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STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT (SESA)

Teita Estate Comprehensive Mixed Land Use Master Plan

FINAL REPORT

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LIST OF ABBREVIATIONS

AD	Anaerobic Digestion
ALARP	As low as reasonably practicable
AMR	Annual Monitoring Report
CDA	Coast Development Authority
CIDP	County Integrated Development Plan
CSR	Corporate Social Responsibility
EIA	Environmental Impact Assessment
EM&MP	Environmental Management and Monitoring Plan
EMCA	Environmental Management and Coordination Act
GIS	Geographical Information Systems
GoK	Government of Kenya
KENHA	Kenya National Highway Authority
KRDS	Kenya Rural Development Strategy
KWS	Kenya Wildlife Service
MEMR	Ministry of Environment and Mineral Resources
NCA	National Construction Authority
NEC	National Environment Council
NEAP	National Environment Action Plan
NEMA	National Environment Management Authority
NRMP	Natural Resources Management Programme
NWRMS	National Water Resources Management Strategy
PPP	Policy, Plan or Program
PRSP	Poverty reduction strategy paper
SEA	Strategic Environmental Assessment
SERC	Standards and Enforcement Review Committee
SEO	Strategic Environmental Objective
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WRA	Water Resources Authority

UNITS

CO	Carbon Monoxide
dB(A)	Decibel Amperes
KES	Kenya Shillings
Km	Kilometres
Km/h	Kilometre per hour
Km ²	Square Kilometre
M ³	Cubic metre
Mm	Millimetres
Ppm	Parts Per Million

DEFINITION OF TERMS

Air quality: means the concentration prescribed under or pursuant to the Environment Management and Coordination Act 1999 (2015 amendment) of a pollutant in the atmosphere at the point of measurement;

Analysis: means the testing or examination of any matter, substance or process for the purpose of determining its composition or qualities or its effect (whether physical, chemical or biological) on any segment of the environment;

Baseline data: Data that describes issues and conditions at the inception of the SEA. It serves as the starting point for measuring impacts and performance and is an important reference for evaluation.

Biological diversity: means the variability among living organisms from all sources including terrestrial ecosystems, aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, among species, and of ecosystems

Buffer Zone: means distinct or established areas that separate potentially competing users and that serves to lessen the danger of potential conflicts.

Ecosystem: means a dynamic complex of plant, animal, micro-organism communities and their non-living environment interacting as a functional unit;

Effluent: means gaseous waste, water or liquid or other fluid of domestic, agricultural, trade or industrial origin treated or untreated and discharged directly or indirectly into the aquatic environment;

Environment: includes the physical factors of the surroundings of human beings including land, water, atmosphere, climate, sound, odour, taste, the biological factors of animals and plants and the social factor of aesthetics and includes both the natural and the built environment;

Environmental Audit: means a systematic evaluation of activities and processes of an on-going project to determine how far these activities and programmes conform with the approved environmental management plan of that specific project and sound.

Environmental Monitoring: means the continuous or periodic determination of actual and potential effects of any activity or phenomenon of the environment whether short-term or long-term.

Grievance: An issue, concern, problem, or claim (perceived or actual) that an individual or community group wants a company or contractor to address and resolve.

Grievance Redress Mechanism: A formalized way to receive, assess, and resolve stakeholder complaints about the impacts of the project, the conduct of project proponents, including its contractors or employees.

Indicator: A signal that reveals progress (or lack thereof) towards objectives; it provides a means of measuring what actually happens against what has been planned in terms of quantity, quality, and timeliness.

Lead Agency: means any Government Ministry, Institution, Department, Parastatal, State Corporation or Local Authority, in which any law vests functions of control or management of any element of the environment or natural resources

Integrated Environmental Assessments: includes Environmental Impact Assessment, Archaeological Assessment, Social Impact Assessment, Health Impact Assessment and Cultural Impact Assessments.

Master plan: a dynamic long-term planning document that provides a conceptual layout to guide future growth and development. Master planning is about making the connection between buildings, social settings, and their surrounding environments.

Mitigation measures: include engineering works, technological improvements, management, and ways and means of minimising negative aspects, which may include socioeconomic and cultural losses suffered by communities and individuals, whilst enhancing positive aspects of the project.

Plan: A purposeful, forward-looking strategy or design, often with coordinated priorities, options, and measures that elaborate and implement policy.

Policy: A broad statement of intent that reflects and focuses the political agenda of government and initiates a decision cycle. A general course of action or proposed overall direction that a government is/ will pursue; a policy guides on-going decision making.

Program: A coherent, organized agenda or schedule of commitments, proposals, instruments, and/or activities that elaborate and implement policy.

Public Engagement/Participation: Engagement is a planned process with the specific purpose of working with individuals and groups to encourage active involvement in the project. This ranges from sensitizing individuals or groups about a project, obtaining community feedback at key project stages or working collaboratively with stakeholders to address local issues.

Scoping: The process of defining the extent and detail of a SEA, including the identification of strategic issues.

SEA Expert: An expert registered and licensed as per the SEA Guidelines

Social Impact Assessment (SIA): is the process of identifying and managing the social/ human impacts of projects

Stakeholder: Those who may be interested in, potentially affected by, or influence the implementation of a PPP. In the context of a SEA applied to development cooperation, stakeholders may include government, donor agencies, local communities, NGOs, and civil society.

Strategic Environmental Assessment (SEA): A range of analytical and participatory approaches that aim to integrate environmental consideration into policies, plans, and programs and evaluate the interlinkages with economic and social considerations.

Stakeholder Mapping: The process of identifying those directly or indirectly affected by a project, those with direct or indirect interests or those with ability to influence the projects' outcomes positively or negatively.

Sustainable Development: means development that meets the needs of the present generation without compromising the ability of future generations to meet their needs by maintaining the carrying capacity of the supporting ecosystem.

Tier: A layer or ranking in a hierarchy, as in policy, plan, or program

Threshold: Levels that should not be exceeded; points at which irreversible or serious damage could occur, either to ecosystems and/or to social systems (health, safety, or wellbeing).

Trade-offs: Refers to losing one quality or aspect of something in return for getting another quality or aspect. It implies a decision made with the full comprehension of both the up- and down-side of a choice.

Vulnerable Groups: Refers to demographic groups who, due to factors usually considered outside their control, do not have the same opportunities as other, more abled groups in society.

NON-TECHNICAL SUMMARY

Background Information

Teita Estate is a leading international producer and exporter of sisal products. Teita Estate Limited has identified the need to introduce a comprehensive mixed land use pattern at the Teita Sisal Estate, which is aimed at enhancing the economic productivity of the area through the proposed estate zoning and subdivision into distinct land use zones.

The proposed mixed-use development site is located 3 kilometres from Mwatate Town, along Voi – Mwatate Road. The development is anchored on the tenets of mixed-use developments which is one of the ten principles of smart growth that promotes community design and developments and incorporates it with economy, public health and environment. In this case, the proposed development blends various compatible land uses including commercial, light industrial, residential with pockets of adequate public amenities and support infrastructure. The end game is a well thought out sustainable human settlement where people can live, work and play.

The purpose of this SESA report is to share the findings of the possible impacts on the biophysical and socio-economic environment upon implementation of the proposed Master Plan. It also provides information on the plan proponent, an outline of the proposed plan, mitigation measures for identified negative impacts, an environmental management and a monitoring plan to ensure effective implementation of the mitigation measures, and a description of the SESA process including the assessment's outcomes and recommendations.

Methodology and Criteria for undertaking the SESA

The SESA was carried out in line with the provisions of the Environmental Management and Coordination Act, (EMCA, Cap 387), the Environmental (Impact Assessment and Audit) Regulations 2003, Draft Environmental Management and Coordination (Strategic Assessment, Integrated Impact Assessment and Audit) Regulations 2018, the 2012 National Guidelines for Strategic Environmental Assessment in Kenya, as well as international guidelines on SESA. The main activities in this SESA study included:

- i. Description of the proposed master plan including the objective, purpose, and rationale
- ii. Identification of alternative options and strategies, implementation plan and time scale
- iii. Areas and sectors affected by the proposed master plan
- iv. Field missions for baseline environmental analysis
- v. Collection of baseline data including data on ecological processes and services
- vi. Review and analysis of existing policy and legislative frameworks for environmental protection and existing environmental protection programs and their objectives
- vii. Review of all relevant development plans for the area within the study boundaries
- viii. Identification of alternatives options and justification of preferred alternatives and linkages between on-going projects and proposed plan
- ix. Prediction and evaluation of impacts, including cumulative effects
- x. Preparation of an Environmental and Social Management and Monitoring Plan (ESMMP)
- xi. Identification of gaps and alternatives actions
- xii. Stakeholder consultations and public participation
- xiii. Presentation of findings and stakeholder dialogue
- xiv. Compilation, validation and submission of final SESA report

Objectives of the SESA

This SESA utilised a set of SESA objectives that cover each of the environmental topics scoped into the assessment covering different section of SESA. The objectives have been further outlined in section 1.1.5.

- ✓ Reduce emissions from the transport sector by reducing the need to travel to school and shopping hence contribute to the wider targets to reduce greenhouse gas emissions
- ✓ Adapt the different proposed land uses to the predicted effects of climate change
- ✓ Reduce all forms of air pollution related to the residential, industrial, commercial and transport land uses and improve air quality
- ✓ Improve quality of life and human health and increase sustainable access to essential services, employment and the natural environment
- ✓ Reduce noise and vibration associated with the construction stage, transport network, industrial processing and agriculture
- ✓ Promote, invest in, build and maintain infrastructure to support the development of high-quality places
- ✓ Improve the living standards and environment of the residents of Mwatate County
- ✓ Provide recreational and green spaces for the residents of Mwatate closer to their living environment
- ✓ Promote and improve the sustainable use of the land and natural resources
- ✓ Reduce use of natural resources by providing other alternatives
- ✓ Protect, maintain and improve the quality of water bodies, wetlands and the marine environment from any direct or indirect impacts from the project, and protect against the risk of flooding, surface and underground water pollution and water wastage
- ✓ Promote water recycling and water harvesting
- ✓ Protect, maintain and enhance biodiversity and ecosystem services, avoiding damage to or loss of designated and undesignated wildlife or geological sites
- ✓ Safeguard and improve soil quality particularly high value agricultural land and carbon-rich soil
- ✓ Protect cultural heritage resources and their settings.
- ✓ Protect the landscape and deliver environmental benefits through sustainable and high-quality design and place-making
- ✓ Propose environmentally alternatives to make the Master Plan Environmentally sustainable and self-conserving.

Scope of the proposed Master Plan

The intended Teita Estate Comprehensive Mixed-Use Master Plan will comprise of several spatial land use patterns, which will include 58.38% residential, .8% industrial, 4.26% commercial, 8.2% on agricultural activities and 1.9% education. Others will consist of public utilities and purposes, recreational purposes, transportation and open space. The zones in each of the development phases include:

- | | |
|------------------------|------------------------|
| ✓ Residential Zone | ✓ Religious facilities |
| ✓ Agricultural zones | ✓ Commercial zones |
| ✓ Public utility zones | ✓ Industrial zones |
| ✓ Public purpose zones | ✓ Wetlands |
| ✓ Medical facilities | ✓ Transport |

1 Introduction

1.1 Background

1.1.1 Overview of The Plan

The Strategic Environmental and Social Assessment (SESA) of Teita Estate Comprehensive Mixed Land Use Development Master Plan is being conducted for approval by the National Environment Management Authority (NEMA). It is meant to provide strategic direction to the proposed comprehensive mixed land use pattern from the current land uses. This section outlines the key areas of focus that shall be addressed by the SESA. Subsequently the experts have recommended that upon the completion of the SESA process and issuance of NEMA approval on the Teita Estate Comprehensive Mixed Land Use Master Plan, hereafter referred to as the 'Master Plan', Environmental &/Social Impact Assessments (ESIA) be undertaken for the various individual project phases to address site-specific impacts of specific projects and EIA/ESIA licenses issued by NEMA.

Teita Estate Limited sought the services of a lead expert, of the SEA experts led by Dr. David Masereti Makori, to carry out a SESA of the proposed Master Plan in fulfilment of Regulation 42 of the Environmental (Impact Assessment and Audit) Regulations of 2003, that requires all Policy, Plans or Programmes to be subjected to a SESA. The SESA process shall entail carrying out the study in accordance with the set regulations and guidelines. This submission of the report to NEMA for review seeks for approval of the SESA by NEMA, and follow up to provide any additional information to enable approval of the Master Plan. The purpose of this draft SESA report is to provide an in-depth analysis of key areas of concern that have been subjected to scrutiny and detailed analysis to ascertain the possible impacts as result of the proposed implementation of the Master Plan, and subsequently develop an adequate and sustainable environmental management and monitoring plan (EMMP). It also sought to provide information on the plan proponent, an outline of the proposed plan and anticipated impacts.

Teita Estate Limited, has identified the need to introduce a comprehensive mixed land use pattern at the Teita Sisal Estate, that is aimed at enhancing the economic productivity of the area through the proposed estate zoning and subdivision into distinct land use zones. The development is anchored on the tenets of mixed-use developments which is one of the ten principles of smart growth that promotes community design and developments and incorporates it with economy, public health and the environment. In this case, the proposed development blends various compatible land uses including commercial, light industrial, residential with pockets of adequate public amenities and support infrastructure. The end game is a well thought out sustainable human settlement where people can live, work and play. The proponent is considering introduction of key zones within the estate as listed below: -

- i. Residential zones
- ii. Agricultural zones
- iii. Public utility zones
- iv. Public purpose zones
- v. Medical facilities
- vi. Religious facilities
- vii. Commercial zones
- viii. Industrial zones

ix. Wetland

The Master Plan is described in detail in Section 2 of this report.

1.1.2 Scope of the Master Plan

The proposals as put up by a team of experts such as planners, managers, urban planners, engineers, quantity surveyors, environmentalists, physical planners, hydro geologists, zoologists, botanists, sociologists and other ancillary experts as the need be to come up with the most economically viable, environmentally sound, technologically savvy mixed-use dwellings. The proposed components will be put up in such a manner to maximize the intended benefits.

The intended Teita Estate Comprehensive Mixed-Use Master Plan will comprise of several spatial land use patterns, which will include 58.38% residential, 4.08% industrial, 4.26% commercial, 8.2% on agricultural activities and 1.9% education. Others will consist of public utilities and purposes, recreational purposes, transportation and open space. The following provides details of the proposed facilities:

- Controlled mixed-use development that is governed by a development control code and rules.
- Security that integrates both physical and technology to provide advanced security surveillance systems that include non-controlled ingress and egress both into the city and individual buildings.
- Due to limited water resources, a water resource plan shall include enhanced production and distribution of water within the development.
- Provide reliable power distribution with minimal brown outs, back-up generators and endeavour to provide power demand from renewable energy sources such as solar and wind
- Provision on 24 hours medical and emergency facilities to be incorporated in the development plan, this includes medical facilities, ambulance and fire brigades
- Provision of a zone for the development of commercial facilities within the development
- Allocation of a zone for the development of universities, primary and tertiary education facilities
- Allocation of zones for light industries establishment
- An adequate traffic design that ensures a walkable environment that is not hampered by vehicular traffic
- Anchor the Mixed-use development on sustainability and green initiatives
- Innovative asset and facility management to maintain the built-up environment
- The zones in each of the development phases include:
 - ✓ Residential zones
 - ✓ Agricultural zones
 - ✓ Public utility zones
 - ✓ Public purpose zones
 - ✓ Medical facilities
 - ✓ Religious facilities
 - ✓ Commercial zones

- ✓ Industrial zones
- ✓ Wetland
- ✓ Transport

1.1.3 Strategic Environmental and Social Assessment (SESA) Definition

Strategic Environmental and Social Assessment (SESA) refers to a range of analytical and participatory approaches to integrate environmental and social consideration into Policies, Plans and Programs (PPP), and evaluate the inter-linkages with economic and social considerations (NEMA, 2012). SESA is a combination of approaches that use a variety of tools, rather than a single, fixed, prescriptive approach. The SESA process extends its aims and principles upstream in the decision-making process, beyond the plan level, when major alternatives are still possible. SESA is a proactive approach to integrate environmental considerations into the higher levels of decision-making. During a SESA process, the likely significant effects of a Policy, Plan, or Program (PPP) on the environment are identified, described, evaluated, and reported.

1.1.4 Basic Principles for SESA

The Environmental (Impact Assessment and Audit) Regulations of 2003 provide for SESA in compliance to the following principles:

- ✓ The sustainable use of natural resources
- ✓ The enhanced protection and conservation of biodiversity
- ✓ Interlinkages between human settlements and cultural issues
- ✓ Integration of socio-economic and environmental factors
- ✓ The protection and conservation of natural physical surroundings of scenic beauty and the protection and conservation of built environment of historic or cultural significance
- ✓ Public and stakeholder engagement

1.1.5 SESA Objectives

This SESA will utilise a set of objectives that cover each of the environmental topics scoped into the assessment covering different section of SESA.

- ✓ Reduce emissions from the transport sector by reducing the need to travel to school and shopping hence contribute to the wider targets of reducing greenhouse gas emissions
- ✓ Adapt the proposed land uses to the predicted effects of climate change
- ✓ Reduce all forms of air pollution related to residential, industrial, commercial and transport land uses and improve air quality
- ✓ Improve quality of life and human health and increase sustainable access to essential services, employment and the natural environment
- ✓ Reduce noise and vibration associated with the construction stage, transport network, industrial processing and agriculture
- ✓ Promote, invest in, build and maintain infrastructure to support the development of high-quality places
- ✓ Improve the living standards and environment of the residents of Mwatate County
- ✓ Provide recreational and green spaces for the residents of Mwatate closer to their living environment
- ✓ Promote and improve the sustainable use of the land and natural resources

- ✓ Reduce use of natural resources by providing other alternatives
- ✓ Protect, maintain and improve the quality of water bodies, wetlands and the marine environment from any direct or indirect impacts from the plan, and protect against the risk of flooding, surface and underground water pollution and water wastage
- ✓ Promote water recycling and water harvesting
- ✓ Protect, maintain and enhance biodiversity and ecosystem services, avoiding damage to or loss of designated and undesignated wildlife or geological sites
- ✓ Safeguard and improve soil quality particularly high value agricultural land and carbon-rich soil
- ✓ Protect cultural heritage resources and their settings.
- ✓ Protect the landscape and deliver environmental benefits through sustainable and high-quality design and place-making

1.1.6 Purpose of Teita Estate Comprehensive Development SESA Report

The purpose of this SESA report is to present strategic recommendations that will guide strategic environmental and socio-economic planning during implementation of the Teita Estate Comprehensive Mixed Land Use Master plan.

1.1.7 Terms of Reference for Teita Estate Comprehensive Development SESA Report

The Terms of Reference (ToR) developed for this study are meant to assess the impacts that might result during the construction, operational and decommissioning phase of the proposed plan. Specifically, the terms of reference include:

- i. Provide detailed descriptions of the proposed plan in terms of location, objectives, design, activities, material inputs, outputs, products and waste.
- ii. Provide detailed description of the baseline environmental and social economic conditions of the plan area.
- iii. Review relevant legal, policy and institutional framework applicable in the implementation of the proposed plan.
- iv. Provide detailed description of the potentially affected environment.
- v. Identify, predict and analyse the environment and social economic impacts of the plan, including seeking stakeholder's views and/or concerns.
- vi. Provide analyses of the plan alternatives in terms of site, design, implementation technologies and provide reason for preferred options.
- vii. Provide detailed Draft Environmental and Social Monitoring and Management Plan (ESMMP) proposing measures for mitigating negative environmental impacts, cost for offsetting such measures, timeframe, responsibility and monitoring frequency and indicators to implement the measures.
- viii. Provide action plans for management of occupational/public health and safety concerns.

1.1.8 Methodology of Undertaking the SESA

SESA is a means of systematically assessing the likely impact of a public plan, programme or strategy on the environment. The Environmental (Impact Assessment and Audit) Regulations of 2003 transposes the requirements of the SESA and those bodies preparing qualifying plans are required to undertake a SESA of plans that are likely to have significant environmental effects, if implemented. The SESA aims to offer greater protection to the environment by ensuring public

bodies and those organisations preparing plans of a ‘public character’ (in this case Teita Estate) consider and address the likely significant environmental effects. The SESA also offers a foundation for future stages of the plan assisting an environmentally led design.

This SESA is prepared for the Teita Estate Comprehensive Mixed Land Use Master Plan, hereafter referred to as the ‘Master Plan’, to explore the potential for positive or negative significant environmental effects. The Screening, Scoping, and Drafts Reports were prepared and approved by NEMA. Following the screening, scoping and draft SESA report stages, the key remaining stages of SESA for the Master Plan are:

- ✓ Final SESA Report (that responds to SESA consultation comments, stakeholder validation workshop comments and any post-consultation updates to the Master Plan reporting).
- ✓ Post Adoption Statement - This statement will be produced after the SESA for the Master Plan has been adopted. It will outline how the assessment and consultation responses have been considered within the finalised Master Plan. It will also include the final environmental monitoring programme for the Master Plan implementation.
- ✓ Monitoring – any significant environmental effects predicted in the SESA will need to be monitored, according to the monitoring programme set out in the Post Adoption Statement, and remedial action taken in response to the monitoring, where required.

The SESA Directive topics to be considered at all SESA stages are:

- | | |
|----------------------------------|--------------------------|
| ✓ biodiversity, fauna and flora; | ✓ air; |
| ✓ population and human health; | ✓ climatic factors; |
| ✓ water; | ✓ material assets; |
| ✓ soil; | ✓ cultural heritage; and |
| | ✓ landscape. |

Inter-relationships between the environmental topics listed above is also considered. For example, direct effects on soil or the quality of the water and the environment, as a result of increasing the background levels of pollution within a specific area, could have a secondary significant effect on biodiversity. The potential inter-relationships identified as part of the scoping exercise are outlined in this draft report.

The SESA was developed to incorporate the feedback from statutory Consultation Authorities. These statutory Consultation Authorities include, but not limited to:

- i. NEMA
- ii. Taita Taveta County Government – Environment and Water
- iii. Kenya Wildlife Services
- iv. African Wildlife Foundation
- v. Taita Taveta Wildlife Conservancy Association
- vi. TAVEVO
- vii. Izera Ranch
- viii. Diaspora University Town (DUT)

The role of the Consultation Authorities within SESA was to bring their individual environmental expertise to the assessment process. This helped to ensure that the future consultation process undertaken by the plan is more robust. This in turn means that the public can gain a better

understanding of the likely effect of a plan on the environment and meaningfully contribute to the plan's preparation process by offering an informed view.

In adherence to the requirements of the Environmental (Impact Assessment and Audit) Regulations of 2003, screening was undertaken to determine whether the Master Plan would be likely to have significant environmental effects which would require SESA. A Screening Report was submitted to NEMA in 15th March, 2023 and a response was received on the 21st March, 2023. SESA was proposed for the Master Plan as the most appropriate and robust framework for identifying potential environmental effects and opportunities at a high-level. The SESA process also ensures that stakeholders are given an early opportunity to comment on and influence the proposals. Following review of the Screening Report, Teita Estate confirmed the intention to progress with SESA for the proposed Master Plan. Following confirmation through screening that a SESA will be undertaken, a scoping report was undertaken and approved by NEMA on 27th of April, 2023. The purpose of the scoping stage was to describe the environmental context, by establishing the relevant baseline information, reviewing other relevant alternatives and identifying environmental problems and opportunities.

The draft SESA draft report was submitted to NEMA on 30th June 2023. Upon review the NEMA comments were received on 2nd October 2023. The team worked on the comments and the revised draft SESA report was submitted on 26th October 2023. Up on satisfying the requirements of SESA and holding a stakeholder validation workshop, comments were received from the public and a final SESA report submitted to the Authority on 22nd January, 2024.

1.1.9 Work Plan and deliverables for executing the SESA

1.1.9.1 Key deliverables for the SESA

S/No.	Deliverables	Dates
1	Master Plan Brief, Submission and decision to conduct SESA by NEMA	23/02/2022
2	Screening report approval by NEMA	21/03/2023
2	Data collection and submission of SESA scoping report to NEMA	27/04/2023
4	Submission of SESA Draft report	30/06/2023
5	Media adverts	07/07/2023
5	NEMA Comment received	02/10/2023
6	Submission of second SESA draft report	26/10/2023
7	Validation workshop conducted	06/12/2023
8	Submission of the final SESA report	22/01/2024

1.1.10 Budget to Implement the SESA

Teita Estate Limited was instrumental in facilitation of financial, administrative, and technical resources for the SESA process and committed support into the implementation stage. The proponent also provided access to master plan information and obliged to facilitate consultative meetings among key SESA consultants, technical teams and stakeholders.

2 Teita Estate Comprehensive Mixed Land Use Master Plan

2.1 Overview of the Master Plan

A sustainable development has to incorporate socio-economic and environment-friendly concepts/ principles by hosting a community of integrated mixed-use development including housing, businesses, industrial e.t.c., seeking to enhance environmental and economic performance through collaboration in managing environmental and resource issues, including energy, water and materials. Consequently, the proposed Master Plan has integrated all the facets of a sustainably developed entity by ensuring that the economic, social and environmental factors are its guiding principles in the design, construction and management. This chapter highlights the purpose, rationale, and objectives, of Teita Estate Comprehensive Mixed Land Use Development Master Plan. It also identified and discusses sectors affected and that interlink with the Master Plan.

Teita Estate Master Plan is an upcoming 3,000-acre comprehensive development located within the newly formed Mwatate Municipality, Taita Taveta County. The development is anchored on the tenets of mixed-use developments which is one of the ten principles of smart growth that promotes community design and developments and incorporates it with economy, public health and environment. In this case, the proposed development blends various compatible land uses including commercial, light industrial, residential with pockets of adequate public amenities and support infrastructure. The end game is a well thought out sustainable human settlement where people can live, work and play.

Since Kenya attained her independence in 1963, the government has through various initiatives tried to address shelter issues key among them formulation of Session Paper No.5 of 1966/67 on Housing Policy, National Strategy for shelter 2000 and most recently the Big 4 Agenda, where housing is one of the four pillars. Despite these efforts, the demand for decent housing has always outstripped the supply especially in urban areas. This is majorly attributed to the rapid urbanization, inaccessibility to land and housing finance coupled with the high cost of infrastructure and low level of investment in the sector by public agencies and parastatals. While the government has majorly focused on provision of support infrastructure, the private sector has emerged as the best alternative supplier of housing. It is against this backdrop that the residential zone of the Teita Estate Master Plan aims to increase the housing stock by creating spaces.

To promote sustainability, foster innovation and provide employment, there is need to have sources of income where people live hence the inclusion of industrial and commercial zones into residential areas. According to the Taita Taveta CIDP of 2018-2022, unemployment rate in the County stands at 45%, which is mainly attributable to low skills among the population and the limited capacity of the industrial sector. As a remedy, the Teita Estate Master Plan proposed a vocational training centre to help improve the low skill levels of the residents.

With land ownership in Taita Taveta county comprising of about 62% in the government owned Tsavo East and West, and 24% in private ranches, only 14% of the total land area is left for occupation by the local residents. Despite the small percentage of available land, the ranch owners and the locals have managed to put forth sustainable agriculture into practice and agricultural activities for production of food crops, cash crops and livestock have been steadily on the rise.

The major challenge that faces urbanization in Taita Taveta has been increased emigration of young population to more fast-growing counties such as Mombasa and Malindi in search of Education and better opportunities. This is mainly attributed to the fact that there are no major workforce seeking entities within the county. Therefore, the opening of this 3000-acre development will open up land to attract more investors to offer more job opportunities to residents as well as spur growth in the newly created Mwatate Municipality.

The Master Plan is strategically located off 18kms from Voi junction connecting Nairobi - Mombasa highway. The highway links to A109 that joins Nairobi to the North and Mombasa to the south. Other keys infrastructure in the region includes the SGR Voi Station, the 60-metre A23 Voi-Taveta Road which is a major gateway and shortest route to Tanzania through Taveta town. The old metre gauge railway and its reserve marks the northern boundary of the Teita Estate and there are plans of reviving the old railway line and construct a new SGR line connecting Voi to Tanzania. This venture will greatly benefit the proposed Teita Estate development. Furthermore, the Master Plan is within a major tourist attraction destination, i.e. the Tsavo East and West National Parks. Figures 1 and 2 shows the national and local setting of the Master Plan.

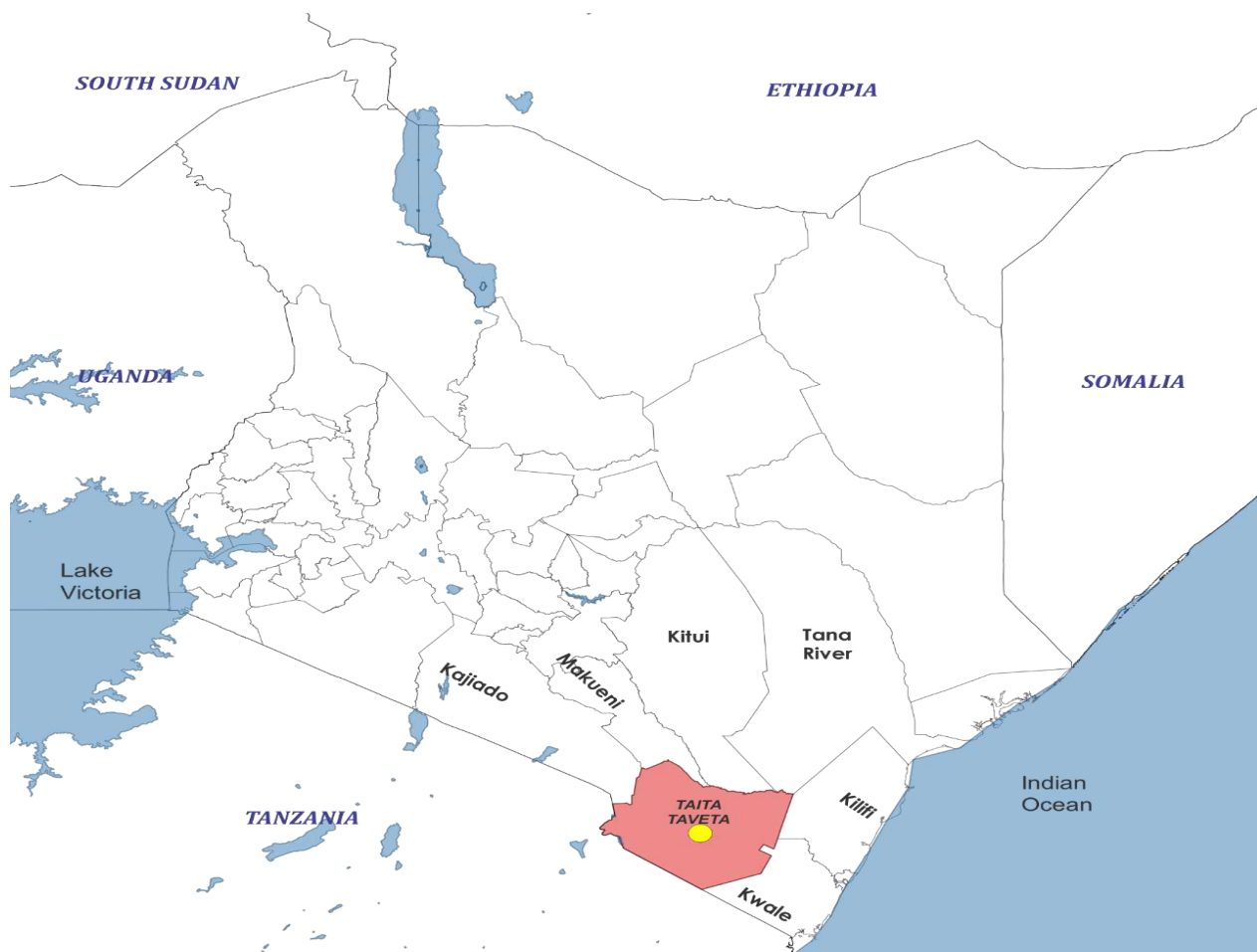


Figure 1: Location of Taita Taveta County in relation to other counties in Kenya

Taita Taveta County has a population of over 340,000 people and borders Kitui, Makueni, Tana River, Kilifi, Kwale and Kajiado counties and Tanzania to the South. The Figure 2 below shows the location of the county in the Kenyan context. The development is located about three (3)

kilometres from Mwatate town and in between Mwatunge to the north and about two (2) from Singila Majengo on the south.

