



**ENVIRONMENTAL IMPACT ASSESSMENT SUMMARY PROJECT
REPORT (SPR)
FOR
THE PROPOSED DUAL HEAT MILK & YOGHURT PASTEURER
INSTALLATION, AT KIENI DAIRY PRODUCTS LIMITED, P.O.BOX
139 MWEIGA
IN ENDARASHA-MWIYOGO WARD, KIENI-WEST SUB-COUNTY,
NYERI COUNTY**

GPS COORDINATES: 0°15'39.81" S, 36°53'10"E



**PROJECT PROPONENT
KENYA CLIMATE SMART AGRICULTURE PROJECT (KCSAP)**

**PROJECT SPONSOR
GOVERNMENT OF KENYA/COUNTY GOVERNMENT OF NYERI
WITH SUPPORT FROM THE WORLD BANK**



CERTIFICATION

This Summary Project Report for the proposed Installation of Dual mounted module plus utilities pasteurizer, for milk value addition (processing) at Kieni Dairy Products Limited, of L.R No. Mweiga Block/V/Muthuini/189 along Nyeri-Nyahururu Road, Endarasha-Mwiyogo ward, Kieni West Sub-County, Nyeri County has been prepared in accordance with NEMA regulations and World Bank environmental and social safeguards policies under the guidance and supervision of a registered NEMA Lead Expert. It meets statutory provisions stipulated in EMCA 2015, the Legal Notice No. 32 and the Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2019; world bank KCSAP triggered policies OP 4.01, OP 4.10, OP 4.11, OP 4.12 and OP 4.09.

We hereby certify that the details herein are correct and true to the best of our knowledge.

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FOR & ON BEHALF: KIENI DAIRY PRODUCTS LIMITED

ACKNOWLEDGEMENT

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Table of Contents

- CERTIFICATION..... i**
- ACKNOWLEDGEMENT..... i**
- ABBREVIATIONS & ACRONYMS..... v**
- EXECUTIVE SUMMARY vi**
- CHAPTER ONE 1**
- 1.0 INTRODUCTION 1**
- 1.1 Background..... 1**
- 1.2 Project Justification..... 1**
- 1.3 1**
 - Rationale of the SPR and scope of the proposed project..... 1**
- 1.4 Objectives of the Summary Project Report (SPR) 2**
- 1.5 Methodology 2**
 - 1.5.1 Screening..... 2**
 - 1.5.2 Scoping..... 3**
 - 1.5.3 Study of project submissions 3**
 - 1.5.4 Information and desk survey 3**
 - 1.5.5 Site Visits and Data Collection 3**
 - 1.5.6 Public Participation and consultation 3**
- 1.6 SPR Team 3**
- 1.7 Summary Project Report Organization 4**
- 2.0 Introduction 5**
- 2.1 Project Design..... 5**
 - 2.1.1 5**
 - Technology and Operational Activities 5**
- 2.2 Equipment, Components and Maintenance..... 5**
- 2.3 Utility and Energy Use 6**
- 2.5 Project Cost 6**
- 2.6 Project Activities..... 6**
 - i. Project management and Monitoring..... 7**
- 3.1..... 8**
- Introduction 8**
- 3.2 Project Location 8**
 - 3.3 Siting, Geographic location and neighborhood 8**
 - 3.4 Description of the project site 9**
 - 3.3.1 Topography..... 9**
 - 3.3.1 Hydrology..... 9**
- 3.5 Proof of Land Ownership..... 9**
- 3.6 Environmentally Sensitive areas..... 9**
- 3.7 Supportive Environmental Management Infrastructures..... 9**
- 3.8 Land Use 10**
- 4.2 Objectives of Public Consultation..... 11**
- 4.3 Methodology of Public Participation and Stakeholder’s consultation..... 11**

4.4 Issues Raised and Response	12
4.4.1 Exploitation by Milk brokers	12
4.4.2 Water Pollution	12
4.4.3 VMGs as beneficiaries	12
4.4.4 Noise Pollution	12
5.1 Introduction	13
5.2 Construction Phase	13
5.2.1 Anticipated Positive Environmental and Social Impacts	13
(a) Temporary Employment Opportunity	13
(b) Direct Benefits to the External Beneficiaries	13
5.2.2 Anticipated Negative Environmental and Social Impacts	14
(e) Child Labour Exploitation	17
(f) Labour Influx Effects	18
5.3 18	
Operation Phase	18
5.3.1 Positive Impacts	18
(a) Increased Access to Market for Cow Milk	18
(b) Permanent Employment Opportunities	19
(c) Improved public Health and Environmental safety	19
(d) Improved Value on Land and physical quality	19
(e) Increased Participation of Youth in Socio-economic Development	19
5.3.2 19	
Negative Impacts	19
(a) Risk of Air and Water pollution	19
(b) Solid Waste Generation	20
(c) Noise Pollution	20
(e) Occupational Health Hazards	21
(f) Gender Based Violence/Sexual Harassment	21
5.4	21
Decommissioning Phase	21
5.4.1 Positive Impacts	21
(a) Rehabilitation and change of use	21
(b) Temporal Employment Opportunity	21
5.4.2 Negative Impacts	22
(a) Generation of solid wastes	22
(b) Noise Pollution	22
(c) Occupational Health Hazards	22
Chapter Six	23
6.0 ENVIRONMENTAL AND SOCIAL MANAGEMENT & MONITORING PLAN (ESM & MP)	23
6.1 Introduction	23
6.1 Environmental and Social Management & Monitoring Plan (ESM&MP) for Construction phase	24
6.3 Environmental and Social Management & Monitoring Plan (ESMP) for the Decommissioning Phase	34
7.0 CONCLUSION AND RECOMMENDATION	40
7.1 Conclusion	40
7.2 40	
Recommendation	40
REFERENCES	41
Annexes	42
Annex 1: Single (Trade) Permit	42

.....	43
<i>Annex 2: Effluent Discharge Control Plan for KDPL</i>	43
.....	44
<i>Annex 3: Land Registration Certificate (Title Deed)</i>	44
<i>Annex 4: Certificate of Incorporation</i>	45
<i>Annex 5: KEBS Permit to use standardization mark</i>	46
<i>Annex 6: Approved Proposed Bill of Quantity</i>	47
.....	48
<i>Annex 7: Effluent Quality Analysis Report for KDPL</i>	48
.....	49
<i>Annex 8: Nema Acknowledgement for EDL Application</i>	49
<i>Annex 10: Kenya Dairy Board Licence</i>	51
<i>Annex 11: Plan of the proposed project</i>	52
<i>Annex 12: Land Valuation Report for</i>	56
<i>Annex 13: List of Members During Agm Meeting to Propose the Project and ESIA</i>	57
<i>Annex 14: Respondent Filled Questionnaires during CPP meeting</i>	58
<i>Annex 15: Chance Finds Procedure</i>	65
<i>Annex 16: Environmental and Social Screening Checkli</i>	66
<i>Annex 17: Photo Gallery</i>	70
<i>Annex 18: Expert Practicing Licence</i>	72

ABBREVIATIONS & ACRONYMS

AEZ	Agro Ecological Zone
AIDS	Acquired Immune Deficiency Syndrome
ASDSP	Agriculture Sector development and Support Program
BOCD	Biochemical Oxygen Demand
CEO	Chief Executive Officer
CGN	County Government of Nyeri
CIGS	CIGS Common Interest Groups
CIDP	County Integrated Development Plan
COC	Code of Conducts
CRS	Corporate Social responsibility
EDL	Effluent Discharge License
EHS	Environment Health and Safety
EMCA	Environmental Management and Coordination Act
EMP	Environmental Management Plan
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Monitoring Plans
ESMP	Environmental and Social Management Plan
FIFO	First In First Out
FCS	Farmers' Cooperative Society
GPS	Geographical Positioning System
GBV	Gender Based violence
GRM	Grievances Resolution Mechanism
HH	House Hold
HIV	Human Immuno-deficiency Virus
KCSAP	Kenya Climate Smart Agricultural Project
KDB	Kenya Dairy Board
KDPL	Kieni Dairy products Limited
KEBS	Kenya Bureau of Standards
KPLC	Kenya Power & Lightening Company
MoALF	Ministry of Agriculture, Livestock & Fisheries
NEMA	National Environmental Management Authority
NGO	Non-Government Organizations
NLC	National Land Commission
OP	Operational Policy
SOPs	Standard Operations Procedures
TDS	Total Dissolved Solutes
U.H.T	Ultra-Heated Tetra packs
VMGS	Vulnerable and Marginalized Groups
WB	World Bank
WIBA	Work Injury Benefit Act
WRMA	Water Resources Management Authority

EXECUTIVE SUMMARY

This document has been compiled and reviewed by the Lead consultancy team on behalf of Kieni Dairy Products Limited being the proponent and in collaboration of KCSAP the project facilitator. It identifies, describes, evaluates and develops means of mitigating potential negative Environmental and Social Impacts of proposed construction of milk value addition facility at **Muthuini village, Mwiyo Sub- location, Endarasha Ward, Kieni West Sub-county, Kieni Constituency in Nyeri County.**

Dairy production is one of the major economic activities in Kieni West constituency in Nyeri County. Nyeri county has eight sub-counties and Kieni West is among the largest producer of fresh milk with KDPL collecting an average of 19,000 liters of raw milk per day. The constituency is also favored by very conducive climate for dairy farming and wide sources of market for cow milk.

KDPL is the largest dairy Cooperative Society in Kieni area with close to over 6983 active dairy farmers comprising of individual producers, common interest groups, youths, women, men and VMGs. KDPL was registered as a public dairy marketing company in 2011 and brings together 7 dairy cooperatives Societies from Kieni west Sub County and collects an average of 20,000litres of milk per day. In the last 4 years, milk intake and thus the sales for KDPL have been going up. It is this trend that KDPL seeks to sustain by going into value addition including yogurt making, U.H.T and sale of pasteurized milk through dispensing (milk ATMs).

Therefore, being a beneficiary farmer producer organization, it intends to benefit under the KCSAP project to facilitate procurement of an extension line comprising of a state-of-the art imported modern Dual Heat Skid Mounted Module pasteurizer plus associated utilities including; (automated temperature control panel, PID Based with Data Logger, Hot Water & Steam Mixing Battery, and System Capacity): for processing and value addition of fresh milk. The equipment will be imported from India and will be installed in the already existing space within the old KDPL Go-down in Muthuini area, Kieni West Sub- county.

The equipment will be procured at a tune of 10 million Kenya shillings. The amount is expected to be funded by the GOK and World Bank Community Grants under KCSAP project.

The initiative will not only improve on milk value addition, to increase the shelf-life, but is also aimed at addressing the challenge of glut and price fluctuations in milk marketing, as well as reduction on logistical challenges experienced by both farmers and traders in milk handling within the area. Currently, KDPL has a pasteurizer of 500 liters' capacity which is too small for their operations and that's why the company through business plan an opportunity analysis in collaboration with KCSAP and the Line ministries, is requesting for grant to enable them acquire a larger volume capacity pasteurizer. Milk is a highly perishable

commodity and as such over the years the challenge of post-harvest losses and milk brokerage make marketing of raw milk into a very ascertain affair and consequently brokers regularly offer very low prices to the dairy farmers. Despite huge potential for availability of large volumes of fresh milk in the area, the issue of low capacity in KDPL to handle, collect, and pasteurize the resource, has been a big challenge to the company over many years.

Therefore, this Summary Project Report has been found necessary for the project in order to incorporate environmental as well as social issues during planning, installation, commissioning and operations. SPR instrument for such projects is a requirement in Kenya under the Environmental Management and Co-ordination Act (EMCA) 1999 and World Bank Operational policy 4.01 on Environmental Assessments. This assessment was subsequently carried out by the environmental consultancy team to examine any potential environmental and Social impacts as well as possible mitigation measures of the project and its immediate surroundings encompassing all aspects pertaining to the physical, ecological, socio-cultural, health and safety conditions at the site and its environs during construction, operation and even up to the decommissioning phases.

The study was based on laid down scientific qualitative procedures with the most recent methodologies and analysis required in EIAs and ESIA, and strictly adhering to the relevant legislative framework governing the dairy industry. The lead expert used various approved techniques and methods to capture both primary and secondary data including; information desk data review, use of community participation (CPP) Questionnaires, focused groups, information sourcing by direct consultation through digital platforms namely telephone, email and WhatsApp, and other literature review for secondary data (respectively).

The project shall be compliant with the various relevant regulatory, legal and policy requirements including: Land and Physical planning, Kenya Dairy Board, Weights and Measures, Public Health, Trade and Cooperatives, NEMA, Water, employment and Occupational and Safety among subsidiary regulations such as water, noise, solid waste and air quality.

Positive impacts include value addition of dairy milk reducing post-harvest losses and hence increasing access to market for dairy farmers, creation of employment, job opportunities for youths, women, men and marginalized groups in the locality, generation of income, reduction of poverty, creation of assets, investment in wealth and health, socio-economic empowerment of the local people, Improved food and

Nutrition security; and improved health and sanitation of community members. Other positive benefits include improved infrastructural investment, leading to improved physical, visual and environmental quality of the area, eased logistics in transportation of raw milk from on-farm to the processors, traders and consumers, improved security and cooperative group management among many other anticipated benefits.

Negative impacts includes Release of effluent from discharges after cleaning of equipment, noise pollution from vehicles and machineries, air pollution, occupational health and safety hazards and community contribution leading to financial burden among the contributing members, social issues from personnel, requirement for parking bays, obstructions and traffic related issues.

Discussion with participants and from data analysis and interpretation revealed the main issues of concern raised by the respondents touched on requirement for extra space for vehicle parks, monopoly and milk scarcity especially in certain seasons of the year, gender related issues such as lack of youth pro-activeness in dairy farming, low prices of milk, and obstruction from the access road by vehicles (trucks) during milk transport. The detailed account of the discussions is presented in chapter five.

It is strongly recommended that a concerted effort is made by all the stakeholders to implement the Environmental and Social Management and monitoring Plan. During the operation and marketing of produce, it is necessary that environmental regulations be strictly adhered to. The performance of the facility should also be monitored against the recommended mitigation measures to ensure sustainability.

The overall total cost of implementing the ESM & MP is estimated at **Ksh. 490,000** against the total proposed project cost that is estimated at **Ksh. 10 million**. It is for this reason that the community members are very supportive of the project. It was also established that all the identified negative environmental and social impacts will be effectively mitigated through full implementation of the ESM &MP.

Overall, installation of the proposed pasteurizer at KDPL, will have far reaching positive environmental and social-economic impacts on the community in terms of reduction of milk spoilage, and bringing more income to the pocket of small-scale dairy farmers.

Bearing to the fact that it has no significant environmental and social impact, the experts therefore recommend it for approval

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

The Government of Kenya (GoK) has received credit from the World Bank through the Ministry of Agriculture; Kenya Climate Smart Agricultural Project (KCSAP) to finance and develop a community producer organization (POs) Milk Value addition unit within the Kieni dairy Products limited public company with a purpose for capacity building of the community and to achieve the three (triple) wins namely' increasing of agricultural productivity, enhancing of resilience to climate change and reduction of Green-house gases) being the key objectives of the project. KCSAP is operating and supporting common interest and vulnerable and marginalized groups to provide with them starter basic seeds for increased production.

For inclusion Grant by Kenya Climate Smart Agriculture; earlier on when the World Bank delegation visited KDPL last year, KDPL received Ksh. 1 million (inclusion grant) to mobilize the Common Interest Groups (CIGs) and over 30 groups were organized. The same grant was also used in capacity building program where every society was visited and unique challenges identified and societies agreed to work together for the benefit of KDPL and ultimately the Farmers to get increased income for their produce. Market survey and linkages were also done and this formed the basis of coming up with this proposed model of expansion and market penetration.

It is anticipated that once all aspects of the project are implemented to conclusion, the project will benefit close to ten thousand of beneficiaries both directly and indirectly.

1.2 Project Justification

One of the broader objectives of KCSAP is increasing agricultural productivity and enhancing resilience/copying mechanisms to climate change risks in the targeted smallholder farming. This project is proposed in respect to this response.

