well as huge loss of public funds

6.5.2.15 Teenage Pregnancies

Teenage pregnancies are a global problem as well as Tanzania in particular but occur most often in poorer and marginalized communities. Early pregnancies remain the major contributors to maternal and child mortality whilst complications relating to pregnancy and childbirth are the leading cause of death for girls aged 15-18. Adolescent pregnancy can also have negative social and economic effects on girls, their families and communities such as drop out of schools, limiting opportunities for future employment, perpetuating poverty cycle, etc. Nevertheless; the proposed project will cause high socio interactions both during construction and mostly during operation phase. Trucks' drivers who are mostly Men and other service providers will highly interact with local community at Rwakalemera Village (Benaco area) the state that may cause sexual interaction and sexual infidelity.

6.5.2.16 Traffic and non-traffic occupational accidents

Road traffic and non-traffic injuries cause considerable economic losses to individuals, their families, and to nations as a whole. These losses arise from the cost of treatment as well as lost productivity for those killed or disabled by their injuries, and for family members who need to take time off work or school to care for the injured. Road traffic crashes cost most countries 3% of their gross domestic product. Regarding the scope of the proposed project traffic and non-traffic accidents are mostly likely to occur especially during trucks entrance and exit, during trucks maneuvering, trucks collision, trucks fall, etc

6.5.2.17 Spreading of HIV, other STIs and Covid-19 among workers and visitors in the project area

With the anticipated considerable number of workers and visitors, the social interaction among them may not be avoided and will be of high significance. Considering the nature with which HIV/AIDS is contracted and spread, this makes a significant contribution to the pandemic. The beneficiaries of some of the activities within the facilities especially youth and women are the most venerable group to that social interaction due to their social economic background.

Other public health hazards could occur due to high congestion of people into a small area where disease like TB, COVID-19, eye disease, upper respiratory tract infections and many may occur.

6.6 Potential Impacts during Decommissioning Phase

The Project will be designed, built, and maintained to operate efficiently for several decades. The expected life span of the Project does not expected at the near future.

Decommissioning may involve excavation and other activities which will lead to temporary increase in noise and vibration as well as air pollution due to dust emissions. The deconstruction of buildings and dismantling of sewerage and drainage systems will also result in the creation of both hazardous and non-hazardous waste which needs to be handled according to waste management regulations.

The earth moving works during top soil replacement will lead to significant deterioration of the acoustic environment within the area and the surrounding areas. This will be as a result of the noise and vibration that will be experienced from machines and workforce being utilized. Dust will also be emitted affecting the surrounding environment.
People working on the proposed parking bay will inevitably be laid off but during the decommissioning phase there may be short-term jobs created by the decommissioning works.
The decommissioning works will involve occupational health and safety risks similar to those of the construction phase. However, in case of decommissioning the following impacts may happen:

6.6.1 Loss of Aesthetics due to Abandoned Project Facilities

In closure of the project, the proponent may decide to demolish the facilities including all other temporary structures. Loss of aesthetics may result from the demolished waste remaining on site for a long time to the extent of becoming an eyesore. *The impact is then considered to be negative of short-term duration with high significance.*

6.6.2 Loss of Employment due to Closure of the Project

If for whatever reason the project is closed down, the people employed by the project will lose their jobs. This will have significant impact to these people and their families. Other groups of people who are dependent on the project, such as suppliers of various services will lose the market. *The impact is then considered to be negative of short-term duration with high significance*

6.6.3 Solid waste generation from demolition activities

Demolition of the proposed development and related infrastructure will result in the accumulation of huge amounts of solid waste. This consists of materials used in construction including concrete, metal, drywall, wood, glass, paints, adhesives, sealants and fasteners. Large quantities of such waste may lead to release of certain hazardous materials into the environment. *The impact is then considered to be negative of short-term duration with high significance*

6.6.4 Air pollution from Dust

Large quantities of dust will be generated during demolition works. This will affect demolition staffs as well as the neighboring residents. Personal Protective Equipment (PPE) should accordingly be provided. *The impact is then considered to be negative of short-term duration with high significance*

6.6.5 Noise and Vibration

The demolition works will lead to significant deterioration of the acoustic environment within the project site and the surrounding areas. *The impact is then considered to be negative of short-term duration with high significance.*

6.6.6 Creation of safety risk impacts to Workers

The demolition works and reinstating the site close to its natural condition will definitely results into various occupational health and safety hazards which if precautions are not taken might result into long-term health effects, injuries, fatal and loss of life as well as damage to properties. Some of the hazards are obvious which require some management; issues like excessive noise levels from the machinery, excessive dust emission from earth works. Injuries to construction workers may result from moving equipment. According to the OHS Act of 2003 causes of accidents in construction sites includes but not limited to poor site layout; poor erection and improper use of scaffolds; falling objects from high level such as poles; improper method of lifting; sharp edges; improper use of Personal Protective Equipment (PPE); inadequate provisions of PPE; falling through uncovered openings especially at upper floor levels and carelessness of workers. The impacts are considered negative, short term and of high significance

6.7 Consideration of Project Alternatives

The ESIA study requires identification and analysis of project alternative which includes consideration of different options in implementing the project. Identifying project alternatives provides the chance to compare different options, the advantages and disadvantages of implementing a specific option. Conducting environmental assessment for each project alternative helps to weigh out the best alternative that meets the project objective. In the analysis of these options, it is also important to consider the no project alternative which will help to assess what will happen in the absence of the proposed project. The analysis of project

alternatives in this study has considered several options as discussed in the following sections.

6.7.1 No Project Alternative (Zero option)

The no project alternative (zero option) considers maintaining the current status quo by not doing anything. This option keeps the current situation in the proposed area by not constructing the proposed Parking Bay at Benaco area. This option considers avoiding all negative impacts that could happen when implementing the project; this could be the best option in avoiding environmental disturbance to the environment. However, this option will result to denying all the potential benefits that could be gained from the project. Therefore, choosing the no project alternative would mean failure to implement the proposed project and in turn increasing detrimental impacts that might stem from the current situation such as traffic congestion, accidents, road damage and the prolonged environmental pollution.

The no project alternative denies economic gain resulting from construction of the proposed Parking Bay. Major gains that will be lost if No Project Alternative is to be opted includes loss of Government revenue collected from all services provided within the parking bay, employment opportunities and suppliers for Villagers and Ngara District at large. Nevertheless; the no project alternative is contrary to nation development policies that shall be practiced and implemented in Ngara District, business opportunities shall not be optimized and other many positive impacts of the project shall not be realized. Therefore, this implies that implementation of the proposed project shall generate a lot of positive impacts compared to adverse impacts.

6.7.2 Project Alternative

The choice of “Project alternative” means the project should be implemented as proposed. The implementation of this project shall lead into achieving all anticipated benefits at local, district and regional levels.

6.7.2.1 Alternatives on project location

The construction of the proposed parking bay is located on the land size of about 8.77 Acres. This piece of land is legally owned by the project proponent (Ngara District Council) and there is no land disputes with the neighbors so far. Geographically, the site is found approximately 25.5km from Ngara CBD, 18.8km from Rusumo Boarder and 2km from the main junction connects Burundi-Rwanda trunk roads, hence is well accessed from all parts of Ngara District. The site is located in a Mini-Town with availability of all social amenities including security for drivers and their properties, vehicles and project infrastructures. Nevertheless; this location is very useful because access to the site for hauling construction materials, equipment, and machineries is not a challenge since it is along the Rusumo trunk road and characterized with flat terrain whilst during operation phase all vehicles/trucks will be smoothly access the parking bay.

The site location has the following advantages;-

- The land size of 8.77 acres is big enough to establish the buffer zone from the neighbors to avoid nuisance to be generated in the Parking Bay
- The land is wholly owned by the project proponent. Thus, there shall be no relocation of people
- Part of the site is occupied by the local parking bay
- The site is located along Lusahunga-Rwanda trunk road. Therefore, access to the site is not a challenge
- The site has a good flat terrain
- Based on the state of the whole site there is no pristine environment that can promote thriving and existence of the species of conservation concern as per IUCN and CITES standards. Furthermore, there are no sensitive ecological receptors in the vicinity of the project area. Also, there were no cultural or archaeological objects that were reported earlier during the feasibility study and the revised design and likewise during assessment none of the objects were observed or found at site.

6.7.3 Alternative on technology and design

The proposed parking bay shall deploy the sophisticated technologies during the construction and operation phases so as to minimize Oil spills, noise and air pollution in the project surroundings. Machines to be used during project phases shall be up to date and shall run through use of modern technology.

6.7.4 Alternative on power or energy

During construction phase the machines to be deployed will use power from the national grid or petroleum products and not biomass so as to avoid environmental degradation from vegetation losses. The use of energy from the national grid and petroleum products, will increase TANESCO revenue collection and improving business to fuel suppliers, protect the environmental integrity from air pollution which would have been caused by emission of greenhouse gases particularly Carbon dioxide. The use of clean energy in the end will reduce the threat of global warming phenomenon which is mainly caused by emission of greenhouse gases from the industries

6.7.5 Alternative on construction materials

The Parking Bay works shall utilize materials that will be locally supplied especially from the approved local suppliers so as to promote market of the local vendors or suppliers. This shall also reduce environmental pollution that would have been triggered by vehicles transporting materials from outside the region. Also, the contractor shall use metals for roofing instead to timber so as to reduce levels to forest clearance. Furthermore, resource efficiency concept shall be emphasized so as to use all construction materials in a useful manner

CHAPTER SEVEN: IMPACTS MITIGATION AND ENHANCEMENT MEASURES

7.1 Introduction

This chapter presents mitigation measures and/or compensatory actions and enhancement measures for the identified impacts. Many of the potential impacts identified in the preceding chapter can be eliminated or reduced/enhanced through the implementation of appropriate mitigation/enhancement measures either at the planning stage or when applied to specific project tasks and activities.

The proponent will ensure that any significant impacts identified is managed (mitigated/enhanced) within its capability in collaboration with other relevant stakeholders. A contractor on behalf of the proponent will:

- Plan and design the project with environmental consideration to reduce the impacts to the natural and social environment;
- Raise awareness of employees and communities surrounding the project site regarding environmental protection, social interaction with communities, security, safety and health issues (e.g. infectious diseases such as HIV/AIDS, COVID-19, STIs, accidents and theft);
- Ensure daily environmental and safety management best practices to minimize and prevent accidents, spill of hazardous material, soil erosion and improve waste management;
- Put in place a mechanism for waste collection and safe disposal of all kinds of wastes generated from the working site;
- Make a provision of monitoring the implementation of mitigation measures during construction and operation phases; and
- Continually improve the mitigation measures following monitoring and evaluation exercise.

7.2 Mitigation Measures during Mobilization & Construction Phase

7.2.1 Enhancement Measures for Positive Impacts

7.2.2 Employment Opportunities

- The Proponent shall be encouraged to employ local, unemployed yet willing to work hard, manpower to the extent viable subject to a maximum of 50% unskilled labour. This will ensure that local people are more benefited out of the project.
- In search for skilled labours, the Contractor must first look in the village/District before going on to other villages/Districts.
- Employment should be on equal opportunities for both gender
- Proponent shall not cause children under the age eighteen (18) to be employed or be engaged in any project activities.

7.2.1.3 Increased Income to Rwakalemera Villagers

- The Contractor must ensure that the laborers are paid as per Tanzania's Minimum wages
- Ensure all payments are timely completed
- The contractor should purchase the required and available materials from local vendors

7.2.1.4 Increased Income Generation Activities to Local People

- Contractor shall provide shelter (*Vibanda*), water supply and sanitary facilities to the food vendors to ensure that they sell food to construction workforce in a clean and hygienic environment.
- Encourage women to participate in the food vending business

7.2.1.5 Increased Human Capital

- On the job-training to villagers when working with skilled projects' personnel

7.3 Mitigation Measures for Negative Impacts

7.3.1 Vegetation clearing

- The problem could be minimized by confining the construction activities within the proposed project site.
- The Contractor shall avoid unnecessary clearing of vegetation beyond the proposed project construction area
- The Contractor shall always ensure that the excavated areas are reinstated whenever possible

7.3.2 Noise Nuisance and Vibration

- Noise levels along the perimeters of the project area shall be monitored and recorded to insure that activities at the site are not exceeding standards.
- Workers will be provided with personal protective equipment (PPE) such as ear muffs/plugs during construction and especially workers working in noisy areas.
- Concrete mixing will be done away from residential area.
- Additionally work will be carried out during the day.
- Vehicles and equipment will be maintained and serviced as required to ensure they do not generate excessive noise

7.3.3 Air Pollutions (Fugitive Dust and Exhaust Emissions)

- The Contractor shall apply water sprinkling on created dusty areas during undertaking of construction works to minimize dust emission
- The Contractor shall provide dust protection masks to construction workers
- The Contractor shall ensure that appropriate construction machines are used for construction works

- The Contractor shall avoid as much as possible stockpiling of dusty construction materials or loose soils.
- The Contractor shall avoid use of old construction equipment/machinery which emit black smoke. All construction machinery/equipment and vehicles must be inspected during contract award to ensure that they do not emit black smoke.
- The Contractor shall operate and maintain vehicles and equipment in good working condition.
- The Contractor shall cover all trucks hauling dusty construction materials with tarpaulins during transportation.
- Minimum Excavator bucket height will be maintained during loading and unloading activity of crushed or quarry rocks

7.3.4 Generation of hazardous waste

- Separate all hazardous wastes from domestic waste during collection and transportation
- All vehicle and equipment mechanical repair activities shall be conducted on proper designated space within the Construction site
- All generated hazardous during construction of structures shall be temporarily stored at designated area at the site and then to be removed from site by a registered hazardous waste dealer.
- Replaced oil and brake fluid to be properly handled in a designated area with primary and secondary containments prior to be disposed by an authorized dealer

7.3.5 Generation of Solid Wastes

- Waste management on site shall be strictly controlled and monitored. Only approved waste disposal methods shall be allowed.
- Ensure that site personnel are instructed in the proper disposal of all waste.
- Ensure that all facilities are maintained in a neat and tidy condition and the site shall be kept free of litter. Measures shall be taken to reduce the potential for litter and negligent behavior with regard to the disposal of all refuse.
- At all places of work provide litter bins, containers and refuse collection facilities for later disposal.
- Solid waste may be temporarily stored on site in a designated area prior to collection and disposal. Waste storage facility shall be covered, tip-proof, weatherproof and scavenger proof. The waste storage area shall be fenced off to prevent wind-blown litter.
- No burning, on-site burying or dumping of waste shall occur.
- All solid waste shall be disposed of offsite at an approved landfill site.
- The Contractor shall provide metal refuse bins or equivalent plastic refuse bins, all with lids, for domestic waste. Refuse shall be collected and removed from all facilities at least twice per week.
- Inert construction rubble and waste materials shall be disposed of by burying in the borrow pits or at an approved site.

7.3.6 Degradation / Depletion of Resources at Point of Source

- Depletion of resource cannot be avoided for developing this project. However, efficient extraction method will be used to minimize losses. All materials extraction sites shall be strictly supervised by Ngara district Council under environmental department in collaboration with other potential stakeholders

7.3.7 Population Influx (Labor Influx)

- Establish transparent recruitment procedures to avoid site followers in form of job-seekers
- Establish a recruitment policy that gives priority to local residents for less specialized services
- Recruitment procedures to be shared with the local authorities for further dissemination
- Opportunities for sub-suppliers and sub-contractors should be awarded to local firms which in turn employ local labour
- Conduct public health campaigns addressing issues of behavioral change, water and sanitation, malaria, HIV/AIDS, etc.

7.3.8 Increased Risk of GBV, SEA and Harassment

- Regular training for workers on required lawful conducts in the project communities.
- Creation of partnership with local offices of the Ministry of Women Affairs and Youth Development, NGOs and community women groups to report workers' misconduct and complaints/reports on gender-based violence
- Provision of opportunities for workers to regularly return to their families or take advantage of entertainment opportunities away from rural host communities.
- Gender based equal opportunities in all project phases
- Create opportunities for employment of women in both management and casual placements
- All gender based employment must consider labor act (18+ Years and above)

7.3.9 Disruption of Traffic Flow

- Only qualified drivers with appropriate driving license shall be engaged
- Induction course shall be done to all drivers prior starting driving
- Drivers shall be sensitized on maintaining speed limits for main road and on access roads/internal driveways.
- Promoting safe drive with specified hours for long drive to avoid fatigue
- Provision of road and safety signs shall be done on site and surrounding areas that are to be followed by drivers and public in collaboration with local authority

7.3.10 Soil and Water Quality Contamination

- All machinery must be keenly observed not to leak oils on the ground.
- Maintenance must be carried out in a designated area and where oils are completely restrained from reaching the ground. Such areas should be covered to avoid storm from carrying away oils into the soil or nearby surface run-off. Waste water/ wash water from these areas should be properly disposed.

- Maintain hygiene conditions at construction site i.e. Good industrial hygiene practices will be maintained
- Establishment of primary and secondary containments for oil storage before final disposal.

7.3.11 Child labour, forced labour and human trafficking

- Employment must consider labor act (18+ Years and above)
- Spread awareness among parents and surrounding communities
- Strict laws in place to prevent child, forced labors and human trafficking
- The Consultant Engineer with Proponent shall strictly make sure the Contractor adheres to Employment and Labour Relations Act (2004)

7.3.12 Teenage Pregnancies

- Strictly enforcing labors to avoid sexual abstinence with teenagers
- Developing a community based approach which utilizes school sex education integrated with parent, church, and community groups
- Increasing teenage knowledge of contraception
- Providing counseling and medical and psychological health and education

7.3.13 Occupational Accidents at Work Place

- Accidents will be minimized through proper maintenance of the machines, protecting or guarding the cutting edges, and awareness of the people including workers on the dangers and make them understand how to protect themselves and others.
- Supervisors will ensure that safety measures are in place and are enforced (implemented) including safety equipment.
- Also the contractor shall provide adequate training to construction workers on the health impacts of the construction and shall provide protective gears to construction workers.
- Approved working hours shall be observed in order to avoid careless mishandling due to fatigue

7.3.14 Liquid Waste

- Contractor may use the existing toilets during the construction period
- Pit latrines and/or septic tanks/soak-away pits at the site for liquid waste collection and regular emptying.
- All storage containers will be properly sealed and monitored to avoid any possible Oil spillage and the use of oil kits

7.3.15 Possible Spread of HIV/AIDS and Other Infectious Diseases

- Workers will be sensitized on the issue of HIV/AIDS and STDs and on the usage condoms etc.
- Establishment and implementation of HIV/AIDS awareness and prevention programs.
- HIV/AIDS testing will be conducted and counseling services will be done

- Providing protection gears where needed such as condoms
- Workers and the nearby community will be sanitized on the issues of COVID-19 and protection measures
- The contractor shall provide employment priority to local unskilled laborers to minimize number of new comers
- The Contractor shall develop and implement HIV/AIDS and STIs prevention and control programme

7.3.16 Creation of occupational health and safety risks

- Appropriate working gear (such as nose muffins, helmets, ear mask and safety clothing) and good construction site management will be provided.
- The contractor will ensure that the construction site is hygienically kept with adequate provision of facilities including waste disposal receptacles, clean toilets, firefighting and clean and safe water supply.
- The Contractor shall enforce mandatory use of Personal Protective Equipment (PPE) to all workforces
- A well-stocked First Aid kits (administered by qualified and trained first aider) shall be maintained at the construction site.
- The trained first aider shall also be responsible for primary treatment of ailments and other minor medical cases as well as providing some health education to the workforce.
- The Contractor shall install safety signal devices and warning signs for the entirely project site
- The Contractor shall be caused to conduct induction training in occupational health and safety rules for every employer of the construction workforce
- The Contractor shall be caused to conduct daily or weekly tool box meetings with specific occupational health and/or safety topic
- The Contractor shall be caused to prepare and implement Traffic Management Plan (TMP)
- The Contractor shall be caused to prepare and implement Emergency Preparedness and Response Plan (EPRP)
- The Contractor shall be caused to prepare and implement Health and Safety Management Plan (HSMP)
- The Contractor shall strictly follow occupational health and safety procedures as required in Occupational Health and Safety Act No. 5 of 2003

7.3.17 Creation of safety risks to local people

- The contractor shall regularly conduct community communication and engagement meetings with villagers so as to raise safety awareness to the people
- The Contractor shall ensure that excavated trenches are speedily backfilled and there shall be warning tapes placed around the construction site

- The Contractor shall entirely barricade with visible nets or tapes excavated trenches which found in highly populated area

7.3.18 Soil Erosion and Modification of Landscape

- The problem could be minimized by confining the construction activities within the proposed project site
- Ensure management of excavation activities
- Light compaction will be necessary to stabilise the soil.
- Provide soil erosion
- In areas where construction activities have been completed and where no further disturbance would take place, rehabilitation and re-vegetation should commence as soon as possible.
- Prompt reclamation of exposed soils should be done.
- Construction during long rains period should be done with caution to avoid soil from being washed away.
- Topsoil excavated from buildings foundations should be stored for re use on other areas for rehabilitation

7.4 Demobilization phase

7.4.1 Restored clean site

- Collection and transportation of unwanted materials to the disposal site
- Allow community to take valuable building materials for example timber for reuse in construction of wastes

7.4.2 Vegetation Regeneration

- Supporting vegetation growth around the project site
- Provision of training to scheme attendants in nurturing of planted vegetation around the project site

7.4.3 Loss of Temporary Employment

- Adapt a project – completion policy: identifying key issues to be considered.
- Assist with re-employment and job seeking of the involved workforce.
- Compensate and suitably recommend the workers to help in seeking opportunities elsewhere.
- Offer advice and counseling on issues such as financial matters.

7.5 Mitigation Measures during Operation Phase

7.5.1 Positive Impacts

7.5.1.1 Increased Revenue to the Village and District Government

- Project activities shall pay Taxes including parking fees, taxes and duties etc. on time.

7.5.1.2 Enhanced Income, Employment Opportunities and Local Business

- Recruitment of skilled and non-skilled labours will be done with priorities to people from the area surrounding the project area.
- Proponent shall not cause children under the age eighteen (18) to be employed or be engaged in any proposed project activities.

7.5.2 Negative Impacts

7.5.2.1 Air Pollution

- Project Proponent will conduct regular maintenance of all equipment on site such as standby diesel powered generator as a way of reducing emissions of noxious gases and improve working mechanisms and thus reduce noise of the moving parts;
- Insisting on the installation of exhaust arresters to vehicles which are parking within the yard
- Maintenance of pavements to avoid dust emissions
- Prohibit unnecessary stopping and start-up of vehicle which produce fumes
- Emphasize Clients on the Regular use of low Sulphur gasoline
- Regular monitoring of ambient air quality
- Project Proponent will conduct adequate training and use of personal protective equipment (PPE) in order to reduce risks associated with dust to employees at the project site

7.5.2.2 Environmental pollution from Leaks and Spills

- Maintenance must be carried out in a designated area and where oils are completely restrained from reaching the ground. Such areas should be covered to avoid storm from carrying away oils into the soil or water systems. Waste water/ wash water from these areas should be properly disposed.
- Regular monitoring of the oil water separator outflow is required.
- Water containing soaps and other detergents must not enter the oil water / separator as it will place the hydrocarbons in suspension, rendering the oil water separator ineffective.
- Regular monitoring of effluent quality will be instituted
- Primary and secondary containments shall be established at the service bay for oil storage before taken by authorized recyclers

7.5.2.3 Risks of Fire and Explosions

- Provide fire hazard signs such as “No Smoking” signs, EXIT, Fire Extinguishers/, Emergency Assembly as well as in case of any fire incidence and emergence contact numbers should be provided.
- The compound should be kept clean and free from fire hazards and litter

- Install fire control appliances (portable fire extinguisher; both CO_2, dry powder and water type, and sand buckets) and employees should be adequately instructed periodically in the use of the various fire appliances.
- Regular maintenance of electrical wires to prevent electrostatic
- Conduct regular drills/simulations to sensitize the worker once a year
- Regular repair and maintenance program for all equipment
- Make sure better lighting arrester are installed in a right places
- Workers shall be trained on fire emergency response by authorized officers from Fire and Rescue Force Office. The training program will be in every year to keep the workers up to dated.

7.5.2.4 Disruption of traffic flow

- Provide clear entry , exit ways, indicate relevant traffic signs “give Way”
- Provide adequate parking within the parking yard
- Establishment of adequate driveways within the premises

7.5.2.5 Generation of solid waste

- Sorting of the solid waste at the site in order to enhance reuse and recycling
- The non-reusable and non-recyclable wastes shall be collected and transported to the dumpsite for final disposal
- Temporary storage facility to be well paved and roofed to avoid storm water and percolation
- The 3R principle (Reduce, Re-use and Recycle) shall be deployed on the project site to manage quantity of waste generated

7.5.2.6 Generation of Liquid waste

- Establishment of primary and secondary containments for oil storage before final disposal
- Pit latrines and/or septic tanks/soak-away pits at the site for liquid waste collection; regular emptying
- Regular monitoring of the oil water separator outflow is required.
- Sediment traps may be used in order to avoid sediment-laden water from entering the storm water system/surrounding watercourses
- Water containing soaps and other detergents must not enter the oil water / separator as it will place the hydrocarbons in suspension, rendering the oil water separator ineffective.
- Regular monitoring of effluent quality will be instituted

7.5.2.7 Noise pollution and vibration

- Good site management will be enforced;
- Heavy equaipments to be installed on concrete bunds
- Best practice - methods of working will be developed and observed;
- Hours of working will be restricted, workers to work by shifts
- Maintenance of vehicles and machinery to avoid noise

7.5.2.8 Underground water pollution due to Oil Leakages and Oil Spill

- Regular maintenance of concrete surface within the parking area
- All machinery must be keenly observed not to leak oils on the ground
- Maintenance must be carried out in a designated area and where oils are completely restrained from reaching the ground. Such areas should be covered to avoid storm from carrying away oils into the soil or water systems. Wastewater/ wash water from these areas should be properly disposed.
- Regular monitoring of the oil water separator outflow is required.
- Water containing soaps and other detergents must not enter the oil water-separator as it will place the hydrocarbons in suspension, rendering the oil water-separator ineffective.
- Regular monitoring of effluent quality will be instituted
- Maintain hygiene conditions at all work place i.e. Good industrial hygiene practices will be maintained
- Establishment of primary and secondary containments for oil storage before final disposal.

7.5.2.9 Soil Erosion

- All cleared and compacted areas should be scarified and planted with vegetation to stabilize the soil.
- Establishment of Drainage systems with the capacity of accommodating probable maximum flood and probable maximum height.

7.5.2.10 Creation of public health risks

- Proper management of solid and liquid waste generated from the project site
- Consideration of hygienic environment to food vendors surrounding the parking yard
- Preparing health guidelines for all local vendors within and around the project site

7.5.2.11 Traffic and non-traffic occupational accidents

- Eliminate dead-end parking areas, so there's always a flow-through of traffic along aisles (the driving lanes facilitating access to parking spots
- Locate aisles and rows of parking parallel to the long dimension of the site
- Established “Entrance” and “Exit” ways with sufficient width as per national and international standards.
- Placing Safety signs especially Speed Limit within the parking bay in all strategic areas
- The developer should conduct regular alcoholic test to all drivers served by the parking bay

7.5.2.12 Risk of infrastructure vandalism

- Ngara District Council shall collaborate with prospective communities in creating community sense of ownership

- Security guards should be present all the time for safety of all properties within the premise
- Where possible, all valuable parts of the project must be secured through metal-grilled boxes or concrete boxes

7.5.2.13 Creation of occupational health and safety risks

- A site-specific Health and Safety Management Plan (HSMP) shall be prepared and implemented Provide and enforce use of protective gears
- Provide regular training to all staffs on health and safety matters especially new employees.
- Provide First Aid facilities and train some workforce on emergency response measures.
- Provide regular medical check-ups for the workers.
- Draw up and establish health and safety regulations, and formulating preventive measures for accidents and other human health and safety hazards.
- Provide proper safety signs within the premises.
- Monthly HSE inspections
- District Council shall follow occupational health and safety procedures as required in Occupational Health and Safety Act No. 5 of 2003.

7.5.2.14 Increased Risk of GBV, SEA and Harassment

- Regular training for workers on required lawful conducts in the project communities.
- Creation of partnership with local offices of the Ministry of Women Affairs and Youth Development, NGOs and community women groups to report workers' misconduct and complaints/reports on gender-based violence
- Provision of opportunities for workers to regularly return to their families or take advantage of entertainment opportunities away from rural host communities.
- Gender based equal opportunities in all project phases
- Create opportunities for employment of women in both management and casual placements
- All gender based employment must consider labor act (18+ Years and above)

7.5.2.15 Child labour, forced labour and human trafficking

- Employment must consider labor act (18+ Years and above)
- Spread awareness among parents and surrounding communities
- Strict laws in place to prevent child, forced labors and human trafficking
- The Consultant Engineer with Proponent shall strictly make sure the Contractor adheres to Employment and Labour Relations Act (2004

7.5.2.16 Teenage Pregnancies

- Strictly enforcing labors to avoid sexual abstinence with teenagers
- Developing a community based approach which utilizes school sex education integrated with parent, church, and community groups

- Increasing teenage knowledge of contraception

7.5.2.17 Spreading of HIV, other STIs and Covid-19 among workers and visitors in the project area

- The Proponent will provide diagnosis and treatment for tuberculosis and sexually transmitted infectious diseases that are common among people with HIV.
- The proponent shall follow health guidelines on the precautions, prevention and treatments for Covid-19
- The Proponent will support voluntary HIV counseling and testing.
- Engage a qualified/registered Service Provider to establish and run an HIV/AIDS Awareness and Prevention Program.
- Deployment of locally available labor to avoid causing a large influx.
- Safety, health and environment induction courses-awareness

7.6 Mitigation Measures during Decommissioning Phase

7.6.1 Loss of Aesthetics due to Abandoned Project Facilities

- At decommissioning, the proponent will either sell the parking yard to any interested bidder or convert it to another use or disassemble all infrastructures and structures in an environmentally sound manner to restore the environment into its original appearance.

7.6.2 Solid waste generation from demolition activities

- Waste separation, reuse/recycling and disposal through appropriate techniques as per Ngara District Council
- Safe disposal of hazardous waste, concrete and similar non-recyclable construction materials, and recycling of scrap metal;

7.6.3 Air pollution from Dust

- Provision of appropriate and adequate PPE to the workers along with strict enforcement on the use of gears
- Water sprinkling through mobile tanker at regular intervals in all areas where demolition activities are progressing

7.6.4 Noise and Vibration

- Personal protective equipment (PPE) shall be properly selected, operated and maintained to minimize noise
- All demolition works are advised to be carried out during the day time
- Best practice - methods of working will be developed and strictly observed
- Light machineries should be applied during demolition activities whilst operators/workers in various sections with significant noise levels shall be provided with ear plugs

7.6.5 Loss of Employment due to Closure of the Project

- Prepare workers for forced retirement by providing skills for self-employment, and wise investment of the retirement benefits;
- Ensure that all employees are members of the Social Security schemes;
- Consider redeploying employees in other relevant projects.