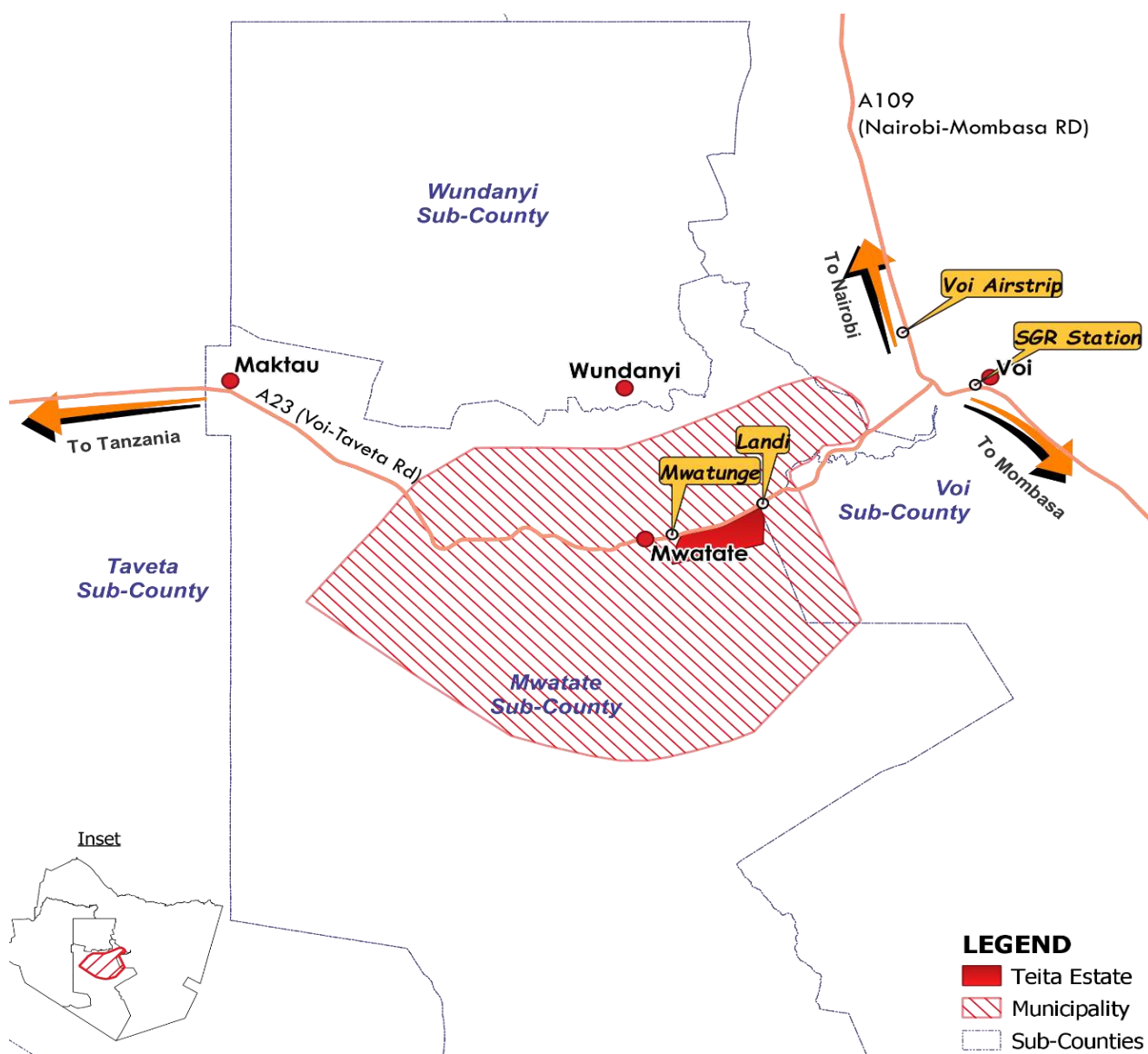


Figure 2: Location of the proposed Teita Estate mixed land use plan in in Mwatate Sub county, Mwatate Municipality

2.2 Objectives of the Master Plan

The proposed Teita Estate Comprehensive Mixed Land Use Development Master plan aims to safeguard integration of all the facets of a sustainably developed entity and environmental considerations are adhered to. This will be done by ensuring that the economic, social and environmental factors are its guiding principles in the design, construction and management processes. The specific objectives of the plan are to provide the much-needed facilities and services as highlighted below:

- ✓ To develop housing units with low, medium and high-density units targeting both middle and high-income earners.

- ✓ Open up land for different land uses to allow the locals and other Kenyans access to land and contribute towards addressing the land question
- ✓ Provide affordable land to the locals who have very limited access to land and resources.
- ✓ Provide land for modern agriculture to enhance agricultural productivity in the region
- ✓ To enhance green spaces and wetland protection by providing land for wetlands and parks within the master plan
- ✓ To spur economic activity in the region by providing a good economic environment and clients
- ✓ Improving housing conditions by providing development designs and encouraging controlled development options governed by development control code and rules.
- ✓ Improving living standards through employment creation through the various commercial and industrial installations proposed.
- ✓ To encourage green living and greening the master plan by making water harvesting mandatory, water recycling by using grey water for irrigation, harnessing green energy such as solar and wind and naturally aspirated house designs.
- ✓ Increase medical provision to the residents of Mwatate and Taita Taveta County by establishing medical facilities within the site
- ✓ To improve education status in the region by providing education facilities of all levels of education including tertiary institutions
- ✓ To designate recreational and sports facilities and services providing various sports and recreational activities with public amenities such as green open spaces

2.3 Existing Land Uses and Surrounding Development

The proposed development area is a sisal plantation with concentration of existing developments located mainly across the Voi-Taveta Road opposite the estate, at Singila area, which is mostly for residential purpose and the neighbouring Mwatate town. Additionally, within the plantation exists settlements that are occupied by the sisal workers and major production activities of the sisal farm take place as well. There is also a school and Health centre serving the settlements. Development and features directly adjacent to the land zone include:

- Accessibility to the Standard Gauge Railway
- The newly improved Voi-Taveta Road
- Residential area that are sparsely located adjacent to the facility
- Sisal plantations in the neighbouring
- The Tsavo National Park
- Mwatate town

Although the site is predominantly agriculture in nature, there are also added neighbouring market centres with land uses such as commercial, educational facilities and public purpose facilities. The key towns, near the site include Landi centre, Voi Town, Mwatate town and Singila Majengo.

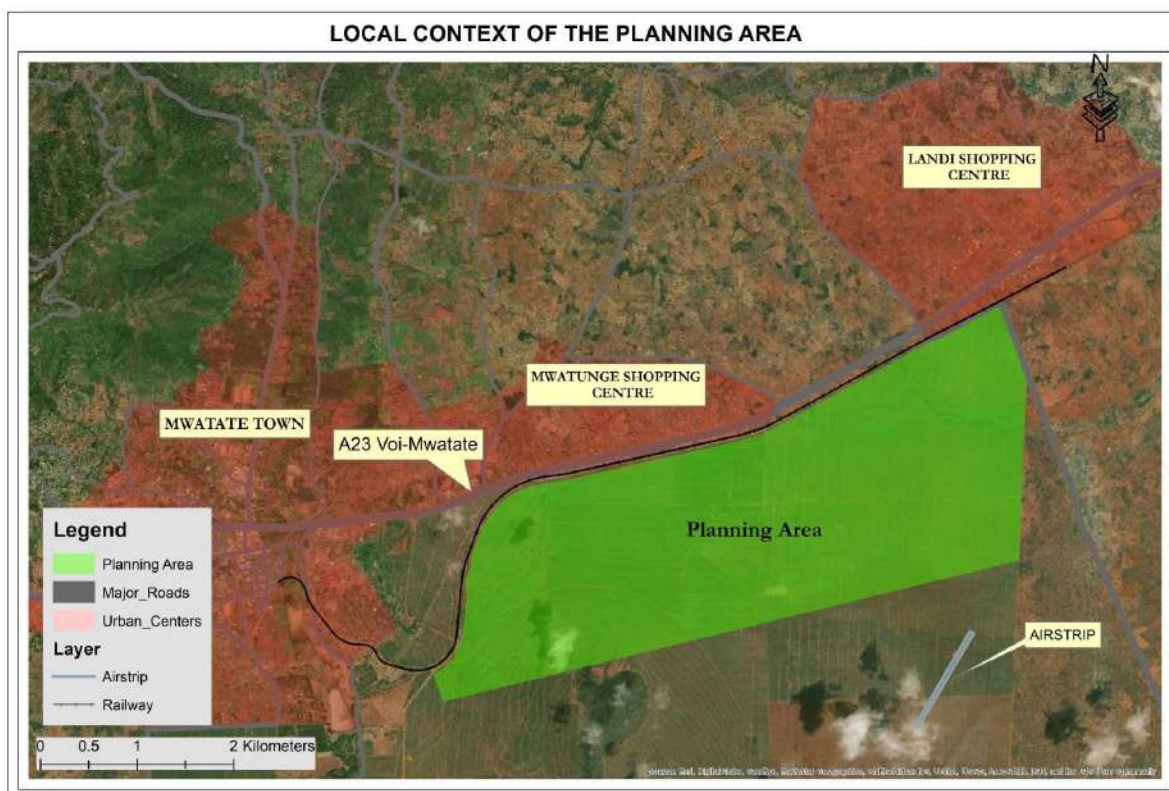


Figure 3: An overview of the Master Plan area showing the land uses surrounding it.

2.4 Current Status of the Study Site

The Master Plan is proposed to cover an area approximately 1,214 hectares (3,000 acres). The land is registered as Mwatate/Mwatate/Block 1/14 under Teita Estate Limited (TEL) on leasehold tenure regime. Currently, the parcel is under sisal with staff quarters, water storage tanks and borehole used for agricultural purposes (Figure 3).



Figure 4: Current status of the proposed Teita Estate Mixed Land use Plan area

The proposed development area is a sisal plantation with concentration of existing developments located mainly across the Voi-Taveta Road opposite the estate, at Singila area, which is mostly for residential purpose and the neighbouring Mwatate town. Additionally, within the plantation there exists settlements that are occupied by the sisal workers and major production activities of the sisal

farm take place as well. There is also a school and Health centre serving the settlements. Development and features directly adjacent to the land zone include:

- Accessibility to the Standard Gauge Railway
- The newly improved Voi-Taveta Road
- Residential area that are sparsely located adjacent to the facility
- Sisal plantations in the neighbouring
- The Tsavo National Park
- Mwatate town

Although the site is predominantly used for agriculture, there are neighbouring market centres with land uses such as commercial, educational facilities and public purpose facilities. The key towns, near the site include Lindi centre, Voi Town, Mwatate town and Singila Majengo.

The proposed plan will have mixed land uses, among them;

- i. Residential zones with various occupation densities
- ii. Commercial centres
- iii. Industrial centres
- iv. Public utilities such as education and health centres
- v. Green areas and parks within each court

The SESA team will establish the biodiversity in the Master Plan site, the ecosystem services, pressure patterns and trends.

2.5 Land Use Description

2.5.1 Residential Zones:

Residential land use is main anchor land use within the scheme and occupies 58.38% of the total Master Plan area. The scheme hopes to create a well-planned and orderly neighbourhood that is safe and friendly for the general wellbeing of the residents. To achieve this, Teita Estate Limited will sell serviced plots for housing. The scheme hopes that the plots can be used in the realization of affordable housing within Mwatate area.

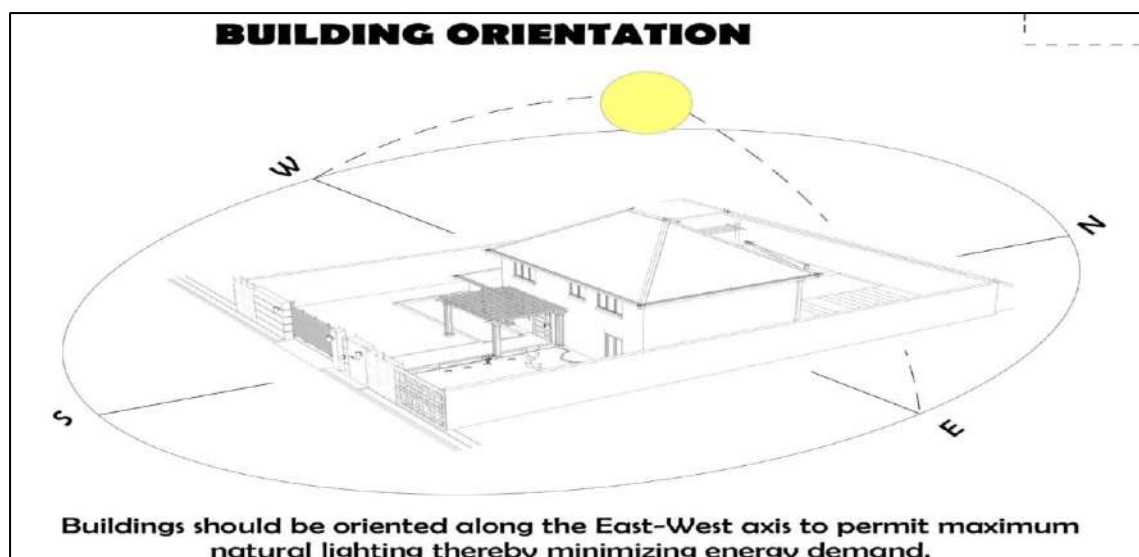


Figure 5: Proposed structural orientation consideration

For orderliness, all the developments will observe the building line and will build a perimeter wall in the site. Landscaping will also be done around the site to enhance aesthetics and promote environmental sustainability. This plan advocates for the incorporation of green buildings in the development for sustainability. Such buildings consume less water, boost energy efficiency, conserve natural resources, produce minimal waste and provide healthier environment for residents as compared to a conventional building. Green building design comprises site planning, design of building envelope, building design with HVAC i.e., heating, ventilation and air conditioning, lighting and water heating.

i. High Density Residential Zone

This residential area is zoned for plots of up to 1/8th acres. The land as provided for is adequate for a single dwelling house, and yards both in the front and back of the parcel providing enough room for a home garden, since this plan advocates for food security. Figures below shows the graphical representation for the high-density residential zone in the Master Plan area.

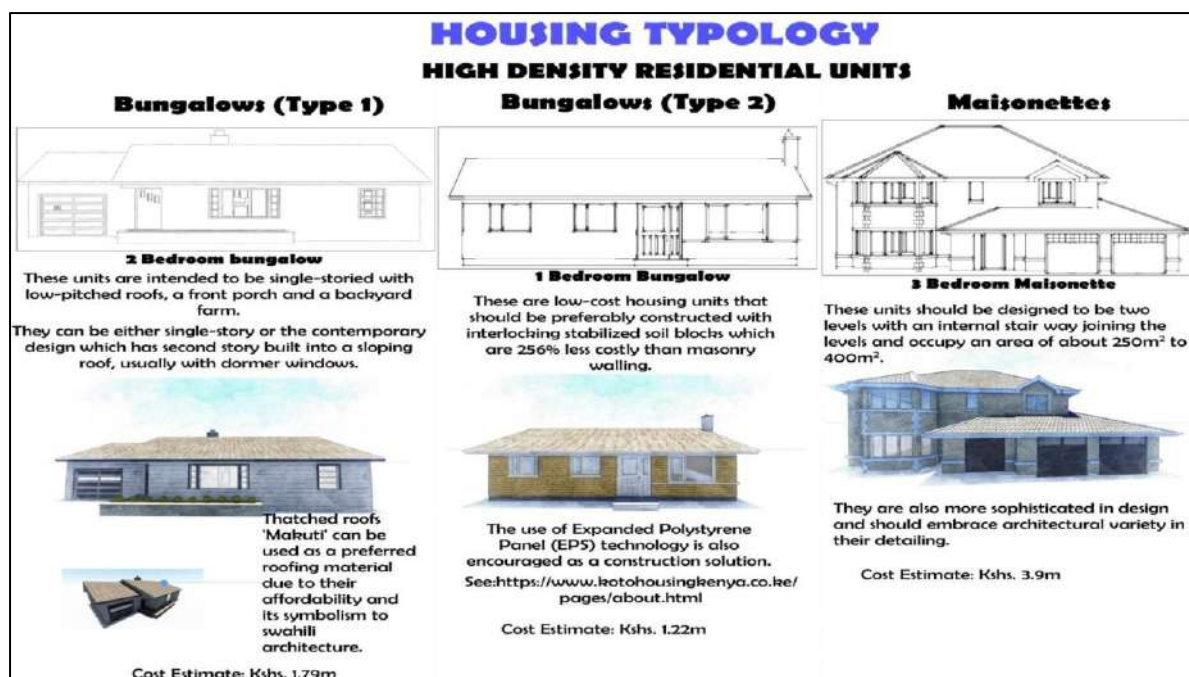


Figure 6: Proposed housing typology

ii. Medium Density Residential Zone

This residential area is zoned for plots of land of measuring a 1/4th of an acre. Below is a visual representation of the houses in the medium residential zones.

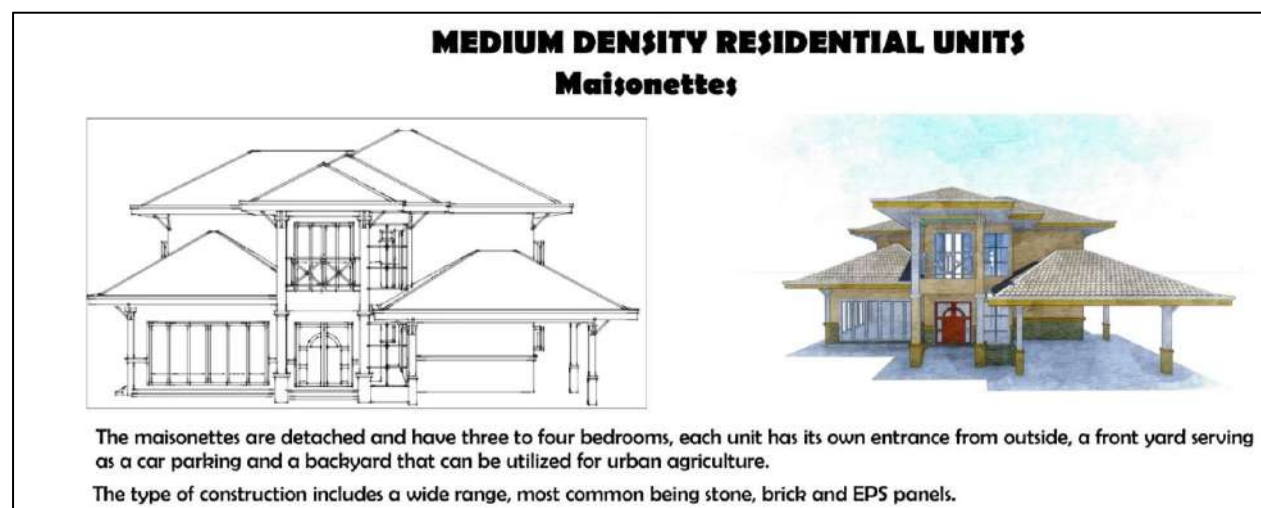


Figure 7: Proposed residential outlay in the medium density residential zone

iii. Low & Super Low-Density Residential Zone

The low residential area is zoned for plots between 2-5 acres of land while the super low zone is reserved for plots between 5-10 acres of land. Below is a visual representation of the houses proposed in these zones.

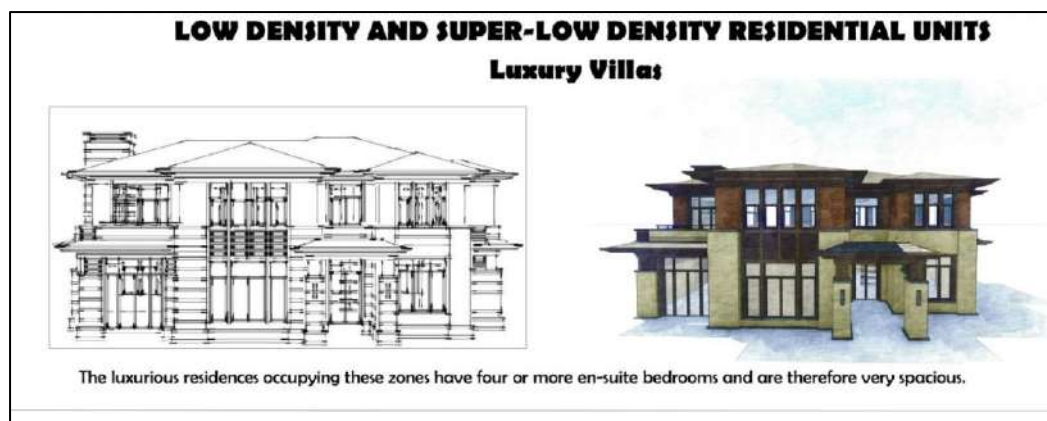


Figure 8: Proposed residential outlay in the low and super low density residential zone

2.5.2 Industrial Zone

The industrial zone occupies 49.48 hectares of land which is 4.08% of the total development area. As earlier indicated, these industries will capitalize on the areas strategic location along A23 road that runs to Tanzania and being only 20 kms from Voi SGR station. The two corridors will be use in the transportation of raw materials and finished products all over the country and even to the neighbouring countries. Since the industries are light industries and non-polluting, the Master Plan envisages low levels of pollution, with stimulation of economy and provision of employment opportunities hence growth of the area and county at large. Examples of such industries include petrol stations, food processing industries, water packaging among others.



Figure 9: Proposed outlay in the industrial zone including a petrol station that will be situated in the zone

2.5.3 Commercial Zone

There are pockets of commercial activities evenly distributed within the development area. This is to ensure accessibility of services and reduce on the need to travel long distance to access these commercial services. This in turn promotes walking and cycling which are majorly provided for in the design of the transportation sector and also reduces the unnecessary use of vehicles which in the long run reduces air pollution.



2.5.4 Educational Facilities

Educational facilities are an integral part of any residential neighbourhood. For this reason, 23.02 hectares of land (1.90%) of the total development area have been set aside. There is an emphasis on even distribution of these facilities for access and to adequately serve the anticipated residents all around the development area. The proposed educational facilities include ECD facilities, primary, secondary and a vocational training centre. ECD facilities will be provided within the residential neighbourhoods. This is meant to reduce walking distance of the young ones.

2.5.5 Hospitals

A hospital is a significant service in an area that is largely residential. For this reason, 7.65 Hectares of land have been set aside. The hospital facility will cater to the resident population within the scheme and within the area.



2.5.6 Cemetery

A cemetery is an important provision in the society, different cultures notwithstanding, as it is a place where people lay their loved ones. The location, size and cultural traditions have to be considered when providing for it. The plan takes cognisance of the different cultures within the target market and therefore has allocated 6.79 hectares of land with separate areas for Christians and Muslims.



2.5.7 Power Sub-station

The developer intends to have a dedicated bulk power supply line from Kenya Power. The main reason being the Master Planed load demand from the high consuming uses like industries and also the Master Planed domestic population of 33,000 in the year 2050. Towards this end, 0.19 Hectares of land has been set aside for power sub-stations. In support of this, the roads have adequate reserves to accommodate powerlines, tunnels and transformers. Teita Estate Limited also intends to have utility points along major roads especially within the industrial precinct. Individual plot owners and developers will also be encouraged to adopt green energy available such as solar.

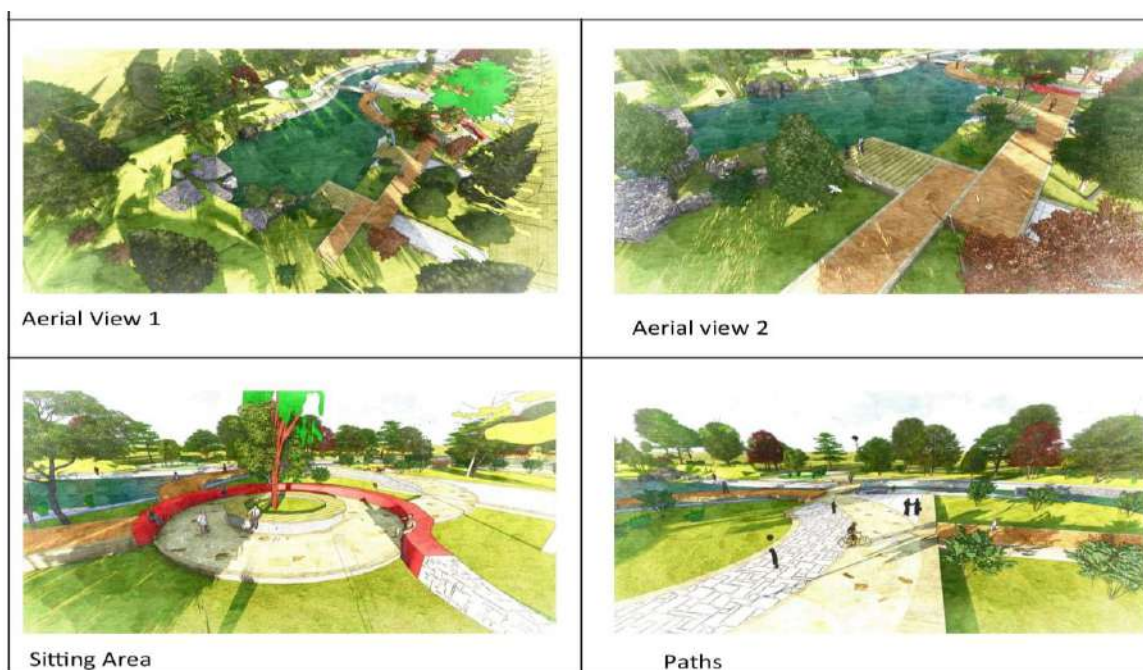
2.5.8 Police Station and Police Post

Where population is high, security is paramount. Police play a major role in our society as they help in maintaining public order and safety by enforcing the law. This is the reason why it is important to provide for a police station and the police posts in this development area. These public facilities have been allocated 1.17 Hectares of land.



2.5.9 Parks

The parks have been allocated 34.53 Hectares of land accounting to 2.84% of the land use allocation. A park is an area of natural, semi-natural or planted space set aside for human enjoyment and recreation. The kind of parks being proposed are neighbourhood parks, public open spaces and landscaped parks. The purpose of parks is to provide spaces and opportunities for both informal active and passive recreation. They are developed and designed for community residents living close to the parks.



2.5.10 Water, Sewer and Waste Management

Mwatate being an arid area faces water scarcity. However, piped water is supplied by Tavevo water and sewerage company. The developer intends to leverage on sustainable water sources such as rain, underground water and water recycling options. Moreover, supplemental water supply to the estate with bulk from the TAVEVO company will be considered. The developer hopes to sink water pans and dams within the proposed plan area to increase water supply. Further, the developer will incorporate water storage tanks and water harvesting techniques for use on the building designs. Currently, the Master Plan site is not served by the trunk sewer. The developer will also construct onsite waste bins to ensure that solid waste is efficiently managed. The 5R's concept of waste management will be leveraged and waste separation and recycling will be highly encouraged. Waste will be collected by licensed private waste collectors and transported to land set aside for waste recycling and management. Waste resources will be mined from this waste to be sold to light industries within the site and other heavy industries outside the site. In addition, organic waste will be managed by composting it and utilizing the resultant biogas for cooking in domestic homes or hotels. The compost manure from this management will be used as organic manure in the land set aside for agricultural purposes. With proper implementation of these strategies, the site will be waste free.

2.5.11 Transportation

Transportation is important especially for mobility and accessibility. This development area has set aside 214.19 Hectares of land for the transportation sector which accumulates to 17.64% of the total land in the development area. This shall consist of:-

- i. Bus way design concept
- ii. Street crossing sections
- iii. Safety concepts
- iv. Adequate traffic management concept

2.5.12 Urban Agriculture

Agriculture will be incorporated within the residential neighbourhoods. Urban agriculture can be defined as Agricultural production (crops and livestock) in urban and peri-urban areas for food and other uses. One striking feature of urban agriculture, which distinguishes it from rural agriculture, is that it is integrated into the urban economic and ecological system. It is not its urban location which distinguishes urban from rural agriculture, but the fact that it is embedded in and interacting with the urban system. Benefits of urban farming include saving on groceries and helps to increase your physical activity.

2.6 Identification of applicable sectors and plans.

The proposed Teita Estate comprehensive mixed land use development is anticipated to interlink with other regional and local policies, plans and programmes. The development is anticipated to enhance the economic productivity of the area and provide a sustainable human settlement where people can live, work and play. This comprehensive development master links with other plans at the national, regional and county as explained in the following sections:

2.6.1 Linkage at the National Level

2.6.1.1 Vision 2030

Nationally, the proposed Teita Estate Comprehensive Development Master Plan links well with Vision 2030 blueprint. Its chapter four on the Social Pillar involves the building of a just and cohesive society, enjoying equitable social development in a clean and secure environment. This quest is the basis of transformation in some social sectors including education, water, sanitation, housing and sports among others.

In this regard the Teita Estate master plan features learning institutions, health facilities, improved infrastructure and provision of amenities, sports stadia and housing developments thereby contributing towards the achievement of some of key flagship vision 2030 projects.

2.6.1.2 National Water Master Plan 2030

The National Water Master Plan (NWMP) 2030 was launched on 26th March 2014. It is a product of an intensive study of Kenya's water resources and meteorological conditions to facilitate planning for development and management of the same. The proposed Teita Estate comprehensive development master plan fits within the Athi Catchment Areas hence will require to be in line with the development plans and overall NWMP. The Master Plan aims at ensuring protection of water resources within the Master Plan area and management of water including proper rainwater harvesting and creating buffer zones for protection of water bodies. Teita Estate Limited should input all strategies necessary to ensure adequate provision of water to its residents.

2.6.1.3 The National Spatial Plan (NSP) Framework

Kenya under vision 2030 has developed a thirty year (2015-2045) spatial plan that aims at distributing the population and activities on the national space for sustainable social-economic development. The plan envisages optimal productivity, sustainability, efficiency and equitability in the use of the scarce land in Kenya and the territorial space. It also provides a framework for urban development planning and management. In line with the national spatial plan Teita Estate Master Plan outlines strategies for sustainable utilization renewable energy and water sources.

2.6.2 Linkage at Coast Regional Level

2.6.2.1 Integrated Coast Region Master Plan (2010-2030)

The Integrated Coast Region Master Plan (2010-2030) is a development standards and guidelines for the Coast region. The master plan is developed by Coast Development Authority (CDA), a regional development authority established by an Act of Parliament (Cap 449). It has the mandate to plan and coordinate the implementation of integrated development projects and programmes within the whole of Coastal region. It therefore serves as a repository where all developmental initiatives within the region will revolve around. In this regard the objectives of the Integrated Coast Region Master Plan (2010-2030) link well regionally with those of the proposed Teita Estate comprehensive development master plan.

2.6.3 Linkage at County Level

2.6.3.1 Taita Taveta County Draft County Integrated Development Plan III (2023-2027)

At the County level, the proposed Teita Estate master plan links well with the Taita Taveta CIDP III (2023-2027). Chapter Seven of the CIDP forms the core of the Plan and is prepared along the lines of Medium-Term Expenditure Framework (MTEF) Sectors. It indicates priorities, strategies, programmes and projects proposed to overcome the development challenges identified in previous chapters. The MTEF sectors are; education, recreation, environmental protection, water and housing among others. All the proposed Teita Estate comprehensive development master plan activities are in consistence with Taita Taveta County development goals.

2.6.3.2 Taita Taveta County Spatial Plan

The draft Taita Taveta County Spatial Plan details the spatial utilization of the land and resources in the county and is synchronized with the thematic areas outlined in the National Spatial Plan 2015-2045. It is a ten-year county GIS based database system providing:

- a. A spatial depiction of the social and economic development program of the county as articulated in the integrated county development plan;
- b. Clear statements of how the spatial plan is linked to the regional, national and other county plans;
- c. Contain strategies and policies regarding the manner in which the objectives referred to in paragraph (b)vi which strategies and policies shall: contain a strategic assessment of the environmental impact of the spatial development framework;

Upon completion, the Taita Taveta County Spatial plan will link well with the spatial works conducted for the proposed Taita Estate comprehensive development Master Plan.

2.6.3.3 The Diaspora University Town Plan

The Diaspora University Town (DUT) plan is a plan for development of a Town that settles 90,000 residents and creates 30,000 students as the anchor economic activity on 3,000 acres of land. The Teita Estate comprehensive development master plan will link well with the proposed town developments by providing housing to staff and students of the DUT.

2.6.3.4 The Idera Ecological Reserve Plan

The Idera ecological reserve plan is on a ranch along the Voi- Mombasa road bordering Maungu town. The plan entails the development of an airport, aviation college and holiday homes. The Teita Estate comprehensive development master plan will link well with the proposed town developments.

