

**CONSTRUCTION OF BUKEDEA GRAVITY FLOW SCHEME - UPPER SIPI
SYSTEM IN KAPCHWORA**

MWE/WRKS/16-17/00048

**CAMPSITE ENVIRONMENTAL AND SOCIAL
MANAGEMENT PLAN**

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ACRONYMS.....	iv
ENVIRONMENTAL POLICY STATEMENT.....	v
1.0 INTRODUCTION	1
2.0 CAMPSITE ESMP OBJECTIVES.....	1
3.0 METHODOLOGY	2
4.0 POLICY AND INSTITUTIONAL FRAMEWORK	4
4.1. Laws	4
4.2. Institutional Framework	9
4.3. Policy.....	11
4.4. The World Bank Safeguard Policies	13
5.1. Campsite and Construction Location	15
6.0 CAMPSITE POWER AND SAFETY PROVISIONS	17
6.1. Campsite security	17
6.2. Campsite organization.....	17
6.3. Electrical Supply and Distribution	18
6.4. Food/Hydrocarbon Storage	18
6.5. Personnel Accommodation	18
6.7. Preparation of meals.....	18
6.8. Personnel orientation / trainings.....	19
6.9. Campsite Excavations and mitigation measures	19
6.10. Fire Protection and Evacuation procedures	19
6.11. First Aid.....	20
6.12. Evacuation of the Work Area	20
7.0 ENVIRONMENTAL IMPACTS AND ENHANCEMENT MEASURES	21
7.1. Positive Impacts	21
7.2. Negative Impacts.....	22
7.2.1. Noise and vibration.....	22
7.2.2. Traffic management.....	22
7.2.3. Soil and geology	22
7.2.4. Air and climatic factors.....	23
7.3. Environmental and Social Management Plan	23
8.0 WASTE MANAGEMENT PLAN	35
8.1. Waste Handling Guidelines.....	35
8.2. Waste Disposal.....	36
8.3. Environmental Protection measures.....	37
8.4. Storm-water Pollution Prevention and Control.....	38
8.4. Erosion and Sediment Control	38
8.5. Hazardous Material and Hazardous Waste	38
9.0 HEALTH MANAGEMENT PLAN	40
9.1. Drinking Water.....	40
9.2. Toilets.....	41
9.3. Alcohol and Drug Abuse.....	41
9.4. First Aid.....	41
10.0 GRIEVANCE HANDLING MECHANISM.....	42
11.0 DECOMMISSIONING:	44

12.0 CONCLUSION.....	46
13. REFERENCES	47
APPENDIX.....	48
GRIEVANCE FORM	48
SAMPLE OF STAKEHOLDER CONSULTATIONS	49
QUESTIONNAIRE	50
SUMMARY OF RESPONSES	51
ATTENDENCE	52

ACRONYMS

CFM:	Collaborative Forest Management
CHU:	Complaints Handling Unit
EER:	Environmental Evaluation Report
E&S:	Environmental and Social
ESMP:	Environmental and Social Management Plan
ETL:	Empire Tools Limited
LTI:	Loss Time Injuries
MSDA:	Material Safety Data Sheet
OHS:	Occupational Health and Safety
O&M:	Operation and Maintenance
PPE:	Personal Protective Equipment
UWA:	Uganda Wildlife Authority

ENVIRONMENTAL POLICY STATEMENT

Empire Tools Limited recognizes the need to operate business in a manner which reflects sustainable environmental management by balancing impacts of its business with the need to protect the local and global environment.

Our Environmental Policy shall earn the confidence of all our stakeholders by demonstrating our commitment to comply with all relevant environmental legislations and minimize pollution through the continual improvement of performance in all areas of the Company.

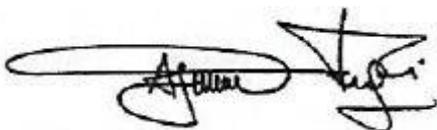
The Company has demonstrated a commitment to identify all activities that have the potential to cause an environmental impact, as well as providing adequate resources to help minimize/prevent any negative impact.

In order to achieve this commitment, we will:

- Promote a culture of continual environmental improvement within the Company.
- Minimize waste through a commitment to 3R (reuse, Reduce, Recycle).
- Adopt More sustainable substitutes
- Regularly measure and evaluate our environmental performance.
- Identify all environmental impacts that the Company contributes to and establish environmental management procedures that can be incorporated into all business decisions, in a cost effective manner.
- Consistently increase the awareness and provide necessary training to all our stakeholders.

It is our duty to ensure that good environmental management is practiced in all contracts and projects that we are involved in, and we will seek to influence customers to demonstrate a positive environmental commitment.

The Managing Director, Mr. Ajuk Ronald is personally responsible for the environmental performance of the Company and signs this policy statement in acknowledgement of this overall responsibility.

A handwritten signature in black ink, appearing to read 'Ajuk Ronald', written over a horizontal line.

Ajuk Ronald
Managing Director

1.0 INTRODUCTION

This document is a summary of the Environmental and Social Management Plan (ESMP) for the establishment of the Project Campsite for the Construction of Bukedea Gravity Flow Scheme Upper Sipi System. In line with national regulations and the Safeguard Systems of the World Bank, It describes the project campsite and its key environmental and social impacts as well as the requisite mitigation and improvement measures.

2.0. CAMPSITE ESMP OBJECTIVES

This ESMP is a living document that is constantly updated and improved as the project progresses. Environmental and Social Management Plan (ESMP) for Construction of Campsite essentially provides the implementation mechanism for the environmental and social mitigation measures during sub-project implementation stages.

The ESMP describes the mitigation and management measures, clarifies responsibilities for implementation, and provides an implementation plan to ensure that this is done with little or no harm to the environment at large; at the same time protecting project affected persons and the vulnerable groups in particular from impacts that may emanate as a result of the program.

The basic objective of this ESMP is to manage, prevent, and mitigate potentially adverse impacts of the project interventions in a way that minimizes the adverse impact on the environment and people at the Campsite.

The specific and broad objectives of this ESMP are to:

- Ensure compliance with national regulatory authority stipulations and guidelines, as well as ensuring compliance with the E&S Safeguards Policies and standards set by the World Bank
- Facilitate the implementation of the environmental and social mitigation measures identified during the assessment.
- Assign responsibilities for project stakeholders for the preparation and implementation of the environmental and social management of the project.
- Define a monitoring mechanism and identify monitoring parameters to ensure effective implementation of the mitigation measures;
- Assess environmental training requirements for different stakeholders at various levels and describe communication and documentation requirements.

- Ensuring that there is sufficient allocation of resources on the project budget so that the scale of ESMP-related activities is consistent with the significance of project impacts;
- Realizing the agreed environmental and social objectives for the Project and verifying environmental and social performance through information on impacts as they occur;
- To provide a plan which describes the actions that will be taken by Empire Tools Ltd to enhance positive impacts and to avoid, minimize, mitigate, compensate / offset negative impacts of the Construction Project.

3.0 METHODOLOGY

In compliance with the requirements of the World Bank, consultations were undertaken as part of the ESMP development process. To fulfill this requirement, key informants were interviewed (the Local Council Leaders of Lawai and Chepterit were interviewed). The stakeholders interviewed are shown in the Table below

Key Informants	LCI-Lawai Village
	LCI-Chepterit Village
	Construction Worker-Cbebrot Geoffrey
	Construction Worker- Cherop Philip
	Construction Worker- Bushendich Fred
Key Questions asked	<ol style="list-style-type: none"> 1. What are local community's expectations from this project 2. What benefit do you envisage to receive at personal or community level as a result of the campsite? 3. What Occupational and Community Health issues do you envisage to result of the project campsite? 4. What are the Environmental issues that you think the project and the campsite will cause to the community and River Sipi 5. What Mitigation measures do you think the Contractor can put in place?

Consultations showed that stakeholders have high expectations from the general project and there are no real critical issues related to environmental and social impacts such as resettlement, biodiversity loss or loss of ecological integrity among others when the campsite is established. However, the few issues brought up by the stakeholders can be remedied

through interventions suggested in the ESMP. The best approach for implementing the intervention is to include stakeholder representatives in the monitoring unit.

4.0. POLICY AND INSTITUTIONAL FRAMEWORK

4.1. Laws

The Constitution of the Republic of Uganda, 1995 Environment and Natural Resource management is governed under the Constitution of the Republic of Uganda of 1995, Article 237 (2b) which provides that the Government or Local Government as determined by parliament by law shall hold in trust for the people and protect natural lakes, rivers, wetlands, ground water, natural streams, forest reserves, game reserves, national parks and any other land reserves for ecological and touristic purposes for the common good of the citizens of Uganda.

The Constitution of the Republic of Uganda also recognizes the importance of conserving the Environment. Articles 39 and 41 state, “Everyone has a duty to maintain a sound environment” while Article 245 which caters for the protection and preservation of the environment states,

The National Forestry and Tree Planting Act 2003 The Forests Act provides the legal framework for Collaborative Forest Management (CFM). The Act defines CFM as a “...mutually beneficial arrangement in which a forest user group and a responsible body share roles, responsibilities and benefits in a forest reserve or part of it” (Section 15). Therefore at the campsite, ETL will promote collaborative forest management between government and local users.

The Land Act. Section 44 of the Land Act Cap.227 reiterates Article 237(2) (b) of the Constitution and provides in subsection (1) that: The Government or a local government shall hold in trust for the people and protect natural lakes, rivers, ground water, natural ponds, natural streams, wetlands, forest reserves, national parks and any land to be reserved for ecological and touristic purposes for the common good of the citizens of Uganda. However, under subsection (5) of section 44 of the Land Act, the Government or a local government may grant concessions or licenses or permits in respect of a natural resource referred to in the section subject to any law.