7.7 Impacts Assessment and Evaluation

The identified impacts above have been subjected to assessment by using matrix method, whereby two types of matrices were used. These include the Impact Categorization Matrix (ICM) and Impact Evaluation Matrix (IEM). The ICM has been used to categorize impacts according to environmental components (biophysical and socio-economic) that are likely to be affected, and IEM was used for determination of the significance of impacts. The significance of impacts was based on the following factors:

- Type of impact – whether positive or negative
- Its effects – whether direct, indirect or cumulative
- Intensity – whether low, medium or high
- Magnitude – whether site specific, local or regional
- Duration – whether short-term, long-term or permanent
- Reversibility- reversible or irreversible
- Significance- whether negligible, low, moderate or high

As demonstrated in **Table 25** the proposed Beneco Parking Bay construction project is expected to have both negative and positive impacts of minor, moderate and major significance during mobilization, construction and operation phases. The results of the assessment indicate that most of the impacts are negative; indirect; have moderate intensity; site specific; short term; reversible and with low to medium significance.

Table 25; Summary of Impact Assessment

Impacts	Category	Mobilization Phase	Construction Phase	Demobilization Phase	Operation Phase	Decommissioning phase
Creation of job opportunities	S	+2	+2	0	+2	0
Increased Income to Rwakalemera villagers	S	+2	+3	0	+3	0
Benefit to Local Producers and Suppliers of Construction Materials	S	0	+3	0	+2	0
Increased Human Capital	S	0	+2	0	+2	

Impacts	Category	Mobilization Phase	Construction Phase	Demobilization Phase	Operation Phase	Decommissioning phase
						0
Population Influx (Labor Influx)	S	0	-2	0	-2	0
Vegetation clearance	B	0	-1	0	0	0
Air pollution	B	0	-3	0	0	0
Soil erosion	B		-1	0	0	-2
Increased Risk of GBV, SEA and Harassment	S	0	-2	0	-2	0
Teenage Pregnancies	S	0	-2	0	-2	0
Child labour, forced labour and human trafficking	S	0	-2	0	-2	0
Solid waste generation	B	0	-2	-2	-2	-2
Liquid waste generation	B	0	-2	0	-2	0
Generation of hazardous waste	B		-2	0	-2	-2
Noise Nuisance and vibration	B	0	-2	0	-2	-2
Change of Landscape of the Area	B	0	-1	0	0	0
Soil and Water Quality Contamination	B	0	-2	0	-2	0
Land Degradation from Extraction and Use of Building Materials	B	0	-2	0	0	0
Environmental pollution from Leaks and Spills	B	0	-2	0	-2	0
Risks of Fire and Explosions	B	0	-1	0	-3	0
Occupational Health and Safety Hazards	S	0	-2	0	-2	-2
Creation of Safety	S	0	-2	0	-2	-2

Impacts	Category	Mobilization Phase	Construction Phase	Demobilization Phase	Operation Phase	Decommissioning phase
Risk to local people						
Disruption of traffic flow	S	0	-2	0	-3	0
Increased in Incidence of HIV/AIDS and STIs	S	0	-3	0	-3	0
Loss of temporary employment	S	0	0	-1	0	-3
Loss of income generation opportunities	S	0	0	-1	0	-1
Restored Clean Site	B	0	0	+2	0	+2
Vegetation Regeneration	B	0	0	+3	+3	+3
Risk of infrastructure vandalism	S	0	0	0	-3	0

KEY:

S	Socio-economic impact	B	Bio-geophysical Impact
0	Negligible	+2	Moderate positive impacts
-1	Minor negative impacts	+3	Major positive impacts
-2	Moderate negative impacts	-3	Major negative impacts

Source: *Consultant's Analysis (November/2021)*

CHAPTER EIGHT: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

8.1 INTRODUCTION

The EIA guidelines define an Environmental and Social Management Plan (ESMP) as a report or document prepared by the proponent after the conduction of ESIA study to present the case for the assessment of their proposal as part of the environmental and social impact assessment process. The ESMP as presented in this chapter contains recommendations and cost estimates for mitigation measures designed to address the negative impacts of the proposed project. The ESMP provides a general outlay of the environmental and social aspects, potential impacts, mitigation measures, performance indicators, monitoring means and frequency, responsibility for monitoring and associated cost estimates.

The responsibility for the incorporation of mitigation measures for the project implementation lies with the Supervising Engineer, who must ensure that the contractor implements all specified mitigation measures. In order for the contractor to carry out environmental management activities during construction, the contractor should draw up an environmental management plan of his/her own to show how s/he will address the mitigation measures during the construction period. The Supervising Engineer is responsible for assessing the contractor's environmental management plan.

The ESMP has been developed with project knowledge and information available to date. As project commencement and scheduling plans are developed and changed, components of the ESMP might require amendments. This is therefore a working document, which can be updated whenever new information is received or site conditions change.

The objectives of the ESMP are to:

(i) to bring the project into compliance with applicable national environmental and social legal requirements social policies and procedures; and
(ii) to outline the mitigation/enhancing, monitoring, consultative and institutional measures required to prevent, minimize, mitigate or compensate for adverse environmental and social impacts, or to enhance the project beneficial impacts.

The objectives, activities, mitigation measures and allocation of costs and responsibilities pertaining to prevention, minimization and monitoring of significant negative impacts and maximization of positive impacts associated with the project equipment installation and operational phases are outlined in the proposed ESMP in the following section. It outlines corresponding management strategies proposed in chapter 8 that will be employed to mitigate potential negative environmental impacts and assign responsibility for the implementation of mitigation measures.

8.2 Implementation of the Management Plan

The environmental and social mitigation measures of the proposed project shall be handed over to the contractor during construction period. The Contractor shall take stock of the contents of

the Environmental and Social Management Plan of the Project. The contractor shall implement the ESMP during the construction period under close supervision of Proponent. During the Operation Phase, Proponent shall implement the ESMP

8.2.1 Environmental and Social Cost

The total cost for implementation of ESMP is estimated at Tshs. 74,500,000.00 in which those of construction phase are included in the works contract of this project. The environmental and social cost estimates was developed based on the measured items in the contractual bill of quantities and experience of the Consultant on projects of similar nature

Table 26: ESMP's Institutional Responsibilities

Unit / Personnel	Responsibilities
National Environment Management Council (NEMC)	• Conduct environmental compliance monitoring and enforcement to ensure that project proponent is efficiently implement approved ESMP • Undertake screening of the project to determine level of ESIA study • Reviewing and approval of the project ESIA reports submitted by Ngara DC • Reviewing of the annual environmental and social audit reports submitted by Ngara DC;
Ngara District Council/Proponent	• Holds final responsibility for the environmental and social performance of the project • The Client will be represented by Consultant who will be in charge of the supervision works, and overseeing the contract from initiation stage to completion of construction activities at various proposed sites; • The Client has to procure a contractor who will be responsible for the implementation of the entire project activities; • Responsible for ensuring the site development is implemented according to the requirements as stipulated in ESMP; • Ensure that sufficient resources are available to the other role players to efficiently perform their tasks as indicated in ESMP; • Overall management of all project activities; • Receive and supervise the implementation of the recommendations of the environmental report from the Consultant; • Cooperate with Consultant to periodically supervise contractors' activities; and • Carry out annual environmental and social audits of the project and submit the subsequent reports to NEMC for review and approval. • Ensure availability of key staffs for social, environmental, health and safety monitoring during project phases
NELSAP PIU	• To provide support to the District where required to facilitate the implementation of LADP activities. • Ensure timely availability and reliability of funding for agreed and approved LADP activities and related interventions. • Ensure timely processing of the direct payments to contractors and consultants on behalf of the district.

Unit / Personnel	Responsibilities
	• Monitoring and evaluation of the progress of LADP activities implemented by the district. • Liaise closely with Ngara DC in preparing a coordinated response on environmental and social management aspects of the project; • Carrying out safeguards due diligence; and • Preparation of quarterly environmental and social performance reports for the project.
World Bank	• Financing the entire project activities • Overall ESMP supervision and monitoring • Provision of technical support and guidance to Ngara DC, NELSAP PIU, Contractor and Supervising Engineer • Recommending on additional measures to strengthening the ESMP implementation performance
Consultant (Supervision Engineer)	• monitoring and supervision of the construction works including overseeing implementation of ESMP • administer all construction works, progress review and monitor the works undertaken by the Contractor and implementation of ESMP to ensure compliance with contract specification and contractual requirements • Cooperate with Ngara DC to periodically supervise contractors' activities. Scheduled meetings held between the contractor, Ngara DC representative and Consultant. • Include, among its staff, an environmental officer who will oversee the implementation of the ESMP and report to Ngara DC and NELSAP PIU.
Contractor	• responsible for implementation of construction works and ensure compliance with environmental requirements; • Contractor shall prepare/update a Contractor's ESMP (C-ESMP), and ensure that the measures related to environmental and social safeguards are fully carried out as stipulated; • Preparing/Updating the project's Environmental Health and Safety Management Plan; • Conduct general training on occupational health, safety and environment to the construction workforce • Reporting arising works that are detected by Environmental Officer to Consultant and Ngara DC representative for further actions. • Prepare and implement covid-19 contingency plan, prepare and implement emergence preparedness plan, prepare and implement traffic management plan,

Table 27: Environmental and Social Management Plan (ESMP)

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
Mobilization and Construction Phase					
Employment Opportunities	• The Proponent shall be encouraged to employ local, unemployed yet willing to work hard, manpower to the extent viable subject to a maximum of 50% unskilled labour. This will ensure that local people are more benefited out of the project. • In search for skilled labours, the Contractor must first look in the village/District before going on to other villages/Districts. • Employment should be on equal opportunities for both gender • Proponent shall not cause children under the age eighteen (18) to be employed or be engaged in any project activities.	Contractor and Proponent	1 Month	5,000,000	As many employments as possible
Increased Income to Rwakalemera Villagers	• The Contractor must ensure that the laborers are paid as per Tanzania's Minimum wages • Ensure all payments are timely completed • The contractor should purchase the required and available materials from local vendors	Contractor and Proponent	During Construction Phase	N/A	Created many opportunities as possible
Increased Income Generation Activities to Local People	• Contractor shall provide shelter (*Vibanda*), water supply and sanitary facilities to the food vendors to ensure that they sell food to construction workforce in a clean and hygienic	Contractor and Proponent	During Construction Phase	N/A	Created many opportunities as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	environment. • Encourage women to participate in the food vending business				
Increased Human Capital	• On the job-training to villagers when working with skilled projects' personnel	Contractor and Ngara DC	During Construction Phase	N/L	As many employments as possible
Vegetation clearing	• The destruction of exotic vegetation could not be avoided during the start of construction works. • The problem could be minimized by confining the construction activities within the proposed project site. • The Contractor shall avoid unnecessary clearing of vegetation beyond the proposed project construction area • All cleared and compacted areas should be scarified and planted with natural vegetation to stabilize the soil • The Contractor shall always ensure that the excavated areas are reinstated whenever possible	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent (Ngara DC)	During pre-construction and stages.	1,000,000	As minimum impact as possible
Noise Nuisance and Vibration	• Noise levels along the perimeters of the project area shall be monitored and recorded to insure that activities at the site are not exceeding standards. • Workers will be provided with personal protective equipment (PPE) such as ear muffs/plugs during construction and especially workers working in noisy areas. • Concrete mixing will be done away from residential area. • Additionally work will be carried out during the day.	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	During Construction Phase	4,000,000	Not exceeding TBS Limit 85dB

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	• Vehicles and equipment will be maintained and serviced as required to ensure they do not generate excessive noise				
Air Pollutions (Fugitive Dust and Exhaust Emissions)	• The Contractor shall apply water sprinkling on created dusty areas during undertaking of construction works to minimize dust emission • The Contractor shall provide dust protection masks to construction workers • The Contractor shall ensure that appropriate construction machines are used for construction works • The Contractor shall avoid as much as possible stockpiling of dusty construction materials or loose soils. • The Contractor shall avoid use of old construction equipment/machinery which emit black smoke. All construction machinery/equipment and vehicles must be inspected during contract award to ensure that they do not emit black smoke. • The Contractor shall operate and maintain vehicles and equipment in good working condition. • The Contractor shall cover all trucks hauling dusty construction materials with tarpaulins during transportation. • Minimum Excavator bucket height will be maintained during loading and unloading activity of crushed or quarry rocks	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent (Ngara DC)	Quarterly	3,000,000	• 0.021mg/m^3 for PM_{10} as per TBS • 0.015mg/m^3 for $PM_{2.5}$ as per TBS • 0.12ppm for NO_2 as per TBS • 0.5ppm for SO_2 as per TBS • 10ppm for CO as per TBS • Construction workers wearing dust protection gears (ISO 45001)

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
Generation of hazardous waste	• Separate all hazardous wastes from domestic waste during collection and transportation • All vehicle and equipment mechanical repair activities shall be conducted on proper designated space within the Construction site • All generated hazardous during construction of structures shall be temporarily stored at designated area at the site and then to be removed from site by a registered hazardous waste dealer. • Replaced oil and brake fluid to be properly handled in a designated area with primary and secondary containments prior to be disposed by an authorized dealer	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	During Construction	3,000,000	None or as minimum as possible
Generation of Solid Wastes	• Waste management on site shall be strictly controlled and monitored. Only approved waste disposal methods shall be allowed. • Ensure that site personnel are instructed in the proper disposal of all waste. • Ensure that all facilities are maintained in a neat and tidy condition and the site shall be kept free of litter. Measures shall be taken to reduce the potential for litter and negligent behavior with regard to the disposal of all refuse. • At all places of work provide litter bins, containers and refuse collection facilities for later disposal.	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	Construction Phase	4,000,000	As minimum impact as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	• Solid waste may be temporarily stored on site in a designated area prior to collection and disposal. Waste storage facility shall be covered, tip-proof, weatherproof and scavenger proof. The waste storage area shall be fenced off to prevent wind-blown litter. • No burning, on-site burying or dumping of waste shall occur. • All solid waste shall be disposed of offsite at an approved landfill site. • The Contractor shall provide metal refuse bins or equivalent plastic refuse bins, all with lids, for domestic waste. Refuse shall be collected and removed from all facilities at least twice per week. • Inert construction rubble and waste materials shall be disposed of by burying in the borrow pits or at an approved site.				
Degradation / Depletion of Resources at Point of Source	• Depletion of resource cannot be avoided for developing this project. However, efficient extraction method will be used to minimize losses. All materials extraction sites shall be strictly supervised by Ngara district Council under environmental department in collaboration with other potential stakeholders	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	Monthly during construction phase	2,000,000	As minimum impact as possible
Child labour, forced labour and human trafficking	• Employment must consider labor act (18+ Years and above) • Spread awareness among parents and surrounding communities • Strict laws in place to prevent child,	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	Daily monitoring	3,000,000	None or as minimum as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	forced labors and human trafficking • The Consultant Engineer with Proponent shall strictly make sure the Contractor adheres to Employment and Labour Relations Act No. 6 of 2004				
Teenage Pregnancies	• Strictly enforcing labors to avoid sexual abstinence with teenagers • Developing a community based approach which utilizes school sex education integrated with parent, church, and community groups • Increasing teenage knowledge of contraception • Providing counseling and medical and psychological health and education	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	Weekly	1,000,000	None or as minimum as possible
Population Influx (Labor Influx)	• Establish transparent recruitment procedures to avoid site followers in form of job-seekers • Establish a recruitment policy that gives priority to local residents for less specialized services • Recruitment procedures to be shared with the local authorities for further dissemination • Opportunities for sub-suppliers and sub-contractors should be awarded to local firms which in turn employ local labour • Conduct public health campaigns addressing issues of behavioral change, water and sanitation, malaria, HIV/AIDS, etc	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent (Ngara DC)	Monthly during construction phase	1,000,000	As minimum impact as possible
Increased Risk of GBV, SEA and Harassment	• Regular training for workers on required lawful conducts in the project	-NELSAP -Consultant Supervisor	Monthly during construction	2,000,000	As minimum impact as

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	communities. • Creation of partnership with local offices of the Ministry of Women Affairs and Youth Development, NGOs and community women groups to report workers' misconduct and complaints/reports on gender-based violence • Provision of opportunities for workers to regularly return to their families or take advantage of entertainment opportunities away from rural host communities. • Gender based equal opportunities in all project phases • Create opportunities for employment of women in both management and casual placements • All gender based employment must consider labor act (18+ Years and above	engineer -Site Contractor -Proponent	phase		possible
Disruption of Traffic Flow	• Only qualified drivers with appropriate driving license shall be engaged • Induction course shall be done to all drivers prior starting driving • Drivers shall be sensitized on maintaining speed limits for main road and on access roads/internal driveways. • Promoting safe drive with specified hours for long drive to avoid fatigue • Provision of road and safety signs shall be done on site and surrounding areas that are to be followed by drivers and public in collaboration with local	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	Monthly during construction phase	5,000,000	As minimum impact as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	authority				
Soil and Water Quality Contamination	• All machinery must be keenly observed not to leak oils on the ground. • Maintenance must be carried out in a designated area and where oils are completely restrained from reaching the ground. Such areas should be covered to avoid storm from carrying away oils into the soil or nearby surface run-off. Waste water/ wash water from these areas should be properly disposed. • Maintain hygiene conditions at construction site i.e. Good industrial hygiene practices will be maintained • Establishment of primary and secondary containments for oil storage before final disposal	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	Quarterly	2,000,000	As minimum impact as possible
Occupational Accidents at Work Place	• Accidents will be minimized through proper maintenance of the machines, protecting or guarding the cutting edges, and awareness of the people including workers on the dangers and make them understand how to protect themselves and others. • Supervisors will ensure that safety measures are in place and are enforced (implemented) including safety equipment. • Also the contractor shall provide adequate training to construction workers on the health impacts of the construction and shall provide protective gears to construction workers.	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	Monthly	1,000,000	As minimum impact as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	• Approved working hours shall be observed in order to avoid careless mishandling due to fatigue				
Liquid Waste	• Contractor may use the existing toilets during the construction period • Pit latrines and/or septic tanks/soak-away pits at the site for liquid waste collection and regular emptying. • All storage containers will be properly sealed and monitored to avoid any possible Oil spillage and the use of oil kits	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	Monthly	2,000,000	As minimum impact as possible
Possible Spread of HIV/AIDS and Other Infectious Diseases	• Workers will be sensitized on the issue of HIV/AIDS and STDs and on the usage condoms etc. • Establishment and implementation of HIV/AIDS awareness and prevention programs. • HIV/AIDS testing will be conducted and counseling services will be done • Providing protection gears where needed such as condoms • Workers and the nearby community will be sanitized on the issues of COVID-19 and protection measures • The contractor shall provide employment priority to local unskilled laborers to minimize number of new comers • The Contractor shall develop and implement HIV/AIDS and STIs prevention and control programme	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	Quarterly	1,000,000	As minimum impact as possible
Creation of occupational health and safety risks	• Appropriate working gear (such as nose muffins, helmets, ear mask and safety clothing) and good construction site	-NELSAP -Consultant Supervisor engineer	Monthly	2,000,000	NONE or As minimum impact as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	management will be provided. • The contractor will ensure that the construction site is hygienically kept with adequate provision of facilities including waste disposal receptacles, clean toilets, firefighting and clean and safe water supply. • The Contractor shall enforce mandatory use of Personal Protective Equipment (PPE) to all workforces • A well-stocked First Aid kits (administered by qualified and trained first aider) shall be maintained at the construction site. • The trained first aider shall also be responsible for primary treatment of ailments and other minor medical cases as well as providing some health education to the workforce. • The Contractor shall install safety signal devices and warning signs for the entirely project site • The Contractor shall be caused to conduct induction training in occupational health and safety rules for every employer of the construction workforce • The Contractor shall be caused to conduct daily or weekly tool box meetings with specific occupational health and/or safety topic • The Contractor shall be caused to prepare and implement Traffic	-Site Contractor -Proponent			

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	Management Plan (TMP) • The Contractor shall be caused to prepare and implement Emergency Preparedness and Response Plan (EPRP) • The Contractor shall be caused to prepare and implement Health and Safety Management Plan (HSMP) • The Contractor shall strictly follow occupational health and safety procedures as required in Occupational Health and Safety Act No. 5 of 200				
Creation of safety risks to local people	• The contractor shall regularly conduct community communication and engagement meetings with villagers so as to raise safety awareness to the people • The Contractor shall ensure that excavated trenches are speedily backfilled and there shall be warning tapes placed around the construction site • The Contractor shall entirely barricade with visible nets or tapes excavated trenches which found in highly populated area	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	Quarterly	2,000,000	NONE or As minimum impact as possible
Soil Erosion and Modification of Landscape	• The problem could be minimized by confining the construction activities within the proposed project site • Ensure management of excavation activities • Light compaction will be necessary to stabilize the soil. • In areas where construction activities	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	Quarterly	2,000,000	Attaining an even/level surface

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	have been completed and where no further disturbance would take place, rehabilitation and re-vegetation should commence as soon as possible. • Ground clearance should be minimized and if possible concentrated only to the specific building foundation areas, and only when it is necessary. • Prompt reclamation of exposed soils should be done. • Construction during long rains period should be done with caution to avoid soil from being washed away. • Topsoil excavated from buildings foundations should be stored for re use on other areas for rehabilitation				
DEMOBILIZATION PHASE					
Restored clean site	• Collection and transportation of unwanted materials to the disposal site • Allow community to take valuable building materials for example timber for reuse in construction of wastes	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	1 Month	Non Measurable	Almost to its origin state
Vegetation Regeneration	• Supporting vegetation growth around the project site • Provision of training to scheme attendants in nurturing of planted vegetation around the project site	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	1 Month	Non Measurable	Almost to its origin state
Loss of Temporary Employment	. • Offer advice and counseling on issues such as financial matters • Adapt a project – completion policy:	-NELSAP -Consultant Supervisor engineer	1 Month	Zero Cost	Retrenchment to go as smoothly as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	identifying key issues to be considered. • Assist with re-employment and job seeking of the involved workforce. • Compensate and suitably recommend the workers to help in seeking opportunities elsewhere	-Site Contractor -Proponent			
Operation Phase					
Increased Revenue to the Village and District Government	• Project activities shall pay Taxes including parking fees, taxes and duties etc. on time.	Proponent/Respective parking bay	Operation Phase	0	Maximum utilization
Enhanced Income, Employment Opportunities and Local Business	• Recruitment of skilled and non-skilled labours will be done with priorities to people from the area surrounding the project area. • Proponent shall not cause children under the age eighteen (18) to be employed or be engaged in any proposed project activities.	Proponent/Respective parking bay	Operation Phase	0	Maximum employment opportunities
Air Pollution from trucks, equipment and machinery	• Project Proponent will conduct regular maintenance of all equipment on site such as standby diesel powered generator as a way of reducing emissions of noxious gases and improve working mechanisms and thus reduce noise of the moving parts; • Insisting on the installation of exhaust arresters to vehicles which are parking within the yard • Maintenance of pavements to avoid dust emissions • Prohibit unnecessary stopping and start-	Proponent/Respective parking bay	Annually	3,000,0000	• 0.021mg/m^3 for PM_{10} as per TBS • 0.015mg/m^3 for $PM_{2.5}$ as per TBS • 0.12ppm for NO_2 as per TBS • 0.5ppm for SO_2 as per

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	up of vehicle which produce fumes • Emphasize Clients on the Regular use of low Sulphur gasoline • Regular monitoring of ambient air quality • Project Proponent will conduct adequate training and use of personal protective equipment (PPE) in order to reduce risks associated with dust to employees at the project site				TBS • 10ppm for CO as per TBS • Construction workers wearing dust protection gears (ISO 45001)
Environmental pollution from Leaks and Spills	• Maintenance must be carried out in a designated area and where oils are completely restrained from reaching the ground. Such areas should be covered to avoid storm from carrying away oils into the soil or water systems. Waste water/ wash water from these areas should be properly disposed. • Regular monitoring of the oil water separator outflow is required. • Water containing soaps and other detergents must not enter the oil water / separator as it will place the hydrocarbons in suspension, rendering the oil water separator ineffective. • Regular monitoring of effluent quality will be instituted • Primary and secondary containments shall be established at the service bay for oil storage before taken by	Proponent/Respective parking bay	Annually	2,000,000	As minimum impacts as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	authorized recyclers				
Risks of Fire and Explosions	• Provide fire hazard signs such as “No Smoking” signs, EXIT, Fire Extinguishers/, Emergency Assembly as well as in case of any fire incidence and emergence contact numbers should be provided. • The compound should be kept clean and free from fire hazards and litter • Install fire control appliances (portable fire extinguisher; both CO2, dry powder and water type, and sand buckets) and employees should be adequately instructed periodically in the use of the various fire appliances. • Regular maintenance of electrical wires to prevent electrostatic • Conduct regular drills/simulations to sensitize the worker once a year • Regular repair and maintenance program for all equipment • Make sure better lighting arrester are installed in a right places • Workers shall be trained on fire emergency response by authorized officers from Fire and Rescue Force Office. The training program will be in every year to keep the workers up to dated.	Proponent/Respective parking bay	Operation Phase	2,000,000	As minimum impacts as possible
Disruption of traffic flow	• Provide clear entry , exit ways, indicate	Proponent/Respective	Operation Phase	3,000,000	As minimum

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	relevant traffic signs “give Way” • Provide adequate parking within the parking yard • Establishment of adequate driveways within the premises	parking bay			impacts as possible
Generation of solid waste	• Sorting of the solid waste at the site in order to enhance reuse and recycling • The non-reusable and non-recyclable wastes shall be collected and transported to the dumpsite for final disposal • Temporary storage facility to be well paved and roofed to avoid storm water and percolation • The 3R principle (Reduce, Re-use and Recycle) shall be deployed on the project site to manage quantity of waste generated	Proponent/Respective parking bay	Annually	3,000,000	As minimum impacts as possible
Generation of Liquid waste	• Establishment of primary and secondary containments for oil storage before final disposal • Pit latrines and/or septic tanks/soak-away pits at the site for liquid waste collection; regular emptying • Regular monitoring of the oil water separator outflow is required. • Sediment traps may be used in order to avoid sediment-laden water from entering the storm water system/surrounding watercourses	Proponent/respective parking bay	Annually	2,000,000	As minimum impacts as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	• Water containing soaps and other detergents must not enter the oil water / separator as it will place the hydrocarbons in suspension, rendering the oil water separator ineffective. • Regular monitoring of effluent quality will be instituted				
Noise pollution and vibration	• Good site management will be enforced; • Heavy equaipments to be installed on concrete bunds • Best practice - methods of working will be developed and observed; • Hours of working will be restricted, workers to work by shifts • Maintenance of vehicles and machinery to avoid noise	Proponent	Annually	2,000,000	As minimum impacts as possible
Noise from Standby Generator	• Install gen-sets whose noise levels are within the noise generating equipment limits. • Ensure the generator designs and models have minimum noise level generation • Proper and regular monitoring of noise level	Proponent	Annually	2,000,000	Noise should be below 75dB during daytime and below 55dB during night time
Underground water pollution due to Oil Leakages and Oil Spill	• Regular maintenance of concrete surface within the parking area • All machinery must be keenly observed not to leak oils on the ground • Maintenance must be carried out in a designated area and where oils are	Proponent	Annually	3,000,000	Non or As minimum impacts as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	completely restrained from reaching the ground. Such areas should be covered to avoid storm from carrying away oils into the soil or water systems. Wastewater/ wash water from these areas should be properly disposed. • Regular monitoring of the oil water separator outflow is required. • Water containing soaps and other detergents must not enter the oil water-separator as it will place the hydrocarbons in suspension, rendering the oil water-separator ineffective. • Regular monitoring of effluent quality will be instituted • Maintain hygiene conditions at all work place i.e. Good industrial hygiene practices will be maintained • Establishment of primary and secondary containments for oil storage before final disposal.				
Soil Erosion	• All cleared and compacted areas should be scarified and planted with vegetation to stabilize the soil. • Establishment of Drainage systems with the capacity of accommodating probable maximum flood and probable maximum height.	Proponent	Annually	700,000	As minimum impacts as possible
Creation of public health risks	• Proper management of solid and liquid waste generated from the project site	Proponent/Respective parking bay	Annually	1,000,000	Non or As minimum

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	• Consideration of hygienic environment to food vendors surrounding the parking yard • Preparing health guidelines for all local vendors within and around the project site				impacts as possible
Child labour, forced labour and human trafficking	• Employment must consider labor act (18+ Years and above) • Spread awareness among parents and surrounding communities • Strict laws in place to prevent child, forced labors and human trafficking • The Consultant Engineer with Proponent shall strictly make sure the Contractor adheres to Employment and Labour Relations Act (2004)	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	Daily monitoring	3,000,000	None or as minimum as possible
Increased Risk of GBV, SEA and Harassment	• Regular training for workers on required lawful conducts in the project communities. • Creation of partnership with local offices of the Ministry of Women Affairs and Youth Development, NGOs and community women groups to report workers' misconduct and complaints/reports on gender-based violence • Provision of opportunities for workers to regularly return to their families or take advantage of entertainment opportunities away from rural host communities. • Gender based equal opportunities in all project phases • Create opportunities for employment of	Proponent/Respective Market	Semi-Annually	1,000,000	Zero or As minimum impact as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	women in both management and casual placements • All gender based employment must consider labor act (18+ Years and above)				
Teenage Pregnancies	• Strictly enforcing labors to avoid sexual abstinence with teenagers • Developing a community based approach which utilizes school sex education integrated with parent, church, and community groups • Increasing teenage knowledge of contraception • Providing counseling and medical and psychological health and education	-NELSAP -Consultant Supervisor engineer -Site Contractor -Proponent	Weekly	1,000,000	None or as minimum as possible
Risk of infrastructure vandalism	• Ngara District Council shall collaborate with prospective communities in creating community sense of ownership • Security guards should be present all the time for safety of all properties within the premise • Where possible, all valuable parts of the project must be secured through metal-grilled boxes or concrete boxes	Proponent/Respective parking bay	Monthly	300,000	Non adverse impact
Creation of occupational health and safety risks	• A site-specific Health and Safety Management Plan (HSMP) shall be prepared and implemented Provide and enforce use of protective gears • Provide regular training to all staffs on health and safety matters especially new employees. • Provide First Aid facilities and train some	Proponent/Respective parking bay	Annually	1,000,000	Non or As minimum impacts as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	workforce on emergency response measures. • Provide regular medical check-ups for the workers. • Draw up and establish health and safety regulations, and formulating preventive measures for accidents and other human health and safety hazards. • Provide proper safety signs within the premises. • Monthly HSE inspections • District Council shall follow occupational health and safety procedures as required in Occupational Health and Safety Act No. 5 of 2003.				
Spreading of HIV, other STIs and Covid-19 among workers and visitors in the project area	• The Proponent will provide diagnosis and treatment for tuberculosis and sexually transmitted infectious diseases that are common among people with HIV. • The proponent shall follow health guidelines on the precautions, prevention and treatments for Covid-19 • The Proponent will support voluntary HIV counseling and testing. • Engage a qualified/registered Service Provider to establish and run an HIV/AIDS Awareness and Prevention Program. • Deployment of locally available labor to avoid causing a large influx. • Safety, health and environment	Proponent/Respective parking bay	Annually	1,000,000	Non or As minimum impacts as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
	induction courses-awareness				
Traffic and non-traffic occupational accidents	• Eliminate dead-end parking areas, so there's always a flow-through of traffic along aisles (the driving lanes facilitating access to parking spots • Locate aisles and rows of parking parallel to the long dimension of the site • Established “Entrance” and “Exit” ways with sufficient width as per national and international standards. • Placing Safety signs especially Speed Limit within the parking bay in all strategic areas • The developer should conduct regular alcoholic test to all drivers served by the parking bay	Proponent/Respective parking bay	Annually	2,000,000	Non or As minimum impacts as possible
Decommissioning Phase					
Loss of Aesthetics due to Abandoned Project Facilities	• At decommissioning, the proponent will either sell the parking yard to any interested bidder or convert it to another use or disassemble all infrastructures and structures in an environmentally sound manner to restore the environment into its original appearance.	Contractor	1 Month	1,000,000	As minimum impacts as possible
Solid waste generation from demolition activities	• Waste separation, reuse/recycling and disposal through appropriate techniques as per Ngara District Council • Safe disposal of hazardous waste, concrete and similar non-recyclable construction materials, and recycling of scrap metal;	Contractor	1 Month	3,000,000	As minimum impacts as possible

Identified Impact	Mitigation & Enhancement Measure	Responsible Institution	Timeframe	Relative Budget (TZS)	Target Level
Air pollution from Dust	• Provision of appropriate and adequate PPE to the workers along with strict enforcement on the use of gears • Water sprinkling through mobile tanker at regular intervals in all areas where demolition activities are progressing	Contractor	1 Month	1,000,000	As minimum impacts as possible
Noise and Vibration	• Personal protective equipment (PPE) shall be properly selected, operated and maintained to minimize noise • All demolition works are advised to be carried out during the day time • Best practice - methods of working will be developed and strictly observed • Light machineries should be applied during demolition activities whilst operators/workers in various sections with significant noise levels shall be provided with ear plugs	Contractor	1 Month	1,500,000	As minimum impacts as possible
Loss of Employment due to Closure of the Project	• Prepare workers for forced retirement by providing skills for self-employment, and wise investment of the retirement benefits; • Ensure that all employees are members of the Social Security schemes; • Consider redeploying employees in other relevant projects.	Contractor	1 Month	0	As minimum impacts as possible
	TOTAL				**74,500,000**

CHAPTER NINE: ENVIRONMENTAL AND SOCIAL MONITORING PLAN

9.1 Environmental Monitoring Plan

This section discusses the need for programmes covering both internal and periodic external monitoring. The overall objective of environmental and social monitoring is to ensure that mitigation and enhancement measures are implemented and that they are effective. The activities and indicators that have been recommended for monitoring are presented in the EMP in the next section. Environmental monitoring will be carried out to ensure that all construction and operation activities comply and adhere to environmental provisions and standard specifications, so that all mitigation measures are implemented. Such monitoring can act as an early warning system to management, providing a feedback mechanism to enable damaging practices to be altered.