3 Environmental and Social Analysis of the Master Plan

3.1 Introduction

This Chapter discusses the baseline environmental assessment and detailed analysis of the areas which will be affected during execution of the proposed Teita Estate Comprehensive Master Plan. The chapter provides information on the existing environmental conditions including sensitive areas that would be potentially impacted by the master plan. The objective is to document and establish the environmental baseline to assist in assessing and monitoring master plan impacts.

The chapter begins with a brief outline of the methodology employed in the situational analysis. It further examines the baseline environmental, socio-economic and cultural characteristics of the master plan site and its locality. The data acquired will inform adequate projection of the anticipated impacts and subsequently developing of effective measures towards averting, prevention, risk reduction and compensations.

3.2 Methodology for baseline analysis

The study considered three sub-counties bordering the plan area. The study area was considered appropriate for an initial high-level review of potential effects on SESA topic, as advised by the preliminary stages of the SESA, following the Preliminary Assessment as part of the SESA process. Three subcounties including Tsavo Nation Park were identified as areas of interest. These include;

1. Mwatate
2. Wundanyi
3. Voi

Online mapping and publicly available resources were used to identify environmental constraints and inform the baseline of the study area. The sources used include:

- 1) National water data
- 2) Kenya water towers
- 3) National land use/landcover maps
- 4) Kenya protected areas
- 5) National mineral data
- 6) Local authority GIS data
- 7) Kenya open data
- 8) National environmental outlook
- 9) KWS repositories
- 10) African Wildlife Fund repositories

Moreover, the steps followed during the environmental baseline situation analysis were as follows:

- i. Environmental screening and scoping of the proposed Master Plan land uses
- ii. Desktop studies
- iii. Physical inspection of the proposed development area and surrounding Master Plan areas
- iv. Stakeholder engagement and information gathering
- v. Preparation of the SESA draft reports

- vi. Stakeholder validation
- vii. Preparation of the final SESA report

3.3 Data sources for Environment Baseline Analysis

The data sources for SESA analysis of Teita Estate Comprehensive Development master plan considered three sub counties bordering the plan area, that include Mwatate, Wundanyi and Voi. Publicly available resources were also used to identify environmental constraints and inform the baseline of the study area. The data sources used include the Kenya protected areas, local authority GIS data, Kenya open data and National environmental outlook. Moreover, the offices outlined here were contacted for information on environmental analysis;

Component	Concerns/desired aims	Data sources
Bio-physical environment	Land, Water, Wildlife	<ul style="list-style-type: none"> ✓ Ministry of Agriculture Taita Taveta County ✓ Tavevo Water and Sewerage Company ✓ Water Resources Authority (WRA), Voi ✓ Kenya Forest Service (KFS), Taita Taveta County ✓ Kenya Wildlife Service (KWS), Voi ✓ African Wildlife Service (AWF), Voi Office
Social-economic	Planning and development	<ul style="list-style-type: none"> ✓ Ministry of land infrastructure and urban development, Taita Taveta County ✓ Planning department, Taita Taveta County
Institutional	Inter-County institutional collaboration and coordination	<ul style="list-style-type: none"> ✓ Related master plans in Taita Taveta County

3.4 Physiographic Analysis

The physical environment describes the topography, landforms geology, soils, climate and meteorology, air quality, and hydrology.

3.4.1 Location and size of Taita Taveta County

Taita Taveta County (Figure 10) is one of the six counties in the Coast region of Kenya. Taita Taveta County is located approximately 200 km northwest of the coastal city of Mombasa and 360 km southeast of Nairobi. It borders Tana River, Kitui and Makueni Counties to the North, Kwale and Kilifi Counties to the East, Kajiado County to the North-west, and the Republic of Tanzania to the South and South-west. The County lies between latitude 2°46' South and 4°10' South and longitude 37°36' East and 30°14' East. The total land area in Taita Taveta County, 10,650 km² and constitutes the Tsavo National Park (Tsavo East and Tsavo West National Parks), which translates to about 62% of the total land area forming the Tsavo ecosystem.

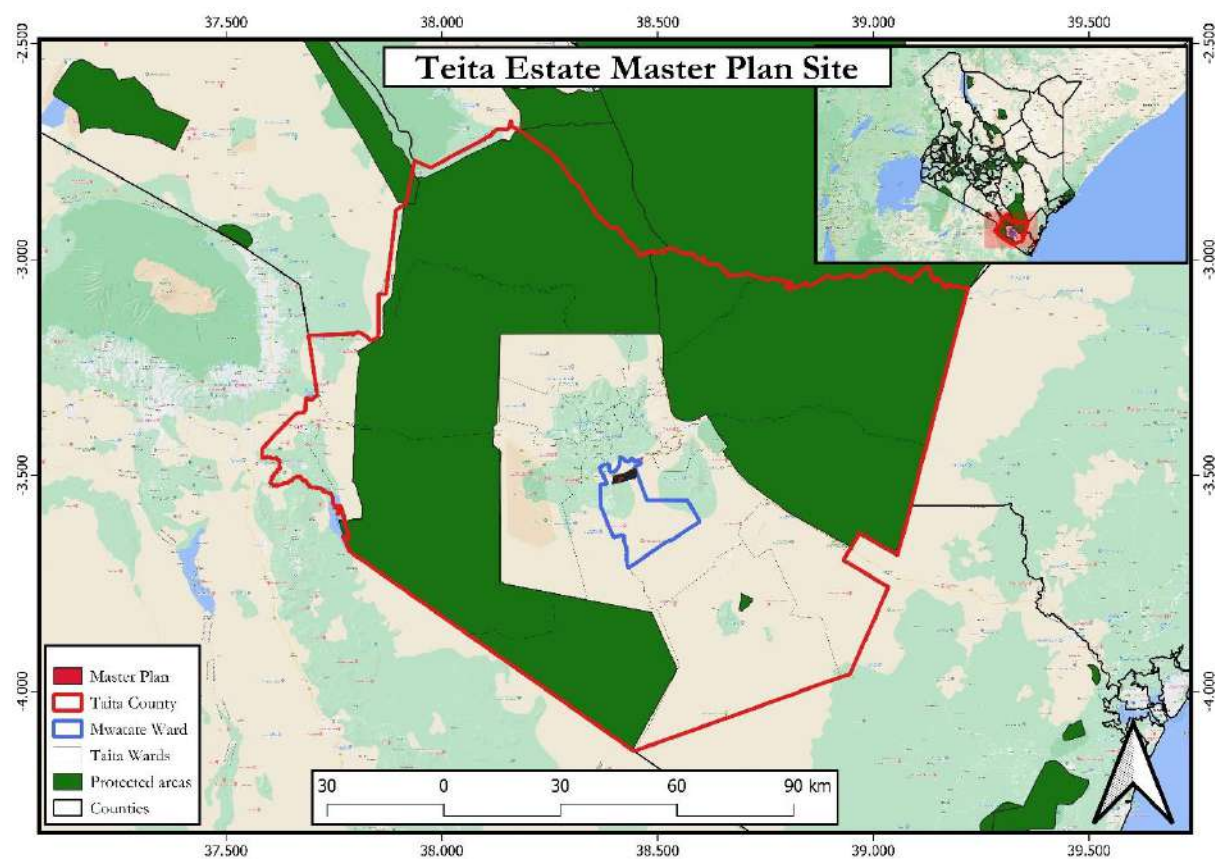


Figure 10: Location of Taita Taveta County in Kenya

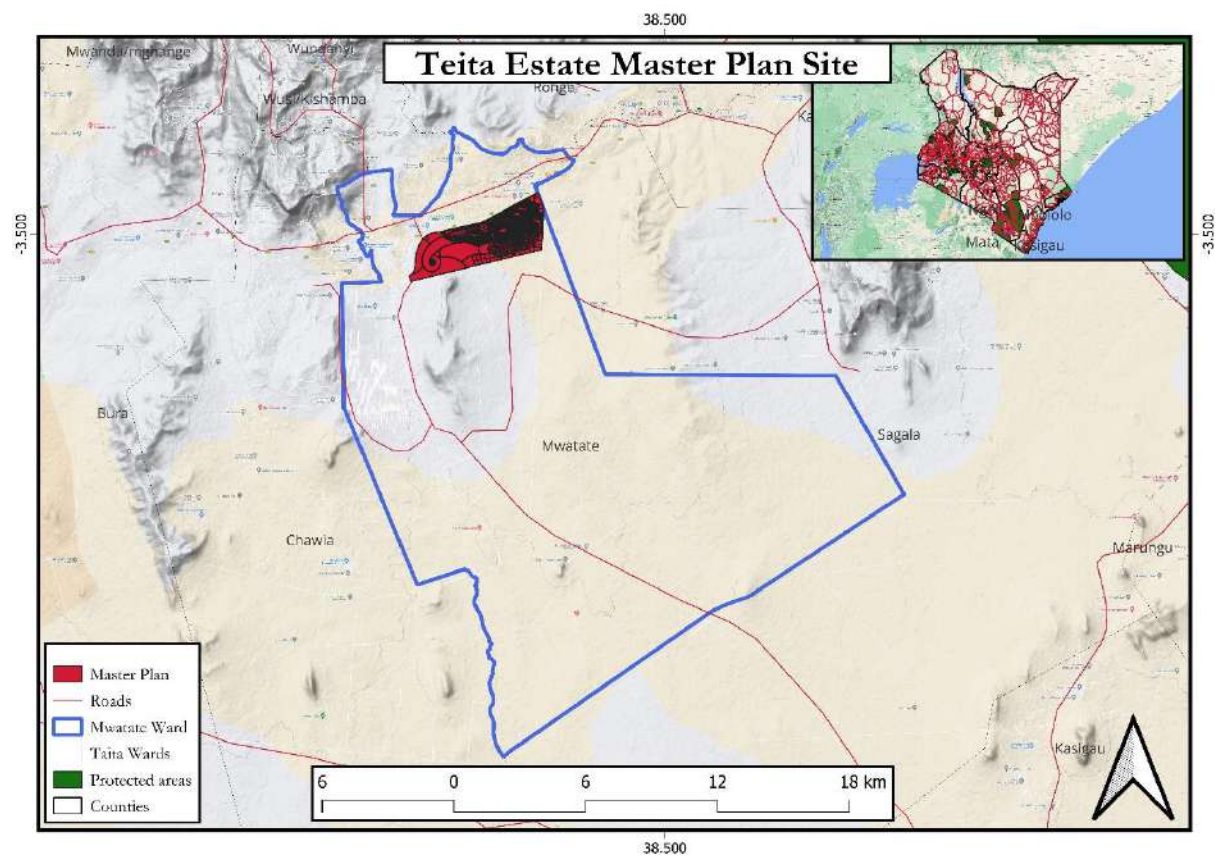


Figure 11: Location of Teita Master Plan in relation to Mwatate Ward

Moreover, Taita Taveta County has four sub counties namely Wundanyi, Mwatate, Voi and Taveta. Teita Sisal Estate is located in Mwatate Subcounty, Mwatate Ward in Taita-Taveta County. It is situated approximately 18 km from Voi Town. Teita Estate borders several conservancies including Mgeno and Teri ranches to the East shown as in the map below (Figure 11).

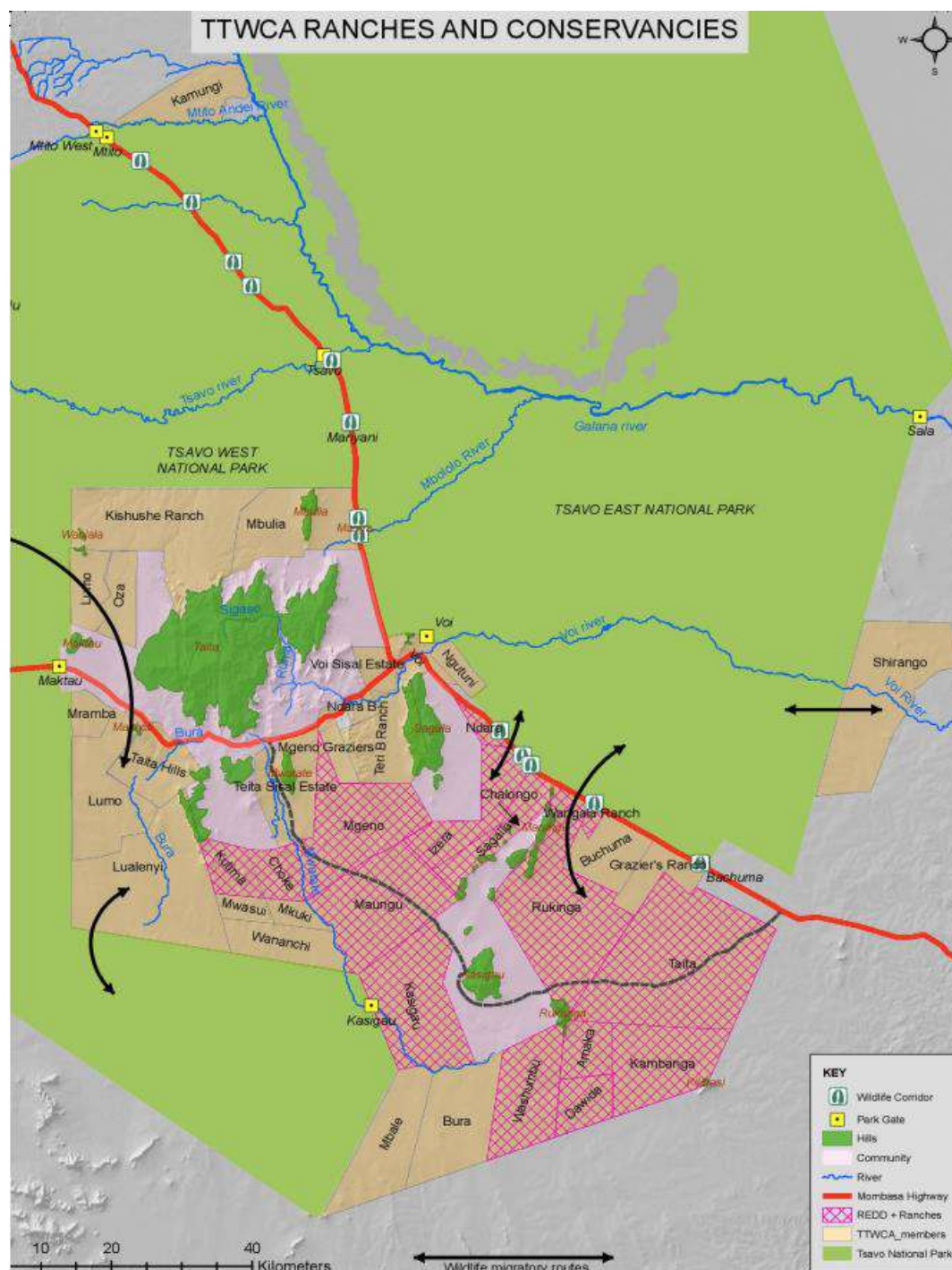


Figure 12: Teita Sisal Estate in relation to Taita Taveta Wildlife Conservancy Ranches and wildlife migratory corridors

Source: Taita Taveta Wildlife Conservancy Association

3.4.2 Geology

Geology is the science which deals with the physical structure and substance of the earth, their history, and the processes which act on them. In this regard the geology, hydrogeology and the various geological structures found in the area and immediate neighbourhood were focused on. The geology of the study area falls under Taita County which is in turn divided into Mozambique Belt and Tertiary Volcanic Belt. The Mozambique Belt encompasses Mwatate, Taita Hills, Kasigau and Kuranze areas while Tertiary Volcanic Belt covers Taveta region (Kella, 1992:4). The section of Mozambique belt underlying Mwatate area is characterized by crystalline rocks of peltic, arenaceous and calcareous sediments with intercalated thin bands of basic sills or lava flows, small lenses of ultramafic rocks emplaced along certain lithohorizons, and a Lu chabornokite body. With the exception of the latter they are all part of Pre-cambrian age.

To the south of Mwatate a gem-grade of rubies was discovered in 1973 (Pohl, et, al). The rubies are products of desilication of alumina-rich country rocks or pegmatitic fluids caused by ultramafic rocks. These rocks were recognized to occur in lenses forming a belt along strike within the Kurase Series. They were originally dunites and pyroxenites, which were affected by at least the later phase of deformation and metamorphism

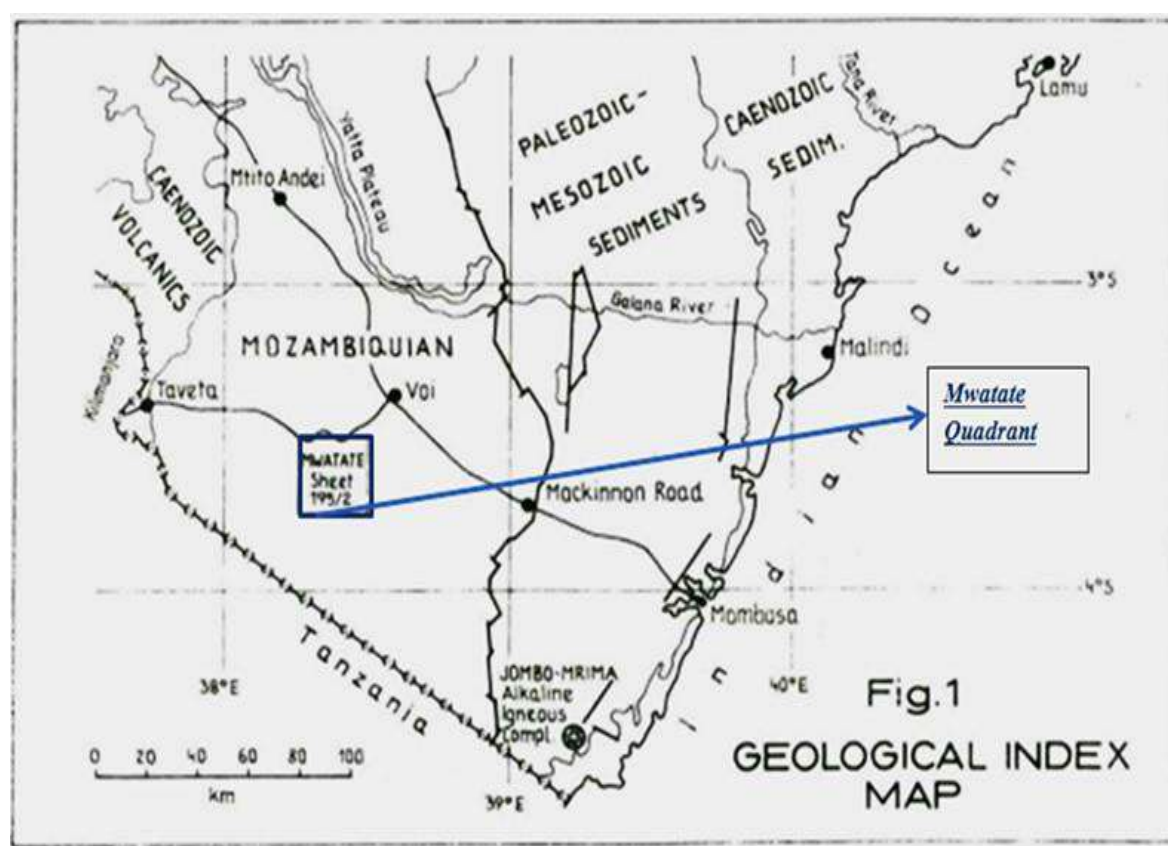


Figure 13 Mozambique belt covering the study area (W. Phol, et.al)

Moreover, the geology of the Teita Estate land proposed for the development is dominated by Archaean gneisses of the Basement System. The Basement rocks throughout the area are covered in the higher parts by sandy alluvium and red-sandy soils, while in the lower parts black cotton soils predominate.



Figure 14: Outcrop of quartzite gneiss

The Basement rock in the area comprises quartzo-felspathic gneisses and the biotite gneisses hidden beneath a layer of recent soils. Most of the ruby and gemstones are found in this County and mostly in the Mozambique belt. Narrowing it down to Mwatate, previous studies indicate occurrences of Vanadium glossularite, marbles and Quartz-feldspars falling under industrial mineralization. The other minerals occurrences in the study area include gemstones that comprise of red garnets and red rose-mapande. The geology map of the study area is as illustrated below.

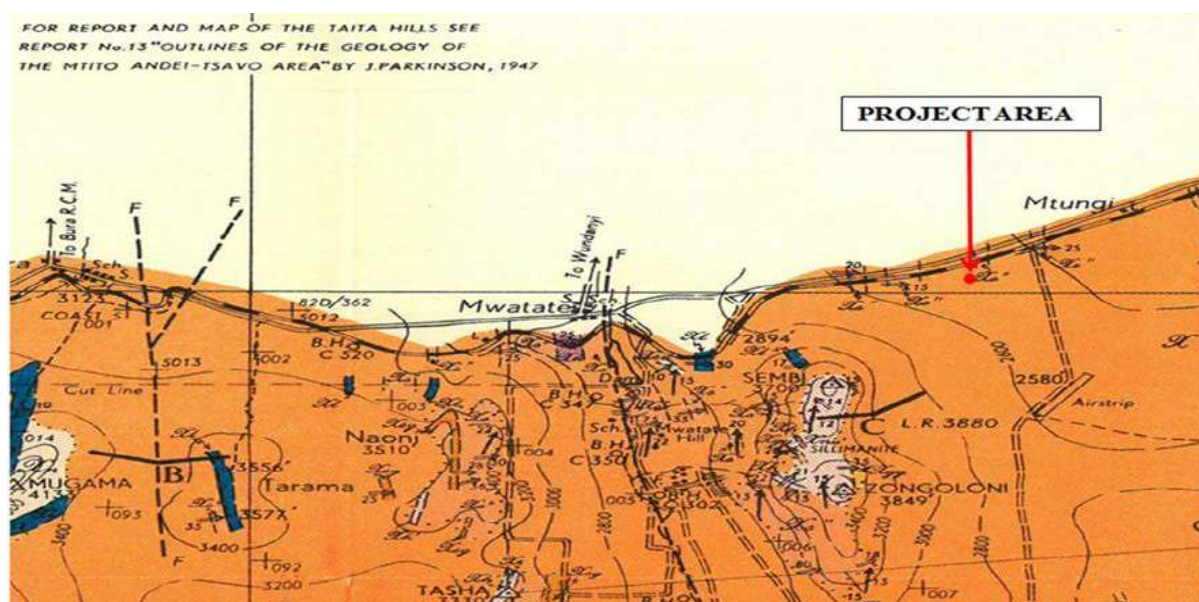


Figure 15: Geology map of the study area

Additionally, basement system rocks are the oldest rocks in the area, and they underlie the Teita Estate farm comprises quartzo-felspathic gneisses and the biotite gneisses hidden beneath a layer of recent soils. The mineral deposits and occurrences in Taita Taveta County include the green vanadium garnets that were encountered in Mindi and Mikeli Hills during the year 1971. Some

years afterwards deposits were discovered in Mgama Ridge, and actual production of the gemstone commenced in 1973. Also, tiny grains of red corundum were discovered around Alia peak, Mgama ridge (E 180 R). The mineral occurs together with red spinel marble horizon within the Lualenyi Member. Several other places also discovered red corundum later. In addition to green grossularite and red corundum, green tourmaline, red garnet (rhodolite), blue zoisite (tanzanite), turquoise, and red spinel have been found in the Mwatate sheet area.

On the other hand, the several industrial minerals to have been prospected in Mwatate include Marbles, limestone, apatite, graphite and sillimanite. The mineral ores at present documented or mapped in the Mwatate sheet area of mineralogical importance only; they include magnetite, pyrite (with base metal sulfides in minor amounts), and rutile. Locally in the Lualenyi Member, elevated geochemical values of Uranium and Thorium are present.

3.4.3 Soil formations

In the area, the dominant soils are cambisols and originate from weathered gneiss and are often gravely to sandy-loamy and shallow and are well drained and moderately fertile. On steep slopes and transitional zones, the dominant soil types are Regosols, which are shallow soils, have high permeability and low water holding capacity. In some areas, the soils are well drained to excessively drained, dark reddish brown to dark brown shallow to extremely deep, friable to firm and compact, sandy clay loam to clay. The soils are also characterized by high aluminium levels, low calcium levels, resulting in low cation exchange capacity and vulnerable to soil erosion. At the valley bottoms, alluvial soils (fluvisols) are apparently, characterized by young soils with fertility being moderate to high. They receive fresh sediments and nutrients during regular floods and occur in all larger river basins of Bura, Lumi, Mbololo, Mwatate and Voi Rivers.

Moreover, the lowlands are characterized by reddish, very deep acid sandy – clay soil (Ferralsols). They are found in most of the Tsavo National Park and the ranches. They are vulnerable to soil erosion, have a low water holding capacity and low soil fertility.

3.4.4 Climate

The study area is generally hot and dry all the year round, except for high catchments areas in the hills. The effect of the south easterly winds influences the climate of the area. The hilly areas have ideal conditions for condensation of moisture, which results in relief rainfall. The county experiences two rainy seasons in a year. The long rains fall between March and May and the short rains between November and December. The mean annual rainfall in the hills ranges from 650 mm to over 1,200 mm in the upper mountain zone.

The lowlands where the study area lies receive between 450 – 750 mm annually and rainfall is more unreliable in amount and distribution. The lower parts are hot with mean temperatures of about 30°C, with temperatures getting as low as 18.2°C in the hilly areas. The potential annual evaporation rate is about 1,800mm. It is observed that in the area of study, climate change and variability is an emerging threat to sustainable environmental conservation and life.

The climate graph of the plan area is highlighted below in Figure 15;

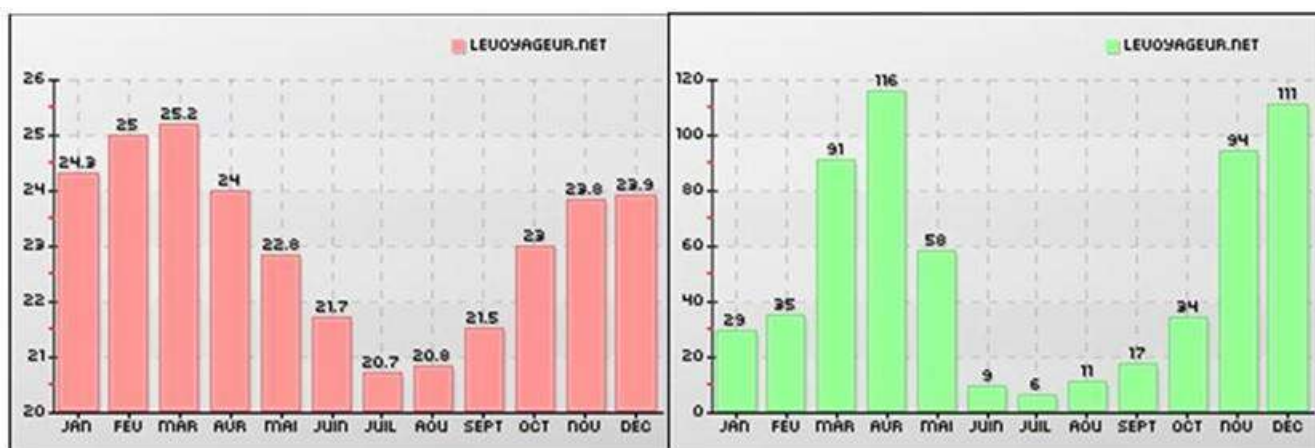


Figure 16: Climate graph of the plan area showing the average temperature variations within the year

3.4.5 Hydrogeology

The area of study is characterised by several streams and seasonal rivers within the Taita region, with varying discharge levels. Most of the rivers are either major tributaries of larger rivers or seasonal water courses such as those that drain the Davida (Taita) hills. The largest of these rivers is the Tsavo River; a major tributary of the Athi - Galana- Sabaki river system, Tsavo river basin in Taveta and Wundanyi division. Tsavo River arises from Njukini springs in Taveta Division and it flows into Athi river. Mwatate river basin in Mwatate Division, which constitutes of Bura river as its major tributary and flow southwards through the national park into Kwale County. The main rivers in the County are the Tsavo, Lumi and Voi rivers. Mzima springs are the major water supplier to the TAVEVO Urban Area.

Moreover, in the area of study there are also small springs and streams that include Njukini, Njoro kubwa, Kitobo, Sanite, Maji Wadeni, Humas Springs and Lemonya Springs. Additionally, underground water is also available through boreholes. Moreover, in the Teita Estate proposed development area, the occurrence of groundwater in this area is mainly obtained within the weathered and fractured zones of the Basement rocks. The recharge of groundwater is good since the plan area receives a considerable recharge from Basement Hills surrounding the area. Additionally, the yields of boreholes in this zone are expected to be medium to fairly low due to nature of rocks in this area. Boreholes located in highly fractured zones are medium yielding. The estimated yield from the proposed borehole is about 5,000 to 10,000 litres per hour.

The water bearing formations in this area are not uniformly distributed hence the difference in water struck levels and yields of the surrounding boreholes. The flow of groundwater is limited to highly fractured and weathered zones within the basement rocks which are the main rock formations in this area. The map below shows the orientation of the main ground water channels cutting across the proposed development parcel of land.

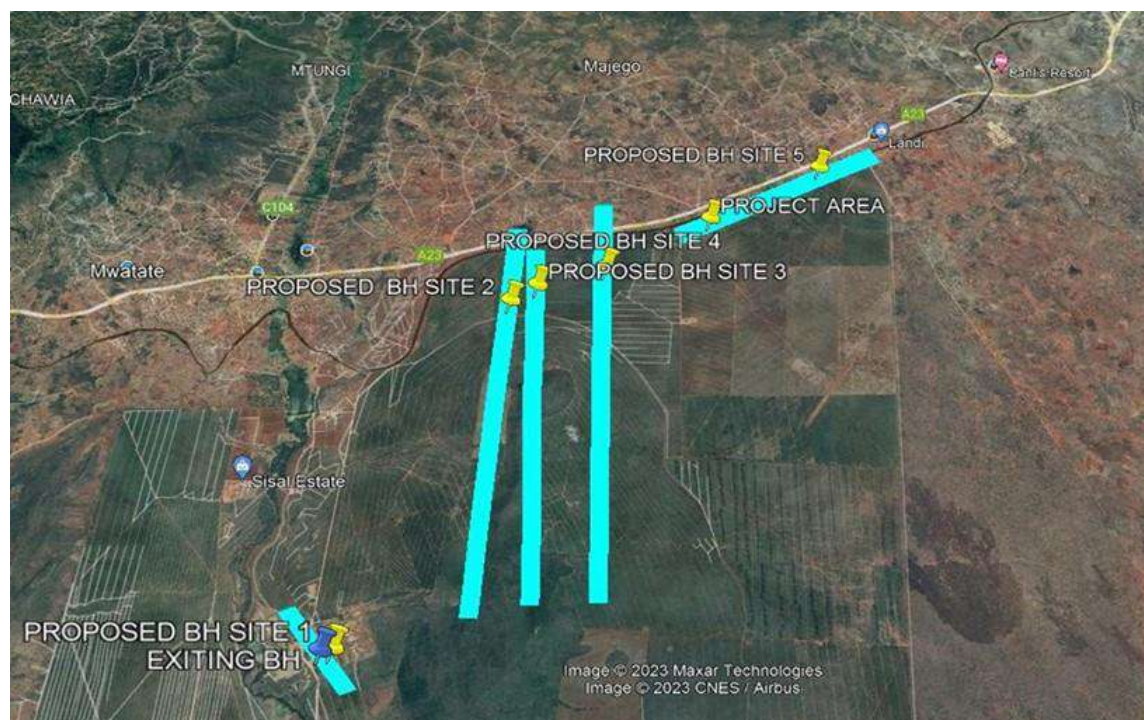


Figure 17: Ground water channels cutting across Teita Estate

3.4.6 Water Supply

Mzima springs is the major water supplier to the TAVEVO Water and Sewerage Co. Ltd. area of jurisdiction that is approximately 17,084 km². The bulk water supply system for TAVEVO comprises of two sources;

- ✓ Njoro Kubwa Springs: Current capacity of 3,000m³/d and a potential production of 100,000m³/d. Njoro Kubwa Springs emerge from Kilimanjaro Aquifer and are located 3km South East of Taveta Town.
- ✓ Mzima Springs: Current capacity of 35,000m³/d and a potential production of 105,000m³/d. Mzima Springs located South West of the Chyulu Hills in Tsavo national park

Voi Town is served by the bulk water supply system from Mzima Springs via Mzima pipeline (750 mm dia.) through four off takes with the water flowing via gravity. On the other hand, Mwatate Town is served by two local water sources namely Ngirwinyu River and Mwasinenyi Borehole. Mzima Springs is proposed to serve Mwatate through Mzima II Pipeline which is scheduled to be constructed by Year 2035 (WSMP-Tahal/Bhundia, 2014). Prioritized distribution network investment plans for TAVEVO area has an implementation schedule of 3 phases as follows:

- ✓ Short Term Phase (Immediate Interventions): 2017 - 2020
- ✓ Medium Term Phase: 2021 - 2030
- ✓ Long Term Phase: 2031 – 2040

Moreover, in Taita Taveta County there are also small springs and streams that include Njukini, Njoro kubwa, Kitobo, Sanite, Maji Wadeni, Humas Springs and Lemonya Springs. For the plan

area there is an additional source of underground water that is also available through borehole abstraction.