The National Environment Act, Cap153 In the construction of the Campsite, ETL will adhere to Section 36 (1) of Cap 153 which provides for the restricted use of wetlands and prohibits reclamation or drainage of wetlands; erection, construction, placement of any structure, etc. on the wetland; disturbance of a wetland by drilling or tunneling in a manner

that is likely to have adverse effects on the wetland; and depositing in, on or under any wetland any substance in a manner that is likely to have adverse effects on the wetland

Occupational Safety and Health Act, 2006 this provides for the health, safety, and welfare of persons employed in all workplaces. Amongst others, the Act provides for establishing existing workplace hazards; carrying out risk assessment and control; establishing a safety program or system that includes the necessary policy and regulations; providing information, instruction and competent supervision with adequate authority; training workers to enable them to work in a healthy and safe manner; providing workers with necessary equipment to enable them carry out work in a healthy and safe environment; reporting hazardous situations, illness, injuries and fatalities; not allowing workers or forcing them to work contrary to required health and safety measures; and ensuring that workers understand the scope of their authority

National Environment (Noise Standards and Control) Regulations, 2003 Part III of Section 8 (1) requires facility operators, to use the best practicable means to ensure that the emission of noise does not exceed the permissible noise levels. The regulations require that persons to be exposed to occupational noise exceeding 85dBA for eight hours in a day should be provided with personal protective gear.

The Public Health Act, Cap 269 Section 56 of the Public Health Act, Cap 269 prohibits any person from causing a nuisance defined by Section 59 as any chimney emissions in such a quantity or toxicity level that may be hazardous or injurious to health. Section 57 authorizes the local authorities to cause the abatement of a nuisance.

The Water Act, Cap152 The Water Act, Cap 152, Section 31, Subsection (1), prohibits pollution of water and states, “A person commits an offence if, unless authorized under this Act, causes (a) waste to come into contact with any water (b) waste to be discharged directly into water.

National Environment (Waste Management) Regulations, 1999 The Regulations made in accordance with section 54 (2) of the National Environment Act, Cap153 are meant for management of waste that NEMA may consider necessary. Regulation 5(1) states, “A person who owns or controls a facility or premises which generate waste shall minimise the waste generated by adopting the cleaner production methods.” The cleaner production methods include: Improvement of the operations processes through: conserving raw materials and energy, eliminating the use of toxic materials and reducing toxic emissions and waste; 17

The National Environment (Standards for Discharge of Effluent into Water or on Land) Regulations, 1999 The standard for effluents or wastewater before discharge into water is prescribed in the Schedule to these Regulations which states that, “Every industry or establishment shall install at its premises, anti-pollution equipment for the treatment of effluent chemical discharge emanating from the industry or establishment.”

National Discharge Standards for selected pollutants

Parameter	National discharge standards
BOD5 (mg/l)	50
Suspended solids (mg/l)	100
Faecal coliforms	10,000 counts/ 100ml
Chlorine residual	(mg/l)
pH 8-Jun	1mg/l
Phenols (µg/l)	0.2 mg/l
Oil and grease (mg/l)	10mg/l
Total Phosphorus (mg/l)	10mg/l
Temperature	10,000 counts/ 100ml

Source: The National Environment (Standards for Discharge of Effluent into Water or on Land) Regulations, 1999.

The National Environment (Noise Standards and Control) Regulations, 2003 Sections 23 and 107 of the above Regulations provide for the maintenance of a healthy environment for all people in Uganda, the tranquility of their surroundings and their psychological well-being by regulating noise levels. ETL will be prescribing the maximum permissible noise levels from a facility or activity to which a person may be exposed and the provision for control of noise and for mitigating measures for the reduction of noise.

Regulatory noise limits

Facility	Noise limits dB (A) (Leq)	
	Day*	Night
Construction sites	60	50
Mixed residential (with some commercial and entertainment)	55	45

Time frame: Day 6.00 a.m. – 10.00 p.m.; Night 10.00 p.m. – 6.00 a.m.

Source: The National Environment (Noise Standards and Control) Regulations, 2003.

The Water Resources Regulations, S1 No.33/1998 Part II, Section 3, Sub-regulation (1) of this regulation states that, “Any person who occupies land on or adjacent or who at the commencement of these regulations, owns, occupies, operates, controls any works on land referred to in regulation 10, shall apply for a permit or register the works.

Local Governments Act, Cap 243 This Act provides for decentralized governance and devolution of Central Government functions, powers and services to local governments that have own political and administrative set-ups. Section 9 of this Act provides that a local government is the highest political and administrative authority in its area of jurisdiction and shall exercise both legislative and executive powers in accordance with the Constitution.

The project will be under Kapchorwa District. The District Environmental Officer are mandated to inspect and monitor environmental considerations for development projects in their areas of jurisdiction.

The Physical Planning Act, 2010 Under Section 19 of the Act, it is stated that preparation of national or regional physical development, consideration shall be given to among others environmental protection, national resources management, urbanization and tourism.

National Environment (Audit) Regulations, 2006 The regulations established in 2006 to provide tools for environmental audit of existing and operational facilities in the country by the Inspectors from the Authorities or delegated parties. Environmental audits are prompted by any reasonable cause to believe that the environment is threatened by any activity.

Employment Act, 2006. This Act is the principal legislation that seeks to harmonize relationships between employees and employers, protect worker’s interests and welfare and safeguard their occupational health and safety through:

1. Prohibiting forced labour, discrimination and sexual harassment at workplaces (Part II; Part IV). Providing for labour inspection by the relevant ministry (Part III).

2. Stipulating rights and duties in employment (weekly rest, working hours, annual leave, maternity and paternity leaves, sick pay, etc. (Part VI).
3. Continuity of employment (continuous service, seasonal employment, etc. (Part VIII).
4. This Act is relevant to the project both during the construction and operational phase.

The Act governs labour type and conditions under which person hired by the project work. It prohibits Child labour (a condition the contractor must comply with) as well as providing guidance on work rights during the post-construction phase.

The Water Supply Regulations, 1999 The Water Supply Regulations, 1999 manage the water supply works including:

- (i) Permits requirements and procedures for water supply works by authority or connection to land owner (Division 1, clauses 4 to 6);
- (ii) Application, examination and approval of Water supply plan (Division 2, clauses 7 to 11);
- (iii) Cost of works, security deposit, inspection of works and penalty for violation (Division 2, clauses 12 to 18);
- (iv) Metering system and charging rates (Part III, clauses 19 to 21).

These will guide the entire water supply exercise especially during project operation.

Guidelines for Environmental Impact Assessment in Uganda, 1997 National Environment Management Authority (NEMA) issued Guidelines for Environmental Impact Assessment, on July 1997. The Guidelines list the projects, which are subject to a detailed EIA study. The projects are classified into projects that in the proposed location have negligible environmental impacts, and projects that likely to have significant environmental impacts. The Guideline lists the key features of EIA including Environmental screening, Scoping, Guidelines for public participation, and Guidelines for monitoring plan and EIA approval process.

Environmental Impact Assessment Regulations, 1998 In these regulations, the National Environment Management Authority (NEMA) has the major responsibility of managing all environmental related issues in Uganda. NEMA works with lead agencies to ensure a proper environmental management. A lead agency can be any ministry, department, local government system, public officer in which or whom any law vests function of control or management of any segment of the environment. The Environmental Impact Assessment Regulations includes clauses covering provisions, definitions, environmental impacts studies review processes, schedule, approval requirements and fees.

4.2. Institutional Framework

Ministry of Water and Environment (MWE) through the Directorate for Environmental Affairs (DEA) is mandated to formulate environmental management policies, coordinate and supervise national projects on environmental management, monitor performance of divested government institutions (mainly National Environmental Management Authority (NEMA) and National Forestry Authority (NFA), coordinate environmental issues of various government ministries, mobilize support and resources for environmental management, and liaise with international environmental agencies and processes. DEA has responsibility for wetlands, forests, environmental management and meteorology.

National Environment Management Authority (NEMA) is a semi-autonomous institution that was established by an Act of parliament in May 1995 and became operational in December 1995. NEMA is specifically mandated by the National Environment Act (NEA), Cap. 153 as the principal agency in Uganda charged with the responsibility of coordinating, monitoring, supervising, and regulating all environmental management matters in the country. NEMA is responsible for the regulatory functions and activities that focus on compliance and enforcement of the existing legal and institutional frameworks on environmental management in Uganda. NEMA's mandate covers both green and brown issues of environmental management. It oversees the implementation of all environment conservation programmes and activities of the relevant agencies both at the national and local Government level. One of the key institutional mandates of NEMA include among others ensuring the observance of proper safeguards in the planning and execution of all development projects including those already in existence that have or are likely to have significant impact on the environment.

The Wetland Management Department. The Wetland Management Department (WMD) is the lead agency mandated to plan, implement, monitor and supervise wetland management activities. It is mandated to formulate policy, develop framework laws, set standard and guidelines for wetland management, mobilize resources, provide technical guidance and support supervision to other stakeholders involved in wetland management including Local Governments.

Directorate of Water Resources Management The Directorate of Water Resources Management (DWRM) is responsible for developing and maintaining national water laws, policies and regulations; managing, monitoring and regulation of water resources through issuing water use, abstraction and wastewater discharge permits; Integrated Water Resources

Management (IWRM) activities; coordinating Uganda's participation in joint management of Trans-boundary waters resources and peaceful cooperation with Nile Basin riparian countries. The directorate comprises three departments namely Department of Water Resources Monitoring and Assessments, Department of Water Resources Planning and Regulation and Department of Water Quality Management.

Ministry of Gender, Labour & Social Development This ministry sets policy direction and monitoring functions related to labour, gender and general social development. Its OHS Department in the ministry is responsible for inspection and mentoring of occupational safety in workplaces and this could be during project construction and operation of the Bukedea Water supply and Sanitation Project facilities. The OHS Department in this Ministry will be responsible for undertaking inspections of construction sites to ensure safe working conditions.

District Local Administration Structures The proposed project is within the jurisdiction of Kapchorwa and surrounding Districts' Local Government headed by a Local Council V (LC V) Chairman and Chief Administration Officer (CAO) who are the political head and technical head respectively. Various district offices whose functions would be relevant to the project include offices of Natural Resources/Environment, District Health Inspector, District Planner, Community Development Officer, District Director of Health Services, District Water Officer and District Engineer.