Simple monitoring systems should be set up during construction by the Supervising Engineer (SE) and Contractor and by the Proponent during operation, so that potentially environmentally problematic areas can be detected well in advance and the appropriate remedial action taken. This could simply be a checklist of items that need to be inspected as a matter of routine, or periodically, depending on the nature of the aspect.

There are four types of monitoring that are also relevant to this EIA.

- **Baseline monitoring**: the measurement of environmental parameters during a pre-project period and operation period to determine the nature and ranges of natural variations and where possible establish the process of change.
- **Impact/effect monitoring:** involves the measurement of parameters (performance indicators) during establishment, operation and decommissioning phase in order to detect and quantify environmental and social change, which may have occurred as a result of the project. This monitoring provides experience for future projects and lessons that can be used to improve methods and techniques.
- **Compliance monitoring:** takes the form of periodic sampling and continuous measurement of levels of compliance with standards and thresholds – e.g. for waste discharge, air pollution.
- **Mitigation monitoring**: aims to determine the suitability and effectiveness of mitigation programs designed to diminish or compensate for adverse effects of the project.

Table 28: EMP Institutional Responsibilities

Unit / Personnel	Responsibilities
National Environment Management Council (NEMC)	• Conduct environmental compliance monitoring and enforcement to ensure that project proponent is efficiently implement approved ESMP • Undertake screening of the project to determine level of ESIA study • Reviewing and approval of the project ESIA reports submitted by Ngara DC • Reviewing of the annual environmental and social audit reports submitted by Ngara DC;
Ngara District Council/Proponent	• Holds final responsibility for the environmental and social performance of the project • The Client will be represented by Consultant who will be in charge of the supervision works, and overseeing the contract from initiation stage to completion of construction activities at various proposed sites; • The Client has to procure a contractor who will be responsible for the implementation of the entire project activities; • Responsible for ensuring the site development is implemented according to the requirements as stipulated in ESMP; • Ensure that sufficient resources are available to the other role players to efficiently perform their tasks as indicated in ESMP; • Overall management of all project activities; • Receive and supervise the implementation of the recommendations of the environmental report from the Consultant; • Cooperate with Consultant to periodically supervise contractors' activities; and • Carry out annual environmental and social audits of the project and submit the subsequent reports to NEMC for review and approval. • Ensure availability of key staffs for social, environmental, health and safety monitoring during project phases
NELSAP PIU	• To provide support to the District where required to facilitate the implementation of LADP activities. • Ensure timely availability and reliability of funding for agreed and approved LADP activities and related interventions. • Ensure timely processing of the direct payments to contractors and consultants on behalf of the district. • Monitoring and evaluation of the progress of LADP activities implemented by the district. • Liaise closely with Ngara DC in preparing a coordinated response on environmental and social management aspects of the project; • Carrying out safeguards due diligence; and • Preparation of quarterly environmental and social performance reports for the project.
World Bank	• Financing the entire project activities • Overall ESMP supervision and monitoring • Provision of technical support and guidance to Ngara DC, NELSAP PIU, Contractor and Supervising Engineer • Recommending on additional measures to strengthening the ESMP implementation performance
Consultant (Supervision	• monitoring and supervision of the construction works including overseeing implementation of ESMP

Unit / Personnel	Responsibilities
Engineer)	• administer all construction works, progress review and monitor the works undertaken by the Contractor and implementation of ESMP to ensure compliance with contract specification and contractual requirements • Cooperate with Ngara DC to periodically supervise contractors' activities. Scheduled meetings held between the contractor, Ngara DC representative and Consultant. • Include, among its staff, an environmental officer who will oversee the implementation of the ESMP and report to Ngara DC and NELSAP PIU.
Contractor	• responsible for implementation of construction works and ensure compliance with environmental requirements; • Contractor shall prepare/update a Contractor's ESMP (C-ESMP), and ensure that the measures related to environmental and social safeguards are fully carried out as stipulated; • Preparing/Updating the project's Environmental Health and Safety Management Plan; • Conduct general training on occupational health, safety and environment to the construction workforce • Reporting arising works that are detected by Environmental Officer to Consultant and Ngara DC representative for further actions. • Prepare and implement covid-19 contingency plan, prepare and implement emergence preparedness plan, prepare and implement traffic management plan,

Table 29: Environmental and Social Monitoring Plan (EMP)

Environmental Aspect	Parameters	Monitoring Frequency	Sampling Area	Measurement Units	Measurement Method	Target level/Standard	Responsible Institution	Annual Estimates Cost (TZS)
Pre-construction and Construction Phase								
Underground and surface Water pollution due to accidental spill of oil, fuel, lubricants on site	-Hydrocarbons/ Oil & Grease / area affected (Physical, chemical and biological)	-Before to start construction -After construction (Before Operation)	Project Site/discharged water -Nearby Water Source	Mg/l/pH	Laboratory/Visual	<10 / Zero oil spilled to the area - WHO and TBS standards, No contamination	-NELSAP/WB -Consultant Supervisor engineer -Site Contractor -Proponent	1,000,000
Air Pollution due to Noxious Gases	Ambient Air CO2, CO, NO2, NOx, SO2,	Quarterly	Project Site	Mg/m³	Portable Gas Analyzer	SO2< 0.5, NOx < 0.2, CO2 < 500, CO <30,	Contractor/ Proponent	3,000,000
Employment and Gender Based Violence (GBV)	Percentage of local workers in terms gender	Quarterly	Project site	No. of cases	Recording	Zero or Minimal cases	-NELSAP/WB -Consultant Supervisor engineer -Site Contractor -Proponent	1,000,000
Population Influx	Number of new job seekers	Monthly	Project site and project village	No. of cases	Recording	Zero or Minimal cases	-NELSAP/WB -Consultant Supervisor engineer -Site Contractor	300,000

Environmental Aspect	Parameters	Monitoring Frequency	Sampling Area	Measurement Units	Measurement Method	Target level/Standard	Responsible Institution	Annual Estimates Cost (TZS)
							-Proponent	
Soil erosion	Amount and type of soil used	Once during and after construction phase	Project site	m^3	Physical observation	No undulating surface	- NELSAP/WB -Consultant Supervisor engineer -Site Contractor -Proponent	1,500,000
Vegetation Clearance	Presence of natural/exotic vegetation.	Bi-annual	Project site	Area covered by vegetation	Physical Inspection	Maximum vegetation covers within and around the project site	-Consultant Supervisor engineer -Site Contractor	1,500,000
Noise Pollution	Noise Levels	Quarterly	Project Site	dBA	Noise Detectors/Sound Meters	70 dBA daytime 55dBA nighttime	-Consultant Supervisor engineer -Site Contractor	2,000,000
HIV/AIDS Infections	Number of infected persons Illness of construction workers	Quarterly during construction phase	Project site	Number of cases	Affected People	0	- NELSAP/WB -Consultant Supervisor engineer -Site Contractor -Proponent	1,500,000

Environmental Aspect	Parameters	Monitoring Frequency	Sampling Area	Measurement Units	Measurement Method	Target level/Standard	Responsible Institution	Annual Estimates Cost (TZS)
Employment Opportunities and Management	-Number of local employments -No under 18yrs employees	Monthly	Project Site	Number of local employments and under 18 yrs	Employed people	0	-NELSAP/WB -Consultant Supervisor engineer -Site Contractor -Proponent	` 500,000
Increased Dusts (pm10)	Water Sprinkling	Monthly	Project Site	Frequency of water sprinkling	Inquiries (PM10)and observation	< 0.05 (>0.05 = PPE)	-NELSAP/WB -Consultant Supervisor engineer -Site Contractor -Proponent	1,000,000
Increased Health and Safety Risks	Number and type of safety equipment such as mask, helmet gloves and ear plugs. Number of incidences	Quarterly	Project site	• Number of PPEs provided • Number of incidents reported	Records, injuries and inspection		-NELSAP/WB -Consultant Supervisor engineer -Site Contractor -Proponent	2,000,000
Waste Management	Solid Waste Liquid Waste	Weekly Weekly		Kg of waste Litres of waste	Weight Volume	As minimum as possible	-Consultant Supervisor engineer -Site Contractor	2,000,000

Environmental Aspect	Parameters	Monitoring Frequency	Sampling Area	Measurement Units	Measurement Method	Target level/Standard	Responsible Institution	Annual Estimates Cost (TZS)
Operation Stage								
Air Pollution	SO_2	Annually	Project site	mg/Nm³/yr	Portable Gas Analyzer	SO_2< 0.5	Proponent	2,000,000
	CO_2			mg/Nm³/yr		CO_2 < 500,		
	NOx			mg/Nm³/yr		NOx < 0.2,		
	CH_4			mg/Nm³/yr		CH_4<20		
Noise pollution	Noise levels	Annually	Project Site	dBA	Noise Detectors/Sound Meters	Daytime <70dBA Night time <55dBA	Proponent	500,000
Occupational Health and Safety Hazards to workers	PPEs, Safety signs, safety procedures, safety training done, periodic medical checks, safety inspection	Quarterly	Project Site	N/A	Recordings, visual, interview	Numbers	Proponent/ OSHA	1,000,000
Spreading of HIV and other STIs in the project area and adjacent areas	New cases of HIV infected staff	Thrice per year	Project site and project village	Number of cases	Recording from health facilities	Minimized to zero	Proponent	200,000
Generation of solid waste	Quantity Generated and collected per week	Once every week	Project area	Kgs of waste	Weight	As minimum as possible	Proponent	1,000,000
Environmental pollution from Leaks and Spills	- Influent originating from storm water runoff and Oil-Water Separator (pH, colour, EC, TDS, COD, BOD,	Quarterly	Project area	Mg/l,ppm	Contents	TBS standard-no contamina-tion	Proponent	1,000,000

Environmental Aspect	Parameters	Monitoring Frequency	Sampling Area	Measurement Units	Measurement Method	Target level/Standard	Responsible Institution	Annual Estimates Cost (TZS)
	DO, Pb, Zn, Cu, TSS)							
Risk of infrastructure vandalism	Community participation in project works	Daily	Project area	Number of cases	office Records	Zero	Proponent	700,000
Generation of domestic Liquid waste	Liquid Waste	Monthly	Project area	Litres of waste	Volume	As minimum as possible	Proponent	500,000
Water and land Pollution due to hydrocarbons	Hydrocarbons (Oil and Grease)	Biannually	Project Site (Oil/water separator effluent)	Mg/litre	Sampling analysis and spectrometer	<70mg/litre	Proponent	800,000
Traffic Jams	Number of vehicles/trucks/hour	Daily	Project Site and project village	Vehicles/Hour	Visual and records	Minimum	Proponent	-
Risks of Fire and Explosions	Measures in place e.g. fire alarms, fire detectors, firefighting equipment, equipment inspection, fire training, emergency alarm,	Biannually	Project Site	N/A	Inspection/observation, document review	As per recommended design	-Proponent FIRE Office	300,000
	Accidents/Incidents	Monthly	Project Area	Number of cases reported & recorded	Accidents/Incidents Recorded	No exposure	Proponent	1,000,000
Traffic Accidents	Awareness of safe drive, safety signs, road humps,	Quarterly	Project site	N/A	Inspection/observation, document review	As minimum as possible	Proponent	750,000

Environmental Aspect	Parameters	Monitoring Frequency	Sampling Area	Measurement Units	Measurement Method	Target level/Standard	Responsible Institution	Annual Estimates Cost (TZS)
	awareness to community & pupils along the routes.							
	Accidents/Incidents	Monthly	Project area	Number	Review of accident & incident records	As minimum as possible	Proponent	500,000
Sludge from oil/water separator	Quantity of sludge generated	Biannually	Project area	Weight/Volume	Visual Inspection	As minimum as possible	Proponent	1,000,000
Decommissioning Phase								
Air pollution due to dust emission from demolition works	PM10	Monthly	Project area	Mg/m³	Dust Track Aerosol Particulate Monitor	PM10 < 0.05	Contractor/ Proponent	500,000
Air pollution from exhaust emission during transportation and machinery operating on site	SO_2, NOx, CO_2, CO,	Monthly	Established monitoring stations	Mg/m³	Portable Gas Analyser	SO2< 0.5, NOx < 0.2, CO2 < 500, CO <30,	Contractor/ Proponent	1,000,000
Occupational Health and Safety Hazards	PPEs, Safety signs, safety procedures, safety training done, periodic medical checks, safety inspection	Weekly	Project Site	N/A	Number of PPEs distributed Documents review, visual, interview		Proponent	1,000,000
Traffic	Awareness of safe	Weekly	Project site	N/A	Inspection/observation,	As minimum as	Proponent	750,000

Environmental Aspect	Parameters	Monitoring Frequency	Sampling Area	Measurement Units	Measurement Method	Target level/Standard	Responsible Institution	Annual Estimates Cost (TZS)
Accidents	drive, safety signs, road humps, awareness to community & pupils along the routes.				document review	possible		
	Accidents/Incidents	Weekly	Project area	Number	Review of accident & incident records	As minimum as possible	Proponent	500,000
	TOTAL							**32,300,000**

CHAPTER TEN: PRELIMINARY DECOMMISSIONING PLAN

10.1 Introduction

Decommissioning forms the end part of the project life cycle. The proposed project is not expected to end at near future due to its nature and inelasticity. However; if decommissioning becomes inevitable due to any causative factors then the Closure Plan must be abided. During decommissioning of the project, various disturbances that will have been caused in the area need to be addressed quickly and efficiently in order to minimize the possible impacts that could continue to happen even after closure of the project. It is also important, that all remediation plans suggested be conducted by taking into consideration the needs for sustainable development of the project area. In order to achieve this, consultations with various stakeholders during preparation of the Closure Plan (CP) will be undertaken. It is the requirement of the Environmental Impact Assessment and Audit regulations of 2005 that the Proponent prepare a closure plan in order to indicate how impacts will be dealt with, including cost of mitigation measures. “Parking Bay site closure Committee” involving local and district levels will be established by the proprietor through consultations with relevant authorities. It is the closure committee that will review from time to time the implementation of the plan and set priorities of the future use of various infrastructures. The choice of whether the project site should be demolished or renovated or the project site should be re-planned for other development project or used by the locals for other purpose and other closure priorities will be decided by the closure committee

10.2 Preliminary Decommissioning and Closure Plan

The closure committee will be chaired by the council director in collaboration with local leaders including WEO and VEO. Members of the committee will be selected through consultations with the local authorities and relevant government institutions i.e. NEMC, TANESCO, NSSF, and TANROADS offices. This is the set –up and implementation procedure of the closure plan that will be followed as part of the ESMP. The Preliminary Decommissioning and Closure Plan (Table 30 next page) objectives are set as follows:

- The closure plan must limit the potential adverse effects of the closed parking bay site on the receiving environment and that the quality of life of the surrounding communities is not compromised after operation of parking bay site.
- The rehabilitation of the area in its natural appearance and closure plan complies with current regulatory requirements and must facilitate the attainment of site relinquishment after demonstration of successful implementation of the closure measures stipulated in the plan.
- That decommissioning and rehabilitation are carried out in a planned sequential manner consistent with best practice.
- That as far as is practicable the post project site operation landform is safe stable non-erodible and is integrated into the surrounding environment.
- Prevent or minimize adverse long term social and environmental impacts of the post-project site
- Create a self-sustaining ecosystem or ultimate land use based on an agreed set of objectives

- Enable all stakeholders to have their interests considered during project closure.
- Ensure the process of closure occurs in an orderly cost effective and timely manner.
- Ensure that the cost of closure is adequately represented in proponent's budgets.
- Ensure clear accountability and sufficient resources for the implementation of the closure plan
- Establish appropriate indicators for evaluating success of the closure process. The achievements from this process will justify relinquishment of the project license.

The Proprietor will participate in rehabilitation for disturbed and impacted areas depending on their location, the type of impact, and the proposed end land use. The closure plan identifies those actions that will be undertaken upon completion of project activities and subsequent decommissioning of the site. This includes the removal of structures, the disturbed landscape and vegetation will be restored to make it compatible with future use.

The Proprietor understands the importance for planning for decommissioning and closure early to ensure that the final landforms are properly designed and able to function as ecological systems in the long term and reach a point where the project proponent has met agreed completion criteria to the satisfaction of the Government and surrounding community.

Table 30: Preliminary Decommissioning and Closure Plan

Activity	Closure Plan	Responsibility	Budget (TZS)
Machinery and demolition of the structures at the parking bay site	• Disassemble electrical appliances including Generator, etc. • Consult TANESCO to disconnect electricity from the project site. • Demolition of all concrete and metal structures including offices, and paved surfaces. • Warning signs will be posted and fence installed around project site • All disassembling and demolition activities will be supervised by qualified engineers. • Closure Committee will be monitoring all closure activities to ensure they are done appropriately • All relevant stakeholders will be consulted for technical assistance during the closure phase	Environmental Managers and Closure Committees	5,000,000
Access and Haul Roads	• Where practical the access road to project site will be graded to approximately original land surface and ripped for re-vegetation. • Culverts will be removed and disposed into the appropriate waste disposal facility; • The roads will be top soiled with approximately 300mm of growth media of required and re-vegetated by using indigenous trees	Environmental Managers and Closure Committees	3,000,000
Personal Protective Equipment (PPE)	• All workers during the closure phase shall use appropriate PPE including helmet, safety boot, dust mask, safety gloves, goggles, protective garment and safety vest.	Environmental Managers and Closure Committees	1,000,000

Activity	Closure Plan	Responsibility	Budget (TZS)
Waste Management	• All waste generated during the closure phase will be sorted for easy management • A review process will be introduced so that the closure plan for waste dumps is adjusted and updated for the inevitable changes to quarrying and plant site plans schedules, community standards and recognized best practices • Debris may be used on the road to fill on earth roads instead of dumping over land. • Metal materials will be collected and transported to steel factories where could be recycled for metal production. • All hazardous wastes found at the site during decommissioning will be cleaned up and disposed of in accordance with the regulations. • The closure committee will make sure that no wastes will be disposed in the water bodies.	Environmental Managers and Closure Committees	2,000,000
TOTAL			**11,000,000**

10.3 Post –Closure Monitoring

10.3.1 Site Monitoring

Monitoring of the project site will be continued for six month after closure phase to monitor if there are any impacts which have been caused by closure activity during the removal of structures. Post closure monitoring will then be finalized after six months when an appropriately qualified independent third party establishes that steady state conditions have been achieved and there is no risk at the site.

If contamination related to the hazardous materials spill, oil spills or waste management facilities is detected at any point consultations with regulatory authorities shall be made to agree on mitigation measures, timeframe followed by carrying out of implementations**.**

10.3.2 Vegetation

Semi-annual inspection of re-vegetation areas will be carried out until an appropriately qualified independent third–party establishes that they are self-sustaining and that habitat restoration objectives have been achieved.

10.3.3 Physical Stability

Semi-annual assessment of the stability of the following rehabilitated areas and as appropriate and necessary corrective action shall be taken with particular attention on

- The stability of the soil used to fill pits of the site;
- Stability of compacted areas in resistance to soil erosion; and
- Stability of the planted vegetation to avoid soil erosion.

CHAPTER ELEVEN: CONCLUSION AND RECOMMENDATIONS

11.1 Summary

The Environmental Impact Assessment study has identified a number of issues pertaining to the proposed parking bay project. The issues/impacts have been described and assessed in detail to gain adequate understanding of possible environmental effects of the proposed project at all stages from construction/installation, operation to decommissioning. The Environmental Management plan provides a way forward for implementation of the proposed mitigation measures. The Environmental and Social Monitoring Plan shows what has to be monitored during construction and implementation phases. The estimated costs for implementing the mitigation measures as well as monitoring are just indicative based on consultant's informed judgment.

11.2 Conclusions

While a number of environmental impacts have been identified and assessed accordingly, none of them are considered to be too severe to make their amelioration impossible. Given the nature and location of the development, the conclusion is that the potential impacts associated with the proposed development are of a nature and extent that can be reduced, limited and eliminated by the application of appropriate mitigation measures. Further, the consultant is of the opinion that implementation of the proposed ESMP and EMP will safeguard the integrity of the environment and welfare of the people in the project area.

11.3 Recommendations

The Consultant recommends that the proposed project be allowed to proceed on condition that the proponent implements the ESMP and EMP proposed in this ESIA Report as appropriate and any further conditions that may be imposed by NEMC/NELSAP following consultations with lead agencies like TANROADS, and other stakeholders. This should go hand in hand with obtaining statutory approvals as in Table 31 below.

Table 31: Statutory Permits, Certificates and Licences for the Project

	Permit, Certificate and License	Relevant Act/Regulation	Responsible authority	Owner/who to apply for	Status
1.	EIA Certificate	EMA No. 20, of 2004	VPO-DoE through NEMC	Ngara DC	This document is part of the application
2.	Certificate of registration of workplace issued by the Occupational Safety and Health Authority (OSHA)	Occupational Health and Safety Act, 2003, S. 15-17	OSHA –Lake zone office in Mwanza or HQ	Ngara DC	To be applied for
3.	OSHA Compliance Licence	Occupational Health and Safety Act, 2003, S. 15-17	OSHA –Lake zone office in Mwanza or HQ	Ngara DC	To be applied for
4.	Workers Compensation Fund (WCF) registration	The Workers Compensation Act No. 20 of 2008.	Workers Compensation Fund	Ngara DC	To be applied for
5.	Fire Safety Certificate	Fire and Rescue Act, No. 14 of 2007	Fire and Rescue Force - Ministry of Home Affairs	Ngara DC	To be applied for
6.	Customary Title Deed	Land and Land Village Act (URT, 1999b) (No. 4 of 1999 amended by No. 2 of 2004)	NGARA District Council	Ngara DC	Obtained – Annex III
7.	Construction permit	The Contractors Registration Act No. 17 of 1997	Contractors Registration Board (CRB)	Ngara DC	To be applied for
8.	Road Reserve Use Permit	The Roads Act, No. 13 of 2007	TANROADS	Ngara DC	To be applied for

REFERENCES

—, The Environmental Impact Assessment and Audit Regulations, (2005)

—, Tanzania Environment Management Act Cap 191 (2004)

—, Environmental Impact Assessment and Audit (Amendment) Regulations (G.N. No. 474) of 2018

—, Operational Policy/Bank Procedure 4.01: Environmental Assessment, (2001).

—, Operational Policy/Bank Procedure 4.12: Involuntary Resettlement, (2001)

—, IFC/WBG Guidelines: Air Emissions and Ambient Air Quality

—, IFC/WBG Guidelines: Noise Management

—, IFC/WBG Guidelines: Occupational Health and Safety

—, WHO Air Quality Guidelines for Particulate Matter, Ozone, Nitrogen dioxide and Sulfur dioxide

—, Artelia EAU and Environment, 2013. Environmental and Social Impact Assessment Report for the Proposed Rusumo Falls Hydroelectric Project, Ngara District; Dam and Power plant component.

—, (2008), The HIV and AIDS (Prevention and Control) Act No. 28, Dar es Salaam, Ministry of health and Social Welfare

—, (2007), Environmental Management (Air Quality Standards) Regulations, Dar es Salaam, Government Printers, 2007

—, (2007), The Environmental Management (Air Quality Standards) Regulations, 2007

—, (2007), The Environmental Management (Water Quality Standards) Regulations, 2007

—, (2007), Environmental Management (Control of Ozone Depleting Substances) Regulation, Dar es Salaam, Government Printers, 2007

—, (2007), Environmental Management (Soil Quality Standards) Regulations, Dar es Salaam, Government Printers, 2007

—, (2007), Environmental Management (Water Quality Standards), Dar es Salaam: Government Printers, 2007

—, (2007), National Land Use Planning Act No. 6, Dar es Salaam, Ministry of Land, Housing and Human Settlement Development

—, (2007), The Environmental Management (Control Of Ozone Depleting Substances) Regulations

—, (2006), Livestock Policy, Dar es Salaam, Ministry of Livestock Development

—, (2008), Agricultural Marketing Policy, Ministry of Industry, Trade and Marketing, Dar es Salaa

—, (2000), National Women and Gender Development Policy, Ministry of Health and Social Welfare, Dar es Salaam, Tanzania

—, (2005), Environment Impact Assessment and Audit Regulations, 2005, Government printer, Dar es Salaam, Tanzania

—, (2004), Environmental Management Act No. 20, Dar es Salaam: Government Printers

—, (2003), The Animal Diseases Act No. 17, Dar es Salaam: Government Printers

—, (2003), National Health Policy, Dar es Salaam, Ministry of Health and Social Welfare

—, (2003), Energy Policy, Dar es Salaam, Ministry of Energy and Minerals

—, (2003), Tanzania Food, Drugs and Cosmetics Act No. 1

—, 2002: Forest Act, 2002. Government printer, Dar es salaam, Tanzania,

—, 2002: National Water Policy. Government printer, Dar es salaam, Tanzania,

—, (2002), Water Policy, Dar es Salaam, Ministry of Water and Livestock Development

—, 1999: National Land Act, 1999. Government printer, Dar es salaam, Tanzania

—, (1999) Village Land Act No. 5, Ministry of Lands, Dar es Salaam, Housing and Human Settlement Development,

—, 1998: National Forest policy. Government printer, Dar es salaam, Tanzania,

—, (1997), Environmental Policy of Tanzania, Dar es Salaam: Dar es Salaam University Press

—, 1997: National Land Policy. Government printer, Dar es salaam, Tanzania

—, 1997: National Environmental Policy. Government printer, Dar es salaam, Tanzania

—, (1996), Community Development Policy, Dar es Salaam, Ministry of Community Development, Women Affairs and Children

___, Leon, B. Davies, G. Howell, K. Newing, H. Linkie, M. 2002. African Forest Biodiversity: A field survey manual for vertebrates. Cambridge University press.

—, (2020), DON Consult Limited: Environment Impact Assessment for the Proposed Construction of Rusumo Village Water Supply Scheme, Under Local Area Development Program (LADP) in Ngara District, Kagera Region.

—, (n.d), The Tanzania Development Vision 2025, Dar es Salaam, Planning Commission

___, (2019), Kagera Region Investment Guide, Dar es Salaam, President's Office Regional Administration and Local Government

—**,** International Finance Corporation (IFC) (2012), Performance Standards on Environmental and Social Sustainability, World Bank Group

Online Sources

http://www.metamorphosisalpha.com/ias/population.php

www.ngaradc.go.tz

APPENDIX I: Consulted Stakeholders & Minutes of the Village Meeting- Rwakalemera

MUHTASARI WA KUTHIBITISHA UWEPO WA ARDHI ILIYOTENGWA KWA AJILI YA MATUMIZI YA KUPELEKA UMEME KATIKA SHULE YA NGARA HIGH SCHOOL NA TATHMINI YA ATHARI ZA MAZINGIRA NA JAMII ZINAZOWEZA KUTOKEA KUTOKANA NA UTEKELEZAJI WA MIRADI HII

TAREHE 06.11.2021

AGENDA ZA MKUTANO:

1. KUFUNGUA MKUTANO
2. UTAMBULISHO
3. UPATIKANAJI WA ARDHI YA KUTEKELEZA MIRADI.
4. TATHMINI YA ATHARI ZA MAZINGIRA NA KIJAMII ZINAZOWEZA KUJITOKEZA KUTOKANA NA UTEKELEZAJI WA MIRADI
5. KUFUNGA KIKAO

MUHT NA/2021/2022 – KUFUNGUA KIKAO (MKUTANO).

