



**ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT COMPREHENSIVE PROJECT REPORT
FOR THE MULTI STAGE RICE MILLING FACILITY AT PUR BER RICE FARMERS COOPERATIVE
SOCIETY**

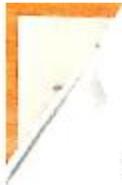


**GPS Lat: -0.205501, Long 34.848903
PUR BER RICE FARMERS COOPERATIVE SOCIETY
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Lead Expert: Odhiambo Ken K'oyoo - Reg No: 1925

February 2026

CERTIFICATION



Project Summary Report

CERTIFICATION

This Environmental & Social Impact Assessment Project (SPR) for the proposed Construction of Pur Ber Multi stage rice milling plant in Kabonyo/Kanyagwal Ward, Kadibo Sub - County by the County Government of Kisumu under the National Agriculture Value Chain Development project has been prepared in accordance with the Environmental Management and Coordination (Amendment) Act (EMCA) 2015 and the Environmental Impact Assessment and Audit regulations 2019 for submission to the National Environment Management Authority (NEMA).

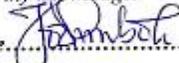
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Proponent

I, the undersigned, certify that all kinds of information provided for the purpose of this Summary Project Report (SPR), without any prejudice, is true to the best of my knowledge.

Chairman Name DAVID NDHINE Signature  Date 12/08/2025

Pur Ber Rice Farmers Cooperative
Address, Kisumu



DISCLAIMER: This project report has been prepared in accordance with NEMA regulations under the guidance and supervision of a registered and licensed Lead Expert based on the findings from field survey, public participation, literature review, and preliminary feasibility and design reports. It meets statutory provisions stipulated in Environmental Management and Coordination (Amendment) Act 2015, the Environmental Impact Assessment and Audit (Amendment) Regulations 2019 and the World Bank Environmental and Social Standards. The Views expressed herein are for Pur Ber Farmers marketing cooperative and public consultations and do not in any way reflect the views of National Value Chain Development Project, The County Government of Kisumu, The National Government of Kenya and the World Bank.

ACKNOWLEDGEMENT

I would like to express my appreciation to the following individuals for their overwhelming support in the journey that led towards the successful development of this project report. It is our duty to acknowledge with gratitude *Pur-ber Rice Farmers Cooperative Society* for **making available** the opportunity to undertake the ESIA exercise that will contribute towards the licensing of the proposed **Construction of Multi Stage Rice milling plant in Kabonyo/Kanyagwal Ward, Kadibo Sub - County**. The task of gathering data for the project report was much eased by **the following officers**/and departments/Institutions.

- 1 **Mr. David Ndhine** - **Chairman, Pur-ber Rice Farmers Cooperative Society**
- 1 Mr. Sylvester Oketch - County Project Coordinator – NAVCDP - Kisumu
2. Eng. Billiard Obingo - County Agriculture Infrastructure Officer
3. Susan Omwa - County Environmental Safeguard Compliance Officer
4. Dickson Oranga - Agriculture Engineer
5. Hazel Alai - **Senior** Environment Officer: County Government of Kisumu
6. Rose Ayoo - County Agribusiness Development Officer
7. Bonface Nyandeje - Asst. Chief; Kwakungu Sub-Location (*Ministry of Interior & Coordination of National Government*)
8. Eng. Charles Wanjala - Works Engineer; National Irrigation Authority (NIA)
9. Mr. Ambrose Onyango - Sub-County Agriculture Officer; County Government of Kisumu, Nyando Sub-County
- 10 Joyce Omondi - County Social Safeguards and Gender Mainstreaming Officer
11. Amos Odeny - Chief; Kwakungu (*Ministry of Interior & Coordination of National Government*)

The team played a crucial part in coordinating with the experts in data collection exercise and a guided tour around the project site. We highly appreciate the cooperation accorded to us by the Residents of Kabonyo/Kanyagwal ward. *The information* availed to us contributed *significantly* towards the success of this exercise. The final report is the result of a collaborative process which drew on the effort, knowledge, expertise and patience of Ms. Susan Omwa, Mr. John Wycliffe Opiyo, Mr Dickson Oranga and Madam Hazel Alai. To all the others that have not been mentioned here, we earnestly recognize their efforts.

Ken Koyooh
Lead Expert

PROJECT FACT SHEET

<i>Project Name</i>	<i>Establishment of a Multistage Rice Milling Facility</i>
<i>proponent</i>	<i>Pur-ber Rice Farmers Cooperative Society</i>
<i>Location and GPS Coordinates</i>	<i>Kabonyo/Kanyagwal Ward, Kadibo Sub-County, Kisumu County</i> <i>Lat: -0.205501, Long:34.848903</i> <i>Elevation:1121m</i>
<i>Project objective</i>	To enhance handling capacity and efficiency in rice processing
<i>Project scope</i>	<ul style="list-style-type: none"> ● Construction of a rice mill housing unit ● Abolition block and bio-digester, ● Drying floor, ● Office block, ● Chain link fence and gate, ● Power and generator house
<i>Funded by</i>	World Bank, Government of Kenya, County Government of Kisumu, Pur Ber Rice Farmers Cooperative – Co-financier
<i>Approximate project Cost</i>	<i>KES. 40,331,012.00</i>
<i>Land ownership</i>	<i>Kisumu/Kawino/2751</i>

EXECUTIVE SUMMARY

The proponent, Pur Ber Rice Farmers Cooperative Society with the support of National Agriculture Value Chain Development Project (NAVCDP) - Kisumu, proposes to establish a multi stage rice milling plant in Kabonyo/Kanyagwal Ward, Kadibo Sub – County. The Kisumu County Integrated Development Plan (CIDP) III (2023-2027), promotion and operationalization of modern appropriate technologies on mechanization that focuses on the reduction in cost of production is duly prioritized to promote agro processing and value addition and also reduce post-harvest losses of high value crops like rice. To address constraints including inadequate availability of efficient rice mills and limited drying and storage facilities in the county, the FPO proposed to establish a multi- Stage rice milling behind Nyangánde Market in Konyango village, Kwakungu Sub-location, Kawino South location, Kabonyo/Kanyagwal Ward, Kadibo sub-County in Kisumu County. The GPS coordinates of the site is: Latitude -0.205501" Longitude 34.849903" at an elevation of 1121m. The site can be accessed via the 5.8km Korowe-Nyangande murram road (off Nairobi – Kisumu Highway) Rabuor Nyang'ande murram road.

The proposed rice milling facility will entail:

- **Rice mill housing unit** of Dimensions 24m in length by 15m in width by 8.95m in height, accommodating mill house, walking space and storage area with sufficient aeration.
- **A gender sensitive ablution block** of dimensions 4.2m by 2.2m by 3.5m and a bio-digester.
- **An office block** measuring 9.8m by 3.7m by 4.2m. The office block will accommodate three offices.
- **A power and generator house unit** of 5.2m by 2.2m by 2.4m, sufficient to provide power accessories, back-up generator and compressor house.
- **Fencing and a double flap gate** of 5m wide, a concrete pole with chain-link is to be done to enclose the compound for security.
- **A reinforced concrete drying floor** of 320m² for spreading rice to reduce moisture content.

The milling facility proposed will have a milling capacity of 2 metric tonnes per hour compared to the current 240kg/hr mill capacity of the current co-operative rice mill.

This ESIA has been undertaken in accordance with the requirements of the National Environment Management and Coordination Act (EMCA), 1999 (Revised 2015), as well as in fulfilment of the World Bank Environmental and Social Framework (ESF) on Environmental and Social Standards (ESS). The objective for this is to integrate both the environmental and social concerns in the project planning and implementation processes.

The methodology of the process which culminated to the assessment and the subsequent ESIA project report included the following: Reconnaissance visits, Baseline Data collection (interviews with proponent), Environmental screening to determine the necessity and level of the ESIA report, Environmental Scoping to narrow down on most significant issues, Desktop studies for documentary reviews-project related documents, plans, policy and legislative frameworks, Public

Consultation through key informant interview and further consultations through a public baraza to collect views and Preparation of the Project Report.

The project will have both positive and negative impacts. The positive impacts include: Job Creation, Livelihood enhancement, appreciation in land value, skill transfer and proliferation of secondary enterprise.

The potential negative impacts categorized as social include: risk of child labour, moral decay, spread of HIV, insecurity, cultural erosion occupation related safety issues, disintegration of some families amongst others, while the environmental adverse impacts air pollution, soil erosion, risk of accidents, soil and water contamination by waste, noise and vibration amongst others. Mitigation measures for each of the identified impacts was identified and an Environmental and Social Monitoring Plan developed.

The sub project will cost approximately **KES. 40,331,012.00** (*Forty Million, Three Thirty-One Thousand and Twelve Only*). Environmental (Impact Assessment and Audit) Regulations, 2003 under NEMA requires the proponent to pay 0.1% of the project cost with a minimum of Ksh 10,000 for medium-risk, as processing fee.

Recommendations

The recommended measures from the ESIA include:

- The proposed project be implemented at the proposed site which is a close proximity to the largest irrigation scheme.
- The ESMP be adopted and applied as the basis for addressing environmental and social aspects throughout the project cycle with necessary amendments as may be found appropriate during operation and implementation. The ESMP will be the guiding tool for impact monitoring and future audits.

LIST OF ACRONYMS

AGM	Annual General Meeting
AEZ	Agro-Ecological Zone
CBOs	Community Based Organization
CDP	Community Development Plan
CESCO	County Environmental Safeguards Compliance Officer
CGK	County Government of Kisumu
CPP	Consultative Public Participation
DOHSS	Directorate of Occupational Health and Safety Services
EHS	Environmental Health and Safety
EMCA	Environmental Management Coordination Act
ESMP	Environmental and Social Management Plan
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental & Social Management Plan
ESS	Environment and Social Safeguards
FAO	Food and Agriculture Organization
FGD	Focused Group Discussion
FLID	Farmer Led Irrigation Development
ICID	International Commission for Irrigation and Drainage
IWUA	Irrigation Water Resource Users Association
Km	Kilometre
LR	Land Reference
M	Metre
NAVCDP	National Agriculture Value Chain Development Project
NEAPC	National Environment Action Plan Committee
NEC	National Environment Council
NEMA	National Environment Management Authority
NIA	National Irrigation Authority
OHS	Occupational Health and Safety
PAPs	Project Affected Persons
PPE	Personal Protective Equipment
PPG	Personal Protective Gear
SEAH	Sexual Exploitation Abuse and Harassment
VMG	Vulnerable and Marginalised Groups
WASH	Water Sanitation and; Hygiene
WRA	Water Resources Authority

DEFINITION OF TERMS

Adaptation: Adjustment or preparation of natural or human systems to a new or changing environment which moderates harm or exploits beneficial opportunities.

Agro-ecological zones: Geographical mapping units based on climatic conditions and land forms that determine relatively homogeneous crop growing environments

Afforestation: Planting of new forests on lands that historically have not contained forests

Carbon Sequestration: Terrestrial, or biologic, carbon sequestration is the process by which tree and plants absorb carbon dioxide, release the oxygen, and store the carbon. Geologic sequestration is one step in the process of carbon capture and sequestration (CCS), and involves injecting carbon dioxide deep underground where it stays permanently.

Climate Change: Climate change refers to any significant change in the measures of climate lasting for an extended period of time. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among others, that occur over several decades or longer.

Ecological restoration refers to enhancing the recovery of an ecosystem that has been degraded, damaged, or destroyed (Gann et al., 2019).

Insecticide: A chemical used for killing insects.

Irrigated rice: Rice which is supplementary or fully supported with water supplied by artificial means.

Land degradation is defined as the reduction in the capacity of the land to provide ecosystem goods and services and guarantee or assure its functions over some time for its beneficiaries.

Paddy: 1). Wetland rice. 2). Bunded and leveled field used for cultivation of rice. The original meaning of paddy (Malay padis) is threshed, unhulled rice.

Land Rehabilitation refers to returning an area of land to its former natural state after some process has resulted in its degradation or damage.

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CHAPTER ONE: INTRODUCTION

1.1 Background Information

Pur Ber Rice Farmers Cooperative Society Limited was registered on 20th of April 2022 and operates in Kisumu County with registration number CS/26763 and Certificate number as GKP (L) 0425-7M-11/19. The FPO operates in Kabonyo / Kanyagwal ward, Kadibo sub-county with the main objective to support members with production inputs and marketing services like fertilizer, seeds, offering agricultural machinery, giving market information and doing value addition, provision of storage facilities, enhance collective bargaining and facilitating correct weighing. The cooperative is working with 30 CIGs/VGMs with a total of 573 members who are duly registered. Distribution are as follows: men are 197 and women are 356, youths 20 on both sexes. It has 12 board members with 2 casual staffs.

The operational model of the FPO is through collective action of individual farmers federated into Common Interest Groups for enhanced service delivery, peer to peer learning and member feedback. Their business model is through expansion of product lines through value addition and aggregation for improved market access.

The cooperative's Vision, Mission and Values

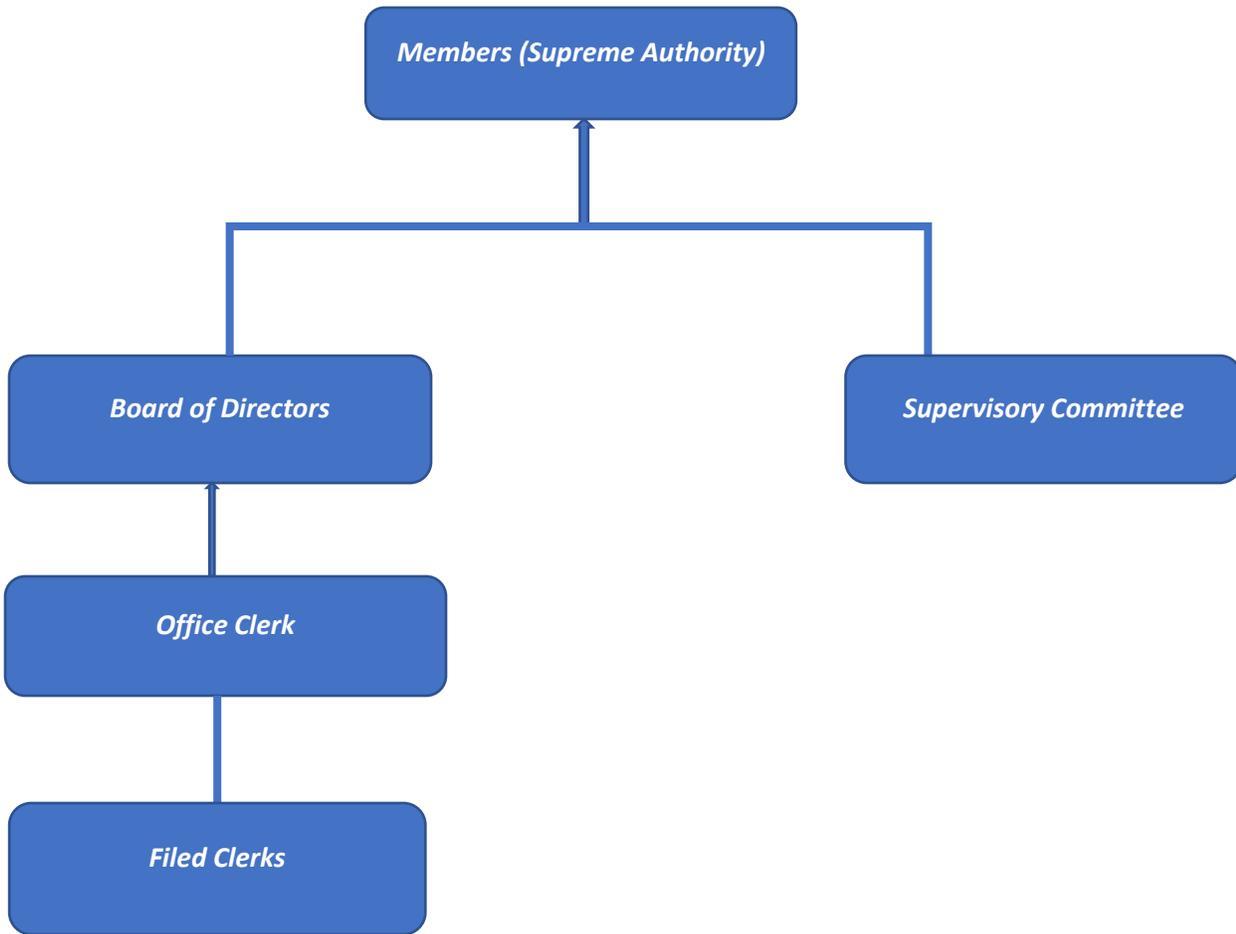
The vision of the cooperative is to be the preferred cooperative society in the production and marketing of rice nationally while offering fully integrated rice support services, with a mission to members to optimize rice production by providing competitive timely payments, training, farm inputs, credit, marketing services and prudent resource management.

Strategic Goals and Objectives of the cooperative

Pur Ber Rice Farmers Cooperative Society Limited has the following strategic targets per pillar:

Membership	To grow membership by 500 new members every year and activate 393 non-active members annually until 2028 as well as retaining recruited members.
Production and Operations Pillar	To improve productivity per acre to 50 bags by 2028 and timely access to quality inputs and automate office processes.
Human Resource Pillar	To achieve a competent and effective human capital through enhanced staff welfare for effective and efficient staff productivity
Marketing Pillar	To create and build a strong rice brand for best possible return for members and maintain strong stakeholder relations ensuring strict compliance with the law and regulations.

The FPO organizational structure



Sub Project Overview

Pur Ber Rice Farmers Marketing Cooperative Society seeks to increase market participation and value addition by establishing a multi-stage processing plant.

- **Location:** The rice mill will be located in Kabonyo/Kanyagwal ward in Kadibo Sub County, close to the source of paddy supply (i.e, near the irrigation schemes). This will help in minimizing transportation costs and increase easy access to more paddy from the schemes.
- **Access Roads:** There are roads or transportation infrastructure to bring paddy to the mill and deliver the finished product to markets or distribution points. Korowe - Nyangande and Rabuor - Nangande roads makes the mill easily accessible from the main Nairobi - Kisumu highway, all weather road for transportation of milled rice to other markets.

- **Water Supply:** Adequate water supply will be made available for use, cleaning, and other milling processes. This will be obtained from roof catchment and back up from the connection from Nyang'ande Sub County hospital.
- **Power Supply:** Availability of a reliable power source is crucial for operation of the mill. The mill will use a three-phase power source from the mains electricity grid for operation. The site is located next to Nyang'ande shopping centre which is at close proximity to a three-phase power supply. Solar power and a backup generator has been considered to supplement grid power especially on sections with low power requirements like lighting.

The proposed sub-project will entail:

- Construction of a rice mill housing unit
- An abolition block and a bio-digester
- Drying floor
- Office block
- Chain link fence, gate and green fence
- Electric power and a generator house

The milling facility proposed will have a milling capacity of 2 metric tonnes per hour compared to the current 240kg/hr mill capacity of the current co-operative rice mill.

Establishing a modern multi-stage rice processing plant is one of the priority interventions in the Kisumu County Rice Value Chain Development Action Plan (2024-2028) that will commercialize the rice value chain through increasing market participation and value addition. Compared to single pass mills, the multi stage milling system is a more sophisticated system configured to maximize the process of producing well-milled, whole grains which will fetch better market prices improving farmers' incomes.

1.3 Sub Project Objective

a) To enhance handling capacity and efficiency of rice processing

Specific Objectives

- I. To improve efficiency of rice milling from 45% to 70%
- II. To improve the quantity and quality of milled rice for enhanced market participation.

1.4 Sub Project Justification

The need for a rice mill and other supplementary equipment such as combined harvester, a truck for transportation of paddy and a drying floor to increase the efficiency are clearly spelt out in the Community Development Plan (PICD-CDP, 2024) of Kabonyo/Kanyagwal ward in Kisumu

County. Women, youth and vulnerable groups are the main targeted beneficiaries. The rice value addition venture was identified as a potential trigger for accelerated economic growth by both the County Technical Advisory Committee and the County Project Coordinating Unit.

Situated within South West Kano Irrigation Scheme, Pur-ber Rice farmers' co-operative is a duly registered marketing co-operative under the Cooperative Society Act 490. The society has a total of 570 individual members and 10 corporate members, with an average area under production of 700 acres (averagely 1.5 acres per member). The FPO does value addition on a small scale using a diesel driven low-capacity mill which is costly. In some cases, they outsource milling services when they have huge market demands. The multi-stage rice milling facility will therefore help in reducing post-harvest losses, value addition and increased market participation

1.5 Objectives of the ESIA

The main objective of this ESIA was to establish the baseline biophysical and social conditions of the proposed site; evaluate the existing and the anticipated impacts and propose measures to enhance the positive impacts and measures to minimize the effects of the negative impacts. Other objectives considered in this project report include:

- i. To identify potential environmental impacts of proposed project; both positive and negative
- ii. To assess the significance of these impacts to the environment and other stakeholders
- iii. To assess the relative importance of the impacts of alternative plans to the proposed project
- iv. To propose mitigation measures for the significant negative impacts of the proposed project on the environment and all involved stakeholders
- v. To propose measures that will enhance the positive impacts of the proposed project to the environment and all involved stakeholders
- vi. To generate baseline data for monitoring and evaluation of how well the mitigation measures are being implemented during the proposed project cycle;
- vii. To present information on the impact of alternatives

1.6 Terms of reference

This ESIA has been prepared in a manner that:

- Complies with the National Environmental Impact Assessment and Audit Regulations of 2003 as established under the Environmental Management and Coordination Act (EMCA), 1999 (amended in 2015)
- Incorporates the requirements of World Bank Environmental and Social Frameworks on ESS requirements.

The task and scope of the Assessment included but not limited to the following areas:

1. Detailed description of project activities, detailing activities that shall be undertaken during the project construction, operation and decommissioning phases.

2. Description of the baseline information: socio-economic and bio-physical environment
3. Detailed assessment of the anticipated impacts to the environment (biophysical social and economic) aspects of the area covered by the project.
4. Description of the legal, policy and institutional framework within which the proposed Sub projects will be implemented. This section includes local, national and international laws and standards applicable to the proposed project.
5. Evidence of adequate public participation during the ESIA process
6. Analysis of potential positive and negative impacts of the project activities on the environment
7. Recommendation of appropriate mitigation and support measures for the negative impacts.
8. Recommendation of support measures to emphasize on positive impacts
9. Addressing of issues connected to climate change and climate variability
10. An analysis of the project alternatives and selection criteria in terms of siting, design, technology selection, construction techniques and phasing, degree of associated environmental and social impacts, and operating and maintenance procedures.
11. Developed an environmental and social management and monitoring plan articulating the identified negative impacts, cost implications, responsibility for implementation, timelines and dates for future environment audits.
12. Attachment of all the requisite documents and records e.g. Topographical, architectural and structural drawings, land ownership/ consent among others as shall be guided by the project.
13. Specifications through maps at appropriate scales, the boundaries of the study area for assessment as well as surrounding areas likely to be environmentally affected.

1.7 Assessment Methodology

This report was produced by a team of experts. An Initial checklist was administered to help categorize the project based on likely adverse impacts. This checklist was submitted to NEMA and approval was done. The project was categorized as low risk and required preparation of the Project Summary Report to be done. The scope of the ESIA report was then developed to guide the assessment.

The process started by a team conducting a reconnaissance visit to the project site. This enabled the experts to familiarize themselves with the local issues. A desktop study was done to generate a draft report using the available secondary data. The gaps were identified from the draft Summary Project Report which informed primary data collection to enrich the document. Data gathering tools were developed and administered to the public during ESIA public engagement

The methodology of the process which culminated to the assessment and the subsequent ESIA project report included the following: -

- Preliminary assessment of the site; where the experts visited the site to familiarise with the location.