1.3 Rationale of the SPR and scope of the proposed project

The SPR is prepared in accordance with the Legal Notice number 31 which has classified such a project as a low-risk project and requiring only SPR as the main tool for approval. Documentation of this SPR has followed the format provided by NEMA (through both EMCA, 1999 and the Environmental Social Impact Assessment and Audit Regulations-legal Notice No.32 of April 2019) and the World Bank policy guidelines on social and environmental safeguards policies which require that certain types of projects be subjected to an ESIA to ensure compliance.

The scope of the proposed project will include the following:

- 1) Planning and Acquiring of all the statutory requirements
- 2) Renovations of the existing chilling room and procurement of Skid mounted module pasteurizer and associated utilities.

1.4 Objectives of the Summary Project Report (SPR)

The overall objective of carrying out an SPR is to determine the likely impacts of a given project on the environment and social-cultural aspects, and consequently propose possible mitigation measures and monitoring plans.

The Constitution of Kenya and the World bank statutes requires that environmental and social concerns are integrated in all economic development which calls for environmental and Social integration in the project life cycle in order to:

- (i) Protect and manage the environment for sustainable development;
- (ii) Integration of environmental management, social and economic decisions at early planning stages;
- (iii) Predict the consequences of a proposed project in terms of environmental, social, economic and cultural settings and propose mitigation measures;
- (iv) Compare available alternatives for a particular project and determine the optimal mix of environmental, social and economic costs and benefits; and
- (v) Involve public, proponents, private and government agencies in assessment and review of a proposed project in an open, transparent and participatory approach

1.5 Methodology

1.5.1 Screening

Environmental and Social screening was done using the Standard World Bank and KCSAP scheduled screening list. (*See the filled screening checklist on annex 16*). The Screening procedure was applied to determine whether the project had an Environmental and social Impacts, of scale and magnitude liable to be subjected to any of the appropriate environmental and social safeguards instruments and frameworks as required under EMCA (Cap. 2000), World Bank Operation procedures, KCSAP, Local, regional and International Practices, policy, legal and institutional framework. The exercise was done by the NEMA officials, lead expert in collaboration with KCSAP team. A decision was made in reference to the NEMA Public Notice on ESIA and Legal Notice No 31 and 32 of April 2019 that the report should only conduct

and submit SPR for decision making by the Authority.

1.5.2 Scoping

This was undertaken to determine the extent of the study. This was done to ensure that critical issues pertaining to the ESIA were identified to enable the experts understand the area and collect baseline information in preparation for undertaking the task.

1.5.3 Study of project submissions

This involved review of project reports, anticipated designs and other submissions provided by the proponent. It also involved discussions with the project engineers.

1.5.4 Information and desk survey

This involved visiting of the company offices where policy, permits, licenses, records, operation manuals and production documents were perused. Every section was visited and the respective managers were consulted and also briefed and assured of maximum support during all the project cycle

1.5.5 Site Visits and Data Collection

Site visits were conducted at the proposed project site in order to:

- ✓ Develop a better understanding of the project area;
- ✓ Consult the local people about the proposed project and document their views;
- ✓ Carry out site cognizance and baseline survey;
- ✓ Assess project impacts

1.5.6 Public Participation and consultation

Consultation was also undertaken as part of the SPR in order to obtain the views of members of the immediate community and interested and affected groups within the site's immediate area of influence. The consultation was done with randomly selected people in the neighborhood of the proposed site and involved use of a semi-structured interview. Some of the key considerations were opinions of existing staff at KDPL, the local leaders, local administration, members of the larger public, immediate neighbors, direct beneficiaries, service providers and the neighboring public institutions such as churches and schools. This process was aided by use of FGDs and administering predesigned questionnaires.

1.6 SPR Team

The Environmental and Social Impact Assessment was undertaken by the following team of experts:

Members of the SPR team

- | | | |
|----|-------------------|--------------------------------|
| 1 | Charles Kirimi | — Environmentalist (lead) |
| 2. | Ephantus Ndirangu | — Environmentalist (associate) |

3. Patrick Mwangi — Agriculture Economist (agribusiness)
4. Lucy Kirimo — Sociologist
5. Beatrice Theuri — Agriculture Economist
6. Isaac Mwaniki — Dairy technologist
7. Ian Mwangi — Food scientist.

1.7 Summary Project Report Organization

The report has several major Chapters presented as follows;

1. Introduction: Project background and context
2. Project description
3. Location of the project
4. Public Participation and Stakeholder Consultations
5. Potential impacts mitigation measures
6. Environmental and Social Management & Monitoring Plan (ESM & MP)
7. Conclusions and recommendations

Appendices

Chapter Two

NATURE OF THE PROJECT

2.0 Introduction

This chapter focuses on the project description. It gives an overview of milk production and marketing organization in KDPL, technology,; the value chain required action plans and process of milk marketing in the area.

2.1 Project Design

2.1.1 Technology and Operational Activities

(a) Bulking

Here, the process will involve aggregation of delivered fresh raw milk, sampling, testing and then storage for processing, or delivery or collection by other bulk buyers/retailers in the major markets as outlined above.

(b) Processing by Pasteurization

The processing will be done by subjecting received quality raw milk into the newly installed pasteurization line. (*See annex 11*). Therefore, using the proposed procured, installed, tested and commissioned equipment by KCSAP; it will finalize the process by bringing an aspect of products diversification from the existing low temperature pasteurized short shelf-life KDPL milk for direct consumption to a more weather resilient quality products such as yoghurt, packaged fresh, and U.H.T. The proposed pasteurization will be done in approved sanitized and skid mounted module dual solar heated technology (as required by KDB, KEBS and Agricultural Food Authority of Kenya). This will also improve on product resilience to higher temperatures and storage-ability of both fresh and yoghurt milk and therefore enable transportation of products to other far niche markets without spoilage or denaturing of milk by hot climatic conditions. The milk will also be packaged in different shapes and sizes, as demanded by the market. Stock control shall also be done on First in-First out (FIFO) rule.

2.2 Equipment, Components and Maintenance

The equipment for milk processing will comprise of the following components namely: heat control, motors, thermostats, fuses, churns, pumps, etc. including, trolleys and transport facilities. All these will be repaired and maintained regularly during the operational phase of the project. Such activities will also include repair of floors, repair and maintenance of electrical gadgets and equipment and replacement of worn-out materials among others. Any obsolete equipment or materials shall be disposed as per manufacturer's instructions and the NEMA/MOH/Public health and other relevant authorities Guidelines.



Figure 2.1: The proposed equipment model at KDPL

2.3 Utility and Energy Use

The project is well designed taking into consideration of all the favoring factors whereby the preliminary necessary arrangements including availability of land, utilities such as water and electricity, storage/installation space, office personnel, perimeter fencing of the plot, security, means of transport and communication including a ready market for goods and services have already been established.

The main sources of energy that will be required for the project will include mains electricity and fossil fuels (especially diesel). Electricity will be used for welding, metal cutting/grinding and provision of light. Diesel and petrol will run the vehicles that will transport the equipment, products and materials. The proponent intends to promote efficient use of utility and energy through; proper planning, use of sustainable alternatives like solar for heating, and implementation of various mechanisms as proposed under the EMP in order to save on utility bills and also to reduce other economic and environmental costs.

2.4 Project Management Activities

The project will be under the management of accounting officers, operation and supervisory managers; overseen by an elected committee of democratically elected seven board members. Both the chief accounting officer and the operation' manager, would be responsible for the day-to-day running of the project.

2.5 Project Cost

The cost for construction of the project is estimated to cost a total of **Ksh. 10,000** million, 90% of it being contributed by the Government of Kenya and 10% by the proponent through direct contribution by the beneficiary community members. This budget is targeted to cover the cost of renovating the storage area, procurement of skid mounted module pasteurizer, plus other associated utilities such as solar (power) systems and packaging.

2.6 Project Activities

i. Project management and Monitoring

The proposed project will be monitored particularly on fiduciary, efficiency and productivity by a Supervisory committee who will be responsible for monitoring and evaluation of the executive management board. Other monitoring organs will be the Cooperatives auditors by the Directorate of cooperatives who already has been on boarded since inception including the monitoring unit at county coordination unit level.

ii. Pre-Installation Investigations

The implementation of the project's design, installation and commissioning phase will start with thorough investigation of the site physical, chemical and visual properties including water and air quality determination, in addition to acquiring of the prerequisite; permits, licences and relevant documentations including the ESIA.

iii. Sourcing, Procurement and Transportation of Equipment

The proposed equipment will be transported oversea to the project site from the dealer/supplier. Greater emphasis will be laid on adherence to procurement procedures, import and end export protocols, and quality standards.

iv. Electrical Works

Electrical works during installation, commissioning including operations will include; the installation of electrical wiring, and devices such as sockets, switches, power surge guards, electrical cables, and lighting apparatus. The proposed equipment once imported and delivered to the site will be complete and ready for "plug-in and operate" type. At KDPL the facility is already installed with a 3-phase connection from the KPLC grid.

v. Septic and Drainage Works

There will be no construction, excavation or laying of foundations which will be required to be carried out during preparation of the installation site for the proposed project, as the imported equipment will be installed in an already built and on-going dairy factory at KDPL grounds in Kieni West. However, over the long-term plan for waste control plan that is already designed for KDPL, an elaborate Chance find procedure has also been outlined for the facility.

Chapter Three

3.0 LOCATION OF THE PROJECT

3.1 Introduction

This chapter discusses the location of the Project, siting and issues of land ownership, environmentally sensitive area as well as supportive infrastructure within the project site.

3.2 Project Location

Kieni Dairy Products Limited (plant) is situated within the proximity of Mweiga Township. The site is located about 27 kilometres north-west of Nyeri town, in Endarasha (Mwiyogo) area, off the Nyeri-Nyahururu B5 road. The selected site is located on latitudes-**0.260833** and longitudes **36.886389** on approximate elevation of **1951** metres above sea level.



Figure 2.2: Location of KDPL

Source: Google Earth, Maxar Technologies

3.3 Siting, Geographic location and neighborhood

The project area is generally used for small scale mixed farming and dairy production. The project supply area is located in Muthuini Village, Mwiyogo Sub-Location, Mweiga Location, Nyeri County. The Company is located along Nyeri-Nyahururu B5 Road just within the vicinity of Kiawara township. The company is sits on a 12.5 Hectares of Land bordering Solio farm, Thuru thuru FCS, Nairutia to the west, Watuka, Endararasha and Mweiga FCS to the East, Gatarakwa FCS, Muratha FCS to the South wards; and residential open farms and premises.

3.4 Description of the project site

3.3.1 Topography

The project site lies at about 2191 meters above sea level. The ground landscape is generally flat rising gently eastwards towards the Mt. Kenya. Thuru thuru/Kamariki hill (2,429 meters a.s.l) is the nearest highest point in terms of topographical features within the vicinity of the proposed site.

3.3.1 Hydrology

The occurrence of the ground water in the area is characterized by several factors including the presence of weathered and fractured zones of the volcanic rocks and springs on old land depression surfaces. These weak zones have become the avenues of groundwater. The depth of the weathered and fractured volcanic rock zone is found from 140 meters downwards which make it possible for drilling of Boreholes water to come from far as the weak zone, and therefore not very deep for the area. Due to its proximity with Aberdare, Mt. Kenya catchments, there are several main rivers found within the area. These includes; River Honi, Thuruthuru and other seasonal streams.

3.5 Proof of Land Ownership

The land where the project is located is fully owned by the proponent on plot L.R No. Mweiga/Block 5/Muthuini/189 (*see annex 3*).

3.6 Environmentally Sensitive areas

There are no visible environmentally sensitive areas near the project. The typical vegetation in the area consists of shrubs, food crops;-maize, beans, potatoes, agro- forestry, trees, and hay grass. The proposed development will have no impacts on the biological environment as the permanent structures are already internally been established within the KDPL compound (see the photos on the annexes). There are no animals of economic importance to mention in the site, except few wild birds, flies, mosquitoes and; domestic livestock within the neighboring farms.

3.7 Supportive Environmental Management Infrastructures

The main road from Nyeri to Nyahururu through Kiawara market runs through the sub- location and is an access way to the site. There are also a number of earth roads criss- crossing the sub-location. Most of the area is within the network coverage for mobile phones providing a reliable means of communication. A KPLC powerline is also accessed only at 50meters along the connecting tarmac and earth roads, and are already connected to the proposed site.

There are two main health centers (Endarasha and Kamariki) and also other two dispensaries Wendani and Karimeno which are nearest to the site and are government supported facilities, respectively.

3.8 Land Use

The major economic activities are crop farming and livestock keeping, commercial activities, a bit of manufacturing and quarrying. Dairy production tops before coffee and tea in Nyeri County. Most residents are customary habitants and practicing dairy production, sheep rearing, ranching and mixed farming.

Chapter Four:

4.0 PUBLIC CONSULTATION AND PARTICIPATION

4.1 Introduction

This chapter outlines the key issues raised by the public on the proposed project. The findings indicate that all the community members support the project as long as they are involved and fully sensitized on the same.

4.2 Objectives of Public Consultation

The need for public consultations as required by EMCA (1999) was to:

- Disseminate and correctly inform the stakeholders about the project, its key components, location and expected impacts.
- Awareness creation on the need for SPR.
- Gather comments, concerns and suggestions of the interested and affected parties.
- Ensure that the concerns of the stakeholders were known to the decision-makers early enough.
- Incorporate the information collected into the SPR.

The purpose for such a process was to identify the positive and negative impacts and subsequently promote and mitigate them respectively. It also helped in identifying any other miscellaneous issues which may bring conflicts in case project implementation proceeded as planned.

4.3 Methodology of Public Participation and Stakeholder's consultation

The stakeholders consulted in this study were: dairy farmers, input suppliers, location chief, immediate neighbors and other community members. Also consulted were the representatives of the key relevant departments, government agencies and non-government organization. These included; ASDSP, KCSAP and Mwiyo - Wendani Parish as faith based organization. This was used to obtain views, comments, concerns and suggestions.

Public consultations were conducted in full compliance with COVID-19 regulations (social distancing of 1.5-2 meters, sanitization of hands, the number per meeting limited to 15 persons per facilitator and limiting the time of the meeting to one hour). Through public consultations written and oral information was obtained on the benefits, anticipated negative impacts and mitigation measures. The main method was use of questionnaires to collect information (*Annex 14*).

The total number of participants engaged was 86 persons (49 males, 37 females). This report has incorporated all the views and suggestions from public participation.



Figure 5.3: Ongoing public participation at KDPL premises

4.4 Issues Raised and Response

4.4.1 Exploitation by Milk brokers

Community members reported that exploitation by milk brokers and spoilage of fresh milk was a serious challenge in the area. They were optimistic that construction of the proposed milk value addition plant would come in handy to address the problem.

4.4.2 Water Pollution

Some members mentioned the issue KDPL factory discharging of grey water after cleaning of milk equipment. The issue was thoroughly discussed, and finally the forum was satisfied; that the proposed mitigation measures by KDPL management would effectively control and prevent the emission of untreated effluent to the neighboring farms.

4.4.3 VMGs as beneficiaries

The community members informed the ESIA team that women and children will be the greatest beneficiaries of the proposed project as they are the ones exposed to the danger of poverty when all socio-economic aspects are not running well in the community.

4.4.4 Noise Pollution

Some respondents also mentioned the issue of noise during installations, construction and operation of machineries. This was also deliberated in length and a well-reasoned mitigation plans was developed. (see the ESMP in chapter).

Chapter Five

5.0 ANTICIPATED POTENTIAL ENVIRONMENTAL IMPACTS

5.1 Introduction

This Chapter identifies and discusses both positive and negative impacts associated with the proposed project. The anticipated Environmental and Social impacts have been discussed as positive or negative social and environmental impacts. Some impact mitigation has already been proactively addressed in the design while others would be undertaken through considered incorporation in the implementation of the project and guided by the Environmental and Social Management and Monitoring Plan (ESM & MP) presented in this report.