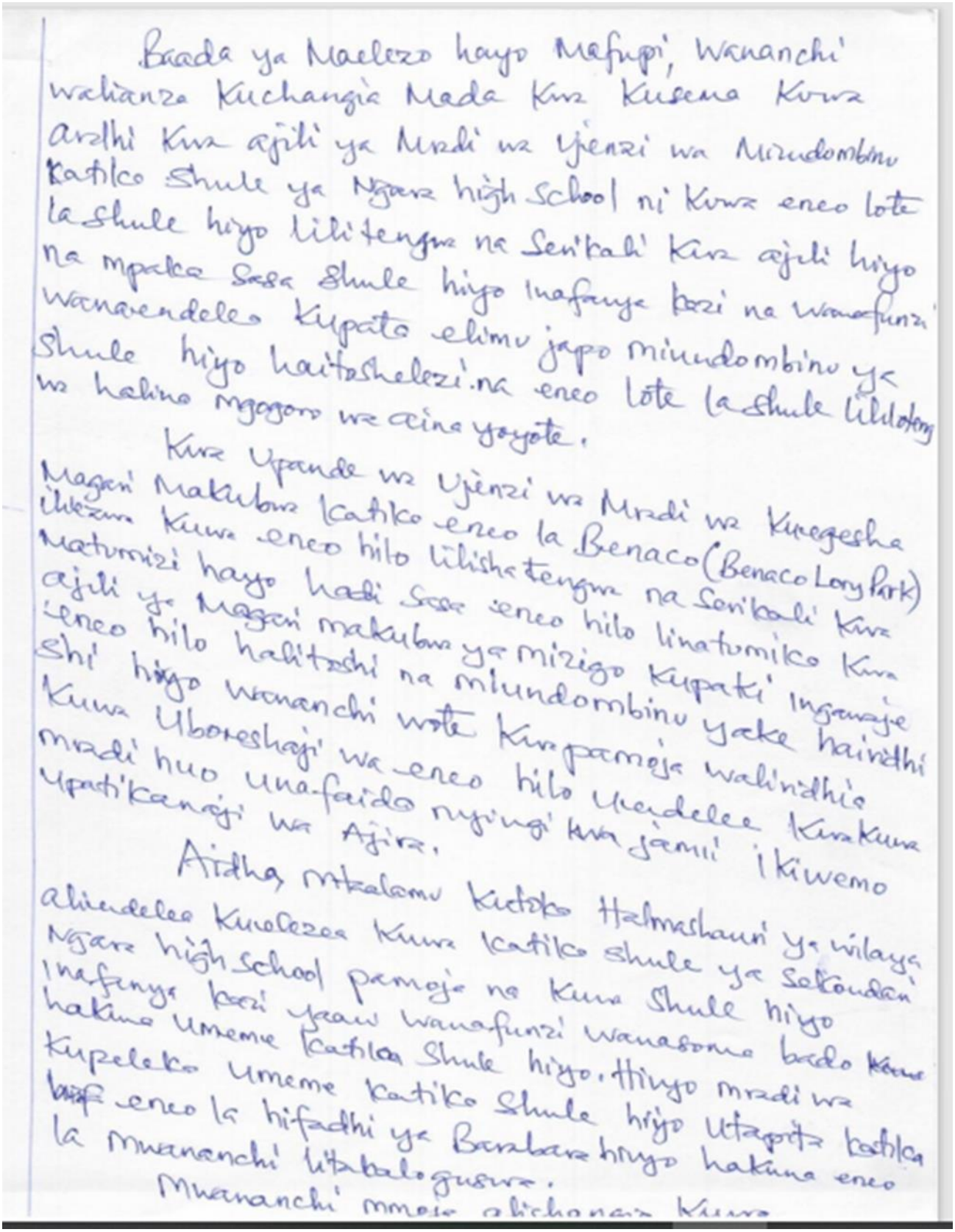
Mwenyekiti alifungua mkutano wa hadhara mnamo saa 9:17 Alasiri kwa kueleza kuwa mkutano huu ni wa dharura kwa ajili ya kujadili miradi ambayo itatekelezwa katika kijiji cha Rwakalemela sambamba na upatikanaji wa Ardhi.

MUHT. NA/2021/2022 – UTAMBULISHO.

Mwenyekiti wa kijiji alifanya utambulisho wa wataalamu kutoka Halmashauri ya wilaya ya Ngara, pia alitambulisha wananchi kivitongoji kisha wajumbe wa Serikali ya kijiji waliohudhuria katika mkutano huu.

MUHT. NA/2021/2022 – UPATIKANAJI WA ARDHI KWA AJILI YA UTEKELEZAJI WA MIRADI.

Mwenyekiti alimuomba Mratibu wa LADP ili asimame atoe ufafanuzi wa jinsi ya upatikanaji wa Ardhi, Mratibu wa LADP alieleza kuwa katika utekelezaji wa miradi hii unahitaji Ardhi isiyo na migogoro ya aina yoyote kwa kuwa miradi hiyo haina kifungu chochote cha kulipa fidia katika utekelezaji wa Miradi, yote inayofadhiliwa na Benki ...



Baada ya Maelezo hayo Mafupi, Wananchi walianza Kuchangia Mada Kwa Kusema Kuwa ardhi Kwa ajili ya Mradi wa Ujenzi wa Mzundombinu katika Shule ya Ngara high School ni Kwa eneo lote la Shule hiyo lilitengwa na Serikali Kwa ajili hiyo na mpaka Sasa Shule hiyo inafanya kazi na wanafunzi wanaendelea Kupata elimu japo miundombinu ya Shule hiyo haitoshelezi.na eneo lote la Shule lilitolewa wa halina mgogoro wa aina yoyote.

Kwa Upande wa Ujenzi wa Mradi wa Kuegesha Magari Makubwa katika eneo la Benaco(Benaco Lorry Park) likizungumzwa eneo hilo lilishatengwa na Serikali Kwa matumizi hayo hadi Sasa eneo hilo linatumika Kwa ajili ya Magari makubwa ya mizigo kupaki Ingawaje eneo hilo halitoshi na miundombinu yake hairidhi Shi hiyo wananchi wote Kwa pamoja walionidhia Kuwa Uboreshaji wa eneo hilo Utaendelea Kwa Kuwa mradi huo una faida nyingi kwa jamii Ikiwemo Upatikanaji wa Ajira.

Aidha, mkalamo kutoka Halmashauri ya wilaya alizungumzia Kuwa katika shule ya Sekondari Ngara high School pamoja na Kuwa Shule hiyo inafanya kazi yaani wanafunzi wanasoma bado Kuna hakuna Umeme katika Shule hiyo. Hivyo mradi wa kupeleka Umeme katika Shule hiyo Utapita katika eneo la hifadhi ya Barabara hivyo hakuna eneo la mwananchi litakalo guswa.

Mwananchi mmoja alichangia Kuwa

amefurahishwa sana kusikia kwamba Mradi wa Kupeleka Umeme Shuleni utapita kwenye hifadhi ya Lambare kwakuwa hakuna Mwananchi yoyote atakaye athiriko na Mradi kwani hakuna Mwananchi anaye fanya Shughuli za kilimo katika eneo la hifadhi ya Lambare.

MUHTI NA/2021/2022 — TATHMINI YA ATHARI ZA KIMAZINGIRA NA KIJAMII ZINAZOWEZA KUSIBIKEZA KUTOKANA NA UTEKELEZAJI WA MIRADI.

Mtaalamu Mshauri wa Mazingira aliwasilisha agenda hii kwa Wananchi kuwa wananchi wanatakiwa kutoa Maoni na Mchango yao Mbalimbali kwa Uhuru na Uwazi juu ya athari za Kimazingira na Kijamii wakati wa Utekelezaji na Uendeshwaji wa Miradi.

Wananchi walielezea kuwa faida zitakazopatikana na miradi hii ni pamoja na:-

i/ Upatikanaji wa ajira kwa wananchi wakati wa Utekelezaji wa miradi

ii/ Wananchi watapata fursa ya Kufanya biashara kama Vijasiriamali katika eneo la Mradi

iii/ Kwa upande wa mradi wa Maegesho ya Magari Wanaa Makubwa - ajali zitapungua kutokana na Magari hayo kuto egeshwa katika Maeneo yasiyo na Makazi ya Wananchi.

Pia Wananchi walichangia Mawazo Kuwa, wakati wa Utekelezaji wa Mradi Kuna Uwezekano wa Kutokea athari mbaya kwa Wananchi zikiwemo ajali, Vumbi. wakati wa ~~ujenzi~~ ujenzi wa mradi.

HITIMISHO:

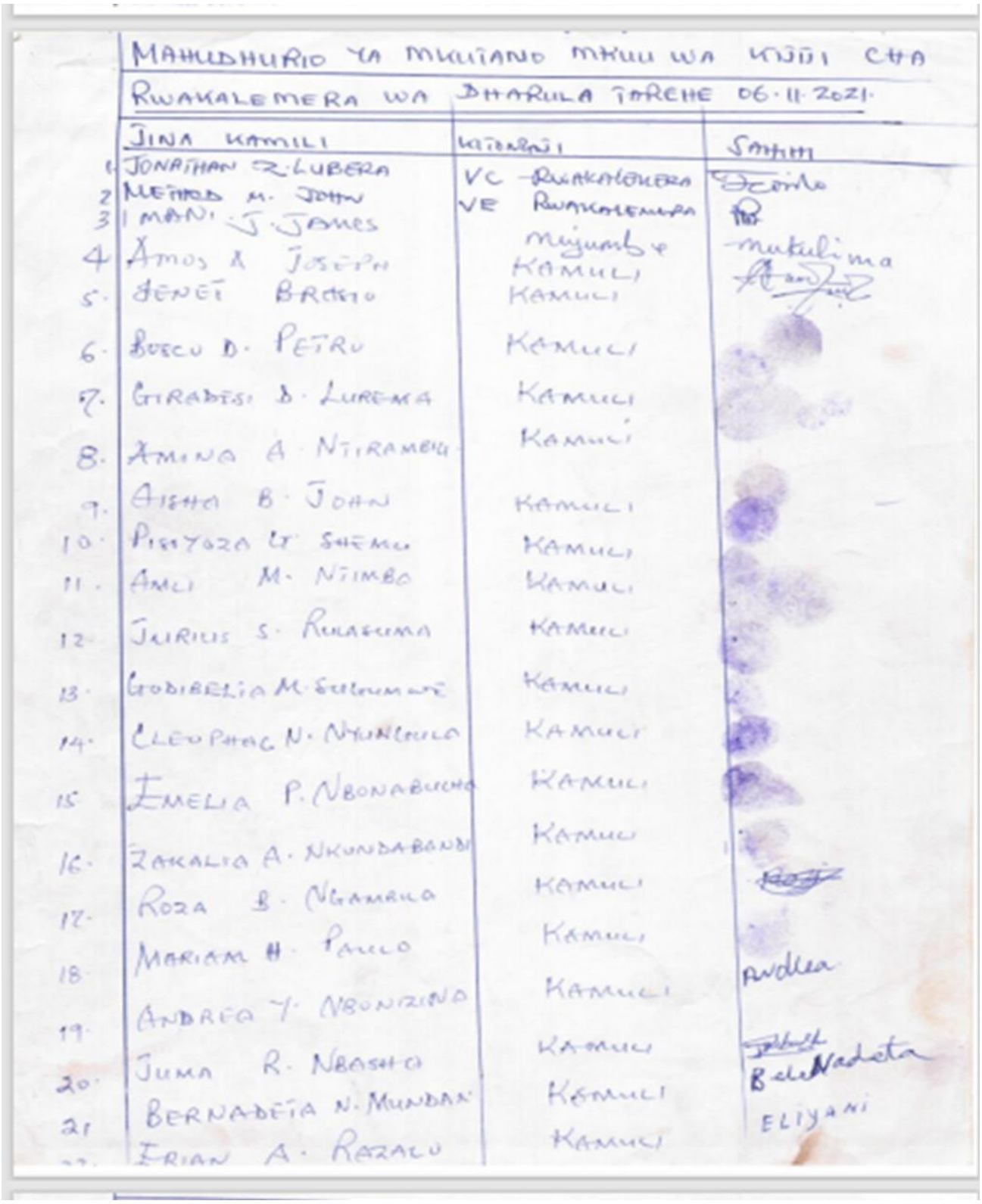
Kwa ujumla wananchi wenyewe walikubaliana Kuwa Maeneo yote kwa ajili ya Utekelezaji wa Mradi hayana Migogoro yoyote ile na pia ni walisisitiza Kuwa wakati wa Ujenzi wa Mradi hiyo Kipaumbele cho ajira Mbalimbali zitolewe Kwa wananchi wa Maeneo husika.

MUHT NA/2021/2022 — KUFUNGA MKUTANO.

Mwenyekiti wa Kijiji alifunga mkutano huo wa hadhara mnamo saa 11:26 jioni kwa Kuwashukuru wananchi wote kwa Mahudhurio yao Mazuri na Kuwataka Kila lakheri watudipo Majumbani mwao.

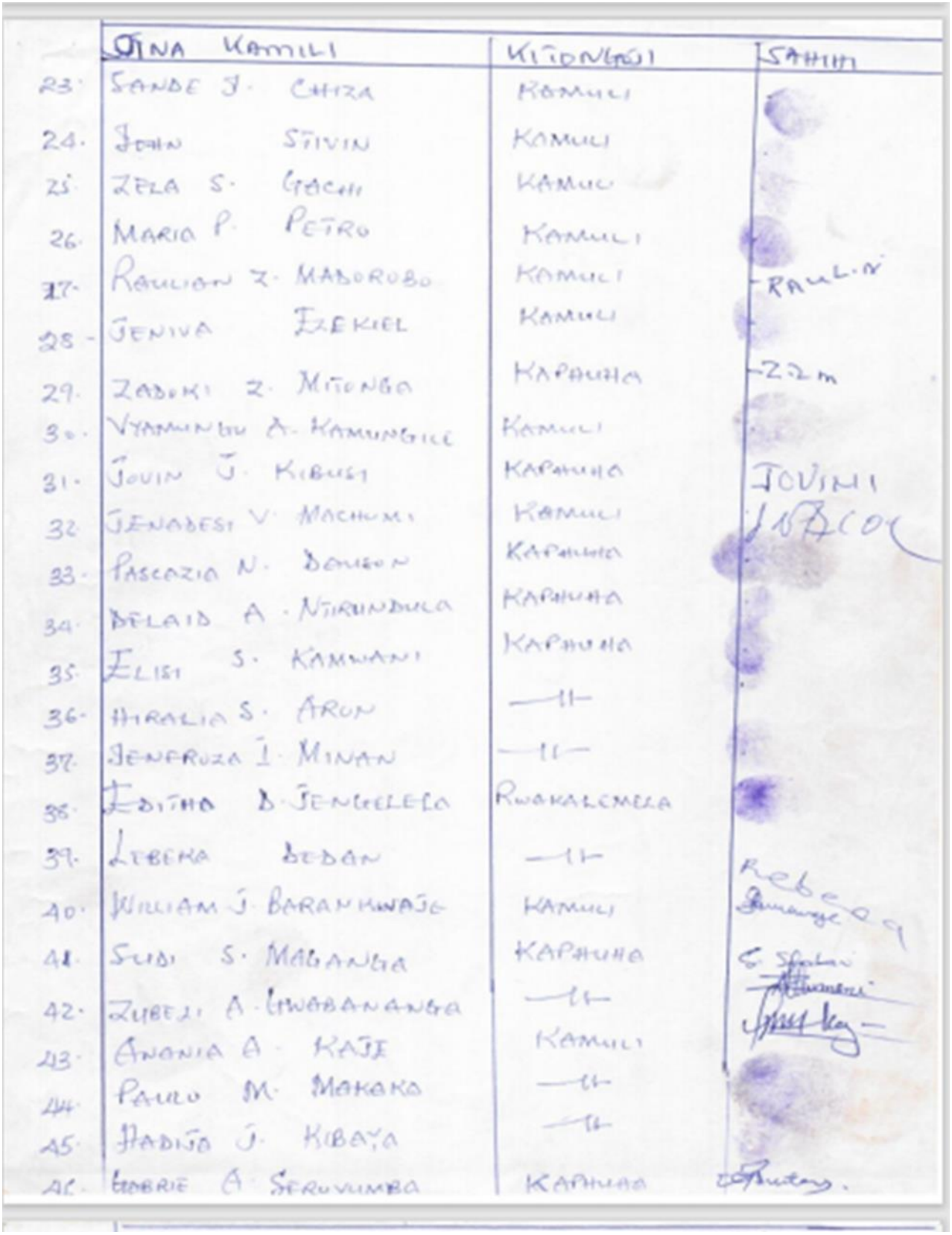
METHOD TOBANA
KATIBU

JONATHAN Z. LUBERA
MWENYEKITI



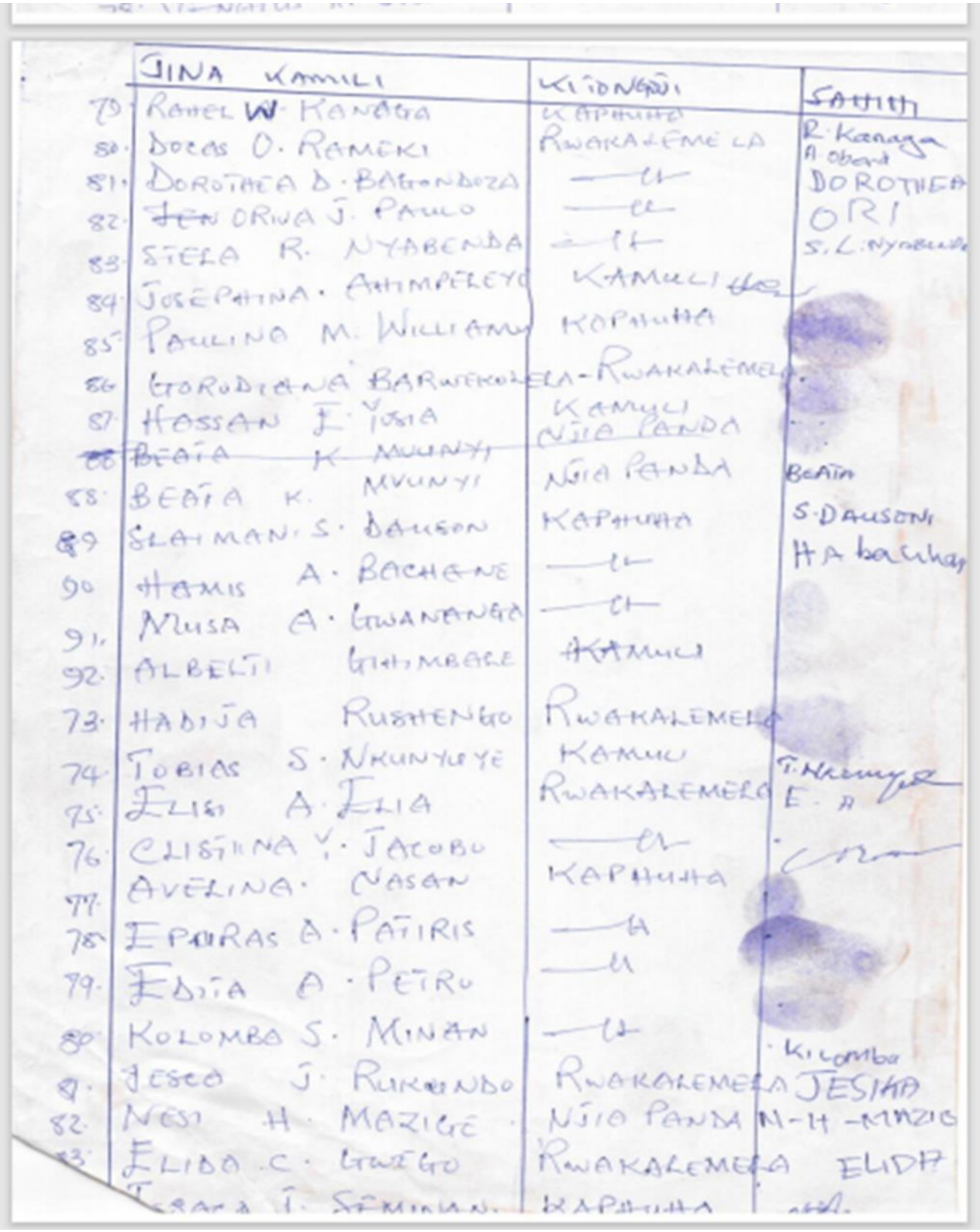
MAHUDHURIO YA MKUTANO MKUU WA KIJIJI CHA RWAKALEMERA WA DHARURA TAREHE 06.11.2021.

	JINA KAMILI	KAZI/NAFASI	SAHIHI
1.	JONATHAN Z. LUBERA	VC RWAKALEMERA	
2	METHOD M. JOHN	VE RWAKALEMERA	
3	IMANI J. JAMES	Mjumbe	mutulima
4	AMOS A JOSEPH	KAMUCI	
5.	JENETI BARIO	KAMUCI	
6.	BOECU D. PETRU	KAMUCI	
7.	GIRADESI D. LUREMA	KAMUCI	
8.	AMINA A. NTIRAMEU	KAMUCI	
9.	AISHA B. JOHN	KAMUCI	
10.	PISTOZA C. SHEMU	KAMUCI	
11.	AMLI M. NTIMBA	KAMUCI	
12.	JULIUS S. RUKAKUMA	KAMUCI	
13.	GODIBELIA M. SULEIMAN	KAMUCI	
14.	CLEOPHAC N. NYUNGULA	KAMUCI	
15	EMELIA P. NBONABUCHA	KAMUCI	
16.	ZAKALIA A. NKUNDABANDI	KAMUCI	
17.	ROZA B. NGAMAKA	KAMUCI	
18.	MARIAM H. PAULO	KAMUCI	Andrea
19.	ANDREA Y. NBONZINA	KAMUCI	Bella Nadeta
20.	JUMA R. NBASHO	KAMUCI	ELIYANI
21	BERNADETA N. MUNDAN	KAMUCI	
	ERIAN A. REZALU	KAMUCI	

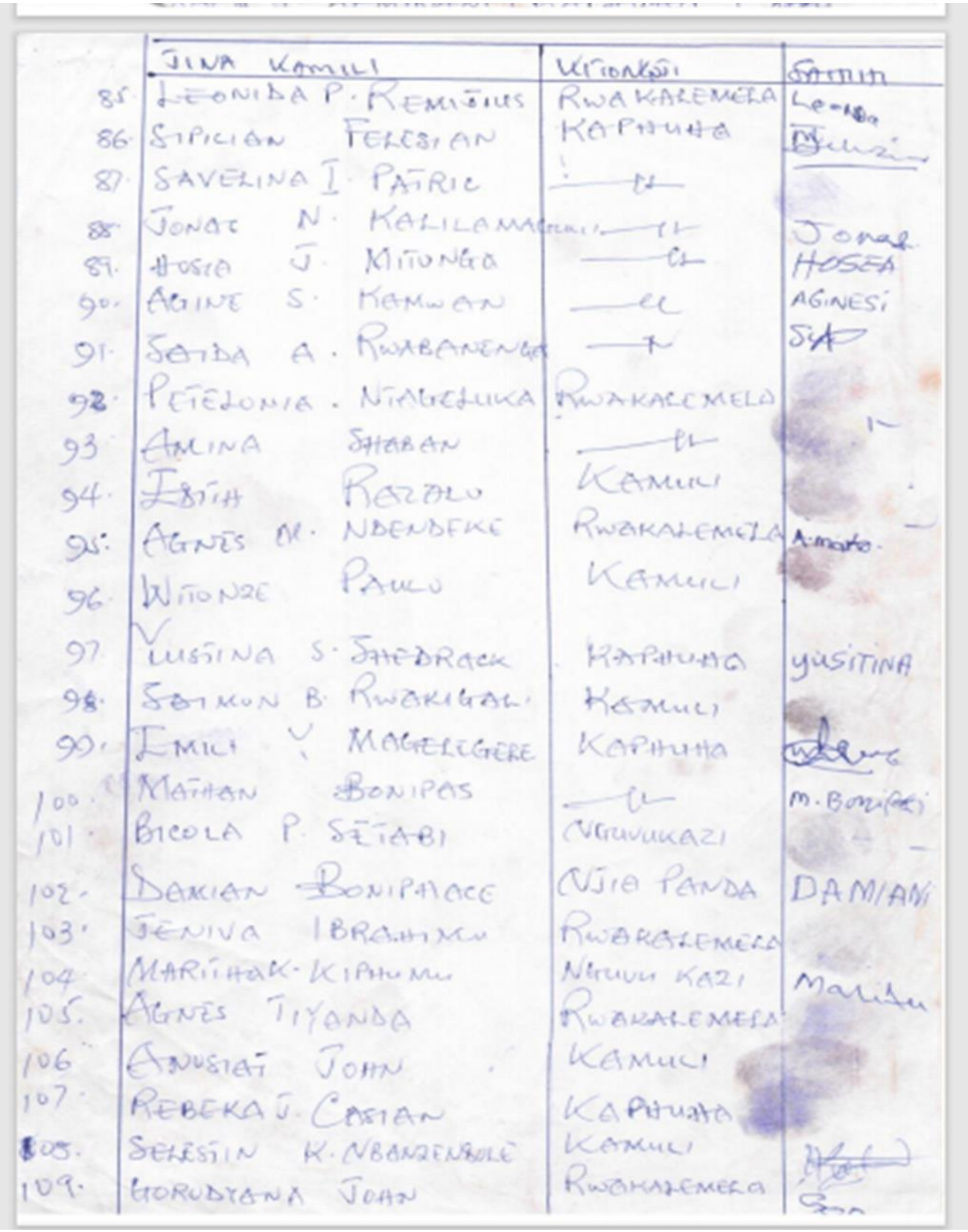


	JINA KAMILI	KITONGOJI	SAHIHI
23.	SANDE J. CHIZA	KAMULI	
24.	JOHN STIVIN	KAMULI	
25.	ZELA S. GACHI	KAMULI	
26.	MARIA P. PETRO	KAMULI	
27.	RAULIAN Z. MABOROBO	KAMULI	RAUL.N
28.	GENIVA EZEKIEL	KAMULI	
29.	ZABOKI Z. MITONGA	KAPAHIA	Z.Z m
30.	VYAMUNGU A. KAMUNGILE	KAMULI	
31.	JOVIN J. KIBUGI	KAPAHIA	JOVINI
32.	JENADESI V. MACHUMI	KAMULI	
33.	PASCAZIA N. DONGEN	KAPAHIA	
34.	DELAIDA A. NJIRUNDULA	KAPAHIA	
35.	ELISI S. KAMWANI	KAPAHIA	
36.	HARALIA S. ARUN	—11—	
37.	JENERUZA I. MINAN	—11—	
38.	EDITHA D. JENGELELA	RWAKALEMELA	
39.	LEBEKA BEDAN	—11—	Rebeca
40.	WILLIAM J. BARAKWAJE	KAMULI	
41.	SUDI S. MAGANGA	KAPAHIA	
42.	ZUBERI A. LWABANANGA	—11—	
43.	ANANIA A. KAJE	KAMULI	
44.	PAULO M. MAKAKA	—11—	
45.	HADIJA J. KIBAYA	—11—	
46.	HARRIE A. SERUYUMBA	KAPAHIA	

	JINA KAMILI	KITONGOJI	SAHIHI
47.	VEREDIANA K. MZUNGU	KIGANDO KAPHUHA	
48.	YUDESI GABRIEL		Yudes
49.	SPESIOZA WELLINGTHON	KAPFUHA	S. wellington
50.	SESILIA EMANUEL	KAPFUHA	
51.	EVANGELINA KAROLI	KAPFUHA	E.K.
52.	DOROTHEA JOHN	KAMULI	DoROTEYA
53.	SARA BARWEKALERA	RWAKALEMERA	
54.	JENIVA PAUL	RWAKALEMERA	
55.	AGNES BIZIRIKO	KAPFUHA	
56.	PISIOZA ANTONY	KAPFUHA	
57.	AIZAK NELSON	KAPFUHA	
58.	RAJABU NIHENIYE	KAPFUHA	Rwatenye
59.	SETI BIZIRIKO	KAPFUHA	Nelson
60.	KALORI ANTON	KAPFUHA	
61.	JENIVA ISRAEL	RWAKALEMERA	Kaloli
62.	DEUS MBUNGI BISO	KAPFUHA	
63.	ABNAH JACOBO	RWAKALEMELA	
64.	KWIZERA M. SENGATI	RWAKALEMELA	
65.	BRAYO NTAMASABO	KAMULI	
66.	ANGELINA MARCO	KAMULI	
67.	GAUDESIA DAUSON	KAMULI	
68.	CHARLES RADISLAUS	KAPFUHA	
69.	JOSEPHATI SIMON	KAMULI	
70.	ELIDA CHARLES	RWAKALEMELA	
71.	ATHANAS SAIMON	KAMULI NJIA PANDA	ATANAZI
72.	MINANI C. BALIHELO	RWAKALEMELA	
73.	JENIVA PAULO	KAMULI	EA
74.	MADALENA ERAST	RWAKALIMELA	
75.	KATUSHABE CLAVEL	KAMULI	
76.	MATHIAS COSMAS	RWAKALEMELA	
77.	MELISIANI T. BUGUSU	—	Melling
78.	VENATUS M. BISSO		



	JINA KAMILI	KIJONGOO	SAHIHI
79	RAHEL W. KANAGA	KAPHUHA	R. Kanaga
80	DOCAS O. RAMEKI	RWAKALEMELA	A. Obed
81	DOROTHEA D. BAGONDOZA	"	DOROTHEA
82	~~JEN~~ ORIA J. PAULO	"	ORI
83	STELA R. NYABENDA	"	S. L. Nyabenda
84	JOSEPHINA. AMPELEYO	KAMULI	
85	PAULINA M. WILLIAM	KAPHUHA	
86	GORODIANA BARWEKOLELA	RWAKALEMELA	
87	HOSSAN I. YOSIA	KAMULI NJIA PANDA	
~~88~~	~~BEATA K. MKUNYI~~		
88	BEATA K. MKUNYI	NJIA PANDA	Beatin
89	SLAHMAN S. DAUSON	KAPHUHA	S. DAUSON
90	HAMIS A. BACHENE	"	H A bachha
91	MUSA A. GWANENGA	"	
92	ALBERTI GHAMBAGE	~~KAMULI~~	
73	HADIJA RUSHENGO	RWAKALEMELA	
74	TOBIAS S. NKUNYUYE	KAMULI	T. Nkunyuye
75	ELIA A. ELIA	RWAKALEMELA	E. "
76	CLISINA Y. JACOBO	"	
77	AVELINA. NASAN	KAPHUHA	
78	EPHRAS A. PATIRIS	"	
79	EDITA A. PETRO	"	
80	KOLOMBA S. MINAN	"	Kilomba
81	JESCA J. RUKUNDO	RWAKALEMELA	JESIAH
82	NESI H. MAZIGE	NJIA PANDA	N-H-MNZIG
83	ELIDA C. GWEGO	RWAKALEMELA	ELIDA
	[illegible]	KAPHUHA	



	JINA KAMILI	KITONGOJI	SAHIHI
85.	LEONIDA P. REMIGIUS	RWAKALEMELA	Le-Ida
86.	SIPICIAN FELESIAN	KAPUTA	
87.	SAVELINA I. PATRIC	"	
88.	JONAS N. KALILAMA	"	Jonas
89.	HOSEA J. MITONGA	"	HOSEA
90.	AGINE S. KAMWAN	"	AGNESI
91.	SEIDA A. RWABANENGA	"	SA
92.	PETRONIA . NTABEZUKA	RWAKALEMELA	
93.	AMINA SHABAN	"	
94.	IBTIH RAZALO	KAMUCI	
95.	AGNES M. NDENDEKE	RWAKALEMELA	Amarto.
96.	WITONZE PAULO	KAMUCI	
97.	LUSINA S. JAEDRACK	KAPUTA	yusitina
98.	SOLOMON B. RWAKIGALI	KAMUCI	
99.	EMILI V. MAGELEGERE	KAPUTA	
100.	MATHAN BONIPAS	"	M. Bonifasi
101.	BICOLA P. SETABI	NGUVUKAZI	
102.	DAMIAN BONIFACE	NJIA PANDA	DAMIANI
103.	JENIVA IBRAHIM	RWAKALEMELA	
104.	MARITHA K. KIPANGA	NGUVU KAZI	Maritha
105.	AGNES TIYANDA	RWAKALEMELA	
106.	ANUSIATI JOHN	KAMUCI	
107.	REBEKA J. CASIAN	KAPUTA	
108.	SELESTIN K. NBANZENGOLE	KAMUCI	
109.	GORDIANA JOAN	RWAKALEMELA	