- Screening: This is the initial phase of any ESIA process. It involves the determination of whether or not an ESIA study is required for a particular development activity. Determination in the proposed project depended on the following aspects but not limited to:
 - The sensitivity of the area likely to be affected;
 - Public health and safety;
 - The possibility of uncertain, unique or unknown risks;
 - The possibility of having individually insignificant but cumulatively significant impacts;
 - Whether the proposed activity affects protected areas, endangered or threatened species and habitats;

From the above, the proposed project was seen to require an Environmental Impact Assessment summary report. The risk are however low since construction activities of such magnitude are expected to give forth both negative and positive effects to the environment and ultimately contribute to an increased waste generation both in the construction and occupational phases. This stage also involved activities such as:

- a. *Getting a comprehensive site description that includes:* Location of the proposed project, the soils and geology of the proposed site, water resources available on site, drainage system evident on site, climatic conditions of the proposed location and its vicinity, vegetation on site, land use systems on site and its vicinity, infrastructure at the site and justification for selection of the site
- b. *Getting detailed information on:* The nature on of proposed construction activities, the materials to be used in the construction activities on site and the expected project outputs including waste generation.
- c. *Collection of Baseline Data:* Data collection involved activities such as desktop study and discussion with the proponent, observation, detailed physical inspection of the proposed site and the surrounding areas to determine anticipated impacts of the proposed project.
- d. *Data Analysis and Evaluation of Alternatives:* Use of checklists and the threshold limits were used in data analysis; while the proposed site location, technologies to be employed, product mix, scale of construction, potential environmental impacts, capital and operating costs, suitability under local conditions, and institutional, training, and monitoring requirements were considered in the evaluation of alternatives.
- e. *Consultation and public Participation:* Here, stakeholders, that include the neighbor's to the proposed site, Farmers, opinion leaders, chief, concerned department were interviewed and asked to fill in questionnaires, FGDs were also conducted to different groups in order to get their views, expectations, projected economic and social effects regarding the proposed project activities and location. These findings were then analyzed and incorporated in this project report.

f. *Preparation of the Project Report:* This Environmental Impact Assessment summary project report was prepared by approved and registered Lead EIA experts.

g. *Submission of the Summary Project Report:* This report will then be submitted to National Environment Management Authority (NEMA).

1.8 Structure of the report

The report is organized into nine substantive chapters. Following this introductory chapter, Chapter 2 gives the environmental and social baseline, Chapter 3 discusses Policy, Legal, Institutional and Administrative Framework. Chapter 4 describes the project, Chapter 5 analyses public participation and its outcomes, Chapter 6 discusses the project alternatives, and Chapter 7 identifies the Potential environmental and social impacts and mitigation measures. Chapter 8 discusses while chapter 8 provides the Environmental and Social Impact Management and Monitoring Plan ESMMP. Chapter 9 provides the Conclusions and Recommendations. This is followed by some of the literature sources consulted (References) and Annexes to the report.

CHAPTER TWO: PROJECT ENVIRONMENTAL SETTING

2.1 Introduction

The proposed sub-project will entail construction of a rice mill housing unit, an abolition block and a bio-digester, drying floor, office block, chain link fence, gate, green fence, electric power and a generator house. The milling facility proposed will have a milling capacity of 2 metric tonnes per hour compared to the current 240kg/hr mill capacity of the current co-operative rice mill in Kabonyo/Kanyagwal ward.

2.2 Project location and site ownership

The proposed project is to be located behind Nyangánde Market, Konyango village, Kwakungu Sub-location, Kawino South location, Kabonyo/Kanyagwal Ward, Kadibo sub-County in Kisumu County. The GPS coordinates of the site is: Latitude -0.205501" Longitude 34.849903". At an elevation of 1121m. The piece of land where the project will be implemented is owned by Pur Ber Rice Farmers Marketing cooperative society. The site was considered for the project due to request from pur ber rice cooperative society farmers, proximity to the farms for the paddy with Kabonyo Kanyagwal ward having 80% of the South West Kano Irrigation Scheme.

The proposed Pur Ber multi-stage rice milling facility Nyangande Market Centre and can be accessed via the 5.8km Korowe-Nyangande murram road (off Nairobi – Kisumu Highway) Rabuor Nyang'ande murram road._

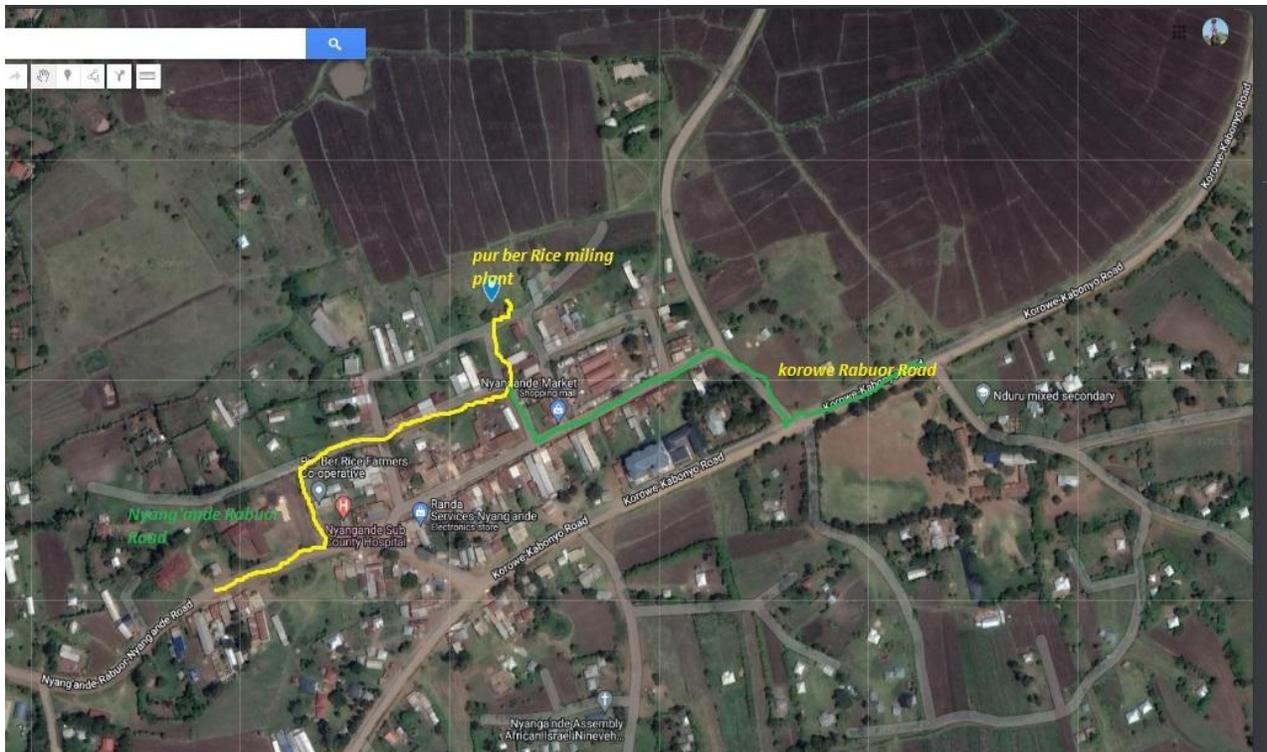


Figure 2.1: Google map of the project site

2.3 Climatic Conditions

Rainfall

The Nyando River Basin experiences a bimodal rainfall pattern with long rains in March-May and short rains in September-November. The mean annual rainfall ranges from about 1,100 to 1,600mm with a minimum and maximum mean monthly rainfall of 72mm and 243mm respectively (JICA, 1992). The amount of rainfall is greatly influenced by altitude and relief features. The presence of convective currents in the Lake Victoria region is responsible for most of the rain at the shorelines. The Nyando Wetland is a zone of low rainfall experiencing semi-arid conditions.

The relative humidity in the middle and lower basin varies between 55% and 75% in the dry and rainy seasons, respectively, peaking in May and July with the minimum occurring in January during the short dry season and October, during the long dry season. The monthly A-pan evaporation far exceeds monthly rainfall in the basin throughout the year (JICA, 1992). Annual mean A-pan evaporation ranges from 1900 to 2200mm while the monthly mean evaporation ranges from 1300mm to 2200mm. The monthly minimum and maximum evaporations are recorded during June/July and March, respectively. Water stress occurs especially after the second rains which are feeble and unreliable.

Temperatures

The mean minimum annual temperature peaks are recorded in August through September and ranges from 14°C to 18°C. Highest temperatures are recorded in June through July with annual mean ranging from 27°C to 32°C.

Geology and Soil

The geology of Kano Plain is characterized by a complex succession in the soil profile. The northern, southern and eastern parts of the plains are dominated by deep accumulations of hill wash that have been sorted by local flash floods and become mixed with lenses of alluvium. Soils at the fan base and lacustrine are finer while that at the piedmont plain are coarse-textured. (JICA, 1992)

Dark coloured clays and clay loams are the most widespread of the alluvial soil types; their colour vary from brown to black, which corresponds to a variation in clay content of between 35% and 60% respectively in the top soil and of between 40.5% and 70% in the subsoil (Millman 1973). Blackness of soils is not due to large amounts of organic content, only a small portion of organic nutrients are present in the top soil and characteristic blackness is due to the presence of unoxidised minerals in the soil matrix which are a result of prolonged waterlogging on the plains, during times of floods. When moistened these soils become plastic, slightly sticky and lose any semblance of a structure, and crack *on drying to form* a weak, angular, blocky structure. Clay soils are usually

impervious at depth; consequently, top soils sock up water like a sponge in the rainy season until they are saturated

Flora

The natural vegetation in the area is largely grass, shrubs and indigenous trees including Acacia and other semi-arid species in the drier parts, most of the agricultural zoned area is covered by crop vegetation such as maize, beans, sorghum and rice. Floodplain is generally plain grassland with Acacia spp, Lantana camara spp. and other shrubs in patches. The acacia species are the most common constituent plant of the area, especially Naivasha thorn (acacia xanthophloea) and a bit of Nilotica Aegyptica. Other species observed around the area are the Yellow Oleander (Thevetia Peruviana), Casia Siamea and Markhamia Lutea.

Fauna

Fauna of the area comprise many varieties of domesticated animals like cattle, sheep, goats, birds, cat, and dogs among others. Wild fauna includes insects, birds, snakes, and rodents. Birds' distribution in Nyando is influenced by human activities and availability of food. They become problematic during ripening phase – when rice plant is already developing and filling grains – until harvest. Birds' species include Eurasian Tree Sparrow (*Passer montanus*), Chestnut Munia (*Lonchura malacca*), Scaly – Breasted (*Lonchura punctulata*), White-Bellied Munia (*Lonchura leucogastra*). However, at the site and the immediate surroundings, there is limited number of fauna due to the human presence so the project will have insignificant impact on the fauna.

Hydrology

Nyando River with its headwaters in the Mau Forest complex pours its waters into Winam Gulf of Lake Victoria after traversing the Kano Plains dissecting the Nyando area. The arrival of seasonal floods from the upper catchment through the main tributaries & distributaries of Awach Kano and Nyando causes a stage rise of flood in the area during rainy seasons. The sources of water for the Nyando Wetland include direct precipitation, runoff from upland areas, inflow from rivers, recharge from aquifers and backflow from the lake during flooding. Aguko streams

2.4 Demographic and Population Profile

There is evidence of ethnic heterogeneity in Kabonyo/Kanyagwal ward, as the entire area has been inhabited by both locals and up-country people. Therefore, there is maximum mixing between ethnic groups in the study area though, the Luo community is the majority. All denominations of faith are represented around the project area. There is a wide range of denominations within the Christian community embracing Catholics, Apostolic Church, African Inland Church, Seventh Day Adventists and members of the Pentecostal Church. Kabonyo Kanyagwal Ward has a population of 25,065 according to the 2019 population census.

2.5 Socio-economic characteristics of the area

Livelihood activities

The residents of Kabonyo/Kanyagwal Ward have diversified economic activities depending on the location. Generally, the residents earn their living from fishing, crop farming and other small commercial activities. People living in flood prone areas grow rice which is a good cash crop. In other areas, individuals grow fruits, horticultural crops and cattle. Out of 41,961 Hectares of land in Nyando Sub-County, 39,097 Hectares and 2,565 Hectares are used for subsistence and commercial farming. (KNBS – Census 2019). Trade is also a major economic activity in the scheme area evident by the presence of Nyangande Market and Korowe market Centre. The major causes of poverty in Kadibo Sub-county include poor agricultural technologies, lack of proper storage facilities, erratic and unreliable rainfall, gender disparity, poor marketing of agricultural commodities, poor and inaccessible road network, frequent floods, mismanagement of rural industries such as rice, cotton and fish industries, insecure land tenure systems, poor water and sanitation systems, impact of HIV/AIDS and low accessibility to health services

Literacy

The literacy level for Nyando Sub- County stands at 72.5%. The school dropout stands at 18.1%, 11,030 males and 16,013 girls. This can be attributed to either early marriage or child labour for girls and favour of fishing and working in rice plantations for boys.

Sensitive ecosystems or places of cultural importance

The project area has no sites of cultural value for the community that can be interfered with by the proposed project.

CHAPTER THREE: LEGAL, REGULATORY, INSTITUTIONAL AND POLICY FRAMEWORK

3.1 Introduction

This chapter contains laws, regulations and the institutional frameworks within which the invoked laws are enforced. The chapters highlight laws including the Multilateral Environment Agreements which Kenya is a party to. The chapter also incorporates the World Bank ESS which the project may invoke across the project phase.

The Constitution of Kenya 2010 is the supreme law of Kenya so that all laws, actions by individuals or the state that contravenes the constitution are null and void.

- i. Chapter 4 on the Bill of Rights confers to every person the right to a clean, healthy environment. This incorporates the right to have the environment protected for the benefit of the present and future generations.
- ii. Chapter 5 deals with the land and environment with part two providing the obligations of a developer with regards to environmental protection.

3.2 National Policy Framework

3.2.1 National Environment Policy

The National Environment Policy was approved by the Ministry of Environment, Water and Natural Resources in 2013. The policy's overall objective is to achieve conservation and management of the natural resources that have in them wildlife resources, water resources, grazing lands, minerals and soils. This is by ensuring that environmental concerns are incorporated in the national planning and management processes.

Relevance to the Project

The proponent has to ensure that the natural resources are conserved and managed accordingly. The policy promotes the use of ESIA as a tool that ensures this is achieved. The project has commissioned this ESIA to achieve the aim of the policy. Annual Environmental Audits will also be carried out to ascertain the efficacy of the ESIA Management plan, address the emerging issues.

3.2.2 National Land Policy, 2009

The policy provides guidelines for sustainable land use and management practices. It outlines the measures and guidelines for the government to implement in order to realize optimal utilization and management of land through establishment of development control standards, processes and procedures that are efficient, transparent and accountable taking into account International Conventions and national policies relating to the sustainable use of land and the preservation of environmental values. It provides a framework for land administration, access, use, and management by addressing issues like land tenure, historical injustices, environmental degradation, and land-related conflicts

Relevance to the Project

The project will be implemented on a legally acquired land by the FPO. There will be conversion of land from agriculture use to commercial. The use of land has potential to degrade the environment by introducing commercial activities at higher scale than the current practices. Both the contractor and the FPO will manage the issues as per the ESMP.

3.2.3 National Gender and Development Policy, 2019

The policy provides for the framework for advancement of gender equity and an approach that would lead to greater efficiency in resource allocation and utilization to ensure empowerment of women. The overall objective of the Gender and Development Policy is to facilitate the mainstreaming of the needs and concerns of men and women in all areas in the development process in the country.

Relevance

The contractor, project managers and the FPO will consider gender equality, women empowerment and inclusive participation in all its phases both at construction and operation phase.

3.2.4 National Climate Change Policy

The policy aims at enhancing adaptive capacity and resilience to climate change, and promoting low carbon development for the sustainable development in Kenya.

Relevance

The project aspires to enhance handling capacity and efficiency of rice processing. The mill facility design was participatorily developed in consultation with the beneficiaries and is climate proofed. During construction, the contractor will ensure that the equipment used is properly maintained not to emit CO₂, and reduce vegetation loss for net CO₂ Sink.

3.2.5 National Climate Change Response Strategy

The strategy aim at strengthening national actions so as to achieve climate change adaptation and Greenhouse Gases emission mitigation. It envisages involvement of all stakeholders in response to climate change impacts.

Relevance

The contractor will ensure minimal emission by maintaining engines. The proposed milling plant will be regularly maintained as per the manufacturer's specifications. Further, the proposed project is one that aims to increase people's adaptability to climate change.

3.3 Institutional Framework

3.3.1 Introduction

There are over 20 institutions and departments and agencies, dealing with environmental issues in Kenya. Some of the key institutions include the National Environment Management Authority (NEMA), the Forestry Department, the Kenya Wildlife Service (KWS), Ministry of Environment and Natural Resources, Ministry of agriculture, Livestock and fisheries, Ministry of Water and Irrigation, the Kenya Forestry Research Institute (KEFRI), the National Museums of Kenya (NMK), the Kenya Agricultural and Livestock Research Organization (KALRO), the Kenya Marine and Fisheries Research Institute (KEMFRI), Regional Development Authorities and Public Universities among others.

Others include international agencies involved in environmental issues in Kenya include Environmental Liaison Centre International (ELCI), International Union for the Conservation of Nature and Natural Resources (IUCN), World Wildlife Fund for Nature (WWF), United Nations Environment Programme (UNEP). The local NGOs include East African Wildlife Society (EAWLS), the Green Belt Movement, Forest Action Network (FAN), African Water Network (AWN), Wildlife Clubs of Kenya (WCK) and the Environment Trust of Kenya (ETK) among others.

3.3.2 The National Environmental Management Authority (NEMA)

NEMA is a corporate body responsible for the administration of the EMCA 2015 (amendment). The Director General appointed by the President heads NEMA. The NEMA functions include the co-ordination of various environmental management activities, initiation of legislative proposals and submission of such proposals to the Attorney General, research, investigations and surveys in the field of environment. NEMA has initiated various Regulations so as to fully operationalize the EMCA 1999 and it plays a critical role in the processing and issuing of EIA Licenses in Kenya.

3.3.3 The Kenya Bureau of Standards (KEBS)

KEBS is the institution charged with the responsibility for developing standards, including food safety standards. The institution has developed standards pertaining to various products of suitable quality of rice. The materials to be used in construction and the rice produced should meet the basic .KEBS standards.

3.3.4 The National Commission for Science Technology and Innovation

The National Commission for Science Technology and Innovation is a body corporate established under the Science, Technology and Innovation Act, No. 28 of 2013, succeeding the National Council for Science and Technology which was in operation since 1977. It is mandated to regulate and assure quality in the science, technology and innovation sector and advise the government on matters related thereto. 2.5.6 Agriculture and Food Authority (AFA), 2019 According to AFFA Act, 2013, crops Act 2013 and the Kenyan Constitution (2010), the Authority has the mandate of doing research on agriculture and fisheries and providing advice on agricultural practices among others.

3.4 Legal Framework

3.4.1 Environmental Management and Coordination Act, EMCA (1999)-Amended in 2015

The Act provides the legal framework for environmental management and administration in Kenya. It aims at improving the legal and administrative coordination of the diverse sectoral initiatives in the field of environment so as to enhance the national capacity for effective environmental management. Section 58 of the Act requires that developments likely to have adverse effects on the environment to be subjected to an EIA and the assessment report submitted to NEMA for consideration and subsequent decision making. The Act empowers stakeholders to participate in sustainable management of the natural resources. It requires that Environmental Impact assessment (EIA) (under Section 58) be carried out to guide the implementation of environmentally sound decisions.

Relevance

This ESIA is prepared in compliance with the provision of the act including public participation and developing an ESMP section to guide in ensuring that the project is implemented and operated sustainably.

3.4.2 Environmental Impact Assessment and Audit Regulations 2003 (Legal Notice No.101) and (Amendment) 2019

The regulations provide for the importance of carrying out EIA/ESIA/SEA and give the procedure of doing and submission the same to NEMA. The regulations guided the categorization of the project based on the assessed anticipated impacts.

Relevance:

This ESIA has been carried out to identify and propose mitigation measures to potential negative environmental and social impacts of the investment before the implementation to minimize harm to the environment and communities while maximizing on the positive impacts. The ESIA report will then be submitted to NEMA for review and licensing in compliance with this provision.

3.4.3 Environmental Management and Coordination (Air Quality) Regulations, 2015

The objective is to provide for prevention, control and abatement of air pollution to ensure clean and healthy ambient air. It provides for the establishment of emission standards for various sources, such as mobile sources and stationary sources. It also covers any other air pollution source as may be determined by the Minister in consultation with the Authority. Emission limits for various areas and facilities have been set. Thus the contractor is required to employ air pollution suppressants/ avoid air pollution during construction works.

Relevance

This ESIA is an effort to comply with this regulation as mitigation measures during all the phases of the project will be provided which will be implemented accordingly. Annual environmental audit (air quality audit) during operation phase will be conducted as the facility will be emitting dust.

3.4.4 Noise and Excessive Vibration Pollution Control Regulations, 2009

The regulation provides guidelines on the level of noise that will be permissible in particular area, time among others. Table 1: Maximum Permissible Noise Levels for Constructions Sites (Measurement taken within the facility) - second schedule

Relevance

The project is within residential and hence the noise and vibration level will not go beyond 60db. This will be observed throughout the project phases. The works will be restricted to day time between 7: 00 am - 12: 30 pm. Any works beyond the stipulated will undergo approvals within the provided laws.

3.4.5 The HIV and AIDS Prevention and Control Act 2006

This legislation provides for measures for the prevention, management and control of HIV and AIDS protection and promotion of public health and for the appropriate treatment, counseling, support and care of persons infected or at risk of HIV and AIDS infection, and for connected purposes. This Act will ensure that the Contractor makes provision for VCT services for employees and locals, as well as promotes public awareness on HIV and AIDS. This will contribute to reduced risk of new infection, stigmatization of those already infected as well as management during the construction period.

Relevance

There is likelihood of increased infections and discrimination among the workers and the community as there will be increased liquidity and increased population in the area which may attract prostitutes among others.

3.4.6 The Children Act, 2001

This Act concerns the protection of the welfare of children (persons below 18 years of age) from economic exploitation, any work that interferes with the children, or is harmful to the child's health or physical, mental, spiritual, moral or social development among others.

Relevance

Child labour is likely during construction and during operation. The contractor and the Pur ber Millers must be sensitized to ensure that this provision is adhered to. The contractor must also confirm, from the job applicants' identification card, the applicants' dates of birth.

3.4.7 The Sexual Offences Act, 2006

The Act protects community and employees from any unwanted sexual attention or advances by staff members or community members. Thus the Act ensures the safety of women, children and men from any sexual offences which include: rape, defilement and indecent acts.

Relevance

The contactor and the workers will be sensitized on sexual offences act ensuring harmony on site.

3.4.8 Water Quality Regulations, 2006, (Legal Notice No.121)

Water Quality Regulations apply to water used for domestic, industrial, agricultural and recreational purposes; water used for fisheries and wildlife purposes; and water used for any other purposes. Different standards apply to different uses. These regulations provide for the protection of lakes, rivers, streams, springs, wells and other sources. The Ninth Schedule of the Regulations stipulates standards for irrigation water. Persons (real or legal) discharging effluent into the environment are required to submit quarterly discharge monitoring records to NEMA.

Relevance:

The project during construction will involve excavation that may compromise water quality. The contractor will inform the community in advance to make necessary adjustments on water access.

3.4.9 Environmental Management and Coordination (Waste Management Regulations) 2006

These are meant to streamline the handling, transportation and disposal of various types of waste. The regulations emphasize on waste minimization, cleaner production and segregation of waste at the source. Under the Regulations, NEMA licenses transporters, incinerators, landfills, composers, recyclers and transfer stations. Licensing employs a risk-based approach by concentrating on facilities considered to pose a high risk to the environment.

Relevance:

Solid wastes are expected at various phases of the project. The contractor will have to minimise/avoid the production. The farmers during operation will be advised to convert the rice husks into hay to reduce waste generation.