3.5 Biological Analysis

The county has 48 forests that comprises of indigenous and exotic forest cover, with approximately 10,000ha of the county designated as forests. There are also about 21 species of fauna and flora that are not found anywhere else in the world. Indigenous forests cover 41.5% of the area, 12% has exotic forests, 1% contains endemic species and 46% consists of bushland. Small-scale farming of crops, mainly maize and beans is also widely practiced.

3.5.1 Flora

The area of study is characterised by three types of flora;

1. High Altitude/High Elevation Flora: These includes areas such as the mountainous and hilly areas which receive high amounts of rainfall, are cool and experience higher rainfall than the rest of the areas. The areas include Taita hills, Mbololo forests, Ngangao forests and areas of Mwatate. The areas are characterized by a high level of species and generic endemism with the forest ecosystem having more the 2,000 species of plants of which 25 to 30% are endemic. The Taita Hills forests fauna consists of over 400 species with at least 123 endemic plant species. Ngangao and Mbololo forests have 7 of the endemic species.
2. Midlands of Taita Taveta Flora: These include some parts of Taita Hills which are between 1,000 to 1,200 metres above the sea level. These areas are characterized by dry spells and have woodland formations composed mainly of different acacia species such as *Acacia mellifera*, *A. seyal*, *A. nilotica* and *Euphorbia* species such as *Commiphora* sp., *Ficus* sp., *Tamarindus indica* and *Terminalia brownii*.
3. Lowland Elevation Flora: This is the area around Voi. The area is dry and is characterized by arid and semi-arid vegetation which is a characteristic of savannah vegetation. Tall grass, wooded Acacia-Commiphora associations and shrubs dominate the area. In areas where the water table is high such as along Voi river, riverine vegetation dominated by *Croton macrocarpus*, *Croton megalocarpus*, *C. dichogamous*, *Acacia xanthophloea*, *Milicia excelsa*, *Albizia gummifera*, *Kigelia africana*, *Adansonia digitata*, *Melia volkensii* and *Ficus thorningii*.

There are some exotic trees that have been planted in the upper areas mainly for agroforestry purposes. They include: *Grevillea robusta*, *Makamea lutea*, *Terminalia brownie*, *Terminalia spinosa*, *Mangifera indica*, *Melia azedarach* and *Azadirachta indica*. There are also some of the endemic plant species include the African violet - *Saintpaulia teitensis*. The threatened plant species include the African sandal wood *Osyris lanceolata* that is medicinal in nature. There is also *Ficus thorningii*. Common in riverine areas such as Voi River. This is mainly threatened by the local community because it's good for roofing.

The area of study also has some invasive plant species that include: *Prosopis juliflora* popularly known as Mathenge plant, *Acacia mearsi*, *Lantana camara* and *Opuntia* spp such as *Opuntia stricta*, *Opuntia vulgaris* and *Acacia indica*. The area of study has three sisal varieties that include *Agave sisalana*, *Agave hildana*, and *Agave* hybrid 11,648 that occupies the majority of the land area.

3.5.2 Forest Cover

The Taita Taveta County total forest cover is about 280 Km², representing 0.51% of the total County area (CIDP-TT, 2014). The county has a total of 78 forest parcels, but 52 parcels are yet to be gazetted, an exercise that is to be undertaken by the county government. The gazetted forests cover an area of 1,489.8 Ha whereas the non-gazetted ones cover an area of approximately 9,000 Ha (TTCIDP, 2014). The indigenous forests in the County possess unique biodiversity, being home to varied flora and fauna. Over 20 endemic species of African violets (e.g. *Saintpaulia teitensis*) occur exclusively in Taita Taveta. Also, the Taita Thrush and the Taita Apalis are birds endemic only to the county. The Taita Falcon and the Taita Fiscal were first discovered at the hills but occur elsewhere too. However, climate change seems to have worsened the problems already faced by forests from encroachment for agriculture, over-extraction of timber and non-timber products e.g. charcoal production.

Forested areas are confined to the Taita hill tops (approximately 2% of the forest cover) where remnants of the original Afromontane forest vegetation are restricted to isolated mountain peaks. There are 48 Kenyan Eastern Arc forests which have survived on hill tops in the County, of which 28 are gazetted and are under government protection and management. They range in size from small 500 square metres with a few remnant trees to modestly vast 2 square kilometres indigenous and exotic forest mountains.

The Taita Hills forest hold a unique biodiversity with 13 taxa of plants (such as *Ceropegia verticillata*, and *Zimmermannia ovata*) and 9 taxa of animals such as birds (Taita thrush, Taita apalis and Taita white eye) endemic to the Taita Hills. In addition, 22 plant species found in the Taita Hills forests are typical of the Eastern arc forests.

3.5.3 Wildlife

The Tsavo Ecosystem is the largest protected complex in Kenya and is particularly important for its migratory wildlife species, especially the elephants that are known to migrate from the Tsavo West NP to Mkomazi Game Reserve. The Tsavo ecosystem contains a high number of endangered species, partly by virtue of its large size (44,000 km²). It has the largest population of elephants in the country, and hosts populations of black rhinos, African wild dogs, Hirola (Hunter's hartebeest), and Grevy's zebras, all of which are classified as threatened.

The two species (Hirola and Grevy's zebra) were translocated to the conservation area to give them increased protection. Essential wildlife areas and connections include the Tsavo West NP, the Chyulu NP, the Tsavo East NP, the Galana Ranches, and dispersal areas in Taita-Taveta County, as well as trans-boundary areas as shown in the map below (Figure 17).

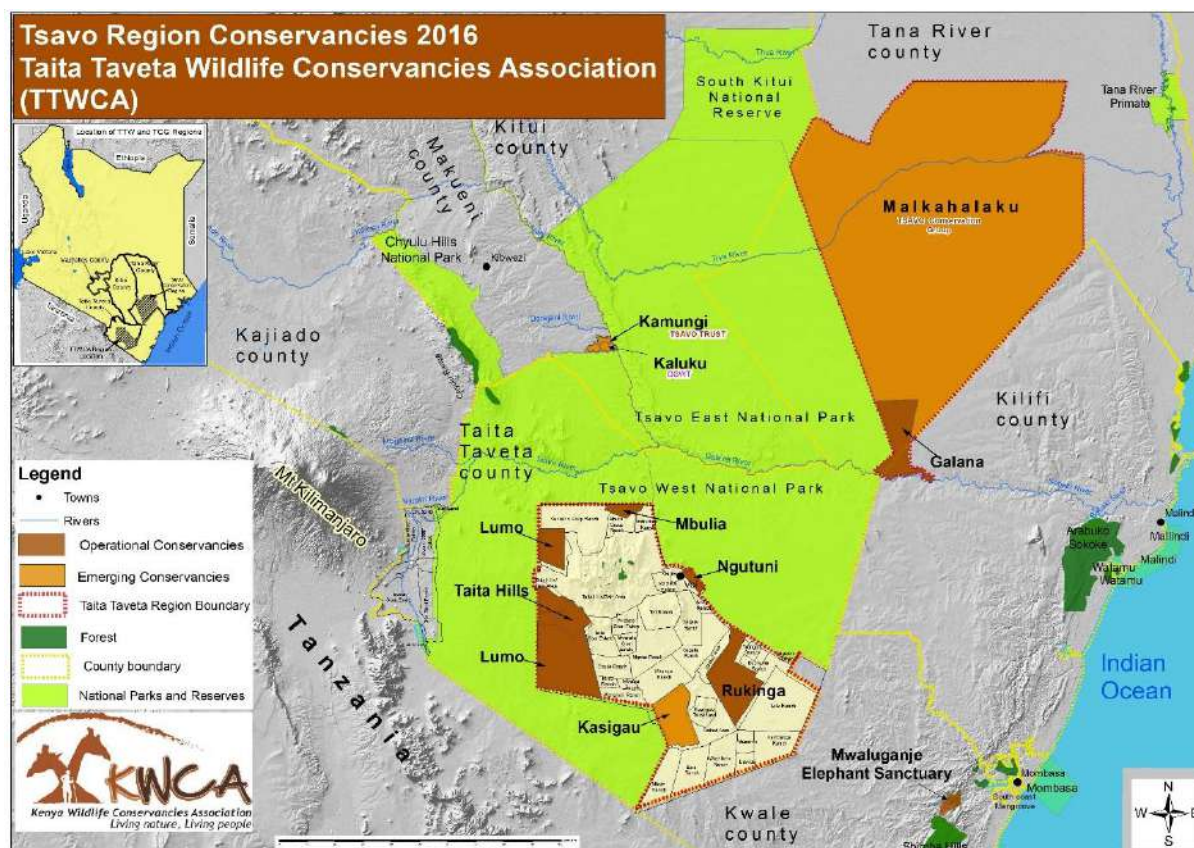


Figure 18: Conservancies and parks in Taita Taveta and its environs

Source: Kenya Wildlife Conservancy Association

3.5.3.1 Wildlife migratory routes and corridors

Teita Sisal Estate is located in Mwatate Municipality, Mwatate Town, Mwatate Ward in Taita-Taveta County. It is situated approximately 18 km from Voi Town. Teita Estate borders several conservancies including Mgeno and Teri ranches to the East. Its location is outside of the wildlife migratory corridor as can be seen in Figure 19 below, that is situated to the south of the development about 50 kms from the nearest migratory corridor.

Most of the of the larger mammals and carnivores in the Tsavo ecosystem come under intense human pressure in the dispersal areas on which they depend for their requirements. Some pathway for elephants is now covered with a patchwork of settlements and agricultural activities, crisscrossed by fences, curtailing elephant movements and causing human-elephant conflicts. The human-wildlife conflicts have necessitated the erection of electric fences by KWS in partnership with various organizations and conservancies within the region as indicated in Figure 19 below. However, the Teita Estate Master Planning area is within the Mwatate Municipality area and outside any wildlife migratory corridor. Indeed, the planning area is located about 50 kms outside the established electric fence.

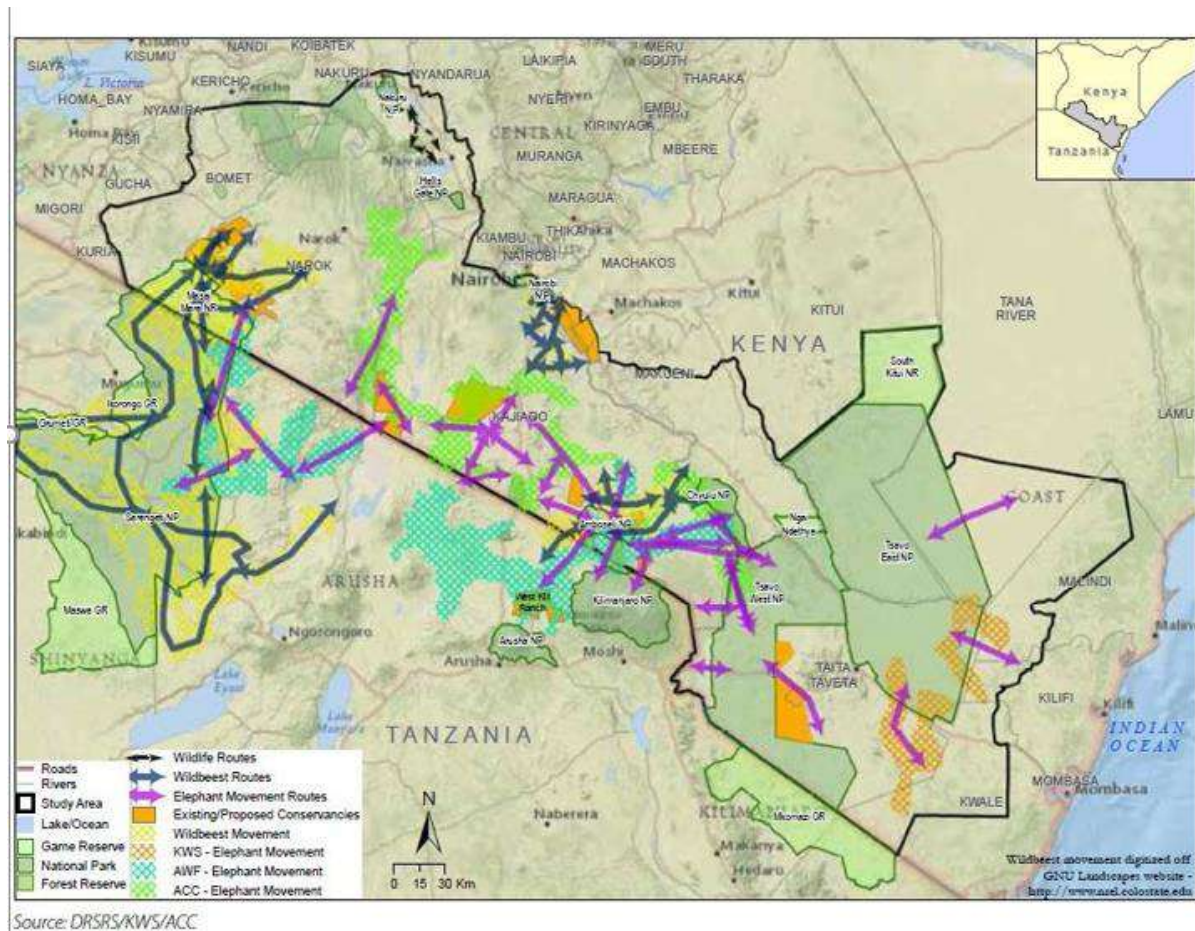


Figure 19 Wildlife migratory routes on the southern parts of Kenya

Source: DRSRS/KWS/ACC

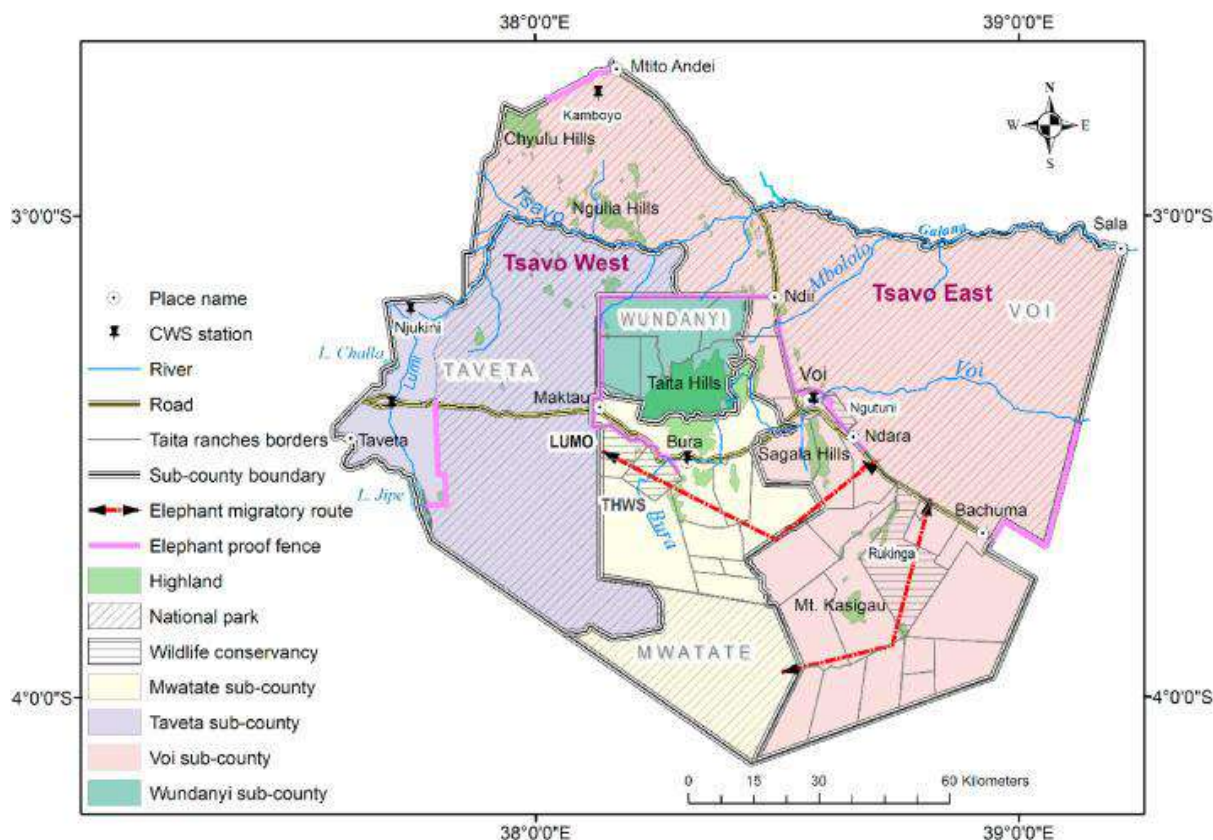


Figure 20: Location of established electric fences in Taita Taveta county and the Tsavo Conservation area

Source: (Munyao et al., 2020)

3.5.3.2 Birdlife

The parks, sanctuaries and forests in and around Taita Taveta County are home to a prolific birdlife that features over 500 species. The preliminary biodiversity survey conducted for this SESA report entailed establishing the presence or absence of birds through sighting, sounds and/or habitat that are conducive for bird occurrence. This formed a basis for the actual field assessment. From the assessment, it was projected that the development will have minimal disturbance to birds in the Master Plan area. The plan area is predominantly under sisal farming, a land use that offers feeding grounds for the birds with little or no nesting grounds for the same. However, the levels of noise anticipated to be generated during construction and occupation periods will determine the pattern of the birds. Higher noise levels will lead to less frequent visits by the birds to the site. Additionally, the change in land use such as creating agricultural patches depending on the types of crops, may influence visits from specific bird species, hence leading to positive avian impacts. This may also lead to a spin-off effect increasing bird predator levels, such as snakes and the black crowned crows, to the site. It should also be noted that creating of open green spaces and the water points within the plan site will attract a larger population of birds. This is highly encouraged due to the interdependent nature of birds and their effect to the natural environment, biodiversity and visual and acoustic appeal.

The method used for identification involved observation of birds, the evidence of their existence by feathers, nests and/or chirping noise. The areas were sampled during early morning, late evening, and in mid-morning and late afternoon hours. Approximately 54 species of birds were

identified during the field assessment (detailed in Appendix 3). 11 species were recorded within the proposed Taita Estate master planning area. While these is approximately 20% of the population, the birds recorded may either be residents or feeding in the site while they could be nesting outside of the plan area and estate. This is due to the fact that very few nests were spotted within the site and the kind of vegetation in the site was predominantly sisal, acacia and Commiphora species, which limits the potential to offer nesting ground for the birds.

Moreover, there exists good habitat for breeding, feeding and nesting in the area surrounding the proposed master plan site, especially in the adjacent Mgeno Ranch and the hills on the southern parts of the plan area. The natural vegetation is abundant and there is a substantial amount of birds adoptable to these environments. Close analysis of the bird species recorded indicated that the feeds include nectar, fruit, plants, seeds, carrion, and meat (small animals and other birds). Such an established food web indicates that the surrounding environment is capable of maintaining the population of birds within and around the plan site. However, it was noted that there are bird feeders deliberately established in some resorts within a 30-kilometre buffer of the site, which act as pull factors for bird species. The establishments within the plan area could be encouraged to establish such pull factors which will complement feed sources in the natural environment, reducing the anticipated impacts the plan could have on birds. A list of bird species identified in the study area is in appendix 3.

3.6 Social Economic Analysis

3.6.1 Population

Taita-Taveta County is at the onset of a transitional population structure where 0-14 year who constitute 39% of the total population are declining, while the youthful population of 15-34-year olds who constitute 33.5% of the total population are increasing. This is due to declining fertility rates among women as shown by the highest percentage household size of 0-3 at 48%. Based on the Medium Growth Rate Variant adopted in the study, the estimated population of Taita Taveta County (2023) is 370,000 and is projected to increase to 453,009 by 2040.

3.6.2 Land Ownership

The land in the County is predominantly communally owned in the rural Taita lowlands used as ranges for pasture. However, in the urban centre approximately 35% of land parcels have title deeds (ICDP for Taita Taveta County 2012-2017). Moreover, land adjudication is currently going on to ensure all land owners are issued with title deeds.

3.6.3 Land Use

The County accommodates a wide range of land uses including formal and informal, urban and rural settlements and these are complimented by economic, transport and public and social infrastructure. The total land area in Taita Taveta County is 17,059.1 km². Of this, total agricultural land is approximately 10,630 km², with arable land constituting about 2,055 km². The rest is rangeland, suitable for livestock rearing. Approximately 14,307.2 Km² of land is non-arable. The percentage of arable and non-arable land area is 12% and 88% respectively. Additionally, the Tsavo East and West National Parks cover an approximate area of 10,650 Km², which translates to about

62% of the total land area. Water bodies cover approximately 16 Km², leaving about 22% of County land for settlement and agricultural activities.

Land available for household farming activities is reduced drastically due to the presence of a total of 28 ranches which combined, cover an approximate area of 773.5 km². Eight of these belong to the Kenya Government, nine to group ranches and 11 are privately owned. The average size of the ranches is 2,762.5 Ha. Large scale sisal farming for fibre production further reduces land available for settlement and household farming activities. There are three companies that produce sisal for both domestic and export markets. Rain fed agriculture is the dominant activity by most households as a subsistence and/or economic undertaking.

3.6.4 Settlement Patterns

Majority of Taita Taveta County residents have a similar socio-economic background and are likely to live in the same areas because their income usually influences their decision as to where to purchase or rent a home. The settlement patterns are also influenced by rainfall patterns, topography, infrastructural development, proximity to urban centres, security and availability of natural resources. The climatic conditions are strongly influenced by altitude and physiographic features. The settlement patterns are nuclear concentrated within urban centres along the main roads (Voi – Mombasa Highway and Voi -Taveta Highway). Wundanyi Sub-County is the most densely populated with 106 people per km². Mwatate is the second largest in terms of density at 55 people per km² while Voi Sub-County has the lowest density, which stands at 15 persons per Km² due to large tracts of land under sisal farming and the presence of Tsavo East National Park.

3.6.5 Energy

Taita Taveta County is endowed with potential for vast renewable energy (RE) resources including wind, solar, biomass, hydropower for both on-grid and off-grid systems. Despite the potential of renewable energy, the County's grid connection remains very low. The majority of Taita Taveta County's population depends on wood fuel for cooking. Approximately 90 per cent of households use firewood or charcoal for cooking and heating. Population under the grid in the County is 57.5% which translates to 96,256 households. The buffer population to be served by the grid in the County is 18.7% which translates to 62,218 households and off grid population is 23.8% which translates to 39,898 households (off grid solar market assessment brief for 14 underserved counties of Kenya).

On the other hand, about 2% of residents in Taita-Taveta County use Liquefied Petroleum Gas (LPG), 5% use paraffin, 69% use firewood and 24% use charcoal. Wundanyi and Mwatate Sub Counties have the highest level of firewood use in Taita-Taveta County at 80% each. Voi Sub-County has the highest level of charcoal and paraffin use at 34% and 9% respectively.

The number of consumers connected to the national electricity grid stands at 3,963, while 15% of the total households have access to electricity for lighting. 46% use lanterns, 35% use tin lamps, and 1% use fuel wood. Voi constituency has the highest level of electricity use at 19%. There are 86 trading centres that are connected to the grid, while the rest, i.e. 62 trading centres are not connected. Therefore, with Teita Estate comprehensive development will have access to the grid, adequate sources of fuel for plant and equipment, and access to renewable sources of energy outlined above. Indeed, the Master Planning area intends to capitalize on the renewable energy

potential by instituting regulations on installation of solar panels on rooftops of all buildings and encouraging harnessing of both solar and wind power by business and industrial premises within the site.

3.6.6 Sanitation

Voi, Wundanyi and Mwatate have no sewerage system with the use of on-plot sanitation systems for disposal of effluent being prevalent. The major problem faced is the lack of a proper sludge management system such as a Sludge Handling Facility for the discharge of septage by the exhaust vacuum tankers. Septage from septic tanks is discharged directly to the environment including unrestricted public utility sites such as near the solid waste disposal sites.

Wastewater master plans for Voi and Taveta towns (MIBP/CES/BOSCH, 2017) propose the construction of sludge handling facilities as well as long-term plans such as construction of water-borne sanitation system to serve the towns up to ultimate horizon of year 2040. Moreover, in Wundanyi and Mwatate urban centres, implementation of improved on-plot sanitation systems complemented with sludge handling facilities would ensure sustainable environment and a healthy population.

3.7 Social Cultural Analysis

3.7.1 Cultural Heritage

Taita Taveta County in Kenya is known for its rich cultural heritage and historical significance. It is home to the Taita people, who have a unique cultural identity and traditions. The region is also known for its archaeological sites, rock art, historical landmarks, and cultural practices.

While Mwatate is a town located in Taita Taveta County, it is not known for significant cultural or historical sites. However, Taita Taveta County as a whole has cultural and historical sites of importance such as rail road that was built during colonial period. Some notable sites within Taita Taveta County that may be of interest affected include:

- a) Wundanyi Hill: Wundanyi Hill is an iconic landmark in Taita Taveta County and holds cultural significance for the local Taita community.
- b) Ngangao Forest: Ngangao Forest is a forest reserve located in Taita Hills and is known for its biodiversity and potential archaeological sites.
- c) Mbololo Forest: Mbololo Forest is another forest reserve in Taita Taveta County that is rich in biodiversity and cultural heritage.
- d) The Taita Hills: The Taita Hills have cultural significance for the Taita community and may contain sites of historical importance.
- e) Chawia Cultural Village: The Chawia Cultural Village is a community-driven initiative that aims to preserve and showcase the cultural heritage of the Chawia people, one of the communities in Taita Taveta County.

However according to the master plan, the land where the development is proposed is currently uninhabited, except for sisal workers and settlers of diverse cultural backgrounds who live in close proximity. This implies that the implementation of the master plan will not result in significant cultural changes in the neighbouring towns and centres, as they are already cosmopolitan in nature.

3.7.2 Archaeological and cultural sites

Regarding archaeological and cultural sites, the social cultural analysis conducted as part of the master plan did not identify any resources of archaeological, paleontological, historical, architectural, religious (graveyards), aesthetic, or other cultural significance that would be affected by the development. However, the plan recognizes the need to be prepared for the possibility of chance archaeological or culturally valuable finds during excavation activities in the Teita Estate.

To address this, the plan outlines specific procedures that should be followed in the event of such discoveries. Firstly, if any materials with potential archaeological, historical, paleontological, or cultural value are found, work in the area should be immediately stopped. The relevant authorities should then be notified about the findings. This ensures that proper documentation and assessment can take place.

Moreover, though the social cultural analysis did not find any resources of archaeological, paleontological, historical, architectural, religious (graveyards) aesthetic or other cultural significance resources that could be affected. However, Teita Estate development will be responsible for “chance finds procedures”, in case culturally or archaeological valuable materials are uncovered during excavation. Some key procedures will entail:

- i. stop work immediately following the discovery of any materials with possible archaeological, historical, paleontological, or other cultural value, announce findings to relevant authorities for further action
- ii. protect artefacts as well as possible use of plastic covers, and implement measures to stabilize the area, if necessary, to properly protect artefacts.

These procedures aim to ensure that any culturally or archaeologically valuable materials discovered during the development are appropriately handled, documented, and preserved. Moreover, by incorporating these chance finds procedures into the plan, the developers of the Teita Estate plan demonstrate their commitment to cultural heritage preservation and responsible excavation practices. These measures aim to safeguard any potential archaeological or cultural discoveries that may arise during the development, ultimately contributing to the preservation of the region's cultural heritage.

4 Legislative and Policy Context

4.1 Introduction

It is a legal obligation within the Laws of Kenya that a master plan of such magnitude adheres to certain legal parameters. This section therefore describes the Policy, Legal, and Institutional framework pertaining to the Teita Estate Comprehensive Mixed Land Use Master Plan. The policy, legal and institutional frameworks have been put in place to ensure that such development master plans and projects adhere to environmental conservation. In this regard this SESA will be undertaken in strict adherence to the Republic of Kenya policy, legal and administrative framework for environmental management. Some of the relevant legal and administrative frameworks that shall be of relevance in the SESA process are outlined below.

4.2 The Constitution of Kenya 2010

The Constitution of Kenya (2010) Article 42 of the Kenyan Constitution states thus: Every person has the right to a clean and healthy environment which includes:

- a) To have the environment protected for the benefit of present and future generations through legislation and other measures, particularly that are contemplated in article 69.
- b) To have obligation relating to the environment fulfilled under article 70. Section 69 states that: The state shall;
 - i. Encourage public participation in the management, protection and conservation of the environment.
 - ii. Establish systems of environmental impact assessment, environmental audit and monitoring of the environment.
 - iii. Eliminate processes and activities that are likely to endanger the environment

Every person has a duty to cooperate with state organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and those of actual resources. It is anticipated that the proposed Teita Estate comprehensive development will be guided by the spirit of the Kenyan constitution considering environmental protection and conservation.

4.3 Key Policies Relevant to the SESA

4.3.1 National Environmental Policy

The broad objectives of the national environmental policy include;

- i. Optimal use of natural resources while improving environmental quality;
- ii. To conserve resources such that the resources meet the needs of the present without jeopardizing future generations in enjoying the same;
- iii. Develop awareness that inculcate environmental stewardship among the citizenship of the country;
- iv. Integrate environmental conservation and economic activities in the development process
- v. Ensure that national environmental goals contribute to international obligations on environmental management

To achieve this, it is a policy direction that appropriate reviews and evaluations of developmental plans and operations are checked to ensure compliance with the environmental policy.

4.3.2 The National Housing Policy 2004

The sessional paper no. 3 of 2004 on national housing policy outlines the government of Kenya commitment in provision of affordable housing. The main goal of the policy is to facilitate the provision of adequate shelter and a healthy living environment at an affordable cost to all socioeconomic groups in Kenya in order to foster sustainable human settlements. This will minimize the number of citizens living in shelters that are below the habitable living conditions. It will also curtail the mushrooming of slums and informal settlements especially in the major towns.

Chapter two of the housing policy outlines one of the objectives of the policy as to promote inclusive participation of the private sector, public sector, community-based organisations, Non-Governmental Organisations, co-operatives, communities and other development partners in planning, development and management of housing programmes.

The proposed Teita Estate master plan provides adequate land for low medium and high-end residential premises. This provision links very well with the goals and objectives of the national housing policy of 2004. Further, in the national housing policy, the government of Kenya commits to facilitate investments in the housing sector. Based on the provisions of the national housing policy 2004, the proposed Teita Estate master plan builds on the government agenda on housing.

4.3.3 The National Industrialization Policy Framework for Kenya 2012-2030

The main objective of the national industrialization policy is to enable the industrial sector to attain and sustain annual sector growth rate of 15% and make Kenya the most competitive and preferred location for industrial investment in Africa leading to high employment levels and wealth creation. Specific objective number 6 of the policy focuses on developing at least 2 Special Economic Zones and 5 SME Industrial Parks.

This specific objective anchors well with the proposed Mixed-Use master plan objective on industrial development. Under the master plan, substantial land has been set aside for special economic zones.

4.3.4 The Integrated Coastal Zone Management (ICZM) Policy, 2013

The ICZM policy is rooted in the understanding that the coastal and marine environment is a limited spatial area and a distinctive system in which a range of environmental and socioeconomic interest interconnect in a manner which requires a dedicated and integrated management approach. The policy brings together all those involved in the development, management and use of the coastal zone within a framework that facilitates the coordination and integration of activities and decision-making processes. The objectives of the policy are to: -

- a) Promote integrated planning and coordination of coastal developments across the various sectors;
- b) Promote sustainable economic development to secure livelihoods of coastal communities;
- c) Conserve the coastal and marine resources and environment for sustainable development;
- d) Manage environmental risks associated with changes in shoreline and climate;

- e) Develop capacity in research and education and enhance stakeholder awareness and participation in sustainable resource management;
- f) Establish effective institutional and legal frameworks for implementation of the ICZM policy.

4.3.5 The Regional Development Authorities Policy, 2007

This policy calls for equitable socio-economic development through the sustainable use of natural resources by formulating integrated regional development plans in consultation with all those involved, closing gaps in regional resource mapping and attracting resource-based investment that benefit communities. The policy is the framework for streamlining and strengthening the Coast Development Authority (CDA), Tana, and Athi Rivers Development Authority (TARDA) in coastal zone development and management.