The anticipated impacts are discussed in three phases namely: construction, operational and decommissioning phases.

5.2 Construction Phase

As previously mentioned in this report, there will be very minimal renovations other than slight concreting of equipment stands during the proposed installations at KDPL premises. The Go-down is already built with adequate space only awaiting installation of the proposed milk value addition equipment. However, whenever such renovations, constructions or installation will be carried out; below is an outline of the various mitigation measures that should be implemented to counter any possible impacts at the installation stage.

5.2.1 Anticipated Positive Environmental and Social Impacts

(a) Temporary Employment Opportunity

One of the main positive impacts during the construction phase will be the availability of employment opportunities especially to casual workers and several other specialized workers. Employment opportunities have both economic and social benefit.

(b) Direct Benefits to the External Beneficiaries

The community members informed the ESIA team that youth will be mainly involved during transportation of milk and products, and that women and children will be the greatest beneficiaries of the proposed project as they are the ones exposed to the danger of poverty when all socio-

economic aspects are not running well in the community.

5.2.2 Anticipated Negative Environmental and Social Impacts

(a) Solid and Liquid Waste Generation

The construction works involves activities which may lead to generation of both solid and liquid wastes. These will include rejected, debris and broken construction materials, excavated materials , broken floors among others. There will also be some solid containers such as cement bags, bentonite residuals and cement bags and other packets with materials and equipment to be used during implementation of the project. The workers at the site will also generate fecal wastes during their day-to-day operations. Unless these are addressed, it can prove to be an environmental/health hazard.

Mitigation

- Use an integrated solid and liquid waste management system which includes reduction at source, recycling, re-use, incineration, and sanitary landfills;
- Any remaining waste (paper or polythene containers, cement bags, bentonite, construction debris, etc. shall be safely burned and/or disposed in designated waste disposal areas before the project is commissioned;
- Some of the excavated materials will be used for back filling of appropriate areas. By assessment all the excavated material from the site will be used to refilling of the compound and floors.
- Construction crew to be encouraged to dump their personal wastes in designated covered dustbins;
Where no containment exist, portable and necessary sanitary arrangements will be availed though not very significant except issues of drilling, fabrication, human chattering movement.

(b) Noise Pollution

The proposed activities of transport vehicles, testing of equipment, etc may likely become of a noise importance during construction and installation phase to some degrees. The site workers and community members are likely to be affected since noise beyond some level is itself a nuisance and thus should be controlled within acceptable limits. Noise levels in construction works are usually below the threshold limit (90dBA) that workers can be exposed in an 8 hours working day and is consequently not of any major concern. H o w e v e r , the works will be undertaken during the day time and hence effects to night time noise will not be associated with the above mentioned equipment.

Mitigation

- Adhere to the Kenya Noise Prevention and Control rule passed in 1996 under legal notice No. 296 as a subsidiary legislation to the Occupational Health and Safety Act (OSHA) of 2007 which requires putting in place measures that will mitigate noise pollution. Consider especially the rule, which states that, “No worker shall be exposed to noise level in excess of the continuous equivalent of 90 dBA for more than 8 hours within any 24 hours duration”;
- Any noisy source including equipment, machinery or device shall be mitigated by use of appropriate noise suppression equipment such as mufflers;
- Proper maintenance of the applied equipment;
- The workers will be supplied with on ear mask where applicable to control excessive noise;
- Place noisy equipment in sound proof rooms or in enclosures to minimize ambient noise levels;
- No works during the night to prevent disruption of the neighboring community; and
- Sensitize vehicle drivers and machine operators to switch-off engines of vehicles or generators when not in use and to avoid hooting.

(c) Dust Emissions

Particulate matter pollution is likely to occur during site clearance, excavation works and laying of installations. Therefore, there can be a possibility that generated dust may affect the workers and the surrounding community members’ health. The law requires that best management practices are adopted during construction and even operational activities. Ideally, no visible dust should be created nor should exhaust from any equipment be visible for more than 10 seconds. However, the potential impact on air quality will be minimal.

Mitigation

- Ensure that the workers have proper PPEs like dust masks;
- Ensure strict enforcement of on-site speed limits;
- Ensure Noise survey is regularly done on the site, and
- The equipment used to construct must be fitted with dust suppressors equipment (e.g. water sprays), and pre-start inspection of dust control equipment will be undertaken.

(d) Risk of Accidents and Health and Safety Concerns

During installation activities, it is expected that the workers may encounter occupational health hazards. Such injuries can also result from loading and unloading truck mounted with construction materials, transportation of the ladders, hand tools and cuts from sharp objects, slips and fall from

heights, tripping hazards among others.

Mitigation

- a. Ensure compliance with occupational health and safety act, 2007;
- b. Ensure workers are provided with personal protective equipment and first aid kit;
- c. Ensure all equipment are inspected before use for appropriate safeguards and that the machine operators are trained on machine safety;
- d. Ensure the working hours are controlled and that employees are not allowed to extend the working hours beyond an acceptable limit for purposes of gaining extra pay;
- e. Ensure appropriate road safety signs are strategically placed and drivers adhere to the requirements of such signage;
- f. Provide appropriate barriers along the excavated trenches.
- g. All construction sites shall be isolated from the public, customers and internal workers.
- h. This will be done through temporary scaffolding and fixing appropriate safety signage and information;
- i. Involve the local people for enhanced ownership and management; and
- j. Upon completion and commissioning of the works, public safety in regard to the project and assets will be important.

(e) Risk of Oil Spillage

The transport and movable parts of equipment's, requires oiling and greasing to minimize wear and tear. Possibilities of oil spillage contaminating the ground, floors and water points within the project areas can therefore be real though on very minimal quantities.

Mitigation

- a. Safety procedures will be enforced to minimize cases of oil spillage. Such procedures may include maintaining the machinery in specific designated areas designed for such purposes;
- b. Ensure that oil/grease spills and other oils and associated materials (filters, rags and cans) are immediately removed along with all contaminated material and disposed of at an waste disposal site; and
- c. Ensure that contaminated materials including used/spilled oils/grease as well as other contaminated materials are stored in a banded area before being disposed off.

(f) Risk of contracting Diseases, HIV/AIDS and COVID-19

The project will attract new people such as skilled and un-skilled workers, input suppliers, transporters including expatriates etc., to the project area and this can lead to several repercussions leading to the spread of the virus. Influx of new people to the project area especially construction workers can affect the number of new cases of HIV and Covid-19 risks, because they often interfere with an otherwise stable situation but the contrary can also happen where the newcomers find

themselves at higher risk.

Mitigation

- Programs will be developed and integrated into the project implementation for sensitizing the local community and project workers on HIV/AIDS, Covid-19 and/or other sexually transmitted diseases (STDs);
- Review the construction activities to integrate with the HIV/AIDS and Covid-19 protocol sensitization campaigns;
- Develop appropriate training and awareness materials for Information, Education and Communication (IEC) on Covid and HIV/AIDS; and
- Identify other players (local CBOs, NGOs and government organizations) on HIV/AIDS or Covid, for enhanced collaboration.

(g) Temporary Internal Disturbance

Before laying of the foundations, clearing of part of the existing structures including old equipment, tables, and utility distribution lines, waste bins, etc, within the Go-down and inside the premise must be done. Direct impact from such disturbance may cause changes in visual quality, increasing costs of mitigation as well bringing internal disturbance especially to the working population in the company.

Mitigation

- Ensure proper delineation and demarcation of the affected sections/areas.
- Strict adherence to required (designed) excavation depths and boundaries for equipment stand where necessary.
- Project implementation plans will be developed such that section excavated are worked on and completed before moving in of the new machinery.
- Identify and restrict movement of staff to areas of disturbance
- Reshaping, landscaping or rehabilitation of affected sections even outside of the main building.

(e) Child Labor Exploitation

There can be the risk of children being used in some of the project activities which should be against the law. Children can also be more vulnerable if being exploited in terms of wages. This should be mitigated in the following ways:

Mitigation

- Ensure no children are engaged in any Project activities whether on site or offsite.
- Strictly follow Labor Laws

(f) Labor Influx Effects

This impact is triggered during Project Construction Phase due to the Project attracting various categories of workers from local and national or even international markets. This therefore can lead to new people coming to one area drawn from diverse social and cultural backgrounds often resulting to a number of issues as listed below;

- (i) Strain on various resources especially water resources
- (ii) Grievances from local community members over job opportunities
- (iii) Sexual Exploitation and Abuse
- (iv) Unwanted Pregnancies

Mitigation Measures

- The contractor awarded the Project will develop a labor Management Plan (LMP) in consultation with local leaders.
- The contractor will ensure effective community engagement and strong grievance mechanisms on matters related to labor, with a discrete mechanism for safely and confidentially reporting issues of SEA and GBV at the community level triggered by the Project

5.3 Operation Phase

5.3.1 Positive Impacts

(a) Increased Access to Market for Cow Milk

The current market sources are seasonal and highly dependent on brokers. During times of excess (glut) production there are also significant losses of the produce because farmers in the local area currently have no means to bulk, process or preserve the excess produce a waiting for buyers. The demand for processed milk and ability to increase shelf-life for milk to reach other niche markets where there is huge demand has been a big challenge both for KDPL and the area for a long time. Product and Market Diversification is currently a key at KDPL in order to meet the existing demand as well as bringing more income to the pockets of local small-scale farmers.

Consequently, currently the community members have to accept very low buying prices from local buyers, beyond where the few able farmers have also to travel increasingly to far distances in search for milk market. This is not only very costly but also leads to excess post-harvest losses including much wastage of time that

could have been used for other productive purposes. It is expected that the construction of the plant, will greatly improve the situation by providing a Long Life value-added products for diversification hence improving on quality, income and by large the required market access.

(b) Permanent Employment Opportunities

Both Permanent and casual employment opportunities are one of the long-term major impacts of the project that will be realized during the construction and operations. It is expected that a lot of the local community members will be permanently employed as drivers, plant attendants, technicians, receptionists, accountants, managers, cooks, cleaners, supervisors, security, cater and cateresses, extensionists, etc. as well as those who will be involved indirectly in agricultural and transport activities.

(c) Improved Public Health and Environmental Safety

The proposed project will reduce in milk spoilage. Reduction in milk spoilage and wastage is a measure for improved public health and safe environment.

(d) Improved Value on Land and Physical Quality

The proposed Go-down and largely the vast empty KDPL compound, is currently idle and of less economic value, but with the proposed development, the quality of the land, introduction of infrastructures such as machinery, water, electricity, drainage, cold chains, sewer-lines, soak-pits, signages, Go-downs for packaged milk storage, Grading sheds, ramps, etc. will improve the value of the land, visual and physical quality of the area both internally and externally.

(e) Increased Participation of Youth in Socio-economic Development

Kenyan Youths are more motivated by soft skilled labour such as technical jobs than menial jobs. The proposed project (value addition; transport, sampling, processing, marketing and other activities will definitely attract more to youths. The prevailing socio-cultural norms within the area- influencing household division of labour determine that production and management of milk value chain as a business over and above the normal routines done by youths are tasks for the Youth. By constructing of the plant closer to the communities, the youth will be able to spend their time in other productive activities thereby increasing their participation in socio- economic development. It is also expected that same will improve the economic and social status of even other gender in the locality including men, women and even children since there will be benefit trickledown.

5.3.2 Negative Impacts

(a) Risk of Air and Water pollution

There are possibilities of emissions from boilers, compressors including dusts and debris etc. occurring during the installations, renovations, operations, processes and transportation of milk in commercial scale. This may

become serious when the surfaces, open drains etc. is left open and agents of contamination become active. Air and water quality is a serious environmental problem which should be controlled. Leakage of Spoilt or rejected milk and milk residues may also interfere with water quality directly through increasing turbidity levels, Biochemical oxygen demand (BOCD), Total Dissolved Solutes (TDS) etc; hence indirectly affecting the environment. The proposed project is expected to have minimal risk if all the proposed mitigation measures are properly followed:

Mitigation

- Importation of Quality Equipment,
- Apply air and water contamination/pollution control measures such as control of exposure.
- Suppress emission and dust by appropriate technologies
- Ensure excavated materials are reused for back filling and compacting,
- Ensure proper landscaping of the affected areas within the compound, and
- Ensure compacted areas are ripped off to reduce run-off.
- Ensure effective provision and use of PPEs throughout the project.

(b) Solid Waste Generation

The Operations of project and related activities and processes will result in moderate quantities of solid waste. The waste will include materials such as waste papers from both the office paper works and cement, granite packaging materials, empty gunny bags, obsolete equipment and devices including; broken materials, wood and tile debris, concrete, metal, wood, adhesives, sealants and fasteners during renovations and maintenance of structures.

(c) Noise Pollution

The operations including transportation and factory related activities such as loading and off-loading works will lead to significant deterioration of the acoustic environment within the project site and the surrounding areas. This will be as a result of the noise and vibration that will be experienced as a result of operations of the proposed project.

(d) Increased demand and Energy Consumption

Operation of the dairy plant will rely of energy to run. This if not well conserved and managed can result to high cost of energy and demand.

Mitigation

- Use of energy saving bulbs (LED lighting).
- Optimize use of natural light during the day.
- Install solar panels to limit energy use

Undertake regular energy audits.

(e) Occupational Health Hazards

Taking into account of all the proposed works; project can inevitably expose some workers or the public to occupational health and public safety risks: in particular, working with equipment, handling and use of tools engender certain risks. The construction workers are also likely to be exposed to risk of accidents and injuries resulting from accidental cuts from sharp tools, falls, slipping, falling objects, injuries from moving parts, broken tools and any other equipment.

(f) Gender Based Violence/SexualHarassment

The GBV and more so sexual harassment can potentially occur with women being more vulnerable especially when seeking employment during this phase of the project. The proponent should ensure that this does not happen and should implement the following.

Mitigation

- Develop and implement policy against GBV/sexual harassment
- Disseminate the policy among all the project staff and dam management committee
- Put in place measures for monitoring GBV/sexual harassment
- Have deterrent/punitive measures for any offenders reported.

5.4 Decommissioning Phase

Decommissioning refers to the final closure of the plant, disposal of the equipment and associated utilities at the expiry of the project life span or change of use of the factory, when KDPL is closed down. It may also happen when the community gets another alternative business. During this project, the proponent will be expected to demolish the physical structures, change use, remove all the equipment and utilities; and the elevated water tank etc, and remediate the site.

5.4.1 Positive Impacts

(a) Rehabilitation and change of use

Upon decommissioning of the proposed project, rehabilitation of the project site will be carried out to restore the site to its original status or to a better state than it was originally. This will include replacement of topsoil and re-vegetation which will lead to improved visual quality of the area. This will also mean that alternative options can be utilized within the project site.

(b) Temporal Employment Opportunity

For decommissioning to take place properly and in good time, several people will be involved. As a result, several employment opportunities will be created for the demolition staff during the demolition phase of the proposed project.

5.4.2 Negative Impacts

(a) Generation of solid wastes

Although demolition waste is generally considered as less harmful to the environment since they are composed of inert materials, there is growing evidence that large quantities of such waste may lead to release of certain hazardous chemicals into the environment. We recommend that proper waste disposal mechanisms be observed during the decommissioning phase.

(b) Noise Pollution

The decommissioning related activities such as demolition works will lead to significant deterioration of the acoustic environment within the project site and the surrounding areas. This will be as a result of the noise and vibration that will be experienced as a result of demolishing the proposed project structures.

(c) Occupational Health Hazards

Demolition works will inevitably expose workers and the public to occupational health and public safety risks: in particular, working with heavy equipment, handling and use of tools engender certain risks. The construction workers are also likely to be exposed to risk of accidents and injuries resulting from accidental falls, falling objects and injuries from hand tools.

Chapter Six

6.0 ENVIRONMENTAL AND SOCIAL MANAGEMENT & MONITORING PLAN (ESM & MP)

6.1 Introduction

This chapter presents the Environmental and Social Management and Monitoring Plan (ESM & MP) that will be implemented by the proponent to prevent, or reduce significant negative impacts to acceptable levels. This plan is not static but will be updated throughout the project life cycle.