3.4.10 Land Act (No.6 of 2012)

This Act is intended to create harmony among the land laws to allow for a sustainable administration and management of land and related resources such as environmentally sensitive areas, heritage sites within public land. As part of environmental management of land resources in areas earmarked for development, the Act requires an Environmental Impact Assessment as per EMCA Act to identify and propose mitigation measures to potential negative environmental and social impacts of the investment before the implementation to minimize harm to the environment and communities while maximizing on the positive impacts.

3.4.11. The County Government Act, 2012

The Act grants County Governments the powers to grant or to renew business licenses or to refuse the same. To ensure implementation of the provisions of the new constitution, the County Governments are empowered to make by-laws in respect of all such matters as are necessary or desirable for the maintenance of health, safety and well-being of the general public.

3.3.12 Physical and Land Use Planning Act, 2019

The Act provides for the planning, use, regulation and development of land and for related purposes. It aims to ensure that every person engaged in physical and land use planning shall

promote sustainable use of land and livable communities which integrate human needs in any locality.

Relevance

To the proposed project is implemented in zoned agriculture area and it is an enterprise towards value addition of agriculture produce. The proponent will ensure planning approvals from the County Government of Kisumu is obtained.

3.4.13 Public Health Act (Cap 242)

The Act addresses matters of sanitation, hygiene and general environmental health and safety. This Act will govern the Contractor's activities on site including ensuring the health and safety of employees including providing personal protective equipment (PPE) and health services when it comes to venereal diseases.

Relevance

Under this Act the proponent and the contractor are required and will adapt practicable measures such as engaging an Environment Health and Safety (EHS) officer at the project site. The project will also consider rice food safety during processing at the rice mile and storage.

3.4.14 Water Act, 2016

The Water Act, 2016 provides for the management, conservation, use and control of water resources and for the acquisition and regulation of rights to use water; provides for the regulation and management of water supply and sewerage services. In Kenya, water is regarded as a national resource and is therefore owned by the state for and on behalf of the people. Part (b) of the same section restricts the abstraction of ground water or carrying out any activity in boreholes and wells without an environmental impact assessment license issued in accordance with the provisions of the Act.

Relevance

In compliance with this regulation, the proponent will connect to an existing borehole on which some hydrological modelling was done before and established to have sufficient discharge. This will also be complemented with roof catchment.

3.4.15 Occupational Health and Safety Act 2007

The State Department of Labour and Skills Development through the Directorate of Occupational Health and Safety Services performs health and safety services to ensure that every workplace is free of any hazards, and complies to laid down standards to assure safety of employees (OSHA, 2007). The services include: a. Registration and renewal of workplace and plants b) Workplace - A client is expected to apply for registration of a workplace using forms; DOSHS 21A,21B, DOSHS 23, c) Plants - A client is expected to register for plant using form, DOSHS 2020.

Workplace Inspection- This involves checking the condition of workplaces to prevent injuries, illnesses, incidents, and accidents. Through a critical examination of the workplace, inspections

help to identify and record hazards for corrective action. An incident register is required at the site. Workplace audits which include; i) Fire safety audit, done by an approved fire safety audit, has a fire audit report. ii) Hygiene surveillance- surveillance on workplace contaminants and hazards, which are;-Noise survey, Air quality monitoring, Thermal Environment survey, Environmental and Social Impact Assessment, Audit ventilation, other risk assessments at the inception and upon major changes that may alter risk levels, Reports, periodic showing returns approved persons, health and safety officer. Examination and testing of plant, Accident investigation and WIBA processing, Work Injury Benefits Act-for accidents the employer reports to DOSH county offices within 24hrs for fatal,7days for non-fatal accidents for purposes of compensation.

3.5 World Bank Environmental and Social Standards

3.5.1 Introduction

The Environmental and Social Framework (ESF) was approved by the Board of Executive Directors on August 4, 2016. It consists of a Vision for Sustainable Development; ten Environmental and Social Standards (ESSs), which set out the requirements that apply to Borrowers; an Environmental and Social Policy for Investment Project Financing (IPF), which sets out the requirements that apply to the Bank; and an Environmental and Social Directive/Procedure for Investment Project Financing (IPF) and a Directive on Addressing Risks and Impacts on Disadvantaged or Vulnerable Individuals or Groups.

ESS1-Assessment and Management of Environmental and Social Risks and Impacts

Environmental Assessment: Requires Environmental Assessment (EA) for projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable

Relevance: It sets out the Borrower's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank. It also contributes towards compliance with NEMA's statutory requirements for new projects.

ESS2-Labor and Working Conditions

It enables borrowers to promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.

Relevance: The proponent will follow all the labor requirement conditions as per the Employment Act of Kenya and World Bank ESS 2. The ESS2 is triggered

ESS3-Resource Efficiency and Pollution Prevention and Management (Water & Energy efficiency, IPM, avoid sensitive ecosystem). This aims at minimizing and managing

environmental and health risks associated with use of pesticides; and promotes safe and effective environmentally sound pest control strategies. Rice handling may affect food

Relevance: *This ESS sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life-cycle.*

ESS4-Community Health and Safety (infrastructure design, hazardous materials).

It outlines the borrower's responsibility to address health, safety, and security risks that project-affected communities might face, with special attention to vulnerable groups, ensuring that development projects are implemented in a way that protects the health and safety of the communities they affect.

Relevance: *As per the Occupational Health and Safety requirements there will be risks and impacts during construction operation and decommission phase. Therefore, ESS4 will be triggered*

ESS5- Land Acquisition, Restrictions on land use and involuntary Resettlement

Relevance: *Clear land ownership documents confirmed by search and agreements*

ESS6-Biodiversity Conservation and Sustainable Management of Living Natural Resources (avoid sensitive ecosystem). The objectives of this Convention are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.

Relevance: *The proponent will not interfere with the areas not earmarked for the project thus not interfering with the biodiversity outside the project area. Conscious steps to be taken to relocate or avoid organisms where possible within the project area.*

ESS 10 -Stakeholder Engagement and Information Disclosure

Stakeholder Engagement and Information Disclosure recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation. (Meaningful consultation with evidence of documentation have been attached)

Relevance: *The project development included public participation and consultation. The implementation will involve effective stakeholder engagement to enhance its sustainability of projects and acceptance throughout the project phases.*

CHAPTER FOUR: PROJECT DESCRIPTION

4.1 Project Design

4.1.1 Design of the proposed sub project

The works designed for the project are:

Rice mill housing unit of Dimensions 24m in length by 15m in width by 8.95m in height, accommodating mill house, walking space and storage area with sufficient aeration.

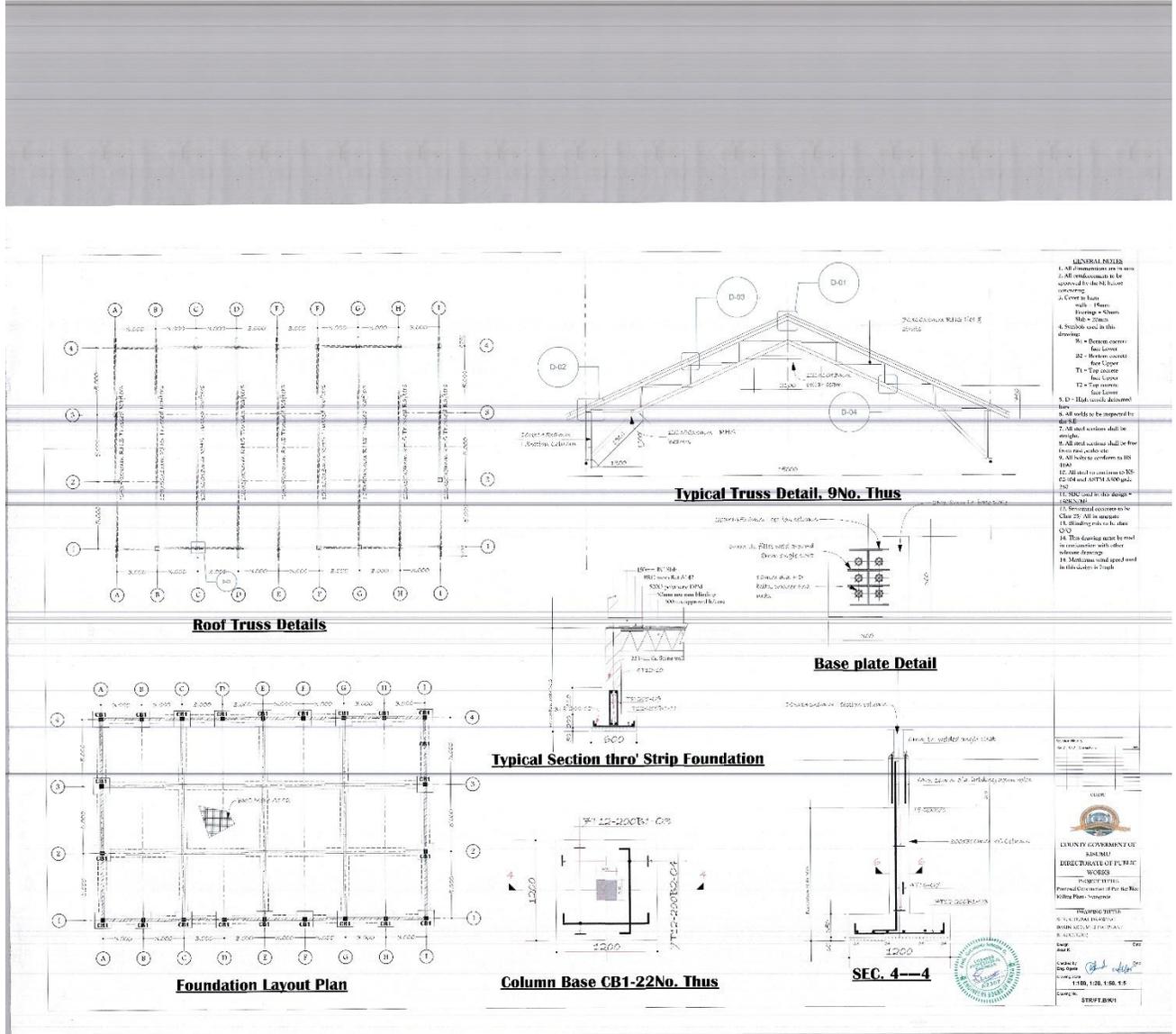
A gender sensitive ablution block of dimensions 4.2m by 2.2m by 3.5m and a bio-digester. An office block measuring 9.8m by 3.7m by 4.2m. The office block will accommodate three offices.

A power and generator house unit of 5.2m by 2.2m by 2.4m, sufficient to provide power accessories, back-up generator and compressor house.

Fencing and a double flap gate of 5m wide, a concrete pole with chain-link is to be done to enclose the compound for security.

A reinforced concrete drying floor of 320m² for spreading rice to reduce moisture content.

4.1.2 Detailed design drawings Project Design



4.2 Project Materials and Products

The proposed Pur Ber Rice Mill will take into consideration sustainable utility of the amount of artificial and natural materials from within its environs and that which will be imported from neighboring areas in all its phases. The material input into the project will have short term and long term, beneficial and adverse impacts on the bio-physical environment. Both on-site and off-site impacts are anticipated from usage of materials. The table below is a summary of the main

material inputs into the project, their sources, anticipated impacts and possible mitigation measures.

Table 4.1: Summary of materials inputs, impact of the environment and mitigation measures

Materials	Sources	Uses	Impacts	Mitigation
Sand	Kadibo sub-county	Preparation of concrete for joining masonry stone and aggregate	Off-site depletion of raw materials and land degradation Especially destruction of the river beds	Re-evaluation of the project to ensure that the design optimizes the use of sand A detailed material plan will be prepared as part of the initial design review
Stones	Neighboring sub-county	To reinforce the foundations and construct gabions	Off-site depletion of raw materials and land degradation Resultant solid wastes Excessive consumption	Re-evaluation of the project to ensure that the design optimizes the use of stones A detailed material plan should be prepared as part of the initial design review
Cement	Suppliers from factories	Mixed with sand to prepare concrete for joinery and ballast to make aggregate for constructing slabs and columns	Excessive consumption of cement Off-site depletion of limestone for making cement Land degradation Dust pollution	Re-evaluation of the project to ensure that the design optimizes the use of cement A detailed material plan should be prepared as part of the initial design review Careful use of cement to avoid unnecessary spills
Gravel	Quarries within Nyando /Kisumu East Sub-County	Preparation of aggregate for making ballast	Off-site depletion of gravel land/soil degradation	Re-evaluation of the project to ensure that the design optimizes the use of gravel A detailed material plan should be prepared as part of the initial design review
Timber	Suppliers within Kadibo sub-county	Roofing and making Doors and reinforcements during walling	Off-site deforestation and resultant soil erosion	Reforestation Programme Re-evaluation of the project to ensure that the design optimizes the use of timber A detailed material plan should be prepared as part of the initial design review
Soil	On site within Kadibo sub-county	Leveling and landscaping works	Resultant solid wastes, dust pollution and hard pans	Careful planning landscaping programme. Spraying dusty areas with water

Materials	Sources	Uses	Impacts	Mitigation
Poles	Vendors within Kadibo Sub-county	Supporting structural Works during construction	Off-site deforestation and resultant soil erosion	Reforestation programme Re-evaluation of the project to ensure that the design optimizes the use of poles A detailed material plan should be prepared as part of the initial design review
Steel bars	Supplied from factories	Reinforcement and casement	Health hazard Excessive demand on steel Resultant solid waste	Re-evaluation of the project to ensure that the design optimizes the use of steel bars Re-using and recycling of waste metals Practice effective occupational health and safety practices
PVC material (pipes, conduits and fittings)	Supplied from factories	For water and Wastewater piping systems, insulations	Non-biodegradable solid wastes and resultant breeding grounds for rats and disease vectors such as mosquitoes	Re-using and recycling of wastes Proper handling of the wastes
Glass	Supplied from factories	For windows	Health hazard Heavy demand on glass Resultant solid waste	Practice effective occupational health and safety practices Careful handling of glass
Paint	Supplied from factories	For corrosion control, colourful external and internal finishes	Health hazard Excessive use of paint Resultant pollution	Careful use of paint to avoid unnecessary spills Re-evaluation of the project to ensure that the design optimizes the use of paint Practice effective occupational health and safety practices
Water	Nyang'ande Sub County Hospital	Input in the construction works for dust suppression, concrete and aggregate preparation and sanitation/cleaning	Excessive consumption of water Wastewater and pollution Conflicts with other water users in the area	Careful management of water use Regular maintenance of pipes and taps to fix leakages Maximization on other sources of water such as rainwater harvesting and storage in larger tanks

CHAPTER FIVE: PUBLIC AND STAKEHOLDER CONSULTATION

5.1 Introduction

The role of public consultation and involvement in the ESIA process, is to assure the quality, comprehensiveness and effectiveness of the assessment and ensure that the public views are adequately taken into consideration in decision making process. This is in compliance to Section 17 of the Environmental (Impact Assessment and Audit) Regulations, 2019.

5.2 Objective of the public consultation

The overall reason for the involvement of the public is to disseminate the project information to those affected and especially incorporate the views of the PAPs early enough in the design of the ESMP. The specific objectives of the consultation are to:-

1. Advance the project design and eliminate potential for conflicts;
2. Boost the community's project ownership and sustainability
3. Facilitate the development of appropriate and acceptable entitlement options
4. Develop institutional coordination

5.3 Methodology

Due to the complex nature of the socio-ecological environment, a combination of tools was used to conduct the environmental and social impact assessment. Various stakeholders were incorporated into the consultation processes. A stakeholder identification and involvement based on various needs, interest and potential influence to the project was used. The stakeholders used were; the direct project beneficiaries of the development or directly affected (primary stakeholders) and those indirectly affected by the project but influence development e.g. departments and local administration (secondary stakeholders). Both participatory methods and analytical tools were applied to ensure the inclusion of the opinions of all stakeholders. Public consultations took off from the scoping stage once the ESIA process was commenced with the main objective of involving the public in to the design of the project so as to identify and mitigate the likely negative project effects and enhance the positive ones. Key stakeholders consulted include: - the local beneficiary community, line ministries officials, the local area administration; discussions and interviews with key informants provided relevant information representing all the socio-economic classes from the various divisions.

1. Resource person/ key informants who involved interviews with the proponent, management committee of Pur ber Rice Cooperative society, local administration and private practitioners.
2. Administration of simple questionnaires to the community. Filled questionnaires are annexed to this report.
3. Public baraza at the project site- this was attended by the community including the immediate members to the site, chief, Village Administrators, Area MCA representatives,

representative from National Land commission, Engineer, Kisumu County Environment officers and NACDP officials.



Public participation; FGD

5.4 Surveillance of the Project Area

There was an organized tour of the project area with Pur Ber Rice cooperative society committee leaders, local leaders; to survey the proposed Rice mill plant site. The purpose of the tour was to ensure that leaders and by extension the larger community clearly understood the project boundaries and to have a firsthand experience of the actual picture on the ground. The areas that are of socio-cultural significance were also taken into consideration.

5.4.1 Potential Negative Environmental impacts raised

a) Construction phase

- Dust- excavation activities are likely to emit dust. The site will be demarcated, to minimize dust to the neighboring residences/premises, sprinkling of water to contain the spread of dust
- Clearing of vegetation during construction- There is minimal vegetation at the proposed investment site, however there will be enhancement of vegetation by doing a green buffer at the rear and sides of the site.
- Increased traffic in the area- Have signage to the construction site.

5.4.2 Social issues

- Accidents and injuries- Provisions of Personal protective equipment to workers (contractors' obligation). The work site should have an incident register, a first aid kit and first aid practitioner.
- Labor influx- Sensitization of the new laborers, giving opportunity to the local community especially the unskilled labor.
- Discrimination (work opportunities) - Unskilled labor to be sort from the locals, women, youth and persons with disability to be considered for project ownership and sustainability.
- Moral decadence- Training of workers on HIV/AIDS and drug and substance abuse.

b) Environmental Impacts at operation phase

- Rice Husk Management: Rice husks are a byproduct of the milling process and need to be properly disposed of. Capacity building of the beneficiaries to use as biofuel (making of briquettes or additive in poultry feed)
- Air Pollution Control: During the milling process, there may be dust and emissions that need to be controlled to reduce environmental pollution. Dust collectors or filters should be installed. Orientation of the structure was considered so the chat effect of the dust to the workers inside is minimized. A green buffer will be done at the rear and sides of the plant site to minimize rice dust and husk dust
- Noise Management: Milling operations has noise levels on worker's overtime. Routine servicing of machine parts to reduce noise and vibration. Workers due to long hours of exposure should put on ear protection equipment for safety purposes to avoid occupational hearing loss. Earmuffs and earplugs

Social impacts

Sharing of benefits- The cooperative shall share benefits accruing from sales and profits with shareholders, have a conflict resolution committee and channels for airing grievances

Increased traffic/risk of accidents-Signage shall be put especially at high traffic zones like schools and hospitals, speed pumps at hotspots, sensitization to the drives and, monitoring of speed.

- Occupational health and safety- Provision Personal Protective equipment to workers; this includes but not limited to, dust coats, dust masks, helmet, earplugs/earmuffs.
- A fully equipped First aid kit with a trained person(s) who can administer first aid in case of accidents and injuries,
- The designs shall have disability friendly facilities; ramps have been considered instead of staircases.
- A fire extinguisher, the site is to have a fire extinguisher, a fire exit and a fire assembly point.
- The site shall have a safely plan from the manufacturer

- Moral decadence sparked by money flow - family breakups/conflicts, drug and substance abuse
- Child labor- Risk of school dropouts or underage children working in the mill. Observance of labour laws by the mill management.

Decommissioning Phase.

The milling machine is estimated to have a lifespan of 30 years, powerhouse, abolition block and power hose are estimated to have a life span of 50 years. A decommissioning Environmental and Social Impact Assessment will be done with clearly spelt out ESMP to ensure compliance with the ESMFs.

5.4.3 Grievance Mechanism

The Cooperative will ensure that a grievance mechanism in the FPO is in place, in accordance with ESS10. A committee of 3 (supervisory committee) has been formed to address any grievances that may arise from time to time as early as possible in the sub project implementation to address specific concerns raised in a timely fashion.

The Multi stage rice miller will be sensitized to open up a grievance register where the grievances will be recorded and resolved within the recommended period of 14 days. Audit of all grievances will be undertaken by the supervisory committee quarterly. All unresolved grievances automatically will stand escalated to the county level. Reports on the grievances will be presented during the AGMs

CHAPTER SIX: ANALYSIS OF PROJECT ALTERNATIVES

All possible alternatives for the project site were explored and every option was analyzed as follows:

6.1 Abandoning the project option

This option will not achieve the projects' objective and broader county, national and international goals of economic and social empowerment of communities which accrue from the proposed Rice Milling facility. Pursuing this option will stagnate the growth potential of Pur Ber farmers' Cooperative SACCO.

6.2 Alternative Human Waste Management Technology Option

Some of the consulted people acknowledged the fact that given the nature of the soils most pit latrines collapse during floods and so the pit latrine types remain less desirable. On the other hand, the location is not sewered as the cost of putting up a sewer system is prohibitive. The Septic tank option has also had limited success in the areas around project areas more especially during flood season. As such the bio-digester technology option of managing human waste remains for the following key reasons;

- Minimal space needed to install
- Water proofed
- Easy to install
- Work effectively and suppresses odor.
- End product going to soak pit is environmentally friendly
- Can be customized to users
- No exhausting required thus lower maintenance cost

6.3 Relocation Option

Relocation option to a different site is an option normally available for project implementation. At present the project proponent does not have an alternative site in mind proximate to the project beneficiaries. The site is the only available option owned by the cooperative society ideal for the kind of the proposed development project. It provides minimal short term negative environmental impacts while offering much long-term positive impacts. The experts therefore do not consider alternative site option.

6.4: "Yes" Project Option

This is the most preferred option because of the following reasons;

- Proximity of site to farmers
- Accessibility of site

- The site location is in harmony with its surrounding
- The proponent legally owns the land

The yes option will lead to a business Boom in Nyangánde market Centre. This will lead to the increase in demand for merchant goods traded by locals in the area. Sand, stones, brick, timber among other products during construction will be drawn from the neighborhood thus boosting the local economy.

The local community was optimistic that the construction of the proposed milling facility will open up new fields of employment. Local people expressed hope that they will be able to access a few employment opportunities once the project commences mostly as casual workers and a few skilled workers in different sections. However, they wanted assurance that the locals will be given first priority for employment once the construction of the project begins. This will be a source of income for several individuals and households and hence is expected to improve the living standards of the local people.

CHAPTER SEVEN: ANALYSIS OF POTENTIAL SOCIAL AND ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

7.1. Introduction

An effort has been made to account for impacts during the initial site preparation, construction and the operation phases of the proposed Pur Ber Rice Milling plant. This Section discusses the various potential environmental and social impacts (both positive and negative) associated with the proposed rice mill. Upon critical weighing the issues and levels of potential impacts the following environmental and social impacts were identified as critical for detailed assessment and monitoring.

7.1.1: Types of Impacts

The types of impacts considered in this project report include:

Primary impacts: - a primary impact is direct and occurs at the same time and place of action

Secondary impacts: - *a secondary impact occurs later in time, or at a different place from the initial action*

Cumulative impacts: - cumulative impacts result from incremental impact of a proposed action on a common resource when added to the past, present and foreseeable future

Project legal and regulatory compliance: this refers to demonstrated compliance with national and local environmental regulations and standards

7.2 Construction phase impacts

7.2.1 Positive impacts

Employment creation

Employment creation is expected from construction work. Both skilled and un-skilled labour on temporary terms will be hired during the project construction phase. This will increase financial flows in Nyang'ande and its environs.

Improved Products Market and local economy

The construction work will require supply of hardware materials such as steel bars, timber, cement etc. from the local suppliers with gains accruing to the economy through multiplier effects. This will also contribute to the growth of the informal sector of food vendors and related services and thus an overall increase in revenue.