4.3. Policy

The National Environment Management Policy, 1994

The overall goal of this policy is the promotion of sustainable economic and social development heedful of the needs of future generations and the ESIA is one of the vital tools it considers necessary to ensure environmental quality and resource productivity on a long-term basis. It calls for integration of environmental concerns into development policies, plans and projects at national, district and local levels. Hence, the policy requires that projects or policies likely to have significant adverse ecological or social impacts undertake an ESIA before their implementation. This is also reaffirmed in the National Environment Act, Cap 153 which makes ESIA a requirement for eligible projects (Third Schedule).

National Water Policy, 1999

The National Water Policy is one of the fundamental policies for the governance of water resources in Uganda. The overall policy objective is to manage and develop the water resources in a sustainable manner, so as to secure and provide water of adequate quantity and quality for all social and economic needs, with the full participation of all stakeholders, and so as not to leave the future generations any worse off than ourselves. The leading institution on water issues in Uganda is the Ministry of Water and Environment, which implements a Water Action Plan and the National Wetlands Policy (1995). The policy ensures sustainable management of water resources.

The National Policy on Conservation and Management of Wetland Resources, 1995

The National Policy on conservation and management of wetland resources aims at curtailing loss of wetland resources and ensuring that benefits from wetlands are equitably distributed to all people of Uganda. In general, the policy calls for sustainable use, environmental sound management of wetlands, equitable distribution of benefits and application of ESIA procedures on activities to be carried out in wetlands. In order to operationalize the policy and to provide a legal framework for its implementation, wetland related issues have been adequately incorporated into the National Environmental Act, Cap 153.

National Health Policy

The overall objective of health sector policy is to reduce mortality, morbidity and fertility, and the disparities therein. Ensuring access to the Minimum Health Care Package is the central strategy. Strategies creating the enabling conditions for delivery of the Minimum Health Care

Package including enhanced appropriate health infrastructure such as to control vector infestation and also improved people's involvement in the management of public health services.

Occupational Health and Safety Policy

This is a comprehensive policy that addresses linkages of human activities to environmental aspects relating to the health of the workers and the public in general. Under its sub-sections 1.2.3.4, the workers are entitled to medical cover. Sub-section 1.3.1, 1.3.2 and 1.3.3 addresses environmental protection rules from activities including land, public health and water resources.

The National HIV/AIDS policy

This policy provides the overall policy framework for the national HIV/AIDS response. It also recognizes special groups which include migrant workers and acknowledges the existence of commercial sex workers. It also recommends the need to identify strategies to address migrant workers in view of the challenges posed by their mobility and vulnerability to HIV/AIDS. It anticipated that during the implementation of the different phases of the project, there will be an influx of people into the project area that will result into interaction and may pose a danger of HIV/AIDS spread.

Gender Policy

The policy states in part as follows;

“The Uganda Gender Policy is an integral part of the national development policies. It is a framework for redressing gender imbalances as well as a guide to all development practitioners.

The aim of this policy is to guide all levels of planning, resource allocation and implementation of development programmes with a gender perspective. The emphasis on gender is based on the recognition that "gender" is a development concept useful in identifying and understanding the social roles and relations of women and men of all ages, and how these impact on development.

The policy gives a clear mandate to the Ministry of Gender, Labour and Social Development and other Line Ministries to mainstream gender in all sectors. It sets priority areas of action at the National, Sectoral, District and Community levels. The ultimate objective of this policy, therefore, is to evolve a society that is both informed and conscious of gender and development issues and concerns. Indeed, sustainable development calls for maximum and

equal participation of both men and women in economic, political and social cultural development.”

4.4. The World Bank Safeguard Policies

The Campsite establishment triggers the following World Bank Safe Guard Policies: -

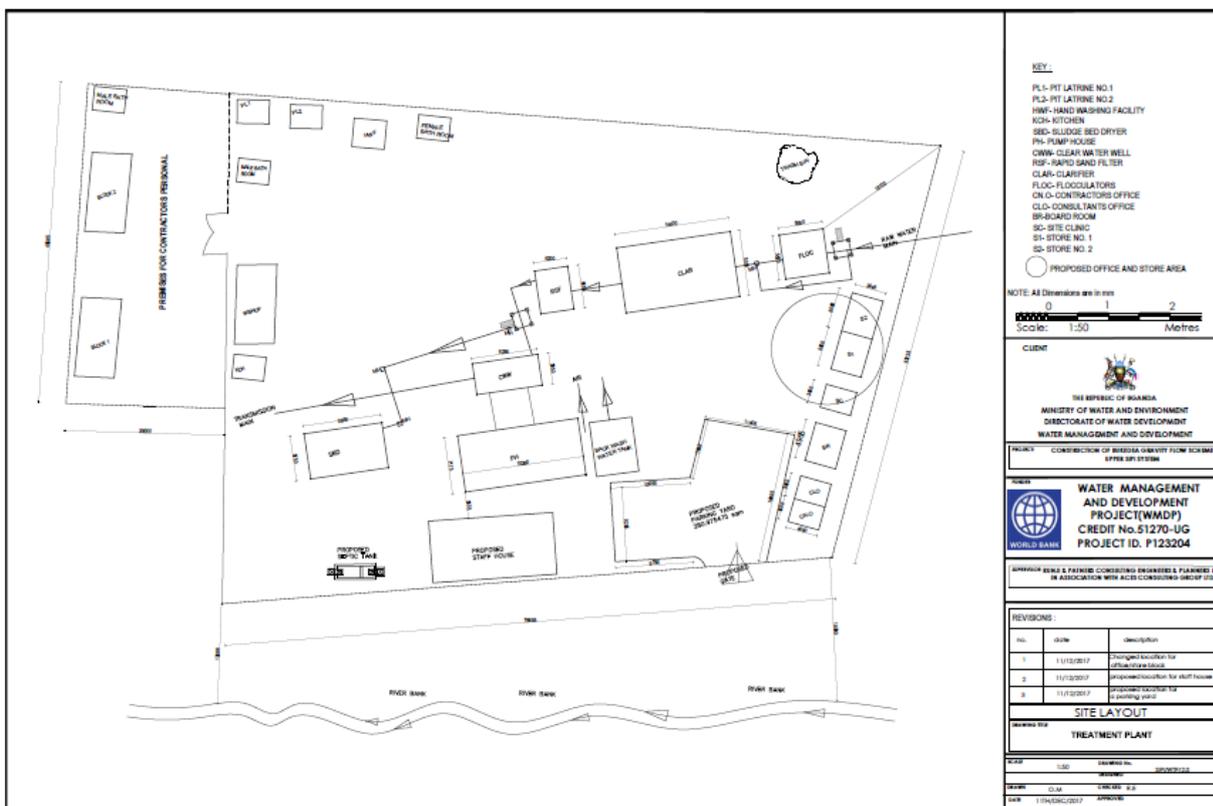
Environmental Assessment OP/BP 4.01 the campsite will impact the environment. However, the Environmental and Social Management Framework gives procedures of how to make check lists of impacts, their sources, screening and forecasting the main potential impacts. The campsite will be constructed 500metres from the closest community and 20 meters from River Sipi. This is likely to have minimal environmental impacts since all wastes have been planned for and the campsite will be delineated and fenced

Natural Habitats OP/BP 4.04 The Campsite is most unlikely to adversely impact on the natural ecosystems because the project is going to adopt sustainable waste management practices and population influx will be regulated.

OP/BP 4.09 (Pests Control Management) The policy is meant to minimize and manage the environmental and health risks associated with pesticides use and promote and support safe, effective and environmentally sound pest management. This being partly an Agricultural based project, this policy is potentially relevant due to the potential application of pesticides and herbicides. At the time of this study, there was no notable use of pesticides and herbicides in the project area and hence the policy is not triggered.

Physical Cultural Resources (OP/BP 4.11) Physical Cultural Resources include sites having archaeological (prehistoric), paleontological historical, religious, and unique natural significance. However, there may be some chance finds during excavations. These will be handled in accordance with the Chance Finds Procedures.

Involuntary Resettlement (OP/BP 4.12), the establishment of the campsite will not require resettlement of any party and since the campsite will be constructed on vacant piece of land (with no occupants, trees and susceptible land use) already secured by government and it is anticipated there will be no displacement of local communities. A Resettlement Action Plan for the project has catered for the site where the main infrastructure (Treatment Plant, Pump House and other facilities) will be located to address issues of compensation. However, additional land requirements for the campsite (specifically for construction worker’s residence) shall be handled by the contractor and this will involve short-term lease or rent from the owner.



5.1. Campsite and Construction Location

The campsite and construction area traverses Lawai Village (Ngasire Parish), an area with a physical environment characterized with steep terrain surrounded by few planted and natural woodlots that emanate from the Mount Elgon ranges and associated with River Sipi. The Campsite area is predominantly covered sandy loams of medium fertility in the valleys and loam in the raised areas. These soils support the growing of assorted crops such as maize, coffees, bananas, coffee, Irish potatoes and Onions. The project is located in an area described as generally wet with bi-modal type of rainfall of over 1,191 mm per annum. The district's climate is generally influenced by the Mt. Elgon ranges and experiences very low temperatures in areas with high altitude.

Schools and Sensitive Institutions

The campsite is 600metres from the nearest school (Ngasire Primary School) and is surrounded by others schools like Ngasire Parents, Gamatui Boarding Primary, Gamatui Girls and Sipi Secondary School and given that most school going children are below 18 years of age (Minors/Adolescents) who are more susceptible to defilement, early child marriages and sexual harassment by Construction Workers. Therefore, massive awareness campaigns on early child marriages will be held including Workers, Parents, Teachers, Pupils and Students and Local Leaders

Floral diversity

The vegetation of the Campsite and construction area falls under one major ecosystem (the agro-ecosystem) which consists of planted woodlots, agriculture, domesticated plants and indigenous species. This secondary vegetation has emerged as a result of anthropogenic activities like crop growing, settlement and cutting trees for charcoal making. The major wetlands crossed by the proposed road have been transformed and the major vegetation there in is associated with crops, tree and remnants of the original vegetation in few areas

Faunal Diversity

The area has no big game animals, some animals that have been seen around bank of the stream and these include monkeys, snakes, toads, frogs and lizards. Several birds' species found in the area include among others weaver birds, Storks Black headed heron, African pied Wagtail and wetland birds

Socio-economic Environment

The major human and economic activities around the campsite include agriculture (Coffee, Cabbage, Irish Potatoes and commercial tree planting and subsistence cattle rearing).