The proposed plan links with the goals of the policy in the framework for streamlining and strengthening the Coast Development Authority (CDA), EAC development agenda, Tana, and Athi Rivers Development Authority (TARDA) in coastal zone development and management.

4.3.6 National Climate Change Response Strategy (NCCRS), 2010

The purpose of this strategy is to put in place robust measures needed to address most of the challenges posed by climate variability and change through thorough impact assessments and monitoring of various plans. According to Climate Change Projections, in this country we are likely to experience hotter drier sunny seasons, warmer wetter rainy seasons, rise in sea levels and an increase in extreme weather events.

These climatic changes will impact on our daily lives and the buildings that we work and live in must be adapted to cope with such changes. With time, both existing buildings and the construction of new buildings will have to adapt to cope with the conditions climate change may produce. A range of new ways to design, construct, upgrade and occupy buildings so that they are more energy efficient as well as resilient to threats such as flooding and drought is proposed. In the construction sector, priority inclusion areas should include energy efficient innovations and technologies, and utilization of low-carbon appliances and tools; the utilization of eco-friendly energy resources such as wind, solar, biogas etc; as well as possible utilization of biofuels.

4.3.7 Sessional Paper, No. 1 of 2017 on National Land Use Policy

This policy has been developed, incorporating all activities that are likely to have an impact on the use of land and its resources. The overall goal of the national land use policy is to provide legal, administrative, institutional and technological framework for optimal utilization and productivity of land related resources in a sustainable and desirable manner at national, county and community levels. The Policy is premised on the philosophy of economic productivity, social responsibility, environmental sustainability and cultural conservation. Key principles informing it include efficiency, access to land use information, equity, elimination of discrimination and public benefit sharing.

4.3.8 Public Health Policy of 2014-2030

The Kenya Health Policy, 2014–2030 gives directions to ensure significant improvement in overall status of health in Kenya in line with the Constitution of Kenya 2010, the country's long-term development agenda, Vision 2030 and global commitments. It demonstrates the health sector's

commitment, under the government's stewardship, to ensuring that the country attains the highest possible standards of health, in a manner responsive to the needs of the population.

This policy is designed to be comprehensive and focuses on the two key obligations of health: realisation of fundamental human rights including the right to health as enshrined in the Constitution of Kenya 2010 and; contribution to economic development as envisioned in Vision 2030. The public health policy calls upon the individual plan owners within Mixed Use Development Plan to ensure that buildings are adequately provided with utilities so that they are fit for human habitation. All developments must have amenities/utilities that are essential for safeguarding public health for all people using the facilities.

4.3.9 Kenya Environmental Sanitation and Hygiene Policy 2016 – 2030

The Kenya Environmental Sanitation and Hygiene Policy (KESHP) 2016-2030 provides broad guidelines to both state and non-state actors at all levels to work towards universal access to improved sanitation leading to improved quality of life for the people. Primarily, KESHP aims to increase the proportion of the population with access to improved sanitation to 100% by 2030 and ensure a clean and healthy environment for all in Kenya.

KESHP proposes a range of complementary activities including the provision of sanitation services and maintenance of sanitary facilities for proper collection, treatment and environmentally sound disposal of liquid and solid wastes, water treatment and safety, promotion of hygiene practices, public education, sanitation marketing, regulation and legislation supported by clearly mandated institutions, sustainable financing and research and development.

4.4 Legal Framework

The following pieces of legislations are applicable to the proposed Teita Estate master plan.

4.4.1 Environmental Management and Co-ordination Act (EMCA) Cap 387

This Act aims at coordinating environmental protection activities in the country. In its preamble, the Act states that every person in Kenya has a right to a clean and healthy environment. The Act defines the legal and administrative co-ordination of the diverse sectorial initiatives in the field of environment. The Act harmonizes the sector specific legislations touching on the environment in a manner designed to ensure greater protection of the environment. This Act is guided Policy wise by the National Environmental Council, while the day-to-day enforcement falls under the Director General of the National Environment Management Authority. The Environmental Management and Coordination Act (EMCA) CAP 387 provides for the legal framework for the management of the Kenyan environment. Under the act, section 57A, all Policies, Plans and Programmes for implementation shall be subject to a Strategic Environmental Assessment.

Under the act, all proposed plans that are likely to have significant impact on the environment according to the Second Schedule will undergo an Environmental Impact Assessment (EIA). According to section 58 of the Act, second schedule, and the environmental (Impact Assessment and Audit) Regulations, 2003, all new enterprises and projects must undergo EIA. The independent developments under the proposed master plan will therefore be subjected to EIA.

Under EMCA CAP 387, there are a number of regulations geared towards sustainable development. The applicable regulation to the proposed Teita master plan are discussed below:

4.4.1.1 Environmental Management and Co-ordination (Environmental Impact Assessment and Audit) Regulations, 2003

Under these regulations, it is stated that no licensing authority under any law in force in Kenya shall issue a trading, commercial or development permit or license for any micro project activity likely to have cumulative significant negative environmental impact before it ensures that a strategic environmental plan encompassing mitigation measures and approved by the Authority is in place.

Section 42 and 43 address Strategic Environment Assessments; section 42(1) requires lead agencies in consultation with NEMA to subject all policy, plans and programmes for implementation to a Strategic Environment Assessments while regulation 42 (3) commits the government and all lead agencies to incorporate principles of SEA in the development of sector or national policy.

4.4.1.2 The Environmental Management and Coordination (Amendment) Act 2015

The Act aims at coordinating environmental protection activities in the country. In its preamble, the Act states that every person in Kenya has a right to a clean and healthy environment. The Act defines the legal and administrative co-ordination of the diverse sectorial initiatives in the field of environment. The Act harmonizes the sector specific legislations touching on the environment in a manner designed to ensure greater protection of the environment. This Act is guided Policy wise by the National Environmental Council, while the day-to-day enforcement falls under the Director General of the National Environment Management Authority.

Under the act, all proposed projects that are likely to have significant impact on the environment according to the Second Schedule will undergo an Environmental Impact Assessment (EIA). According to section 58 of the Act, second schedule, and the environmental (Impact Assessment and Audit) Regulations, 2003, all new enterprises and projects must undergo EIA. The independent developments under the proposed master plan will therefore be subjected to EIA. Notably, under EMCA CAP 387, there are a number of regulations geared towards sustainable development.

4.4.1.3 Environmental Management and Coordination (Water Quality Regulations) 2006

Water Quality Regulations apply to water used for domestic, industrial, agricultural, and recreational purposes; water used for fisheries and wildlife purposes, and water used for any other purposes. Different standards apply to different modes of usage. These regulations provide for the protection of lakes, rivers, streams, springs, wells and other water sources. The objective of the regulations is to protect human health and the environment. The effective enforcement of the water quality regulations will lead to a marked reduction of water-borne diseases and hence a reduction in the health budget.

The regulations also provide guidelines and standards for the discharge of poisons, toxins, noxious, radioactive waste or other pollutants into the aquatic environment in line with the Third Schedule of the regulations. The regulations have standards for discharge of effluent into the sewer and aquatic environment. While it is the responsibility of the sewerage service providers to regulate

discharges into sewer lines based on the given specifications, NEMA regulates discharge of all effluent into the aquatic environment. Everyone is required to refrain from any actions, which directly or indirectly cause water pollution and therefore an offence to contravene the provisions of these regulations.

4.4.1.4 Environmental Management and Co-ordination (Waste Management Regulations) 2006

The Minister for Environment and Natural Resources gazetted these regulations in 2006. These Regulations may be cited as the Environmental Management and Co-ordination (Waste Management) Regulations, 2006. Waste Management Regulations are meant to streamline the handling, transportation and disposal of various types of waste. The aim of the Waste Management Regulations is to protect human health and the environment.

The Act provides for how waste should be handled from transportation to disposal. It also includes provisions that waste should be transported by licensed transporters to licensed disposal facilities. The regulations place emphasis on waste minimization, cleaner production and segregation of waste at source.

4.4.1.5 Environmental Management and Co-ordination (Air Quality) Regulations, 2014

The objective of this Act is to provide for prevention, control and abatement of air pollution to ensure clean and healthy ambient air. It provides for the establishment of emission standards for various sources, including mobile sources (e.g. motor vehicles) and stationary sources (e.g. industries) as outlined in the Environmental Management and Coordination Act, CAP 387.

The regulation also covers any other air pollution source as may be determined by the Cabinet Secretary for Environment, Water and Natural Resources in consultation with the Authority. Emission limits for various areas and facilities have been set. It also provides the procedure for designating controlled areas, and the objectives of air quality management plans for these areas.

4.4.1.6 Environmental Management and Coordination (Noise and Excessive Vibration Pollution Control) Regulations, 2009

The regulations determine that no person or activity shall make or cause to be made any loud, unreasonable, unnecessary or unusual noise that annoys, disturbs, injures or endangers the comfort, repose, health or safety of others and the environment.

The regulations also relate noise to its vibration effects and seek to ensure no harmful vibrations are caused by controlling the level of noise. Any person(s) intending to undertake activities in which noise is suspected to be injurious or endangers the comfort, repose, health or safety of others and the environment, must make an application to NEMA and acquire a license subject to payment of requisite fees and meeting the license conditions. Failure to comply with these regulations attracts penalties as prescribed under these regulations.

4.4.1.7 The Environmental Management and Co-Ordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations, 2006

The purpose of the regulations is to monitor the status and the components of biological diversity in Kenya and take necessary measures to prevent and control their depletion so as to ensure that

conservation of biological diversity resources is achieved. Part II, Section 4 of the regulations states that (1) a person shall not engage in any activity that may;

- a) have an adverse impact on any ecosystem;
- b) lead to the introduction of any exotic species;
- c) lead to unsustainable use of natural resources,

4.4.2 Water Act, 2016

The Water Act, 2016 provides the legal framework for the management, conservation, use and control of water resources and for the acquisition and regulation of right to use water in Kenya. It also provides for the regulation and management of water supply and sewerage services. In general, the Act gives provisions regarding ownership of water, institutional framework, national water resources, management strategy, and requirement for permits, state schemes and community projects. Part IV of the Act addresses the issues of water supply and sewerage.

Part II, section 18, of the Water Act 2016 provides for national monitoring and information system on water resources. Following on this, sub-section 3 allows the Water Resources Authority (WRA) to demand from any person or institution, specified information, documents, samples or materials on water resources. Under these rules, specific records may require to be kept by a facility operator and the information thereof furnished to the Authority.

Developments envisioned by mixed use Development Master Plan will require to keep water use consumption for monitoring purpose and as part of legal compliance to the regulations. Water sources such as boreholes and wells will be expected to undertake EIA and seek WRA approval as the authority is liable for management, conservation, use and control of water resources.

4.4.3 Forest Conservation and Management Act, No. 34 of 2016

The Act gives effect to Article 69 of the Kenyan 2010 Constitution about forest resources; to provide for the development and sustainable management. The Act applies to all forests on public, community and private lands. The principles of the Act lay emphasis on (a) good governance in accordance with Article 10 of the Constitution; and (b) public participation and community involvement in the management of forests; among others.

The Act, establishes the Kenya Forest Service to conserve, protect and manage all public forests in accordance with the provisions of this Act. Teita Estate development master plan affects patches of privately-owned farm. It is appropriate to ensure initiation of participatory forest management in the green spaces envisioned by the master plan so that the local community can have a significant input with Kenya Forest Service (KFS) office playing a coordination role. Further, the master plan land uses will need to ensure that disruption of the environment in forested areas is minimised and appropriate mitigation strategies are established and implemented.

4.4.4 The Agriculture, Fisheries and Food Authority Act of 2013

The Act provides for the establishment of the Agriculture, Fisheries and Food Authority, the administration of matters of agriculture and the preservation, utilization and development of agricultural land and related matters. The Act requires each county government to keep a register of land development orders and land preservation orders, which they may issue under this Act. In

this regard the Teita Estate development master plan should ensure sustainable development principles are adopted throughout the entire development cycle.

4.4.5 The National Land Commission Act, No. 5 of 2012

Section 5 of the Act outlines the Functions of the Commission, pursuant to Article 67(2) of the Constitution 5(1) provides to monitor and have oversight responsibilities over land use planning throughout the country. The general function of the commission is the management and administration of public, private and community land. Under the Act, the Commission has the mandate to:

- Alienate public land on behalf of and with the consent of the national and county governments
- Monitor the registration of all rights and interests in land
- Ensure that public land and land under the management of designated state agencies are sustainably managed for their intended purpose and for future generations
- Develop and maintain an effective land information management system at national and county levels.
- Manage and administer all unregistered trust land and unregistered community land on behalf of the county government
- Develop and encourage alternative dispute resolution mechanisms in land dispute handling and management.

4.4.6 Survey Act, Cap 299 Revised Edition [2012]

The Survey Act makes provision in relation to surveys, geographical names and the licensing of land surveyors, and for connected purposes. The Department of Surveys, under the Director, provides and maintains plans for property boundaries in support of the Land Registration throughout the country. In this Teita Estate Mixed Land Use Master Plan preparation, the existing survey data will apply.

4.4.6 Land Registration Act (No. 3 of 2012)

This Act gives the process of land registration for the different land categories. It gives the process for establishment of land registration units and for the establishment of land registries. In this regard the Teita Estate Mixed Land Use Master Plan the survey and land titling process will comply with the provisions of this Act. This includes undertaking the sub-division scheme by a duly registered physical planner with a valid license from the Physical Planners' Registration Board.

It is then followed by an application for sub-division is done at the relevant Sub county planning office. The sub-division scheme is then circulated to the relevant county departments and Government agencies for evaluation purposes. Upon completion of evaluation process the County planning Committee issues the approval which is communicated through the County Director of physical planning through the form PPA2. This would ease the process for the interested investors

4.4.7 Physical and Land Use Planning Act, 2019

The Act makes provision for the planning, use, regulation and development of land and for connected purposes. Article 5 under principles and norms of physical and land use planning notes that every person engaged in physical and land use planning development activities shall be in a

manner that integrates economic, social and environmental needs of present and future generations.

The 3rd Schedule of the Act Article 1 gives considerations for Easements and Wayleaves. Article 4 notes major developments should be subjected to environmental and social impact assessment. The proponent and contractors of the proposed master plan should ensure compliance with the provisions of the act and land use planning.

4.4.8 County Governments Act, No. 17 of 2012

The Act vests responsibility upon the County Governments in planning of development projects within their areas of jurisdiction be it projects of importance to the local County government or those of national importance. Section 102 of the Act provides the principles of planning and development facilitation which include integration of national values in county planning, protect the right to self-fulfilment within the county communities and with responsibility to future generations, protection of rights of minorities and marginalized groups and communities, promotion of equity resource allocation, among others.

Section 114 and 115 indicate and gives guidelines in planning of projects of national significance and instils the aspect of public participation in every aspect of the planning process through clear strategic environmental assessments; clear environmental impact assessment reports; expected development outcomes; and development options and their cost implications.

4.4.9 Urban Areas and Cities Act, No. 13 of 2011

The Act came into function with regard to Article 184 of the Constitution providing regulations on the classification, governance and management of urban areas and cities and further providing the criteria of establishing urban areas. Part III of the Act gives the regulations and functions of every city or municipality with regard to integrated development plans, which shall include but not limited to environmental plans and disaster preparedness, within the area of jurisdiction in achieving objects of devolved governments under section 174 of the constitution, while maintaining the socio-economic rights of the people.

Moreover, in the first schedule, the Act enlists the services that any municipality, City or Town shall provide to its residents, which include but not limited to traffic control and parking, water and sanitation, refuse collection, solid waste management, pollution abatement services among others.

4.4.10 The Energy Act, 2019

The energy Act aims to consolidate the laws relating to energy, to provide for National and County Government functions in relation to energy, to provide for the establishment, powers and functions of the energy sector entities; promotion of renewable energy; exploration, recovery and commercial utilization of geothermal energy; regulation of midstream and downstream petroleum and coal activities; regulation, production, supply and use of electricity and other energy forms; and for connected purposes. Article 178 of the act gives provisions for installation of energy infrastructure along roads, and railways, government property, including forests, National parks, reserves, and heritage sites, for the purpose of the production, conveyance and supply of energy.

The implementer of Development Master Plan should ensure close linkage with the County Government of Taita Taveta as they have power to ensure efficient use of energy and its conservation. All developments envisioned by the master plan are expected to protect health and safety of users of energy by providing an enabling environment of operation that protects the health and safety of users of the service for which the license or permit is required and other members of the public affected by the undertaking.

4.4.11 Occupational Safety and Health Act, No. 15 of 2007

The Act covers provisions for health, safety and welfare. This Act applies to all workplaces where any person is at work, whether temporarily or permanently. The purpose of this Act is to secure the safety, health and welfare of persons at work, and protect persons other than persons at work against risks to safety and health arising out of, or in connection with, the activities of persons at work.

Some of the areas addressed here are machinery safety, chemical safety and health, safety and welfare. Special provisions are also provided in the ILO conventions on safety and health in construction recommendation, 1988 R175.

4.4.12 Data Protection Act of 2019

This is an Act of Parliament to give effect to Article 31(c) and (d) of the Constitution; to establish the Office of the Data Protection. The Act governs the collection, processing and storage of personal data by government and private actors. It establishes an ecosystem of rights and obligations that operationalizes the right to privacy enshrined in the Kenyan Constitution.

The Act aims at ensuring that there are adequate legal safeguards to protect personal data, and promote the right to privacy which is a fundamental human right. This provision of the Act has been applied in this SESA process during data collection, public participation and consultations. It will also apply in public disclosure on the SESA report and the accompanying master plan maps.

4.5 Institutional Framework

The SEA process extends the aims and principles of Environmental Impact Assessment (EIA) upstream in the decision-making process. Section 57A of EMCA (Cap 387) and Environmental (Impact Assessment and Audit) Regulations, 2003 recognizes SEA as a measure of environmental impact assessment at strategic level such as policy, plans and programmes. EMCA (CAP 387). Section 57a requires all Policies, Plans and Programmes for implementation to be subjected to Strategic Environmental Assessment (SEA).

The Regulations section 42 and 43 address SEA; section 42(1) requires Lead Agencies in consultation with NEMA to subject all policy, plans and programmes for implementation to a SEA. Regulation 42(3) commits the government and all Lead agencies to incorporate principles of SEA in the development of sector or national policy.

Some of the key institutions which are relevant to the proposed Teita Estate mixed use development include;

1. National Environment Management Authority (NEMA),
2. Kenya Forestry Service (KFS),

3. Kenya Wildlife Service (KWS),
4. Water Resources Authority (WRA)

Moreover, the environmental bodies that shall be relevant to the proposed project include;

1. The National Environment Council
2. The National Environment Management Authority
3. The Standards and Enforcement Review Committees
4. The County and Sub- County Environment Committees

4.6 Multilateral Agreements/Treaties

There are number Multi-Lateral Environmental Agreements (MEAs) that are relevant to the proposed project that are discussed in the following section

4.6.1 Vienna Convention on the Protection of the Ozone Layer

Intergovernmental negotiations for an international agreement to phase out ozone depleting substances concluded in March 1985 with the adoption of the Vienna Convention for the Protection of the Ozone Layer. This Convention encourages intergovernmental cooperation on research, systematic observation of the ozone layer, monitoring of CFC production, and the exchange of information. The convention's declaration demands a voluntary attempt at monitoring development processes, their resultant emissions and the impacts on the ozone layer for purposes of knowledge and information sharing in order to combat the same.

The Master Plan proposes industrial development, and therefore the SEA report has determined and put in place measures to minimize the emissions that affect the ozone layer through technological monitoring of gaseous emissions and their toxicity levels for purposes of minimizing the same.

4.6.2 United Nations Convention on Biological Diversity (UNCBD)

The convention promotes the protection of ecosystems and natural habitats, respects the traditional lifestyles of indigenous communities, and promotes the sustainable use of resources. The project activities especially during construction will impact negatively to the flora and fauna of the respective construction areas. In this regard, both the proponent and the contractor must ensure that the activities of the proposed project do not affect the immediate ecosystems negatively and that the livelihoods of the local people are not negatively affected but rather enhanced.

4.6.3 African Convention on the Conservation of Nature and Natural Resources

This convention reaffirms the importance of natural resources both renewable and non-renewable resources, particularly the soil, water, flora and fauna. The main objective is to facilitate sustainable use of nature and natural resources

4.6.4 Convention on International Trade in Endangered Species (CITES)

The Convention on International Trade in Endangered Species of Wild Fauna and Flora is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species. CITES provides

a framework to be respected by each party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level.

4.6.5 United Nations Convention to Combat Desertification (UNCCD)

The purpose of the UNCCD is to address the problem of the degradation of land by desertification and the impact of drought particularly in arid and dry semi-humid areas. NEMA is the focal point for the Convention.

4.6.6 Kyoto Protocol to the United Nations Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change provides the basis for concerted international action to mitigate climate change and to adapt to its impacts. Its provisions are farsighted, innovative and firmly embedded in the concept of sustainable development. According to Article 2, the Convention's ultimate objective is "to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic [originating in human activity] interference with the climate system.

4.6.7 Earth Summit on Sustainable Development Agenda 21

Agenda 21 entails a comprehensive plan of action to be undertaken globally, nationally and locally by organizations affiliated to the United Nations, governments, and other groups in every area in which human's impact on the environment. Kenya continues to implement Agenda 21 plan of action by incorporating its principles in national policies, plans, programmes and strategies. The provisions have also been incorporated in the Teita Estate master plan to promote sustainable development, which comprises of the three (3) underlying tenets of economic, social and ecology, which are well articulated in the SESA.

4.6.8 Sustainable Development Goals (SDGs)

The 17 Sustainable Development Goals aims at transforming the world with 9 of these goals having some bearing on Teita Estate master plan. They include Goal number 1 - aiming at reducing poverty, Goal 4 - clean water and sanitation; Goal 7 - affordable clean energy; Goal 8 - decent work and economic growth; Goal 9 - industrial growth, innovation and infrastructure; Goal 11 - sustainable cities and communities; Goal 12 - responsible consumption and production; Goal 13 - climate action; and Goal 15 - life on land. In this regard, the master plan has aligned to the SDGs as relevant to its implementation.

5 Public Participation/Stakeholder Engagement

5.1 Introduction

Engaging with stakeholders from the beginning of the SESA process is important as each organisation or individuals bring their environmental expertise to the assessment process, and ensures that the consultation process undertaken by a proponent is more robust. This in turn means that the public can gain a better understanding of the likely effect of a plan on the environment and meaningfully contribute to the plan's preparation process by offering an informed view. Consultation with the wider public is also undertaken at different stages in the SESA and is crucial for ensuring transparency in the SESA decision-making process.

Public participation in SESA is meant to reduce conflict through early identification of contentious issues and provide an opportunity for the public to influence project design in a positive manner. Public participation is a policy requirement by the Government of Kenya and a mandatory procedure as stipulated by EMCA 1999 (2015 amendment) section 58. It is an important process through which stakeholders including interested parties, organizations, beneficiaries and members of public living in project areas (both public and private), are given an opportunity to contribute to the overall project design by making recommendations and raising concerns about the project before its implementation. In addition, the process creates a sense of responsibility, commitment and local ownership for smooth implementation.

The general objectives of the consultation and public participation are:

- i. Disseminate and inform the stakeholders about the Master Plan with special reference to its key components and location.
- ii. Create awareness among the public on the need for the SESA for the proposed Master Plan.
- iii. Gather comments, suggestions and concerns of the interested and affected parties.
- iv. Incorporate the information collected in the SESA study.

Moreover, public participation/engagement enabled;

- a) Improved transparency and increased public confidence in SESA Study
- b) Identify the social, bio-physical, economic and environmental concerns as perceived by the public.
- c) Identify the positive and negative impacts that the Master Plan should consider.
- d) Identify and record contentious issues that could later bring conflict.
- e) Obtain local input into the design of the Master Plan, alternatives and mitigation measures of negative impacts of any nature.

5.2 Stakeholders Identification and Engagement Plan

Stakeholders consulted during the SESA study were identified in accordance with the areas/sectors that are affected directly or indirectly by the proposed Master Plan. The criteria used to identify various stakeholders was based on the legal mandates of various institutions, assessment of the different interests of the stakeholders, stakeholder power rights and responsibilities and their role in the proposed Teita Master Plan. The identified stakeholders and the engagement plan is outlined below;

Teita Estate Comprehensive Mixed Land Use Master Plan
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Stakeholder category	Potential role in the SESA activity	Engagement strategy	Follow-up strategy plan
National government lead agencies	<ul style="list-style-type: none"> • Provide their views on the effect of the proposed Teita Estate master plan • Interlinkages of the Plan with other existing Plans • Identify any improvement needed for the plan 	<ul style="list-style-type: none"> • Invitation to public consultation meetings • Special consultations at the organizational levels • Review of any relevant existing documents 	<ul style="list-style-type: none"> • Invitation to SESA validation meeting • Participate in monitoring and evaluation of the implementation of SESA recommendations
Private sector organisations	<ul style="list-style-type: none"> • Provide ideas to improve the master plan • Provide challenges and the current trends applicable to mixed use developments master plan 	<ul style="list-style-type: none"> • Invitation to public consultation meetings • Special consultations at the organisational levels • Invitation to SESA validation meeting • Participate in Monitoring and evaluation of the implementation of SESA recommendations 	<ul style="list-style-type: none"> • Invitation to SESA validation meeting • Participate in Monitoring and evaluation of the implementation of SESA recommendations
Professional associations/Academia organisations	<ul style="list-style-type: none"> • Lead in research and consultancy 	<ul style="list-style-type: none"> • Invitation to public consultation meetings • Special consultations at the organisational levels 	<ul style="list-style-type: none"> • Invitation to SESA validation meeting • Participate in Monitoring and evaluation of the implementation of SESA recommendations
Political leadership	<ul style="list-style-type: none"> • Play a major role in awareness raising on the master plan • Can influence on various policies, programs and plan related to master plan 	<ul style="list-style-type: none"> • Invitation to public consultation meetings 	<ul style="list-style-type: none"> • Invitation to SESA validation meeting
Civil Society Organisations	<ul style="list-style-type: none"> • Help in incorporation of gender and vulnerable people issues in the master plan. • Enhance awareness of the master plan on the ground 	<ul style="list-style-type: none"> • Invitation to public consultation meetings • Special consultations at the organisational levels 	<ul style="list-style-type: none"> • Invitation to SESA validation meeting • Participate in Monitoring and evaluation of the implementation of SESA

5.3 Approach on Stakeholders Consultation

Key government lead agencies officials, County government officials, civil society organisations, private sector institutions and political leaders, interested and affected individuals and institutions within and neighbouring the proposed Teita Estate mixed use development were consulted in the SESA study. The exercise was conducted by experienced experts via interviews and discussions under the guidance of interview schedules developed to capture the general and specific concerns, comments and issues comprehensively. The purpose for such interviews was to identify the positive and negative impacts that were studied in detail during the SESA draft stage and subsequently promoted proposals on the best practices to be adopted and mitigate the negative impacts respectively.

5.4 Methodology for Public Consultations

Views and concerns from the residents, local leaders, surrounding institutions and development partners in the Teita Estate mixed use development who in one way or another would be affected or have interest in the proposed Master Plan were sought through interviews, key stakeholder consultations and public meetings as stipulated in the Environmental Management and Coordination Act, (Cap 387).

The stakeholders were consulted during screening, scoping, up to the SESA draft study. During the consultation process, the stakeholders were taken through the Master Plan including the objectives and possible impacts associated with implementation activities. The following steps were followed in carrying out the SESA public consultation process:

1. identification and compiling a database of interested and affected individuals and institutions
2. interview schedules were designed for different target groups and local community members in the proposed master plan.
3. public meetings in the locality and around the proposed mixed-use development area
4. Key Stakeholder Meetings at various levels and with different target groups in the County

The public consultation and participation were conducted through:

- i. Household socio-economic survey.
- ii. Key stakeholder consultation interviews.
- iii. Public participation meetings
- iv. 1st key stakeholders meeting.
- v. 2nd key stakeholder's consultation meeting

5.5 Public Consultations

In relation to the master plan, public consultations were done in the form of consultation vide gazette notices on 22nd April 2022 (Appendix 2) and 25th October 2019 respectively.

CPP Method	Date	Venue
Focus Group Discussion	9 th December, 2022	Mwatate
Focus Group Discussion	9 th December, 2022	Singila
Key Informant Interview	9 th December, 2022	Mwatate
Focus Group Discussion	10 th December, 2022	Lindi
Focus Group Discussion	10 th December, 2022	Mwatate
Focus Group Discussion	10 th December, 2022	Voi
Structured questionnaires	8 th , 9 th , 10 th , December, 2022	Randomly
Public Baraza	31 st March 2023	Chief's office ground- Mwatate
Key Informant Interviews: - ✓ KWS ✓ NEMA ✓ Diaspora University ✓ Izero Ranch Management ✓ CECM- Environment & Water ✓ County Physical Planning ✓ TAVEVO ✓ Taita Taveta Conservancies Association ✓ KWS Research Institute	Different dates	✓ Tsavo East HQ ✓ Mwatate ✓ Voi office ✓ Izero ranch office ✓ County Offices - Voi ✓ Mwatate ✓ TAVEVO offices - Voi ✓ TTCA Voi office ✓ Tsavo East

5.5.1 First public baraza

The first public baraza was held on 31st of March 2023 in Mwatate Town at the Chiefs ground (details attached in Appendix 5).

Meeting Venue	Targeted stakeholders	Date and time	No. of participants
Chiefs Ground, Mwatate Town	✓ Local community ✓ Local administration officers ✓ NGOs representatives ✓ KWS representatives ✓ County representatives ✓ Political leaders ✓ County government representatives ✓ Nyumba kumi	31 st March 2023, 10:00 am	194

Comments arising from the first consultative meeting are as summarised in the table below;

	Positive impacts	Discussion
1	Development of infrastructure and social amenities	Participants were optimistic the development would improve the areas infrastructure

2	Employment benefits for the locals	During the discussion the locals were positive that the proposed development would create job opportunities to locals as well as across the country during and after implementation. However, they emphasized the need of prioritizing on the locals when offering job opportunities
3	Improved business environment	The locals expressed hope that the proposed development was likely to positively impact on the local economy through enhancement of business opportunities such as building materials industry, food industry and other symbiotic industry that will form linkages to the light industries that have been proposed in the development masterplan
4	Improved water supply	The locals noted that intentions of the master plan to drill boreholes, restore wetland, rehabilitate Mwatate dam as well as explore the opportunities around Njoro Kubwa spring would boost the water needs of the area. The local leadership implored the developers to consider options of additionally factoring in the locals outside the plan's scope in regards to water supply for maximized benefit.
5	Improved sanitation facilities	Waste water and solid waste management was highlighted as an issue of concern within the Mwatate municipality. The locals present expressed key concerns over the associated health risks that are attributed to poor sanitation. With adequate plans for waste water treatment and solid waste management, the locals viewed the master plan for the proposed development as a game changer that will form the basis for emulation across the municipality.
6	Improved security	The plans to have a police station and a police post within the development area was applauded as this was noted to be essential towards enhancing security. Additionally, the county leadership through the already existing structures were requested to work closely with the developers to ensure adequate cooperation towards security enhancement in all the development phases of the proposed plan.
7	Increased housing facilities	The plan having been comprised of proposed residential areas ranging from super low to high density residential areas, will greatly help towards resolving the housing issues that was noted to be an issue in the neighbouring Mwatate town. Based on the proposed controlled development policy, the locals were hopeful that the housing facilities will be of improved standards.
8	Economic growth	Upon implementation and actualization of the proposed master plan, the locals were positive that the area would witness significant economic transformation through the various investment platforms as designed in the master plan. Income sourced from the

		job opportunities within the estate would also greatly enhance cashflow in the local economy.
Negative impacts		
1	Habitat loss	There were fears that clearing of the sisal plantation would to some extent interfere with the habitat for the fauna that live within the plantation and thus affect the biodiversity and organism distribution in the area. They however noted that the likely organisms to be affected would be rodents and insects.
2	Water pollution	Based on the terrain, the locals expressed concerns over possibilities of water pollution and contamination should the construction works fail to adhere to Environmental Management plan that shall be developed for the specific development works
3	Human – Wildlife conflict	Taita Taveta county being a largely conservation area with 64% comprised of the Tsavo East and West parks, human-wildlife conflicts are a common occurrence as had been expressed during the public consultation.