The purpose of the Environmental and Social Management Plan (ESMP) for the proposed Project is to provide mitigation measures for the significant negative environmental impacts. The objectives of the ESMP are to clearly show how the project will manage the negative impacts while enhancing the positive ones to ensure a project that is economically, socially and environmentally sustainable;

Environmental monitoring is an applied research and analysis activity to support cost-effective and timely assessment of the status and trends in environmental and social conditions in response to different project activities. Also, it is necessary to assess the project performance against the desired mitigation measures, and compliance with the regulations and standards in order to protect people's health and safety, and the environment health and performance. Monitoring activities will be applied to direct monitoring indicators whenever applicable. Indirect indicators can be monitored instead of direct ones whenever it would provide acceptable indication of the occurrence of specific impacts and/or compliance with provisions of the ESMP.

6.1 Environmental and Social Management & Monitoring Plan (ESM&MP) for Construction phase

(a) Construction phase Environmental Management & Monitoring Plan						
Environmental impact	Proposed Mitigation Measures	Indicator	Responsibility	Means of Verification	Frequency/ Time Frame	Est. Cost (KShs .)
1. To minimize dust pollution and soil erosion around the site						
Soil, Dust and Air quality	<ul style="list-style-type: none"> • Ensure proper demarcation, delineation and scaffolding of the project area to be affected by construction works; • Dust suppression measures including use of water spray mists and PPEs to workers. • The machines must be fitted with dust suppressors equipment 	<ul style="list-style-type: none"> • Number of times water sprinkled • Number of machines fitted with dust suppressors 	<ul style="list-style-type: none"> • Contractor 	<ul style="list-style-type: none"> • Schedules and • Tracking Records of sprinkling 	Throughout	60,000
2. Management of Storm water and roof harvesting for environmental resource conservation and Utility saving						
Drainage of storm water	<ul style="list-style-type: none"> • Harvest rainwater as much as possible. This includes water from the roofs and impervious surfaces and storage for domestic and gardening purposes. • Pre and post treatment of water including recycling for reuse purposes • Guttering of all facilities and roofing with safe roofing materials as required by NCA. 	<ul style="list-style-type: none"> • Notable gutters in the entire roof. • installed tanks 	<ul style="list-style-type: none"> • Contractor and PropONENT 	<ul style="list-style-type: none"> • Records of water consumption 	Throughout	As per Bill of Quantities
3. Prevention of loss of vegetation cover						
Loss of Vegetation Cover and landscape	<ul style="list-style-type: none"> • Indigenous trees or other fast growing trees be planted in strategic locations where the vegetation cover will be cleared as part of landscaping initiatives; • Re-vegetation of exposed areas • Identify and restrict movement of vehicles to areas of disturbance 	<ul style="list-style-type: none"> • No. of trees planted • Notable areas re-vegetated 	<ul style="list-style-type: none"> • Contractor/Super vising engineer/ work foreman 	<ul style="list-style-type: none"> • Records and delivery notes of trees planted 	3 months	100,000
4. Control of Soil Erosion						

Risk of Soil Erosion	<ul style="list-style-type: none"> Apply soil erosion control measures such as levelling the project site to reduce run-off; Ensure excavated materials are reused for back filling and compacting, Ensure proper landscaping of the affected areas within the compound, and Ensure compacted areas are ripped off to reduce run-off 	<ul style="list-style-type: none"> Visible soil erosion control measures in place Areas already landscaped 	<ul style="list-style-type: none"> Contractor/Supervising engineer/work foreman 	<ul style="list-style-type: none"> Photos of original site and current site status 	monthly	50,000
5. Oil spillage and control						
Risk of oil spillage	<ul style="list-style-type: none"> Employ safety procedures to prevent oil spillage Ensure that oil/grease spills are immediately removed along with all contaminated material and disposed of at an approved waste disposal site; and Ensure that contaminated materials including used/spilled oils/grease as well as other contaminated materials are stored in a banded area before being disposed off. 	<ul style="list-style-type: none"> No oil spills cases reported 	<ul style="list-style-type: none"> Contractor/Supervising engineer/work foreman 	<ul style="list-style-type: none"> Records Tracking documents 	monthly	100,000
6. Handling of solid and liquid waste						
Generation of Solid and Liquid waste	<ul style="list-style-type: none"> Solid waste to be disposed only at licensed disposal sites; Take adequate measures on spilled substance on water and land Ensure minimal spillage Provide solid waste facilities (waste bins) for temporary disposal of waste before disposal to appropriate and designated locations. Liaise with the County Government of Nyeri and local NEMA office for guidance on licensed waste collectors and suitable dumping sites for generated wastes 	<ul style="list-style-type: none"> Quantity of wastes generated, reused or recyclable No of litter bins Waste disposal site Licensed waste handler in place No of trainings done on solid waste management to workers and local communities 	<ul style="list-style-type: none"> Contractor/Supervising engineer/work foreman NEMA 	<ul style="list-style-type: none"> Tracking documents Receipts Attendance Register Photos 	Weekly	50,000

	<ul style="list-style-type: none"> • Cement wrappers, debris and all other solid waste to be handled, managed and disposed according to the EMC (Waste Management) Regulations 2005. 					
7. Noise pollution management						
Noise Pollution and vibrations	<ul style="list-style-type: none"> • Maintain the levels of noise pollution from the machinery in accordance to the manufacturer's specifications • All construction work to be limited to daytime only; • Immediate neighbors to be notified in advance on the date of commencement of construction work. • All employees likely to be exposed to ear noise to be provided with ear protectors; • Contractor to ensure strict enforcement on use of ear protectors; • There should be less use of noisy equipment on site. • Engineering controls to minimize noise from concrete mixer where applicable • All vehicles engine to be put off while offloading and waiting to be loaded 	<ul style="list-style-type: none"> • Number of PPEs purchased. • Number of workers using PPEs. • Available servicing cards/receipts • Number of vehicles and machinery not on idling when not in use. • Time of operation 	<ul style="list-style-type: none"> • Contract or/Supervising engineer/work foreman 	<ul style="list-style-type: none"> • Local purchase orders • Reports • Receipts • Work plan 	Daily and weekly	30,000
8. Preventing injuries, incidents and accidents						
Occupational Health and Safety (OHS)	<ul style="list-style-type: none"> • The Contractor to place labels and warning signs in areas posing risk of injury or accident. The contractor to provide all workers with full protective gear (PPEs) • The contractor to train and provide First-aid Kit to the workers • The contractor to have Incident and Accident Registers on site for recording of injuries or any OHS incidence 	<ul style="list-style-type: none"> • No of Labels and warning signs • No of workers using PPEs on use by those involved at the site • Trained officers on First-aid Kit • Incidents reported • Number of COVID-19 sensitizations conducted 	<ul style="list-style-type: none"> • Contract or/Supervising engineer/work foreman • Directorate of Occupational Health 	<ul style="list-style-type: none"> • Purchase receipts • Reports • Attendance register • Contingency plan for accident response in place 	Weekly	50,000

	<ul style="list-style-type: none"> • Compliance with COVID 19 control regulations. • Contractor to prepare a contingency/emergency management and preparedness plan for accident response. • Employ drivers who are well trained. • Ensure the availability of Emergency contacts for police, ambulance, etc. • Emergency plans should be communicated and well understood. • Train workers on administering first aid • Contractor to hire a qualified health and safety officer to oversee OSH issues. • Proper site sanitation to be ensured by the selected contractor. • Discourage unauthorized people from the project site 	<p>and Records of participants etc.</p> <ul style="list-style-type: none"> • Emergency contacts at the site • Records of testimonials of drivers <p>No of persons insured</p>	and Safety (DOSH)			
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(b) Construction phase Social Management & Monitoring Plan

Social impact	Proposed Mitigation Measures	Indicator	Responsibility	Means of Verification	Time Frame	Est. Cost (KShs .)
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1. Prevention of Diseases and incidences

Increase in incidences of HIV/AIDS and STIs	<ul style="list-style-type: none"> • Contractor to sensitize workers and community members on HIV/AIDS Awareness and other communicable diseases to be instituted and implemented as part of the Contractor's Health and Safety Management Plan (CHSMP) to be enforced by the Supervising Engineer. • Periodic HIV/AIDS and other communicable diseases Awareness Workshops for Contractor's Staff. 	<ul style="list-style-type: none"> • Number of worker and community sensitized • Availability of condom dispensing equipment • Number of meetings held for workers and community 	<ul style="list-style-type: none"> • Contractor • PropONENT • Public Health 	<ul style="list-style-type: none"> • Attendance registers • Site visits 	monthly	40,000
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	<ul style="list-style-type: none"> Controlled access to Contractor's Workforce Camps by outsiders. Contractor to provide standard quality condoms at the construction site during the construction period. 					
2. Control of spread of COVID-19						
Spread of COVID-19 amongst workers	<ul style="list-style-type: none"> The Contractor will develop a SOPs for managing the spread of Covid-19 The SOPs shall be in line with the World Bank guidance on COVID-19, Ministry of Health Directives, and site-specific project conditions. Mandatory provision and use of appropriate Personal Protective Equipment (PPE) Avoid concentrating of more than 15 workers at one location. Maintain social distancing at least 2 meters. All workers and visitors accessing worksites every day or attending meetings shall be subjected to rapid Covid-19 screening which may include temperature check and other vital signs. The project shall put in place means to support rapid testing of suspected workers for covid-19. Install handwashing facilities with adequate running water and soap, or sanitizing facilities at entrance to work sites including consultation venues and meetings and ensure they are used. Ensure routine sanitization of shared social facilities and other communal places routinely including wiping of workstations, doorknobs, handrails etc. 	<p>Availability of:</p> <ul style="list-style-type: none"> SOP(s), Training material, PPE, Sanitizing facilities, Installed handwashing equipment 	<ul style="list-style-type: none"> All the Project components Supervising Eng. & Contractor(s) 	<ul style="list-style-type: none"> SOPs, Project assessment reports, Purchase orders/receipts, Photos 	monthly	60,000
3. Labour Influx and related issues						

Labor risks including labor influx	<ul style="list-style-type: none"> • Adherence to national labor code and WB policies. • Local community members will be given priority in employment opportunities, in casual and unskilled labor. • Train the community on the project requirements and product. • Training of PMC, SAIC, CESSCOs and Community policing of the project 	<ul style="list-style-type: none"> • Register of workers engaged in the project. • Number of trainings for PMC, SAIC, CESSCOs and Community policing of the project • Report. on local administration on GBV incidences monitoring, assessment, prevention, and control. 	<ul style="list-style-type: none"> • Contractor • supervising engineer • CPCU/N PCU 	<ul style="list-style-type: none"> • Training reports • Workers register • Copies of ID cards 	1 month	50,000
4. SEA prevention						
Sexual Exploitation and Abuse by project workers against community members	<ul style="list-style-type: none"> • Develop and implement a SEA action plan with an Accountability and Response Framework as part of the C-ESMP. The SEA action plan will follow guidance on the World Bank's Good Practice Note for Addressing Gender-based Violence in Investment Project Financing involving Major Civil Works (Sept 2018). 	<ul style="list-style-type: none"> • SEA Action Plan • Code of Conduct • Number of staff trainings • SEA FP • Community Liaison trained in PSEA • IEC materials for workers' sites and community • Discrete SEA reporting pathway 	<ul style="list-style-type: none"> • Supervision Consultant • GBV Expert 	<ul style="list-style-type: none"> • SEA action plan • Attendance registers 	1 month	50,000
5. Gender Based Violence						
Gender-based Violence (GBV) at the community level	<ul style="list-style-type: none"> • The contractor will implement provisions that ensure that GBV at the community level is not triggered by the Project, including: • Effective and on-going community engagement and consultation, particularly with women and girls; • Review of specific project components that are known to heighten GBV risk at the community level, e.g. compensation schemes; employment schemes for women; delivery of water supplies; etc. 	<ul style="list-style-type: none"> • Number of SEA action plans prepared • Code of conduct prepared • Number of staff trainings on SEA held. • -Number of PSEA community liaison trainings carried out • Number of IEC materials available 	<ul style="list-style-type: none"> • Supervision Consultant • GBV Expert 	<ul style="list-style-type: none"> • GBV plans • Attendance registers • GBV action plans 	1 month	50,000

(a) Operation phase Environmental Management & Monitoring Plan

Environmental impact	Proposed Mitigation Measures	Indicator	Responsibility	Means of Verification	Time Frame	Est. Cost (KShs.)
Water pollution	<ul style="list-style-type: none"> • Regular maintenance septic system. • Exhaust the septic tank through a NEMA licensed exhauster once full 	<ul style="list-style-type: none"> • No. of times maintenance done, • No. of NEMA licensed exhausters 	<ul style="list-style-type: none"> • Project management committee • CPCU 	<ul style="list-style-type: none"> • Tracking records • Licenses • Photos 	2 years	50,000
Increased demand for water	<ul style="list-style-type: none"> • Water saving devices such as push taps to be installed to minimize lose. • Sinking of borehole specifically for the project • Installation of roof rainwater harvesting systems to the premise. • Workers to be sensitized on appropriate water use and conservation technologies applicable. 	<ul style="list-style-type: none"> • No. of boreholes drilled • No. of gutters installed for water harvesting • No, of onsite tanks • Rate of metered water consumption 	<ul style="list-style-type: none"> • Project management committee , CPCU 	<ul style="list-style-type: none"> • Records, • Bills • Purchase receipts 	3 months	15,000

<p>Increased demand for Energy</p>	<ul style="list-style-type: none"> • Use of energy saving bulbs (LED lighting). • Optimize use of natural light during the day. • Install solar panels to limit energy use • Undertake regular energy audits. 	<ul style="list-style-type: none"> • No. of Energy saving bulbs in place • Amount of natural light penetrating • No. of solar panels in place • Energy audits conducted 	<ul style="list-style-type: none"> • Project management committee • CPCU • Energy experts 	<ul style="list-style-type: none"> • Receipts • Bills • Reports • Photos 	<p>3 months</p>	<p>100,000</p>
<p>Generation of Solid waste</p>	<ul style="list-style-type: none"> • Provide solid waste facilities (waste bins) for temporary disposal of waste before disposal to appropriate and designated locations. • Liaise with the County Government of Nyeri and local NEMA office for guidance on licensed waste collectors and suitable dumping sites for generated wastes • All materials must be removed and recycled/reused as far as possible 	<ul style="list-style-type: none"> • Quantity of waste collected • No. of waste receptacles • No. of licensed waste handlers 	<ul style="list-style-type: none"> • Project management committee • CPCU 	<ul style="list-style-type: none"> • Tracking records • Photos • Copies of license 	<p>3 months</p>	<p>30,000</p>

Occupational Health and Safety risks	<ul style="list-style-type: none"> • Adhere to Site Occupational Health and Safety rules and regulations as stipulated in the Occupational Safety Act of Kenya of 2007 and revised in 2010. • Sensitize all workers on occupational health and safety • Provide adequate first-aid facilities in the project sites to handle medical emergencies • Discourage unauthorized idlers at the site • Provide adequate PPE's to workers during construction • Comply with the National and International Labor laws • Comprehensive HIV/AIDs sensitization program for workers 	<ul style="list-style-type: none"> • No of Labels and warning signs • No of workers using PPEs on use by those involved at the site • Trained workers on basic first-aid • Incident report • Contingency plan for accident response in place • Number of COVID-19 sensitizations conducted and Records of participants etc. • Emergency contacts at the site • No of persons insured 	<ul style="list-style-type: none"> • Project management committee • Directorate of Occupational Health and Safety (DOSHS) 	<ul style="list-style-type: none"> • Purchase receipts • Reports • Attendance Register 	3 months	50,000
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	and the local community					
(b) Operational phase Social Management & Monitoring Plan						
Social impact	Proposed Mitigation Measures	Indicator	Responsibility	Means of Verification	Time Frame	Est. Cost (KShs.)
Social Conflict	<ul style="list-style-type: none"> Involve local administration and other social groups like the church in social mediation and moderation Notify all the affected persons Establish a grievance redress mechanism where all conflicts related to the project are addressed 	<ul style="list-style-type: none"> No. of cases/incidents/conflicts addressed 	<ul style="list-style-type: none"> Project management committee, CPCU 	<ul style="list-style-type: none"> Incident Register GRMs policy 	3 months	10,000
Theft, vandalism and destruction of infrastructure	<ul style="list-style-type: none"> Ensure the general safety and security of the facility at all times by providing day and night security guards Ensure only authorized personnel get access to the site facility. 	<ul style="list-style-type: none"> Presence of a day and night security guard No. of complaints 	<ul style="list-style-type: none"> Project management committee CPCU 	<ul style="list-style-type: none"> Incident Register 	monthly	20,000