Health Care

The Campsite area is close to health facilities like Gamatui Health Centre II, Chema Dispensary, Munarya Health Centre, Sipi Health Centre and Kapchwora Hospital, health facilities that offer services such as Outpatient, Inpatient, Antenatal and Maternity, Laboratory, Dental, HIV/AIDS counselling and Testing, Minor Surgery, Immunization among others with complicated cases will be referred to Mbale Regional referral Hospital. Because the health services in the project area are staff strained and may not be able to handle additional patients (project workers) in the construction phase, ETL will provide Clinical/health services for its workers. The common diseases in the area are malaria, cough, water related etc. HIV/AIDS prevalence in the project area is put at above 8% in some sub counties of the project area. This is higher than the national average of 6.4 %. With the influx of workers during the construction stage, this rate may increase.

5.3. Campsite Drainage

Environmental management impacts requiring mitigation	Sources of impacts	Mitigation measures	Monitoring actions and methods	Responsibility for implementation	Resources required for the implementation
Irresponsible use of water	Water wastage due to careless practices during construction .	Educate the employees on sustainable and effective use of water, e.g. avoiding running taps.	Water Resource Plan	ETL (Environment Officer)	Water Abstraction Permit
	Leaks from tanks and taps.	Water shall be used sparingly throughout the construction of the development.	Daily inspections and condition reports.	ETL (Environment Officer)	Water resource use plan.
		Water reservoirs shall be fixed. The water tank or taps shall be accessible to visual inspection. All faulty and leaking taps and pipes shall be immediately repaired.	Daily inspections and condition reports.	ETL (Environment Officer)	Set of materials and equipment to fix leaks on standby on site.
Sipi River and	Refuse,	Accidental	Inspection	ETL	Waste bags

Groundwater contamination	garbage, cement, concrete, chemicals, fuels, oils or any other objectionable or undesirable material.	spills shall be cleaned immediately to avoid the pollution of ground water, since the soil at the site is highly permeable.	daily, reporting, and regular clean up.	(Environment Officer)	on site.
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6.0. CAMPSITE POWER AND SAFETY PROVISIONS

6.1. Campsite security

Armed security guards shall be recruited to ensure safety of people and property and to monitor and track people movements with visitors and employee register around site entrance Security Due to large number of workers on site, the safety of personnel and property shall be given special attention though:

- Sensitize the community about the negative effects of stealing and vandalism
- Local workers to be vetted by the LC executive
- Guard equipment and limit intruders onto working sites
- Cooperate with local security officials including the Secretary for Defense at the local level (LC)

6.2. Campsite organization

Outsourced workers sometimes find it hard to settle in the area which they are not familiar with. A campsite has been erected to accommodate outsourced workers. The arrangements for the campsite are tabled below.

Item	Responsibility
Construction workers Campsite	
<ul style="list-style-type: none"> • The campsite will be erected on an area where the least possible damage will be inflicted on the vegetation and also away from waterways. However, the site must also be accessible, enabling the movement of people and vehicles. • The land use and ownership of the proposed site shall be determined beforehand. Permission shall be obtained from relevant authorities and/or owners of the land where the construction campsite will be erected. • To prevent conflict, the campsite shall not be erected near agricultural fields and also not close to community water points. 	Site Engineer/ HSE Officer

Establishment of the campsite	
<ul style="list-style-type: none"> • The campsite shall be fenced-off, access shall be controlled and children/minors are not allowed within the boundaries of the campsite. • ETL will in no way permit or allow prostitution to take place at the campsite. This shall be communicated during Tool Box sessions. 	Site Engineer/ HSE Officer
The campsite shall have sufficient sanitation facilities separate for men and woman and clearly indicated.	

6.3. Electrical Supply and Distribution

Before the connection of commercial electrical power by UMEME (Utilities provider), a centralized camp electrical supply source will be used. Diesel engine driven electrical generators with approved manufacture’s control measures shall be used and positioned as necessary around the camp. Priority for electrical power shall go to security lighting, access lighting and operating water pumps around the camp.

6.4. Food/Hydrocarbon Storage

Raw/fresh food shall be sourced from markets/farmers known for quality and hygiene and growing organic food. Food will be kept in the store on containers approved by the HSE Officer, manufacture and expiry dates of all foodstuffs on store shall be documented and all expired food will not be cooked but disposed to the trash collection facility

6.5. Personnel Accommodation

Empire Tools Limited shall provide decent accommodation facilities for workers in order to avoid spread of communicable diseases at the campsite. The number of employees (locally sourced within Eastern and Northern Uganda but are unable to rent their own private accommodation facilities at the surrounding trading centres) that will reside at the campsite shall not exceed 20 which matches with the accommodation facilities available. Female employees shall be sourced from surrounding communities to provide clerical works and axillary services and Skilled Women will seek accommodation at Kapchwora town and surrounding trading centres

6.7. Preparation of meals

Employees will receive Breakfast, Lunch and Super served with clean/safe drinking water served at the dining facility at the campsite. The food will be prepared using Off-cuts (firewood) and clean water. The HSE Officer shall always inspect the Kitchen to check on hygiene and sanitation arrangements to ensure that no contaminated food is served to workers at Site.

6.8. Personnel orientation / trainings

All construction staff shall undergo safety education training before entering in the site, Work will only start after passing the examination set by the recruitment office, ETL will establish regular education and pre-working safety education, handing over system, special operating operators shall be trained to get special operation operating certificate before starting work.

Tool-box meetings will be done daily to address general issues of safety, Community health, HIV/Aids, Work conflicts, Gender Based Violence, and so on. This will be the opportunity for individuals on the project to identify safety issues and concerns of a general nature. It is also the opportunity to coordinate the control of recognized hazards and promote safety awareness. A valuable tool to instill a Safety First culture among employees is to review lessons learned from this job or from another job.

6.9. Campsite Excavations and mitigation measures

- Empire Tools Limited in consultation with the Project Manager (Consultant) shall visit all potential excavation sites prior to excavation. The engineers and surveyors shall then draft a plan for approval before commencement of excavations. This plan shall indicate the required resources and sensitive areas that may not be mined (indication of mature trees).
- The removal of sand at excavation sites shall be focused where the least significant vegetation exists.
- Empire Tools Limited shall liaise with the applicable local headmen and residents regarding the location of excavation sites.
- All burrow-pits shall be restored using top-soils to facilitate regeneration of biodiversity

6.10. Fire Protection and Evacuation procedures

- Only approved containers and tanks shall be used for storage and handling of flammable and combustible liquids. Containers of flammable and combustible liquids shall be tightly capped when not in actual use.
- Appropriate measures will be implemented at all workplaces, including adequate:
 - Means of fire detection.
 - Raising the alarm in the event of a fire.
 - Firefighting equipment.
 - Installation of emergency lighting.
- Appropriate measures will be implemented for regular maintenance, servicing and testing of fire prevention equipment and procedures will be produced at all workplaces detailing

action to be taken in the event of a fire, including on discovering a fire, hearing a fire alarm, evacuation routes and assembly points.

- The Safety Officer will regularly inspect the designated evacuation routes for obstructions.
- Where disabled persons use the workplace, specific arrangements will be made to ensure they can escape in an emergency.
- All employees will be informed, instructed and where necessary, trained in fire prevention and evacuation procedures (action to be taken, fire alarm, types and use of fire equipment). These procedures will be practiced regularly and records will be maintained.
- Prior to performing any cutting, welding, burning, brazing, or other activities which may be a source of heat or ignition, the Supervisor must obtain a hot work permit and this permit must be conspicuously posted in the area of the work.

6.11. First Aid

An onsite clinic will be set up to provide treatment to the people who may get simple injuries onsite. For injuries that cannot be handled at the site clinic, first Aid will be provided before the casualty is rushed to the hospital using the company vehicle accompanied by the company Nurse. The clinic will be well facilitated with all first Aid kits that may be deemed necessary. The clinic will be put to a standard acceptable by the laws of Uganda and World Bank

All employees, contractors and visitors must report all accidents resulting in injury to any person (not just employees), damage to any property or dangerous occurrences / near misses.

All employees, contractors and visitors will be informed of the name of the First Aider and their location and adequate first aid equipment will be provided at all workplaces, under the control of the First Aider, to include:

- First aid kits.
- Eyewash stations near chemicals
- A suitable place or room for the administration of simple first aid procedures.

6.12. Evacuation of the Work Area

In case of an emergency, all Empire Tools Ltd employees, Visitors and other Stakeholders shall observe and participate in notices to evacuate the work area. ETL site-wide emergencies requiring site evacuation are signaled by an intermittent siren tone or notices from the Supervisors. All personnel will be required to evacuate the ETL site via the quickest route to the Emergency/Fire assembly point or as directed by any Safety or other emergency services personnel.

ETL has an established emergency response procedure for evacuation of the jobsite. All personnel working at the jobsite must be trained in this procedure as part of their initial job orientation.

7.0. ENVIRONMENTAL IMPACTS AND ENHANCEMENT MEASURES

7.1. Positive Impacts

Income for materials/ equipment suppliers: Development of the campsite will entail civil works requiring materials such as gravel, bricks, lumber, steel reinforcement and cement. This is a positive but short-term and reversible impact

Creation of Employment Opportunities: It is anticipated that the construction phase of the campsite and the general project will engage the local labour force. People shall be employed for skilled and non-skilled tasks for example masonry, carpentry, welding, clinical, clerical, cooking, security guards and driving among others. Employment will broaden and strengthen the income of local communities and migrant workers and it will improve their ability to absorb shock.