5.5.2 Recommendations from first public baraza

The following suggestions were made during the first consultative meeting;

- Locals should be provided with more affordable land acquisition deals during the selling period
- Job opportunities should be offered to locals as first priority to stir development in the area as well as build the spirit of plan ownership
- During the subdivision, the proponent should consider issuing individual titles to the distinct land properties
- Adherence to all the regulatory provisions during the plan implementation stages
- Consultation with the locals during the various implementation phases
- Implementation of the proposed development as per the master plan without significant alterations i.e., areas set for light industries should not be substituted with heavy industries for fears of pollution cases
- Proper plans to adequately handle resultant waste water and solid waste that shall emanate from the operationalization of the development infrastructure
- Explore avenues to ensure the plan area maximizes on eco-friendly investment opportunities
- Locals to be given opportunity to name the estate to create a sense of ownership
- As a corporate social responsibility, the execution of the plan should incorporate strategies of enhancing water supply to the neighbouring locality

5.5.3 Other public consultations

In addition, other public engagements were held on the 10th of December, 2022 across all the sub-counties around the plan area and with NEMA officials on 27th March, 2023 (details attached in Appendix 5).

Meeting Venue	Targeted stakeholders	Date and time	No. of participants
Mwatunge	<ul style="list-style-type: none"> ✓ Local community ✓ Local administration officers ✓ KWS representatives ✓ NGOs representatives ✓ County representatives ✓ Political leaders 	10 th December, 2022, 10:00am	34
Mwatate	<ul style="list-style-type: none"> ✓ Local community ✓ Local administration officers ✓ KWS representatives ✓ NGOs representatives ✓ County representatives ✓ Political leaders 	10 th December, 2022, 12:00hrs	29
Singila	<ul style="list-style-type: none"> ✓ Local community ✓ Local administration officers ✓ KWS representatives ✓ NGOs representatives ✓ County representatives ✓ Political leaders 	10 th December, 2022, 3:00pm	38

Comments arising from these consultative meetings are as summarised in the table below;

S/No.	Positive impacts	Discussion
1	Improve infrastructure /social amenities	Participants were optimistic the development would improve the areas infrastructure
2	Employment benefits for the locals	The respondents were positive that the Teita Estate Comprehensive Mixed Land Use Master Plan would create numerous employment opportunities for both skilled and unskilled labour alike, during the construction and operational phases. Even though most of the Teita Estate Comprehensive Mixed Land Use Master Plan would need skilled labour force during operation, people expressed hope that they would be able to access employment once the Teita Estate Comprehensive Mixed Land Use Master Plan commences mostly as casual workers. The respondents were also optimistic that they would take up relevant training to take up jobs during operation stage.
3	Improved business environment	The respondents and participants were optimistic that business opportunities would arise during construction of the Mixed-use Development
4	Improved water supply	The participants were optimistic that the proposed water supply and management strategies incorporated in the master plan such as water pans and boreholes for water extraction would improve the availability of water in the area.

5	Improved sanitation facilities	The locals during the public participation commented that most households lack sanitary facilities and they were hopeful that with the development, there will be improved sanitation facilities due to the proposed integrated waste management plan.
6	Improved security	The respondents were optimistic that the proposed master plan development activities will lead to improved security situation in the neighbourhood due to the number of people that will reside in the areas
7	Increased housing facilities	The respondents were positive that the proposed residential zones would boost availability of affordable and improved housing conditions in the area
8	Economic growth	With the proposed master plan, investors will be attracted to invest their money in the proposed development through enterprises, business among others. The use of locally available materials and labour for the proposed master plan development activities will contribute towards growth of the local and national economies by contributing to the gross domestic product.
9	Transfer of skills	The members of the public suggested that with the Teita Estate Comprehensive Mixed Land Use Master Plan being a source of employment. Many different skilled workers would be employed from within and without the area. This would lead to a transfer of skills and gaining of experience during the implementation phase.
10	Improve Networking and Culture Exchange	The development will attract various people from different counties and countries and this will promote cultural integration of knowledge and exchange of a wide range of ideas.
Negative impacts		
1	Increased pressure on infrastructure	Some participants were concerned that due to magnitude of the proposed master plan, its execution will increase pressure on existing infrastructure such as roads, water supply system, waste handling facilities, electricity etc. This would be due to increased volumes on human and vehicle traffic along the access road.
2	Habitat loss	Members of the public expressed concerns that during the construction phase of the plan, there would be clearance of vegetation, which would lead to the negative impacts. The clearance of vegetation would affect the scenic beauty and ecological functioning of these sensitive areas. Also, the clearance of vegetation would have impacts on the soil particularly increased soil loss which subsequently might impact on the water quality and ecosystem productivity.
3	Alteration of land	The proposed master plan for mixed land use upon implementation will significantly alter the scenic landscape and terrain of the plan area, unless managed properly this can lead to adverse environmental implications

4	Water pollution	The residents feared that execution of the master plan would lead to increased population in the area, the natural water ways would be polluted through sewage effluent and water from industries. This would also affect the quality of water that is being utilized by locals in the area
5	Air pollution	The locals expressed concern over the possibility of generation of large amount of dust and fumes within the execution stage of the master plan. They noted that surrounding areas might encounter air pollution from excavation works and transportation of construction materials and industries.
6	Noise pollution	The residents expressed fear over noise and vibrations likely to occur during the execution of the master plan. They highlighted construction equipment and other moving machines in the construction sites
7	Human – Wildlife conflict	Interference with the natural ecosystem due to the planned change of use would result into human-wildlife conflict as well as fear of the propagation of the poaching culture
8	Increased waste generation	Population influx in the area as well as commercial/production activities will result into significant waste generation in the area. This thus will require adequate plans for waste management in order to avert possibilities of waste management nuisance.

5.5.4 Recommendations from the second public consultations

The recommendations provided in second public consultations are listed below;

- i. The local community should be granted the priority on purchase of land
- ii. Solid waste management should be addressed well before implementation of the plan
- iii. Waste water management should be elaborate
- iv. The plan should enhance partnerships establishment between the local community and the inhabitants
- v. Appropriate measures should be instituted to curb against rising insecurity
- vi. Through collaboration with KWS, the developers should consider electric fencing of the section neighbouring Mgeno ranch to inhibit human-wildlife conflicts
- vii. Adherence to the provisions of the EMCA 1999, 2015 amendment regarding environmental protection and conservation.
- viii. Re-forestation through landscaping and beautification to restore lost vegetation cover
- ix. Prioritizing on the locals on job opportunities
- x. Establishment of grievance redress channel for improved community relation
- xi. Provision of alternative water sourcing points for the wildlife to reduce human-wildlife conflicts
- xii. Liaise with the KeNHA to work on structural adjustments that will help in traffic management at the plan area access points.

5.5.5 Questionnaires

Structured questionnaires were administered to key identified stakeholders in the plan area to seek their views in relation to the proposed Teita Estate Comprehensive Mixed Land Use Master Plan. The list of some of the individuals who responded to the questionnaires are tabulated in annex 4

5.6 Public Review and SESA Disclosure Process

Upon submission of the draft SESA report to NEMA; within fourteen (14) days of receiving the SESA study report NEMA, undertook administrative review of the Draft Report to ensure that the Draft SESA was adequate to enter the stakeholder-review process.

After the draft report passed the administrative review, NEMA distributed the draft SESA report to stakeholders for comments. NEMA then sent out the draft SESA report to relevant stakeholders. Stakeholders generally have 30 working days (from the date of dispatch) to submit comments on a plan level SESA. However, NEMA may extend this review period in some instances.

On public review, NEMA prepared a summary of the SESA report (advert) and invited the public to make oral or written submissions on the report. NEMA, at the expense of the proponent:

- i. Published an advert in the Kenya Gazette on 14th July 2023 (attached in appendix 4)
- ii. Made adverts in newspapers that has nationwide circulation
 - a. Nation media – Tuesday July 18th, 2023
 - b. The standard – Thursday July 13th 2023.
- iii. Radio advert – July 17th to 19th 2023

5.7 Validation Workshop

On 6th December 2023 a validation workshop was held at Panlis Hotel in Chakaleri Shopping Centre, in Mwatate Area for purposes of validating the Teita Estate Mixed Land Use Master Plan SESA report (see Appendix 1 for the sample invitation letter and Appendix 5 for the validation workshop minutes, attendance list and photos). In attendance were representatives from Teita Estate Ltd, The National Government, Taita Taveta County Government, NEMA, and Ministry of Irrigation and Natural Resources and SEA experts, among others.

The proceedings of the workshop observed the following;

1. More awareness raising on the Teita Estate Mixed Land Use Master Plan and the anticipated plan s hence allaying fears on anticipated land allocation and land uses.
2. The participants also requested to have access to the developed master plan maps for decision making regarding investments in the Teita Estate Mixed Land Use development.
3. The proponent needs follow the due process on land sub-division and titling to the potential new owners in consultation with the relevant government agencies.
4. Considering the various land uses solid waste and waste water management plans needs be developed for Smart growth of the mixed land use development.

5.8 Disclosure of the Mixed Land Use Master Plan and Maps

In adherence to the Data Protection Act of 2019 some key rail-guards that were put in place to ensure conformity with the Act as follows;

- ✓ During the stakeholders' sensitization phase, key provisions of this Act were explained. Particularly pertinent is Section 26 which deals with data that is of a personal nature. For example, during t data collection, the respondents were informed that personal data was being collected and the use to which the personal data would be put.
- ✓ Moreover, during the public participation sessions, the team made a declaration stating that the information to be collected would be held professionally and would only be used to assist in the development of the SESA report. Indeed, the information collected during the course of the SESA report preparation were only used in the preparation of this report and all details shared herein.
- ✓ Additionally, upon completion and approval of the final SESA report, public disclosure of the Teita Estate Mixed Land Use Master Plan and the accompanying maps will be made available to the public and other stakeholders for purposes of knowledge on the plan. In addition, the proponent is contemplating organising for another public baraza to enable the public understand the details of the design and implementation of the Master Plan before purchase and development of the site. This will be held at a date that will be determined by the proponent and the stakeholders between the months of March and May 2024.
- ✓ The SESA report will be availed at the Teita Estate Offices and NEMA offices in Mwatate for any further reference. Moreover, copies of the mixed land use development plan can always be availed to the interested parties on demand

6 Impacts Identification and Analysis

6.1 Introduction

The environmental baseline information and the Master Plans land uses discussed earlier, forms the basis for impact identification and evaluation for this SESA report. Field surveys, key stakeholder consultation and public participation forums conducted on the proposed Teita Estate Mixed Land Use Master Plan identified both positive and negative environmental and social impacts. Additionally, literature review of published reports, scientific papers and other related reports informs this report on expected impacts. The impacts that are expected to arise from the Master Plan execution could either be termed as positive, negative, direct, indirect, short-term, long-term, temporary, and/or permanent depending on their area of cover and their stay in the environment.

In this respect this chapter gives a highlight of impacts analysis. The prediction and evaluation of impacts, including cumulative effects are documented including trade-offs. Moreover, positive and negative impacts likely to originate from the proposed Master Plan execution are described based on the physical, biological, social environment and economic aspects as described in the following section.

6.2 Impact Analysis

The magnitude and the extent of each impact is described in terms of being significant, minor or negligible, temporary or permanent, long-term or short-term, specific (localised) or widespread, reversible or irreversible. In general terms the temporary impacts having no obvious long-term consequences are regarded as being minor. On the other hand, the impacts with long-term repercussions are classified as significant. Significant positive impacts are usually associated with improved access, which is the prime objective of the development.

Additionally, the negative and positive impacts likely to originate from the development have been linked to the biological, physical, social environment and the economic aspects on various land uses proposed by the Master Plan as discussed in the following section.

6.3 Quantification of the magnitude of impacts

The SESA report further assessed the magnitude and significance of impacts based on the following factors:

- Location or extent
- The area/volume covered
- Timing: Whether immediate or delayed
- Duration: Short term, long term, intermittent or continuous
- Reversibility or irreversibility
- Likelihood: Probability of the impact taking place
- Significance: Whether it is local, regional or global

Moreover, in making the observations expert knowledge was relied upon in determination of the relied impacts which are rated based on the applicable mitigation measures. The scale applied in the analysis and the quantification of the impacts is as shown in the table below. The impact analysis and quantification will further be accompanied by a narrative that provides the rationale to the scoring.

Value	Description	Scale description
0	No impact	This implies that to the best knowledge of the experts, the activity will not have any known impact on the environment. Such an impact will not in any way affect the normal functioning of either the human or the natural systems hence does not warrant any mitigation.
1	Minimal impact	These are activities with little impact on the environment. They call for preventive measures, which are usually inexpensive and manageable. These activities have minimum impacts on either natural or human environment or both
2	Moderate impact	A moderate impact will have localized effect on the environment. If the effect is negative and cumulative, action in form of mitigation measures needs to be put in place to ensure that it doesn't become permanent or irreversible.
3	High Impact	An impact is high if it affects a relatively large area spatially, has severity on biological resources or the effect is felt temporarily for a relatively long period (1) year. In case the effect is negative, such an impact needs to mitigation measures put in place to prevent further direct, indirect or cumulative adverse effects.
4	Very High Impacts	An activity rates highly in all aspects used in the scale i.e., temporal, spatial and severity. If negative, it is expected to affect a large population of fauna and flora, and a large area of the geophysical environment, usually having trans-boundary consequences. Urgent and specialized mitigation measures are needed or suspension of plan until enough effective mitigation measures are put in place
5	Un known	There are activities for which impacts are not yet known or has not been confirmed

Scoring criteria for the master plan implementation options

In this SESA report impact analysis and quantification of anticipated physical, biological, social and economic impacts are discussed in the following section.

6.4 Discussion of Assessed Impact Factors on Environment

6.4.1 Physical Characteristics

The development of the master plan is anticipated to affect soil during the implementation stage. Clearing of some of the sisal plantation to pave way for construction activities may expose the soil at site to agents of erosion such as wind and water. Moreover, areas where excavations will be

carried out will also be prone to erosion processes. The impact of Teita Estate development on soil during implementation stage is within low effects.

Negative effects of the plan on ground water and water quality may occur from oil leaks and spills from construction equipment which may leach through the ground surface to contaminate groundwater. During operation stage, impact may mostly occur from industries with inadequate liquid waste management system, which may result to wastewater contaminating water sources in the area. However, the expected impact on ground water and water quality is within low effects.

Some negative effects of the development master plan on physical processes include floods that may result from surface paving and an increase in buildings in the area. This may lead to limited percolation rates during the rainy seasons. However, the expected impact magnitudes on the development plan on floods are within low effects.

6.4.2 Biological Conditions

The proposed development master plan activities that will alter land cover such as land clearing, excavations and construction of buildings will most likely result to loss of sisal within the plan area to pave way for construction. The expected impact magnitudes of the development plan on sisal are within medium-high effects. The excavations and construction of buildings will most likely result to loss of shrubs and grass within the plan area to pave way for construction. The expected impact magnitudes of the development plan on sisal, is within low effects.

There are no forest plantations within the proposed area of the master plan development. Forest plantations in the neighbourhood will not be affected, where impacts may occur due to spill over effects will be very minimal.

The proposed plan area is extensively a sisal plantation with few habitats for birds, and rare to come across birds or birds' nests. No Important Bird Area is at or near the proposed plan area. The proposed plan area is also not a migratory corridor for any birds' species. The numerosity of birds is relatively small, of which there are no significant effects on them. On the other hand, the construction of water facilities and growing of crops may have positive impacts by attracting certain birds' species. The magnitude of expected impacts of the development plan on birds is negligible.

The development area being a sisal plantation, the greatest impact during excavation and construction will be on rats and snakes due to their established niches within the sisal plantation. The rats find food from the sisal plantation while the few snakes within the area prey on them. Clearing of most of the sisal plantations for the master plan development to take place will lead to loss of habitat to the rats. This will result to a spin-off negative effect to the snakes which will experience food shortage due to depletion of rats. The magnitude of expected impacts of the development on rats and snakes is within medium-high effects.

Insects such as ants and grasshoppers found within the sisal plantations may decrease in number especially through the proposed plan activities during implementation stage. This includes activities which may result to modification of their habitat and alteration of ground cover including land clearing.

The expected impact magnitudes on insects are within low effects. Surface excavations will affect the micro-fauna and intensify the negative effects on them, while soil erosion from the development impacts will further lead to their reduction. The expected impact magnitudes on micro-fauna are within medium-low effect.

6.4.3 Social Cultural Factors

The development plan area is under sisal plantation which will be cleared during excavation and construction. In this regard, agriculture being the main activity in the proposed development plan area will be highly impacted negatively. Therefore, the magnitude of the expected impacts of the development plan on agriculture is within high effect.

The general lifestyle of the local community will be affected either positively or negatively. This will mainly be during construction and operation phases activities that will provide vast employment opportunities to the local community. This will include unskilled, semi-skilled and skilled labour opportunities. The negative magnitude of expected impacts of the development plan on cultural patterns is within low effects. Positive effects magnitude is expected to rise with the implementation of the plan.

The risk of accidents or hazards on employees and local community members is small for there are no settlements in the development area. The zoning of the industrial area in the plan is located far from the residential zone. A few accidents may occur during excavation and the construction period of various developments. Mitigations for the community and employee's occupational health and safety have been provided in this report's environmental and social management and monitoring plan. The expected impact magnitude on occupational health and safety is within low effects.

The proposed development excavation and construction phase will affect food chains. This is due to alteration of habitats, land clearing and changing ground cover that will result to certain species being exposed and others moving away leaving their predators in challenging conditions to get food. However, the expected impact magnitude is within low effects for the development plan area has few animal and plant species.

6.5 Positive Impacts on the Physical Environment

6.5.1 Optimal Use of Land

The land proposed for the development is under sisal production and noting that land is held with high regard in Kenya, optimised land use is encouraged. In this regard, when the proposed development is complete and executed as per the master plan, a lot of economic returns will accrue from mixed development activities compared to the current gains from sisal farming. Moreover, the development plan activities that are expected to economically benefit the locals, county and national government through revenues earned from their operations. In the long-term the proposed development will be more profitable economically.

6.5.2 Landscaping and Aesthetics

The implementation of the proposed mixed-use development plan, will involve landscaping activities in different zones that is currently under sisal growing. The execution of the planned

development, green zones will in the long-term improve the master plan area's visual landscape beauty and make it aesthetically attractive thereby resulting to positive impact.

6.6 Negative Impacts on the Physical Development

6.6.1 Changes Land, Soils and Geology

The execution of the proposed development plan will affect the soil and geology of the land through depletion of the local soil resource from excavation and carting away of spoil material, and soil sealing leading to increased surface runoff and soil erosion soil.

On the other hand, spillage of hazardous construction chemicals including oils, fuel, grease, paints, solvents, curing and acids among others may lead to soil contamination. Moreover, the importation of soil for landscaping and fill activities may lead to introduction of invasive species or noxious weeds and pathogens such as bacteria, fungi and nematodes.

Increased soil erosion, storm water generation and sedimentation is likely to be expected, usually an indirect impact of sisal bushes clearance and from increase in the built up areas. The removal of sisal plantation and other bushes and indigenous tree species will leave bare land subject to soil erosion. Subsequently the bare land will be prone to wind and water erosion.

Soil erosion is a serious problem both at its source and downstream of the development site. Lost soil is deposited elsewhere, and the location of the deposition could alter downstream hydrology and increase flooding. This could alter downstream hydrology and increase flooding. Soil erosion could also interfere with water quality directly through increasing turbidity levels, siltation and indirectly from contaminants carried with eroded soil particles.

Mitigation Strategies

The above impacts can be mitigated and will be adequately addressed as per Strategic Environmental and social Management Plans (SESMPs) developed. The impact on soils and geology is expected to be moderate hence allocated a rating value of 2.

6.6.2 Increased Water Demand

The proposed Teita Estate mixed land use developments will result in increased water demand on resources from the land uses including, industrial, educational, sports facilities, commercial infrastructure, transportation, agriculture and recreation areas. All these land uses are expected to exert pressure on existing water sources. The water for these land uses will be sourced from boreholes and surface dams, flood water and rain water harvesting. Without conservative use of these water resources, there is likely to be adverse impacts such as depletion of groundwater resources from over-abstraction, and increased water scarcity in the surrounding areas. Excessive exploitation of water as a natural resource has a negative impact on the environment. The anticipated increase in water demand necessitated a hydrological study of the area discussed in section 3.4 above.

Additionally, the effluent from the proposed developments has potential to cause ground/surface water pollution, and health hazards to human and aquatic life. Management of construction

wastewater, spill control mechanisms, and treatment of effluent will be required to ensure protection of water resources.

The developed ESMP require to be implemented for water use efficiency alongside implementation of water conservation and management policy. Due to the expected water uptake, impact on water resources is expected to be high and hence allocated a rating value of 3.

Mitigation Strategies

Measures to ensure adequate water supply for the envisioned development by the proposed Master Plan include instituting water conservation measures in the construction and operation phase of environmental management plans. Moreover, to curb effluents from the master plan development, sustainable water resource protection and conservation options require to be instituted through the following mitigation strategies;

- ✓ Conduct a hydrological study
- ✓ Account for the actual water demand for the development relative to proposed land uses
- ✓ Encourage rainwater and storm water harvesting
- ✓ Adopt water systems that are efficient and not prone to wastage
- ✓ Adopt systems to recycle wastewater
- ✓ Monitoring water consumption to inform future planning
- ✓ Conducting surface and ground water quality from periodic tests and analysis for various land use zones

6.6.3 Increased Energy Demand

The proposed development will result in a higher demand on energy resources both during execution of the planned developments and operation phases. The forms of energy to be utilized include grid energy and fossil fuels to run construction equipment and vehicles during construction phases. Moreover, energy from the main grid will be required for lighting and powering of equipment in residential, commercial, and industrial establishments in the operation phase. Noting that fossil fuel is non-renewable, its excessive use results to emissions of greenhouse gases (GHGs) emissions and related impacts on environmental sustainability. On the other hand, electricity generation in Kenya is mainly from hydro and geothermal sources and therefore high energy consumption can impact negatively on their sustainability.

It will therefore be imperative for this master plan development to carry out energy audits for evaluation and improvement of energy consumption and saving practices adopted by all the master plan sectors involved. Moreover, it would be prudent to institute energy conservation measures in proposed developments while also tapping into renewable energy opportunities like solar and wind energy. Further, legal compliance on energy management will be critical for success in energy efficiency. Practical energy management and conservation options also require to be implemented as highlighted in the Energy ESMP. In this respect the impact on energy demand is expected to be moderate hence allocated the rating value of 2.

Mitigation Strategies

To reduce energy consumption the following strategic measures need be employed;

- ✓ Adopt renewable energy opportunities including solar and wind energy
- ✓ Ensure machines, equipment and transport systems are energy efficient
- ✓ Undertake energy audits to inform efficient energy management systems
- ✓ Implement energy management/conservation options as highlighted in the energy ESMP
- ✓ Put in place systems to monitor energy consumption and aid in future planning.
- ✓ Adhere to requirements of energy laws and regulations

6.6.4 Increase Solid Waste and Effluents Generation

All the proposed developments in this master plan and land uses are expected to generate a substantial amount of solid and liquid waste. During excavation, waste will result from soils, rocks and vegetation. In the construction phase waste generation will result from reject materials (damaged bricks, concrete and plastics), packaging materials (paper, polythene, plastic, and metal), and wastewater and used oil.

Moreover, during the operation phase the households, commercial and industrial developments are likely to generate significant amounts of organic and inorganic wastes including effluents, whose proper handling is critical to avoid surface and ground water pollution. Additionally, inadequate management of solid and sewerage waste from the developments will lead to pollution and creation of human health hazards endangering the residents and the public.

Proper effluent management plans including treatment and setting aside land for waste water treatment and recycling of waste water will be required to mitigate the potential adverse impacts of the generated effluent. An integrated solid waste management strategy that includes reduction at source, reuse, recycling, incineration of non-recyclable waste and composting of waste and use of resultant biogas for generation of electricity, to compliment sources from incineration will also be required for management of solid waste from the developments.

Mitigation Strategies

To mitigate the adverse impacts of solid and effluents waste, the following strategies need be employed;

- ✓ Adopt a circular economy approach to waste management in the development area
- ✓ Segregation of waste in the different zones (domestic, commercial, and industrial) for efficient management.
- ✓ Consider the use of recycled or refurbished construction materials.
- ✓ Implement waste management options as highlighted in the waste ESMP
- ✓ Adhere to requirements of waste management laws and regulations 2006
- ✓ Contracting a licensed waste management company for collection, transportation and disposal of waste in designated areas within the plan site
- ✓ Composting of organic waste to generate biogas and manure for use in land set aside for agriculture.
- ✓ Pre-treatment of industrial effluents before discharge as per wastewater regulations
- ✓ Proper effluent management plans including recycling of wastewater and use of waste water to generate biogas and sludge for manure.
- ✓ Adhere to requirements of wastewater laws and regulations 2003

6.6.5 Air Quality Degradation

The local ambient air quality will be impacted both during the execution and operation phases of the envisioned development by the proposed Master Plan. This will mostly be from dust emitted during excavation and aggregate transportation to construction sites, and from construction vehicles and machinery emitting oxides of carbon, nitrogen, and sulphur into the atmosphere during the construction phase.

Moreover, the land proposed for development is under sisal plantation which is a CO₂ sink. Subsequently the land conversion from sisal estate to mixed use developments will remove this CO₂ natural sink.

Upon completion, the development will introduce activities that are likely sources of air pollution including emissions from housing development, industrial, commercial infrastructure, transportation, and agriculture activities. These sources of air pollution are as enumerated in the table below;

Sector	Sources of air pollution
Transport	Vehicles, fuel use, engine emissions
Energy	Fossil fuels, biomass, domestic solid fuel heating
Manufacturing/Industrial	Chemicals, extractives and cement
Services	Retail, hospitality and tourism, hospitals and health-care services
Waste	<ul style="list-style-type: none">- Improper management of domestic waste, e-waste, plastics, food waste, organic waste)- Industrial waste (construction and demolition waste),- Hazardous waste - sewerage effluents
Agricultural	Farming and agro-industry

Impact on ambient air quality was also echoed by various consulted stakeholders; however, with adequate measures described in the environmental and social management plan chapter; this impact can be mitigated. The Master Plan should aim at ensuring maintenance and enhancement of green zones to sequester carbon from emissions. Further, adherence to air quality regulations 2014 provides for the prevention, control and abatement of air pollution to ensure clean and healthy ambient air. Based on this, impact on ambient air quality was therefore found to be moderate and allocated a value of 2.

Mitigation strategies

The development will implement measures to reduce air pollution as follows;

- ✓ Use of renewable sources energy including solar and wind energy
- ✓ Creation of green zones to act as carbon sinks
- ✓ Adhere to air quality laws and regulations including Air Quality Regulations 2014.

6.6.6 Increased noise impacts

The developments works will most likely result in noise generation as a result of the machines in use e.g. excavation equipment, mixers and construction vehicles delivering materials to active construction sites. The noise is expected to last for the entire Master Plan execution period. Off-

site noise will also be experienced near and along the access roads to the construction materials sources. Moreover, increase in ambient noise levels is expected with the completion and occupation of the developments and from the mundane activities of this master plan development.

However, noise impacts can be mitigated through a noise abatement scheme. This includes proper planning of the various land uses to locate the noisier activities (industrial and commercial uses) near main roads or peripheral areas. On the other hand, the less noisy activities (residential, and recreational) uses located inwards in the more serene areas, can aid in mitigating the noise impacts. Additionally, the establishment of buffer zones between different land uses will attenuate noise, further reducing the potential impacts. Adherence to noise ordinances such as the Noise and Excessive Vibration Pollution Control regulations, 2009 and employment of noise attenuation mechanisms for point sources will mitigate the impact. Based on this, impact on noise and vibrations was therefore found to be moderate and allocated value of 2.

Mitigation Strategies

To mitigate noise pollution the following measures can be employed;

- ✓ Establishment of buffer zones between different land uses will attenuate noise, further reducing the potential impacts.
- ✓ Employment of noise attenuation mechanisms for point sources
- ✓ Adherence to noise ordinances such as the Environmental Management and Coordination (Noise and Excessive Vibration Pollution Control) Regulations, 2009

6.7 Positive Impacts on the Biological Environment

Landscaping of various land use zones will introduce exotic and indigenous tree species that are adaptive to the area. The landscaped areas will increase tree cover at the sites proposed for green spaces and improve environmental conditions by minimising air pollution and offsetting GHGs through CO₂ absorption. The green spaces also provide for storm water attenuation, thereby acting as a measure for flood mitigation including preservation of biodiversity and nature conservation.

6.8 Negative Impacts on Biological Factors

6.8.1 Vegetation Cover Loss and Habitat Fragmentation

The development plan will entail clearing of the sisal plantation, cutting down of trees and other vegetation that may lead to the loss of economically significant flora. This is further expected to lead to degradation of environmentally significant areas and thus cause adverse effects on the environment such as reduction of biodiversity and exposure of soil to surface run-off. Moreover, the destruction of flora will be accelerated by the envisioned land use changes consisting of developments in housing, industrial, commercial, transportation and agriculture. This will result into habitat loss, alteration and fragmentation of land.

The clearing of vegetation is known to have adverse effects on the environment such as reduction of biodiversity, reduction of aesthetic beauty, exposure of soil to surface run-off, increment in dust pollution.

The proposed Master Plan development activities will also result in alteration and disruption to terrestrial habitats. This may adversely affect some wildlife habitats due to clearing of sisal plants and creation of barriers to some wildlife movement that stray into the sisal plantation. It may also result from creation of barriers to wildlife movement due to the visual and auditory disturbance caused by the presence of machinery, construction workers, associated equipment and development operations.

Additionally, some of the areas stakeholders raised concern on the environmental degradation due to change of land use from agricultural land to a built environment. Conversion of land in the proposed Master Plan from sisal plantations to a mixed-use development will likely degrade the environment through loss of biodiversity in the area. The destruction of wildlife habitat can result in the direct loss of some species and the ability of the ecosystem to support other biological resources upon which the wildlife relies for survival.

Mitigation Strategies

Some of the identified key mitigation measures that can be employed to manage the impact associated with the destruction of flora include;

The following measures can mitigate the loss of vegetation cover and habitat fragmentation;

- ✓ Carry out landscaping of different zones and maintaining the proposed green spaces as outlined in the Master Plan.
- ✓ The green spaces should be enriched with native vegetation and where possible, avoidance of clearance of the existing indigenous vegetation should be done.

Based on the precautionary measures to be put in place, this impact is expected to be moderate and hence allocating a rating value of 2.

6.8.2 Habitat Alteration

The implementation of the mixed-use development will result in habitat alteration and loss of a section of sisal agricultural land.

Mitigation Strategies

The following mitigation strategies can be employed to cushion habitat alteration:

- ✓ Maintain the proposed green spaces as outlined in the Master Plan
- ✓ Formulation and implementation of a Biodiversity Management Plan
- ✓ Adherence to Environmental Management and Co-ordination (Conservation of Biological Diversity and Resources, and Access to Genetic Resources and Benefits Sharing) Regulations, 2006

6.8.3 Loss of Biodiversity and Species

The sisal plantation in the proposed master plan area host wildlife such as snakes and a wide range of rodents. With the proposed master plan development there would be visual and auditory disturbance due to the presence of machinery, construction workers, and associated equipment. The clearing of vegetation to pave way for the proposed development will likely result to habitat loss and fragmentation. This may cause some wildlife to move out due to lack of food, shelter and mates when their habitats depart from natural conditions.

The destruction of natural habitats can also impact on the local flora and fauna reducing biodiversity. This in turn affects the existing food chains and food webs. Such alterations may result to ecological imbalances to the detriment of all the biota inhabitation. On the other hand, the introduction of exotic species of plant or animal may oust indigenous species or introduce disease agents which may affect plants, animals or humans. In this regard the wildlife habitat may be impacted negatively both from direct and indirect activities associated with the development. Human-wildlife conflicts will thus be exacerbated while the movement of livestock and humans may also be impeded.

Alteration, fragmentation, or destruction of wildlife habitat can result in the direct loss or displacement of species and the ability of the ecosystem to support other biological resources such as the plant communities upon which the wildlife relies on for survival. In the event that there are rare or endangered animal species they may be rendered locally extinct.

Mitigation Strategies

The following mitigation strategies can be employed to cushion the local biodiversity from negative impacts of the proposed development:

- ✓ Consider introducing exotic and indigenous species in green spaces to compensate for the loss
- ✓ Consider developing watering pans for wild animals in areas adjacent to the plan area to allow for migration in the neighbouring ranches bordering the migration and dispersal corridor
- ✓ It is paramount that the reserves within a 10-kilometre buffer next to Mwatate Town remain intact as more that 80% of the bird species identified reside in these areas.
- ✓ In addition, an establishment of similar reserves and water areas is highly encouraged.
- ✓ Specifically, the plan should establish the probability of maintaining small fruit trees and bushes for provision of feeding grounds for the birds as an alternative to the proposed crops.