No.	JINA KAMILI	CHEO	SAHIHI
110	FROLIDA MELLING	NGUVUKAZI	Sarah
111	JOSEFINA MATHAYO	NJIAPANDA	[illegible]
112	SIERIA JOFILY	NGUVUKAZI	
113	JONI STAFHODI	NGUVUKAZI	
114	JENI RWEHABULA	NJIAPANDA	Jeni
115	ELIZABETH NKONDEMU	NGUVUKAZI	[illegible]
116	MALIA ROBATHI	NGUVUKAZI	
117	SIERA NIKODEMU	NGUVUKAZI	
118	NEEMA WISTONI	KAPHUHA	
119	JASTINI JOSEPH	NGUVUKAZI	J.
120	JOSTONI EFUTHA	NGUVUKAZI	[illegible]
121	MALIA PETRO	NGUVUKAZI	
122	PHILIBERT MIKAILE	NGUVUKAZI	
123	ELIABU WIKILIFU	NGUVUKAZI	P.A.
124	ABDULEA KABUKOBA	NGUVUKAZI	[illegible]
125	JOLAMU ROBATHI	NGUVUKAZI	[illegible]
126	KILIMESIA EDWADI	NGUVUKAZI	TOR
127	FELESIA SHUBULACK	KAPHUHA	[illegible]
128	JAMES MICHAEL	KAMULI	FORESTA
129	FORESI JONASI	RWAKALEMELE	[illegible]
130	YASMINI ASUMANI	KAMULI	
131	ELINA MUSA	KAPHUHA	
132	KELEZESIA JONI	RWAKALEMELA	ELINA. M
133	YUZOFINA PETRO	NGUVUKAZI / KAMULI	
134	KATHALINA VALES	RWAKALEMELA	[illegible]
135	EDINA DOMINIKI	RWAKALEMELA	EDINA
136	JENIVA ADONI	NJIAPANDA	[illegible]
137	MELEY LENADI	RWAKALEMELA	
138	LAZARO JAKOBO	NGUVUKAZI	
139	JULIETHI GABI	KAPHUHA	[illegible]
140	JOSAMU ATHANAZI		
141	AROIZI JONI	KAFUHA	
142	NAOME CHINGIONZE	KAFUHA / NJIAPANDA	Naomi
143	JOANA RAULIAN	NGUVUKAZI	[illegible]

	JINA KAMILI	KITONGOJI	SAHIHI
1144	ABED ATHUMAN	NYAPANDA	
1145	AGNESTHA GODION MUMWAMI	NGIAPANDA	Agnesta
1146	DOROTHEA DARIO TOI	NJAPANDA	D·BAROI-T
1147	VALERI PETRO	RWAKALEMELA	KAILEHI
1148	FRANCIS MZUNGU	〃	Francis
1149	ANATORIA THOMAS	〃	Anatoria
1150	EMANUEL SEMUNAN	KAPUHUHA	EMS
1151	BONIFACE MGUMBA	RWAKALEMELA	
1152	PAULO JEREMIA	KAPUHUHA	
1153	SIMON JAPHET	KAMULI	
1154	RAZALI K. JOSION	KAPUHUHA	
1155	RUBIAN PATRIC	〃	
1156	MAGILEI PHILLIPO	RWAKALEMELA	
1157	JANET DAVID	KAPUHUHA	
1158	THOMAS MICHAEL	RWAKALEMELA	
1159	PAULINA SIMON	KAMULI	
1160	HIBINA S. STIVIN	KAPUHUHA	H. STIVINI
1161	ANASTAZIA N. WILLIAM	〃	A. WILLAS
1162	ADELINA BAUYEMAULA	RWAKALEMELA	
1163	SALAMANA IBRAHIMU	〃	Salam
1164	LENAYU KASSIAN	KAPUHUHA	
1165	MABINA ATHUMAN	NJIA PANDA	
1166	GERECIA DARIO	KAPUHUHA	MAD
1167	ATHUMANA IBRAHIMU	NJIA PANDA	D.D
1168	MUKAMUKALA 〃	〃	〃
1169	VENELANDA M. MAKAKA	KAMULI	
1170	MASAKE - DAUSON	〃	
1171	SHAKILA - AMULI	〃	

APPENDIX II: Consulted Stakeholders & Minutes of Ngara DED's Meeting

HALMASHAURI YA WILAYA

MUHTASARI WA KIKAO CHA KAMATI YA WATAALAM CMT KUJADILI TATHIMINI YA ATHARI ZA MAZINGIRA NA KIJAMII KWA MIRADI PENDEKEZWA AWAMU YA II CHINI YA LADP

WAJUMBE WALIOHUDHURIA

1. BW. SOLOMON. O. KIMILIKE	-	MKURUGENZI MTENDAJI
2. EGIDY TEULAS	-	MKUU WA IDARA YA UTAWALA/UTUMISHI
3. YONA CHARUGAMBA	-	MKUU WA IDARA YA FEDHA NA BIASHARA
4. CONSTANTINE F. MSEMWA	-	MKUU WA IDARA YA MIPANGO, TAKWIMUNAUFUATILIAJI.
5. NGERANGERA TRESPHORY	-	MKAGUZIWA NDANI (W)
6. PETRONILA L. KAGIMBO	-	KAIMU AFISA EIMU MSINGI (W)
7. DIDMUS BAMUHIGA	-	KAIMU MRATIBU WA LADP
8. ADELINA MAPUNDA	-	KAIMU AFISA BIASHARA
9. EMMANUEL M. VICTOR	-	KAIMU AFISA TEHAMA
10. ENOCK G. NTAKISIGAYE		AFISA ELIMU SEKONDARI (W)
11. ENOCK MPONZI	-	AFISA ARDHI (W)
12. ATHANASIO ANDREW	-	KAIMU AFISA MAZINGIRA (W)
13. JOSEPH J. MRIANGA	-	KAIMU AFISA MALIASILI (W)
14. EMMANUEL KULWA	-	MKUU WA IDARA YA MAENDELEO YA JAMII,
15. SIMON MTUKA	-	KAIMU MKUU WA IDARA YA UJENZI (W)
16. REMIGIUS E. KAWISHE	-	KAIMU MKUU WA IDARA YA KILIMO, MIFUGO/ USHIRIKA
17. JOSEPHATSANGATATI	-	MKUU WA IDARA YA MIFUGO NA UVUVI
18. SAKINA Y. CHAMITI	-	MRATIBU WA TASAF
19. GABRIEL GIBSON	-	LADP CONSULTAT
20. DR. DAVID S. MAPUNDA	-	KAIMU MGANGA MKUU (W)
21. PERPETUA O. RUTWAZA	-	KAIMU AFISA UGAVI (W)

SEKRETARIET

1. BI. VIVIAN MARUHE	-	MWANDISHIWAVIKAOVYA HALMASHAURI
2. BI. PERAGIA J. NABUDINDI	-	MWANDISHIWAVIKAO
3. JONAS P. NSEKAMBABAYE	-	MHUDUMU

AGENDA NA. 1/1/11/2021/2022: KUFUNGUA KIKAO

Mwenyekiti aliwasalimia wajumbe na kuwakaribisha katika kikao, pia alieleza kwamba lengo la kufanyika kwa kikao ni kujadili au kutoa maoni juu ya tathimini ya athari za mazingira na

1

kijamii kwa miradi pendekezwa awamu II chini ya LADP. Aidha alieleza kwamba katika kikao kinachofanyika yupo Mtaalam Mshauri wa Mazingira ambaye amekuja kwa ajili ya kufanya kazi ya kuandika maandiko kwa niaba ya Halmashauri ya Wilaya ya Ngara hivyo ataeleza dhumuni la kikao ambapo wajumbe watatakiwa kuchangia kwa kina. Kikao kilifunguliwa rasmi saa 4.00 asubuhi

AGENDA NA. 2/1/11/2021/2022KURIDHIA AGENDA

Wajumbe walipitia agenda na kuridhia zianze kujadiliwa

AGENDA NA. 3/1/11/2021/2022: TATHIMINI YA ATHARI ZA MAZINGIRA NA KIJAMII KWA MIRADI PENDEKEZWA AWAMU YA II CHINI YA LADP

Iliwasilishwa kwamba Mtaalam Mshauri wa Mazingira alipewa kazi ya kuandaa andiko la athari za kimazingira na kijamii kwa miradi itakayotekelezwa na mradi wa LADP II kwa niaba ya H/W ya Ngara, hivyo aliwaomba wajumbe kutoa maoni yao kwa uhuru na uwazi kwa kila mradi uliowasilishwa katika Nyanja zifuatazo;

a) Faida za kimazingira na kijamii kwa kila mradi uliopendekezwa
b) Hasara za kijamii na kimazingira zinazoweza tokea wakati na baada ya kukamilika kwa mradi
c) Njia mbalimbali za kukabiliana na athari mbaya za kimazingira na kijamii kwa kila mradi

Pia Mtaalam Mshauri wa Mazingira alitaja orodha ya miradi inayopendekezwa kutekelezwa kwa kipindi cha cha awamu ya pili chini ya LADP kwa ufadhili wa benki ya dunia ambayo ni:

1. Construction of Ngara District Head Quarter Administration Block
2. Completion of Nzaza–Kabanga strategic market
3. Construction of Strategic Benaco trucks parking bay
4. Construction and equip Rulenge Health centre Complete and put in use Rusumo and Lukole Health centres built during LADP I by constructin fence around both health centers, procure medical Equipment and furniture for both High voltage Electric Lines to connect both Rehabilitation gravel access road to Rusumo HC and procure Ambulance for Rusumo HC
5. Procure furniture to equip Bukiriro Secondary School
6. Construction of infrastructure at Ngara High school and equip them (Admin Block, Dining Hall, Dormitory and High voltage line to connect the school
7. Construct High voltage Electrict Line to connect Rusumo Water Project power source to run water pump after construction
8. Construction and equip Muhweza Dispensary
9. Construct Strategic Market at Kahaza in Rusumo village

Mtaalam Mshauri wa Mazingira alieleza kwamba ameshafika katika Vijiji na maeneo ambako miradi inatarajiwa kutekelezwa kwa ajili ya kuongea na wananchi katika maeneo husika pamoja na kukusanya taarifa mbalimbali na kusema kote alikopita wanajamii wamejitokeza katika mikutano na kutoa ushirikiano.

Wajumbe walipokea taarifa na kujadili/ kutoa maoni kama ifuatavyo;

Mjumbe aliuliza swali "Je kuna umuhimu gani kwa wao kutoa maoni wakati wananchi wa maeneo husika wameshatoa maoni kwa miradi yao waliyopendekeza?

Ufafanuzi ulitolewa kuwa katika kufanya tathimini ya athari za mazingira na kijamii kwa miradi inahusisha/kushirikisha wadau wa ngazi mbalimbali ili kuhakikisha miradi/mradi unakuwa na manufaa chanya kwa jamii na mazingira na hivyo kupunguza au kuzuia kabisa athari mbaya za mradi kwa jamii na mazingira, pia aliongezea kwa kusema kuwa wajumbe wa CMT ni moja ya wadau muhim sana katika miradi hii.

Mjumbe mwingine alisema kuwa endapo miradi pendekezwa itapatiwa fedha kwa ajili ya utekelezaji itakuwa na faida kubwa kwa wakazi wa maeneo husika na wilaya kwa ujumla kwa kuwa vijana wetu wenye ujuzi na wasio na ujuzi watapata ajira kipindi cha ujenzi wa miradi, hivyo alisisitiza wakandarasi watakapatiwa kazi wahakikishe wanajaza fomu ya makubaliano kuwa ahakikishe wazawa wanapewa kipaumbele katika utoaji wa ajira wakati wa ujenzi.

Kuna mjumbe alitoa ushauri kuwa miradi kama ya masoko na paking ya malori itasaidia kuongeza mapato kwa H/W na hivyo kuiongezea uwezo H/W kutoa huduma za kijamii kwa wanainchi vijijini kama vile kujenga zahanati, kupeleka miundombinu ya maji safi kwa wananchi katika halmashauri ya Ngara.

Mjumbe alisema kuwa katika utekelezaji wa miradi/mradi wa aina yoyote ule kuna wakati huwa inajitokeza changamoto ya vibarua kutolipwa stahiki zao na hivyo kupelekea vibarua kudhulumiwa na kuleta manung'uniko katika jamii, je kuna mikakati gani ya kuhakikisha jambo kama hili halijitokezi au likijitokeza ni hatua zipi zitakazo chukuliwa katika kupatiwa ufumbuzi?

Ufafanuzi ulitolewa kuwa ili kukabiliana na changamoto ya aina hii, mkandarasi sharti lazima awe na mikataba kwa wafanyakazi wake wote bila kujalisha ni mfanyazi mwenye ujuzi au asie na ujuzi, pia ufatiliaji na ukaguzi wa kila wiki unapaswa kufanywa na Halmashauri ili kuhakikisha kuwa wafanyakazi watapewa mkataba pindi tu anapoajirwa na mkandarasi.

Pia ilielezwa kuwa ni muhimu kuwa na mfumo wa namna ya jamii kwa ujumla kutoa malalamiko yao juu ya kero zinazoweka kujitokeza kutokana na utekelezaji wa mradi/miradi, mfumo huo wa wananchi kutoa malalamiko ni lazima uwe rahisi na Rafiki wa walalamikaji.

Mjumbe mmoja alitoa shukrani zake kwa miradi iliyotekelezwa kwa awamu ya kwanza na kusema imekuwa na faida kubwa wa wananchi na kusema mfano ni ujenzi wa miundombinu katika shule ya msingi makugwa ambapo awali walimu walikuwa hawana nyumba ya kuishi, wanafunzi walikuwa wanapeana zamu kutumia darasa kwa sababu ya upungufu wa vyumba vya madarasa, hivyo anaomba na miradi ya awamu ya pili ipatiwe fedha kwa ajili ya utekelezaji ili kupunguza changamoto katika jamii.

Wajumbe walisisitiza kuwa swala la utunzaji wa mazingira lipewe kipaumbele kwa miradi yote itakayopatiwa fedha na kutekelezwa hususani katika swala la upandaji miti ya vivuli na matunda ipandwe mapema ili mkarandi awe anaimwagilia mpaka kufika kumaliza ujenzi iwe imekwisha chipua.

pia kuna mjumbe alisema kuwa katika ujenzi wa jengo ofisi za halmashauri kutahusisha ubomoaji wa baadhi ya majengo yaliyochakaa na hivyo kupelekea uwepo wa vumbi, na je

hatuoni kama vumbi hilo litatuadhili sisi wafanyazi na hata kupelekea kuugua kikohozi na mafua?

Ufafanuzi ulitolewa kuwa katika andiko kutakuwa na mpango wa uthibiti wa athari ambapo mkandarasi atawajibika kuzuia vumbi hilo kwa kumwagilia maji na kuweka uzio ili kutenga eneo la kazi na maeneo mengine, wajumbe walichangia pia kwa kusema wanafanyakazi kwa kipindi hicho ni vyema pia kupewa vifaa vya kujikinga vumbi, pia ilishauriwa kuwa ubomojai wa majengo chakavu uwe unafanywa nyakati za jioni ambapo watumishi wa halmashauri wanakuwa wameshatoka mao fisini.

Kuna mjumbe alishauri kuwa miradi ya ujenzi wa masoko mkakati yakishakamilika, kipindi yanafanya kazi kutakuwa na uzalishaji wa taka wa kila siku, hivyo basi nivyema katika usanifu wa miradi hiyo ni muhimu kuwepo na miundombinu ya ukusanyaji taka kwa muda kabla ya kuondolewa na kulepekwa dampo na pia lazima halmashauri ionyeshe mpango namna itakavyokuwa inaondoa taka kutoka kwenye vizimba vya soko na kuzipeleka dampo ili kuepuka mrundikano wa taka kipindi soko linafanyakazi na hivyo kutokuwa kero kwa wafanyabiashara na wakazi wa maeneo ya karibu na soko.

AGENDA NA. 4/1/11/2021/2022: KUFUNGA KIKAO

Mwenyekiti aliwashukuru wajumbe kwa michango na maoni yaliyotolewa juu ya tahimini ya athari ya kimazingira na kijamii kwa miradi itakayotekelezwa katika mradi wa LADP II. Baada ya kutamka hayo kikao kilifungwa saa 9.10 alasiri.

UMETHIBITISHWA NA;

.....
Katibu

AFISA UTUMISHI/UTAWALA HALMASHAURI YA WILAYA NGARA

Tarehe.....10...../...11..... **2021.**

.....
Mwenyekiti

MKURUGENZI MTENDAJI HALMASHAURI YA WILAYA NGARA

APPENDIX III: CUSTOMARY TITLE DEED

HATI NA.3NGR/3352
MUDA 3:00 ASUBUHI
AFISA ARDHI WA WILAYA

Namba ya Hati 3NGR/3352

Fomu ya Ardhi ya Vijiji Na. 21

JAMHURI YA MUUNGANO WA TANZANIA

SHERIA YA ARDHI YA VIJIJI
(Na. 5 ya 1999)

HATI YA HAKIMILIKI YA KIMILA

(CHINI YA FUNGU LA 25)

Leo Tarehe 20 Mwezi 03 Mwaka 2020 Halmashauri Ya Kijiji Cha **Kasulo - Rwakalemela** imetoa kwa **Halmashauri ya Wilaya, S.L.P 30 Ngara** (humu ndani ikirejewa kama "Mmiliki") wa hati ya hakimiliki ya kimila (itaitwa "Hakimiliki") juu ya Ardhi iliyofafanuliwa katika jedwali (humu ndani itaitwa "Ardhi") kwa kipindi kisicho na **Ukomo** kuanzia tarehe **1** mwezi **Januari 2021,** kwa maudhui na tafsiri halisi ya sheria ya Ardhi ya vijiji na kwa kuzingatia vipengele vyake na kanuni zozote zinazotungwa chini ya sheria hiyo au sheria mbadala au marekebisho yake. Hati hii inatolewa kwa masharti yafuatayo:-

i) Ardhi itatumika kwa ajili ya **Maegesho Ya Magari Makubwa Na Miundombinu Yake.**
ii) Eneo la maegesho litajengwa kwa kuzingatia viwango vya kitaalam vinavyokubalika kisheria.
iii) Mmiliki atawajibika kuhifadhi mazingira.
iv) Mmiliki atahakikisha kwamba mipaka ya Ardhi inalindwa na kutunzwa na idumu kuwa bayana kwa kipindi chote cha hakimiliki.
v) Endapo alama za mipaka zilizowekwa zitavurugwa, zitavunjwa ,au kung'olewa mmiliki atawajibika kugharamia kazi ya kurudishia alama hizo kwa usahihi.
vi) Mmiliki atawajibika kuzungushia uzio/fensi eneo lote la zahanati.

JEDWALI

(Maelezo kamili ya eneo na mipaka yake)

Ardhi hii yenye eneo lenye ukubwa wa ekari **8.70** iko katika Kitongoji cha **Nguvu Kazi**

UKA NA. 3NGR/KSL/NGVK/158

POINTI	MASH	KAS
P 1	261373	9723084
P 2	261306	9723015
P 3	261296	9722997
P 4	261344	9722942
P 5	261263	9722877
P 6	261151	9723012
P 7	261215	9723084
P 8	2613301	9723184
P 9	261367	9723202

Kama zinavyooneshwa katika Mchoro/Ramani hapa sehemu ya Kulia.

Saini.....

Jina Kamili. JONATHAN ZLUBERA

Wadhifa: **Mwenyekiti wa Kijiji**

Anuani: **S.L.P 30 - Ngara**

Saini.....

Jina kamili. BAMBARA. F. JUSTINARY

Wadhifa: **Afisa Mtendaji wa Kijiji**

Anuani: **S.L.P 30 - Ngara**

1. Majina ya Viongozi Wakuu wa Halmashauri.

(i) WILBARD JOHN BAMBARA.....
Mwenyekiti wa Halmashauri (W) - Ngara

(ii) AIDAN JOHN BAHAMA.....
Mkurugenzi Mtendaji (W) - Ngara

2. Imegongwa Lakiri ya Halmashauri ya Wilaya ya **NGARA** na kusainiwa Leo Tarehe 4 Mwezi 2021 Mwaka 14

Jina: E. K. MPONZI

Saini:.....

Wadhifa: **Afisa Ardhi wa Wilaya**

APPENDIX IV: GBV CODE OF CONDUCT

Contractor's Gender-based Violence and Child Protection Code of Conduct

The Contractor shall create and maintain an environment which prevents gender-based violence (GBV) and child abuse/exploitation (CAE) issues, and where the unacceptability of GBV and actions against children are clearly communicated to all those engaged on the project. The following core principles and minimum standards of behavior will apply to all employees of the Contractors without exception:

1. GBV or CAE constitutes acts of gross misconduct and are therefore grounds for sanctions, penalties and/or termination of employment. All forms of GBV and CAE including grooming are unacceptable be it on the work site, the work site surroundings, or at worker's camps. Prosecution of those who commit GBV or CAE will be pursued.

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 language or behaviour towards women, children and men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.

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 defence.

5. Sexual favours or other forms of humiliating, degrading or exploitative behaviour is 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 staff, volunteers, consultants and sub-contractors are highly encouraged to report suspected or actual GBV and/or CAE by a fellow worker, whether in the same contracting firm or not. Reports must be made in accordance with Standard Reporting Procedures.

8. All employees are required to attend an induction training course prior to commencing work on site to ensure they are familiar with the GBV and CAE Code of Conduct.

9. 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 CAE Code of Conduct.

10. All employees will be required to sign an individual Code of Conduct confirming their agreement to support GBV and CAE 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 CAE. 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: _____

Individual Gender Based Violence and Child Protection Code of Conduct

I, _____, acknowledge that preventing gender-based violence (GBV) and child abuse/exploitation (CAE) are important. GBV or CAE activities constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or termination of employment. All forms of GBV or CAE are unacceptable be it on the work site, the work site surroundings, or at worker's camps. Prosecution of those who commit GBV or CAE will be pursued as appropriate.

I agree that while working on the Project I will:

- Consent to police background check.
- 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.
- Not use language or behaviour towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- 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.
- Not engage in sexual favour or other forms of humiliating, degrading or exploitative behaviour.
- 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.
- Attend and actively partake in training courses related to HIV/AIDS, GBV and CAE as requested by my employer.
- Report through the GRM or to my manager suspected or actual GBV and/or CAE by a fellow worker, whether in my company or not, or any breaches of this code of conduct.
- Wherever possible, ensure that another adult is present when working in the proximity of children.
- Not invite unaccompanied children into my home, unless they are at immediate risk of injury or in physical danger.
- 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.
- 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.
- Refrain from physical punishment or discipline of children.
- Refrain from hiring children for domestic or other labour 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.
- 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:

- Before photographing or filming a child, assess and endeavour to comply with local traditions or restrictions for reproducing personal images.

1

- 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.
- 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.
- Ensure images are honest representations of the context and the facts.
- 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 behaviours that could be construed as GBV or CAE 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 CAE. 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 _____

Title: _____

Date: _____

Manager's Gender Based Violence and Child Protection Code of Conduct

Managers at all levels have particular responsibilities to create and maintain an environment that prevents GBV and CAE. They need to support and promote the implementation of the Contractor's Codes of Conduct. To that end, they must adhere to the Manager's Codes of Conduct 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 and child-safe work environment. These responsibilities include but are not limited to:

Mobilization

1. Establish a GBV and CAE Compliance Team (GCCT) from the contractor's and consultant's staff to write an Action Plan that will implement the GBV and CAE Codes of Conduct.
2. The Action Plan shall, as a minimum, include:
    i. Standard Reporting Procedure to report GBV and CAE issues through the project Grievance Response Mechanism (GRM);
    ii. Accountability Measures to protect confidentiality of all involved; and,
    iii. Response Protocol applicable to GBV survivors/survivors and perpetrators.
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 GCCT feel confident in performing their duties. Participation in the GCCT will be recognized in employee's scope of work and performance evaluations.
5. Ensure that contractor, consultant and client staff are familiar with the GRM and that they can use it to anonymously report concerns over GBV and CAE.
6. Hold quarterly update meetings with the GCCT to discuss ways to strengthen resources and GBV and CAE 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.
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 CAE, to investigate allegations thereof, or to take corrective actions when GBV and/or CAE 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 and CAE Codes of Conduct. This training will be separate from the induction training course required of all employees and will provide managers with the necessary understanding and technical support needed to begin to develop the Action Plan for addressing GBV and CAE issues.
2. Provide time during work hours to ensure that direct reports attend the mandatory Project's facilitated induction GBV and CAE training required of all employees prior to commencing work on site.
3. Ensure that direct reports attend the monthly mandatory refresher training course required of all employees to combat increased risk of GBV and CAE during civil works.

1

4. Managers are required to attend and assist with the Project's facilitated monthly training courses for all employees. Managers will be required to introduce the trainings and announce the self-evaluations.
5. 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 and CAE in addition to the training.
2. Managers must verbally and in writing explain the company and individual codes of conduct to all direct reports.
3. All managers and employees must sign the individual 'Code of Conduct for GBV and CAE', 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. All posted and distributed copies of the Company and Individual Codes of Conduct should be translated into the appropriate language of use in the work site areas (ex. Kiwahili, English).
6. Managers will explain the GRM process to all employees and encourage them to report suspected or actual GBV and/or CAE.
7. Mangers 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 GCCT and in accordance to the Action Plan.
8. Managers must provide support and resources to the GCCT 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 GCCT 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 and CAE (unless a breach of confidentiality is required to protect persons or property from serious harm or where required by law).
3. If a manager develops concerns or suspicions regarding any form of GBV or CAE by one of his/her direct reports, or by an employee working for another contractor on the same work site, s/he is highly encouraged to report the case using the identified reporting mechanism.
4. 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.
5. Managers failing to comply with such provision can be in turn subject to disciplinary measures, to be determined and enacted by the company's Chief Executive Officer (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.

2

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.

6. Ultimately, failure to effectively respond to GBV and CAE cases on the work site by the contractor's managers or CEO may provide grounds for legal actions by authorities.

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 CAE. 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: _____

APPENDIX V: COVID -19 CONTIGENCY PLAN

UNITED REPUBLIC OF TANZANIA

PRESIDENT'S OFFICE - REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

……..

NGARA DISTRICT COUNCIL

Phone: 028 2226016
Fax: 028 2226152
Email:ded.ngara@kagera.go.tz

Health Department
P.O. Box. 30.
NGARA
KAGERA.

NGARA PUBLIC HEALTH EMERGENCIES CONTINGENCY PLAN
MARCH, 2020/2021

Aidan J. Bahama
DISTRICT EXECUTIVE DIRECTOR
NGARA

Executive Summary

Corona viruses are large family of viruses. There are several known human coronaviruses that usually only cause mild respiratory disease, such as the common cold. However, at least twice previously, coronaviruses have emerged to infect people and cause severe disease. The severe respiratory syndrome (SARS) of unknown etiology among people was first reported on 31st December 2019 in Wuhan City (population of 19 million), capital of Hubei Province (population of 58 million), southeast of China; of which 7 were reported as severe cases. This COVID19 is the different from SARS-Corona Virus of 2003 and MERS- Corona Virus of 2013. 94 countries were reported of COVID19 the entire world like China, Japan, South Korea e.tc. The incubation period is about 1 – 14 days. The sign and symptoms are fever, cough, sore throat, nasal congestion, malaise, headache, and muscle pain or malaise. There is no current evidence from RCTs to recommend any specific anti-COVID19 treatment for patients with suspected or confirmed, but can treat the sign and symptoms. The transmission can be occur either by directly contact of respiratory secretions and droplets. Standard precautions include hand hygiene; use of PPE to avoid direct contact with patients' blood, body fluids, secretions (including respiratory secretions) and Use a medical mask if working within 1-2 meter of the patient.

Acknowledgments

The Ngara District Council wishes to express its gratitude to all experts who participated in developing this Contingency Plan for Public Health Emergency of COVID19. Special gratitude goes the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) for Public Health Emergency Preparedness and Response for the strategic guidance in the development of this Plan and provided Infection Prevention and Control (IPC) and Clinical Management of Novel Corona Virus (nCoV) Pneumonia. Specifically, valuable contributions from Districts Executive Director are also appreciated.

I would also like to acknowledge the team of technical experts from different Health Departments specifically from Curative Services team, Preventive Services team, Health Quality Assurance, Emergency Preparedness and Response and Disease Control, Environmental Health and Sanitation, Health Promotion, who worked tirelessly and contributed to the successful completion of this plan.

Finally but not the least, I would like to extend sincere appreciation to the World Health Organization through Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) with Regional, for facilitating assessment on District operational readiness for COVID19response.

Abbreviations

DMO	District Medical Officer
COVID19	Corona Virus 2019
HIDTU	Highly Infectious Disease Treatment Unit
IDSR	Integrated Disease Surveillance and Response
WHO	World Health Organization
IEC	Information, Education and Communication
IHR	International Health Regulations
IMS	Incident Management System
IPC	Infection Prevention Control
LGA	Local Government Authorities
MOHCDGEC	Ministry of Health Community Development Gender Elderly and Children
NGO	Non-Government Organization
POE	Point of entry
PPE	Personal Protective Equipment
RMO	Regional Medical Officer
RRT	Rapid Response Team
SOP	Standard Operating Procedure
TOT	Training of Trainers
WHO	World Health Organization
DHO	District Health Officer
DED	District Executive Director
DC	District Commissioner

Key Concepts

The following glossary is from the Tanzania Disaster Management Act (2015) and United Nations International Strategy for Disaster Reduction terminology on disaster risk reduction (2009 version).

Disaster

An occurrence or series of occurrences, whether natural or man-made, man-made calamity that causes or poses a significant disruption or threat to the functioning of a community, causing widespread human, natural, economic or environmental losses which exceed the capacity of that community to cope with the disaster using its own resources.

Disaster response

Any measure taken immediately prior to or following a disaster impact that is directed towards saving life, protecting property and the environment or dealing with the immediate damage and other effects caused by the disaster.

Emergency management

It is also used, sometimes interchangeably, with the term disaster management, particularly in the context of biological and technological hazards and for health emergencies. While there is a large degree of overlap, an emergency can also relate to hazardous events that do not result in the serious disruption of the functioning of a community or society.

Hazard

A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihood and service, social and economic disruption or environmental damage.

Preparedness

The knowledge and capacities developed by governments, response and recovery organizations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters.

Response

Actions taken directly before, during or immediately after a disaster to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.

Introduction

Ngara district is among of eight district of Kagera region, 4 Division, 22 Wards and 75 Villages with 34 streets of Mainer Township.

Ngara District is exposed to a number of natural and man-made hazards that impact livelihoods, destroy infrastructure, disrupt the provision of essential services and claim lives. Primary risks are linked to hazards such as road accidents and health epidemics.

For many years now, Ngara is threatened by a number of public health risks which causes a number of deaths, morbidity to affected people and economical disruption. These include; Malaria, road accidents, Ebola, Corona Virus.