Increased Privacy and Restored Dignity of the Beneficiaries: Most of the local Communities in the rural areas have no access to proper sanitation and reasonable percentage of the rural population use open defecation. The proposed project intends to enhance sanitation conditions of both the rural and urban population. This will not only improve public health and hygiene but also restore the dignity and privacy of vulnerable groups such as women and physically challenged persons in the rural areas. In rural areas women remain in-doors until the fall of darkness so that they can relieve themselves with the attendant risk of being sexually molested under the darks. The project intends to construct toilets at close proximity and will enhance the privacy, dignity and safety of the rural women.

7.2. Negative Impacts

7.2.1. Noise and vibration

The noise and vibration assessment takes into account all impacts from both the construction and operational phases of the project. NEMA has Noise standards, 2003, in undertaking the assessment, consideration will be given to the policies, guidance and procedures set out by NEMA. Noise disturbance by heavy machinery will cause disturbance on the local communities.

- ETL shall ensure that equipment which generate a lot of noise shall be operated only during day time
- Appropriate PPEs (ear masks) shall be provided to workers engaged in noisy environment.

7.2.2. Traffic management

ETL employees and visitors shall follow its journey management procedures strictly. Trips shall be planned and combined to reduce driving exposures, mandatory use of seat belts by drivers and passengers in company and visitors' vehicles shall be enforced. All drivers shall attend defensive driving course while night driving shall be discouraged.

Potential impacts

- Localized traffic delays at specific junctions and roads during excavations
- Closure of some access to properties as the excavation activities are taking place
- Increase in traffic volumes as a result of heavy trucks transporting construction materials
- Increase in incidences of accidents as a result of the trucks transporting construction materials.

Other measures shall include

- Signages instructing speed regulation shall be hoisted in the campsite
- Speed humps shall be installed at appropriate locations
- Flagmen shall be positioned to regulate traffic flow.
- Management of traffic shall be handled in collaboration with Kapchorwa Police.

7.2.3. Soil and geology

Campsite and Gravity Flow Scheme construction will involve site clearing (bush clearing) using heavy machines, which compact the soils that can lead to surface runoff and leaching of nutrients. Wind erosion can also occur due to soil disturbance by the machines

Likely potential impacts

- Soil Contamination such as accidental fuel spills

- Soil erosion and compaction
- Removal and storage of spoil materials
- Impact of surface water run-off on soil quality over the operational life of the project

7.2.4. Air and climatic factors

The dust and smoke pollution relates to the bush clearing by the heavy Machinery. As the heavy machinery will knock down trees and transport them to a safe place during the bush clearing, a running high-pitched engine noise will be created. The noise will be accompanied by thick volumes of dust, which could cause poor visibility, skin and eye allergies, and respiratory problems. Dust emissions can potentially aggravate the health conditions of persons with asthma.

7.3. Environmental and Social Management Plan

Activity	Potential Impacts	Mitigation Measures	Responsibility		Cost Estimates for Implementation (US\$)	Indicator
			Execution	Monitoring		
Site Clearing	Loss of Natural Vegetation	<ul style="list-style-type: none"> ➤ Clearing natural vegetation will be minimized or avoided as far as possible. ➤ The campsite will be established in a natural clearing as far as possible ➤ Prepared an inventory of the trees to be felled, and then prepare a tree plantation plan and the species to be planted. 	ETL Environment Officer	Safeguard Team	113,966,500	Soil, wind and river bank erosion controlled and site aesthetic value enhanced through tree planting
<ul style="list-style-type: none"> ▪ Camp establishment ▪ Site clearance ▪ Excavation 	Soil Erosion	<ul style="list-style-type: none"> ➤ Construction camps will be located in a stable area, requiring minimal de-vegetation and leveling. ➤ Embankments and excavated slopes will not be left unattended for long but shall be restored/levelled ➤ After the completion of the construction works, the construction sites, campsites and other work areas will be completely restored. All debris, surplus construction material or any garbage will be cleared from the site. ➤ Photographic record will be maintained for pre-project, during-construction and post-construction condition of the sites. 	Site Engineer	Safeguard Team	190,000,000	Landscaping of the campsite
Aesthetic Value	Construction may potentially affect the aesthetic value of the area	<ul style="list-style-type: none"> ➤ Landscaping and tree plantation will be carried out at the site and camps where possible. ➤ Proper housekeeping will be regularly carried out at the site and campsite. ➤ Grassing of all exposed areas 	ETL HSE Officer	Safeguard Team	5,000,000	Campsite restored (Grass and tree planted)

Disruption of Animal habitats and Ecosystem	Loss of natural habitat	<ul style="list-style-type: none"> ➤ Sensitize the community to tether animals away from the Construction area ➤ UWA recommended that construction workers should be sensitized during orientation about the presence of wild animals and the strategies to avoid affecting them because any killing of wild animals is illegal and it is an offence regarded as Poaching 	Environment Officer	Safeguard Team	7,000,000	Trees planted and workers sensitized
Risk of Diseases especially HIV/AIDS & Malaria and Hepatitis B	Pressure on Local health facilities	<ul style="list-style-type: none"> ➤ The project shall work closely with respective government departments, local NGOs, and/or faith based organizations, and local communities involved in HIV and reproductive health ➤ Mega awareness campaigns on HIV/AIDS and other STDs shall periodically be organized ➤ Voluntary Counseling and testing services to the workers and community members shall be made available constantly ➤ There will be continuous sensitization of the workers and community members about HIV/AIDS and other STDs. ➤ ETL will put in place strategies to control malaria such as distribution of mosquito nets and sensitization of communities. This will be done through Health Centres and Non-Government Organizations operating in the area. ➤ There shall be provision of first line treatment for workers ➤ ETL through Corporate Social responsibility will support some of the health centres along the project area so as to improve on the service delivery. ➤ ETL shall have its own Clinic facility, and offer services to its workforce to reduce pressure on existing health 	HSE Officer	Safeguard Team	15,000,000	New infections diagnosed and treated

Health and safety of employees and surrounding Communities.	Fatalities	<ul style="list-style-type: none"> ➤ Road warning signs, humps should be installed to minimize speed and reduce accidents ➤ Diversion roads should be made and traffic guides put in place to avoid risk of accidents to the community. ➤ Constant watering of the construction area to reduce dust and related diseases. ➤ Regulated speed and enforcement of speed limits for project workers as well as other drivers to minimize accidents. ➤ Provide personal Protective Equipment (PPE) to project workers like masks, Helmets, Reflector Jackets and gloves, 	HSE Officer	Safeguard Team	15,000,000	Zero harm policy strictly enforced and necessary PPE provided to workers
Exhaust emissions by Construction machinery and vehicles	Air Quality Deterioration	<ul style="list-style-type: none"> ➤ Vehicles and equipment exhaust should comply with guidance ➤ ETL will ensure compliance with the standard for ambient air quality. ➤ Water will be sprinkled where needed and appropriate, particularly at work sites near communities. ➤ Liaison will be maintained particularly with the communities near the camps and worksites. ➤ Provide dust masks and eye protection against dust, splinters, debris ➤ Dust suppression methods such as wetting materials or slowing work should be employed as needed to avoid visible dust ➤ Vehicle Speed limit (Less than 20 within the camp) ➤ Implement wet dust suppression on unpaved roads and during the demolition activities ➤ Keep drop height to a minimum for vehicle offloading of soil, or any other material that will emit dust during handling ➤ Routinely service the equipment to ensure better performance and minimal emissions. 	ETL Environment Officer	Safeguard Team	5,000,000	Respiratory infections and allergies recorded and treated

Stock-piling of material	Road Accidents	<ul style="list-style-type: none"> ➤ In case of the block age of the existing routes, alternate routes will be identified in consultation with affected communities. ➤ Stock-piled material should be used instantly or heaped at locations that will not hinder mobility in the area. 	ETL Site Engineer	Safeguard Team	10,000,000	Stocked materials safely removed and cleared access/egress
Borrow pits	Environmental degradation	<ul style="list-style-type: none"> ➤ All pits will always be backfilled after extraction of the required materials 	Site Engineer	Safeguard Team	15,000,000	Borrow pits backfilled
Damage to roads, water channels, jetties, and other structures	Damage to Infrastructure	<ul style="list-style-type: none"> ➤ It will be ensured that no damage is caused to the infrastructure at the site. ➤ Appropriately sized vehicles will be used to transport the material construction, minimizing the wear and tear of the transportation routes. ➤ All damaged infrastructure will be restored to original or better condition. 	ETL Project Manager	Safeguard Team	30,000,000	Status of infrastructure tracked and repaired
Gender Inclusion	Cultural and Gender issues	<ul style="list-style-type: none"> ➤ Liaison with the communities will be maintained throughout the construction phase. ➤ Grievance redress committee will be established at each site. 	ETL Sociologist	Safeguard Team	5,000,000	Record of workers employed including age, sex, disability, ethnicity, religion