Since the Master Plan of the proposed development has set aside areas under water bodies to be maintained, this impact will be moderate and therefore allocated a rating value of 2.

6.9 Positive Impacts on Socio-Economic Aspects

The master plan development will bring along some positive socio-economic impacts. Some of these anticipated positive impacts will include provision numerous employment opportunities for skilled, semi-skilled and unskilled labour during the implementation of various phases of the mixed use development zones. This will be a significant positive impact since unemployment rates are

currently quite high in the county. Additionally, the stakeholder's proposals on local casual labour sourcing will lead to multidimensional development in the area and improve incomes.

On the other hand, the business opportunities are anticipated during the execution of different land uses. Opportunities will range from supply of raw materials to small scale business people such as food vendors and kiosk owners. It is also anticipated that the value of land will increase with urbanisation around the master plan area while standard of living of the populace will increase due to high demand for goods and services.

The development has also allocated a zone for setting up a school and a hospital facility thereby leading to expansion of educational, health and social facilities and improved provision of these basic services. Improved healthcare services are anticipated in the area due to development of health care facilities.

It is anticipated that there will also be improved security situation in the neighbourhood due population and the possible synergistic effects that populated neighbourhoods bring along with them. Further, improved and increased housing development will attract various classes of residents thereby bringing along networking and cultural integration of knowledge and exchange of a wide range of ideas.

The envisioned development will enhance economic growth resulting to increased revenue from the use of locally available materials and labour for the proposed Master Plan development activities. Moreover, the set aside zone for light industries, when operational will offer benefits including job opportunities and revenue generation to the county and national government through taxes, rates and fees.

6.10 Negative impacts on Socio-Economic Aspects

Nonetheless, envisioned development will result to negative pressures such as on infrastructure associated with magnitude of land use changes. There is a potential of increasing pressure on existing infrastructure such as roads, water supply system, waste handling facilities, electricity etc. This would be due to increased volumes on human and vehicle traffic along the access road.

Further, there will be interference with already existing infrastructure such as the pipeline, water pipes, power lines, roads and thus causing inconveniences. However, socio – economic impacts are expected to be mitigated and hence rated to be moderate and thus allocated a rating value of 2.

6.10.1 Health and Safety Risk

The implementation of the mixed-use developments will result to known workplace safety risks. Safety hazards are likely to increase resulting in a possible increase in accidents involving workers and/or the public. Development works will expose workers to occupational health and safety risks and injuries resulting from accidental falls or use of hand tools and construction equipment

During operation phase of some of the developments, potential health and safety hazards may arise in the event of a lack of adequate facilities, protection measures, worker protection measures, and non-adherence to OSHA, 2007 regulations. Adequate health and safety plans will therefore require to be implemented to mitigate all foreseeable health and safety risks in the development.

Due to population influx, there is concern for increased spread of communicable and infectious diseases. However, health and safety impacts are expected to be mitigated and hence rated to be minimal with a value of 1.

Mitigation Strategies

To mitigate the community and workers from health and safety risks the following strategies need be implemented

- ✓ Establish an emergency plan to assist in managing occupational hazards and risks for the development.
- ✓ Risk management plans should also be established with other facility control and safety systems.
- ✓ Provide for the safety, health and welfare of workers and all persons at workplaces
- ✓ All places intended to be used as a workplace must be registered by DOSHS before they are occupied.
- ✓ Establish monitoring measures, hazard identification and risk assessments and Safe Work Method Statements (SWMS) for all activities intended to be done at the development.

6.11 Cumulative Impacts

The IFC defines cumulative as those impacts that result from the successive, incremental, and/or combined effects of an action, plan, or activity when added to other existing, planned, and/or reasonably anticipated future ones. It is anticipated that cumulative impacts on resources such as water, and energy within Mwatate area and environs might arise due to the needs for the simultaneous development of other interlinking plans. Based on this the SEA undertook a Cumulative Impacts Analysis (CIA) as described in succeeding sections.

6.12 Cumulative Impact Analysis

Cumulative Impact Analysis is a systematic procedure for identifying and evaluating the significance of effects from multiple activities. CIA was carried out during the Strategic Environmental Assessment as it considers a wider temporal and spatial scope at an early level of the planning process. With reference to development plans, cumulative impacts can occur from the combined impacts of policies and proposals on specific areas or sensitive receptors. The Teita Estate mixed land use master plan is anticipated to generate several cumulative impacts from the different operations zones considered in its development. During the CIA, the following elements that define the cause-effect relationship of the impacts according to Cooper (2004) were used;

- ✓ Identification of the impact sources i.e. multiple activities that could lead to potential impacts or environmental changes
- ✓ Consideration of the pathways of impacts between sources and receptors and the linkages between these impacts
- ✓ Analysis of the characteristics of these impacts i.e. whether they are additive, synergistic or antagonistic.

The CIA process took place in several steps, some of which were done concurrently with the initial steps of the SEA process. The CIA for the proposed Master Plan was undertaken in the process summarized below:

- i. Scoping in consultation with the relevant key stakeholders and agencies
- ii. Establishing of the baseline characteristics of the proposed Master Plan
- iii. Assessing the impacts of the Master Plan
- iv. Proposing mitigation measures for the potential significant impacts
- v. Development of a monitoring plan – documented in Chapter 9 of this SEA
- vi. Incorporating finding

6.13 Cumulative Positive Impacts

6.13.1 Improved infrastructure

The mixed land use developments will lead to the construction of such infrastructure as water supply network, sewerage network, waste water treatment facilities, road network and communication network. This will further improve the infrastructure of the region and make it more attractive to investors

6.13.2 Increase in land and property value

Upon execution of this master plan, the value of land is anticipated to appreciate hence leading to the overall increase in property value around the Teita Estate. The local land and property owners will subsequently benefit from selling their property at higher profit margins as compared to when there was no mixed land use development.

6.13.3 Increased employment opportunities

The mixed land use developments of residential, commercial and industrial zones will provide an employment opportunity for the local community and beyond. Moreover, small-scale enterprises will also be established due to the demand by the foreseen increased population, hence opportunity for more jobs.

6.14 Cumulative Negative Impacts

6.14.1 Influx of new inhabitants

The development of the residential, commercial and industrial zones will lead to movement of people from around the County and beyond due to the new job opportunities within the area. This will eventually result in an increase in the population of the area around Teita Estate.

6.14.2 Increased water demand

There will be an increase in demand for water use by the Teita Estate mixed land use development and environs. This will lead to increased pressure on water resource provision to the already scarce resource in the area.

6.14.3 Increased demand for waste water services

The mixed land use developments residential, commercial and industrial facilities will require more waste water services which are not currently available in the environment.

6.14.4 Increased traffic

There will be increased traffic in the mixed land use development area due to the high number of residents and workers accessing the Teita Estate development. The improved road network will also attract more motorists who may not be residents of the mixed land use development.

6.14.5 Increased noise pollution

The master plan development of residential, commercial, industrial zones and increased traffic may lead to increased noise generation. The noise maybe of nuisance to the residents and neighbouring communities.

6.14.6 Increased air pollution

The increased traffic within the mixed land use development and the environs will lead to increased release of toxic gases and particulates from the vehicles, industrial zones and other activities within the neighbourhood.

6.14.7 Increased waste generation

The residential, commercial and industrial zones will lead to generation of more solid waste. The solid waste if not handled properly could lead to unpleasant smells, invasion of the area by some species such as birds and spread of diseases by some rodents

6.14.8 Loss of biodiversity

The constant clearing of vegetation to create space for the developments will lead to loss of some of the indigenous species within the area resulting to loss of biodiversity

6.14.9 Soil erosion

The clearing of vegetation for the development of the various zones will expose the soil to erosion by wind or water during the rainy seasons. The industrial zones may contaminate the soil by spillage of hazardous substances or wastewater. The residential zones will generate high volumes of wastewater and if not properly disposed of may spill into soil hence contaminating it.

6.14.10 Depletion of the water resources

The residential, commercial and industries will need a high and regular supply of water. The water will be abstracted from boreholes to be drilled within the development. Continuous abstraction may lead to depletion of groundwater resources. The fertilizers, pesticides and herbicides that will be used in the agricultural zones may leach into the surface water and groundwater resources hence contaminating them and rendering them unfit for domestic use.

6.15 Mitigation measures for cumulative impacts

Mitigation of cumulative impacts is best approached through a multi-stakeholder's approach. Some of the actions that may be needed to effectively manage cumulative impacts include;

- ✓ Plan design changes to avoid cumulative impacts (location, timing, technology).
- ✓ Adaptive management approaches to plan mitigation
- ✓ Collaborative engagement in other regional cumulative impact management strategies.
- ✓ Participation in regional monitoring programs to assess the realized cumulative impacts and efficacy of management efforts.
- ✓ Effect monitoring needed to assess the realized cumulative impacts is clearly defined and implemented.
- ✓ Ensure multiparty regional mitigation and/or management that may be needed to effectively manage cumulative impacts is also identified
- ✓ Support from other stakeholders (County Governments, developers and communities) is sought to implement mitigation measures.

Impact	Mitigation
Influx of new inhabitants	<ul style="list-style-type: none"> ✓ Increased accessibility of Teita Estate by enhanced traffic for prompt transport. ✓ Develop well planned - low income residential zones
Increased water demand	<ul style="list-style-type: none"> ✓ Come up with measures of optimizing the existing water resources such as rain harvesting and water recycling technologies ✓ Sensitizing the occupiers in all the zones on water conservation initiatives. Perform scheduled maintenance on the water supply infrastructure to reduce any leakages
Increased demand for waste water services	Develop an onsite wastewater treatment plant since it is non-existent.
Increased traffic	Work with the relevant road authorities to develop efficient road designs
Increased noise pollution	<ul style="list-style-type: none"> ✓ The industrial and commercial zones to schedule most of the operations during the day ✓ Only operations that meet the required permissible noise levels should be allowed to operate at night ✓ Install 'no hooting' signs in zones where noise will be of most nuisances like the education and residential zones. ✓ Sensitization of motorists within these zones against unnecessary noise making
Increased air pollution	<ul style="list-style-type: none"> ✓ Instigate measures of air pollution control before releasing any harmful substances into the air ✓ Sensitize on the use of non-sulphur fuels for different purposes in all the zones. ✓ Sensitize neighbouring community against open burning of waste
Increased solid waste generation	<ul style="list-style-type: none"> ✓ Develop a waste management plan for the development which will guide the occupiers of the different zones in managing their waste ✓ Leverage on waste management techniques that will ensure the plan area has a zero-waste policy. ✓ Sensitize the occupiers and visitors on the recommended ways of waste disposal
Loss of biodiversity	<ul style="list-style-type: none"> ✓ Avoid clearing indigenous vegetation ✓ Ensure replacement of any cleared vegetation is done after development
Soil erosion	<ul style="list-style-type: none"> ✓ Put measures in place to control the spillage of hazardous substances and wastewater into the soil. ✓ Ensure that the wastewater system in all the zones is adequate and made from good quality materials to prevent spillage into the soil.
Depletion of water resources	<ul style="list-style-type: none"> ✓ In collaboration with the Taita Taveta County government, implement water resource conservation measures such as water storage in dams and rainwater harvesting ✓ Lobby county government to implement laws to prohibit illegal abstraction of surface and ground water ✓ Encourage organic farming to reduce the leaching of the chemicals from the agricultural zone

7 Alternative Options of the Master Plan

7.1 Introduction

This chapter discusses the alternative analysis of various Master Plan options. The analysis includes employing alternatives to achieve the same plan, use of alternative approaches, and the no intervention. The chapter further discusses the implication of key Master Plans to the proposed Teita Estate mixed use development. Additionally, the justification of the preferred alternative is discussed in the succeeding section and its linkages with the on-going development plans.

The Teita Estate master plan opted different land uses including residential, commercial, industrial, green spaces, and public amenities. However, much as the development conforms to land zoning provisions, there is need to widen the scope of potential alternative developments that may suffice needs other than the designated use. In this regard the SESA team identified four possible alternatives to which the land can be used as discussed in the following subsections.

7.2 Option 1 – The Agricultural Use Option

The development area is currently under sisal plantation with agriculture being the predominant activity in the neighbourhood of the development area. This option would provide revenues to Teita Estate from sale of sisal products. Moreover, the sisal plantations would promote carbon sequestration. However, if the agricultural land use option is compared to the comprehensive mixed land use development option, it may not be the most optimal way to use prime land in the neighbourhood of an urban area.

7.3 Wildlife Conservancy

Wildlife conservancy promotes environmental sustainability by providing stability to different natural processes of nature and maintenance of essential ecological processes. Moreover, a wildlife conservancy provides environmental sustainability benefits by acting as a carbon sink through absorption of GHGs. It also has socio-economic benefits for it provides natural beauty sites for tourism thereby generating much needed foreign exchange. However, this section of the larger Teita Estate is located near human settlements that would cause human wildlife conflict.

In this regard, the wildlife Conservancy option is therefore not compatible to the proposed Teita Estate section of land. Moreover, as much as this land use option is important, the economic gain is low as compared to the current option of utilizing it as comprehensive mixed-use development.

7.4 Linear Development Master Plan

During scoping process, the linear development master plan was reviewed. Its analysis found that the design was too linear in nature and considered land economy over important tenets such provision of green areas in every court, curvilinear road networks to reduce incidents of accidents, application of green planning concepts, natural water ponds and provision of schools, especially ECD within each court. Therefore, it was decided that the linear land use plan (as shown in the

figure below) be dropped and hence the team embarked on development of a mixed-use master plan. (A high resolution map has been printed separately and attached in large format).

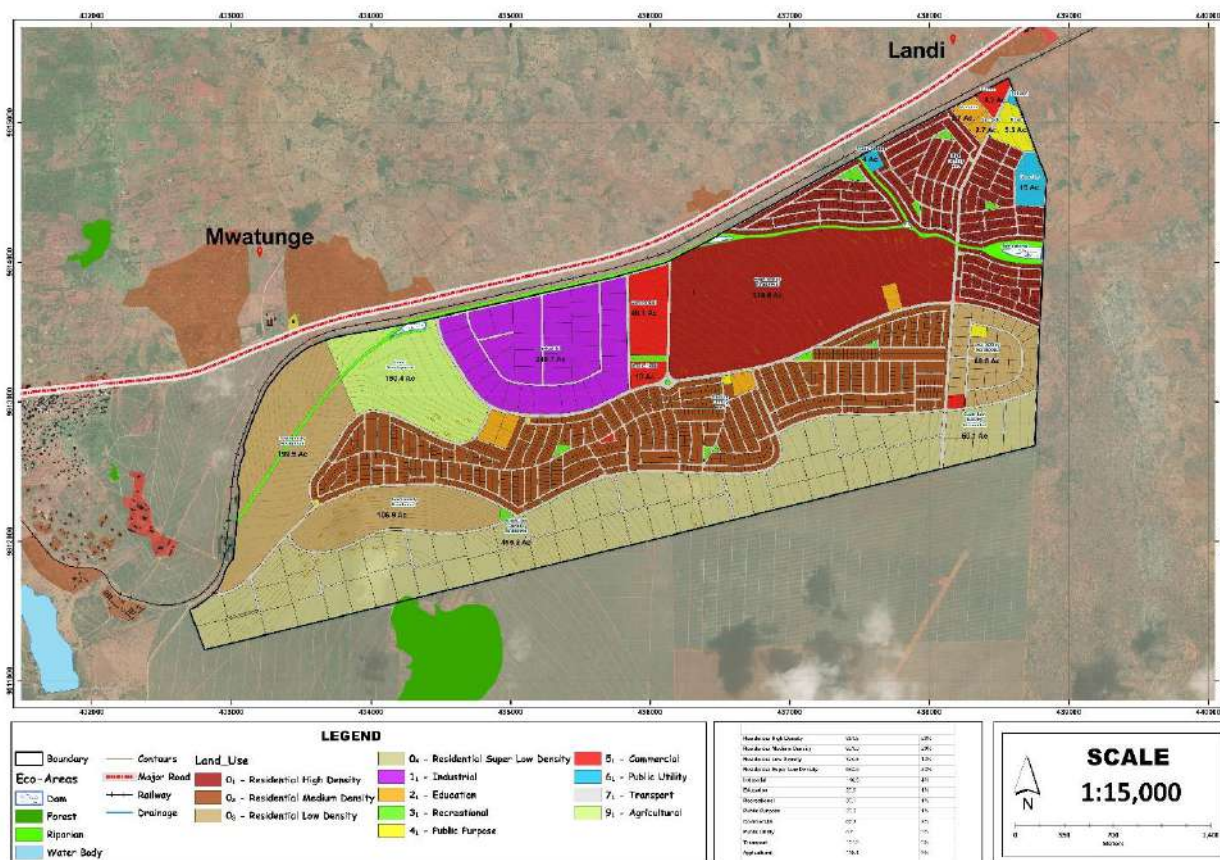


Figure 21: Linear land use master plan

7.5 The Proposed Comprehensive Mixed-Use Development

This option focuses on developing 3,000 acres of sisal land for mixed use purposes, including residential, commercial, industrial, educational, agriculture and green spaces. The option reckons that Kenya's urban areas have the perennial challenge of housing shortage, more so for the low and middle-income population due to the high urban population influx and growth rate. Taita Taveta County is no exception to the scarcity of the high-middle-low income housing. This mixed-use development option seeks to address this challenge of deficit in the housing sector.

Moreover, the commercial development shall promote the economic development by providing more space for doing business. The light industry development will promote the various professional, businesses, service provision elements and also production for export hence earning the country foreign exchange. Additionally, the proposed master plan will employ environmental conservation through select native and exotic plant species and agricultural areas serving as green spaces. Moreover, the development plan will employ energy and water conservation measures as well as circular economy approach to solid waste and waste water management. In this regard this option is economically and environmentally sustainable. (A high resolution map has been printed separately and attached in large format).

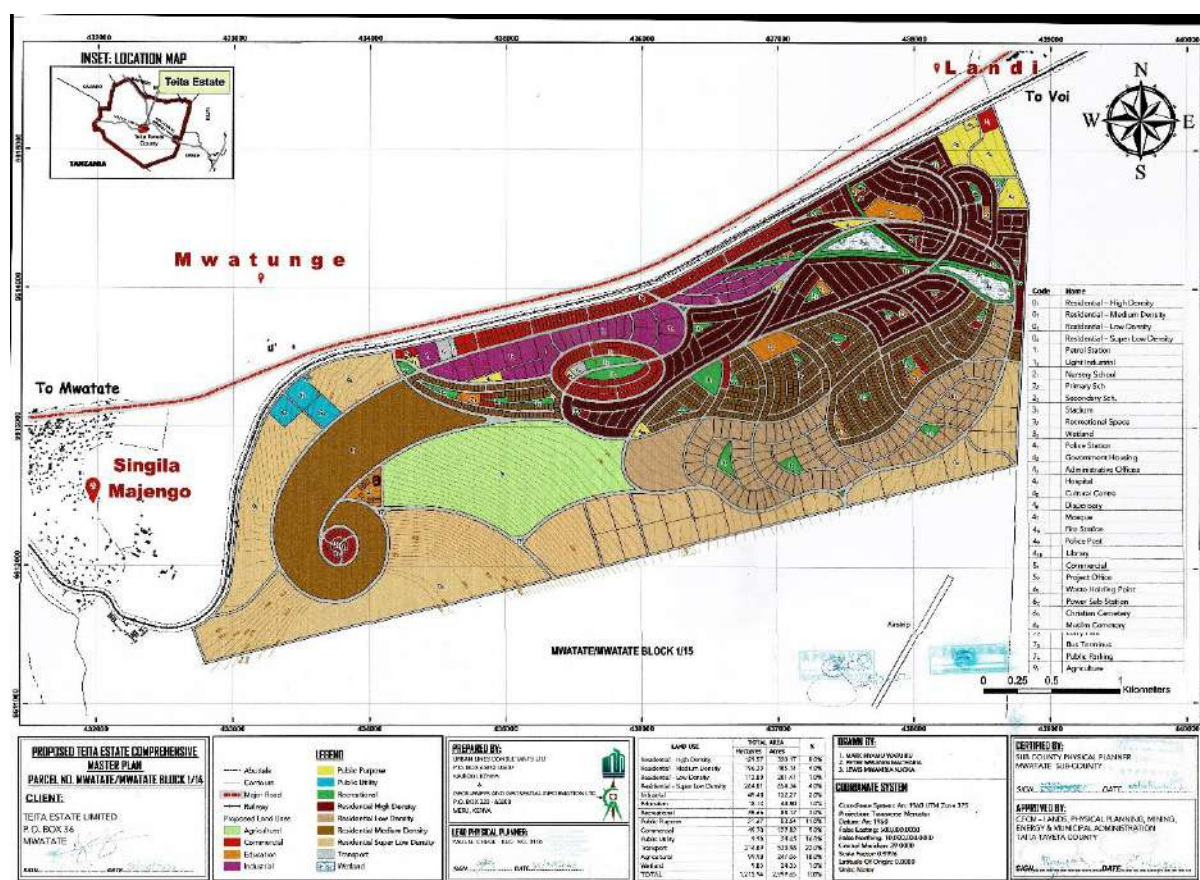


Figure 22: Comprehensive mixed-land use development master plan

7.6 Justification of Preferred Alternative – Mixed Use Development Option

Considering the analysis of the three alternative options, this master plan opted for the mixed-use development for it will result to optimal use of the land. Moreover, the mixed-use development will result in providing socio-economic and environmental benefits from the proposed plan area. To this end, the proposed Teita Estate master plan will integrate socio-economic and environmental guiding principles in the design, implementation and operation phases.

8 Climate Change Assessment and Mitigation Plans

8.1 Introduction

This chapter discusses the causes of climate change followed by a vulnerability assessment of the proposed Teita Estate mixed use development master plan. The chapter also assesses the likely impacts from the envisioned development by the Teita Estate mixed use development master plan which will contribute to climate change. Further it analyses the key adaptation and mitigation actions that need to be employed during the master plan execution.

8.2 The Causes of Climate Change

The main sources of GHGs contributing to global warming include but not limited to increase in energy use, land-use changes and emissions from industrial activities which further impact on climate change. Land-use changes induced by urban growth may lead to deforestation and reductions in the uptake of CO₂ by vegetation. Cement, as a construction material of commercial and residential buildings, also has a large carbon footprint due to an energy-intensive manufacturing process and high energy cost for transporting this dense material.

Moreover, urban related activities and infrastructures act both as emitters and direct causes of climate change. They create two main categories of impacts on the carbon cycle and the climate system through;

I. Changes related to the emission of aerosols, GHGs and solid wastes

GHGs are the main source of changes in the climate system. GHGs together with aerosols generate changes in the earth's radiation that induce climate change. Solid waste on the other hand affect the growth, function and health of vegetation and of ecosystems in general.

II. Land-use related changes

Urbanization is a process that changes the use of land and by creating impervious surfaces and fragmentation of ecosystems has disproportional impacts upon the carbon cycle. The built environment of urban areas is also a forcing function on the weather–climate system of urban sites because it is a source of heat.

8.3 Vulnerability of proposed development master plan to Climate Change

Noting that Climate change presents unique challenges for urban areas, understanding the vulnerability of the envisioned development by the proposed Master Plan to climate change is important. This has been addressed by assessing the likely impacts of climate change to this proposed master plan land uses

8.4 Proposed master plan sector – potential sources to GHGs

An assessment of the contribution of cities to climate change is a vital first step in identifying potential solutions. The large and growing proportion of the earth's population living in towns

and cities, and the concentration of economic and industrial activities in these areas, means that they need to be at the forefront of mitigation.

The establishment of emission baselines is necessary if effective mitigation benefits are to be identified and applied. Critical sectors identified to have the potential of contributing to the GHGs have been described below.

8.4.1 Transport

Globally, transportation is responsible for about 23% of total energy related GHG emissions and 13% of global GHG emissions. Urban areas rely heavily on transportation networks of various kinds for both internal and external movements of goods and people. The road transport is the largest contributor to GHGs emission. The implementation of the proposed Master Plan will see increase in the number of vehicles on the roads. This as a result will have a negative impact on the environment as it will increase consumption of petroleum products while releasing CO₂ and N₂O to the atmosphere.

8.4.2 Commercial and residential buildings

GHG emissions from commercial and residential buildings are associated with emissions from electricity use, space heating and cooling. Commercial and residential buildings are responsible for direct emissions (onsite combustion of fuels), indirect emissions (from public electricity use for street lighting and other activities, and district heat consumption), and emissions associated with embodied energy (e.g. in the materials used for their construction). Emissions are affected by the need for heating and cooling, and by the behaviour of building occupants.

8.4.3 Industries

Many industrial activities are energy intensive in their operation. These include the manufacturing industries, chemicals and fertilizer industries, cement, pulp and paper. Teita Estate mixed use development is envisaged to establish an industrial park that includes light. The light industries involve light processing of goods such as detergents, toiletries; plastics and pharmaceuticals, including large and heavy equipment or complex, numerous processes. Some of the industries can generate nitrous oxide, carbon dioxide and fluorinated gases which form the principle GHGs.

8.4.4 Waste

Despite being only a small contributor to global emissions, rates of waste generation have been increasing during recent years, particularly in developing countries that have been experiencing increasing affluence. Poor management of waste in landfills and dumpsites contributes to production of methane gas which is one of the major GHGs. However, the Master Plan envisions the establishment of material aggregation and segregation centres and possibly an incineration centre, which could be a source of pollution if not managed well.

8.4.5 Agriculture, land-use change and forestry

Urban areas have a potential to shape emissions from agriculture, land-use change and forestry in two major ways. First, the process of urbanization can involve direct changes in land use, as formerly agricultural land becomes incorporated within built-up areas. Agriculture is one of the leading sectors in the removal of GHGs from the atmosphere. Second, the forested areas can be cleared to pave way for the development hence leading to a reduction in the forest cover. This can reduce the capacity of the forests and vegetation to carry out carbon dioxide sequestration.

8.4.6 Energy supply for electricity generation

Energy is perhaps the broadest possible category for assessing GHG emissions. The combustion of fossil fuels is the major source amongst them, and is used throughout the world for electricity generation, heating, cooling, cooking, transportation, and industrial production. Energy is obtained from fossil fuels, biomass, nuclear power, hydroelectric generation and other renewable sources. Urban areas rely heavily on energy systems, the energy structure (types of energy forms used) and the quality of the energy (its energetic and environmental characteristics).

8.5 Adaptation and Mitigation actions for the master plan

The climate change adaptation actions are those that help in reducing the vulnerability of a development plan to the effects of climate change, while the mitigation actions are those that should be undertaken to avoid the increase of a pollutant emission. The following adaptation and mitigation measures should be considered during the execution of the Teita Estate mixed use development master plan

No.	Sector	Adaptation action	Mitigation action
1	Housing developments	<ul style="list-style-type: none"> • Develop an integrated, improved early warning and response systems for climate change risks such as flooding • Development and implementation of educational and public awareness programmes on climate change and its effects • Ensuring that all new developments are climate-proof over their lifespan • Develop strategies to optimize the use of renewable and sustainable energy sources 	<ul style="list-style-type: none"> • Mainstreaming of climate change into development planning and management for sustainability • Have in place measures to enhance conservation of energy. • Use of green building technologies
2	Commercial centres	<ul style="list-style-type: none"> • Revision of the existing building codes and standards to incorporate the use of climate change proof designs and materials • Develop strategies for preventive and precautionary actions e.g. evacuation plans 	<ul style="list-style-type: none"> • Put in place measures to enhance energy conservation, efficiency and use of renewable energy • Put in place measures to ensure implementation of the revised building codes and standards
3	Industries	<ul style="list-style-type: none"> • Develop a policy to guide the design and operations of the industries 	<ul style="list-style-type: none"> • Have in place measures to control and reduce GHG emissions by the industries such as carbon taxing

4	Infrastructure and utilities	<ul style="list-style-type: none"> • Ensure that all new infrastructure is climate-proof over its lifespan • Revise the designs for the waste management systems such as landfills to those that can adapt to the effects of climate change • Put in place emergency measures to deal with waste management during catastrophes 	<ul style="list-style-type: none"> • Improve local water recycling facilities • Develop strategies for waste reduction at source through implementation of Integrated Solid Waste Management Systems (ISWM) • Develop strategies to enhance the waste treatment methods
5	Transport	<ul style="list-style-type: none"> • Road construction designs and materials to incorporate those that are climate change proof 	<ul style="list-style-type: none"> • Develop strategies to enable efficient means of transport that have a low GHG footprint
6	Agriculture and Green spaces	<ul style="list-style-type: none"> • Develop policies to incorporate landscape restorations and reforestation in all development plans • Develop strategies for flexible agriculture to prepare for natural catastrophe 	<ul style="list-style-type: none"> • Develop strategies to enhance the agricultural and forestry zones which aid in carbon dioxide sequestration
7	Natural green open spaces and water bodies	<ul style="list-style-type: none"> • Discourage environmentally destructive land uses and improper non-green infrastructure whose impacts could eventually amplify the effects of climate change Protection and sustainable riparian zone / green zone management • Establishment of rainwater harvesting reservoirs 	<ul style="list-style-type: none"> • Increase tree cover in the green and open spaces of the Master plan to greater carbon sequestration, both in the soil and the biomass

9 Grievance Redress Mechanism

9.1 Introduction

A key principle of any development is to prevent or minimise grievances rather than going through a redress process. This can be achieved through commitment to full participation and consultation of the stakeholders and establishing extensive communication and coordination between the affected communities, and the envisioned development plans. However, this does not always exclude grievances from arising.

This SESA process provides opportunities for the likely to be affected parties to voice and articulate their queries, concerns, issues, complaints, dissatisfaction or sense of injustice or unfairness, and seek to have these resolved cordially, and in the shortest time possible. Affected parties should be able to file a grievance for any disagreeable decision, practice or activity, arising from proposed Teita Estate mixed land use development master plan.

Subsequently communities and individuals who believe that they are adversely affected by this master plan development have a right to submit complaints to the established project-level grievance redress mechanisms. The Grievance Redress Mechanism (GRM) should therefore ensure that complaints received are promptly reviewed in order to address project-related concerns.

In this regard a GRM as a mechanism, or set of procedures and processes, or organizational systems and resources, has been established to be used as a means to hear, address and resolve issues and complaints related to Teita Estate mixed land use development master plan implementation. The stakeholder input handled through these systems and procedures thereby amount to grievances.

9.2 Potential Grievances

In this mixed-use development master plan some of the anticipated grievances likely to occur during implementation of the master plan may include:

- ✓ Disagreement over opportunities offered to the local community mostly on employment or business opportunities.
- ✓ Interruption of community, social or other services and infrastructure
- ✓ Damage to un-expropriated public assets such as water network

9.3 Objective of the GRM

GRMs are designed as a conduit for soliciting inquiries and increasing participation in development projects. The objectives of this GRM is to:

- ✓ Generate public and stakeholder awareness about the proposed Teita Estate mixed use development master plan.
- ✓ Increase stakeholder involvement in the development of the master plan
- ✓ Improve proposed mixed use master plan outcomes via timely resolution of problems

- ✓ Provide feedback to different levels of the mixed-use development master plan performance
- ✓ Act as an effective risk management tool to identify and resolve implementation problems in a timely and cost-effective manner:
- ✓ Build community relations through creating and maintaining trust with affected persons and the stakeholders
- ✓ Allow the development management team to be more accountable to stakeholders

9.4 Guiding principles for GRM

Some of the key principles for an effective GRM include;

- Starting early in the plan cycle and have room for modification if need be.
- Simple and accessible - should be accessible to diverse members of the community
- Legitimate: Enabling trust from the stakeholders intended to use it
- Participatory and inclusive: - should be developed in a participatory manner and include representatives from the main actors of the plan area
- Contextualization and appropriateness - should be localized and appropriate to local context
- Responsive, timely, and efficient - to avoid lengthy suits that are time wasting.
- Transparency - users be aware of access to the mechanism and be given fair resolutions.
- Formalized - the mechanism needs to be formally established
- Appropriate protection: The mechanism should not impede access to other remedies such as legal reprieve.

9.5 The GRM Structure and Composition

This SESA proposes a two tier GRM comprising of community/stakeholders level and the Teita Estate master plan management level. The functions of each structure are as enumerated in the table below;

Institution	Composition	Function
Grievance Redress Committee	<ul style="list-style-type: none"> ✓ Established at the community stakeholders' level with membership from the Master Plan Area 	<ul style="list-style-type: none"> ✓ Assist community/stakeholders to file a complaint. ✓ To address affected persons grievances as first point of contact, within 15 days
Community Stakeholders Level	<ul style="list-style-type: none"> ✓ Consists of a 9-member committee (exclusive of ex-official members) ✓ Membership should be drawn from a variety of factors including affected persons (male, female, elders' representatives, youth). 	<ul style="list-style-type: none"> ✓ Receive, review, investigate and keep track of grievances through the grievance logs (with support of CLO) ✓ Adjudicate and develop redress options for the raised grievances. ✓ Monitor fulfilment of agreements achieved through the committee.