Increased land value

Upon establishment of Pur Ber Milling facility there will be an increase in adjacent land value leading to a boom in localized land purchases adjacent to the project and other secondary development. To access the facility, it will be incumbent upon the facility operators to influence

government operatives in maintenance of access road to the facility. This in itself will indirectly benefit general road users and spur development towards the sited area.

Skills Transfer

It is anticipated to both skilled and unskilled local masons, plumbers and carpenter will be engaged in the construction will have an opportunity to learn new skills from the experience of constructing Pur Ber Rice Mill. And its accessories. For instance, the bio-digester construction and installation processes. This will enhance their competitiveness in future assignments.

7.2.2 Negative Impacts at Construction phase

Air pollution and Aerial Emissions

The potential sources of air pollution include traffic, emission from excavation works and material supply vehicles. This is a short-term negative impact and will last within the actual excavation period and ferrying of materials. This impact is considered low risk. There is also risk of greenhouse emission and hydrocarbons by use of fossil fuels in vehicles, vibrators, mixers etc

Proposed Mitigation

- Ensure that maintenance on all machinery is done regularly and to manufacturers specifications to avoid the emission of noxious gases.
- Drivers and machine operators to avoid unnecessary running of engines and promptly report maintenance needs.
- Vehicles' transporting dusty material like cement be covered at all times

Solid Waste Generation

The Pur Ber Mill Construction Works will entail a medium scale of masonry works. The volume of solid waste generated from the construction of the facility and its associated accessories will consume natural and man-made resources and generate construction related waste. This if unmanaged well may be an eye-soar, breeding ground for vector and poses health risk.

Proposed Mitigation Measures

The contractor should ensure that construction wastes generated and not reusable or recyclable is cleared from the project site and disposed of in line with the Solid waste management act of 2021.

- ✓ Contractor to practice waste separation at source to enable easy recycling of re-usable waste materials
- ✓ Contractor to provide temporal waste disposal receptacle in site.
- ✓ Contractor to liaise with licensed waste collector to routinely collect and dispose the waste
- ✓ Train workers and local communities on solid waste management

Surface and ground water pollution/ contamination

Earth movement, disposal of vegetation and other cleared materials and the improper disposal of liquid and solid waste, including the human waste from the workers actions, are likely to cause physical and chemical alteration of surface and ground water quality. Civil works, excavations, or an inadequate planning of cuts and fills, may affect the water table significantly in the area.

Mitigation Measures

- The contractor to construct a standard temporary (lined) pit latrine for the workers
- Alternative get into use agreement public latrine service providers in Nyangánde for temporary use by the workers
- Contractor to contract services of garbage collectors
- Civil works, excavations, cuts and fills to be compacted so that there is minimal soil loss

Traffic and Risk of Accidents

There is risk of accidents by speeding vehicles. This can be vehicles transporting materials or project associated personnel to and project site. Accidents may also occur at construction site

Mitigation Measures

- Provisions of Personal protective equipment to workers (contractors' obligation).
- The work site should have an incident register, a first aid kit and first aid practitioner.
- Sensitize all workers and drivers on speed limits
- Erect appropriate signages
- Restriction to active project site

Labor Influx

This may put pressure on existing social amenities and create conflict with locals who may wish to be engaged in the opportunities that present itself.

Mitigation Measures

- As much as practicable employ local women, youth and persons with disability to be considered for project ownership and sustainability
- Provide for safe water supply and a functioning ablution service
- Share existing unskilled works on rotational basis
- Sensitization of new laborers

Moral Decadence

This is typical of place with foreigners and financial flows just like anticipated in the project. Cultural values and moral harmony is likely to be disrupted as a result.

Mitigation Measure

- Training of workers on HIV/AIDS and drug and substance abuse

- Sex education
- Contractor provide dedicated place for dispensing condoms

Child Labour

This is a common occurrence where contractors want to cut on cost. By engaging under age person there are risks involved and breaking of important best practices.

Mitigation

- No engagement of persons below 18 years of age in any works

Sexual Harassment

This can occur when supervisors and senior employees demand for sexual favours from either gender for placements.

Mitigation Measures

- Reporting any cases and stern action to be taken
- Discrimination in employment opportunities

7.3 Construction phase impacts

Negative Impacts at Operation Phase

Dust Emission

This may occur as a result of vehicles movements to and from site. The other sources of dust will be the rice milling activities. Dust is a comprises of particulate matter which may cause visual obstruction and respiratory issues in not managed

Mitigation

- Wet scrubbers to be installed in the chimney
- Increase the height of the chimney to recommended height
- Maintain the milling equipment to manufacturers specifications
- Workers to ware nose masks
- Sensitize engine users and drivers to monitor
- Plant buffer around the facility

Noise and Excessive Vibration

This may result from machine operations. Excessive Noise and vibration are a health risk to receiving individuals. It also disturbs peace.

Mitigation Measure

- Regular maintenance of the mill to manufacturer specifications
- Sound proof the Milling section if the noise levels surpasses allowable limits
- Provide employees exposed to high noise levels with ear muffs
- Comply with provisions of noise regulations of 2009

Waste Generation

This is anticipated in the form of rice husk, rice stalks, food wastes, waste packaging materials, plastics etc.

Mitigation Measures

- All solid waste generated during operation phase should be managed and disposed according to the requirements of Environmental Management and Coordination (Waste Management) regulations of 2006 and the Sustainable Solid waste management Act of 2021.
- All liquid waste generated either during operation phase should be managed or disposed according to the requirements of the environmental management and Coordination (water quality) Regulation 2006.
- Timber off-cuts can be used as fuel /firewood and hence should be sold for the same or donated to local period for the use as firewood.
- Paper waste especially that from cement packaging should be collected and disposed at NEMA disposing sites or reused in seedlings production.
- NEMA and County licensed solid and liquid waste collection and Disposal Company to be contracted to collect and dispose all solid waste from the flat.
- Waste handling bins with lids to be provided for dropping of waste.
- All waste bins to be regularly emptied.

Occupation, Safety and Health Issues

This are likely to occur as a result of interactions with machinery and equipment which may cause injury to users

Mitigation Measures

- Ensure that workers are equipped with necessary skills to enhance their safety at work
- Ensure that all machines and other moving parts of equipment are guarded to protect all workers from injury
- All workers must be provided with the complete set of personal protective clothes
- Have a local dispensary contact person in the event of need for first aid and avail first aid kit at the project site.

CHAPTER EIGHT: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

8.1 Overview

The environmental management plan indicates the likely environmental problems, the mitigation measures and assigns responsibility of ensuring the enforcement on a particular person. The cost and the time frame for the mitigation activities are also included in the plan. In this regard, an ESMP is an important output of an ESIA study as it also provides a monitoring and evaluation framework. The plan will deal with all the phases of the project life cycle.

Environmental and Social Management Plan (ESMP) for the proposed project is useful in ensuring that minimal adverse impacts are experienced and that the project is conducted in the most sustainable way. In this section, an ESMP and a Monitoring Programme have been developed for the proposed Pur Ber Rice Mill facility. The ESMP is relatively flexible to allow minimal changes of some processes while restricting over deviation that may defeat presence of an ESMP. The proposed project will be subjected to periodic review to allow continual improvement.

The EMP for the proposed Milling facility is based on the anticipated impacts, mitigation measures suggested and, environmental objectives set out in EMCA (1999). These objectives will be pursued through the spirit of continual improvement, prevention of pollution, and international best practice. As such, the ESMP addresses environmental concerns that may arise from all three project phases:

8.2 Construction phase

Construction phase which succeeds planning, involves purchase/acquisition of materials, transportation and storage, excavation and construction works. Table 1 outlines how anticipated adverse impacts in this stage will be mitigated.

8.3 Operational phase

Operational phase activities will consist of supplying the community with water. The activities have a potential to cause undesired impacts if environmental considerations are not factored in the implementation process. Consequently, Table 2 identifies possible means of dealing with anticipated adverse environmental impacts.

8.4 Decommissioning phase

When the project life is expired, there will be need to decommission the project, which can take a number of dimensions. The most common two dimensions are converting the project's resources into a different function or to dismantle structures, dispose of assets and reclaim the project site almost to the original state. In this case, the decommissioning phase will entail the second option and hence will present a number of unwanted impacts such as generation of solid waste, open manhole and destruction of flora among others. These negative impacts will be contained through the measures outlined in Table 8.1.

Table 8.1: Environment Management Plan at Construction Phase

	Potential Environmental / Social Impact	Recommended Action	Monitoring Indicator	Monitoring Frequency	Responsibility (Monitoring & Reporting)	Estimated Cost
1	Air Pollution and aerial emission	<ul style="list-style-type: none"> ✓ Ensure that maintenance of all machinery is done regularly and to manufacturers specifications to avoid the emission of noxious gases. ✓ Drivers and machine operators to avoid unnecessary running of engines and promptly report maintenance needs. ✓ Vehicles transporting dusty material like cement be covered at all times 	<ul style="list-style-type: none"> ✓ No. of inspections and Services ✓ No. of times machine operators and Drivers are sensitized on air pollution control ✓ Tree planting as a buffer zone 	Daily except when site is inactive	Contractor NAVCDP NEMA DOSH	30,000.00

	Potential Environmental / Social Impact	Recommended Action	Monitoring Indicator	Monitoring Frequency	Responsibility (Monitoring & Reporting)	Estimated Cost
2	Solid Waste Generation	<ul style="list-style-type: none"> ✓ None-reusable or recyclable waste to be cleared from the project site and disposed of in accordance with the Sustainable Solid Waste Management Act of 2021 ✓ Contractor to practice waste separation at source to enable easy recycling of re-usable waste materials ✓ Contractor to provide temporal waste disposal receptacle in site. ✓ Contractor to liaise with licensed waste collector to routinely collect and dispose the waste ✓ Train workers and local communities on solid waste management 	<ul style="list-style-type: none"> ✓ No. of segregation bins on site ✓ No. of licensed waste collectors contracted ✓ No. of sensitization forums held with workers and local communities 	Weekly	Contractor NVCDP NEMA	40,000.00
3	Surface and Ground water Contamination	<ul style="list-style-type: none"> ✓ The contractor to provided sanitary facility for the workers use at construction 	<ul style="list-style-type: none"> ✓ No. of site sanitary facility ✓ No. of water quality Tests in 	Fortnightly and monthly or	Contractor Public Health Officer	50,000.00

	Potential Environmental / Social Impact	Recommended Action	Monitoring Indicator	Monitoring Frequency	Responsibility (Monitoring & Reporting)	Estimated Cost
		<ul style="list-style-type: none"> ✓ Make arrangements to utilize the Nyangánde market sanitary facility ✓ Contract services of garbage collectors ✓ Civil works, excavations, cuts and fills to be compacted so that there is minimal soil loss 	<ul style="list-style-type: none"> adjacent shallow wells ✓ No. of times waste is collected 	during active construction	NAVCDP NEMA	
4	Traffic and Risks of Accidents	<ul style="list-style-type: none"> ✓ Provision of personal protective equipment to workers ✓ The work site should have an incident register, a first aid kit and first aid practitioner. ✓ Sensitize all workers and drivers on speed limits ✓ Erect appropriate signages ✓ Restriction to active project site 	<ul style="list-style-type: none"> ✓ % of workers with PPE ✓ No of incident register ✓ No. of First aid equipment ✓ No. of sensitization ✓ No of Signages 	Daily	Contractor NVCDP DOSH officer NEMA	40,000.00
5	Influx of laborers	<ul style="list-style-type: none"> ✓ As much as practicable employ local women, youth and persons with disability ✓ Local casual labourers to be atleast 70% of the workforce ✓ Provide for safe water supply and a functioning ablution services 	<ul style="list-style-type: none"> ✓ No. of sensitization ✓ Proportion of locals employed ✓ No. of ablution and safe water supply 	Weekly	Contractor NVCDP Social Safeguard officer	10,000.00

	Potential Environmental / Social Impact	Recommended Action	Monitoring Indicator	Monitoring Frequency	Responsibility (Monitoring & Reporting)	Estimated Cost
		<ul style="list-style-type: none"> ✓ Share existing unskilled works on rotational basis ✓ Sensitization on labour laws 				
6	Moral Decadence	<ul style="list-style-type: none"> ✓ Sensitize workers on HIV/AIDS, drug and substance abuse ✓ Sex education ✓ Contractor to provide dedicated place for dispensing of condoms ✓ Sensitization on GRM and GBV 	<ul style="list-style-type: none"> ✓ No. of sensitization done ✓ No. of Condoms dispensed 	Monthly	Contractor NVCDP Social Safeguard officer Environment Officer	20,000.00
7	Increased Child labour	<ul style="list-style-type: none"> ✓ No engagement of persons below 18 years of age in any works ✓ Enforcement of laws prohibiting child labour ✓ Enlighten children on importance of school 	Age of workers	daily	Contractor DOSH NVCDP Children Officers	10,000.00
8	Increased incidences of	<ul style="list-style-type: none"> ✓ Reporting any cases and stern action to taken 	<ul style="list-style-type: none"> ✓ No. Of SEAH cases s reported 	Monthly	NVCDP	0

	Potential Environmental / Social Impact	Recommended Action	Monitoring Indicator	Monitoring Frequency	Responsibility (Monitoring & Reporting)	Estimated Cost
	Gender Based Violence, Incidences of Sexual Exploitation, Abuse and Harassment	<ul style="list-style-type: none"> ✓ Distinct changing rooms and washrooms for Male and Female ✓ Sensitization on GBV,SEAH and employees code of conduct ✓ Sensitise employee on the nearest gender desk 			Social Safeguards officer Environment Officer	
9	Work injuries at work-place	<ul style="list-style-type: none"> ✓ Sensitize workers on Occupation Safety and health ✓ Provided well equipped first Aid Kit ✓ Provided incident register for use in site ✓ Machine operators to have appropriate skills training on tool box operation ✓ Designate onsite referral to local medical facility ✓ Designate a EHS person ✓ Restrict entry into active construction site e,g caution tape and signages ✓ Registration Dosh Registration 	<ul style="list-style-type: none"> ✓ Number and types of PPEs provided to workers. ✓ Number of trainings held ✓ Number of fully equipped first aid kits ✓ A designated nearby health facility ✓ Certificate of registration with DOSH 	<ul style="list-style-type: none"> ✓ Contractor ✓ CPCU (CAIO, CESSCO) ✓ DOSH ✓ CIDU ✓ Labour office 	During construction	As per the BoQ

	Potential Environmental / Social Impact	Recommended Action	Monitoring Indicator	Monitoring Frequency	Responsibility (Monitoring & Reporting)	Estimated Cost
			✓ Hazard and risk management plan			
10	Soil Erosion	<ul style="list-style-type: none"> ✓ Restrict excavation to project site ✓ Stock piling excavated soil for reuse in back filling ✓ Scheduling construction to non-rainy period 	<p>Area exposed to erosion agents</p> <p>Scheduling construction works</p>	Daily	CPCU Environment Officer	As per BoQ
11	Noise and excessive vibration	<ul style="list-style-type: none"> ✓ Sensitize construction equipment operators and driver of keeping low noise level ✓ Insulate active work site if highly noise emission ✓ Use of PPEs like Earplugs, muffs when in Noisy areas ✓ Construction to restricted to day time 	<p>No. of sensitization done</p> <p>No. of complaints recorded</p>	Monthly	NEMA CPCU (CESCO,CAI O,CIDU, IWUA)	
12	Accidental Oil spills	<ul style="list-style-type: none"> ✓ Ensure the machineries are repaired at the garage and not at the construction areas ✓ Installation of oil/water interceptor within the construction site 	<ul style="list-style-type: none"> ✓ Designated garage ✓ Vehicle/machineries maintenance schedule 	Monthly	<ul style="list-style-type: none"> ✓ Contractor ✓ NEMA ✓ PHO ✓ CPCU (CESCO, CIAO) 	50,000

	Potential Environmental / Social Impact	Recommended Action	Monitoring Indicator	Monitoring Frequency	Responsibility (Monitoring & Reporting)	Estimated Cost
		<ul style="list-style-type: none"> ✓ Sensitize workers and the community of the impacts of oil in the environment ✓ Put in place appropriate remedial measures on handling accidental oil spills 	<ul style="list-style-type: none"> ✓ Level of implementation of vehicle/machine maintenance schedule ✓ Installed Oil/water interceptor ✓ No of sensitization meetings held ✓ Measures in place to manage oil spills 		<ul style="list-style-type: none"> ✓ IWUA ✓ CIDU 	
13	Project related grievances	<ul style="list-style-type: none"> ✓ <i>Sensitize project employees on existing project GRM</i> ✓ <i>Maintain grievance register</i> ✓ <i>Timely redress of any grievances recorded</i> ✓ <i>Equitable and inclusive distribution of employment opportunities (at least 70% of casual workers to be recruited from the local community)</i> 	<ul style="list-style-type: none"> ✓ <i>No of sensitization meetings held</i> ✓ <i>Grievance register</i> ✓ <i>No of grievances resolved</i> ✓ <i>Employment register</i> 		<ul style="list-style-type: none"> ✓ <i>PHO</i> ✓ <i>CPCU (CSS&GM O, CESCO)</i> ✓ <i>Contractor</i> ✓ <i>National Police</i> ✓ <i>Local admin</i> ✓ <i>Nyachoda IWUA</i> ✓ <i>SAIC</i> 	5000.00

Table 8.2 Environment and Social Impacts Management Plan at Project Operation Phase

	Potential Environmental / Social Impact	Recommended Action	Monitoring Indicator	Monitoring Frequency	Responsibility	Estimated Cost
1	Dust Emmissions	<ul style="list-style-type: none"> •Wet scrubbers to be installed in the chimney •Increase the height of the chimney to recommended height •Maintain the milling equipment to manufacturers specifications •Workers to wear nose musks and other PPE's •Sensitize engine operators and drivers on emission minimization •Growing of buffer Trees around the facility •Rice blower exhaust point to be secured from blowing wind 	<p>No of Wet scrubbers installed</p> <p>No of maintenance done</p> <p>No. of sensitization done</p> <p>No. of buffer trees</p> <p>No. Wind breaker structure at husks exhausting point</p>	Quartely	<p>Pur Ber Leadership</p> <p>NEMA</p> <p>DOSH</p> <p>Environment Officer</p>	100K
2	Noise and Excessive Vibration	<ul style="list-style-type: none"> •Regular maintenance of the mill to manufacturer specifications •Sound proof the Milling section if the noise levels surpasses allowable limits 	<p>No. Machine Service</p> <p>Area sound proofed</p>	Monthly	<p>Pur Ber Leadership</p> <p>NEMA</p>	150K

	Potential Environmental / Social Impact	Recommended Action	Monitoring Indicator	Monitoring Frequency	Responsibility	Estimated Cost
		Provide employees exposed to high noise levels with ear muffs Comply with provisions of EMC (noise and excessive vibration control) regulations of 2009	No. of Ear Muffs provided		DOSH Environment Officer	
3	Waste Generation	<ul style="list-style-type: none"> • Solid waste generated during operation phase should be managed and disposed according to the requirements of Environmental Management and Coordination (Waste Management) regulations of 2006 and the Sustainable Solid waste management Act of 2021 • All liquid waste generated during operation phase should be managed and disposed according to the requirements of the environmental management and Coordination (water quality) Regulation 2006 • Timber off-cuts can be used as fuel /firewood and hence should be sold for the same or donated to local period for the use as firewood • Paper waste especially that from cement packaging should be collected and 	Levels of Compliance to relevant laws No. of waste collection Chambers Quantity (Kgs) of waste recycled	Monthly	Pur Ber Leadership NEMA Environment Officer	10K per month

	Potential Environmental / Social Impact	Recommended Action	Monitoring Indicator	Monitoring Frequency	Responsibility	Estimated Cost
		<p>disposed at NEMA disposing sites or reused in seedlings production</p> <ul style="list-style-type: none"> • NEMA and County licensed solid and liquid waste collection and Disposal Company to be contracted to collect and dispose all solid waste from the flat. • Waste handling bins with lids to be provided for dropping of waste. • All waste bins to be regularly emptied. • Value addition on the rice husk as maybe animals' feeds, Bio-char production and briquetting. 				
4	Occupation Health and Safety	<ul style="list-style-type: none"> • Ensure that workers are equipped with necessary skills to enhance their safety at work • Ensure that all machines and other moving parts of equipment are guarded to protect all workers from injury • All workers must be provided with the complete set of personal protective clothes • Have a local dispensary contact person in the event of need for first aid and avail first aid kit at the project site 	<p>No. of workers with PPEs</p> <p>No. of areas with restricted entry</p> <p>No. of sensitization workshops</p> <p>No. of well serviced first aid equipment</p>	Monthly	Dosh officer NEMA Environment Officer	50k

	Potential Environmental / Social Impact	Recommended Action	Monitoring Indicator	Monitoring Frequency	Responsibility	Estimated Cost
5	Benefit Sharing Conflicts	<ul style="list-style-type: none"> • Members education • Adhering to cooperatives Societies Act • Adherence to cooperatives compliance • Formulation of Cooperative Governance and financial management policy • Adherence to the MOU signed between The FPO and County Government 	<p>No. of Complains addressed</p> <p>Levels of adherence to cooperative and financial management Policy</p> <p>Level of adherence to MoU</p>	Monthly	Cooperatives Officer Social Safeguards	50,000
6	Threat to sustainability of the Project	<ul style="list-style-type: none"> • Adherence to FPO and County MoU provisions • In-cooperation of other future investors should not digress from the project objective 	Levels of adherence to MOU	Quarterly	Cooperatives officer Pur Ber Cooperative Ledaership	0
7	Risk of product contamination	<ul style="list-style-type: none"> • Conform to the Food handling certification requirements • Appropriate storage • Regular quality Check 	Level of conformance to food quality standards	Random checks at production	Food Quality assurance officer	5000 per sample

	Potential Environmental / Social Impact	Recommended Action	Monitoring Indicator	Monitoring Frequency	Responsibility	Estimated Cost
8	Oil spillage	<ul style="list-style-type: none"> • Installation of oil separators • Provide for oil collection equipment • Dispose of used oil to recyclers 	Level of oil spillage management	Monthly	Pur ber leadership	-
9	Crime and Insecurity	<ul style="list-style-type: none"> • Increase servailance on crime • Alert the security organs on potential threats • Involve Miji Kumi in handling 	Crime rate	Monthly	Local demonstration Pur Ber Leadership	-

Table 8.3: EMSP for decommissioning phase of proposed project

<i>Expected Negative Impacts</i>	<i>Recommended Action</i>	<i>Monitoring Indicator</i>	<i>Responsibility Monitoring Implementation</i>	<i>Monitoring Frequency</i>	<i>Cost</i>
Mishandling of demolition Waste	<ul style="list-style-type: none"> • A decommissioning ESIA will be done • Use an integrated solid waste management system i.e. Through a hierarchy of options: Source reduction; Recycling Reuse; Sanitary land filling • Provide facilities for proper handling and storage of demolition materials to reduce the amount of waste caused by damage • Use materials that have minimal packaging to avoid the generation of excessive packaging waste. • Ensure adequate collection and storage of waste on the site and safe transportation to the disposal sites and disposal methods at licensed disposal sites 	Registered waste collector engaged	Contractor NEMA DOSHS	One-off	1,000,000
Noise and vibration generation	<ul style="list-style-type: none"> • Avoid idling of machinery when not in use. • Provision of PPEs and clothing including ear muff to workers. • Construction activities to be undertaken during day time. 		Contractor NEMA DOSHS	On - off	20,000

<i>Expected Negative Impacts</i>	<i>Recommended Action</i>	<i>Monitoring Indicator</i>	<i>Responsibility Monitoring Implementation</i>	<i>Monitoring Frequency</i>	<i>Cost</i>
Spills /fuels and lubricants	• Proper maintenance of vehicles and equipment		Contractor NEMA DOSH	weekly	50,000
Loss of livelihoods	• Alternative livelihoods and diversification		Contractor Environmental sub committee	Continuous	variable

CHAPTER NINE: CONCLUSIONS AND RECOMMENDATIONS

9.1 Conclusions

This ESIA Study Report has demonstrated that the construction and operation of the proposed Pur Ber Rice Milling Plant will have positive impacts to the local economy and the country at large. The impacts will include employment to local community members, value addition thereby enhancing market access and consequently more profits to the farmers. This will encourage an increase in food production thus increasing food security, creation of job opportunities thus improving the standards of living among the locals, increase in Government revenue among others. However, negative impacts are anticipated such as pollution (to Air, Water, soil from fumes,), accidents (from injuries among others), increase in immorality, diseases, discrimination against the marginalized and people living with disability among others.