The construction activities and increased vehicle traffic	Noise and Vibration	<ul style="list-style-type: none"> ➤ Vehicle traffic through the communities will be avoided as far as possible. Project routes will be authorized by the Safeguard specialist. ➤ Vehicle speeds will be kept low, and horns will not be used while passing through or near the communities. ➤ Equipment will have exhaust silencers to minimize noise generation. ➤ Nighttime traffic will be avoided near the communities. ➤ Movement of all project vehicles and personnel will be restricted to within work areas, to avoid noise pollution. ➤ Working hours for construction activities within/near the communities will be limited to between 8 am and 6 pm. ➤ Liaison with the community will be maintained. Grievance Redress Mechanism will be put in place to address the community complaints. ➤ The construction workers will be provided with safety device for protection of ears (earmuffs and ear- plugs etc.) 	HSE Officer	Safeguard officer	4,500,000	Noise pollution levels recorded day and night
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Noise Pollution	Health issues	<ul style="list-style-type: none"> ➤ ETL will ensure that the noise from the construction sites complies with the national and the WB standards. ➤ Vehicle traffic through the communities will be avoided as far as possible. Project routes will be authorized by the Site Supervisor. ➤ Vehicle speeds will be kept low, and horns will not be used while passing through or near the communities. ➤ Equipment and generators will have exhaust silencers to minimize noise generation. ➤ Night time traffic will be avoided near the communities. ➤ Movement of all project vehicles and personnel will be restricted to within work areas, to avoid noise disturbance. ➤ Working hours for construction activities within the communities will be limited to between 8am and 6pm. ➤ Liaison with the community will be maintained. ➤ Grievance redress mechanism will be put in place to address the community complaints. ➤ Caution when selecting equipment to avoid use of old or damaged machinery with high level of noise emissions that would have a negative impact in the environment. ➤ Equipment will be properly serviced and efficient. ➤ Ensure Construction workers are aware of the sensitive nature of workplaces they are operating in and advised to limit verbal noise or other forms of noise. For example, metallic objects or tools can be passed on to a colleague rather than dropping or throwing them with loud bangs. ➤ Noise and vibration will be minimized at the project site and surrounding areas through sensitization of construction truck drivers to switch off vehicle engines while offloading materials. ➤ All generators and heavy duty equipment will be insulated or placed in enclosures to minimize disrupting ambient noise levels. ➤ Utilize noise mitigation measures (including the construction of bunds, metal sheet walls) in order to limit noise levels at sensitive receptors. ➤ Ensure that equipment to be used meets industry best 	Site Engineer and HSE Officer	Safeguard Team	4,500,000	Measured and recorded noise levels (excessive noise controlled)
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Vehicle Traffic	Dust and smoke emissions and Risk to the villagers health	<ul style="list-style-type: none"> ➤ Project drivers will be trained on protective driving practices. ➤ Speed limits will be enforced for the project vehicles operating near communities. ➤ Liaison shall be maintained particularly with the communities near the campsite and worksites. ➤ Safety signs shall be placed at work sites. ➤ Temporary road diversion shall be provided. This will be done after consultation from UNRA and the local authority. ➤ There shall be No extended or unannounced disturbance to local traffic and the public. ➤ Unauthorized parking shall not be allowed ➤ No storage of vehicles and material on roads ➤ Coordinate all traffic arrangements with Traffic Police and Regional Administration and other authorities ➤ Delivery Trucks shall be assigned restricted circulation hours (delivery hours will be set as part of planning) ➤ Advise citizens in advance concerning road closures and rerouting of vehicle and pedestrian traffic ➤ Works will be carried out on lots of limited length, in a way to minimize closure of main streets stretches ➤ Outside of working hours, especially at night, all barriers and signs will remain at sites, with lighting and / or lighted signs placed as required to warn both vehicular and pedestrian traffic (Health & Safety Plan) ➤ Excavated areas and trench crossings shall be clearly marked and temporary fencing, bridges, access routes, signage, etc. shall be constructed to facilitate access and avoid accidental falls into these areas ➤ Traffic regulation signages shall be erected at strategic locations 	ETL HSE Officer	District Leadership/ Consultant/S afeguard Team	5,000,000	Respiratory diseases treated both at the Site Clinic and Hospitals
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Welding	Fire hazards	<ul style="list-style-type: none"> ➤ All employees shall be trained and deemed competent to operate\ ➤ Welding Area shall be condoned ➤ Sufficient signage shall be displayed or caution signs 	HSE Officer	Safeguard Team	10,000,000	Fire incidents identified and controlled
Drug/Alcoholic Abuse	Increase of accidents/ Rehabilitation costs	<ul style="list-style-type: none"> ➤ Sensitizing employees on the company drug-free policy ➤ Regular drug and alcoholic tests at the entrance to check on compliance on company Free drug and alcohol policy ➤ Rehabilitation services shall be provided ➤ Conduct background checks before recruitment 	HSE Officer	Safeguard team	5,000,000	Workers counseled and rehabilitated
The construction activities (heavy construction Machinery, vehicle traffic, excavation, filling operations and demolition of structures).	Safety Hazards and Public Health	<ul style="list-style-type: none"> ➤ The contractor will provide personal protective equipment (PPE) to the construction staff and will ensure its appropriate usage. ➤ Availability of safe drinking water will be ensured for the staff. ➤ First aid boxes will be made available at each construction site. Emergency phone numbers (including hospitals, Fire Department, and Police) will be displayed at key locations within the site. The site will have an ambulance available. ➤ The construction sites and the campsites have protective fencing to avoid any unauthorized entry. ➤ Vehicular speeds near/within communities will be kept low to minimize safety hazards. ➤ Firefighting equipment will be made available at the camps and worksites. ➤ The camp staff will be provided safety including firefighting training. ➤ All safety precautions will be taken to transport, handle and store hazardous substances, such as fuel. ➤ The contractor will prepare Demolition work Plan for each site when necessary and obtain approval from the Safeguard specialist. 	ETL HSE Officer	Safeguard	15,000,000	Adequate/necessary Safety gear availed to workers, visitors and the community

Waste generation (domestic solid waste, waste water including sewage, oily water, waste oils, oily rags, and other similar wastes)	Soil and water contamination	<ul style="list-style-type: none"> ➤ No untreated waste effluents will be released to ground or water. ➤ Vehicles and equipment will not be repaired in the field. If unavoidable, impervious sheathing will be used to avoid soil and water contamination. ➤ For the domestic sewage, disposal system, such as septic tanks, garbage bins and soaking pits, will be constructed. ➤ Waste oils will be collected in drum sand sold to recycling firms. ➤ The inert recyclable waste from the site (such as cardboard, drums, broken/used parts, etc.) will be sold to recycling companies. ➤ The hazardous waste will be kept separate and handled by the NEMA certified firms . ➤ Degradable material be disposed-off to Local Government Landfills/disposal sites while non-degradable like metals and plastic shall be sold to re-cycling firms. ➤ Training in fuel and waste handling shall be part of the orientation for workers ➤ Maintain the MSDS Sheets for hazardous materials on site ➤ Enforce HSE Plan on Materials Handling ➤ Emergency Response Plan ➤ Sites for temporary piles should be agreed with the local authorities 	Safeguard team/ HSE Officer	Safeguard Team	10,000,000	Wastes re-used and recycled
Water Availability and Consumption	Potentially cause conflict with the existing water users	<ul style="list-style-type: none"> ➤ Penetrating plan will be prepared to conserve water at the construction and campsites. Water will be providing in a manner that least affects the existing water users and local communities. ➤ ETL will submit the plan to provide and consume water for their construction as well as camp needs ➤ Extreme care will be taken when working close to wells and other water sources. Any damage caused by the project 	ETL Water Specialist	Safeguard team	15,000,000	Clean portable given to workers

Labour influx	Cause conflicts with the nearby communities and increased pressure on facilities & resources (water, food, wood fuel)	<ul style="list-style-type: none"> ➤ Liaison with the communities will be maintained throughout the construction phase. ➤ Grievance redress mechanism will be established at each site. ➤ Local labour shall be given priority ➤ Sensitization of communities in cultural values ➤ Awareness campaigns shall be set up ➤ Working with LC leadership, hire local people for casual jobs ➤ Provide project specific Identification tags / uniform to all workers on site ➤ Maintain Good public relations with the local community ➤ Sensitize workers on Sexually Transmitted diseases especially HIV Aids ➤ Distribute free condoms to workers 	ETL Safeguard team	Safeguard officer/ Community	8,000,000	Gender Based Violence and Violence against Children reported, recorded and intervened
Water consumption	Create conflict among water users	<ul style="list-style-type: none"> ➤ Astute planning will be employed to conserve water at the plant, offices and residential area. Water will be provided in a manner that least affects the existing water users and local communities. 	ETL Environment Officer	Safeguard Team	5,000,000	Water usage monitored and workers sensitized
Electricity Consumption	Power shortage	<ul style="list-style-type: none"> ➤ Ensure electricity connection from multiple sources. ➤ Keep the provision for backup generator 	O&M staff	Site Engineer	8,000,000	Standby energy source kept on site

Operation & Maintenance Activities	Hazards particularly to the O&M staff. (electrocution, fall, burns, cuts and other body injuries) Fuel storage poses safety hazards for the O&M staff and community	<ul style="list-style-type: none"> ➤ Material safety data sheet (MSDS) will be followed to handle hazardous substances/chemicals. ➤ PPE will be provided to the O&M staff. ➤ HSE trainings will be provided to the O&M staff on a regular basis. ➤ Availability of safe drinking water will be ensured at each facility ➤ First aid boxes will be made available at each construction site. Emergency phone numbers (including hospitals, Fire Department, and Police) will be displayed at key locations within the facility. ➤ Firefighting equipment will be made available at the facilities ➤ The O&M staff will be provided safety including firefighting training. ➤ All safety precautions will be taken to transport, handle and store hazardous substances, such as fuel. ➤ Waste management plan to be prepared and implemented in accordance with international best practice. 	Safeguard team	Safeguard Team	8,000,000	Training of Adequate personnel
Total Cost for ESMP Implementation					508,966,500	

8.0 WASTE MANAGEMENT PLAN

Since the project will generate significant volume of wastes of various types, ETL will therefore implement its waste management plan.

The following objectives form the basis for the waste management plan of the Campsite:

- Progressive reduction of wastes with the target to minimize overall emissions/discharges, which have adverse impact on the environment,
- Establishment, Implementation and maintenance of waste segregation aimed at enhancing recycling,
- Ensure effective waste handling and disposal processes, which shall be monitored by relevant waste disposal authorities.

8.1. Waste Handling Guidelines

For proper handling and disposal, wastes shall be well defined at source and the definition transmitted along with the wastes to the final disposal points. ETL shall define and document all wastes generated in the course of work in a monthly waste stream report, which shall be used to track/monitor wastes generated from the project.

The major categories of wastes envisaged from the water scheme Project are outlined as follows:

Solid wastes: These include felled vegetation/trunks, woods from crates, metals, papers, printer cartridges and other office equipment scraped which are due to be removed during site clean-up, domestic waste (waste generated from camp kitchens, packing materials, boxes and plastics).

Liquid wastes: These include non-hazardous operational waste generated from work construction sites e.g. sanitary water, paints etc.

Gaseous wastes: These include combustion products from construction engines, welding gas, natural gas leaks etc.

Hazardous waste: any gaseous, liquid or solid, which due to quantity, physical, chemical or infectious characteristics have the potential to harm human health, environment when improperly handled, stored, disposed, transported or treated e.g. acids, lead phenols, etc.