	<ul style="list-style-type: none"> Develop mechanism to address 					
Sexual Exploitation and Abuse	<ul style="list-style-type: none"> Develop and implement a SEA action plan Ensure necessary steps are in place for: Prevention of SEA: 	<ul style="list-style-type: none"> SEA Action Plan Code of Conduct Number of staff trainings SEA FP Discrete SEA reporting pathway, Monthly minutes from SEA coordination meetings 	<ul style="list-style-type: none"> Project management committee CPCU GBV Expert 	<ul style="list-style-type: none"> SEA action plan Attendance registers 	3 months	100,000
Spread of COVID-19	<ul style="list-style-type: none"> Develop a SOPs for managing the spread of Covid-19 Mandatory provision and use of appropriate Personal Protective Equipment (PPE) Maintaining social distancing at least 2 meters Install handwashing facilities with adequate running water and soap. 	<p>Availability of:</p> <ul style="list-style-type: none"> SOP(s), Training material, PPE, Sanitizing facilities, Installed handwashing equipment 	<ul style="list-style-type: none"> Project management committee CPCU Public Health 	<ul style="list-style-type: none"> SOPs, Project assessment reports, Purchase orders/receipts, Photos 	Continuou s	40,000

6.3 Environmental and Social Management & Monitoring Plan (ESMP) for the Decommissioning Phase

(a) Decommissioning phase Environmental Management & Monitoring plan

Environmental impact	Proposed Mitigation Measures	Indicator	Responsibility	Means of Verification	Time Frame	Est. Cost (KShs.)
Air quality/dust emissions	<ul style="list-style-type: none"> Dust suppression through water sprinkling. Proper servicing of equipment to reduce exhaust fumes. Proper communication engagement Handle complaints and address them on time 	<ul style="list-style-type: none"> No. of equipment Serviced No. of forums held No. of complaints raised 	<ul style="list-style-type: none"> Contractor Project management committee CPCU 	<ul style="list-style-type: none"> Records of servicing, Registers Photos 	1 month	40,000
Generation of Solid and Liquid waste	<ul style="list-style-type: none"> Debris from demolition and all other solid waste to be handled, managed and disposed according to the EMC (Waste Management) Regulations 2005. Solid waste to be disposed only at licensed disposal sites; 	<ul style="list-style-type: none"> Quantity of debris collected No. of licensed waste handlers 	<ul style="list-style-type: none"> Contractor Project management committee CPCU 	<ul style="list-style-type: none"> Tracking records Photos Copies of licenses 	1 month	70,000
Occupational health and Safety risks	<ul style="list-style-type: none"> Sensitize the decommissioning team on occupational health and safety Discourage unauthorized idlers at the site 	<ul style="list-style-type: none"> No. of sensitization meetings done No of workers using PPEs 	<ul style="list-style-type: none"> Contractor Project management committee CPCU Directorate of Occupational Health and Safety (DOSHS) 	<ul style="list-style-type: none"> Purchase receipts Reports Attendance Register 	3 months	50,000

	<ul style="list-style-type: none"> • Provide adequate PPE's to workers • Adhere to Site Occupational Health and Safety rules and regulations as stipulated in the Occupational Safety Act of Kenya of 2007 and revised in 2010. • Provide adequate first-aid facilities and PPE's to workers during construction 	<ul style="list-style-type: none"> • Trained workers on First-aid • Number of COVID-19 sensitizations conducted and Records of participants etc. • Emergency contacts at the site 				
Noise Pollution and vibrations	<ul style="list-style-type: none"> • Maintain the levels of noise pollution from the machinery in accordance to the manufacturer's specifications • All work to be limited to daytime only; • Immediate neighbors to be notified in advance on the date of commencement of demolition work. • All employees likely to be exposed to ear noise to be provided with ear protectors; 	<ul style="list-style-type: none"> • Number of PPEs purchased. • Number of workers using PPEs. • Available servicing cards/receipts • Number of vehicles and machinery not on idling when not in use. • Time of operation 	<ul style="list-style-type: none"> • Contractor/Supervising engineer/work foreman 	<ul style="list-style-type: none"> • Local purchase orders • Noise survey Reports • Receipts • Work plan 	3 months	50,000

Water Pollution	<ul style="list-style-type: none"> Waste to be disposed off should be through a NEMA registered waste disposal company and in a designated site only. Exhaust the septic tank fully through a licensed exhauster Scoop and remediate the site from any oil spills immediately and seek advice from NEMA on how to dispose 	<ul style="list-style-type: none"> Quantity of waste debris collected and disposed accordingly Licensed exhauster No of times site is remediated from spills 	<ul style="list-style-type: none"> Project management committee, CPCU, NEMA 	<ul style="list-style-type: none"> Receipts, Reports, Copies of licenses, MoU, Photos 	3 months	100,000
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(a) Decommissioning phase Social Management & Monitoring Plan

Social impact	Proposed Mitigation Measures	Indicator	Responsibility	Means of Verification	Time Frame	Est. Cost (Kshs.)
Increase in incidences of HIV/AIDS and STIs	<ul style="list-style-type: none"> Sensitize workers and community members on HIV/AIDS Awareness and other communicable diseases Periodic HIV/AIDS and other communicable diseases Awareness Workshops for facility workers. 	<ul style="list-style-type: none"> Number of workers and community members sensitized Number of meetings held for workers and community 	Contractor, Project management committee, CPCU, Public Health	Attendance registers, Site visits, Photos	1 month	10,000

Sexual Exploitation and Abuse	<ul style="list-style-type: none"> • Develop and implement a SEA action • Sensitization of staff • Engagement with the community: • Discrete mechanism of GRM; • Regular community outreach to women and girls about social risks and their PSEA-related rights; 	<ul style="list-style-type: none"> • SEA Action Plan • Code of Conduct • Number of staff trainings • IEC materials • Discrete SEA reporting pathway • whistleblower protection 	Contractor, Project management committee, CPCU GBV Expert	SEA action plan Attendance registers	1 year	70,000
Theft, vandalism and destruction of infrastructure	<ul style="list-style-type: none"> • Provide day and night security guards • Ensure only authorized personnel get access to the decommissioning site 	<ul style="list-style-type: none"> • Presence of a day and night security guard • No. of complaints 	Contractor Project management committee, CPCU	Incident Register Records of employment	monthly	20,000
Increased risk of illicit behavior and crime	<ul style="list-style-type: none"> • Sensitize community and workers on expected code of conduct • Prioritize the employment of locals and only use the immigrant workers where the skills or capacity lacks. • Register of all workers kept on site. 	<ul style="list-style-type: none"> • No. Sensitized workers on national code of conduct • Register of all worker on site • Review report on workers behavior 	Contractor/Works foreman	Minutes Reports Attendance registers	6 months	10,000

Loss of employment	<ul style="list-style-type: none"> • Prior notification of the facility management, employees, local community members and relevant local leaders • Where possible provide an alternative source of livelihood 	<ul style="list-style-type: none"> • Notifications issued • No. of forums held 	<ul style="list-style-type: none"> • Contractor • Project management committee • CPCU 	<ul style="list-style-type: none"> • Memos • Letters 	3 months	5,000
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Chapter Seven

7.0 CONCLUSION AND RECOMMENDATION

7.1 Conclusion

An Environmental and Social Management Plan provided in chapter eight charts the path for sustainable project implementation. The plan provides strategies and activities that needs to be implemented so as to mitigate the negative impacts. Implementation timelines, responsibilities and cost estimates are also provided where applicable. The implementation of the project will have far reaching impact on the community in terms of creation of jobs, value addition of milk value chain, accessibility to market and reduction in post-harvest losses. The project area has market challenges which continue to stifle socio-economic development and threaten livelihoods. It is for this reason that the community members are very supportive of the project. It was also established that all the identified negative impacts will be effectively mitigated through full implementation of the ESM & MP.

7.2 Recommendation

It is recommended that Proponent, contractor and all the stakeholders mentioned in the ESM&MP implement the recommendations in the environmental and social management plan. This is to ensure that the potentially affected environment is well managed and that accidents are prevented in the course of project implementation. The Proponent is also expected to comply with the relevant legal and policy requirements with regard to project implementation.

During the operation of the project, it is necessary that environmental regulations be strictly adhered to. The performance of the facility will also be monitored against the recommended mitigation measures to ensure sustainability. The expert therefore recommends that the SPR should be approved by NEMA to allow the proposed project to be implemented.

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Annexes

Annex 1: Single (Trade) Permit

COUNTY GOVERNMENT OF NYERI
Website: www.nyeri.go.ke
COUNTY GOVERNMENT OF NYERI
Email: info@nyeri.co.ke
Phone: +254 714 952 473

Business No: A20C48767 Permit Number 2020/A20C4876701 Year 2020

Grants This
SINGLE BUSINESS PERMIT
To

Business No. A20C48767	Business Name KIENI DAIRY PRODUCTS LTD	
Business of Registration/ID No. 68454	PIN Number	VAT Number

To engage in activity / business / profession or occupation of:

Business Activity Code & Description:	410: Medium agricultural, producer processor dealer, exporter from 11 to 50 employees
Detailed Activity Description:	** [COOLING PLANT]

Having Paid business License Fee Of:
KES 12,500.00
KES (In words) *** TWELVE THOUSAND FIVE HUNDRED ONLY***
Business under this license shall be exclusively conducted at the address indicated below:

Plot No. 189/V	Physical Location: KANYAGIA	ENDARASHA/MWIYOGO
Postal Address	Telephone 0720586805	Fax & Email:

Validity Period: Issued Date: 20 Mar 2020 Expiry Date: 31 Dec 2020

REF: 01950A202003/0000327

For County Secretary
Signed by: **MARUKI STEPHEN MWANGI**
Stamp and signature

Notice: Granting this license does NOT EXEMPT the business holder above from complying with current regulations on Health and Safety established by the Government of Kenya and the COUNTY GOVERNMENT OF NYERI

S/No. B 08393

See Conditions Overleaf

**KIENI DAIRY PRODUCTS LIMITED
P.O BOX 71 MWEIGA
NYERI COUNTY**

**EFFLUENT DISCHARGE
CONTROL PLAN**

2020

Prepared by:
ECOLAND (K) LTD
P.O Box 1105-10400, Nanyuki
Cell phone: +254 734768688/ 776 343729
Email: ecolandke@gmail.com

Submitted to:
**WATER RESOURCES AUTHORITY
UPPER EWASO NG'IRO
SUB-REGIONAL OFFICE**



*Acknowledge Receipt of the
Same Document.*



REPUBLIC OF KENYA
THE REGISTERED LAND ACT
(Chapter 300)

Title Deed

Title Number WIEIG/BLUCH W/UTHUINI/189

Approximate Area 4.937 Ha

Registry Map Sheet No. 3

This is to certify that WIEINI DAIRY PRODUCTS -

LIMITED -

of P.O. Box 139, WIEIG

is (are) now registered as the absolute proprietor(s) of the land comprised in the above-mentioned title, subject to the entries in the register relating to the land and to such of the overriding interests set out in section 30 of the Registered Land Act as may for the time being subsist and affect the land.




GIVEN under my hand and the seal of the

WIEIG District Land Registry

this 14th day of JUNE, 19 2008

Land Registrar



No. C 68454

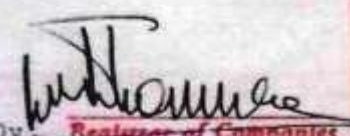
CERTIFICATE OF INCORPORATION

I hereby Certify, that—

KIENI DAIRY PRODUCTS LIMITED.....

is this day Incorporated under the Companies Act (Cap. 486) and that the Company is LIMITED.

Given under my hand at Nairobi this NINETEENTH day
of DECEMBER One Thousand Nine Hundred and NINETY FIVE


Snr. Dy. Registrar of Companies



KEBS Head Office
P. O. Box 54974, Nairobi 00200
Tel: +254 (0) 20 694 8000
Mobile: 0722 2021378,
0734 800 4712
Fax: +254 (0) 20 694 8075
E-Mail: info@kebs.org
Web: http://www.kebs.org

KEBS Coast Region
P. O. Box 90376, Mombasa 80100
Tel: +254 (0) 41 2217090, 22306290640
Fax: +254 (0) 41 229 440
E-mail: kebs-coast@kebs.org

KEBS Lake Region
P. O. Box 20465, Kisumu 40100
Tel: +254 (0) 51 222 8336, 222 9640
Fax: +254 (0) 51 222 7814
E-mail: kebs-kisumu@kebs.org

KEBS South Rift Region
P. O. Box 2124, Nakuru 20100
Tel: +254 (0) 51 2211653, 221 1200
Fax: +254 (0) 51 221 0378
E-Mail: kebs-nakuru@kebs.org

KEBS North Rift Region
P. O. Box 8111, Eldoret 30100
Tel: +254 (0) 52 2032181
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KEBS Mt. Kenya Region
P. O. Box 1790, Nyeri 10100
Tel: +254 (0) 51 203 1400/1
Fax: +254 (0) 51 203 2038
E-Mail: kebs-nyeri@kebs.org

KEBS North Eastern Region
P. O. Box 376, Garissa 70100
Tel: +254 (0) 40 2818
Fax: +254 (0) 40 2400
E-Mail: kebs-garissa@kebs.org

Date: 2020-05-19

Our Ref: KEBS/MKR/SM/1285/1

THE DIRECTOR,
KIENI DAIRY PRODUCTS,
P.O. BOX 71 – 10101,
NYERI.

Dear Sir/Madam,

RE: ISSUE OF STANDARDIZATION MARK PERMIT

We are pleased to inform you that your permit for Yoghurt Brand Name **Peaks** herewith attached has been approved.

The effective and expiry date (s) of the permit(s) is as indicated on the respective Permit.

Conditions of contract for use of the Standardization Mark are printed at the back of Permit.

Additionally, you are required to insert the permit number in the format "SM # XXXXX" (where XXXXX indicates the Permit Number) on your labels immediately below the Standardization Mark logo. Products bearing standardization mark logo without permit number displayed below it, will be deemed to be fake and may be withdrawn from the market and destroyed at the cost of the manufacturer.

The size of the Standardization Mark shall be minimum 20mm high by 12 mm breadth

Thank you for your continued cooperation.