The proposed project design has integrated mitigation measures with a view to ensuring compliance with all the applicable laws and procedures. The infrastructures will be built to the required planning/ architectural/ structural standards putting into consideration the biophysical conditions. During project implementation and operation, sustainable environmental management (SEM) will be ensured; avoiding unsustainable use of natural resources, conserving nature and ensure respectful and fair treatment of all people working on the project and the general public.

In relation to the proposed mitigation measures that will be incorporated during construction and operational phases, the project is considered beneficial and important. It is our considerable opinion that the proposed development is a timely venture that will subscribe to the government's efforts of reducing poverty and increasing food security through value addition. Major concerns should nevertheless be focused towards minimizing the occurrence of impacts that would degrade the general environment. This will however be overcome through close adherence and implementation of the recommended Environmental and Social Management Plan (ESMPs).

It is therefore our recommendation that the project be allowed to go ahead with the implementation provided the outlined mitigation measures are adhered to.

9.2 Recommendations

It is recommended that:

- The proposed project be implemented at the proposed site. It is at a close proximity to the largest irrigation scheme in Kisumu County. The project will result to more beneficial impacts than the negative.
- Diligence on the part of the contractor and proper supervision by the Supervising Engineer during construction and the operation phase is crucial for mitigating the negative impacts.

- The ESMP be adopted and applied as the basis for addressing environmental and social aspects throughout the project cycle with necessary amendments as may be found appropriate during operation and implementation. The ESMP in this regard will be the guiding tool for impact monitoring and future audits. An environmentalist and sociologist should then be engaged to ensure its implementation.

CHAPTER TEN: REFERENCES

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ANNEXES

Screening Check List

ANNEX 3: ENVIRONMENTAL AND SOCIAL SCREENING CHECKLIST BY BENEFICIARY COMMUNITIES FOR INVESTMENTS (COMMUNITY INVESTMENTS, COUNTY LEVEL INVESTMENT, FPO INVESTMENT)

Section A: Background Information

Name of County.....	Kisumu	
Name of CPCU - Environmental /Social Safeguard Compliance Officer	(i) Susan Akinyi Omwa	
INVESTMENT LOCATION (Include GPRS Co-ordinates)		
Name of CIG/VMG/Group	Pur ber Rice farmers Cooperative Society limited	
Postal Address:		
Contact Persons		
(i)	David Mdhine	Cell phone: 0700393484
(ii)		Cell phone
Sub -project name.....	ESTABLISHMENT OF A MULTI STAGE RICE MILLING FACILITY FOR PUR BER RICE FARMERS COOPERATIVE SOCIETY	
Estimated cost (Kshs.).....	Approximately 39,000,000/=	
Approximate size of land area available for the sub -project.....	0.09 ha	
Objectives of the Sub - project	Increased Market access and value addition	
Activities/enterprises to be undertaken (List)...		
(i)	Construction of a mill house & a store	
(ii)	mill installation	
(iii)	Construction of an office block and an ablation block	

Section B: Environmental Issues

Will the Subproject/Investment:	Yes	No	Remarks (If yes, elaborate)
Create a risk of increased soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Create a risk of increased deforestation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Create a risk of increasing any other soil degradation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Affect soil salinity and alkalinity?	<input type="checkbox"/>	<input type="checkbox"/>	
Divert the water resource from its natural course/location?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cause pollution of aquatic ecosystems by sedimentation and agro-chemicals, oil spillage, effluents, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	
Introduce exotic plants or animals?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Involve drainage of wetlands or other permanently flooded areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cause poor water drainage and increase the risk of water-related diseases such as malaria?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Reduce the quantity of water for the downstream users?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Result in the lowering of groundwater level or depletion of groundwater?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Create waste that could adversely affect local soils, vegetation, rivers and streams or groundwater?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Reduce various types of livestock production?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Be on monoculture cropping?	<input type="checkbox"/>	<input type="checkbox"/>	
Affect any watershed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Focus on Biomass/Bio-fuel energy generation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

If the answers to any of the above is 'yes', please include an ESMP with Subproject application.

Section C: Socio-economic Issues

Will the subproject/Investment:	Yes	No	Remarks (If yes, elaborate how)
Have challenges for women farmers to benefit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Target vulnerable community members such as physically challenged, Child headed household etc..?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Interfere with the normal health and safety of the worker/employee?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Reduce the employment opportunities for the surrounding communities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Reduce settlement (no further area allocated to settlements)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Reduce income for the local communities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Increase insecurity due to introduction of the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Increase exposure of the community to HIV/AIDS?	<input type="checkbox"/>	<input type="checkbox"/>	
Induce conflict?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	need for an agreement on equal sharing of benefits to members
Have machinery and/or equipment installed for value addition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Introduce new practices and habits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Lead to child delinquency (school drop-outs, child abuse, child labour, etc.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Lead to gender disparity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Lead to poor diets?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Lead to social evils (drug abuse, excessive alcohol consumption, crime, etc.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Will engage community labour	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If yes, Community labor engagement agreement required
Lead to exclusion of disadvantaged and vulnerable groups from participating and benefiting from the investments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Exacerbate social exclusion of other members of the society	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Lead to increase GBV/SEAH issues	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Section D: Natural Habitats

Will the Subproject:	Yes	No	Remarks (If yes, elaborate)
Be located within or near environmentally sensitive areas (e.g. intact natural forests, mangroves, wetlands) or threatened species?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Adversely affect environmentally sensitive areas or critical habitats – wetlands, woodlots, natural forests, rivers, etc.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Affect the indigenous biodiversity (Flora and fauna)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cause any loss or degradation of any natural habitats, either directly (through project works) or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	abandon block should be a no decision due to high water table and frequent flooding to minimize water permeability.
Affect the aesthetic quality of the landscape?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Reduce people's access to the pasture, water, public services or other resources that they depend on?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Increase human-wildlife conflicts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Use irrigation system in its implementation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

If the answers to any of the above is 'yes', please include an ESMP with Subproject application.

Section E: Pesticides and Agricultural Chemicals

Will the subproject.....:	Yes	No	Remarks (If yes, elaborate)
Involve the use of pesticides or other agricultural chemicals, or increase existing use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cause contamination of watercourses by chemicals and pesticides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cause contamination of soil by agrochemicals and pesticides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Experience effluent and/or emissions discharge?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Involve annual inspections of the producers and unannounced inspections for Export produce?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Require scheduled chemical applications?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Require chemical application even to areas distant away from the focus?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Require chemical application to be done by vulnerable group (pregnant mothers, chemically allergic persons, elderly, etc.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

If the answer to the above is 'yes', please consult the IPMF that has been prepared for the project to help prepare IPMP.

Section F: Indigenous Peoples/VMGs as per ESS7

Are there:	Y	N	Remarks
IP/VMGs living within the boundaries of, or near the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Name of the VMG community
Members of VMGs in the area who could benefit from the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
IP/VMGs livelihoods to be affected by the subproject?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, How
Unique/specific challenges for VMGs to benefit from the project	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Explain
VMGs minority in the community	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, Explain/name of minority VMG
Does VMG require to donate land to benefit from the project		<input checked="" type="checkbox"/>	If yes, follow Free, prior and informed consent procedure

If the answer to any of the above is 'yes', please consult the VMGF that has been prepared for the project.

Section G: Land Acquisition and Access to Resources

Will the subproject/investment:	Yes	No	Remarks
Require that land (public or private) be acquired (temporarily or permanently) for its development?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, elaborate the tenure type
Require that community land be acquired (temporarily or permanently) for its development?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, elaborate the registration status and community claims. Community land agreement required following principles of FPIC.
Require more than 10 percent of the affected private land parcel	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, exclude from the project proposal
Use land that is currently occupied or regularly used for productive purposes (e.g. gardening, farming, pasture, fishing locations, forests)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, Elaborate the current use/Prepare IRP
Complete land documents are not available for the sub- project investment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, what process is needed?
Is the land proposed have encumbrances?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, elaborate the encumbrance
Physically displace individuals, families or businesses?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, exclude from the project proposal
Cause loss of income for more than 30 days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, how many. Exclude from the project proposal
Result in temporary or permanent loss of crops, fruit trees/fencing and pasture land/ loss of income from business activity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, elaborate and prepare IRP
Adversely affect small communal cultural property such as funeral and burial sites, or sacred groves?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, avoid or exclude from project proposal
Result in involuntary restriction of access by people to legally designated parks and protected areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, exclude
Be on monoculture cropping?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

If the answer to any of the above is 'yes', please consult the mitigation measures in the ESMF.

Section H: Proposed action

(i) Summarize the above:	(ii) Guidance
<input type="checkbox"/> All the above answers are 'No' <input type="checkbox"/> There is at least one 'Yes'	<ul style="list-style-type: none"> • If all the above answers are 'No', there is no need for further action; • If there is at least one 'Yes', please describe your recommended course of action (see below).

(iii) Recommended Course of Action

If there is at least one 'Yes', which course of action do you recommend?

- CPCU, Social services officer, labour Officer, Children Officer and NEMA - CDE will provide detailed guidance on mitigation measures as outlined in the ESMF; and
- Specific advice is required from CDE¹, Lead Scientist and CPCUs regarding Sub -project specific Assessment (s) and also in the following area(s)

All Subproject applications/proposals MUST include a completed ESMF checklist. The NAVCDP-CPCU will review the subproject applications/proposals and the CDEs will sign off; The input from the NLC, Social Services office, Children's office, labour office and the CSSCO will be sought before the documents are presented to the CPSC.

The proposals will then be submitted to CPSC for clearance for implementation by communities in the proposed Subprojects. The projects that require CPRs will be forwarded to NPCU for further analysis also may be forwarded to the World bank for approval and finally to NEMA for clearance certificate (License).

Expert Advice

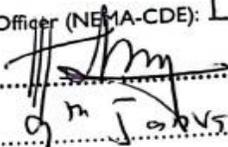
The Government of Kenya through the Department of Monuments and Sites of the National Museums of Kenya can assist in identifying and, mapping of monuments and archaeological sites;

Expert guidance will also be provided by the land registrar on all issues related to land tenure, The children department on all issues on children, especially child labour, plus department of social services on IPs/vulnerable groups in the community, and

Subproject specific Environmental and Social impact assessments, if recommended, must be carried out by experts registered with NEMA and be followed by monitoring and review. During the process of conducting an ESIA's the proponent shall seek views of persons who may be affected by the Subproject. The ESSIO requires consultation of Subproject affected groups and disclosure of ESIA's conclusions. In seeking views of the public after the approval of the Subproject, the proponent shall avail the draft ESIA report at a public place accessible to project-affected groups and local NGOs/CSO/SAIC/CDDCs.

¹County Director of Environment and the County Technical Team

Completed by:
 Name: Susan Omuga
 Position / Community: CESCO
 Date: 6th January 2025

Field Appraisal Officer (NEMA-CDE): Leonard Ofuok
 Signature: 
 Date: 9th January 2025



Note:

Project category	Characteristics
High impact	Full and extensive ESIA needed- irreversible environmental impacts; impacts not easy to pick or isolate and mitigation cost expensive; EMP design not easily done; Must have the ESIA done and future annual EAs instituted
Medium impact	Site specific environmental impacts envisaged; mitigation measures are easy to pick, not costly and ESMP needed, design readily done; need an ESIA and future EAs
Low impact	Have minimal or occasionally NO adverse environmental & social impacts; exempted from further environmental processes save environmental audits. ESMP required
Land	Land tenure documentation needed and land resolution and consent Form needed with project affected person/community
Loss of income and assets	Income restoration plan needed
Presence of VMG/IP	Additional actions needed
Risk of Child labor/SEAH	Additional actions needed

Questionnaires and Key Informants Interviews



REPUBLIC OF KENYA ⁵




NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

SEEKING VIEWS OF THE MOST AFFECTED PUBLIC/NEIGHBOR/INSTITUTION

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

The National Agriculture Value Chain Development Project (NAVCDP) is a World Bank, Government of Kenya and County Government of Kisumu funded project with an objective to increase market participation and value addition for targeted farmers in select value chains in project areas. The project is proposing to *establish a Multi-Stage Rice Milling Facility for Pur Ber FPO* to enhance efficiency and capacity in paddy rice processing. Pursuant to the provision of the Environmental Management and coordination Act, 2015 and the Environmental Impact Assessment and Audit) Regulations 2003 require that an Environmental and Social Impact Assessment is conducted and a public consultation be undertaken to establish the views and concerns of the interested and/or affected stakeholders and in pursuance of sustainability and harmony.

Thus, as a member of the local community member/neighbor/institution within/around the proposed project area, we kindly request for your comments on the expected socio-economic and environmental impacts of the proposed project.

Your response will be treated with utmost confidentiality.

1. Is the proposed project known to you? YES NO

2. How far are you staying from the proposed project?
 a) ≤100M b) ≤500M c) ≥1KM

3. How long have you been a neighbor to the proposed project site? 2 years

4. What impact according to your own opinion will arise during the construction phase of the proposed project?
 a) It will give job opportunity to the people.
 b) It will help in selling milled rice
 c) It will reduce animal activities
 d) Local shops will benefit because their goods will

5. What positive impact according to your own opinion will arise during the operation phase of the proposed project?
 a) It will unite people especially those unbelieved
 b) Both trained and untrained will get job
 c) It will bring joy in the eyes of the people
 d) Business opportunities will be found.

5. What negative impacts (if any) according to your own opinion will arise during the operation phase of the proposed project?

- a) It may bring a lot of mosquitoes
- b) local milling machine may collapse.
- c) leadership rangle everybody would want to alcohol
- d) _____
- e) _____

6). Proposed mitigation measures to the No.5 above:

- a) Dispute management committee to be started.
- b) come up with standard price for milling.
- c) Electing member according to the share.
- d) _____
- e) _____

7) Is the project relevant to the area? Yes because had seen others in the area.

8) According to your own opinion should the proposed project continue or not?

YES NO

9) Consul tee's information

Name: Otiens Omari Omw

Phone number: 0719285529

Signature: [Signature]

Date: 14/01/25

REPUBLIC OF KENYA 5


NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY
SEEKING VIEWS OF THE MOST AFFECTED PUBLIC/NEIGHBOR/INSTITUTION
ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

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Thus, as a member of the local community member/neighbor/institution within/around the proposed project area, we kindly request for your comments on the expected socio-economic and environmental impacts of the proposed project.

Your response will be treated with utmost confidentiality.

1. Is the proposed project known to you? YES NO
2. How far are you staying from the proposed project?
 - a) $\leq 100M$ b) $\leq 500M$ c) $\geq 1KM$
3. How long have you been a neighbor to the proposed project site? _____
4. What positive impact according to your own opinion will arise during the construction phase of the proposed project?
 - a) — Industrialization of area
 - b) — Improved labour supply (labour market)
 - c) — Improved habitat
 - d) — Improved
5. What positive impact according to your own opinion will arise during the operation phase of the proposed project?
 - a) Value addition to rice value chain in the area.
 - b) Employment opportunity
 - c) Industrialization
 - d) Economic up grade of Kisumu/Kanyagwal.
 - e) Improvement of lively road.
 - d) Urbanization of Kisumu/Kanyagwal.
 - f) Improved road network
 - g) Improved electricity supply and
 - h) maintenance improved health facilitation.

5. What negative impacts (if any) according to your own opinion will arise during the operation phase of the proposed project?

- a) Cultural Interference
- b) Air Pollution
- c) Socio-economic interference ie prostitution
- d) child labour
- e) _____

6). Proposed mitigation measures to the No.5 above:

- a) construction of C.R.C's
- b) improved afforestation for the carbon tree
- c) Restrictive government officers & officers to
- d) Maintenance structure of roads
- e) _____

Project help

7) Is the project relevant to the area? _____

8) According to your own opinion should the proposed project continue or not?

YES

NO

9) Consul tee's information

Name: MILTON KITOPO NDEADL

Phone number: 0746975153

Signature: [Signature]

Date: 14/01/2025

REPUBLIC OF KENYA 5



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

SEEKING VIEWS OF THE MOST AFFECTED PUBLIC/NEIGHBOR/INSTITUTION

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

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Your response will be treated with utmost confidentiality.

1. Is the proposed project known to you? YES NO
2. How far are you staying from the proposed project?
 - a) ≤100M
 - b) ≤500M
 - c) ≥1KM
3. How long have you been a neighbor to the proposed project site? _____
4. What positive impact according to your own opinion will arise during the construction phase of the proposed project?
 - a) have workers
 - b) have grades to super market
 - c) to grow our income
 - d) provide us with many food
5. What positive impact according to your own opinion will arise during the operation phase of the proposed project?
 - a) some will run away
 - b) some will have many wife
 - c) some will die because of a lot of money
 - d) drug abuse

5. What negative impacts (if any) according to your own opinion will arise during the operation phase of the proposed project?

- a) To make payment throw back
- b) To make agreement with family
- c) To be faithful to your family.
- d) _____
- e) _____

6). Proposed mitigation measures to the No.5 above:

- a) _____
- b) _____
- c) _____
- d) _____
- e) _____

7) Is the project relevant to the area? _____

8) According to your own opinion should the proposed project continue or not?

YES NO

9) Consul tee's information

Name: Mulicent bongo

Phone number: 0706070033

Signature: AA

Date: 14/1/25

REPUBLIC OF KENYA 5



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

SEEKING VIEWS OF THE MOST AFFECTED PUBLIC/NEIGHBOR/INSTITUTION

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

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Thus, as a member of the local community member/neighbor/institution within/around the proposed project area, we kindly request for your comments on the expected socio-economic and environmental impacts of the proposed project.

Your response will be treated with utmost confidentiality.

1. Is the proposed project known to you? YES NO

2. How far are you staying from the proposed project?

a) ≤100M b) ≤500M c) ≥1KM ✓

3. How long have you been a neighbor to the proposed project site? 40y

4. What positive impact according to your own opinion will arise during the construction phase of the proposed project?

a) employment

b) increase maize milling business

c)

d)

5. What positive impact according to your own opinion will arise during the operation phase of the proposed project?

a) Kisi Kisa Ujanga

b) increase rice marketing

c) livelihood empowered

d)

5. What negative impacts (if any) according to your own opinion will arise during the operation phase of the proposed project?

- a) Waste Management
- b) _____
- c) _____
- d) _____
- e) _____

6. Proposed mitigation measures to the No.5 above:

- a) _____
- b) Engus system
- c) _____
- d) _____
- e) _____

7) Is the project relevant to the area? _____

8) According to your own opinion should the proposed project continue or not?

YES NO

9) Consultant's information

Name: Joseph Okuel

Phone number: 0727569596

Signature: [Signature]

Date: 14/1/2025

REPUBLIC OF KENYA

5



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

SEEKING VIEWS OF THE MOST AFFECTED PUBLIC/NEIGHBOR/INSTITUTION

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

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Thus, as a member of the local community member/neighbor/institution within/around the proposed project area, we kindly request for your comments on the expected socio-economic and environmental impacts of the proposed project.

Your response will be treated with utmost confidentiality.

1. Is the proposed project known to you? YES NO
2. How far are you staying from the proposed project?
 - a) $\leq 100M$ b) $\leq 500M$ c) $\geq 1KM$ ✓
3. How long have you been a neighbor to the proposed project site? 500M
4. What positive impact according to your own opinion will arise during the construction phase of the proposed project?
 - a) Job creation to community / youth / women / Man / PWD
 - b) operation of products
 - c) Cash Flow / within the catchment Area
 - d) Beautiful Surrounding within the construction site
5. What positive impact according to your own opinion will arise during the operation phase of the proposed project?
 - a) livelihood improvement
 - b) Fuel security
 - c) Value Addition of Waste (Hoy, Dust)
 - d) solitizing of Fuels - from production Market

5. What negative impacts (if any) according to your own opinion will arise during the operation phase of the proposed project?

- a) Cultural Influence among the Foreigners
- b) Dust in health
- c) Air Pollution / noise Pollution
- d) - sex Harassment (immoralities)
- e) - No field operation plenty of work from the project

6). Proposed mitigation measures to the No.5 above:

- a) Demarkation to site
- b) Plant trees
- c) use protective Gears / Dine
- d) Manage solid waste
- e) skilled labour's.

7) Is the project relevant to the area? yes its concerning the Area.

8) According to your own opinion should the proposed project continue or not?

YES NO

9) Consul tee's information

Name: Imelde Oduo

Phone number: 0726227102

Signature: 

Date: 14/01/2025

REPUBLIC OF KENYA



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

SEEKING VIEWS OF THE MOST AFFECTED PUBLIC/NEIGHBOR/INSTITUTION

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

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Your response will be treated with utmost confidentiality.

- 1. Is the proposed project known to you? YES NO
- 2. How far are you staying from the proposed project?
a) ≤100M b) ≤500M c) ≥1KM
- 3. How long have you been a neighbor to the proposed project site? 2
- 4. What positive impact according to your own opinion will arise during the construction phase of the proposed project?
a) _____
b) LESS INSECURITY
c) CREAT JOBS
d) FLOW OF MONEY.
- 5. What positive impact according to your own opinion will arise during the operation phase of the proposed project?
a) _____
b) _____
c) _____
d) _____

5. What negative impacts (if any) according to your own opinion will arise during the operation phase of the proposed project?

- a) - DISEASES ATTACK
- b) _____
- c) - MORE OF ALIENS AS
- d) WORKERS
- e) _____

6. Proposed mitigation measures to the No.5 above:

- a) _____
- b) EMPLOY LOCAL
- c) _____
- d) - TRAIN ON SELF CONSTRAINT
- e) _____

7) Is the project relevant to the area?

8) According to your own opinion should the proposed project continue or not?

YES NO

9) Consultant's information

Name: CHARLES ONSORE

Phone number: 0716100172

Signature: 

Date: 14/1/25



REPUBLIC OF KENYA



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

SEEKING VIEWS OF THE MOST AFFECTED PUBLIC/NEIGHBOR/INSTITUTION

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Your response will be treated with utmost confidentiality.

- 1. Is the proposed project known to you? YES NO
- 2. How far are you staying from the proposed project?
a) ≤ 100M b) ≤ 500M c) ≥ 1KM
- 3. How long have you been a neighbor to the proposed project site? 2
- 4. What positive impact according to your own opinion will arise during the construction phase of the proposed project?
a) Job Creation
b) Class Insecurity
c) Open market
d) _____
- 5. What positive impact according to your own opinion will arise during the operation phase of the proposed project?
a) _____
b) _____
c) _____
d) _____

5. What negative impacts (if any) according to your own opinion will arise during the operation phase of the proposed project?

- a) → Air Pollution
- b) → Bad roads due to
- c) heavy trucks turning
- d) _____
- e) _____

6). Proposed mitigation measures to the No.5 above:

- a) _____
- b) → create sand trap
- c) _____
- d) → frequent road maintenance
- e) _____

7) Is the project relevant to the area? Yes

8) According to your own opinion should the proposed project continue or not?