Waste Minimization / Reduction

Waste minimization implies reduction to the greatest extent possible of the volume or toxicity of waste materials. The four principles of waste minimization (reduce, reuse, recycle and recover) shall be adopted as applicable.

Waste Segregation: Waste segregation and characterization shall be carried out on wastes that are similar and shall be combined to simplify storage, treatment, recycling and effective

implementation of appropriate waste disposal methods. Wastes shall be segregated at source into clearly designated bins at strategic locations. Particular attention shall be given to the work area where a variety of wastes shall be generated. The site HSE Representative shall be responsible for maintenance of the waste segregation scheme at the site.

8.2. Waste Disposal

All debris, spoilt materials, and other wastes shall be cleared regularly from the site and disposed at approved dump sites operated by designated waste disposal authorities (Kapchwora District Local Government Landfill). Instructions on material safety handling sheet shall be strictly adhered to and shall form the basis for the disposal of wastes related to such products. Wastes in transit shall be accompanied and tracked by waste disposal notes. The note shall contain such information as date of dispatch, description of wastes, waste quantity, container type, designated disposal site and method, consignee name, means of transport and confirmation of actual disposal time and date. Special attention will be accorded to hazardous wastes removed from the sites and also drums of waste oil that might contain dangerous substances; these are to be transported to a site designated by the District Environmental Officer for safe storage and subsequent testing prior to disposal.

Waste management audit of facilities shall be carried out in consultation with the key stakeholders, and findings shall be properly documented and followed up. Accommodation, catering services areas and work site shall maintain acceptable standard of hygiene and good house-keeping

Empire Tools Ltd is committed to effectively managing all their activities' environmental impacts through compliance with legislation and appropriate arrangements to protect the environment will be put in place at all workplaces, including:

- Approved storage and use of raw materials and substances.
- Waste Management Plan - Waste minimization (promoting reduce, reuse, recycling, recovery including energy recovery and safe disposal).
- Identifying waste disposal routes under the Duty of Care.
- Monitoring and review of environmental performance

8.3. Environmental Protection measures

Environmental Management Impacts	Sources of Impacts	Mitigation Measures	Monitoring Actions and Methods	Responsibility for Implementation	Resources required for the Implementation
Construction waste	Incorrect or infrequent disposal of building rubble.	Building rubble and construction waste shall be stored in skips and shall regularly be removed off the site for disposal at the applicable district waste disposal site	Regular inspection on site.	Environment Officer	Appropriate rubble removal vehicle or (Eco-Projects Ltd-for Hazardous Waste)
	Wind blowing construction waste (e.g. cement bags).	Empty cement bags, plastics, wrapping waste, strapping, etc. shall be secured in containers for general waste to prevent wind-blown waste.	Daily inspection and clean up.	HSE Officer	Appropriate waste container with lid.
Increased general waste	Domestic waste from construction team.	Waste shall be separated according to cardboard/paper materials, plastic, bottles and tins. Only the general waste which cannot be recycled shall be disposed of at the municipal waste disposal facility.	Daily Inspection	Environment Officer	Waste skips, waste bags, Transportation to the waste disposal site.
		Domestic waste which cannot be recycled will be stored in a skip and removed via truck once a week and shall be disposed at the municipal waste disposal facility.	Regular inspection	Environment Officer	Arrangement with local Government Authority.
Hazardous waste	Accidental/negligent Spillages from equipment working on site.	Spillages of any potentially toxic materials, whether by accident or through negligence, must be scooped up immediately into drums and handled by NEMA Certified Companies	Daily inspection and clean up	Eco-Projects Ltd & HSE Officer	waste bags and containers for hazardous waste on site.
	Storage of hazardous materials.	Oil sludge, oily rags, contaminated spill cleanup materials, contaminated soils and other hazardous materials shall be kept off-site or in a dedicated separate container on site. This container must be locked and only accessible by the site foreman. Eco Projects Uganda Ltd shall be approached to collect these wastes periodically or as needed.	Daily inspection and clean up.	Eco-Projects Ug Ltd and HSE officer	Containment area, purpose-made containers.
Ablution waste (Fecal)	Construction team.	Under no circumstances may the waste from temporary toilets on site be dumped on public or open grounds. If stored, the containers should be kept out of direct sunlight and should not be stored for longer than a month. People	Daily inspection and cleanup.	Environment Officer	Portable toilets. Containers for waste.

		responsible for cleaning these toilets shall be provided with latex gloves and masks. Spillage or leakage shall be cleaned-up and fixed immediately			
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8.4. Storm-water Pollution Prevention and Control

Storm-water that has accumulated in excavated areas, chlorinated rinse water, and chlorinated water used to sterilize/flush pipelines shall not be directly discharged or otherwise allowed to enter the storm waterways, or drainage ditches without following due diligence

ETL will devise means of minimizing all potential for spills specifically, do not allow liquids, including (but not limited to) gasoline, diesel fuel and lubricating oil to enter the storm sewer systems, waterways, drainage ditches, or the ground and use due caution when operating oil-bearing equipment near aquatic resources by using absorbent materials to prevent leaks or spills from entering waterways and maintain a 25-ft minimum buffer zone from streams, be aware of storm drain inlets, and cover or contain debris stored outside.

Excess concrete will be safely transported to the batching plant and flushing empty concrete trucks or dumping excess concrete is prohibited. Solidified cement waste from truck chute cleaning is solid waste and shall be cleaned up and transported to the landfill.

8.4. Erosion and Sediment Control

All erosion and sediment control measures shall be maintained throughout the course of the project and removed at the completion of the project, and appropriate measures shall be taken to return the area to its previous state. Maintenance shall include but not be limited to removal of accumulated sediment, repairs, and/or replacement of storm-damaged or otherwise deteriorated structures.

All excavated soil and spoil materials will be managed in a manner protective of the environment and use due caution during excavation or any other soil management in the vicinity of sanitary or storm systems, waterways, or drainage ditches.

8.5. Hazardous Material and Hazardous Waste

All hazardous wastes produced by the Project shall be packaged, transported, and disposed of with care by Eco Projects Ltd under direct supervision of HSE representative. Such loads shall be manifested and a copy of the manifest sent to the Project Manager. All hazardous

materials will be properly labeled and stored until removed from the Project site and all accidental releases of a hazardous material or hazardous waste will be reported promptly to the Project Manager. All spills, regardless of the volume, will be reported and recorded, however, the Sub-contractors responsible for the spill will be obligated for all costs incurred as a result of the cleanup effort.

Sub-Contractors shall inspect their hazardous material and waste storage areas at least weekly to ensure they are properly maintained. All inspections are to be documented, with records retained in the project files.

The ETL shall randomly audit the labelling and storage of hazardous material and waste and the disposal of hazardous waste to verify that all Sub-contractors, at any tier, are fulfilling their roles as responsible parties.

9.0 HEALTH MANAGEMENT PLAN

Conduct Information, Education and Communication (IEC) campaigns, at least every other month, addressed to all the Site staff and labour (including Having workers in good health condition is one of the drivers of the construction project. A number of steps shall be taken to make sure that workers are kept in good health conditions.

We shall throughout the contract (including the Defect Notification Period);

- all the Contractor's employees, all Subcontractors and any other Contractor's or Employer's personnel employees and all truck drivers and crew making deliveries to site for construction activities and to the immediate local communities, concerning the risks, dangers and impact and appropriate avoidance behaviour with respect to, Sexually Transmitted Diseases (STD) or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular; and ensure systematic inclusion of community participatory discussions of the risks of sexual abuse of minors and steps the community can take to mitigate these risks.
- Provide male and female condoms for all Site Staff and labour as appropriate.
- Provide for STI and HIV/AIDS screening, diagnosis, counselling and referral to a dedicated national STI and HIV/AIDS programme, (unless otherwise agreed) of all staff and labour.
- Ensure that no personnel, workers, Site staff and labour (including all the employees, all Subcontractors and any other employees and truck drivers and crew making deliveries to site for construction activities) shall be allowed to have any sexual contact any with minors. Any contact with minors shall lead to criminal prosecution and immediate dismissal.

9.1. Drinking Water

An adequate supply of SAFE drinking water shall be provided in all places of employment and only approved potable water systems shall be used for the distribution of drinking water. Drinking water shall be dispensed by means that prevent contamination between the consumer and the source. Portable drinking water dispensers shall be designed, constructed, and serviced to ensure sanitary conditions; shall be capable of being closed; and shall have a tap. Containers shall be clearly marked as "DRINKING WATER"

9.2. Toilets

ETL shall provide temporary and decently designed and reasonable number of toilets. Provisions shall be made to assure that there are sufficient toilet facilities available for both male and female employees and special consideration will be given to the disabled if any

Provisions for routinely servicing and cleaning all toilets and disposing of the sewage shall be established before placing toilet facilities into operation. The method of sewage disposal and location selected shall be in accordance with the societal accepted and local health regulations.

9.3. Alcohol and Drug Abuse

It is the plan of Empire Tools Limited that alcohol or drugs are prohibited in the workplace, any persons known to be, or strongly suspected of being affected by alcohol or drugs must be referred to the appropriate manager who will offer support and arrange for the person to be removed from the workplace.

The unlawful distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace. A single violation of such prohibition shall result in the offending individual being removed from the jobsite and recommendation of participation in an approved drug abuse assistance or rehabilitation program, and/or reporting to the civil authorities for criminal prosecution.

9.4. First Aid

An onsite clinic will be set up to provide treatment to the people who may get simple injuries Onsite. For injuries that cannot be handled at the site clinic, first Aid will be provided before the causality is rushed to the hospital. The clinic will be well facilitated with all first Aid kits that may be deemed necessary. The clinic will be put to a standard acceptable by the laws of Uganda and World Bank. A skilled and experienced medical practitioner will be employed to attend to this clinic at all times.