The ultimate objective of this Public Health Risk Emergency Response Plan is to consolidate capacity to support response by ensuring that all those charged with tackling the disease (i) know their role; (ii) are competent to carry out the tasks assigned to them; (iii) have access to available resources and facilities; and (iv) work together as a partnership. Therefore, the Plan aims to bring order to the response operations. Additionally, it is concerned with providing a framework for management, coordination and control within which a team of responders can go about their work at times of a major emergency

Background Information

1.1. Geophysical features

Ngara (334,939 people in 2012) is located in northwestern Tanzania near the borders of Rwanda and Burundi. Its elevation is approximately 6,000 feet (1,800 m) and is considered to be in the highlands of Tanzania.

Ngara has four seasons: two dry seasons from June to September and January to February with two rainy seasons from October to December and from March to May. During dry seasons there are sometimes strong winds/hazy air and temperatures vary between 18 and 30 °C (64 and 86 °F), depending on the time of day or night. During the rainy seasons, sudden and heavy downpours may occur daily, lasting from a few minutes to several hours. The rain is sometimes associated with strong winds, floods, mud, fog and temperatures may range between 12 and 26 °C (54 and 79 °F).

Socio-economic issues

The primary occupation is subsistence farming and livestock rearing. Local crops include bananas, passion fruit, papaya, groundnuts, beans, coffee, maize, cassava and a variety of vegetables.

Language

The local language in Ngara is Kishubi and Kihangaza, which are very similar to Rundi and Kinyarwanda, the languages of Rwanda and Burundi. Although Tanzania's national and official languages are Swahili and English, usage in Ngara District is, however, rather limited to official functions, offices, institutions of higher learning and a few other places. Generally, English is understood on a limited scale in the market, and Swahili much more so.

District Public Health Risk management

The overall coordination of the epidemic control activities shall be undertaken within the existing framework of the Emergency Preparedness and Response for outbreak management. The Task force is responsible for designing/adapting strategies, planning, implementation, monitoring and evaluation of all epidemic control activities. The Task force within the district will be getting technical guidance from the National Task Force in terms of policy and strategic orientations, guidelines, etc.
The District Task force will be chaired by the District Medical Officer (DMO) will chair the Task Force at the district level.

The Task Force performs its activities through Technical Committees. Technical Committees are composed of experts in that arm of intervention. The committees are therefore responsible for the technical aspects of the control measures such as developing and designing strategies, planning, implementation, monitoring and supervision of activities.

The key pillars of technical committees include:

1. Coordination
2. Epidemiology/ surveillance
3. Case management and infection prevention and control
4. Laboratory
5. Community Mobilization and Health Promotion
6. Social mobilization/ Psycho-social support
7. Logistics

During preparedness shall hold meetings double within the month and during response shall hold daily, preferably at 2pm to review progress made in implementation of the planned activities and provide guidance. Proceedings of the Task force will be summarized by the end of each day to constitute a press report that will be shared by the media.

The District level subcommittee and Task Force will meet one day before the Rapid Response Team Meeting. The District Task Force will as well convene meeting one day before the Regional Task Force Meeting. This allows the flow of information from the subcommittee to the Regional Task Force.

The above intervention areas or pillars have also five respective objectives as follows:

a. Ensure all efforts are coordinated and implemented in an efficient and timely manner
b. Ensure implementation of highly sensitive, timely and coordinated surveillance systems
c. Ensure effective response to manage cases of (re) emerging communicable diseases
d. Enhance awareness and support especially for at-risk communities
e. Ensure timely and effective logistical support for surveillance and response teams

Scope of the Public Health Response Plan

This Response Plan is a multi-disciplinary and multi-agency plan, and is intended combine responses from key government agencies, private organizations and partners within the Districts.

Response Plan cannot be 'fully comprehensive tool' that cannot be implemented for lack of resources. Despite its limitations, this Response Plan is expected to constitute a recognized emergency response framework for: (i) awareness-raising throughout the multi-disciplinary task force; (ii) developing training throughout the responders; and (iii) building partnership for a combined response.

Outbreak Response

In an outbreak, it is vital to know who is going to do what. The clearer the responsibilities and the decision-making processes are key elements for effective response. A brief description of the command structure to response to outbreak operations in Ngara District, with relevant responsibilities and authority is presented below.

5 Concept of operations

✓ In an event of a major outbreak overwhelming the District, the District Commissioner (Strategic level command) should declare the level and magnitude of the outbreak, while working with the Regional Task Force (Tactical Command) and District levels (Operational Command)

✓ This Response Plan is based on the concept that the emergency functions assigned to the various government departments and agencies and volunteer organizations will parallel their normal day-to-day functions as closely as possible.

✓ Those day-to-day functions that do not contribute directly to emergency operations may be suspended during the outbreak response. The efforts that would normally be required for those functions will be redirected to the accomplishment of outbreak response tasks.

✓ At every level of command, the chain of communication should be maintained and recognized. Final decisions should always be made and recognized at the coordination level, while always observing technical advice from the Subcommittee level.

✓ At any time of response to Health emergencies, the Rapid Response Team (RRT) will be responsible for assessment and verification of a case before dispatching an ambulance to take the patient to the HIDTU. The RRT will be composed of a Clinician, Nurse, Surveillance Officer and a Laboratory staff.

Ngara District Council is high (refer figure 1 below).

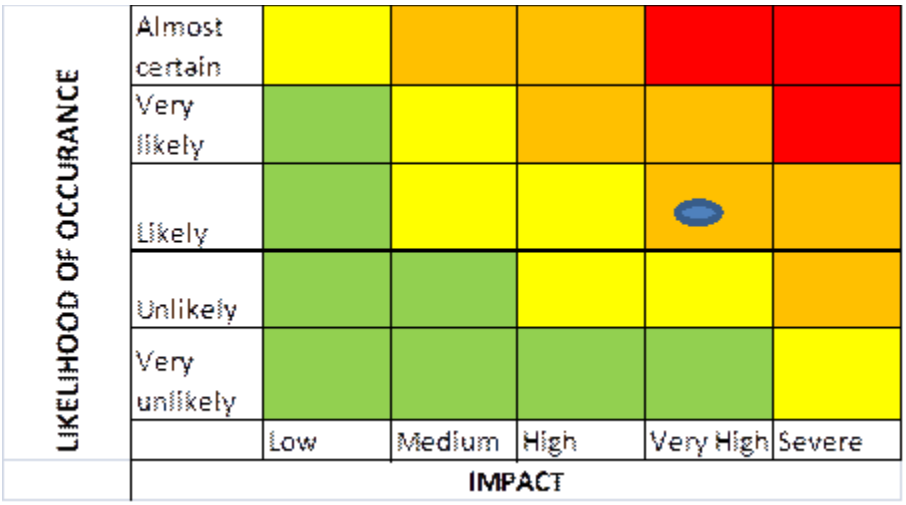


Figure 1: Risk Matrix.

Health System Structure and Services Provision

The District health system operates in decentralized organization of governance where by public and private health service delivery is primarily at Village level and specialized services are managed by Local government level.

The health system ensures public health risk management to outbreaks through mechanisms for indicator or routine based and community-based surveillance, care and treatment, Port health and social welfare services that are all linked to the above levels. There are three provisions Isolation Centre for COVID19 located in Kabanga, Murusagamba and Rusumo with bed capacity of 2. Out of 3 official point of entries, have mechanism and capacity to implement screening however Murusagamba has one official staff of Port health officer, and two non-official staff of Port health officer and no office.

Recent emergencies and disasters in Ngara District Council

Ngara District Council has been facing manmade emergencies. Recent Ngara District Council experienced fire explore at Rusumo Port of Entry during August 18th 2018 that affected a total of 7 cars and tractor 1 with 1 driver death.

COVID19 Response Coordination Mechanism

Coordination of COVID19 Response at different levels will follow the Incident Management System and will be guided by the concept of operations outlined in the All Hazard Emergency Response Plan (2020). During COVID19 response the District Medical Officer will appoint the District Incident Manager to coordinate District level response.

Triggers for action and activation levels

One suspected or probable case of COVID19 constitutes a public health emergency and therefore it will trigger the activation of the response to level II. Where by a confirmed case of COVID19 in the District will trigger activation to level III. The District PHEOCs, National PHEOC

will function based on the level of activation to facilitate coordination of response as outlined in the All Hazard Emergency Response Plan.

The Overall command of the District emergency and disaster is under the District Disaster Management committee which is chaired by the District Commissioner

District Health Incident command

Committee	Members	Description of tasks
1.Coordination	**Chair: District Commissioner** **Members:** 1. District Executive Director 2. District Medical Officer 3. Chairman of District Council 4. District Administrative Secretary 5. All Head Department 6. All member of District Security and Defends Committee	1. Coordinates all operational aspects preparedness and response 2. Convenes meetings and keep all the minutes safely 3. Mobilizes and allocates resources for outbreak preparedness and response a. Prepares the Preparedness and response plan with participation of all the technical committees b. Monitors continuously the implementation of the plan c. Identifies and communicates resource gaps in timely manner d. Facilitates motivations e. Establish emergency operations centre and rapid response teams 4. Produces reports and communicates to higher authority and partners
2. Case management and Infection Control and Laboratory	**Chair :** District Medical Officer **Members;** 1. Medical Officer In charge of District Hospital 2. District Nursing Officer 3. Matron/Patron District Hospital 4. Pharmacist of District Hospital 5. District Hospital Emergency Coordinator 6. District hospital Laboratory manager **7.** Emergency Nurse In charges District Hospitals **8.** Medical Officer in charge of Lukole Health Centre **9.** Matron/Patron of Lukole Health Centre	1. Ensure Quality 2. Train health workers on management including general infection prevention and control 3. Implements barrier nursing procedures and universal precautions 4. Provides care to patients 5. Initiates activities for safe reintegration of discharged patients in collaboration with psychosocial support team 6. Provides data from treatment facility to the surveillance committee 7. Performs any other duties assigned by the coordination committee. 8. Coordinate sample collection, packaging, processing, transportation and laboratory testing of specimens from suspected cases 9. Follows and receives laboratory results 10. Report laboratory results and sensitivity tests to case management committee 11. Reagent management (Ordering, supply and monitoring
3. Epidemiology/ Surveillance	**Chair: District Health Officer** **Members;** 1. District Surveillance Officer 2. District Hospital Health Officers	1. Trains health personnel on surveillance 2. Establishes transmission chains 1. Manages outbreak data: analyses data regularly for trends and 2. Disinfects homes and environment

	3. District Vector Control Officers 4. All Environmental Health Officer 5. Data Officer 6. District Laboratory Technician 7. Epidemiologist 8. IDSR Fco 9. In charges of Port Health Officer 10. District Veterinary Officer 11. Chair of District Driver	3. Provides data from treatment facility to the surveillance committee 4. Performs any other duties assigned by the coordination committee.
4. Social mobilization/ psycho social support	**Chair: District Community Based Health Care** **Members;** 1. District Social Welfare 2. District Communication Officer 3. Education Officer 4. District Community Development officer 5. Head of Religions 6. Director Manager of Radio Kwizera FM 7. Health Promotion and Education Officer 8. Traditional Healers Fco	1. Reviews and/or develops materials for social mobilization 2. Organizes sensitization of the community 3. Serves as focal point for preparing and verifying information to be released to the press by the Task Force 4. Liaises with the different sub-committees, local leadership and NGOs involved in activities on mobilizing communities 5. Provides psychological and social support to suspected/ probable/confirmed cases; affected families and communities 6. Provides psychological support to the response team 7. Prepares communities for reintegration of convalescent cases/ patients who have recovered 8. Performs any other duties assigned by the coordination committee
6. Logistics	**Chair: District Human Resource Officer** 1. **Members:** District Procurement Officer 2. Transport Officer 3. Treasurer Officer 4. District Pharmacist 5. Accountant of Health Department 6. Manager of RUWASA	1. Maps available resources for response and maintains updated inventory 2. Conducts projection of the logistics needs for response 3. Coordinates transport of the different field response teams 4. Provides supplies for the treatment centers and supports stock management

Reporting System

The District gets report from Community, boarders and Health Facility. The Community Health Worker using Rumors book which collects within the community then submitted to the IDSR Fco. The Port Health Officer report to the RRT (DMO) if occur any suspect at port of entry. Also in charge of Hospital, Health Centre or Dispensary report to the RRT (DMO) if get any suspect from their facilities. The DMO after confirmed suspect is associated with Highly Infectious Disease like Corona Virus Disease report to the RMO.

Scenario

The development of this Contingency Plan is based on the Likely Case Scenario that calls for rapid containment of the case. The scenario assumes a case of COVID19 being imported and detected by the surveillance system in all Point of Entry and Health Facilities of Ngara District Council.

Planning Assumptions

a) An Suspect case was detected in one of a local health facility
b) Contact tracing teams well trained and equipped to conduct the task
c) All contacts have been identified and monitored
d) Patients who meet the case definition have been isolated and treated in the designated HIDTU, even though was still not meet the case definition.
e) Infection prevention and control measures are applied at health facilities and community level

Strategy

5.1 Mitigation Strategy

As described in the risk assessment, mitigation measures are important so as to ensure the health risk of COVID19 importation is addressed in order to avoid importation as well as spread of the infection in the District in case of COVID19 is imported. The risks which have been identified for mitigation includes; COVID19 case importation in the District, spread of COVID19 infection in the District and community fear. Table 1 outlines the health risks and planned mitigation measures per each technical area.

Identified health risks	Mitigation measures
EPIDEMIOLOGICAL SURVEILLANCE (POE):	
Importation of COVID19 case(POE)	To ensure the PoE specific contingency plan and SoPs for high risk ground crossing are followed
	To ensure the SoPs for identification, notification, management and referral of COVID19 suspects are followed
	With the help of PoE, Engagement of different media and transport agency to convey messages on COVID19 to travellers for affected Countries
COORDINATION:	**Mitigation measures**
COVID19 cases importation	Secure resources for COVID19 preparedness and response
	Monthly cross sectoral syndication and coordination meetings
	Updated EVD/Marburg/COVID19 contingency plan
RISK COMMUNICATION AND SOCIAL MOBILISATION	**Mitigation measures**
Community panic towards importation of COVID19	Advocacy and sensitization messages distributed to the community by using ITC.
	Address personal behaviors and soci-cultural factors that influence transmission
Spread of COVID19 infection	Mobilise community mobilisers for community sensitization and awareness
	Conduct community awareness campaign to increase awareness and encourage adoption of preventive behaviors and actions
	Desribution material for social and behavior change communication
	To ensure message and materials dissemination trough media mix
	Train Health Promotion Coordinators and other mobilizers at District and community levels

Identified health risks	**Mitigation measures**
	Community awareness for IPC at household level
CASE MANAGEMENT & IPC	**Mitigation measures**
Spread of COVID19 infection	Strengthen Infection Prevention and Control Practices through additional measures for COVID19
	Ensure availability of equiped COVID19 isolation and treatment facilities in high risk Area
LABORATORY	**Mitigation measures**
Spread of COVID19 infection	Training of laboratory personnel on universal precautions and additional IPC measures for COVID19 and on specimen management to laboratory personnel and other HCW
	Map / identify and sensitize local couriers capable of transporting specimen immediately
	Disseminate SOP for COVID19 sample management
	Develop list of supplies for specimen management

5.3 Preparedness and Response Strategy

As described in the risk assessment, preparedness measures are important so as to ensure readness to deal with COVID19 in the District. Preparedness measures that have been suggested are geared at improving capacity to respond to COVID19 with altimate reduction of its impact in case an COVID19 case is imported. The preparedness measures varies with the identified health risks that determines response needs to be addressed by the District. The health risks that have been identified include: COVID19 imported cases, High transmossion and spread of COVID19 infection as well as psychological trauma and fear,other risks include public panic and deaths due to EVD. The response needs for each health risks have been outlined as well as preparedness measures that are suggested for the respective response needs as shown in table 2

COORDINATION:		
Health Risk	**Response need**	**Preparedness measure**
COVID19 imported cases	Coordinate and monitor response activities	Conduct working session to finalize and disseminate ERP
		Conduct working session to review r PHEOC SOPs
		Conduct donor mapping
		Advocacy and sensitization to influential people at all levels.
		Conduct functional simulation exercise for PHEOC
Health Risk	**Response need**	**Preparedness measure**
		Conduct orientations of revised operational documents to high risk in District (ERP & its contingency plans, PHEOC SOPs including Sensitization & orientation of District Authorities about PHEOC)
	COVID19 Outbreak response plan	Update COVID19 contingency plan and disseminate at all levels
		Identify burial ground
		Develop ToRs & SOPs for RRT in response to potential COVID19 cases

	Supportive supervision for response activities	Develop ToR and checklist for supervision at District level
RAPID RESPONSE TEAMS		
Imported COVID19 Cases	Deployment of COVID19 RRT	Train RRT TOT at District level on COVID19 response
		Conduct training of RRT at District level with priority to high risk Area
	Rapid Risk/need Assessment conducted by RRT	Conduct a simulation exercise for RRT within 60 days if no COVID19 case
		Train multi-disciplinary RRT teams and update inventory, ToR at District level
	Provide COVID19 RRT GO kit	Develop list of iterms in GO kit for RRT
		Print Rapid Risk Assessment Manual
BUDGET		
	Operational & Staff welfare support	Develop operational budget
		Advocate for revisit of Workers Compensation Fund in relation to high risk assignments
	Provide risk allowance for COVID19 responders conducting high risk assignments	Advocate for risk allowance for COVID19 responders conducting high risk assignments
	Adequate resources for response	Advocate for increase in the emergency contingency fund and timely emergency fund release procedures
	Provide basic walfare needs for ETC	Develop resource mobilization package/strategy
PSYCHOSOCIAL SUPPORT:		
Health Risk	**Response need**	**Preparedness measure**
Psychosocial trauma and fear among survivors, individual families and	PSS services to responders and affected i families, community and during burial	Dissemination PSS guideline,
		Identify and train a team of PSS service providers and volunteers at District level and high risk Area

community		Map peer support groups, volunteers, and stakeholders that can support families during response in the community at high risk Area
		Assessment of community needs
		Prepare list of items for package with material support (food and non food items) for COVID19 survivals and families that lost relatives
		Establish communication linkage btn PSS team and other responders contact detels (ETC, EOC, Community Mobilizers, nutrition)
EPIDEMIOLOGICAL SURVEILLANCE:		
High transmission of COVID19 cases	Early detection and reporting of COVID19 cases	Operationalization of hotline or emergency number to manage alerts
		Train technical experts at District level on alert processes and requests for information related to COVID19.
		Orient HCWs and IDSR FP at District on use of VHF database, use of COVID19 case definitions and completing case investigation forms in high risk Area
		Orient CHW volunteers, NGOs, traditional healers and community leaders on event based surveillance in high risk Area.
	Contact tracing	Identify contact **tracing teams** at Community levels (volunteers, NGOs, traditional healers and community leaders) and conduct refresher training on contact tracing and identify a local source of contact tracers for all areas
		Disseminate contact tracing SOPs, reporting SOPs and simplified case definitions for community use to all Areas
POE		
COVID19 imported case (POE)	Early detection, management and referral	Train emergency committees at PoE on IPC, detection, assessment, management and referral of any potential COVID19 cases
		Orient POE stakeholders (POE users, tax drivers, service providers, cleaners) on SOP for identification and notification
		Test PoE specific emergency contingency plan (simulation) for ground crossing at high risk

		Area
Health Risk	**Response need**	**Preparedness measure**
	Proper collection, managment and timely reporting of traveller information	Equipped observation/isolation areas at PoE high risk Area
		Develop list of items, PPE, cleaning and disinfecting products and sanitisers at PoE.
		Develop service and maintanance plan for monitoring and data management equipment at PoE
		Disseminate a communication SoP between PoE and Distric's surveillance system for followup of travellers from affected country
		Conduct supportive supervision in collaboration with relevant stakeholders of PoE
RISK COMMUNICATION AND SOCIAL MOBILIZATION:		
Increased panic due to importation of COVID19 Case	Community awareness creation on COVID19 prevention	Train Mobilizers for sensitization and awareness rising
		Develop message tailored to targetted audience and disseminate them through media mix
		Conduct media orientation
		Conduct orientation to Health promotion coordinators and other social mobilisation stakeholders at high risk Area
Spread of COVID19 infection in the community.		To conduct assessment for socio-cultural factors (Myth, attitudes, misconception, beliefs, behaviors, practices etc) that influence COVID19 transmission.
		Implement communication plan that identify channel, responsible and message timing.
		Identify existing community social structures that can effectively support community engagement and awareness campaign.

CASE MANAGEMENT		
COVID19 case/s in the country	Isolation of COVID19 patients	Identification and equiping COVID19 isolation facilities and prepare items for surge capacity
	Povide care and treatment of patients	Dissemination and distribution of COVID19 guideline and SOPS/job aids for case management
		Formulation, training and equiping teams for case management and ambulance in District for designated ETC
		Develop plan and implement onjob orientation of all health workers at health facilities in high risk Area on COVID19 by using District TOTs
		Conduct a simulation exercise in case management (drill) at Lukole Isolation facilities in District
		Conduct operational readness verification visit at the high risk Area (isolation facilities at District levels, IPC materials including PPE)
	Transportation of COVID19 patients	Identification of dedicated transportation facilities (vehicle) and SOPs for transportation
	Ensure 24/7 communication between the HIDTU, EOC and other teams	Develop and mantain contact details with manes, phone contacts of other responding teams
	Ensure provision of commodities, supplies and equipment for COVID case management and IPC	Develop list of minimmum required essential COVID19 commodities and supplies and stockpile at the identified Isolation facility
	Mantain records of staff and other teams daily rosters for HIDTU, ambulance, decontamination, burial)	Develop templates of duty rosters of workers at the HIDTU and templates for reports
	Conduct supportive supervision and mentorship to health workers at the HIDTUs	Develop list/inventory of Districtl technical experts on COVID19 case management , TOR and checklists.

Health Risk	Response need	Preparedness measure
Spread of COVID19	Practice additional IPC measures for COVID19 in health facilities and HIDTU	Dissemination and distribution of HIDTU – IPC guideline and SOPs
		Prepare list of waste management facilities in designated HIDTU to be procured for designated health facilities
	Conduct decontamination of households and surroundings where patients or death due to COVID19s has occured	Formulation, training and equiping the deconatmination teams for isolation facilities, vehicles and households
		Develop list of Items for decontamination of house holds to be procured for all high risk Area
		Identify/arrange transport that will be used by household decontamination teams to be linked with surveillance
	Ensure security at the HIDTU	Fencing of the HIDTU or designated health facility
		Arrangement for security services for the HIDTU
Deaths due to COVID19	Provide safe and dignified burial services	Dissemination SOP for Safe and dignified burials
		Identification and training of burial teams at the risk areas
		Identify and designate transport for burial services of COVID19 corpses
	Provide Equipments and supplies for SDB	Develop list of minimmum required equipment and supplies for burial services and stockpile at the identified high risk areas
LABORATORY		
Stread of COVID19	Early confirmation of COVID19 case	Identify and Train personnel in Specimen management to be deployed to affected district during response
		Print and disseminate SOP for COVID19 sample management
		Relocate more laboratory staff to testing laboratory
	Transportation of specimen to testing laboratories	Re orrientation of curriers at all levels
		Prepare list of required materials for packaging and transportation specimens to be procured

		and supplied to high risk Areas
Health Risk	**Response need**	**Preparedness measure**
	Protection of Laboratory workers against COVID19 infection	Develop list of items for protection of laboratory personnel (PPE etc)
	Sharing of Results	Develop Service and maintanance plan of laboratory quipment
		To prepare and disseminate laboratory linelist forms for COVID19 and report templates

Activation

Alerting

The Rapid Response Team When there is any information or rumor is alerted pending rumor verification.

Stand-by

When there is a confirmed case in any other District/Region/Country that makes Ngara to be in a high risk of being infected, the Rapid Response Team consisting of half of the full team will be mobilized in a standby mode at Lukole HIDTU. The standby rooster will operate 24/7 hours.

Activation (Full Mobilization)

When there is a suspect case that meets Standard Case Definition the Case management Team will be activated to Lukole HIDTU.

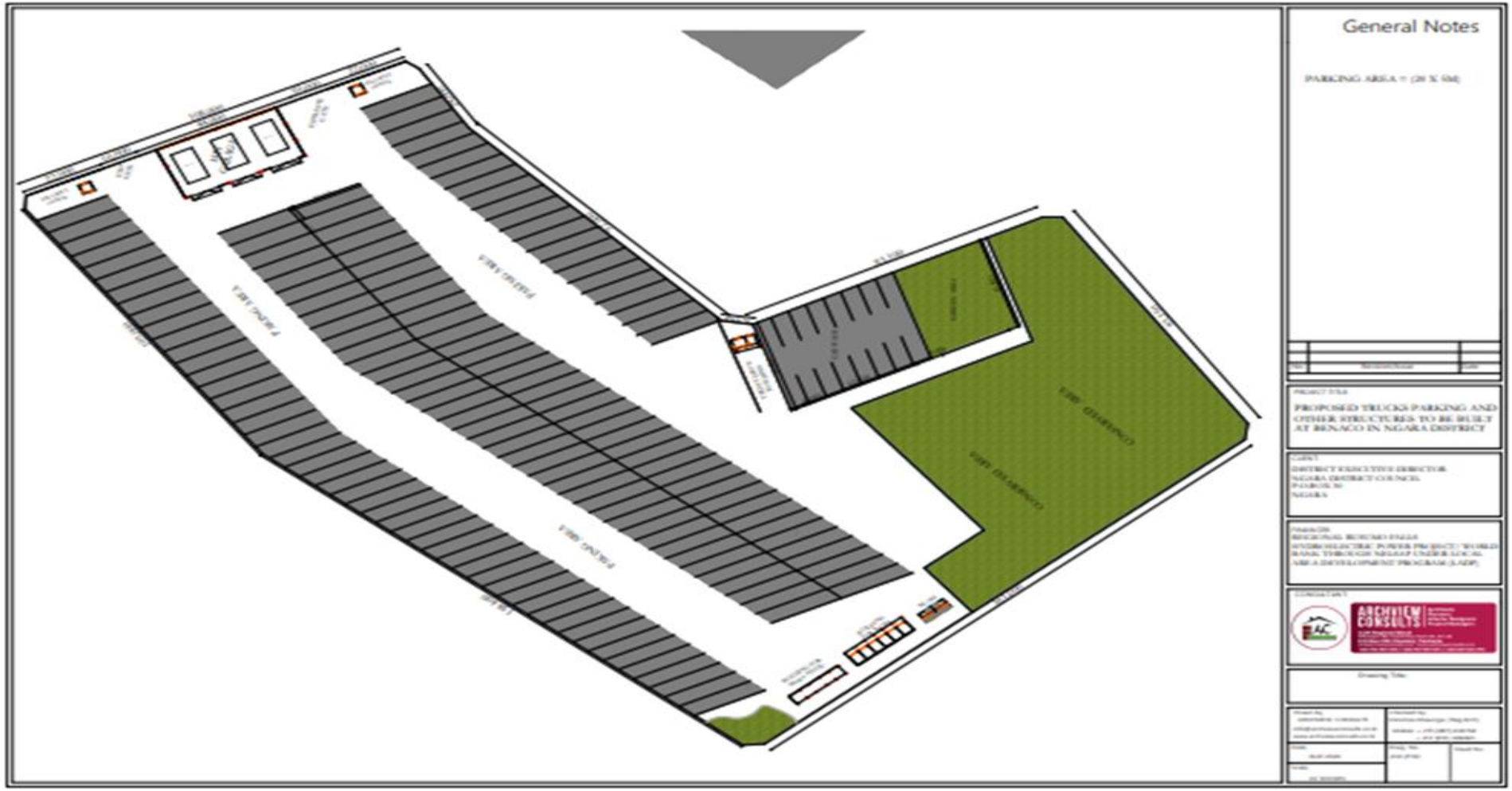
COVID19 Emergency Response Plan Activity Implementation

Pillar	Response needs	Action	Responsible
Social Mobilization	Ensure availability of printed awareness materials	Printing of IEC materials	Head of social Mobilization subcommittee Transport Officer
		Distribution and dissemination of IEC materials	
		Conduct media orientation	
	Strengthen community sensitization (Use of mobile vans, media, Pas)	Intensify Community sensitization using sound facility twice in monthly	Head Social Mob and DHS and TO
		Conduct Sensitize schools, colleges (meetings, school health programme and working areas)	Head of social Mobilization subcommittee
	Strengthen engagement of community stakeholders	Conduct meeting with influential people (Private sectors, religious leaders, local community leaders	Head of social Mobilization subcommittee/DED/DMO
Coordination	Strengthen involvement of stakeholders (mapping and engagement in a response activities)	Conduct stakeholders mapping and develop list of stakeholders with their capacities	DMO/DED
		Conduct meeting with all potential stakeholders for their	DED/DMO

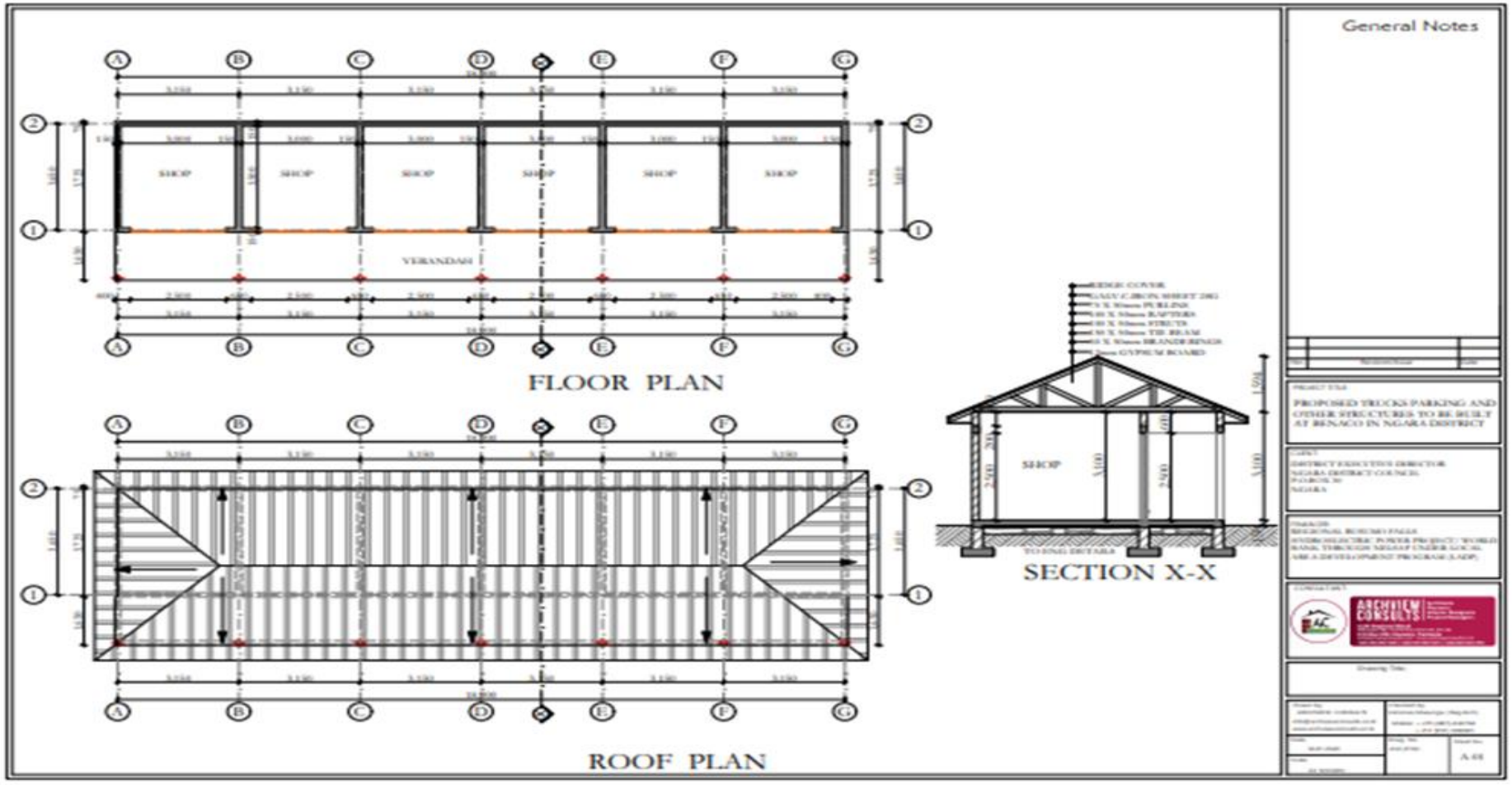
		participation/support in their response (refreshment)	
	Strengthen implementation and monitoring of COVID19 response activities	Conduct regular meetings using the existing response forums	DMO
	Ensure availability of resources to implement response activities (human, financial, transport & logistics support)	Share the coasted plan with stakeholders	DMO
		Consider reallocation of existing resources	DED/DMO
		Recruit Staff who provide services at Lukole H/C and refreshment	DED
Case Management	Strengthen management of patients presenting with symptoms suggestive of COVID19	Print and Distribution of case management Guideline.	Head of District Case Management & Clinical Services Coordinator
		Orientation of healthcare workers on standard case definition and management	Head of District Case Management & Clinical Services Coordinator
		Procure Medical supplier like Glove, Masks, Aprons, googols, sprayer pump, sanitizer, Electronic Dispenser etc	Head of District Case Management & Clinical Services Coordinator