Yours faithfully,

J.M. Gachanja
SECRETARY - PSC
JM/pg

Annex 6: Approved Proposed Bill of Quantity

4. Budgets

No.	Activity	Budget item	No.	Unit cost	Total cost	Community contribution	KCSAP grant	Total amount
	Pasteurisation	Bulk Milk Pasteurizer 2000l/hr	1 Unit	4,000,000	4,000,000	-	4,000,000	4,000,000
		Bulk Milk storage tank	1 Unit	3,300,000	3,300,000	-	3,300,000	3,300,000
		Homogenizer 2000l/hr	1 unit	2,000,000	2,000,000	-	2,000,000	2,000,000
		Industrial Boiler	1 unit	1,800,000	1,800,000	200,000	1,600,000	1,800,000
		Distribution Van (Refrigerated)	1 unit	3,500,000	3,500,000	-	3,500,000	3,500,000
		Stainless Milk can	100 cans	11,000	1,100,000	300,000	800,000	1,100,000
		Milk ATMS	15	450,000	6,750,000	-	6,750,000	6,750,000
		Deep Freezers	15	100,000	1,500,000	-	1,000,000	1,000,000
		Milk Chiller (5000lts)	1	1,500,000	1,500,000	200,000	1,300,000	1,500,000
		CIP unit 1000lts	1 unit	1,300,000	1,300,000	-	1,300,000	1,300,000
		Motorcycles	2	150,000	300,000	-	300,000	300,000
		Yoghurt Processing line	Batch Pasteuriser 1000lts	1 unit	1,500,000	1,500,000	-	1,500,000
	Packaging Table		1 Table	250,000	250,000	250,000	-	250,000
	Automatic cup Filler and sealing Machine		1 unit	3,500,000	3,500,000	-	3,500,000	3,500,000
	Yoghurt carrying trolley		2 unit	150,000	300,000	200,000	100,000	300,000
	Filmatic bottle filler		1 unit	2,300,000	2,300,000	-	2,300,000	2,300,000
	Packaging Materials			800,000	0	400,000	400,000	800,000
	Cold Boxes for selling		50	10,000	500,000	100,000	400,000	500,000
	Solar water Heater	Solar water Heater	1 Unit	450,000	450,000	50,000	400,000	450,000
	Set Up 8 Tree Nursery	Multi-Purpose Tree seeds/ seedlings	10,000 seedlings	200,000	1,600,000	1,600,000	-	1,600,000
		Packaging Materials		800,000	800,000	400,000	400,000	800,000

Annex 7: Effluent Quality Analysis Report for KDPL



WATER RESOURCES AUTHORITY

EWASO NYIRO NORTH REGIONAL OFFICE

P.O. BOX 1331 - 10400

NANYUKI

Telephone: Nanyuki 062 – 32510

Fax: Nanyuki 062 – 32511

E-mail: wrma.ewasongiro@yahoo.com

Water Sample Analytical Certificate – Effluent Results

Name of customer: Kieni Dairy Products Ltd

Address: P.O. BOX 71, MWEIGA

Purpose of sampling: Monitoring

County: NYERI

Date Sampled: 3rd/03/2020

Date received: 3rd/03/2020

Source: Final Effluent

Date compiled: 13th/3/2020

PARAMETERS	UNIT	RESULTS	EFFLUENT STANDARDS	
			DISCHARGE INTO ENVIRONMENT	DISCHARGE INTO PUBLIC SEWER
Temperature	°C	25	+3 ambient temp.	20-30
pH	pH Scale	7.2	6.5-8.5	6-9
Conductivity	µ S/cm	857	-	-
BOD ₅ days at 20°C	mgO ₂ /l	30	30	500
COD	mgO ₂ /l	48	50	1000
Colour	mgPt/l	2.5	-	-
Turbidity	NTU	72	-	-
Total Alkalinity	mgCaCO ₃ /l	228	-	-
Total Suspended Solids	mg/l	33	30	-
Total Dissolved Solids	mg/l	427.1	1200	250
Dissolved Oxygen	mg/l	Nil	-	2000
Residual Chlorine	mg/l	0	-	-
Sulphate	mg/l	34	-	-
Phosphorous	mg/l	2.4	-	-
Total Phosphate	mg/l	7.5	Two guideline value	30
Phosphorous Pentoxide	mg/l	5.6	-	-
Nitrite	mg/l	0.38	-	-
Nitrate	mg/l	127.5	-	-
Nitrogen	mg/l	29	Two guideline value	20
Ammonia	mg/l	1.32	-	-
Potassium	mg/l	4.5	-	-
Oil & Grease	mg/l	Nil	Nil	5 or 10
Arsenic	µg/l	Nil	0.02	0.02

Name of analyst: Vivian Bosire

Signature: *[Signature]*

Comments by head of laboratory:

The BOD and COD levels are within the recommended levels of 30 & 50 ppm respectively in order to discharge into the environment.

Name: James M. Icika

[Signature]
REGIONAL MANAGER
EWASO NYIRO NORTH REGIONAL OFFICE
P.O. BOX 1331, NANYUKI

Signature: *[Signature]*

Date: 13th/3/2020

WRA is ISO 9001: 2008 Certified

Annex 8: Nema Acknowledgement for EDL Application



**NATIONAL ENVIRONMENT MANAGEMENT
AUTHORITY**

*Office of the County Director of Environment
Nyeri County
County Commissioner's Office
Block B room 306*

TEL: 0202066394
P.O BOX 83 10100
NYERI KENYA

Ref: NEMA/NYR/WQ.....026.....

DATE...27/2/2020

KIENI WEST COOLING
PLANT

**RE: ACKNOWLEDGEMENT FOR EFFLUENT DISCHARGE LICENSE
APPLICATIONS/RENEWAL DOCUMENTS**

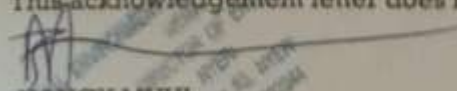
The National Environment Management Authority (NEMA) acknowledges receipt of your EDL application.

We have also received Ksh...70,000... as Renewal fee.

Your reference number is... NEMA /NYR/WQ/5/2/..026..

The application will be reviewed in accordance with Environmental Management (Water Quality) Regulations 2006; NEMA will communicate its assessment / findings in a fortnight.

This acknowledgement letter does not constitute a license.


NANCY MUOI
COUNTY DIRECTOR OF ENVIRONMENT
NYERI

Annex 9: Certificate of Search

Form LRA-85

REPUBLIC OF KENYA

THE LAND REGISTRATION ACT

THE LAND REGISTRATION (GENERAL) REGULATIONS, 2017

CERTIFICATE OF OFFICIAL SEARCH

TITLE NO. Mwaiyegon Block 5 MURITHINI 189

SEARCH NO. 623/06/2020

On the 29th day of June 2020 the following were the subsisting entries on the register of the above-mentioned title:

Part A – Property Section (easements, etc.)

Nature of title ABSOLUTE

Approximate area 4.937 Hs (FOUR DECIMAL NINE THREE SEVEN) Hs

Part B – Proprietorship Section

Name and address of proprietor S-14.6.2000 KITHI DATAI PRODUCE LIMITED
6 - 11 - TIME DEED 15/100

Inhibitions, cautions and restrictions Fr 1.3.2018 CHARGE ENTRY NO. 2 RESERVE RIGHTS UNDER SECTION 87 F 59

Part C – Encumbrances Section (leases, charges, etc.)

1.1.3.2018 CHARGE IN FAVOUR OF TAFA SACCO SOCIETY LIMITED TO
Secure Ksh. 15,000,000= NOTE: RIGHTS UNDER SECTION 82 FE 2
RESERVE

The following applications are pending:

(a) _____

(b) _____

(c) _____

(d) _____

The following certified copies are attached as requested:

a) _____

b) _____

c) _____

d) _____

Date 29th day of JUNE 2020

Signed by the Registrar _____

Signature: J. M. Masamba 257

Seal _____

CITADEL VALUERS LTD
P O Box 13289-00400
NAIROBI

Annex 10: Kenya Dairy Board Licence

Serial No. A

09655 FORM II

KENYA DAIRY BOARD

THE DAIRY INDUSTRY (CARRIAGE OF MILK) REGULATIONS, 1964

PERMIT FOR THE CARRIAGE OF MILK NO (80032)

KIENI DAIRY PRODUCTS

(Name of Permit Holder)

is hereby authorized to carry milk in (prescribed area): NYERI

(a) obtained from (Source(s) of Supply): kienu

(b) on vehicle(s) registration number(s): RCB 084P

(c) along the following route(s): NYERI -NYAHURU/RU RD

Between the hours of: 2020-01-01 03:01:00 - 2020-12-31 03:12:00

(d) at (Premises): KIENI DAIRY PRODUCTS

(e) for Delivery to: NYERI

(f) between the hours of: 2019-12-01 01:12:00 - 2020-12-31 03:12:00

(g) for wholesale retail sale to: NYERI

(h) Milk to be dropped off except as stated under (e) above: 1,000.00 Litres

This Permit is liable to cancellation forth with upon the breach of the terms here of or of the Dairy Industry (Carriage of Milk) Regulations

This permit is valid for the period commencing 31/01/2020 and terminating 31/12/2020 Until terminated by notice in writing. Upon Termination this permit must be surrendered to the person issuing the same.

Date: 07/04/2020

Issued By

Mburu Getald Nuthu

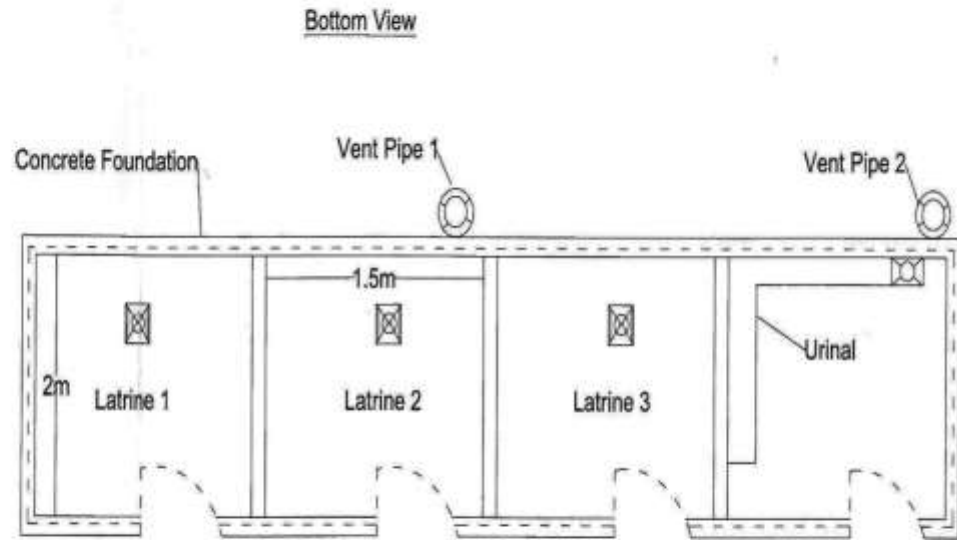
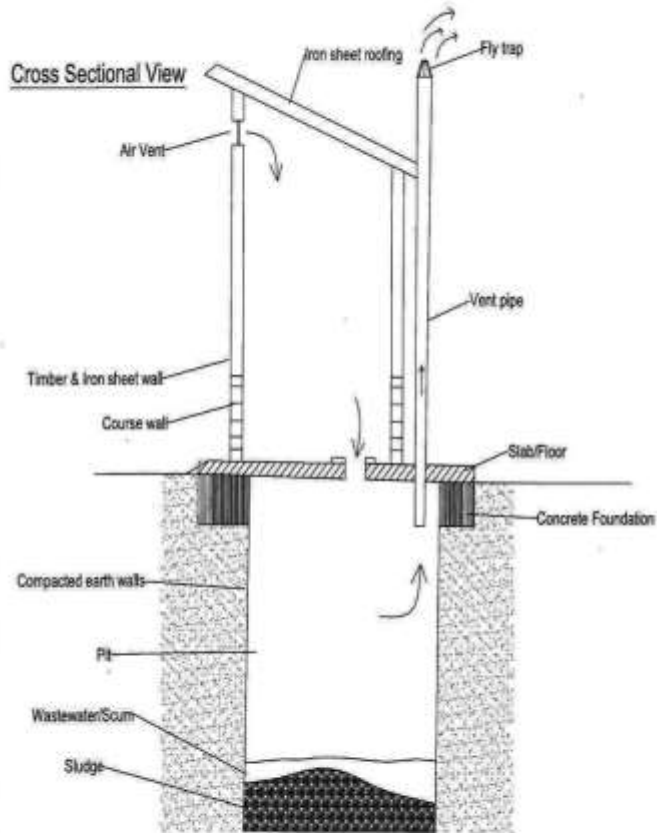


Officer

FORM REF	F 4-02	ISSUE	3	REVISION	0
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Annex 11: Plan of the proposed project

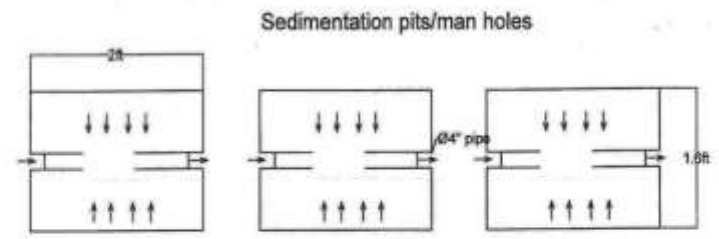
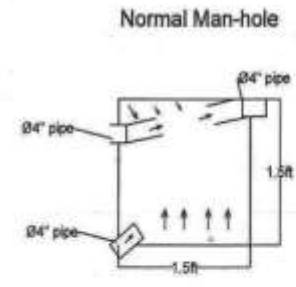
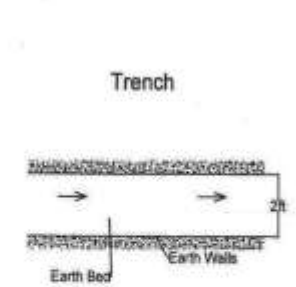
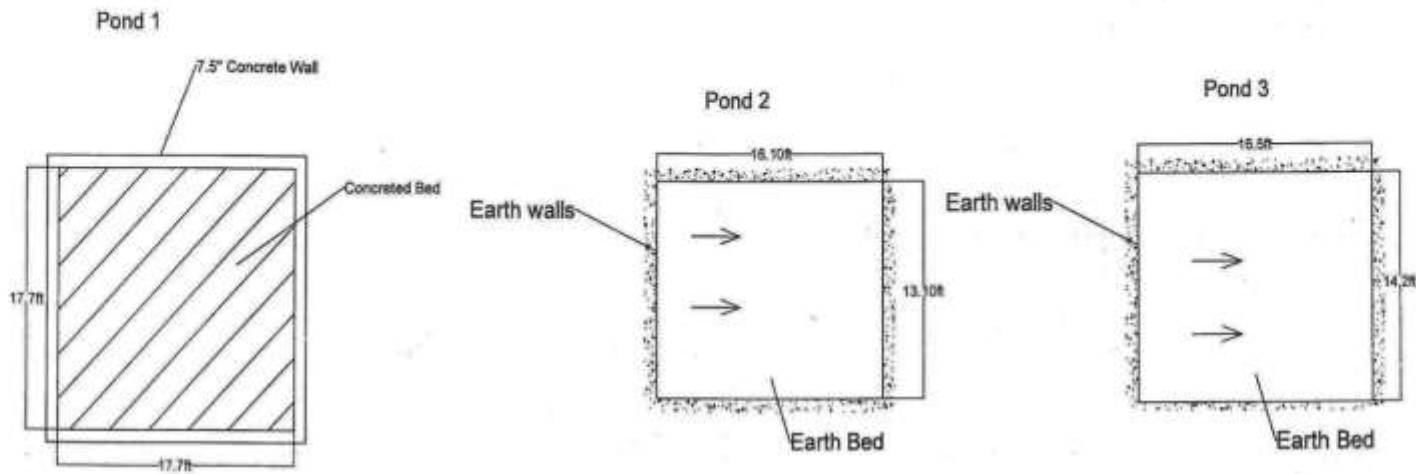
Ventilated Improved Pit (VIP) Latrine