The onsite clinic will be responsible for providing the following services;

- Onsite injury treatment
- First report injury and witness statement forms
- Management of follow-up care and modified work duty programs
- Employee safety and health training
- Pre-employment physicals
- Hearing and basic vision testing
- Workers record keeping
- Short and long-term disability management

10.0 GRIEVANCE HANDLING MECHANISM

Given the vast scope and scale of the project, ETL Project Management Unit realized the to establish a robust complaints handling system that would help it not only to identify problems but also to raise awareness, improve service delivery, and enhance project effectiveness. As a result, a Four-person Complaints Handling Unit (CHU) has been set-up, they are responsible for receiving and resolving complaints. At community level, ETL will maintain cordial relationship with local leaders who are also informally involved in complaint resolution.

At the outset, ETL will entrust the Project Manager with the responsibility of coordinating grievances. Site Administrator will receive and sort HSE related grievances and forward others to appropriate staff members for resolution; track and monitor grievance acknowledgement and resolution; and review and report on grievance data and trends. The HSE Representative is the first point of contact and should try to respond to as many inquiries/comments as possible.

Staff in charge of grievance redress (Complaints Handling Unit) shall be skilled and professional. Therefore, the project management shall identify high-caliber staff at all levels of their projects and assign them responsibility for handling grievances and training program to teach staff (and community members, if applicable). This training shall include information about interacting with beneficiaries about grievances, the company's customer service standards, and internal policies and procedures in relation to grievance redress. ETL will also establish or build on local and community-based grievance redress mechanisms (GRM) by providing grievance redress training for stakeholders at the local level; this greatly reduces GRM costs while enhancing beneficiary satisfaction with, and ownership of, the grievance redress process.

Multiple channels for receiving feedback shall be established. Channels for receiving feedback that can be easily and quickly rolled out at minimal expense are e-mail and telephone and set up an easy-to-access suggestion/feedback box.

A simple grievance form/template (and if need be, other forms of suggestions, inquiries, complaints, etc.) shall be designed and uploaded on the external website. Hard copies of the feedback form may be left near the suggestion/ feedback box.

Finally, a simple, easy to use, Excel-based or log-book-based grievance registration and monitoring database shall be designed to monitor and track all grievances that have been received and resolved. Grievances should be assigned a unique identification number to facilitate their tracking. If resources permit and the amount of grievances received increases over time, the database can be converted into a real-time web-based database.

11.0 DECOMMISSIONING:

The design and facilities shall take due recognition of the need to decommission the campsite and the ancillary facilities at the end of the operational life by preparing a Decommissioning and Abandonment Plan at least three months prior to decommissioning. The abandonment plan shall take due note of the current national and international legislative requirements.

The following shall be considered at the end of the project lifecycle:

- Relocating all un-used Tools and equipment to their ETL Outside central store
- Any equipment that has gone into waste shall be treated as waste and disposed of in appropriate ways for example re-use, recycle, reduce or sold to recycling plants
- Demolish any additional structures that were constructed/installed by the ETL. The site shall be levelled
- Dispose of all the generated waste in accordance with the waste management plan and waste management regulations
- Clean up the site and handover the site to the Client and demobilize/withdraw all personnel that had been posted to the site including the security personnel. Handover acknowledgement shall be written/ documented
- A team shall be set up to study and plan the decommissioning/abandonment programme in a manner that meets standard requirement
- An Environmental Evaluation Report (EER) to determine if the activities carried out at the site have caused any detrimental effects and if any so as to discuss mitigations and restoration measures.
- In-depth Environmental Studies for the actual removal of equipment (demolition) will be carried out.

Site demobilization or decommissioning summary

Environmental Management Impacts Requiring Mitigation	Sources of Impacts	Mitigation Measures	Monitoring Actions and Methods	Responsibility for Implementation	Resources required for the Implementation
POST-CONSTRUCTION:					
Site clean up	Temporary structures, equipment, materials, waste and facilities used for construction activities.	Clear and clean the construction site to the satisfaction of the Site Engineer	Inspection of the site by the Site Engineer	ETL	Post Construction site re-examine.
Monitoring of constructed facilities	Ineffectiveness of constructed facilities.	Monitoring of: <ul style="list-style-type: none"> • The safety and functionality of equipment and components. • Functionality of the structures and all facilities. 	Inspection of the various components.	Site Engineer	Periodical monitoring.

12.0 CONCLUSION

Nuisance during the construction phase will be relatively minor on the physical environment (Soil, water, relief, geology), but will be relatively moderate on the biological environment, and moderate to major on the immediate human environment. Due to the construction activities, noise, dust, risk of accidents, uncontrolled discharge of waste with the risks associated to public health and safety, increased infection STD/ HIV / AIDS will be a major issue. However, the effects will be controlled if the provisions of the ESMP are planned and implemented rigorously. The campsite has no major environmental and social impacts and the concerns highlighted can be addressed as suggested in the ESMP. In fact, the benefits of the project completely outweigh the issues raised.

The anticipated environmental and social impacts of the project are localized and site specific and can be mitigated during by the application of mitigation measures specified in this Environmental and Social Management Plan. The ESMP will provide the mechanism to guide the assessment and mitigation of potential adverse environmental and social impacts of the project activities. The project is environmentally and socially feasible for implementation provided the recommended mitigation and monitoring measures are implemented, and the proposed implementation arrangements are upheld.

The assessments above concluded that the construction activities of the campsite for the Bukedea Gravity Flow Scheme Upper Sipi System, as presented, are environmentally and socially sustainable. However, this conclusion only makes sense if all measures defined in this ESMP are fully and rigorously implemented.

13. REFERENCES

World Bank Safeguard Policies (OP 4.01, OP 4.09, and 4.12)

World Bank (1994), World Development Report 1994: Infrastructure for Development, Washington DC: World Bank.

World Bank (2010). Chapter 21: Safeguard Policies For World Bank Reconstruction Projects in "Safer Homes, Stronger Communities: A Handbook For Reconstructing After Natural Disasters." Accessed April 2012

World Bank (2010) Chapter 21: Safeguard Policies For World Bank Reconstruction Projects in "Safer Homes, Stronger Communities: A Handbook For Reconstructing After Natural Disasters.

World Bank Operational Procedures on Involuntary Resettlement

National Environment Management Authority (NEMA) 2009. POA Document Design Form for the Uganda Municipal Waste Compost Programme. Accessed March 2012

APPENDIX

GRIEVANCE FORM

Grievance Information				
Name	Title	Employee ID (If Employee)	Telephone & Email	Date of Hire (If Employee)
State of Grievance (Date, time, and place of Event leading to Grievance:				
Detailed account of Grievance (Include names of persons involved) if any:				
State Policies, procedures, guidelines that you feel have been violated:				
Proposed solution or sought remedy:				
Deposition of Grievance:				
Date and Signature:				

SAMPLE OF STAKEHOLDER CONSULTATIONS



Interviewing Project Affected Persons and Local Leaders of Sipi and Munarya Sub-County.



QUESTIONNAIRE

Respondents Information:	
Name (Optional):	Title:
Sex	Occupation:
Village:	Sub-County:

Dear Respondent,

You are kindly requested by Empire Tools Ltd to provide responses to this questionnaire so as to guide our decisions on both construction and post-construction phase of the above project.

Your response will be treated with the strictest confidentiality and shall only be used to influence our decisions on Environmental and Socioeconomic impacts of our activities and the sought mitigation measures.

Qn. 1. What are local community's expectations from this project?

Qn. 2. What benefits do you envisage to receive at personal or community level as a result of the campsite?

Qn. 3. What Occupational and Community Health issues do you envisage to result of the project campsite?

Qn 4. What are the Environmental and safety issues that you think the project and the campsite will cause to the community and River Sipi

Qn 5. What Mitigation measures do you think the Contractor can put in place?

Signature & Tel:

SUMMARY OF RESPONSES

Question	Item	Responses
Qn. 1	Community Expectations from the project.	<ul style="list-style-type: none"> ➤ Starting small enterprise ventures ➤ Jobs ➤ Tourism ➤ Community Roads ➤ Community Health Centre ➤ Electricity
Qn. 2	Project Benefits	<ul style="list-style-type: none"> ➤ Market for Local Construction Materials ➤ Jobs ➤ Source of Income ➤ Open small businesses
Qn. 3	Occupational and Health Issues	<ul style="list-style-type: none"> ➤ Diseases like HIV/AIDS, Syphilis ➤ Pressure on Health facilities ➤ Community Hygiene ➤ Labour Influx
Qn.4	Environmental and safety issues	<ul style="list-style-type: none"> ➤ Destruction of the Environment ➤ Water Born Diseases ➤ Over water abstraction ➤ Poor Waste Management ➤ River Pollution ➤ Traffic ➤ Noise pollution ➤ Air Pollution
Qn. 5	Mitigation measures	<ul style="list-style-type: none"> ➤ Rubbish bins and pits ➤ Treat water ➤ HIV testing and counselling ➤ Use local labour ➤ Use Mosquito Nets ➤ Use Condoms ➤ Hoarding of the Site ➤ Watering dusty grounds

ATTENDANCE

CONSTRUCTION OF BUKEDEA GRAVITY FLOW SCHEME-UPPER SIPI SYSTEM,

KEY INFORMANTS CONSULTATIONS

21/11/17

S/N	S	Name	Address	Signature
1.		Siwa Peter	the vice clm	SSD
2.			Lawai 075 690957	
3.		Betty Jackie	Lawai vilage - 0702016766	
4.		WOBWE NI Joshua	JOSHUA 0756219461	
5.		MASABA WILFRED KATONYA	LAWAI 0784422033	attrew
6.		MUSOKI WILSON	LAWAI 0700218005	mid
7.		NAMASEKO ABSAI	Midoga	160
8.		WESORITA PETER	0772604906	W-
9.			LCI CHEPTERIT	
10.		CHEPON PHILIP	0780343751	che
11.		AAA	0759439090	
12.		MASABA FRANCIS	0700275594	Francis
13.		CHEBORITY GEOFFREY	0778489596	Geoffrey
14.		WYO DOMASKO	Defence - Kapwena	WYO
15.			Sipi - Subcounty	
16.		MUSOBO INNOCENT	CHARMAN YOUTH SIPI - SUBCOUNTY	Musobo
17.				
18.				
19.				
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