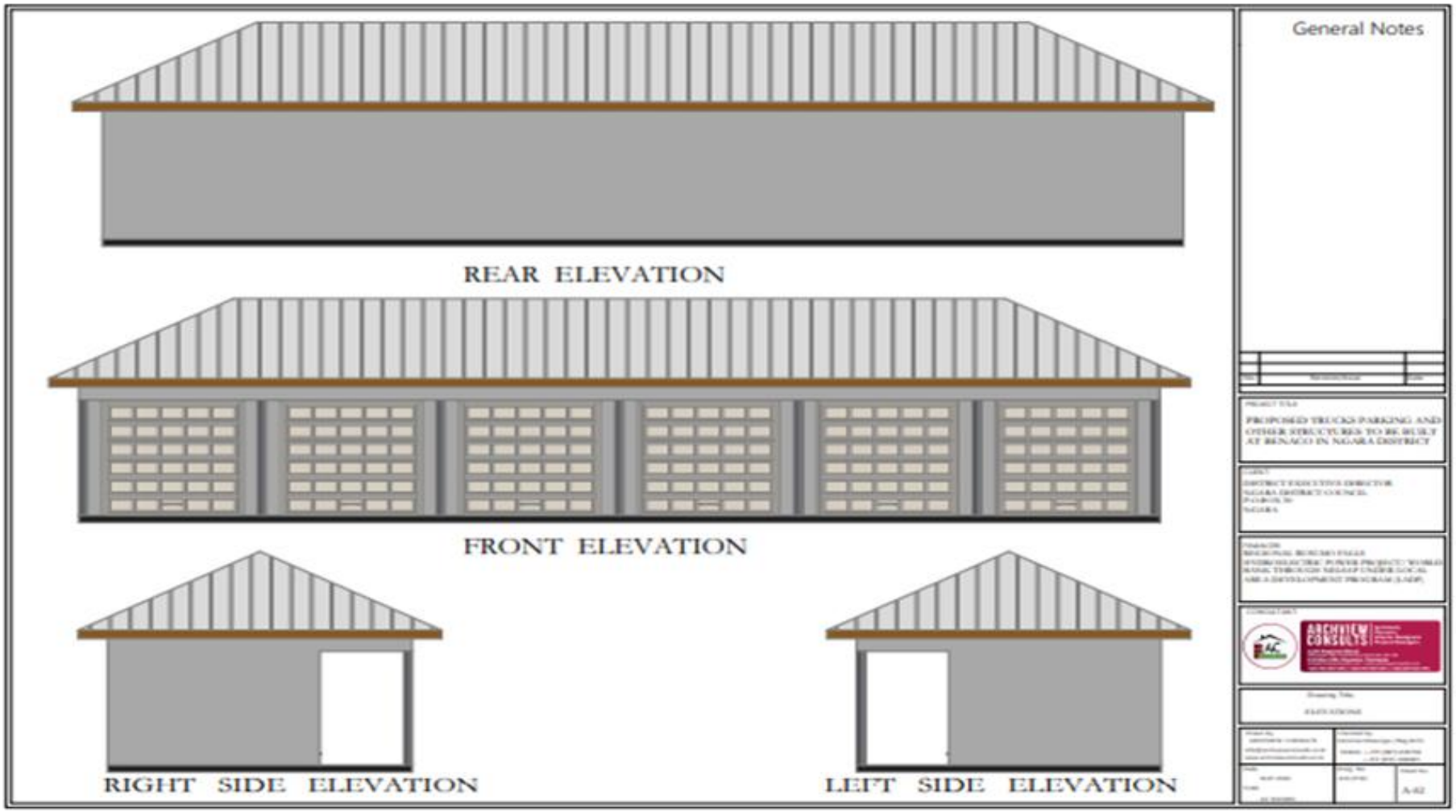
Surveillance & Laboratory	Strengthen use of surveillance data to guide response interventions	Orientation of surveillance officers for consolidation of surveillance data	Head of Surveillance (ie District Surveillance Officer)
	Strengthen adherence to laboratory protocols and testing guidelines for COVID19	Distribution of COVID19 testing guideline	District Laboratory Coordinator
Logistics	Ensure availability of essential commodities for COVID19 control	To ensure are all resource available at Lukole H/C	Chairman of Logistics Team
		To ensure availability all infrastructure which are needed at Lukole H/C	Chairman of Logistics Team
		To ensure availability of fuel for transport, follow up and monitoring of suspect and contacts cases	Chairman of Logistics Team

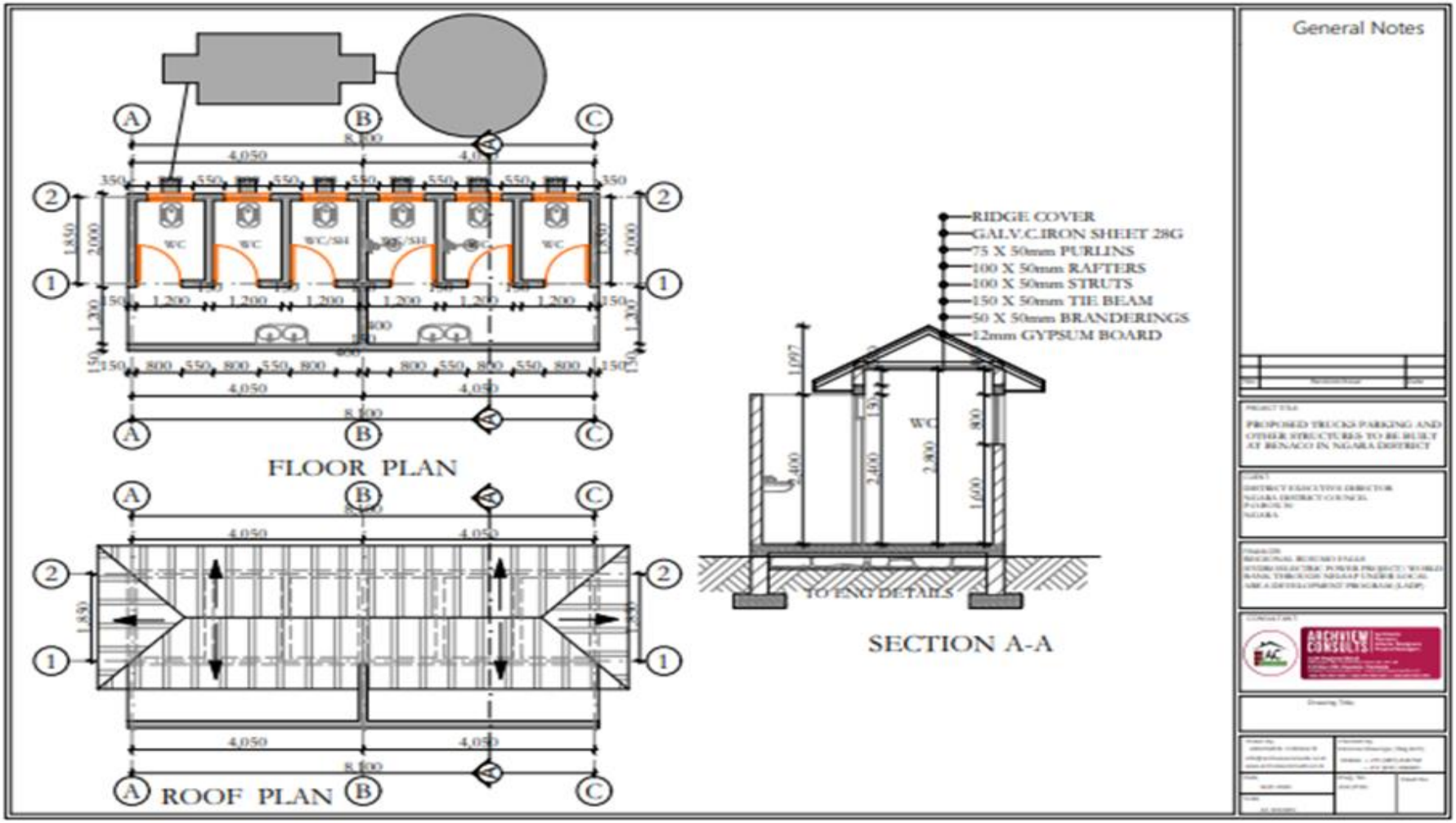
APPENDIX VI: SITE LAYOUT PLAN

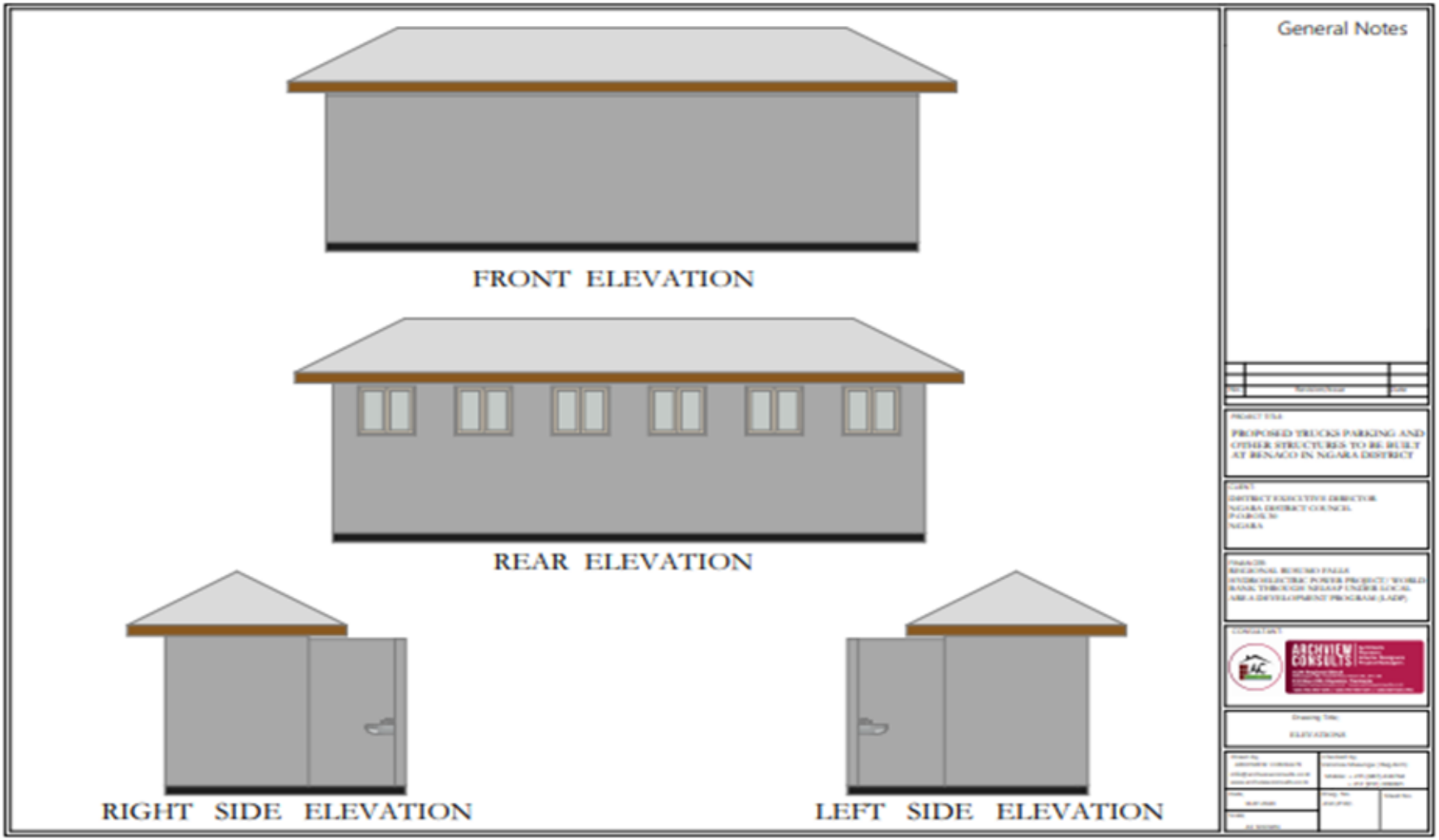


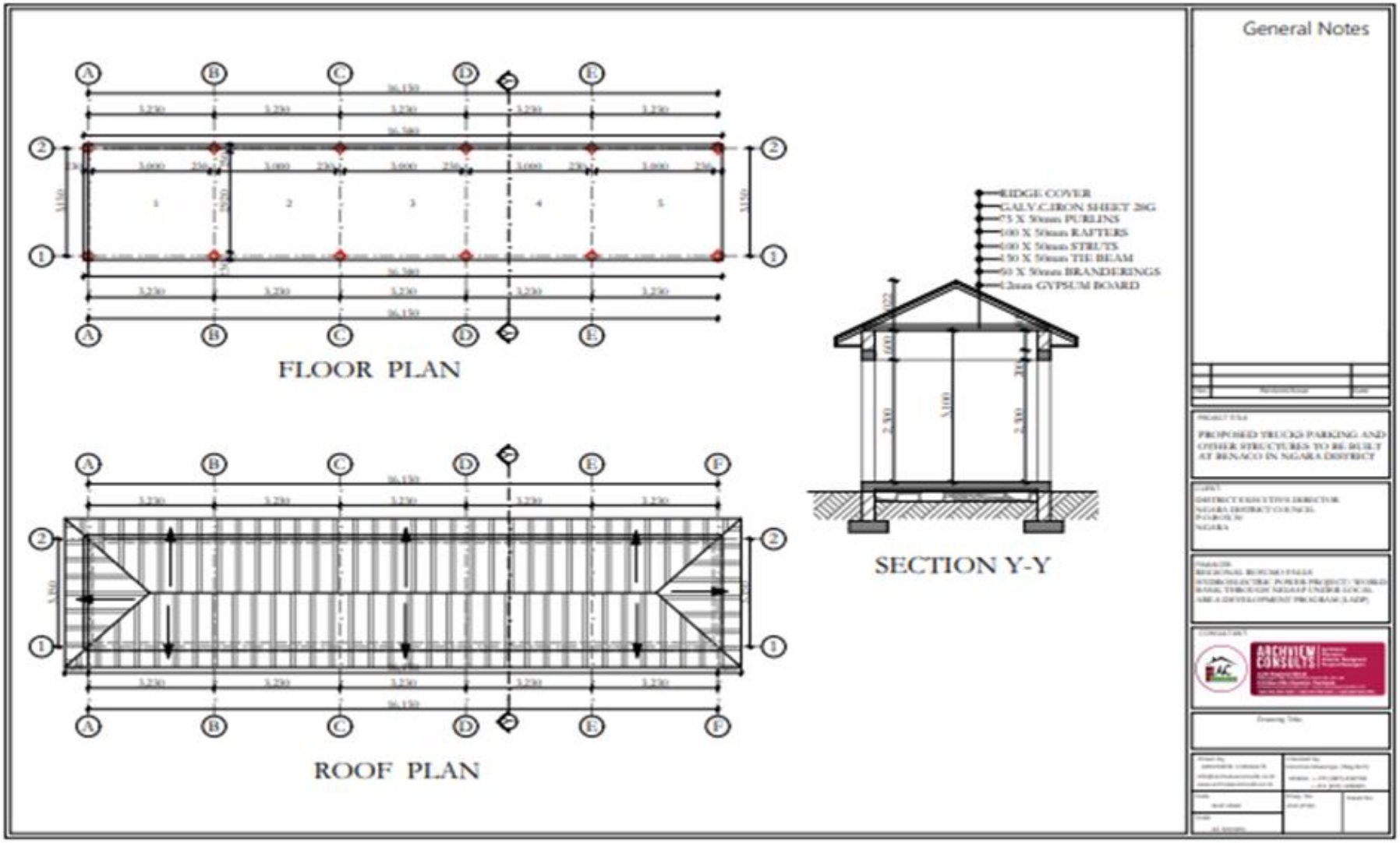
APPENDIX VII: ARCHTECTURAL DRAWINGS

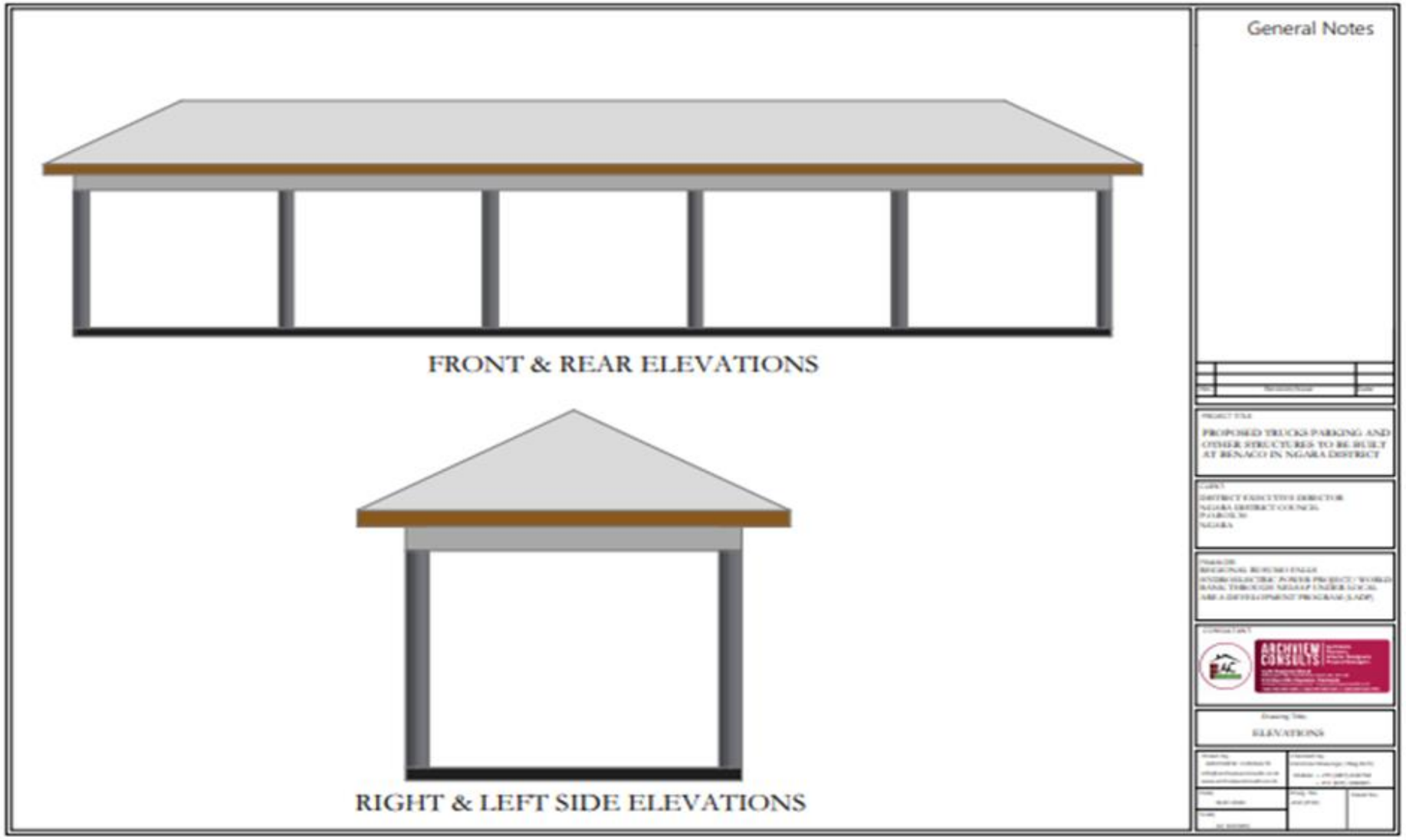


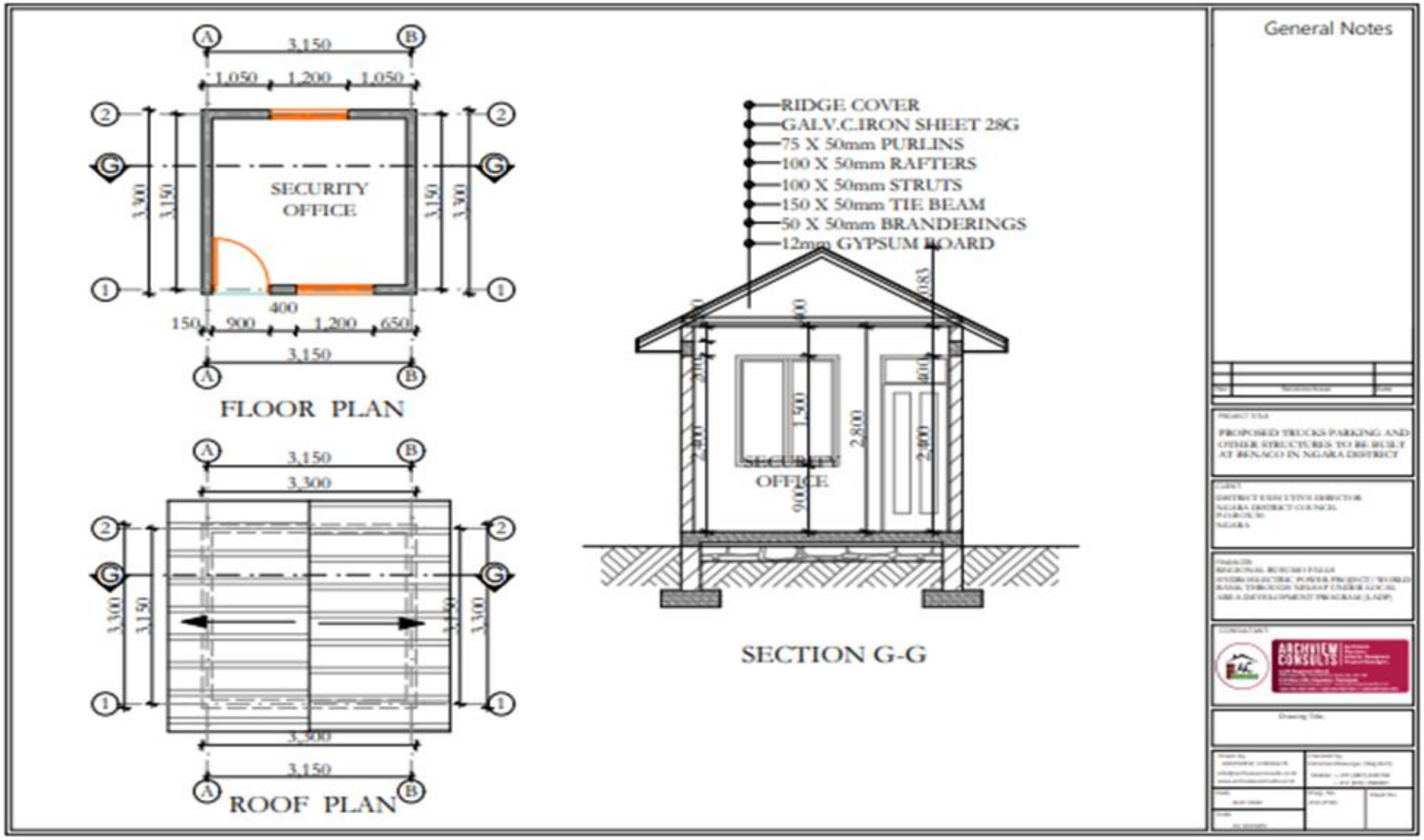

REAR ELEVATION
FRONT ELEVATION
RIGHT SIDE ELEVATION
LEFT SIDE ELEVATION
General Notes
PROPOSED TRUCKS PARKING AND OTHER STRUCTURES TO BE BUILT AT BENACO IN NGARA DISTRICT
ARCHVIEW CONSULTS

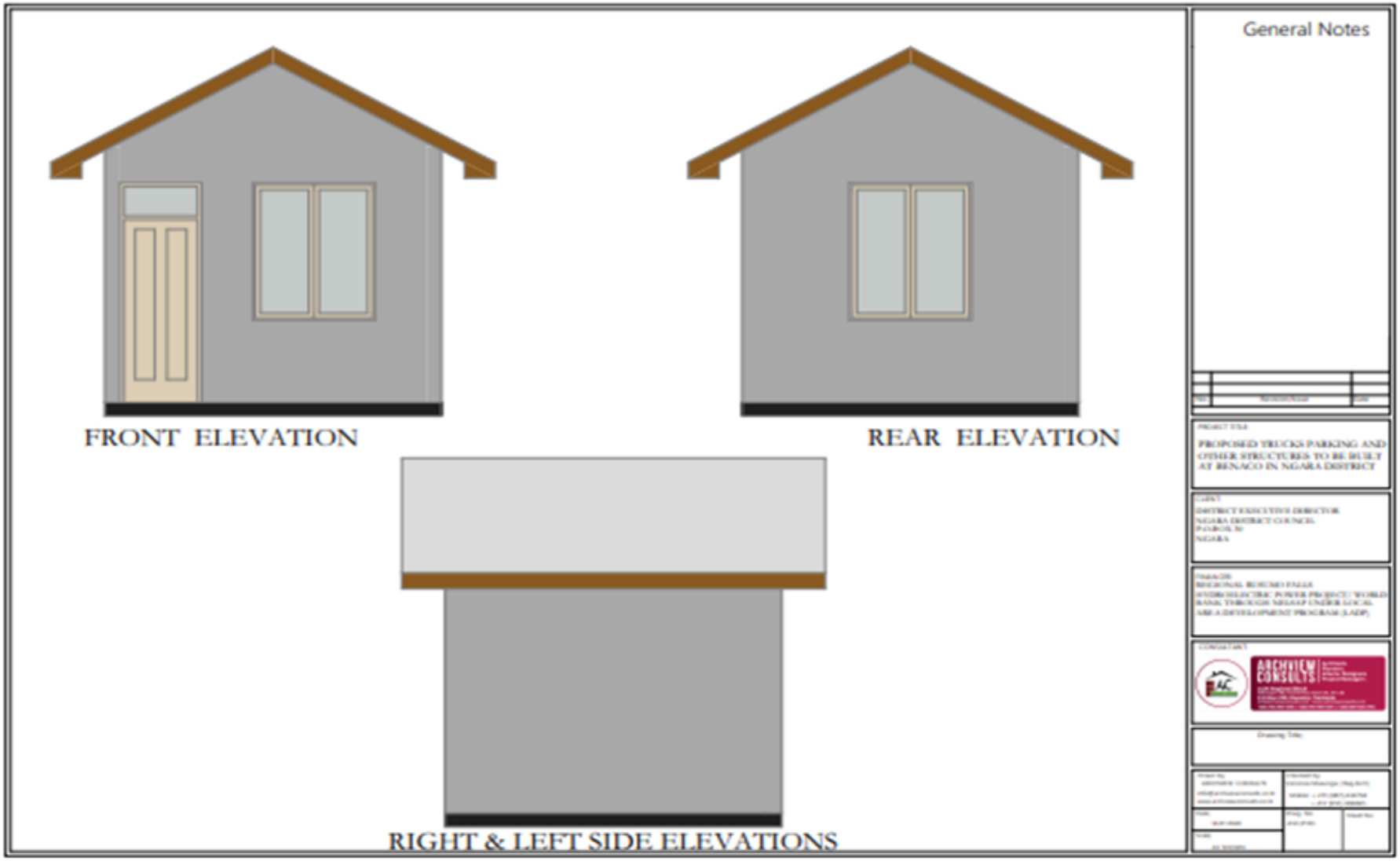

FLOOR PLAN
ROOF PLAN
SECTION A-A
RIDGE COVER
GALV.C.IRON SHEET 28G
75 X 50mm PURLINS
100 X 50mm RAFTERS
100 X 50mm STRUTS
150 X 50mm TIE BEAM
50 X 50mm BRANDERINGS
12mm GYPSUM BOARD
TO ENG DETAILS
General Notes
PROPOSED TRUCKS PARKING AND OTHER STRUCTURES TO BE BUILT AT BENACO IN NGARA DISTRICT