Client;
Kieni Dairy Products Ltd
P.O Box 71
Mweiga

Prepared By;
ECOLAND (K) Ltd
P.O Box 1105 Nanyuki
Email: ecolandke@gmail.com

BOTTOM VIEW

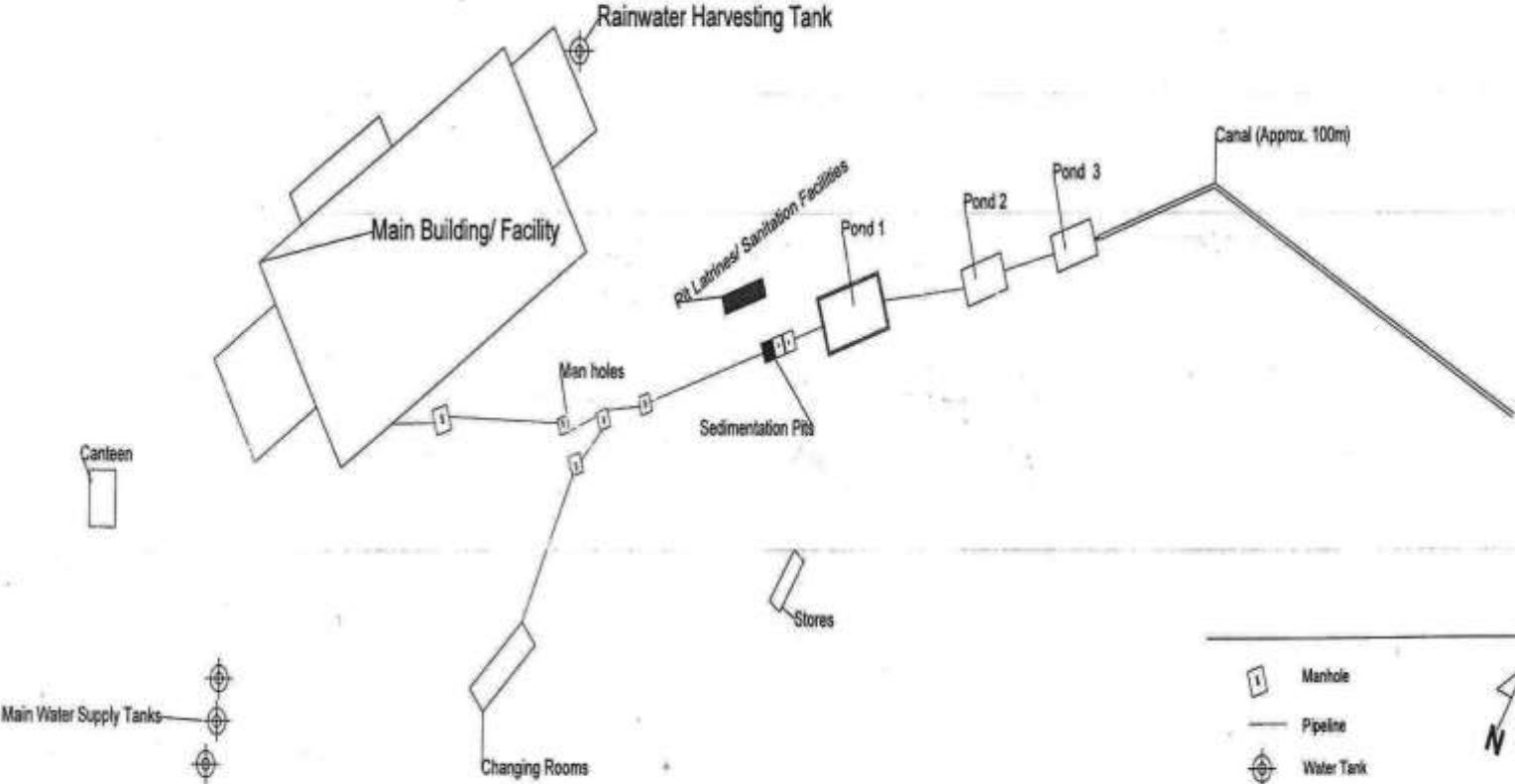


↑ ↑ Gradient direction
 → Direction of flow

Client;
 Kieni Dairy Products Ltd
 P.O Box 71
 Mweiga

Prepared By;
 ECOLAND (K) Ltd
 P.O Box 1105 Nanyuki
 Email: ecolandke@gmail.com

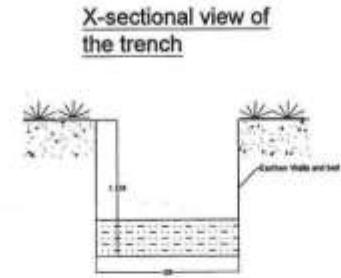
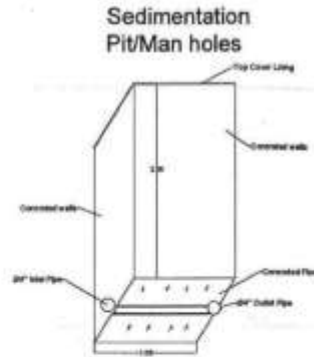
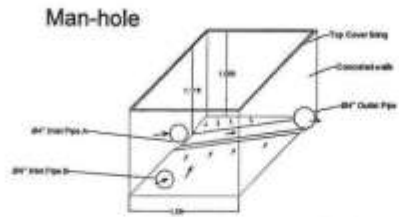
KIENI DAIRY PRODUCTS LTD LAYOUT



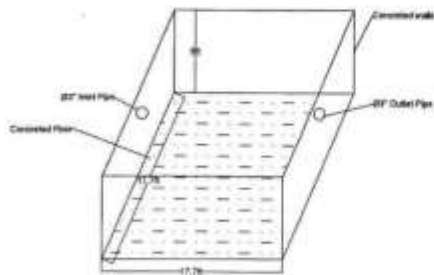
	Manhole	
	Pipeline	
	Water Tank	
Not to scale		

Client: Kieni Dairy Products Ltd P.O Box 71 Mweiga	Prepared By: ECOLAND (K) Ltd P.O Box 1105 Nanyuki Email: ecolandke@gmail.com
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CROSS-SECTIONAL VIEW



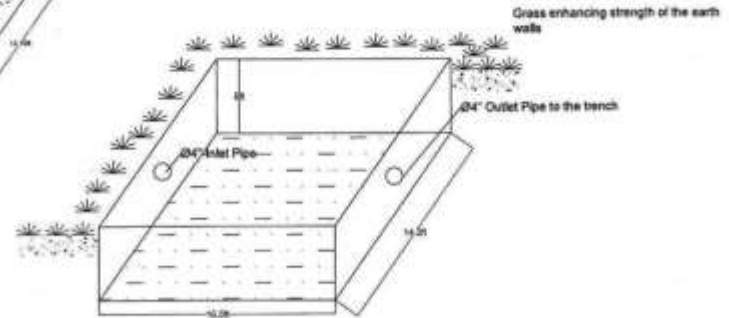
Pond 1



Pond 2



Pond 3




↑ ↑ Gradient direction
 → Dircetion of flow

Client;
 Kieni Dairy Products Ltd
 P.O Box 71
 Mweiga

Prepared By;
 ECOLAND (K) Ltd
 P.O Box 1105 Nanyuki
 Email: ecolandke@gmail.com

Annex 12: Land Valuation Report for KDPL

 **CITADEL VALUERS
LIMITED**
The Value Experts

LR. NO. MWEIGA/BLOCK V (MUTHUINI)/189 - KIENI DAIRY PRODUCTS LIMITED, KANYAGIA AREA, NYERI COUNTY.

9.2 Valuation Certificate

In view of the foregoing particulars and the prevailing economic circumstances, we state the Market, Forced and Insurance (Replacement) Values of **LR. NO. MWEIGA/BLOCK V (MUTHUINI)/189 - KIENI DAIRY PRODUCTS LIMITED, KANYAGIA AREA, NYERI COUNTY** for **Mortgage/Loan Purposes** as at today's date free from all encumbrances as follows:-

(1) **Market Value**
Kenya Shillings: Forty Four Million Five Hundred Thousand (Ksh. 44,500,000.00) Only; broken down as follows:-

Land (4.937Ha).....	Ksh. 20,000,000/=
Improvements (Buildings).....	Ksh. 6,500,000/=
Movable Assets.....	Ksh. 18,000,000/=
Total.....	<u>Ksh. 44,500,000/=</u>

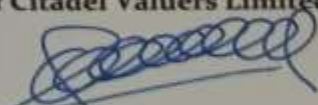
(2) **Forced Sale Value**
Kenya Shillings: Thirty Three Million Three Hundred and Seventy Five Thousand (Ksh. 33,375,000.00) Only; broken down as follows:-

Land (4.937Ha).....	Ksh. 15,000,000/=
Improvements (Buildings).....	Ksh. 4,875,000/=
Movable Assets.....	Ksh. 13,500,000/=
Total.....	<u>Ksh. 33,375,000/=</u>

(3) **Insurance Value**
Kenya Shillings: Twenty Four Million Two Hundred Thousand (Ksh. 24,200,000.00) Only; broken down as follows:-

Improvements (Buildings).....	Ksh. 6,200,000/=
Movable Assets.....	Ksh. 18,000,000/=
Total.....	<u>Ksh. 24,200,000/=</u>

For and on Behalf of Citadel Valuers Limited



.....

DEDAN N. MBURU
B. A. LAND ECON (HONS), M.I.S.K, RV & R.E.A
REGISTERED AND PRACTISING VALUER
9TH DAY OF JULY, 2020.

CVL/TAIFA/NYERI/03-0720/rnn

15

Annex 13: List of Members During Agm Meeting to Propose the Project and ESIA

GITHAE MURAYA	M						
JOSEPH MAWA WAKARA	M						
JOHN WARIU MURITHI	M	22995018	0734-623128				
ALICE WAMBUU	F						
JAMES MARIANGA	M	23675307	0702-963440				
SAJA MUTHONI WAKARU	F						
MARY WAKARU MACHARIA	F	11128108	0725-983221				
LUCY NYAGUTHI MURILIKI	F	2005814	0713-386747				
SAMUEL MBERINGI MAINA	M	0838279	0726-729682				
AMOS KIOWA	M	11128115	0728-020001				
SEBASTIAN GITARE	M	22226246	0714-190737				
SUSAN KARIU	F	8442279	0724-031924				
SUSAN M MURITHI	F						
LYDIA MURITHI	F	1872100	0708-368880				
JULIA WAMBU KALUBI	F	22018186	0726-101884				
ROSE WANJA KIKATHI	F	5238957	0717-819022				
LUCY W OTHARRO	F	1074083	0724-921077				
JOSEPH WAKARU N	M	21934393	0706-879882				
JULIA WANDU MBUTU	F	2154370	0705-882748				
MARY MUTHONI KAGWANJA	F	9088806	0721-985048				
ESTHER WAKARU	F	1218818	0725-444434				
GRACE MUTHONI KIBO	F						
TERENCE WACHIRA	M	22198206	0798-887080				
AGNES WANYU MWIRARI	F	1428182	0729-252712				
DAVID MWANGI KAHINGA	M	2088826	0711-126788				
GEOFFREY KARIUKIRIRU	M	2224678	0701-504471				
CATHERINE MUTHONI MBIATA	F	10188118	0715-489122				
RIKIRO MBOGO	M	2282411	0708-879482				
AGNES WAMBU WACHIRA	F	811880	0718-722203				
SABINE WANJAU NJOROGE	F	2880122	0718-882021				
MOSES GITAH MUTHUI	M	08-84108					
ESNICE WANJIRA NDIBANJOU	F						
GABRIEL MATHEWZ NGAITU	M	22041528	0723-879377				
ELIUD GICHUKI	M	8322267	0704-028718				
PURITY MUTHONI NDUNGU	F	22188271					
LIUS NDUNGU	M	22092836	0722-980701				
ALBILA WAKARU KANGITHI	F						
MAO MURITHI KARIUKI	M	1089487	0708-881818				
DAVID MWANGI NJECHU	M	3227184					
GRACE WAKARU WAKARU	F						
JANE WAKARU WACHIRA	F	8834295	0722-372494				
JOHN WAKARU	F	3227881	0726-733106				
ANN LYDIA WANGICI GICHUMBI	F						
CONVULATA WANGU	F	8838827	0724-878847				
DONALD KIHARA	M	22198288	0718-263714				
JAMES NJOGU NDUNGU	M						
SAJA MUTHONI WAKARU	F	12753892					
JOHN MWANGI WAKARU	M	24719147	0721-102878				
RESUR MUTHUI	F						
CHARLES CATHE MATHIAN	M	2186728					
SEAC MURAGE KIKINDINGI	M						
DOORIS MURAGE KIBWA	M						

Annex 14: Respondent Filled Questionnaires during CPP meeting

ENVIRONMENTAL AND SOCIAL ASSESSMENT QUESTIONNAIRE

PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL MANAGEMENT AND COORDINATION ACT CAP 387, AND SUBSIDIARIES 2015 & 2019 REVISED REGULATIONS ON ENVIRONMENTAL IMPACTS ASSESSMENT AND AUDIT, REQUIRES PUBLIC PARTICIPATION AND CONSULTATION BEFORE COMMENCEMENT OF ANY DEVELOPMENT WITH POSSIBLE ENVIRONMENTAL AND SOCIAL IMPACTS (AS SCHEDULED IN THE ACT).

PROPOSED IS INSTALLATION OF MILK VALUE ADDITION EQUIPMENTS AT KIENI DAIRY PRODUCTS LTD, IN RUIRII, MUGUNDA WARD, THE EQUIPMENT INCLUDE A DUAL TEMPERATURE MILK AND YOGHURT PASTEURIZER WITH SKID MOUNTED PROCESS MODULE & UTILITIES.

PLEASE PROVIDE YOUR OPINION WITH REGARD TO ANY POSSIBLE NEGATIVE IMPACTS.

Name Ruth Haweru ID. 27821216

The information will be treated with all the confidentiality and will only be used to assist the World Bank and Nema in Decision –making during review of the ESIA report and approval of the project.

A) Are there negative impacts (harmful) from the proposed project/s?

YES NO (please tick accordingly)

B) IF Yes kindly list them below:

- i. Environmental pollution - emissions from the plant
- ii. Noise pollution.
- iii. Congestion
- iv. _____

B) How can they be minimized/mitigated?

1. Use efficient fuels with minimal emissions.
2. Shut doors when using dairy machinery or plant trees around the plant
3. Embrace the modern technology to reduce congestion at the plant.
4. _____

C) RESPONDENT RECOMMENDATIONS:

1. In your opinion, do you think the project should be allowed to continue and be licenced by

NEMA? YES NO (please tick accordingly)

2. If NO, Please Indicate Your Major Reasons and the Wayforward/Alternatives below;

- v. N/A - The project is viable as it will have the following benefits:-
 - vi. i) Creation of employment iv) Create market for farmers' milk
 - vii. ii) Improved standards of living in the area. v) Increase the quality of milk.
 - viii. iii) Enhance security infrastructure in the area. vi) It'll make production ~~more~~ easier and faster.
- vi) With the advanced machinery, it will be easy to provide low-cost products to the people.

Thank You for Participation

ENVIRONMENTAL AND SOCIAL ASSESSMENT QUESTIONNAIRE

PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL MANAGEMENT AND COORDINATION ACT CAP 387, AND SUBSIDIARIES 2015 & 2019 REVISED REGULATIONS ON ENVIRONMENTAL IMPACTS ASSESSMENT AND AUDIT, REQUIRES PUBLIC PARTICIPATION AND CONSULTATION BEFORE COMMENCEMENT OF ANY DEVELOPMENT WITH POSSIBLE ENVIRONMENTAL AND SOCIAL IMPACTS (AS SCHEDULED IN THE ACT).

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PLEASE PROVIDE YOUR OPINION WITH REGARD TO ANY POSSIBLE NEGATIVE IMPACTS.

Name ISEN SON K. SUGHT NYAGA ID. 0721250507

The information will be treated with all the confidentiality and will only be used to assist the World Bank and Nema in Decision –making during review of the ESIA report and approval of the project.

A) Are there negative impacts (harmful) from the proposed project/s?

YES NO (please tick accordingly)

B) IF Yes kindly list them below:

- i. issues milk competition
- ii. _____
- iii. _____
- iv. _____

B) How can they be minimized/mitigated?