YES NO

9) Consul tee's information

Name: Monica Opono

Phone number: 0727052247

Signature: 

Date: 14/1/25

REPUBLIC OF KENYA



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

ESIA PUBLIC PARTICIPATION/FGD

The National Agriculture Value Chain Development Project (NAVCDP) is a World Bank, Government of Kenya and County Government of Kisumu funded project with an objective to increase market participation and value addition for targeted farmers in select value chains in project areas. The project is proposing to establish a Multi-Stage Rice Milling Facility for Pur Ber FPO to enhance efficiency and capacity in paddy rice processing. Pursuant to the provision of the Environmental Management and coordination Act, 2015 and the Environmental Impact Assessment and Audit) Regulations 2003 require that an Environmental and Social Impact Assessment is conducted and a public participation be undertaken to establish the views and concerns of the interested and/or affected stakeholders and in pursuance of sustainability and harmony.

We kindly request for your views, opinions and recommendations regarding the project.

1. Who owns the land where the proposed project is to be done?

PUR BER RICE FARMERS GS
PUR BER RICE FARMER COOPERATIVE SOCIETY

2. Appropriate size (acreage) of land per individual

3. Number of beneficiaries

4. What POSITIVE socio-economic do you anticipate from the proposed project?

a. Construction Phase..... Great job

b. Operation Phase..... Open market

5. What POSITIVE environmental impacts do you anticipate from the proposed project?

a. Construction Phase... Market for food vendors.

b. Operation Phase... Money circulation within the region

6. What NEGATIVE socio-economic do you anticipate from the proposed project? (probe for land conflicts, animal-human conflicts, social inclusion, drug abuse, gender disparity, water use conflicts, labour, sexual harassment, occupation safety and health issues etc)

a. Construction Phase... ~~pollution~~ Destruction from machines. Contraction of diseases

b. Operation Phase... ~~pollution~~ Lack of protective measures.

7. What NEGATIVE environmental impacts do you anticipate from the proposed project? (Probe traffic, water, land, air, noise, dust, solid waste and ecological health)

c. Construction Phase... Destruction from machines.

d. Operation Phase..... pollution.....

e. Decommissioning Phase..... failure of machines.....

8. Make suggestions on the Mitigation Measures for each of the negatives impact stated above

- Members will be trained on how to use the waste produced to make manure.
- Regular maintaining of land.
- > Improved health quality to the community
- > Food Security
- > Value addition of waste.
- > Both unskilled and skilled labour
- > Improve economy in the society.

REPUBLIC OF KENYA



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

SEEKING VIEWS OF THE MOST AFFECTED PUBLIC/NEIGHBOR/INSTITUTION

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Your response will be treated with utmost confidentiality.

1. Is the proposed project known to you? YES NO
2. How far are you staying from the proposed project?
 - a) ≤100M
 - b) ≤500M
 - c) ≥1KM
3. How long have you been a neighbor to the proposed project site? 10
4. What positive impact according to your own opinion will arise during the construction phase of the proposed project?
 - a) Job Creation
 - b) Open market
 - c) Less Insecurity
 - d) Economic empowerment
5. What positive impact according to your own opinion will arise during the operation phase of the proposed project?
 - a) _____
 - b) _____
 - c) _____
 - d) _____

5. What negative impacts (if any) according to your own opinion will arise during the operation phase of the proposed project?

- a) - prevalence of disease
- b) - Bad roads
- c) _____
- d) _____
- e) _____

6). Proposed mitigation measures to the No.5 above:

- a) _____
- b) - Sensitivity on self
- c) respect
- d) _____
- e) - frequent road maintenance

7) Is the project relevant to the area? YES

8) According to your own opinion should the proposed project continue or not?

YES NO

9) Consultant's information

Name: PAUL NDOLE

Phone number: 07

Signature: [Signature]

Date: 14/1/25

REPUBLIC OF KENYA 5



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT - KISUMU COUNTY

SEEKING VIEWS OF THE MOST AFFECTED PUBLIC/NEIGHBOR/INSTITUTION

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

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Thus, as a member of the local community member/neighbor/institution within/around the proposed project area, we kindly request for your comments on the expected socio-economic and environmental impacts of the proposed project.

Your response will be treated with utmost confidentiality.

1. Is the proposed project known to you? YES NO
2. How far are you staying from the proposed project?
 - a) $\leq 100M$ b) $\leq 500M$ c) $\geq 1KM$
3. How long have you been a neighbor to the proposed project site? 6 months.
4. What positive impact according to your own opinion will arise during the construction phase of the proposed project?
 - a) Job opportunity created.
 - b) Locals will be contracted to the unskilled labour.
 - c) Markets provided for produced & milled rice.
 - d) Improved economy in the society.
5. What positive impact according to your own opinion will arise during the operation phase of the proposed project?
 - a) Both skilled and unskilled labour.
 - b) Quality rice will be produced.
 - c) There will be improved socio-economic activities.
 - d) Improved health quality to the community.

5. What negative impacts (if any) according to your own opinion will arise during the operation phase of the proposed project?

- a) Water, soil & air pollution.
- b) Destruction of roads & drainage.
- c) Child labour and adultery.
- d) fear of electricity power shortage and frequent blackout.
- e) Uncollected waste of milled rice.

6). Proposed mitigation measures to the No.5 above:

- a) Improved Biogasifier machine and sewerage connected
- b) Regular maintenance of roads
- c) All minors should not be allowed to be around the site.
- d) KPL company be engaged to bring the heavy power to the site
- e) Members will be trained to use the waste to produce manure for farms.

7) Is the project relevant to the area? Very relevant. (Yes).

8) According to your own opinion should the proposed project continue or not?

YES NO

9) Consul tee's information

Name: JUSTUS O. OCAWA.

Phone number: 0727883675.

Signature: Justus

Date: 14/01/2025



REPUBLIC OF KENYA



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

KII

PROJECT: ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

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Thus, as a member of the local community/group/ institution within/around the proposed project area, we kindly request for your comments on the expected socio-economic and environmental impacts of the proposed project.

Your response will be treated with utmost confidentiality.

We kindly request for your views, opinions and recommendations regarding the proposed Project.

Section A: Basic Information

Name of the stakeholder	Charles J. Odwar
Organization/Institution	CAK - Agriculture
Designation	SCAO
Signature/Stamp	[Signature]
Date	14/01/2025

What do you foresee as the likely impacts (positive and negative) of the project on the following components of the environment?

Section B: ENVIRONMENT, HEALTH AND SAFETY

Component	Impact	Proposed mitigation measure
Water (river, lake, well, any other source of water)	Positive	-
Sensitive ecosystem (wetlands etc)	Positive	-
Plants and animals	source of Manure for plants, feeds for animals	-
Vegetation cover	Planting trees around the compound.	-
Soil/land (salinization/alkalinity/erosion)	-	-
Pollution from noise and wastes	Negative	- Baskets for fire wood. - Routine machine cleaning
Air and dust	Negative	- Protective gears - Mgt of rice wastes - Good aeration (ventilation)

Accidents/ injuries	Negative	First Aid Kit.
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SECTION C: SOCIO CULTURAL ASPECT		
Child abuse (child labor, school drop outs, etc)	Negative	No employment of underage
Gender issues (GBV, Gender disparity, SEAH)	Negative	Conflict & Disaster committee to handle GBV, sex issues.
Social amenities	Negative	Adequate to the needs
Settlement	Positive	-
Land use and land value	Positive	-
Security	Positive	Enhanced security.
Current source of livelihood/household income	Positive	Current situation on rural addition is satisfactory

Vulnerable and marginalized groups	Positive	Easy of making
HIV/AIDs and other diseases	Positive	Food security, education
Areas of cultural heritage and religious values	-	-
Nutrition	Positive	Food security.
Social evils (e.g. drug abuse)	Negative	Education on substances drug abuse.
Employment	Positive	Enhanced employment.

Any other comment: This will increase rice production and productivity

In your own opinion, should the project be implemented? YES NO

REPUBLIC OF KENYA



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

KII

PROJECT: ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

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Your response will be treated with utmost confidentiality.

We kindly request for your views, opinions and recommendations regarding the proposed Project.

Section A: Basic Information

Name of the stakeholder	MAUREEN AWINDI QUMA
Organization/Institution	NATIONAL LAND COMMISSION
Designation	SENIOR CLERICAL OFFICER (GRADE
Signature/Stamp	
Date	14 TH JAN, 2024

What do you foresee as the likely impacts (positive and negative) of the project on the following components of the environment?

Section B: ENVIRONMENT, HEALTH AND SAFETY		
Component	Impact	Proposed mitigation measure
Water (river, lake, well, any other source of water)	Less water in the community	- Irrigation scheme can be initiated. - Water storages eg water tanks.
Sensitive ecosystem (wetlands etc)	-	-
Plants and animals		Improve crop sate success
Vegetation cover		- We can use the grass or vegetation as hay (animal feeds) - Enhance the vegetation cover.
Soil/land (salinization/alkalinity/erosion)	soil structure can be damaged	Improve soil structure
Pollution from noise and wastes	can	- Waste can be used as manure in our farms. - We can use ear protection to avoid noise pollution
Air and dust	- The environment can be dusty	- We can sprinkle water on the road during construction - Use protective gears eg helmets, mask, sunshirts and gloves.

Accidents/ injuries	Negative	<ul style="list-style-type: none"> - First aid kits - Trained personnel for administering first aid - Need for traffic control - Road maintenance.
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SECTION C: SOCIO CULTURAL ASPECT		
Child abuse (child labor, school drop outs, etc)	Negative	<ul style="list-style-type: none"> - Labour laws - Administration e.g we chief in reporting cases of dropouts / Child labour.
Gender issues (GBV, Gender disparity, SEAH)	Negative	<ul style="list-style-type: none"> - Sexual ex - Education on issues of GBV - Reporting channels
Social amenities	Positive	<ul style="list-style-type: none"> - There will be connections of water and electricity.
Settlement	positive	<ul style="list-style-type: none"> - Living standards will improve
Land use and land value	positive	<ul style="list-style-type: none"> - Land value will go high because of the processing facility.
Security	positive	<ul style="list-style-type: none"> - It will be enhanced
Current source of livelihood/household income		

Vulnerable and marginalized groups	-	Inclusivity
HIV/AIDs and other diseases	<ul style="list-style-type: none"> - Mortality and morbidity - Reduced agricultural productivity 	<ul style="list-style-type: none"> - Treatment - Avoid multiple partners. - use protective e.g condoms.
Areas of cultural heritage and religious values	<ul style="list-style-type: none"> - Creating misunderstanding and arguments with between those with different beliefs 	<ul style="list-style-type: none"> - Teach the right cultural beliefs - Give moral support and guidance to those in need.
Nutrition	<ul style="list-style-type: none"> - Lower risk of communicable diseases 	<ul style="list-style-type: none"> - Eat well balanced food.
Social evils (e.g. drug abuse)	<ul style="list-style-type: none"> - Depression - Low self esteem 	<ul style="list-style-type: none"> - Resist peer pressure - Take time for self care - Abstain from drug use.
Employment	<ul style="list-style-type: none"> - Skilled labour - product innovation - Reduces poverty 	<ul style="list-style-type: none"> - Living standards will improve - Security will improve because their will be no idlers.

Any other comment: _____

In your own opinion, should the project be implemented? YES NO



REPUBLIC OF KENYA



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

KII

PROJECT: ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

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Thus, as a member of the local community/group/ institution within/around the proposed project area, we kindly request for your comments on the expected socio-economic and environmental impacts of the proposed project.

Your response will be treated with utmost confidentiality.

We kindly request for your views, opinions and recommendations regarding the proposed Project.

Section A: Basic Information

Name of the stakeholder	DICKSON ORANGA
Organization/Institution	CGK - AGRICULTURE
Designation	ENGINEER AGRIC.
Signature/Stamp	
Date	14/01/2025

Accidents/ injuries	0	<ul style="list-style-type: none"> - Ensure proper use of machine - employ qualified trainee - Report labour be channelled by ^{class} formal administration
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SECTION C: SOCIO CULTURAL ASPECT		
Child abuse (child labor, school drop outs, etc)	Positive	- The adults get jobs and finance have no need to engage children
Gender issues (GBV, Gender disparity, SEAH)	Positive	increased income lead to stability
Social amenities	Positive	More training on finance management
Settlement	Positive	More people will be settled in the surrounding to promote business-minded business
Land use and land value	Positive	The schemes for rice production would be more expensive
Security		
Current source of livelihood/household income	Positive	improved source of income

Accidents/ injuries	5	- Employ proper size of machine - employ qualified trainee - Refused labor be checked by provincial administration
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SECTION C: SOCIO CULTURAL ASPECT		
Child abuse (child labor, school drop outs, etc)	Positive	- The adults get jobs and finance have no need to engage children
Gender issues (GBV, Gender disparity, SEAH)	Positive	Increased income lead to stability
Social amenities	Positive	More training on finance management
Settlement	Positive	More people will be settled in the surrounding to provide business-related business
Land use and land value	Positive	The schemes for rice production would be more expensive
Security		
Current source of livelihood/household income	Positive	Improved source of income

Vulnerable and marginalized groups	Positive	Volts who participate in rice production have source of income.
HIV/AIDs and other diseases	Positive	The diseases will be managed effectively since production increased.
Areas of cultural heritage and religious values	Positive	Change attitude
Nutrition	Positive	Improved nutrition guaranteed
Social evils (e.g. drug abuse)	Some	- Mitigated by guidance and counseling
Employment	Positive	- more youths and women can access jobs.

Any other comment: The project generally has more positive impact

In your own opinion, should the project be implemented? YES NO



REPUBLIC OF KENYA



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

KII

PROJECT: ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

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Your response will be treated with utmost confidentiality.

We kindly request for your views, opinions and recommendations regarding the proposed Project.

Section A: Basic Information

Name of the stakeholder	KAGWA OCHIAMBO OWI I
Organization/Institution	PUR BER RICE FARMERS C.S.
Designation	COMITEE MEMBER
Signature/Stamp	
Date	14/1/2025

What do you foresee as the likely impacts (positive and negative) of the project on the following components of the environment?

Section B: ENVIRONMENT, HEALTH AND SAFETY		
Component	Impact	Proposed mitigation measure
Water (river, lake, well, any other source of water)	TREATMENT OF WATER WILL BE APPLIED	
Sensitive ecosystem (wetlands etc)	NOISE FROM TRUCKS TRANSPORTING RICE WILL CREATE EMPLOYMENT	
Plants and animals	IT WILL PRODUCE ANIMAL FOOD	
Vegetation cover	PLANTING TREES	
Soil/land (salinization/alkalinity/erosion)	DRAINAGE SYSTEM WILL BE CONSTRUCTED	
Pollution from noise and wastes	WILL BE WELL MANAGED	
Air and dust	WILL BE AVOIDED WILL COLLECT AT THE BUS	

Project Summary Report

Accidents/ injuries	WELL EQUIPED FIRST AID BOX	
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SECTION C: SOCIO CULTURAL ASPECT		
Child abuse (child labor, school drop outs, etc)	NO UNDER AGE EMPLOYMENT	
Gender issues (GBV, Gender disparity, SEAH)	INCLUSIVITY	
Social amenities	IMPROVED INFRASTRUCTURE	
Settlement	POSITIVE	
Land use and land value	POSITIVE	
Security	IMPROVED	
Current source of livelihood/household income		

Vulnerable and marginalized groups		
HIV/AIDs and other diseases		
Areas of cultural heritage and religious values		
Nutrition	IT NOW PROVIDE FOOD TO THE SOCIETY	
Social evils (e.g. drug abuse)		
Employment	NOW INCLUDE ALL GENDER	

Any other comment: _____

In your own opinion, should the project be implemented? YES NO



REPUBLIC OF KENYA



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

KII

PROJECT: ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

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Thus, as a member of the local community/group/ institution within/around the proposed project area, we kindly request for your comments on the expected socio-economic and environmental impacts of the proposed project.

Your response will be treated with utmost confidentiality.

We kindly request for your views, opinions and recommendations regarding the proposed Project.

Section A: Basic Information

Name of the stakeholder	BERTIA AWUCH OYOLA
Organization/Institution	PUR BER RICE FARMERS COOPERATIVE SOCIETY
Designation	SECRETARY
Signature/Stamp	
Date	14/01/2024

What do you foresee as the likely impacts (positive and negative) of the project on the following components of the environment?

Section B: ENVIRONMENT, HEALTH AND SAFETY		
Component	Impact	Proposed mitigation measure
Water (river, lake, well, any other source of water)	Building of dikes	can water gates will be constructed for water drainage.
Sensitive ecosystem (wetlands etc)	Upraising the land	The land will be upraised for proper drainage.
Plants and animals	feed and manure.	farmers will be trained on how to extract animal feeds and how to make manure from rice waste.
Vegetation cover	large area will be covered	Increase of food security.
Soil/land (salinization/alkalinity/erosion)	Soil sampling	Sampling of soil will enable farmers to know the correct varieties.
Pollution from noise and wastes	Noise absorber will be applied.	Members will be trained on how to deal with waste and pollution noise.
Air and dust	Planting of trees.	Protective gears will be used.

Accidents/ injuries	if any	first aid kits will be available. provide PPE for worker
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SECTION C: SOCIO CULTURAL ASPECT		
Child abuse (child labor, school drop outs, etc)	Will not allowed The project will not employ underage	Age will be determined
Gender issues (GBV, Gender disparity, SEAH)	- positive increase domestic burden on women	Gender equality will be applied.
Social amenities	Improve infrastructure	Develop a settlement cooperative social responsibility.
Settlement	Negative positive	It will improve interaction.
Land use and land value	positive	The land will be utilized by the project.
Security	Will be enhanced	guards will be employed for security.
Current source of livelihood/household income		

Vulnerable and marginalized groups	Economic exploitation	enforce fair employment policies and equalisation.
HIV/AIDS and other diseases	High risk	provide health screening and free condoms to be available.
Areas of cultural heritage and religious values	Freedom of worship	Workers will be allowed to worship.
Nutrition	Better nutrition	Educate worker on how to balance diet.
Social evils (e.g. drug abuse)	Social stigma	Promote social cohesion
Employment	Improve job opportunities	employment will be available.

Any other comment: - Improved Biogasster machines and Sewerages to be constructed.
 - Regular maintaining of roads
 - get company to be engaged to bring the heavy power to the site.

In your own opinion, should the project be implemented? YES NO



REPUBLIC OF KENYA



NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT – KISUMU COUNTY

KII

PROJECT: ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

The National Agriculture Value Chain Development Project (NAVCDP) is a World Bank, Government of Kenya and County Government of Kisumu funded project with an objective to increase market participation and value addition for targeted farmers in select value chains in project areas. The project is proposing to *establish a Multi-Stage Rice Milling Facility for Pur Ber FPO* to enhance efficiency and capacity in paddy rice processing. Pursuant to the provision of the Environmental Management and coordination Act, 2015 and the Environmental Impact Assessment and Audit Regulations 2003 require that an Environmental and Social Impact Assessment is conducted and a public participation be undertaken to establish the views and concerns of the interested and/or affected stakeholders and in pursuance of sustainability and harmony.

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Your response will be treated with utmost confidentiality.

We kindly request for your views, opinions and recommendations regarding the proposed Project.

Section A: Basic Information

Name of the stakeholder	Paul Dmondi Angienda
Organization/Institution	C G K
Designation	WARD ADMIN
Signature/Stamp	
Date	14/1/2025

What do you foresee as the likely impacts (positive and negative) of the project on the following components of the environment?

Section B: ENVIRONMENT, HEALTH AND SAFETY

Component	Impact	Proposed mitigation measure
Water (river, lake, well, any other source of water)	Waste water from the milling process may contaminate nearby water bodies if not managed properly.	Install wastewater treatment facility.
Sensitive ecosystem (wetlands etc)	Noise, lights, trucks and human activities may disturb animals.	Implement noise reduction measures and avoid night-time operations.
Plants and animals	Clearing land may disrupt local ecosystems and reduce biodiversity.	Minimize land clearance and plant more trees.
Vegetation cover	Loss of vegetation during construction.	Minimize land clearing to protect vegetation where possible.
Soil/land (salinization/alkalinity/erosion)	Excavation and construction activities may lead to soil erosion.	Implement Erosion control Measures like barriers and proper drainage systems.
Pollution from noise and wastes	Machinery operations can generate high noise levels affecting the workers and nearby residents.	Use sound proof equipments e.g ear muffs and sound proof barriers.
Air and dust	Dust and particles released during Milling and constructions can affect air quality.	Plant trees to attract dust Use mists Install dust control systems Water spraying during construction.

Project Summary Report

Accidents/ injuries	Machinery related accidents - Slip, trips and falls. Electrical Accidents. Fire & explosions. Heavy lifting injuries	Provide PPE for workers, Regular health check-ups and Safety training. Conduct fire drills Install fire extinguishers -
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SECTION C: SOCIO CULTURAL ASPECT		
Child abuse (child labor, school drop outs, etc)	Children from vulnerable families may be drawn into manual labour thus increasing exposure to exploitive labour and may result in school drop-outs.	- Partner with local education authorities to ensure children remain in school. - Enforce strict policies against child labor.
Gender issues (GBV, Gender disparity, SEAH)	Gender inequality in employment. Increased domestic burden on women	- Implement gender inclusivity. - Provide equal pay and opportunities for women.
Social amenities	An influx of workers and their families may overburden schools, clinics and water supply systems. - Improved infrastructure.	- Develop corporate social responsibility programs to support community services.
Settlement	- Workers moving to the area will increase housing demand thus leading to informal settlement in the long run	- Develop a settlement plan to ensure adequate housing.
Land use and land value	Increased land value making it hard for the locals to purchase. - Land previously used for agriculture may be converted into industrial use	- Zone the area to balance industrial, residential and agricultural land.
Security	The influx of people and cash based transactions may lead to theft and drug crimes	- Establish community policing or security partnerships.
Current source of livelihood/household income	- Disruption of traditional livelihoods - New livelihood opportunities.	- Support sustainable farming to maintain agricultural productivity - Provide skill training programs.

Vulnerable and marginalized groups	Economic exploitation.	Enforce fair employment policies and ensure equal pay for all workers.
HIV/AIDs and other diseases	Higher rates of HIV infections, stigma and strain on health care services. Respiratory illnesses. Communicable diseases.	Provide health screening and promote healthy lifestyles through wellness programs. - Provide free condoms.
Areas of cultural heritage and religious values	—	—
Nutrition	Improved food availability. Income generation for farmers Better nutrition outcomes.	—
Social evils (e.g. drug abuse)	Increased substance abuse Erosion of social identity Social stigma	- Create health awareness. enforce Enforce anti-harassment policies. - Promote social cohesion.
Employment	Increased job opportunities for the youths.	

Any other comment: Ensure a comprehensive emergency response plan to handle accidents and health emergencies.
Establish monitoring and evaluation frameworks to track impacts & effectiveness of mitigation measures.

In your own opinion, should the project be implemented? YES NO



REPUBLIC OF KENYA

NATIONAL AGRICULTURE VALUE CHAIN DEVELOPMENT PROJECT - KISUMU COUNTY

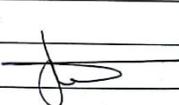
KII

PROJECT: ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED ESTABLISHMENT OF A MULTI-STAGE RICE MILLING FACILITY FOR PUR BER FPO

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Your response will be treated with utmost confidentiality.
We kindly request for your views, opinions and recommendations regarding the proposed Project.

Section A: Basic Information

Name of the stakeholder	DAVID NDHINE
Organization/Institution	PUR BER RICE FCS
Designation	Chair
Signature/Stamp	
Date	14/1/2025

What do you foresee as the likely impacts (positive and negative) of the project on the following components of the environment?