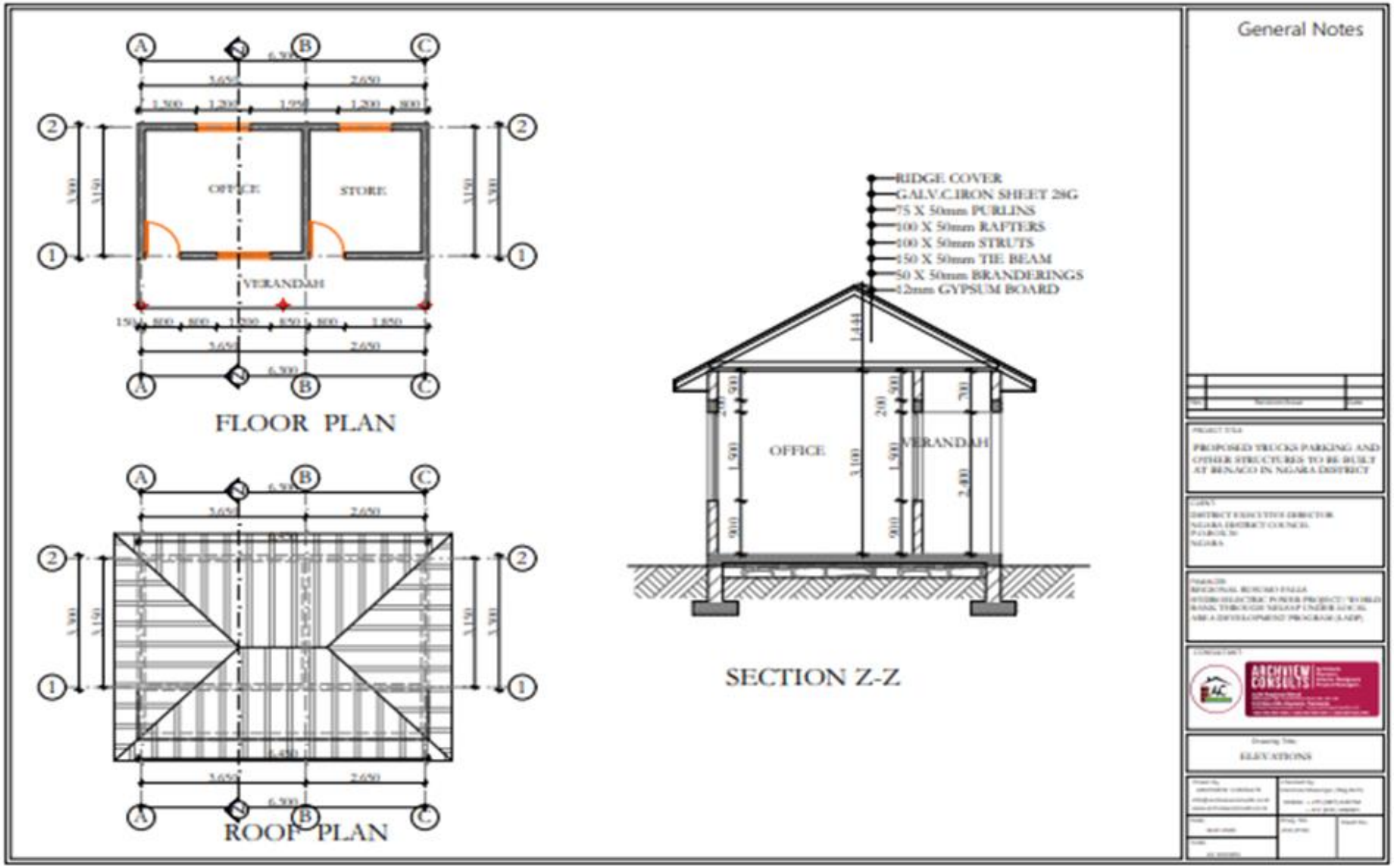

FRONT ELEVATION
REAR ELEVATION
RIGHT SIDE ELEVATION
LEFT SIDE ELEVATION
General Notes
PROPOSED TRUCKS PARKING AND OTHER STRUCTURES TO BE BUILT AT BENACO IN NGARA DISTRICT
ARCHITEM CONSULTS
ELEVATIONS

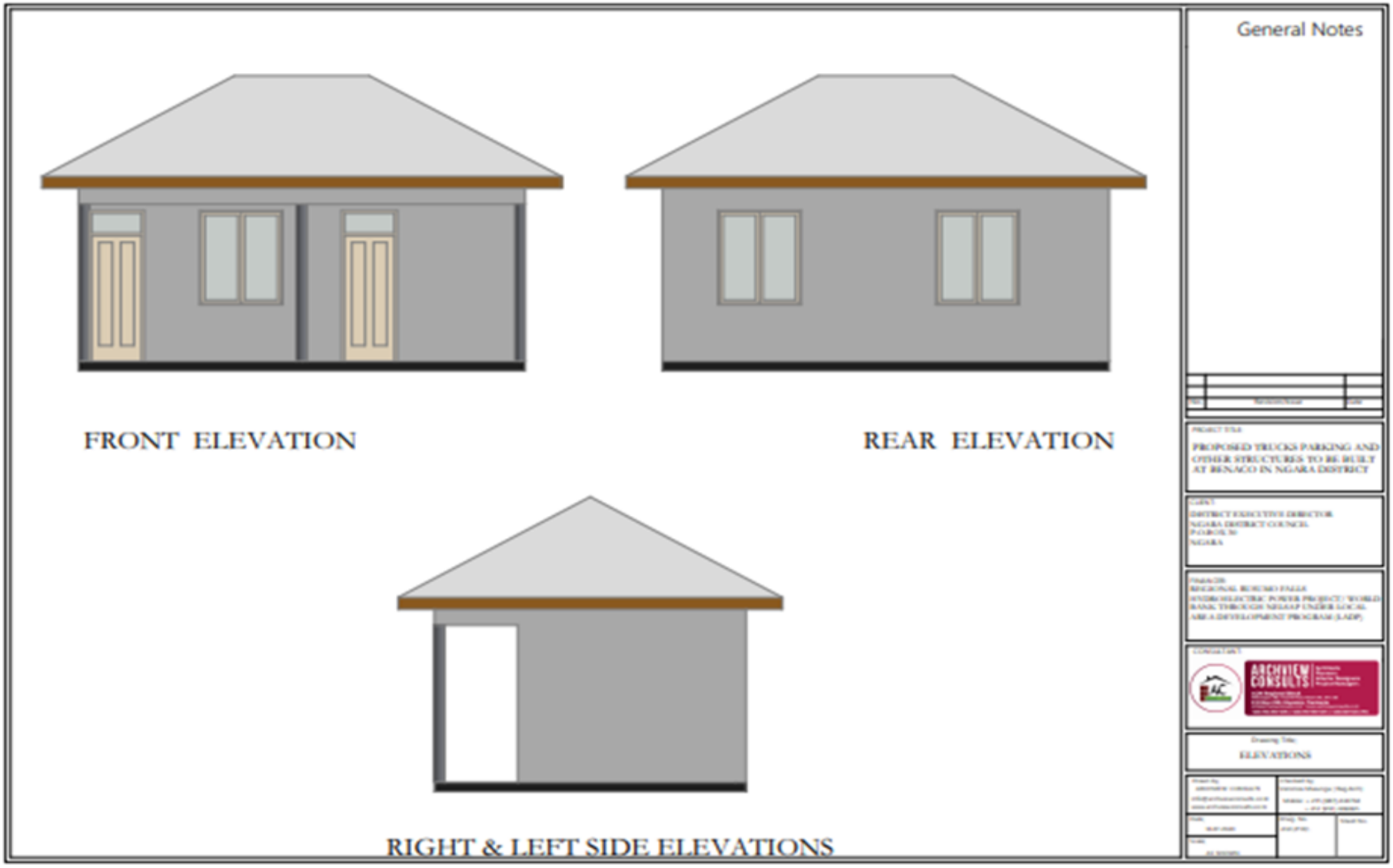

FLOOR PLAN
ROOF PLAN
SECTION Y-Y
RIDGE COVER
GALV.C.IRON SHEET 28G
75 X 50mm PURLINS
100 X 50mm RAFTERS
100 X 50mm STRUTS
150 X 50mm TIE BEAM
50 X 50mm BRANDERINGS
12mm GYPSUM BOARD
General Notes
PROPOSED TRUCKS PARKING AND OTHER STRUCTURES TO BE BUILT AT BENACO IN NGARA DISTRICT
ARCHVIEW CONSULTS

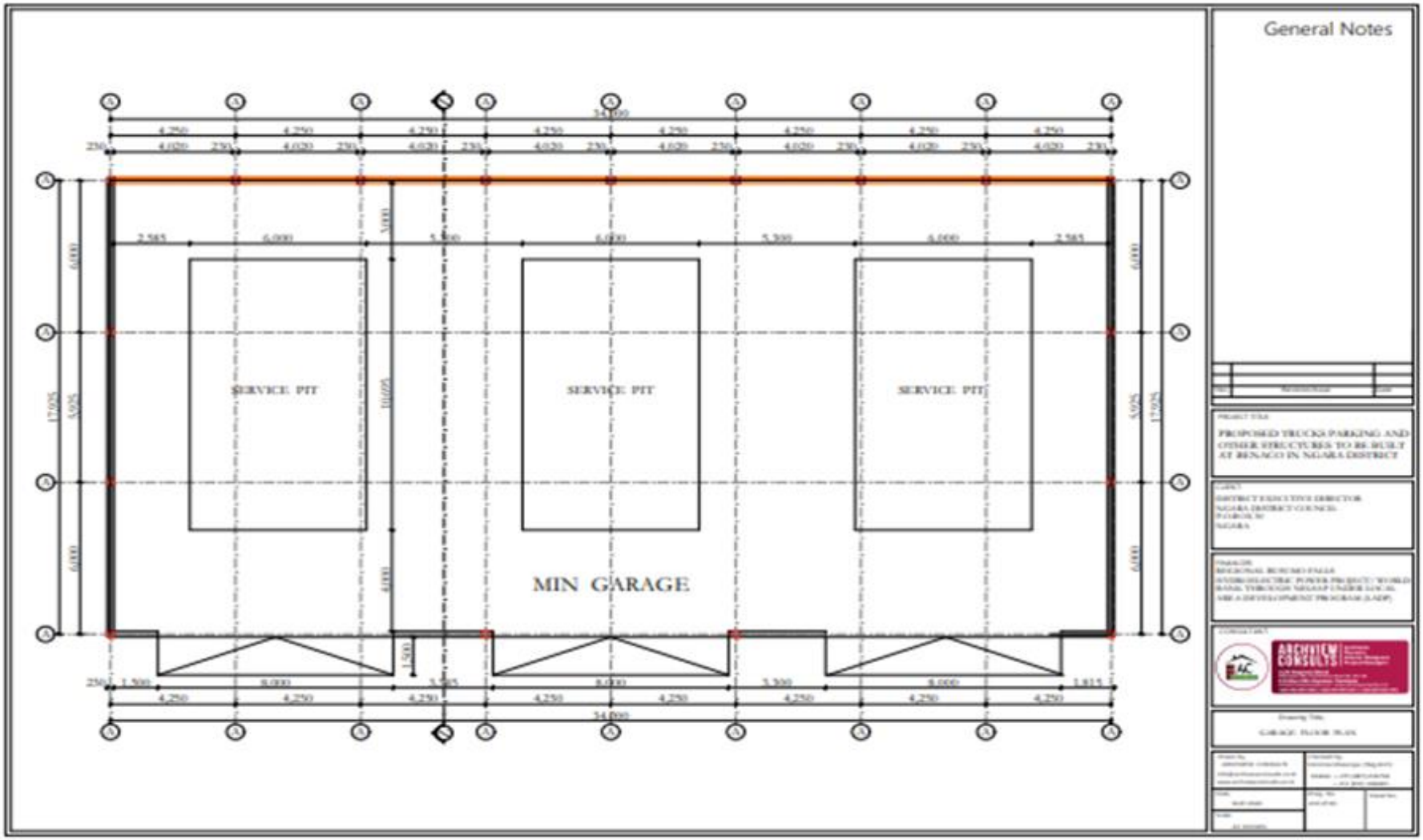

FRONT & REAR ELEVATIONS
RIGHT & LEFT SIDE ELEVATIONS
General Notes
PROPOSED TRUCKS PARKING AND OTHER STRUCTURES TO BE BUILT AT BENACO IN NGARA DISTRICT
ARCHITEM CONSULTS
ELEVATIONS

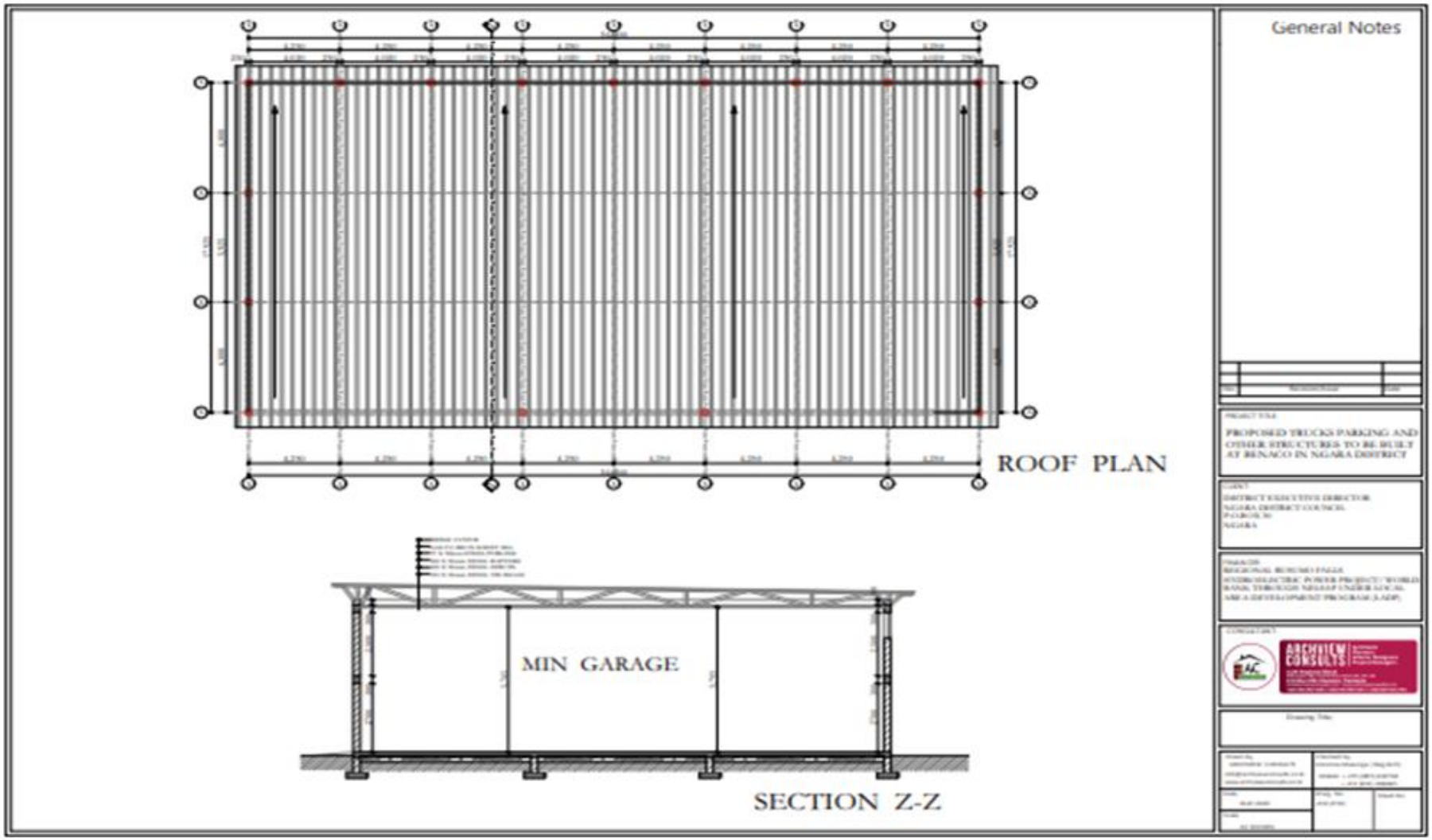

SECURITY OFFICE
FLOOR PLAN
ROOF PLAN
RIDGE COVER
GALV.C.IRON SHEET 28G
75 X 50mm PURLINS
100 X 50mm RAFTERS
100 X 50mm STRUTS
150 X 50mm TIE BEAM
50 X 50mm BRANDERINGS
12mm GYPSUM BOARD
SECURITY OFFICE
SECTION G-G
General Notes

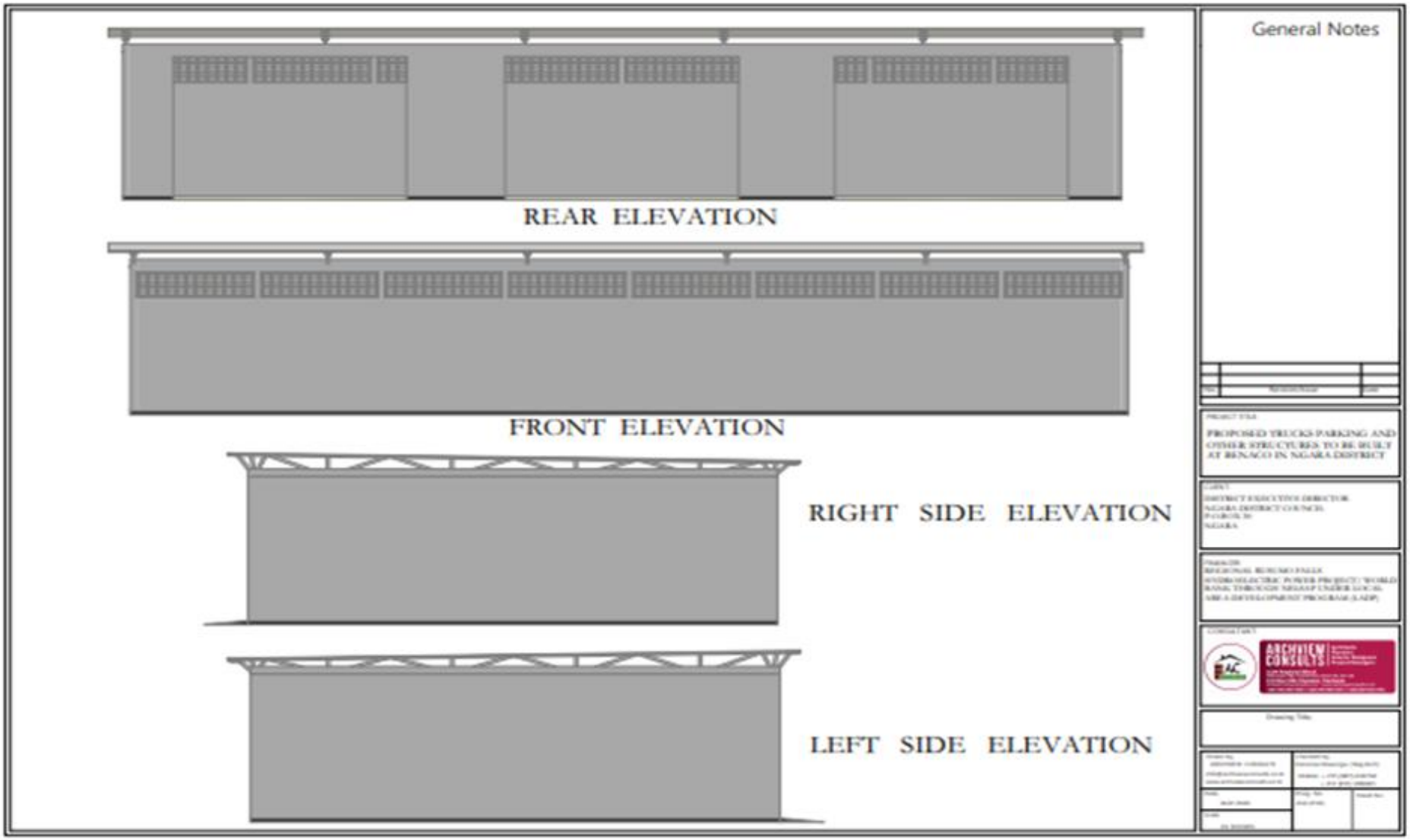

FRONT ELEVATION
REAR ELEVATION
RIGHT & LEFT SIDE ELEVATIONS
General Notes
PROPOSED TRUCKS PARKING AND OTHER STRUCTURES TO BE BUILT AT BENACO IN NGARA DISTRICT
ARCHITEM CONSULTS


OFFICE
STORE
VERANDAH
FLOOR PLAN
ROOF PLAN
RIDGE COVER
GALV.C.IRON SHEET 28G
75 X 50mm PURLINS
100 X 50mm RAFTERS
100 X 50mm STRUTS
150 X 50mm TIE BEAM
50 X 50mm BRANDERINGS
12mm GYPSUM BOARD
OFFICE
VERANDAH
SECTION Z-Z
General Notes
PROPOSED TRUCKS PARKING AND OTHER STRUCTURES TO BE BUILT AT BENACO IN NGARA DISTRICT
ELEVATIONS

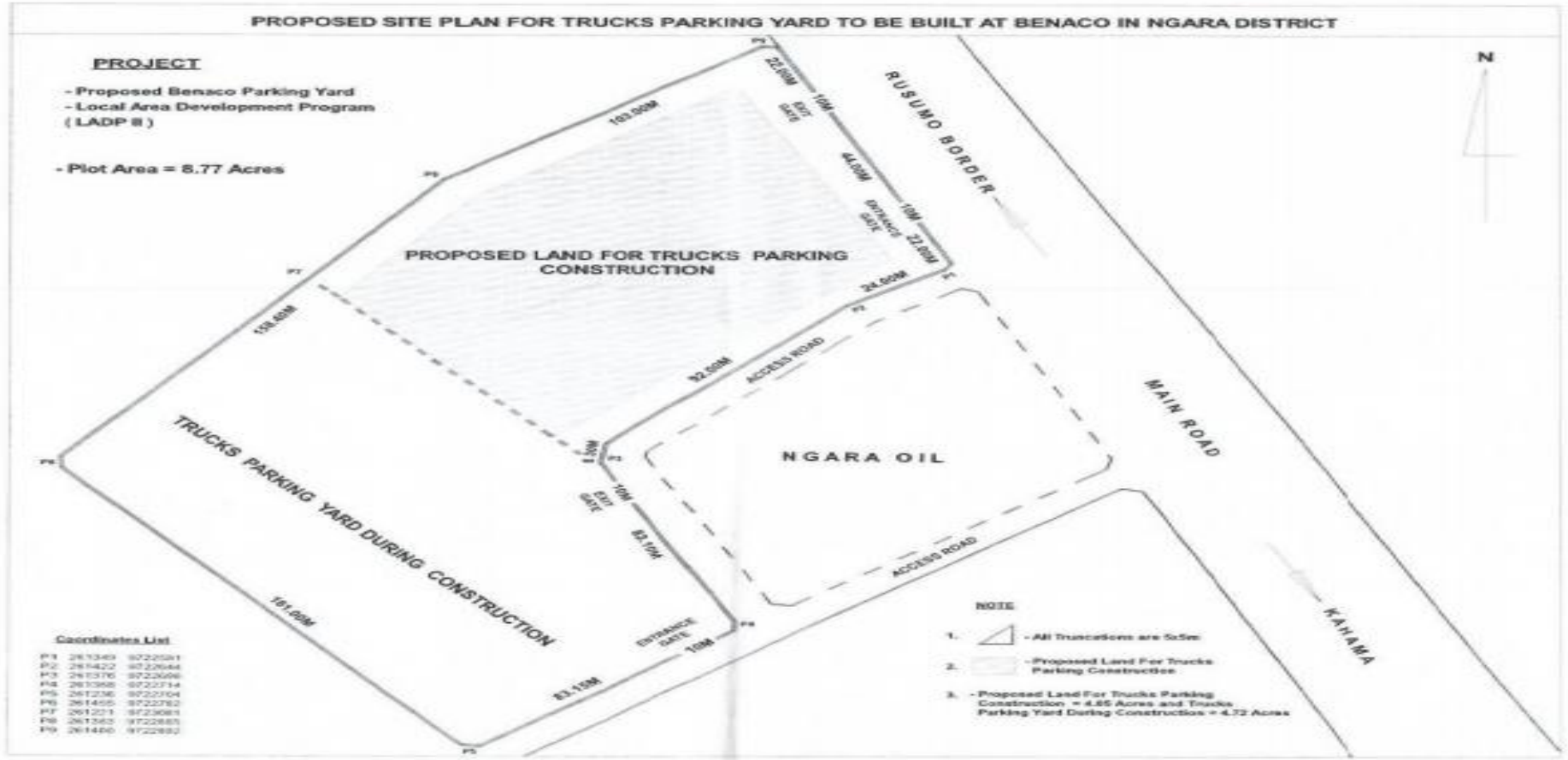

FRONT ELEVATION
REAR ELEVATION
RIGHT & LEFT SIDE ELEVATIONS
General Notes
PROPOSED TRUCKS PARKING AND OTHER STRUCTURES TO BE BUILT AT BENACO IN NGARA DISTRICT
ARCHVIEW CONSULTS
ELEVATIONS


General Notes
SERVICE PIT
SERVICE PIT
SERVICE PIT
MIN GARAGE
PROPOSED TRUCKS PARKING AND OTHER STRUCTURES TO BE BUILT AT BENACO IN NGARA DISTRICT
ARCHITECH CONSULTS
GARAGE FLOOR PLAN


ROOF PLAN
MIN GARAGE
SECTION Z-Z
General Notes
PROPOSED TRUCKS PARKING AND OTHER STRUCTURES TO BE BUILT AT BENACO IN NGARA DISTRICT


REAR ELEVATION
FRONT ELEVATION
RIGHT SIDE ELEVATION
LEFT SIDE ELEVATION
General Notes
PROPOSED TRUCKS PARKING AND OTHER STRUCTURES TO BE BUILT AT BENACO IN NGARA DISTRICT
ARCHVIEW CONSULTS

Appendix VIII: Drawing shows Front section and Rear section



Appendix IX: Grievance Redress Mechanisms

GRIEVANCE REDRESS MECHANISMS

Introduction.

Ngara District Council established a grievance mechanism in accordance with the Word Bank Standards to receive and address specific concerns raised by affected communities, employees and other affected stakeholders as a result of the project activities. Methods for documenting and responding to complaints in a reasonable timeframe, explaining response and compensation procedures, and also including monthly reports back to the community on the system and complaint resolution. To ensure its effectiveness, this GRM has been prepared in Consultation with the local Community and timely resolution of complaints through an effective and transparent complaint mechanism will be enhanced for the satisfaction of the employees and the timely completion of the projects.

The Grievance committees will be formulated to include each stakeholder that will be affected by the project from the project levels to the local government level and district level:

The procedures for Grievance Redress Mechanism

In a situation where an affected community, employee, or any other stakeholder wishes to make a complaint about a project, the following process should be followed;

1. COMMUNITY LEVELS;

- Affected people / employees / communities must fill out a complaint form which shall be available at the local government offices and then compliant shall be registered by the village government officials.
- The Village Executive Officer shall convene a meeting of the Village Grievance Redress Mechanism committee to perform appropriate investigation If deemed necessary, the investigation can include a risk assessment. The investigation shall include follow-up meetings between stakeholders and the contractors, where an impartial party is present without impeding access to any judicial or administrative remedies that may be available at the Ward Executive Officer and Ward Councils. Minutes are recorded and added to the grievance database then further be reported to the Contractor's Community Representative.
- The meeting shall be held by the Grievance Redress committees from each stakeholder i.e. the Village Committee and the Contractor Representatives to resolve the grievance.
- Once the reported grievance has not been resolved at that stage, it will be reported to the Ward level for further resolution processes and again if not resolved it will be transferred to the District Level Grievance Management Committee.
- Likewise, the District Executive Director (DED) shall convene the meetings consisting of the relevant District experts for further resolution process.
- For any resolved grievance, signed agreement to any resolution to a grievance shall be maintained in the archives. Appeals to any grievance shall be allowed in such context the signed agreement shall be revisited to establish the relevance of the appeals. If the grievance is unresolved the records shall remain unresolved and legal actions will be encouraged.

***2*. AT THE CONTRACTORS LEVELS.**

Like in any countries, in Tanzania the labour laws recognise the workers' rights to form and to join workers' organizations of their choosing without interference and to bargain collectively, the Contractor will comply with national law.

CONTRACTOR'S Grievance Mechanism will work as follows:

1. Contractor's complaint & suggestion boxes will be stationed at the contractor's site office and other strategic sites.
2. All complaints submitted in boxes will be investigated and resolved by the contractor's sociologist and human resource manager within 48 hours. In the event that the settlement does not follow the predetermined criteria, the case must be presented to management for review**.** And if unresolved, problem is shared with senior management
    a) In the event of a serious complaint, the worker's complaints will be referred to the Confederation of Workers (TAMICO and project supervisory engineers).
    b) The resolution process ends with a written agreement signed by the employee and contractor's management. If not resolved, it will be submitted to the company's environmental, social and health and safety committee. If it remains unresolved, legal action may be taken by an employee.
    c) Throughout the process, the most important thing is that the documents (resolution agreements, appeals and investigation reports) will be kept in the Contractor's database.

3. Serious complaints will be resolved through the standing procedures described above in the "existing government complaints system"
    a) "Serious" is defined as including actual or imminent injury (which Contractor will also report to the police), damage to property or crops, water or chemical contamination.
    b) Complaints will receive an update on its resolution at least every two weeks until the issue is resolved.
    c) Contractor will meet with the aggrieved individual confidentially to determine the best procedure under which the resolution agreement can be obtained if the complaint is serious and genuine and the group or individual who has posted the complaint chooses not to seek resolution through the standing government grievance system.

4. Resolution Reporting

a) All complaints and related resolutions will be reported Monthly to the World Bank and NELSAP and Ngara DC

Existing Government Grievance System

1. Villager makes complaint to village Government which calls meeting with CONTRACTOR'S

Complainant → **Village Executive** → **Village Chairma**

2. If no resolution, village Government elevates to Ward, which calls meeting with CONTRACTOR'S

- **Village Government**
- **Ward Executive**
- **Ward Council**
- **Ward development Committee**

3. If no resolution, ward elevates to District which calls meeting with Contractors

DED& District Experts

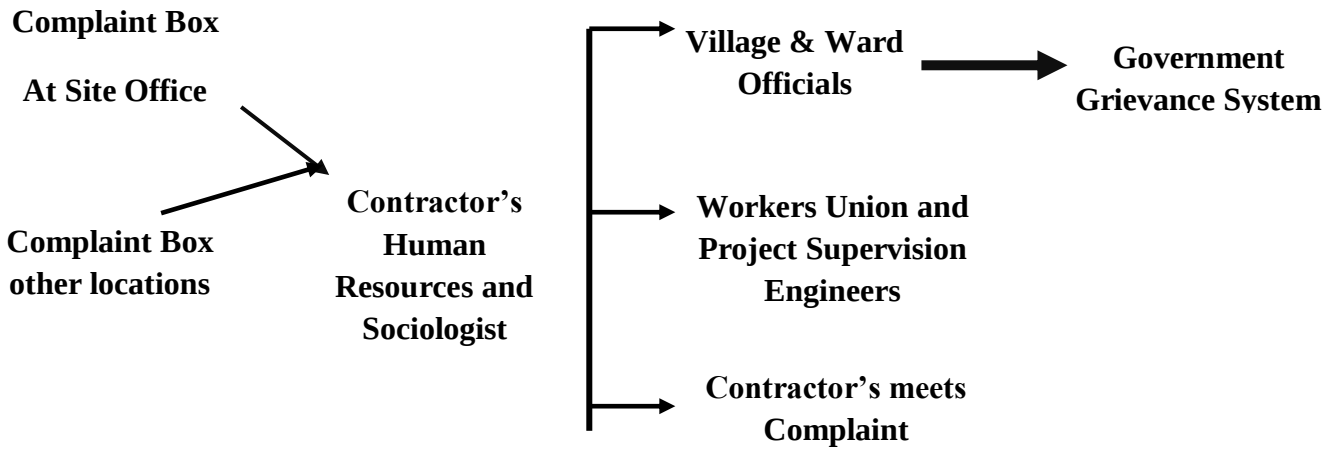
4. If no resolution, District refers to relevant Ministry or Courts

Relevant Ministry or Courts of LAW

CONTRACTOR'S Employees Grievance Mechanism

1. Contractor's Sociologist/Human Resource Officer reviewers box complaints within 48 hours

2. Serious complaints referred to government grievance system; labour issues to union; & confidential complaints met privately with appropriate CONTRACTOR'S Staff



Reporting

- *Complaints distributed to village & ward authorities biweekly*
- *Resolution reported at quarterly at World Banks, NELSAP and Ngara DC*