- 1. factory of quality milk
- 2. _____
- 3. _____
- 4. _____

C) RESPONDENT RECOMMENDATIONS:

1. In your opinion, do you think the project should be allowed to continue and be licenced by NEMA? YES NO (please tick accordingly)

2. If NO, Please Indicate Your Major Reasons and the Wayforward/Alternatives below;

- v. Milk - factory is very important up lifting
 - vi. of dairy farmers from competing
 - vii. for the youths and challenging of milk
 - viii. to avoid wastages.
- Thank You for Participation

ENVIRONMENTAL AND SOCIAL ASSESSMENT QUESTIONNAIRE

PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL MANAGEMENT AND COORDINATION ACT CAP 387, AND SUBSIDIARIES 2015 & 2019 REVISED REGULATIONS ON ENVIRONMENTAL IMPACTS ASSESSMENT AND AUDIT , REQUIRES PUBLIC PARTICIPATION AND CONSULTATION BEFORE COMMENCEMENT OF ANY DEVELOPMENT WITH POSSIBLE ENVIRONMENTAL AND SOCIAL IMPACTS (AS SCHEDULED IN THE ACT.

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PLEASE PROVIDE YOUR OPINION WITH REGARD TO ANY POSSIBLE NEGATIVE IMPACTS.

Name Josias CHEGE MWOANGA. 0726087431

The information will be treated with all the confidentiality and will only be used to assist the World Bank and Nema in Decision –making during review of the ESIA report and approval of the project.

A) Are there negative impacts (harmful) from the proposed project/s?

YES _____ NO (please tick accordingly)

B) IF Yes kindly list them below:

- i.
- ii. N/A
- iii.
- iv.

B) How can they be minimized/mitigated?

- 1.
- 2. N/A
- 3.
- 4.

C) RESPONDENT RECOMMENDATIONS:

1. In your opinion, do you think the project should be allowed to continue and be licenced by NEMA? YES NO _____ (please tick accordingly)

2. If NO, Please Indicate Your Major Reasons and the Wayforward/Alternatives below;

- v.
- vi. N/A
- vii.
- viii.

Thank You for Participation

ENVIRONMENTAL AND SOCIAL ASSESSMENT QUESTIONNAIRE

PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL MANAGEMENT AND COORDINATION ACT CAP 387, AND SUBSIDIARIES 2015 & 2019 REVISED REGULATIONS ON ENVIRONMENTAL IMPACTS ASSESSMENT AND AUDIT, REQUIRES PUBLIC PARTICIPATION AND CONSULTATION BEFORE COMMENCEMENT OF ANY DEVELOPMENT WITH POSSIBLE ENVIRONMENTAL AND SOCIAL IMPACTS (AS SCHEDULED IN THE ACT).

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PLEASE PROVIDE YOUR OPINION WITH REGARD TO ANY POSSIBLE NEGATIVE IMPACTS.

Name KARUKI, GICHUKI ID. 25340921

The information will be treated with all the confidentiality and will only be used to assist the World Bank and Nema in Decision-making during review of the ESIA report and approval of the project.

A) Are there negative impacts (harmful) from the proposed project/s?

YES NO (please tick accordingly)

B) IF Yes kindly list them below:

- i. SOLID WASTE FROM PACKAGING
- ii. _____
- iii. _____
- iv. _____

B) How can they be minimized/mitigated?

- 1. USE OF RECYCLABLE MATERIALS OR RECYCLING
- 2. TRAYS
- 3. USE OF CONTRACTORS.
- 4. _____

C) RESPONDENT RECOMMENDATIONS:

1. In your opinion, do you think the project should be allowed to continue and be licenced by NEMA? YES NO (please tick accordingly)

2. If NO, Please Indicate Your Major Reasons and the Wayforward/Alternatives below;

- v. _____
- vi. NOT APPROVED.
- vii. _____
- viii. _____

Thank You for Participation

ENVIRONMENTAL AND SOCIAL ASSESSMENT QUESTIONNAIRE

PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL MANAGEMENT AND COORDINATION ACT CAP 387, AND SUBSIDIARIES 2015 & 2019 REVISED REGULATIONS ON ENVIRONMENTAL IMPACTS ASSESSMENT AND AUDIT , REQUIRES PUBLIC PARTICIPATION AND CONSULTATION BEFORE COMMENCEMENT OF ANY DEVELOPMENT WITH POSSIBLE ENVIRONMENTAL AND SOCIAL IMPACTS (AS SCHEDULED IN THE ACT.

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PLEASE PROVIDE YOUR OPINION WITH REGARD TO ANY POSSIBLE NEGATIVE IMPACTS.

Name Ruth Wanjira Magoro ID. 93744796

The information will be treated with all the confidentiality and will only be used to assist the World Bank and Nema in Decision –making during review of the ESIA report and approval of the project.

A) Are there negative impacts (harmful) from the proposed project/s?

YES _____ NO (please tick accordingly)

B) IF Yes kindly list them below:

- i.
- ii. n/a
- iii.
- iv.

B) How can they be minimized/mitigated?

- 1.
- 2. n/a
- 3.
- 4.

C) RESPONDENT RECOMMENDATIONS:

1. In your opinion, do you think the project should be allowed to continue and be licenced by NEMA? YES NO _____ (please tick accordingly)

2. If NO, Please Indicate Your Major Reasons and the Wayforward/Alternatives below;

- v. will create employment
- vi. will empower our farmers
- vii. Government will get revenue through
- viii. taxes.

Thank You for Participation

ENVIRONMENTAL AND SOCIAL ASSESSMENT QUESTIONNAIRE

PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL MANAGEMENT AND COORDINATION ACT CAP 387, AND SUBSIDIARIES 2015 & 2019 REVISED REGULATIONS ON ENVIRONMENTAL IMPACTS ASSESSMENT AND AUDIT, REQUIRES PUBLIC PARTICIPATION AND CONSULTATION BEFORE COMMENCEMENT OF ANY DEVELOPMENT WITH POSSIBLE ENVIRONMENTAL AND SOCIAL IMPACTS (AS SCHEDULED IN THE ACT).

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PLEASE PROVIDE YOUR OPINION WITH REGARD TO ANY POSSIBLE NEGATIVE IMPACTS.

Name Ruth Wanjira Magano ID. 33744796

The information will be treated with all the confidentiality and will only be used to assist the World Bank and Nema in Decision –making during review of the ESIA report and approval of the project.

A) Are there negative impacts (harmful) from the proposed project/s?

YES _____ NO (please tick accordingly)

B) IF Yes kindly list them below:

- i. _____
- ii. N/A
- iii. _____
- iv. _____

B) How can they be minimized/mitigated?

- 1. _____
- 2. N/A
- 3. _____
- 4. _____

C) RESPONDENT RECOMMENDATIONS:

1. In your opinion, do you think the project should be allowed to continue and be licenced by NEMA? YES NO _____ (please tick accordingly)

2. If NO, Please Indicate Your Major Reasons and the Wayforward/Alternatives below;

- v. will create employment
- vi. will empower our farmers
- vii. Government will get revenue through
- viii. less.

Thank You for Participation

ENVIRONMENTAL AND SOCIAL ASSESSMENT QUESTIONNAIRE

PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL MANAGEMENT AND COORDINATION ACT CAP 387, AND SUBSIDIARIES 2015 & 2019 REVISED REGULATIONS ON ENVIRONMENTAL IMPACTS ASSESSMENT AND AUDIT , REQUIRES PUBLIC PARTICIPATION AND CONSULTATION BEFORE COMMENCEMENT OF ANY DEVELOPMENT WITH POSSIBLE ENVIRONMENTAL AND SOCIAL IMPACTS (AS SCHEDULED IN THE ACT).

PROPOSED IS INSTALLATION OF MILK VALUE ADDITION EQUIPMENTS AT KIENI DAIRY PRODUCTS LTD, IN RUIRII, MUGUNDA WARD, THE EQUIPMENT INCLUDE A DUAL TEMPERATURE MILK AND YOGHURT PASTEURIZER WITH SKID MOUNTED PROCESS MODULE & UTILITIES.

PLEASE PROVIDE YOUR OPINION WITH REGARD TO ANY POSSIBLE NEGATIVE IMPACTS.

Name John Marita ID. 0725 2594163

The information will be treated with all the confidentiality and will only be used to assist the World Bank and Nema in Decision –making during review of the ESIA report and approval of the project.

A) Are there negative impacts (harmful) from the proposed project/s?

YES NO (please tick accordingly)

B) IF Yes kindly list them below

- i. Trucks queues on the road may cause slatidning
- ii. _____
- iii. _____
- iv. _____

B) How can they be minimized/mitigated?

- 1. drivers discipline
- 2. _____
- 3. _____
- 4. _____

C) RESPONDENT RECOMMENDATIONS:

1. In your opinion, do you think the project should be allowed to continue and be licenced by NEMA? YES NO (please tick accordingly)

2. IF NO, Please Indicate Your Major Reasons and the Wayforward/Alternatives below;

- v. None have the parlor has been be helpful to
- vi. the youth, especially the women
- vii. should be considered for same by the new
- viii. proj. of.

Thank You for Participation

Annex 15: Chance Finds Procedure

1. Purpose of chance find procedure

The chance find procedure is a project-specific procedure that outlines actions required if previously unknown heritage resources, particularly archaeological resources, are encountered during project construction or operation.

2. Chance find procedures will be used as follows:

If the contractor for the proposed KDPL project discovers a physical cultural resource, such as (but not limited to) archaeological sites, historical sites, remains and objects, or a cemetery, tomb and/or individual graves during excavation or construction, the contractor shall:

- Stop the construction activities in the area of the chance find.
- Delineate the discovered site or area.
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be present until the responsible local authorities and the ministry of sports, culture and the arts take over.
- Notify the supervisory engineer who in turn will notify the responsible local authorities and the ministry of sports, culture and the arts immediately (less than 24 hours).
- Contact the responsible local authorities and the ministry of sports, culture and the arts who would be in charge of protecting and preserving the site before deciding on the proper procedures to be carried out. This would require a preliminary evaluation of the findings to be performed by the archaeologists of the relevant ministry of sports, culture and the arts (within 72 hours). The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage, including the aesthetic, historic, scientific or research, social and economic values.
- Ensure that decisions on how to handle the finding be taken by the responsible authorities and the ministry of sports, culture and the arts. This could include changes in the layout (such as when the finding is an irremovable remain of cultural or archaeological importance) conservation, preservation, restoration and salvage.
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by the ministry of sports, culture and the arts concerning the safeguard of the heritage and authorization for construction work to resume.

Annex 16: Environmental and Social Screening Checklist

Environmental and Social screening Check list

ESM Sub-projects Screening Checklist (Prototype)

(Sub-projects screening process by benefitting communities/Agencies)

Section A: Background information

Name of County NYERI COUNTY

Name of CPCU /Researcher BEATRICE THEURI

Sub-project location NWEGA Name of

CBO/Institution KIENI DAIRY PRODUCTS LTD

Postal Address P.O. BOX 232, NWEGA

Contact Person ISAAC NUNU Cell phone 0722-661044

Sub-project name PROPOSED SKID MOUNTED MODULE PLUS UTILITIES MILK PASTEURIZER

Estimated cost (KShs.) 10,960,000 (10.9 million)

Approximate size of land area available for the sub-project 4934 HECTARES

Objectives of the sub project TO PURCHASE AND INSTALL A DUAL HEAT SKID MOUNTED MODULE PLUS UTILITIES (MILK VALUE ADDITION EQUIPMENT)

Activities/enterprises undertaken DAIRY/MILK VALUE CHAIN

How was the sub-project chosen? THROUGH CONSULTATION PROCESS BY KESAD & COMMUNITY BENEFACTORS

Section B: Environmental Issues

Will the sub-project:	Yes	No
Create a risk of increased soil erosion?		X
Create a risk of increased deforestation?		X
Create a risk of increasing any other soil degradation soil degradation?		X
Affect soil salinity and alkalinity?		X
Divert the water resource from its natural course/location?		X
Cause pollution of aquatic ecosystems by sedimentation and agro-chemicals, oil spillage, effluents, etc.?		X
Introduce exotic plants or animals?		X
Involve drainage of wetlands or other permanently flooded areas?		X

Cause poor water drainage and increase the risk of water-related diseases such as malaria?		X
Reduce the quantity of water for the downstream users?		X
Result in the lowering of groundwater level or depletion of groundwater?		X
Create waste that could adversely affect local soils, vegetation, rivers and streams or groundwater?		X
Reduce various types of livestock production?		X
Affect any watershed?		X
Focus on Biomass/Bio-fuel energy generation?		X

If the answers to any of the above is 'yes', please include an EMP with sub-project application.

Section C: Socio-economic Issues

Will the sub-project:	Yes	No
Displace people from their current settlement?		X
Interfere with the normal health and safety of the worker/employee?		X
Reduce the employment opportunities for the surrounding communities?		X
Reduce settlement (no further area allocated to settlements)?		X
Reduce income for the local communities?		X
Increase insecurity due to introduction of the project?		X
Increase exposure of the community to HIV/AIDS?		X
Induce conflict?		X
Have machinery and/or equipment installed for value addition?	✓	
Introduce new practices and habits?		X
Lead to child delinquency (school drop-outs, child abuse, child labour, etc.)?		X
Lead to gender disparity?		X
Lead to poor diets?		X
Lead to social evils (drug abuse, excessive alcohol consumption, crime, etc.)?		X

Section D: Natural Habitats

Will the sub-project:	YES	NO
Be located within or near environmentally sensitive areas (e.g. intact natural forests, mangroves, wetlands) or threatened species?		X
Adversely affect environmentally sensitive areas or critical habitats – wetlands, woodlots, natural forests, rivers, etc.)?		X
Affect the indigenous biodiversity (Flora and fauna)?		X

Cause any loss or degradation of any natural habitats, either directly (through project works) or indirectly?		X
Affect the aesthetic quality of the landscape?	✓	
Reduce people's access to the pasture, water, public services or other resources that they depend on?		X
Increase human-wildlife conflicts?		X
Agrochemical use		
Will the sub-project:		X
Involve the use of pesticides or other agricultural chemicals, or increase existing use?		X
Cause contamination of watercourses by chemicals and pesticides?		X
Cause contamination of soil by agrochemicals and pesticides?		X
Experience effluent and/or emissions discharge?	✓	
Export produce? Involve annual inspections of the producers and unannounced inspections?		X
Require scheduled chemical applications?		X
Require chemical application even to areas distant away from the focus?		X
Require chemical application to be done by vulnerable group (pregnant mothers, chemically allergic persons, elderly, etc.)?		X
Use irrigation system in its implementation?		X

If the answers to any of the above is 'yes', please include an EMP with sub-project application.

Section E: Pesticides and Agricultural Chemicals

This questionnaire will be used with the farmers groups for purpose of implementing the IPMF

1) Pest Control practices

a) Do you use any pesticides to control pests (Insects, diseases, weeds) of crops each season?

N/A

Yes No If yes, Name them:	Name of pesticide	Name of pest, disease, weed controlled	Number of times applied/season	When did you apply (growth stage or month) Quantity purchased
NO				

If No, WHY?

N/A

b) If you use any of the above pesticide types, do you keep records of the:

Completed by: [type here] Name:


Position / Community: JOSEPH GICHERU NDIRITU

Date: 11/12/2020

Field Appraisal Officer (CDE): Moses Mburu

Recommended for environmental impact assessment

Date: 14th Decembe 2020

Signature: 
NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY
NEMA
COUNTY DIRECTOR OF ENVIRONMENT
NYERI
P.O. Box 83, NYERI
TEL: 061-2932344

Annex 17: Photo Gallery

Photo: During Consultative Public Participation (CpP) Meeting At KDPL premise, In Attendance Is Community Leaders, Group Officials, Technical Officers and The Lead Expert.



Photo: Main Office Block at KDPL



Photo: Milk Reception Bay



Photo: Chilling Room



Annex 18: Expert Practicing Licence

FORM 7

(r.15(2))



**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/12999

Application Reference No: NEMA/EIA/EL/17181

M/S CHARLES KIRIMI MUTHINJA
(individual or firm) of address

P.O. Box 1552-10100, NYERI

is licensed to practice in the

capacity of a (Lead Expert/Associate Expert/Firm of Experts) **Lead Expert**
registration number **1622**

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

Issued Date: 7/16/2020

Expiry Date: 12/31/2020


Signature.....
(Seal)
Director General
The National Environment Management
Authority