Section B: ENVIRONMENT, HEALTH AND SAFETY

Component	Impact	Proposed mitigation measure
Water (river, lake, well, any other source of water)	Supply of water will be constant	More pipes to be connected to families
Sensitive ecosystem (wetlands etc)	Reclamation of wetland for rice growing	More canals to be constructed
Plants and animals	Bamboo	By products to be used as animal feeds
Vegetation cover	Wash Area off	no
Soil/land (salinization/alkalinity/erosion)		
Pollution from noise and wastes	Hot flash	Aluminum drums to be applied
Air and dust	Flumes	Partial roof and sand tray installed

Project Summary Report

Accidents/ injuries	if any	will apply labor insurance
---------------------	--------	----------------------------

SECTION C: SOCIO CULTURAL ASPECT		
Child abuse (child labor, school drop outs, etc)	not impact	will find the complaints handle
Gender issues (GBV, Gender disparity, SEAH)	not applicable	Sex risk needed
Social amenities		
Settlement	Problems	
Land use and land value		
Security	will improve	employ more guards
Current source of livelihood/household income		

Vulnerable and marginalized groups	Interpoints	Protect already infrastructure
HIV/AIDS and other diseases	Available	Disseminate awareness + education
Areas of cultural heritage and religious values		
Nutrition	Available	more market to market to country
Social evils (e.g. drug abuse)	Some risk / not much	awareness effects to this country
Employment	Available	Also of jobs create in country

Any other comment: _____

In your own opinion, should the project be implemented? YES NO

Public participation Attendance List and minutes



NATIONAL AGRICULTURAL VALUE CHAIN DEVELOPMENT PROJECT
(NAVCDP)
KISUMU



ACTIVITY: PUBLIC PARTICIPATION - ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT.

VENUE: NYANSANGI CHIEF CAMP

DATE: 14/01/2025

ATTENDANCE LIST

S/NO	NAME	GENDER	ORGANIZATION	POSITION	TELEPHONE	EMAIL ADDRESS	SIGN
1	KAGWA O. OKOTI	M	PURBER	Committee	071813356		
2	WILLIAM NGODE	M	PURBER	farmer	0723331176		
3	MONICA Bolyo	F	PUR-BER	Treasurer	0725077777		
4	Benta Ogola	F	PUR-BER	Secretary	0799347494		
5	Pumele Dhwang	F		farmer	0703196690		
6	GEORGE MASEGWA	M	SACCO	Hon. SEC	0723247496	george.masegwa@gmail.com	
7	NaMonyo Jerry Daka	M	SACCO		0706-23436		
8	VIUAN ATENO BUNWA	F	SLMC	FLIN	0707977905	Vivianateno1993@gmail.com	
9	LILIAN MWOR OJWALA	F	SLMC	MEMBER	0721888368		
10	PAUL Ombingo Ombosi	M	ICRIB/SLA CEDC	SECRETARY	0725456794		
11	OMONDI ISMAEL OISO	M	SACCO	CHAIRMAN	0713319192		
12	BENSON OMBANDA OJWALA	M	SACCO	CHAIRMAN	0726126114		
13	JOSHUA OSAHA	M	PUR BER	COMMITTEE	0707883676	osahajobius@gmail.com	
14	GEORGE MBOGA	M	KAMISACCO	CREDIT	071080002	angulogeup@gmail.com	

S/NO	NAME	GENDER	ORGANIZATION	POSITION	TELEPHONE	EMAIL ADDRESS	SIGN
	Rose Anyangi	F	NAVCDP	CADU	0729396378	anyangia19@gmail.com	
	KEN KIOYAT	M	NAVCDP	P.O.E	0724622808	koyokioyokio@gmail.com	
	JANE OMBANDA	M	CDDC	CHAIR	0720795108	ombanda@gmail.com	
	KENNEDY OUKA OBUKA	M	CDDC KIBERA	CHAIR	0724030354		
	HELEON BORE	M	Kapya	commity	0716100326		
	GRATIS DWINO	M	BUTANBA	member	0723841287		
	Joseph Okojo	M	CDDC	SEC	0721937983	okojoc@yahoo.com	
	JANE AKINTI AGALU	F	KIBERA KIBERA	MEMBER	0721765921		
	JABITHER AKINI OMTI	F	"	TREASURER	0743542593		
	MILTON KIROTA OMBANDA	M	CDDC KIBERA	CHAIR	0714917500		
	CAROL AKINJI GACHE	F	PUR BER	MEMBER	0708099874		
	Joseph Ombanda Sanga	M	KAPYA	MEMBER	0729676176		
	Phoebe Kibungu	F	NAVCDP	MEMBER	070729435		
	Wilson Juma	M	Nduru	Block Rep A	0712859358		
	OMONDI ISMAEL	M	KALAL	CHAIRMAN	0713319192		
	ERICK OMONDI ANTUL	M	CDDC	SPIC SEC	0708005144	erickombanda@gmail.com	
	Kevin Kamungu	M	NAVCDP	CDAL	0705484580	kamungu@gmail.com	
	Maureen Njoro Ouma	F	NLC	SCO	0718-652630	maureenouma85@gmail.com	

Project Summary Report



NATIONAL AGRICULTURAL VALUE CHAIN DEVELOPMENT PROJECT
(NAVCDP)
KISUMU



ACTIVITY: _____

VENUE: _____

DATE: _____

ATTENDANCE LIST

S/NO	NAME	GENDER	ORGANIZATION	POSITION	TELEPHONE	EMAIL ADDRESS	SIGN
1	William NGODE	M			0723331178		<i>[Signature]</i>
2	MONICA OPIO	F	PUR-BER	Treasurer	079507771	Monicakio@ipsworld.com	<i>[Signature]</i>
3	RENÉE ACIOLA	F	PUR-BER	SECRETARY	0797347494	heleacaluch3@aigmail.com	<i>[Signature]</i>
4	RAY OIENO	M	KAMU SACCO	ICT CLEAR	011701986		<i>[Signature]</i>
5	NATAL OIENO	M	Committee	former	070100172		<i>[Signature]</i>
6	SHADRACK OIENO	M		Farmer	0722162675		<i>[Signature]</i>
7	JOHN JULIUS SILA	M	CDDC	VEGETABLE	072222263	Johnsilaj@igmail.com	<i>[Signature]</i>
8	WAMUNYA TEMBODAY	M			072222263		<i>[Signature]</i>
9	MELBA OIENO	F	CDDC	TREASURER	0726227102	melbaos@igmail.com	<i>[Signature]</i>
10	FRED ODHAMBO MBOYA	M	LAKE FARM SAC	CHAIRMAN	0721113674	fredmboya@igmail.com	<i>[Signature]</i>
11	KENNY OIENO	M	CDDC	CHAIRMAN	0724969698	kenningoi@igmail.com	<i>[Signature]</i>
12	SAMUEL ORAO	M	WAO	WAO	074524992	oraoosamuel@igmail.com	<i>[Signature]</i>
13	Paul Omundi	M	CGIK	WA	0717178093	omundipa@igmail.com	<i>[Signature]</i>



NATIONAL AGRICULTURAL VALUE CHAIN DEVELOPMENT PROJECT
(NAVCDP)
KISUMU



ACTIVITY: _____

VENUE: HYANGANDA

DATE: 14/11/2025

ATTENDANCE LIST

S/NO	NAME	GENDER	ORGANIZATION	POSITION	TELEPHONE	EMAIL ADDRESS	SIGN
1	William NGODE	M	PUR-BER	FORMER	0723331178		<i>[Signature]</i>
2							
3							
4							
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Minutes

MINUTES OF THE MEETING DURING PUBLIC PARTICIPATION (PUBLIC BARAZA) FOR THE PROPOSED PUR BER RICE MILLING PROJECT HELD AT KANYAGWAL AND NYANG'ANDE CHIEFS CAMP ON 14/01/2025

Present

- Mr. Paul Angienda - Ward Administrator
- David Ndhine- Chairperson Pur Ber Cooperative.
- Dickson Oranga- Engineer Agriculture
- Samue Orao- Ward Agriculture Officer
- Charles Odwar- Agriculture officer
- Joyce Omondi- CSS&GMO
- Ken Kóyooh- Director Environment
- Hazel Alai-Sub- Environment Officer
- Maureen Awino- National Land Commission
- Amos Odeny-National Government Administration
- Bonface Nyandeje- National Government Administration
- Moses Ombogo – NEMA
- The community members (list of the attendees is on a separate sheet attached)



Agenda

- Preliminaries and project briefing
- Deliberations

Minute 1: Preliminaries and project briefing

The meeting started at 9.30a.m

The meeting started with a word of prayer from a member. The Ward administrator then welcomed and introduced the ESIA team and the community members in attendance. Mr. Dickson Oranga then briefed the members of the details of the proposed project stating that the proposed project will have an abolition block and biodigester, a drying floor, an office block, rice mill housing unit, chain link fence and gate, power and generator house. Mr Ken Kóyooh then led the discussion.

Minute 2: Deliberations

Mr Ken informed the community that the purpose of the meeting was to seek their views concerning the likely impacts of the proposed project. He reiterated to the members the details of the proposed project and the essence of Environmental and Social Impact Assessment (ESIA). He further explained why public consultation is necessary in such a process. He further explained the project location and asked if members were aware of plans to have the proposed project at the site. He urged the community to give their views on the likely impacts of the proposed project to the



community as this would inform the decision making and ensures sound environmental and social management as concerns the project.

Below are the comments from the meeting:

- That the project may entice students/ underage children to drop out of school to work during construction
- A member asked how rice and husk dust from the facility will be managed. It was clarified that a green buffer will be done at the rear and sides of the facility
- Clearance of vegetation-it was explained that minimal vegetation will be cleared during implementation and operation of the facility and there will be planting of trees at the site to enhance vegetation
- The security of the area will improve as area will have security lights thus improving the security of the area
- The project will spur development in the area as investors will be attracted to the area
- The project will provide employment to the people of local residents thus providing a source of income.
- Fears of Interruption of power supply to the neighboring residences because of the amount of power needed at the mill. It was clarified that the mill will have a three-phase power installed that will not interfere with power supply to other users.
- Sharing of benefits especially the by-products from rice milling. It was clarified that benefits accruing from the mill operations will be shared with Pur-ber Farmers' Cooperative society members who are shareholders
- Food vendors will have ready market for the workers during construction phase. food items
- Fears of new workers influencing the locals negatively on moral issues were raised. It was clarified that education and awareness shall be considered to the locals/community/workers on issues of HIV/AIDs drug and substance abuse, Sexual exploitation and harassment and Gender based violence issues.
- Fears of traffic and risk of accident by vehicles delivering building materials to the site, and during operation phase vehicles delivering paddy to the mill. It as clarified that signages, e.g. children crossing, speed limits and speed bumps will be put to minimize risks.

Negative impacts and their mitigation measures

Issues/Impacts raised	Mitigation
Interference with natural habitat	✓ plant trees and grass on undeveloped areas
increased teenage pregnancies, school drop outs	✓ Create awareness, maintain ethics
Accidents	✓ contractor to take precaution especially in the market areas, schools and homesteads ✓ Erect bumps in such areas-standard bumps not makeshift bumps

	<ul style="list-style-type: none"> ✓ Provide workers with PPEs ✓ Inform the community in case of a an activity that is likely to cause accident
Noise	<ul style="list-style-type: none"> ✓ Workers in the mill will have ear protective equipment, earplugs/earmuffs ✓ The generator will have a sound proofed system (canopy). Put strategies to minimize noise and vibration e.g building a wall around the noise -producing components of the project
Dust generation	<ul style="list-style-type: none"> ✓ sprinkle water in the areas with loose soils and materials likely to generate dust
Insecurity: Increase in criminal activities	<ul style="list-style-type: none"> ✓ work closely with the local administration ✓ the company to employ only those with IDs to enhance tracing of criminals
Soil erosion and increased runoff	<ul style="list-style-type: none"> ✓ do proper drainages with structures designed to reduce the speed of flowing water, plant vegetation in areas susceptible to erosion
Conflicts between contractor/ workers and the community	<ul style="list-style-type: none"> ✓ A liaison person from the community will be employed by the company, company to minimize on issues, e.g. compensation and related labor laws, discrimination, that may lead to conflicts, like, most workers to be drawn from the community
Biasness in employment	<ul style="list-style-type: none"> ✓ at least 75% non-skilled workers to be locals
Increased traffic to the place	<ul style="list-style-type: none"> ✓ Signages, bumps,
Roads depletion due to increased traffic	<ul style="list-style-type: none"> ✓ Routine maintenance Of the road
Moral decadence	<ul style="list-style-type: none"> Civic education to the workers and the community on issues of Drug and Substance abuse, SEAH, GBV

- The meeting unanimously consented that the project proceeds

The meeting ended at 1240 hours with a word of prayer from a member.

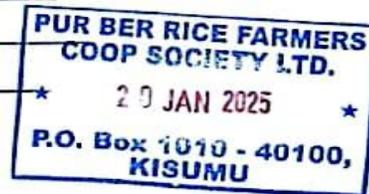
Minutes by: Hazel Alai

Signature 

Confirmed by: DAVID NDHINE

Designation: CHAIRPERSON

Signature & Stamp: 



Land Documents

AGREEMENT FOR SALE OF LAND

BETWEEN

WYCKLIF OKELLO OGEJO

(The Vendor)

AND

PUR BER RICE FARMERS COOPERATIVE SOCIETY LIMITED
(Purchaser)

OVER

ALL THAT PARCEL OF LAND KNOWN AS KISUMU/KAWINO/2751

DRAWN BY:

Otieno and Achieng' Advocates,
Former Rilley Falcon Security Offices,
Opposite the New St. Stephens A.C. K Cathedral,
P.O.BOX 934-40100

KISUMU

Akothruth17@gmail.com

AGREEMENT FOR SALE OF LAND

THIS AGREEMENT is made on the 6th day of November 2024
BETWEEN

- A. WICKLIF OKELLO OGEJO of ID No. 29882489 of and of P.O. Box 26-00200 Nyangande (hereinafter called "the Vendor" which expression shall where the context so admits include his respective personal representatives and assigns).
- B. PUR BER RICE FARMERS COOPERATIVE SOCIETY LIMITED of CS/263 and Post Office Box c/o No. 1010-4010 Kisumu in the Republic of Kenya (the "Purchaser" in the Republic of Kenya (which expression shall where the context so admits include his successors, assigns or personal representatives) of the one part.

1. **WHEREAS:-**

- a. The Vendor legal representative of the estate of Joannes Onyango Odongo (Deceased) is the registered as absolute proprietor of all that property known as **KISUMU/KAWINO/2751** measuring **0.09ha** situated in Kawino locality within Kisumu County of the Republic of Kenya together with any improvements erected and being thereon (hereinafter called "**the said property**") and the seller is in the process of doing succession AND
- b. The Vendor is desirous of selling and the Purchaser is desirous of purchasing the portion of the Property known as **KISUMU/KAWINO/2751** Measuring **approximately 0.045 Ha** subject to the terms and conditions set out in this Agreement.

2. **AGREEMENT FOR SALE AND PURCHASE**

- 2.1 The Vendor agrees to sell the portion of the said property measuring approximately **0.045Ha** and the Purchaser agrees to purchase the said property at a negotiated Purchase Price of **Kshs.350,000** that is to say, **(Kenya Shillings Three Hundred and Fifty Thousand)**
- 2.2 That the deposit of Kenay Shillings Two Hundred Thousand (Kshs.200,000/-) has been paid to the vendor by the purchaser in full through account number 1011274206 held at Faulu Microfinance in the name of the vendor at the execution of this agreement the amount that the Vendor has acknowledged the receipt of the same.
- 2.3 That the remaining balance of Kenya Shillings One Hundred and Fifty (Kshs.150,000/-) to be paid on 6th of December 2024

2.5 The Vendor shall surrender possession of the parcel of land herein to the Purchaser upon execution of this agreement

4.0 The **completion date** shall be 6 months from the date of execution of this agreement

5.0 The Vendor shall deliver or procure delivery to the Purchaser the following documents in respect of the Property on the completion date (hereinafter referred to as "the Completion Documents"): -

- (a) The original Title Deed;
- (b) Undated Instrument of Transfer of Land executed by the vendor in triplicate in favor of the Purchaser
- (c) The Application for Land Control Board Consent in triplicate
- (d) Three (3) colour passport-size photographs of the Vendor
- (e) A copy of the Vendor's National ID Card;
- (f) A copy of the KRA Pin Certificate of the Vendor;
- (g) The Capital Gains Tax payment slips (at cost of Purchaser)
- (h) The Affidavit of Spousal Consent;
- (i) Any other document(s) necessary to effect registration of the Transfer in favour of the Purchaser;

5.1 The Purchaser shall be responsible for obtaining the Government Valuer's approval on the Requisition for Valuation of Stamp Duty Form at his sole cost and expense.

6.0 MATTERS AFFECTING THE PROPERTY

The Property is sold subject to and with the benefit of:-

- a) All easements, quasi easements, rights, exceptions and other similar matters which are apparent on inspection or disclosed in any of the document referred to in this Agreement.
 - b) All matters disclosed prior to the date hereof or apparent from searches or enquiries in writing made by or on behalf of the purchaser prior to the date hereof.
 - c) The property is freehold with vacant possession and free from all encumbrances.
 - d) On or before the completion date the Vendor shall point out to the Purchaser the beacons delineating the said property.
- 10 The sale is subject to the Law Society of Kenya Conditions of Sale (1989 Edition) in so far as they are not inconsistent with the conditions contained in this Agreement.
- 11 The Purchaser shall and pay Stamp Duty, Registration fees, Capital Gains Tax and legal costs. The vendor shall pay outgoing rent or outgoing rates (if any).
- 12 This agreement will be interpreted according to the Laws of Kenya and the parties hereby submit to the jurisdiction of the Courts of Kenya.

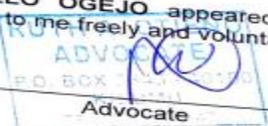
12 This agreement will be interpreted according to the Laws of Kenya and the parties hereby submit to the jurisdiction of the Courts of Kenya

-EXECUTION FOLLOWS-

IN WITNESS WHEREOF this agreement has been duly executed by the parties hereto on the day and the year first hereinabove written.

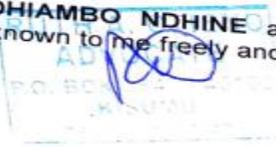
SIGNED by the Vendor)
WICKLIF OKELLO OGEJO) 
 ID No. 29882489)
 WITNESS)
PAUL AKOKO ONNYANGO)
 ID. NO. 24203888) 
JOHN GENGA OGEJO)
 ID.20374581) 
BELINDA ACHIENG ONYANGO)
 ID.26670966)
 In the presence of)
 Advocate)

I certify that **WICKLIF OKELLO OGEJO** appeared before me thisday of2024 being known to me freely and voluntarily execute this instrument and understood its contents.


 Advocate

SIGNED by the Purchaser)
DAVID ODHIAMBO NDHINE) 
 (CHAIRMAN))
 ID No. 21472347)
 WITNESS)
VALENTINE OUMA OKELLO)
 ID NO.31009441) 
NANCY ATIENO AYEYO)
 ID.23590400) 
PAUL OTIENO NDOLE)
 ID.20950372)
 Advocate) 

I certify that **DAVID ODHIAMBO NDHINE** appeared before me thisday of2024 being known to me freely and voluntarily execute this instrument and understood its contents.


 Advocate

Today ofth December 2024, the final payment of one hundred and fifty thousand has been fully paid by Mr David Ndihe through m-pesa No. 0714146934. Wyclif Okello Ogido has received the above amount immediately

- 1- ~~Wyclif~~ WICKGLIFE OKELLO
ID/NO. 29882489
signature [redacted] @ 4/12/24
witness
- 2- Paul Akoko Anyango
ID/NO 24203888
signature [redacted] @ 4/12/2024
- 3- David Ndihe
ID/NO. 21472347

4- ASSISTANT L.H.
KIRAKIRO
R.O. [redacted]
Date: 04/12/2024
[Signature]



www.kra.go.ke

PIN Certificate

For General Tax Questions
 Contact KRA Call Centre
 Tel: +254 (020) 4999 999
 Call: +254(0711)099 999
 Email: callcentre@kra.go.ke

Certificate Date 16/05/2022
 Personal Identification Number
 P052116271Y

This is to certify that taxpayer shown herein has been registered with Revenue Authority

Taxpayer information

Taxpayer Name	PUR BER RICE FARMERS CO-OPERATIVE SOCIETY LIMITED
Email Address	PURBERRICEFARMERS@GMAIL.COM

Registered Address

L.R. Number :	Building N/A
Street/Road N/A	City/Town : KISUMU
County : Kisumu	District Nyando District
Tax Area Nyando	Station Kisumu
P. O. Box 1010	Postal Code 40100

Tax Obligation(s) Registration Details

Sr. No.	Tax Obligation(s)	Effective From Date	Effective Till	Status
1	Income Tax - Company	16/05/2022	N.A.	Active

The above PIN must appear on all your tax invoices and correspondences with Revenue Authority. Your accounting end month is December unless a change has been approved by the Commissioner-Domestic Taxes Department. The status of Tax Obligation(s) with 'Dormant' status will automatically change to 'Active' on date mentioned in "Effective Till Date" or any transaction done during the period. This certificate shall remain in force till further updated.

Disclaimer : This is a system generated certificate and does not require signature.



REPUBLIC OF KENYA

THE CO-OPERATIVE SOCIETIES ACT
(Cap. 490, Section 6 (3))

Certificate of Registration

REGISTRATION No. CS/26763

I hereby certify that the society under the name of

PUR BER RICE FARMERS CO-OPERATIVE SOCIETY LIMITED

and its by-laws have this day been duly registered by me in the Register of Co-operative Societies, in pursuance of the provisions of the Act and the Rules made thereunder.

Given under my hand at Nairobi

this...24TH... day of.....APRIL....., 20..22.....



DAVID K. OBONYO
Commissioner for Co-operative Development



KENYA REVENUE
AUTHORITY

www.kra.go.ke

Tax Compliance Certificate

For General Tax Questions
Contact KRA Call Centre
Tel: +254 (020) 4999 999
Cell: +254(0711)099 999
Email: callcentre@kra.go.ke

Taxpayer PIN : P052116271Y

Certificate Date: 22/04/2025

Name and Address :

Pur Ber Rice Farmers Co-operative Society Limited
N/A, KISUMU, Nyando District,
PO Box:1010,
Postal Code:40100

Certificate Number:

KRAKSM1465845925

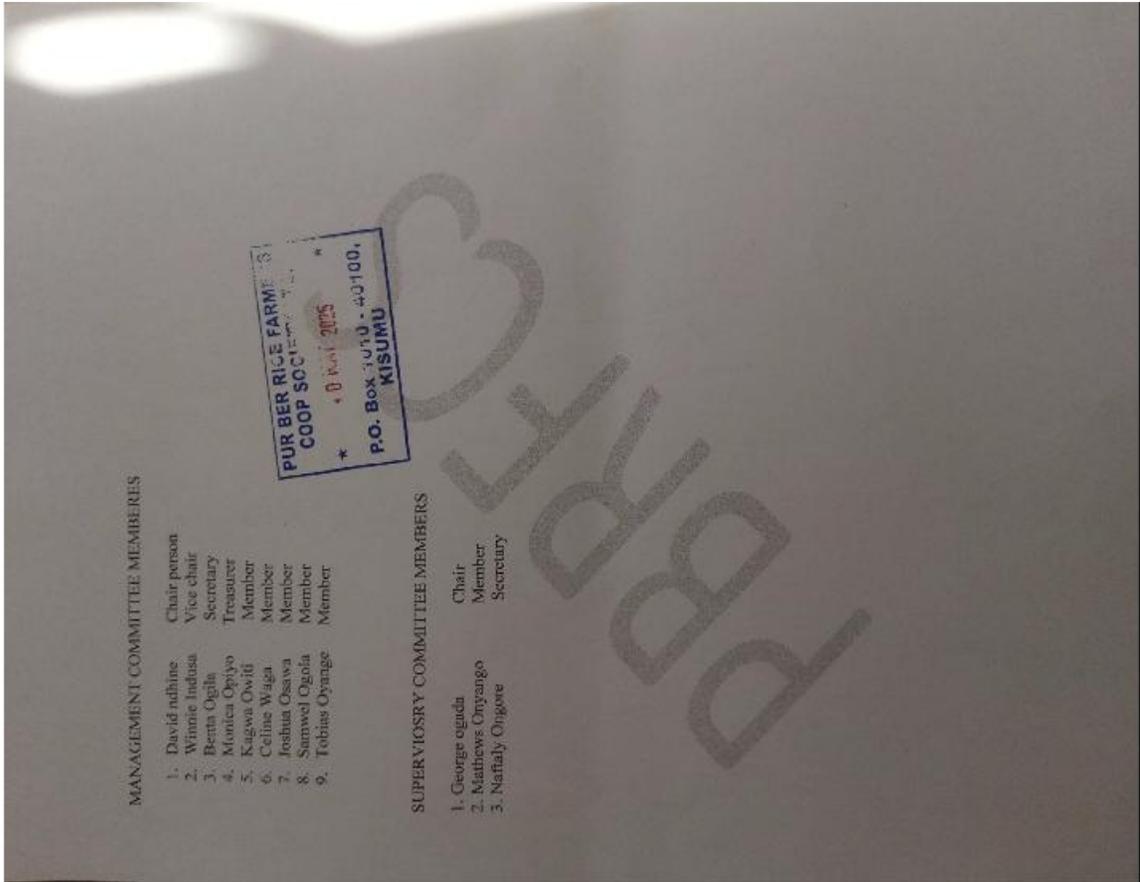


**This is to confirm that Pur Ber Rice Farmers Co-operative
Society Limited,
Personal Identification Number P052116271Y
has filed relevant tax returns and
paid taxes due as provided by Law.**

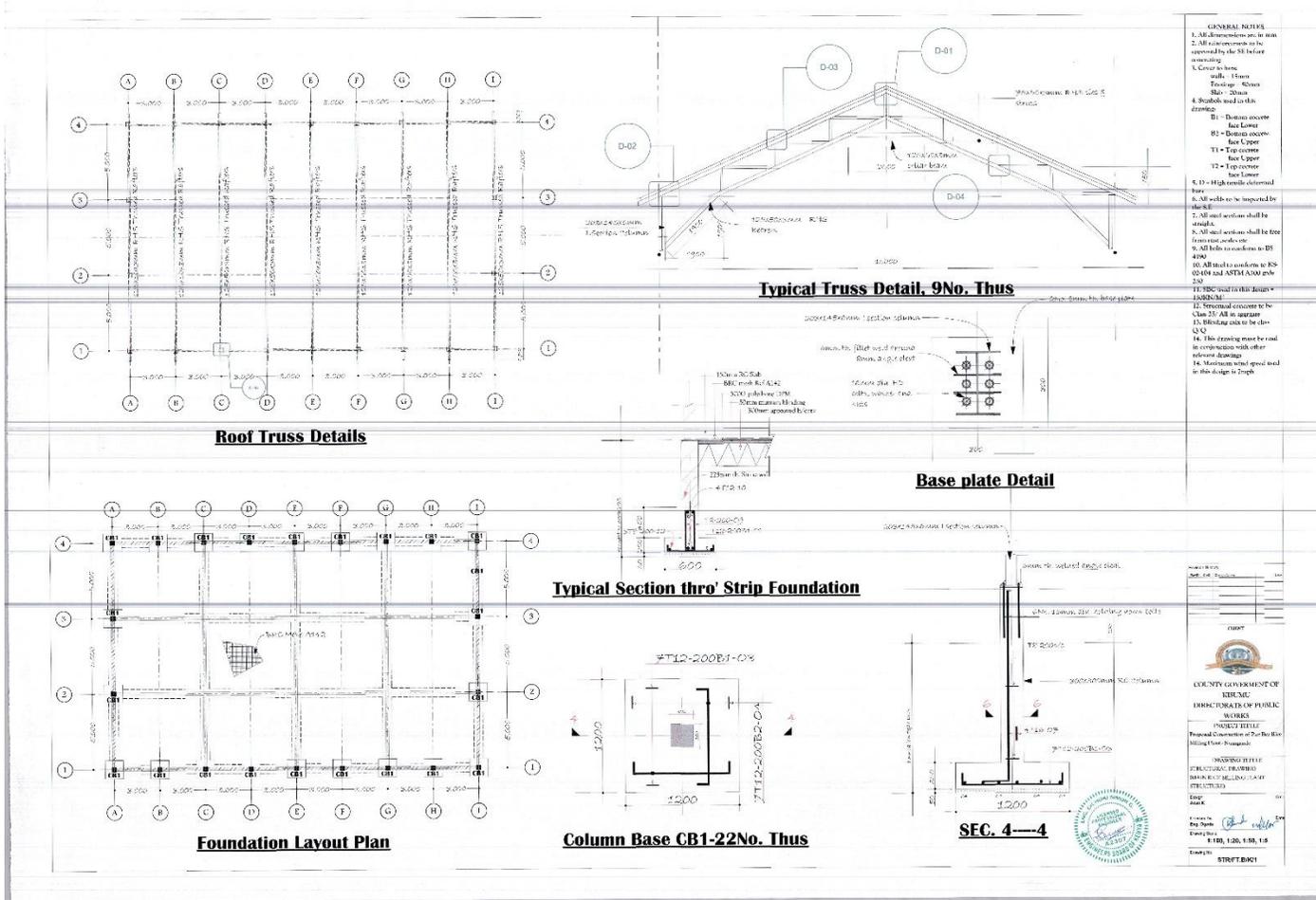
**This Certificate will be valid for
twelve (12) months up to 21/04/2026.**

Caveat This certificate is issued on the basis of information available with the authority as at the certificate date mentioned above. The Authority reserves the right to withdraw the certificate if new evidence materially alters the tax compliance status of the recipient.

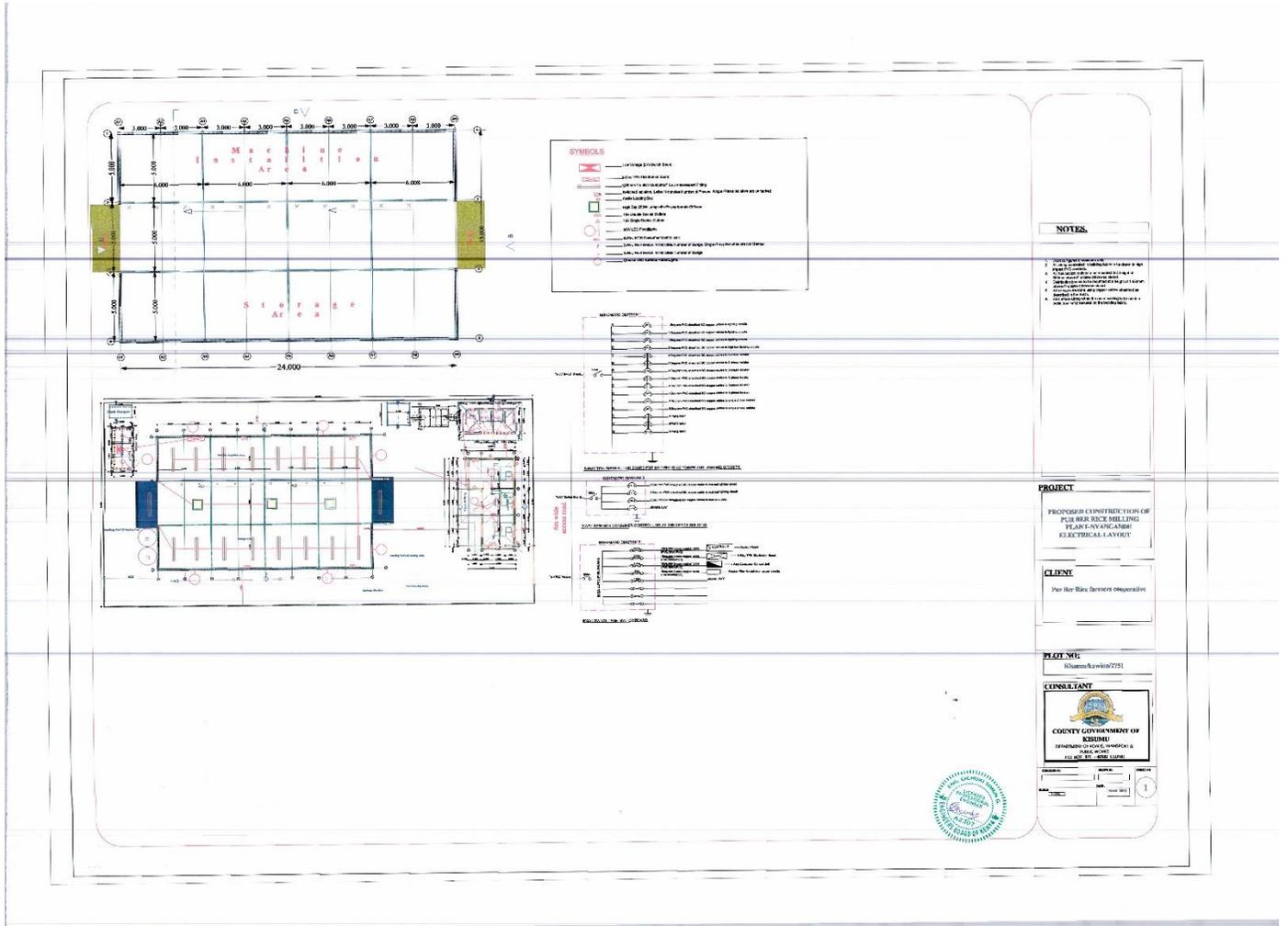
Disclaimer : This certificate is system Generated and therefore does not require signature. You may confirm validity of this certificate on the iTax Portal by using the TCC Checker. This certificate confirms your compliance status for a period of five years preceding the date of issue. The certificate may however be withdrawn on grounds of outstanding debt affecting periods prior to this.



Project design and Summary of BoQ



Project Summary Report



**ESTABLISHMENT OF MULTI STAGE RICE MILLING FACILITY AT PUR BER FPO
SUMMARY BOQ**

I) CONSTRUCTION WORKS		
S/NO.	ITEM	AMOUNT Kshs.
1.	PRELIMINARIES	250,000
2.	RICE MILL	8,898,060
3	OFFICE BLOCK	1,797,270
4	CHAINLINK FENCE	840,700
5	2 DOORS ABLUTION BLOCK	782,740
6	DRYING FLOOR AREA	1,247,150
7	POWER HOUSE AND GENERATOR HOUSE	857,775
	SUB-TOTAL	14,673,695
	ADD 16% VAT	2,347,791
	TOTAL	17,021,486
II)	ELECTRICAL WORKS	23,309,526
	GRAND TOTAL	40,331,012





nema
NATIONAL ENVIRONMENTAL MANAGEMENT AUTHORITY

EAE24015412

FORM 7

(r.15(3))

**NATIONAL ENVIRONMENT MANAGEMENT
AUTHORITY(NEMA)
THE ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT
ENVIRONMENTAL IMPACT ASSESSMENT/AUDIT (EIA/EA) PRACTICING
LICENSE**

License No - NEMA/EIA/ERPL/24201

Application Reference No: NEMA/EIA/EI/30712

M/S Odhiambo Ken K'oyooch
(individual or firm) of address
P.O. Box 199-40100 Kisumu

is licensed to practice in the

capacity of a (Lead Expert/Associate Expert/Firm of Experts) **Lead Expert**
General

registration number 1925

in accordance with the provision of the Environmental Management and Coordination
Act Cap 387.

Issued Date: 6/27/2025

Expiry Date: 12/31/2025

Signature.....

(Seal)

Director General

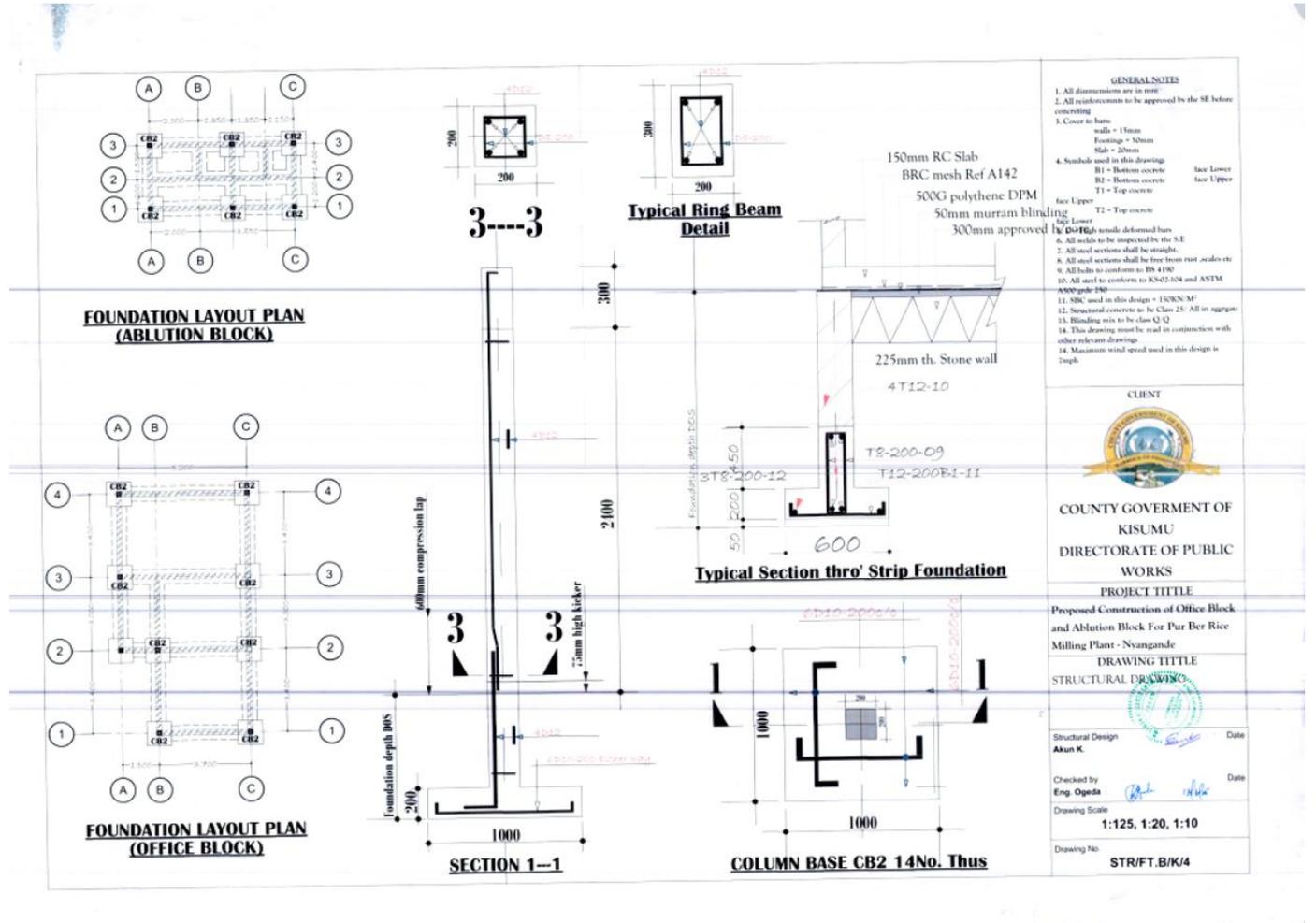
The National Environment Management Authority

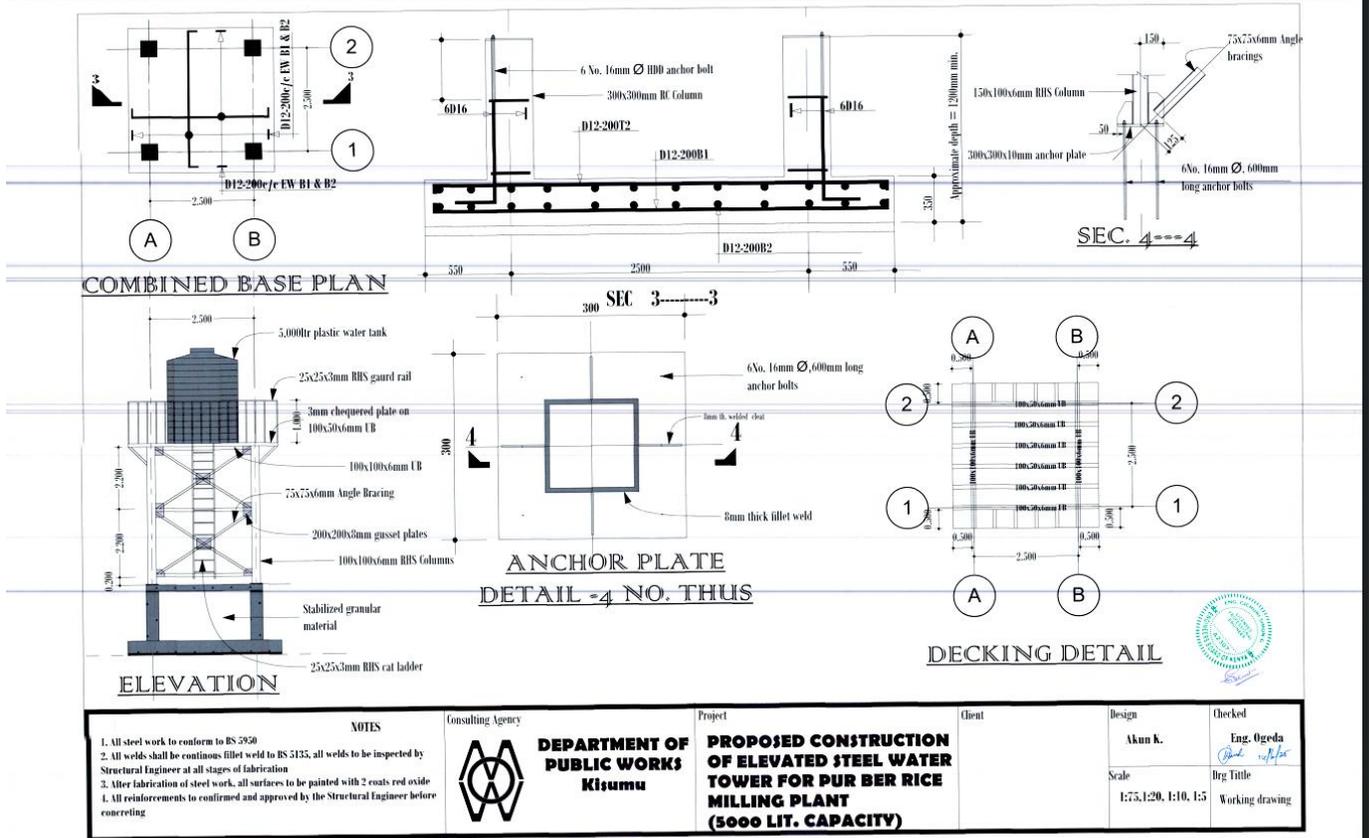
P.T.O.



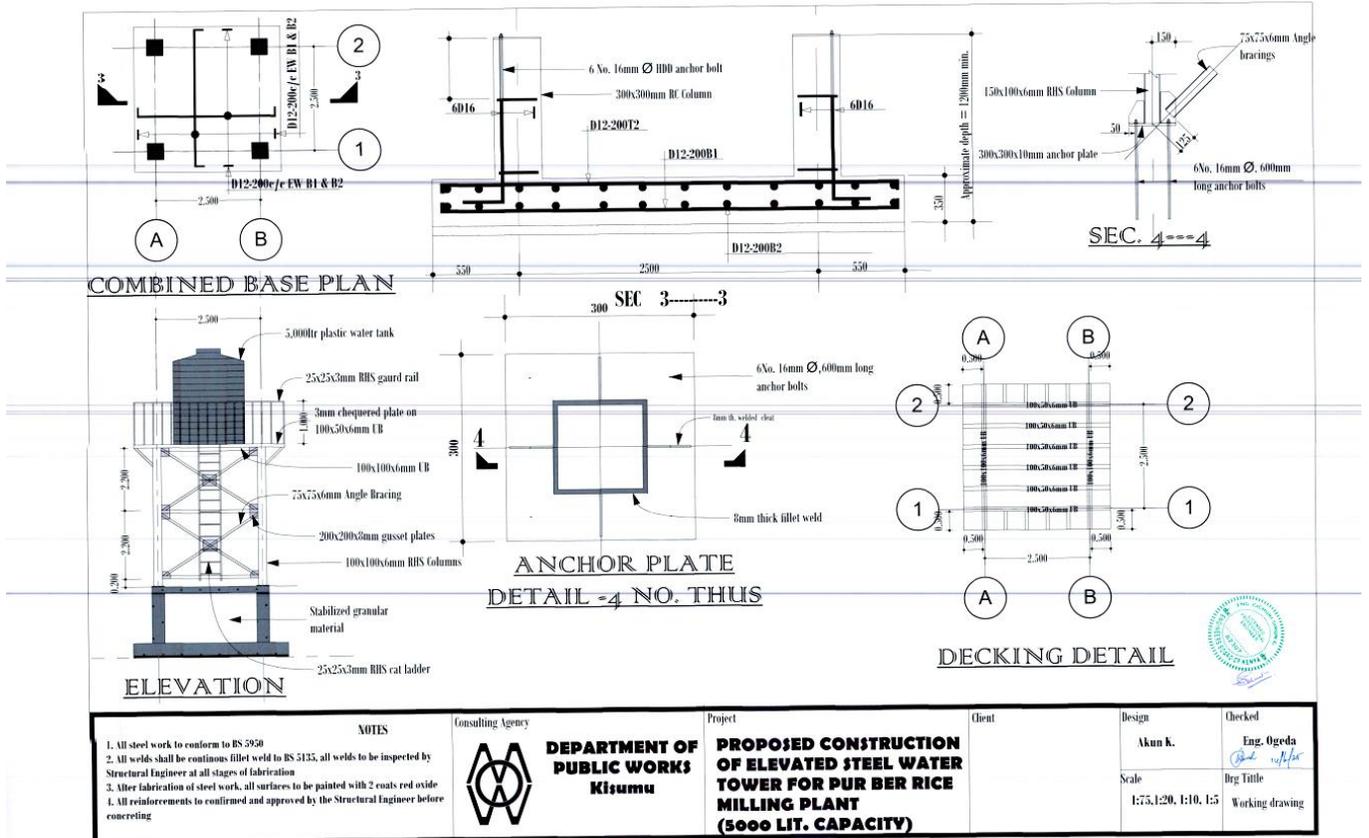
ISO 9001 : 2015 Certified

Other Drawings





NOTES		Consulting Agency	Project	Client	Design	Checked
1. All steel work to conform to BS 5950 2. All welds shall be continuous fillet weld to BS 5135, all welds to be inspected by Structural Engineer at all stages of fabrication 3. After fabrication of steel work, all surfaces to be painted with 2 coats red oxide 4. All reinforcements to be confirmed and approved by the Structural Engineer before concreting		 DEPARTMENT OF PUBLIC WORKS Kisumu	PROPOSED CONSTRUCTION OF ELEVATED STEEL WATER TOWER FOR PUR BER RICE MILLING PLANT (3000 LIT. CAPACITY)		Design Akun K.	Checked Eng. Ogoda
					Scale 1:75, 1:20, 1:10, 1:5	Brg Title Working drawing



NOTES	Consulting Agency	Project	Client	Design	Checked
<ol style="list-style-type: none"> All steel work to conform to BS 5950 All welds shall be continuous fillet weld to BS 5435, all welds to be inspected by Structural Engineer at all stages of fabrication After fabrication of steel work, all surfaces to be painted with 2 coats red oxide All reinforcements to confirmed and approved by the Structural Engineer before concreting 	 <p>DEPARTMENT OF PUBLIC WORKS Kisumu</p>	<p>PROPOSED CONSTRUCTION OF ELEVATED STEEL WATER TOWER FOR PUR BER RICE MILLING PLANT (5000 LIT. CAPACITY)</p>		<p>Design Akun K.</p> <p>Scale 1:75, 1:20, 1:10, 1:5</p>	<p>Checked Eng. Ogeda</p> <p>Drg Title Working drawing</p>