	✓ A representation of the local government administration (ex-official member)	✓ Provide inputs into the monitoring and evaluation process
However, if no amicable solution or settlement is reached, and the aggrieved person is not satisfied or does not hear from the GRC through CLO within the required time limits (15 days), they can escalate the grievance to the next level.		
Management Level The Teita Estate master plan implementation Team	✓ The Teita Estate development master plan implementation team will consider grievance reports forwarded to it and make a determination. ✓ Membership consists of the management team. ✓ The CLO may be invited to the meeting to give account of grievances.	✓ Escalation mechanism to determine grievances unresolved by GRC within 15 days ✓ Responsible for monitoring the complaints ✓ Providing inputs into the monitoring and evaluation process
However, if not satisfied the aggrieved person can go to Court as a last resort. Given the above mechanism it is not foreseen that many disputes will end up in court.		
Court of Law	✓ The Land and Environment court deals specifically with land and environment related disputes.	✓ Aggrieved party may seek legal redress and at their own cost. ✓ The legal option will only act as avenue of last resort and will be sought after all other redress mediums have been exploited and exhausted

9.6 Grievance Redress Process

The following procedures shall be followed in this grievance redress process.

9.6.1 Grievance Uptake

The community / stakeholders level grievance redress procedure shall start with registration of the grievances with the Community Liaison Officer (CLO). The CLO should convene a meeting with GRC, invite the aggrieved party to the meeting and present the grievance to the committee for hearing.

It is envisaged that the GRC should acknowledge receipt of the complaints and grievances within two weeks and strive to resolve the matter within one month. The GRC should ensure that grievances reported to it are dealt with fairly as per the GRM principles, agreed timelines and resolution modes.

The GRC shall seek to eliminate unreasonable or illegitimate claims which may be driven by other factors that are not genuine, or not mixed-use development related, and satisfy legitimate claimants. The CLO shall be the link between the GRC and management team. If the GRC is unable to satisfy the claimant, then the matter will be escalated to the management team through

the CLO. Being a support to the GRC, the CLO in agreement with the GRC should escalate the unresolved complaints to the management team, with documentation about the issue and status.

A number of avenues should be made available to the affected parties for communication of grievances, e.g., through e-mail, text messaging, telephone calls, face to face interactions with members of the committees.

The CLO is responsible for receiving, referencing, registering, and filing all grievances through the grievance form. The CLO then logs the grievance into the grievance log, giving each case a unique number, date complaint was lodged, complainant, nature of complaint, action taken, or not taken, with reasons for the latter.

9.6.2 Sorting and Processing

The committee sitting will assess the eligibility of the issue for the GRM mechanism. For eligible complaints, these are categorized as

- ✓ Comments, suggestions, or queries;
- ✓ Complaints to be handled by GRC;
- ✓ Complaints to be referred directly to Management team and other parties

9.6.3 Verification and Investigation

The GRC shall then convene a meeting on the grievance and may work in consultation with the aggrieved person. In this step, they will also gather information on the grievance and decide on the corrective action within 15 days. The proposed actions shall be lodged in the register.

9.6.4 Develop and communicate the response

The GRC shall inform the complainant of the results of investigations and the actions proposed, seeking to for agreement on the response. The actions can either be;

- ✓ Direct action to resolve the complaint
- ✓ Further assessment and engagement with the complainant or involving other actors to jointly determine the best way to resolve the complaint.

If the aggrieved party accepts the proposed corrective action: A written agreement is developed, detailing the time frame for implementing the corrective action as well as responsible party. This is signed by the CLO and the aggrieved party, and the corrective action commences. The acceptance is then lodged in the log, and later the completion date will be lodged after verification that recommended action was undertaken by the GRC, or concerned party. However, if the aggrieved party rejects the proposed corrective measure, the matter is referred to management level

9.6.5 Implement response and review

Upon agreement between a complainant and the GRC on proposed action then the response should be implemented.

9.6.6 Close out the grievance

Where the response has been successful, the CLO should document the satisfactory resolution. It should be countersigned to show their satisfaction with the response and then closed out.

9.6.7 Monitoring, Evaluation, and Feedback

At all levels, regular progress monitoring of grievances filed, their status and actions taken and recommendations/resolution will be constantly undertaken. The management team should do monitoring and tracking grievances, assessing the extent to which progress is being made to resolve them, and generate reports. These reports should inform policy or process changes to minimize similar grievances in the future.

9.6.8 Documentation

Records maintenance should be ensured including the grievance registers and grievance forms. Every meeting should have written minutes and approved by the relevant parties.

9.6.9 Commitment to GRM: Process, Procedures, and Timelines

The success of procedures and activities in the previous sections much depend on Teita Estate Management commitment towards ensuring the effectiveness and efficiency of the system. This will thereby require the following;

- ✓ Regular monitoring,
- ✓ Commitment to learning and adapting systems;
- ✓ Provision of budgets and tools for operation and implementation of functions.
- ✓ Capacity building of the committees.

10 Environmental Management and Monitoring Plan

10.1 Introduction

Environmental Management and Monitoring Plan (EMMP) is prepared to indicate how site-specific concerns and mitigation measures will be addressed through planning/design, construction and operation phases of the proposed Teita Estate mixed land use development master plan. An EMMP provides a link between the impacts of plan activities during the master plan implementation and the mitigation measures which should be employed to minimize the negative impacts and enhance the positive impacts.

In this SESA report, most of the proposed plan interventions are at a broader level and are only envisaged to provide strategic guidelines for the subsequent plan specific EMMP based on detailed component designs, construction and operation plans. These will be formulated from plan and site specific Environmental and Social Impact Assessments (ESIA) which will be undertaken before commencing implementation of the various specific projects. This EMMP prescribes and directs the management of all environmental aspects associated with and arising from planning, construction, and operation of the components of the proposed Teita Estate mixed land use development master plan.

10.2 Scope and Objectives of the EMMP

This EMMP serves as an instrument that Teita Estate Ltd and other plan stakeholders will employ to integrate Environmental and Social components during implementation and execution of the development components. It details the actions required to effectively implement the mitigation measures and alternative options for environmental and social obligation and enhance the positive impacts as recommended in SESA. The actions help to minimize the negative impacts which might originate from implementation of the Master Plan and support the long-term management and monitoring of the environmental and social issues during plan implementation.

The specific objectives of this EMMP are to:

- ✓ Provide guidelines for appropriate management and protection measures of environmental and social issues and concerns resulting from all activities associated with implementation of all phases of Teita Estate mixed use development master plan components.
- ✓ Provide Teita Estate Ltd and other plan key stakeholders their environmental and social responsibilities in implementation of all phases of the proposed development plan
- ✓ Provide detailed standards and specifications for the management and mitigation of activities that have the potential to impact negatively on the physical and social environment
- ✓ Provide guidelines to plan implementers regarding procedures for protecting the environment and minimizing negative environmental effects.

The Teita Estate Ltd is obligated to comply with various conditions of implementing this EMMP which include:

- ✓ Ensure continuous compliance of the EMMP and adhere to the recommendations thereof

- ✓ Ensure sound environmental management by minimizing negative environmental impacts and instead enhance on the positive impacts
- ✓ Comply with all Kenyan legislation and policies regarding the environment

The various actions to be implemented are outlined in tables for each of the following management actions;

- ✓ Environmental and landscape changes
- ✓ Biodiversity conservation
- ✓ Water resources
- ✓ Energy resources
- ✓ Solid and effluent waste;
- ✓ Occupational health and safety
- ✓ Socio - economic concern
- ✓ Socio-cultural protection

10.2.1 EMMP for environmental and landscape changes

Objective	To ensure positive landscape changes and enhance environmental quality			
Management strategy	Sustainable protection of the region's species and habitats			
		<i>Responsible institution</i>	<i>Timelines</i>	<i>Cost</i>
Recommended mitigation measures	<ul style="list-style-type: none"> ✓ Undertake EIA for all mixed-use development activities ✓ Enforce pollution control measures from air pollution sources ✓ Paving of roads to avoid dust generation ✓ Ensure adequate tree cover to enable percolation of rainfall and reduce runoff ✓ Ensure adequate drainage and storm collection systems ✓ Ensure adequate vegetation cover as buffers to reduce noise effects 	Developers Contractors	Development implementation and operation	EIA prevailing rates Landscaping prevailing rates
Performance indicators	<ul style="list-style-type: none"> ✓ Ambient air quality ✓ % of green zones to developed areas ✓ Background noise levels ✓ Expanse area of buffer zones ✓ Effectives of drainage network during heavy downpour 			
Monitoring parameters	<ul style="list-style-type: none"> ✓ Periodic surveys ✓ Periodic measurements 			
Monitoring reports	<ul style="list-style-type: none"> ✓ Air quality tests ✓ Noise surveys ✓ Environmental audit reports 			
Legislative requirements	<ul style="list-style-type: none"> ✓ Environmental (Impact Assessment and Audit) Regulations, 2003 ✓ Environmental Management and Co-ordination (Air Quality) Regulations, 2013 			

	<ul style="list-style-type: none"> ✓ Environmental Management and Co-ordination (Noise & Excessive Vibration Pollution) (Control) Regulations, 2009 ✓ The Factories & Other Places of Work (Noise Prevention and Control) Rules, 2005 			
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10.2.2 EMMP for biodiversity conservation

Objective	To conserve the fauna and flora in the region			
Management strategy	Sustainable protection of species and habitats			
		<i>Responsible institution</i>	<i>Timelines</i>	<i>Cost</i>
Recommended mitigation measures	<ul style="list-style-type: none"> ✓ Undertake EIA for all mixed-use development activities ✓ Ensure landscaping of different zones ✓ Build lock chain electric fences as per the KWS technical design requirements ✓ Build watering point at border of Teita and Mgeno ranch for migratory animals 	Developers Contractors	Development implementation and operation	EIA prevailing rates
Performance indicators	<ul style="list-style-type: none"> ✓ % of green zones to developed areas ✓ Kilometres of electric fence built ✓ Capacity of the watering point 			
Monitoring parameters	<ul style="list-style-type: none"> ✓ Periodic ecological surveys ✓ Wildlife inventory 			
Monitoring reports	<ul style="list-style-type: none"> ✓ Ecological survey report ✓ Wildlife at watering points report 			
Legislative requirements	<ul style="list-style-type: none"> ✓ Wildlife Conservation and Management Act, 2013 			

10.2.3 EMMP for Water resources

Objective	To minimise impacts on existing water resources while enhancing their conservation			
Management strategy	Sustainable water resources utilisation			
		<i>Responsible institution</i>	<i>Timelines</i>	<i>Cost</i>
Recommended mitigation measures	<ul style="list-style-type: none"> ✓ Undertake hydrogeological survey for the development area to determine the sustainable ground water abstraction levels ✓ Undertake EIA for all mixed-use development activities ✓ Promote integrated water resources management in the development area through water recycling systems and re-use practices ✓ Incorporate water accounting/metering systems for all developments ✓ Promote roof catchment rainwater harvesting ✓ Pre-treatment of effluent before discharge into the environment 	<ul style="list-style-type: none"> ✓ Developers ✓ Contractors 	Development implementation and operation	Cost estimates of water efficient systems Cost of water monitoring at prevailing rates
Performance indicators	<ul style="list-style-type: none"> ✓ Rain water storage capacities ✓ Borehole yields ✓ Water utilisation levels 			
Monitoring parameters	<ul style="list-style-type: none"> ✓ Metering evaluation schedule ✓ Water utilisation evaluation schedule 			
Monitoring reports	<ul style="list-style-type: none"> ✓ Water audit reports 			
Legislative requirements	<ul style="list-style-type: none"> ✓ The Water Act 2016, ✓ Water Resource Management Rules 2007 			

	<ul style="list-style-type: none"> ✓ Water Resources Management (Amendment) Rules, 2012 ✓ Environmental Management and Co-ordination (Water Quality) Regulations, 2006 			
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10.2.4 EMMP for energy resources

Objective	To minimise impacts on available energy resources while enhancing their conservation			
Management strategy	Sustainable energy utilisation			
		<i>Responsible institution</i>	<i>Timelines</i>	<i>Cost</i>
Recommended mitigation measures	<ul style="list-style-type: none"> ✓ Energy conservation through installation/use of energy efficient technologies and systems. ✓ Adoption of green energy sources like solar energy and bio-digesters ✓ Use of green building designs to allow passive heating and cooling, and maximum utilization of natural lighting 	<ul style="list-style-type: none"> ✓ Developers ✓ Contractors 	Development implementation and operation	Cost estimates of energy efficient systems Cost of energy monitoring at prevailing rates
Performance indicators	<ul style="list-style-type: none"> ✓ Energy utilisation levels 			
Monitoring parameters	<ul style="list-style-type: none"> ✓ Metering evaluation schedule ✓ Energy utilisation evaluation schedule 			
Monitoring reports	<ul style="list-style-type: none"> ✓ Energy audit reports 			
Legislative requirements	<ul style="list-style-type: none"> ✓ The Energy Act, 2019 ✓ Subsidiary legislations under Energy Act, 2019 			

10.2.5 EMMP for solid and effluent waste

Teita Estate mixed use development will pursue the principles of waste minimization at source. These encompass leveraging on the benefits of the 5R'S including waste reduction, re-use and recycling. Separation of waste per respective zones domestic, commercial and industrial waste will be adopted to ensure effectiveness in waste management. The development will also ensure mechanisms are put in place to segregate waste at source for purposes of supporting recycling. Moreover, the development should ensure the pre-treatment of industrial effluent before discharge into sewer systems, as enumerated in the EMMP below.

EMMP for solid waste

Objective	To manage solid waste effectively towards zero waste			
Management strategy	Utilization of the integrated solid waste management strategy			
		<i>Responsible institution</i>	<i>Timelines</i>	<i>Cost</i>
Recommended mitigation measures	<ul style="list-style-type: none"> ✓ Utilization of the 5R's – reduce, reuse, recycle, repurpose and rethink ✓ Utilization of waste aggregation and segregation centres to separate waste ✓ Composting organic waste to harvest biogas and compost manure for agricultural purposes ✓ Incineration of residual/unrecyclable waste to harness energy through energy from waste mechanisms 	<ul style="list-style-type: none"> ✓ Developers ✓ Contractors ✓ Home owners 	Development implementation and operation	Cost estimates of establishing aggregation and segregation centres Cost of sensitization Cost of establishing incinerators Cost of establishing EfW centre
Performance indicators	<ul style="list-style-type: none"> ✓ Amount of waste recycles ✓ Amount of energy produced ✓ Amount of organic manure utilized 			
Monitoring parameters	<ul style="list-style-type: none"> ✓ Metering evaluation schedule ✓ Waste recycling percentages 			
Monitoring reports	<ul style="list-style-type: none"> ✓ Waste recycling reports 			

Legislative requirements	✓ Solid Management Act, 2019			
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EMMP for effluent waste

Objective	To manage effluent waste effectively			
Management strategy	Utilization of the integrated effluent waste management strategy			
		<i>Responsible institution</i>	<i>Timelines</i>	<i>Cost</i>
Recommended mitigation measures	<ul style="list-style-type: none"> ✓ Utilization of biodigesters in residential establishment and low and medium waste generation establishments ✓ Utilization of onsite waste water treatment facility ✓ Generation of biogas from onsite waste water treatment facility ✓ Utilization of manure from the treatment facility for landscaping ✓ Utilization of grey waster from biodigesters for landscaping 	<ul style="list-style-type: none"> ✓ Developers ✓ Contractors ✓ Home owners 	Development implementation and operation	Cost estimates of establishing waste water treatment facility Cost estimates for constructing biodigesters Cost estimates for biogas trapping facilities
Performance indicators	<ul style="list-style-type: none"> ✓ Amount of waste water treated ✓ Amount of grey water used for landscaping ✓ Amount of manure produced ✓ Amount of biogas generated 			
Monitoring parameters	<ul style="list-style-type: none"> ✓ Metering evaluation schedule for waste water and biogas 			
Monitoring reports	<ul style="list-style-type: none"> ✓ Waste water recycling reports ✓ Biogas reports 			

Legislative requirements	✓ Waste Water Act			
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No	Issues	Mitigation Strategy	Recommended mitigation measures
1	Integrated environmental landscaping	Sustainable protection of the region's species and habitats	<ul style="list-style-type: none"> ✓ Ensure integrated land use and landscaping of different zones ✓ Ensure adequate tree cover to enable percolation of rainfall and reduction of runoff ✓ Ensure compliance with the Environmental Management and Co-ordination (Conservation of Biological Diversity and Resources, and Access to Genetic Resources and Benefits Sharing) Regulations, 2006
2	Biodiversity conservation	Sustainable protection of species and habitats	<ul style="list-style-type: none"> ✓ Ensure non-interference with migratory routes/corridor in the region ✓ Conservation of indigenous plant species ✓ Ensure compliance with the Wildlife Conservation and Management Act, 2013
3	Water resources conservation	Sustainable water resources utilisation	<ul style="list-style-type: none"> ✓ Undertake hydrogeological survey for the development area to determine the sustainable ground water abstraction levels ✓ Promote integrated water resources management in the development area through water recycling systems and re-use practices ✓ Adherence to Water Act 2016, Water Resource Management Rules 2007, Water Resources Management (Amendment) Rules, 2012 and Environmental Management and Co-ordination (Water Quality) Regulations, 2006
4	Energy conservation	Sustainable energy utilisation	<ul style="list-style-type: none"> ✓ Energy conservation through use of renewable energy, efficient technologies and systems. ✓ Ensure compliance with the Energy Act, 2019 and subsidiary legislations under Energy Act, 2019
5	Solid and effluent waste management	Sustainable solid waste and effluent waste management practices	<ul style="list-style-type: none"> ✓ Adopt integrated solid waste management plans ✓ Adopt waste water management plans ✓ Set aside land for waste management ✓ Install Energy from Waste plants from incineration of inorganic solid waste and biogas from organic waste ✓ Adherence to Environmental Management and Co-ordination (Waste Management) Regulations 2006

			✓ Ensure compliance to Environmental Management and Co-ordination (Water Quality) Regulations 2006
6	Occupational Health and Safety	Adherence to workplace health and safety protocols	✓ Adhere to procedures for hazard identification, risk assessments and Safe Work Method Statements (SWMS) ✓ Ensure health and safety trainings and awareness programmes ✓ Adherence to Occupational safety and health Act (OSHA, 2007), Subsidiary legislations under OSHA 2007 and Work Injury Benefits Act, 2007
7	Enhancing socio-economics of the region	Catalyse economic growth of Taita Taveta County	✓ Adherence to labour rights including gender non-discrimination, equal pay for work done, and mainstreaming gender requirements ✓ Ensure compliance to statutory and non-statutory records and Employment Act, 2007
8	Socio- Cultural Protection	Protection of cultural resources for future generations	✓ Ensure stakeholder's engagement for cultural resources communication ✓ Ensure all developers/contractors have in place 'chance find procedure' ✓ Ensure compliance with the National Museums and Heritage Act, 2006

10.2.6 EMMP for occupational health and safety

Objective	To ensure safety, health and welfare of workers in the work place			
Management strategy	Adherence to workplace health and safety policy			
		<i>Responsible institution</i>	<i>Timelines</i>	<i>Cost</i>
Recommended mitigation measures	✓ Undertake EIA for all mixed-use development activities and implement respective EMMPs ✓ Work places must be registered by DOSHS before occupation ✓ Workplaces must have written procedures for hazard identification, risk assessments and Safe Work Method Statements (SWMS) for all site activities	✓ Developers ✓ Contractors ✓ DOSHS	Development implementation and operation	Cost of health and safety audits at prevailing rates

	<ul style="list-style-type: none"> ✓ Relevant safety signage and barriers should be erected ✓ Have in place an emergency response plan for the development / occupational health and safety plan ✓ Conduct health and safety trainings and awareness programmes ✓ Establish EHS committees 			
Performance indicators	<ul style="list-style-type: none"> ✓ Number of incidents and accidents reported ✓ Fatalities reported during construction, operational and decommissioning phases of each project 			
Monitoring parameters	<ul style="list-style-type: none"> ✓ Workplaces registered by DOSHS within development site ✓ Premises insured as per statutory requirements (third party and workman's compensation) ✓ Emergency preparedness and evacuation procedures 			
Monitoring reports	<ul style="list-style-type: none"> ✓ Health and safety audits ✓ Health and safety management plan ✓ Emergency response plan 			
Legislative requirements	<ul style="list-style-type: none"> ✓ Occupational safety and health Act (OSHA,2007) ✓ Subsidiary legislations under OSHA 2007 ✓ Work Injury Benefits Act, 2007 			

10.2.7 EMMP for Socio-economic concerns

Objective	To improve the livelihoods of communities around the development area			
Management strategy	Catalyse economic growth of Taita Taveta County			
		<i>Responsible institution</i>	<i>Timelines</i>	<i>Cost</i>
Recommended mitigation measures	<ul style="list-style-type: none"> ✓ Ensure public participation in the EIA for development activities ✓ Employment of locals in skilled and unskilled labour ✓ Adherence to labour rights including gender non-discrimination, equal pay for work done, NSSF and NHIF ✓ Mainstreaming gender requirements all development opportunities 	<ul style="list-style-type: none"> ✓ Developers ✓ Contractors 	Development implementation and operation	Cost of EIAs at prevailing rates
Performance indicators	<ul style="list-style-type: none"> ✓ Post implementation socio-economic survey ✓ Land value trends 			
Monitoring parameters	<ul style="list-style-type: none"> ✓ Employees inventory 			
Monitoring reports	<ul style="list-style-type: none"> ✓ Statutory and non-statutory records 			
Legislative requirements	<ul style="list-style-type: none"> ✓ Employment Act, 2007 			

10.2.8 EMMP for Socio- cultural protection

Objective	To ensure the protection of cultural resources through the mixed-use master plan			
Management strategy	Protection of cultural resources for future generations			
		<i>Responsible institution</i>	<i>Timelines</i>	<i>Cost</i>
Recommended mitigation measures	<ul style="list-style-type: none"> ✓ Ensure public participation in the EIA for identification of cultural resources ✓ Ensure stakeholder's engagement for cultural resources communication ✓ Establishment of local cultural recreation centre ✓ Ensure all developers/contractors have in place 'chance find procedure' 	<ul style="list-style-type: none"> ✓ Developers ✓ Contractors 	Development implementation and operation	Cost of EIAs at prevailing rates
Performance indicators	<ul style="list-style-type: none"> ✓ Protected cultural resources inventory ✓ Discovered cultural resources inventory 			
Monitoring parameters	<ul style="list-style-type: none"> ✓ Records of signed / approved chance find procedure 			
Monitoring reports	<ul style="list-style-type: none"> ✓ Statutory and non-statutory records 			
Legislative requirements	<ul style="list-style-type: none"> ✓ The National Museums and Heritage Act, 2006 			

10.3 Environmental Management Monitoring Plan

The Environmental Management Monitoring Plan is vital for this SESA development plans. The monitoring plan will help in assessing the effectiveness of proposed mitigation measures as well as assessing changes in environmental conditions. The monitoring plan will also help to provide warning of significant deterioration in environmental quality for further preventive action. The monitoring frequency and indicators have been recommended for each management action. Regular monitoring using the recommended indicators will indicate the level of progress regarding ensuring environmental sustainability in the proposed development plan.

The parameters of the proposed development plan that were identified for monitoring include: water quality, air quality, solid waste management, occupational health and safety risks, soil erosion, storm water drainage and livelihoods. These parameters are highlighted in the table below.

The EMMP has identified key mitigation measures that can be employed to manage the impact associated with the destruction of fauna. Some of the key management strategies should entail carrying out landscaping of different zones and maintaining the proposed green spaces as per the Master Plan. Nature trails and research sites should be enriched with native vegetation and where possible, avoidance of clearance of the existing indigenous vegetation. The Master Plan should also ensure protection of the riparian environment and establishment of a riparian reserve management plan. Based on the precautionary measures to be put in place, this impact is expected to be moderate (value of 2).

Teita Estate Comprehensive Mixed Land Use Master Plan
Strategic Environmental and Social Assessment (SESA) Final Report

Environmental aspect	Monitoring area	Monitoring parameters	Lab equipment & other requirements	Monitoring frequency	Responsible
Biodiversity loss	Land area under sisal farm Bushlands around the site	Individual species count Biomass index Rainfall volumes	Periodic ecological surveys Wildlife inventory	Continuous	Teita Estate KWS, KFS
Soil erosion	Excavated areas Sloppy areas	Turbidity in storm water Floods	Soil analysis Lab analysis	Continuous	Developers Contractor
Water quality & quantity	Boreholes Water treatment plant	Abstraction rates Physical & biochemical composition pH, TTS, TDS	Sampling bottles Cooler box NEMA accredited lab	Twice per year	Teita Estate WRA
Air quality	Commercial & industrial zones	CO ₂ , SO ₂ , NO ₂ , TSP Dust particles	Air sampling equipment	Continuous	Developers Contractor NEMA
Solid & liquid waste generation	Industrial, commercial & residential zones Waste water treatment plant	Waste composition pH, TTS, TDS	Sampling bottles Cooler box NEMA accredited lab Weighing scale Waste sampling bins	Continuous	Developers NEMA
Occupational Health & Safety risks	Construction sites Industrial zones	Accidents & incident reports records OHS trainings	Incident log book Accident reporting book	Continuous	Developers DOHS
Socio-economic	Planning & implementation phase	Number of jobs created Incomes earned	Qualitative and quantitate analysis	Annually	Developer

11 SESA Recommendations

The approach taken by this SESA report was comprehensive and inclusive. Expert knowledge and opinions, stakeholder and public knowledge, opinions and suggestions were gathered and carefully incorporated into this SESA report. Based on this SESA report, the following recommendations were made;

- i. The fourth option of the Plan alternative was recommended as the best informed by its design. The Plan is largely curvilinear in nature reducing the need for other features and establishments such as bumps to reduce speed in residential and educational sections of the Master Plan. In addition, it has incorporated green areas in all courts and other water and environmentally friendly features such as water pans which could be used to harvest rain water and surface runoff.
- ii. The SESA report highlighted measures that should be put in place to make the Master Plan as sustainable as possible. It recommended the use of biodigesters in residential areas instead of channelling the waste water to the treatment facility.
- iii. The SESA report recommended the use of grey water from biodigesters to irrigate landscapes within the Master Plan area
- iv. The SESA process noticed that the Master Plan had not set aside land for waste water treatment. The SESA report recommended the Plan Owner to set aside land for waste water treatment since the Mwatate region is not served by trunk sewer.
- v. It was also recommended that the Master Plan should leverage the positives of the integrated solid waste management plan, which will make the Master Plan zero waste compliant. This will be achieved by setting aside within the Planning area for aggregation and separation of waste, composting of organic waste for use as organic manure and harvesting biogas from it and setting aside land for establishment of an incinerator for residual waste and harnessing energy from it.
- vi. The SESA recommended that the Plan leverage on plentiful sources of renewable energy such as wind and solar within the region by establishing a code for every establishment installing wind and solar panels on their roofs. This will reduce the Master Plan's carbon footprint after its establishment.
- vii. The SESA also recommended the exploration of other sources of water and high level of water conservation within the Master Plan area. This will include rain water harvesting from the roofs, water pans, exploration of ground water and reduced water usage within the Plan area. In addition water recycling practices such as use of grey water for landscaping is highly encouraged.

12 Conclusion

The proposed Teita Estate mixed use development will spur economic development in Taita Taveta County. Moreover, the execution of the proposed mixed-use development will bring along numerous positive impacts including optimised land uses, creation of employment opportunities and supply of houses and office spaces in the County.

In this regard it is recommended that the mitigation strategies and EMMP provided in this SESA report be duly implemented in line with the EMCA Cap 387, and EIAs be carried out for all individual projects before construction.

Taking into consideration the scope of Teita Estate mixed use development, the anticipated positive impacts, and the mitigation measures provided for identified negative impacts; it is our recommendation that NEMA approves this SESA report.

13 References

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14 Appendix 1

14.1 Validation Workshop Sample Invitation Letter

Managing Director,
Teita Estate Limited,
P.O. Box 36,
Mwatate.
24th November, 2023.

Ustadh Mohamad Ali,
Leader – Muslim Imams,
Taita Taveta

Dear Sir/Madam,

RE: INVITATION TO THE VALIDATION WORKSHOP OF THE STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) REPORT FOR THE PROPOSED TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN ON PLOT NO. MWATATE/MWATATE/BLOCK/1/14 TAITA TAVETA COUNTY

Reference is made to the above subject matter. The Teita Estate Limited is proposing the development of a Comprehensive Mixed Land Use Development Master Plan on plot No. MWATATE/MWATATE/BLOCK/1/14 TAITA TAVETA COUNTY. The Estate had developed a plan (please find a copy attached) and has since carried out a strategic environmental and social assessment (SESA) as dictated by the Regulation 42 of the Environmental (Impact Assessment and Audit) Regulations of 2003. The report was submitted to the National Environment Management Authority (NEMA) for review, and thus requires stakeholder and public validation, hence this validation workshop. A copy of the draft SEA report is available for perusal at the NEMA Taita Taveta office, the NEMA website (www.nema.go.ke) and the Teita Estate Limited website and offices in Mwatate.

In light of this, I am hereby inviting you to the validation workshop that will be held in Mwatate on the **6th of December, 2023 from 8.30 am** (0830 hours) Kenyan time. Please get in touch with David Makori (+254720928721/davidmakori@gmail.com) or Angela Robb (+254726850377) for further details. We are looking forward to a fruitful and insightful engagement with you and your team on the said date and time. Your presence is highly appreciated.

Sincerely Yours,



(for) Philip Kiryazi,

Director Teita Estate.

15 Appendix 2

15.1 Notice on the proposed Master Plan

DAILY NATION | Friday, October 25, 2019

ST. JOHN EVERLASTING GOSPEL CHURCH NOTICE TO THE GENERAL PUBLIC Trust Deed No. 122/1

The undersigned being trustees of St. John Everlasting Gospel Church wish to bring to the attention of members of the public that our Church vest was last misplaced between the months of November, 2017 to July, 2019.

Notice is hereby given that St. John Everlasting Gospel Church will not be liable for any transactions entered irregularly and/or illegally with any party facilitated by otherwise unauthorized persons during the aforementioned period when the Church vest was misplaced.

The Trustees of St. John Everlasting Gospel Church would wish to advise members of the general public to report any transactions entered into by unauthorized persons to the Church office at Inara Duma Estate or to the nearest police station.

Dated 14th October, 2019.

Trustees Names & Contact Address

1. Samuel Ogwel,
P.O. Box 55987-00200, Nairobi.
2. Samuel Oromo Mboi,
P.O. Box 55987-00200, Nairobi.
3. Sarah Oromo Ochwery,
P.O. Box 55987-00200, Nairobi.
4. Joyce Akinyi Ogotu,
P.O. Box 55987-00200, Nairobi.
5. Evans O. Ogada, Advocate,
C/o Zed Acholi Hussein Advocates
LLP, Nairobi.

REPUBLIC OF KENYA IN THE CHIEF MAGISTRATE'S COURT AT MVOYO CIVIL SUIT NO. 271 OF 2019

Benjamin Vuli Makau (Sung) on the Legal Representative of the Estate of the George Kishi Vuli-Deceased) Plaintiff

Augustamellane Sudd Defendant
AND
Gibson Ngigi Wanjiru 3rd Party

SUBSTITUTED SERVICE BY ADVERTISEMENT

TO: GIBSON NGIGI WANJIRU
P.O. BOX 436 - 00900, KIA/MBU

TAKE NOTICE that pursuant to the order of the court issued on 15th October 2019 by Hon. R. Gikau (RM) that service upon you be done by way of advertisement, we hereby notify you that this suit has been filed in the Chief Magistrate's court in Mvoyo by the Plaintiff against the Defendant who now claims liability against yourselves as third parties.

TAKE FURTHER NOTICE THAT if you wish to dispute the Plaintiff's claim against the defendant and the defendant claim against you, you must appear within 15 days after service of this notice on you inclusive on the day of service, otherwise you will be taken to admit the plaintiff's claim and the defendant's claim against you and you will be bound by any judgment given in this suit.

URBANUS K. & ASSOCIATES ADVOCATES ADVOCATES FOR THE DEFENDANT

DRAWN AND FILED BY:
Urbanus K. & Associates Advocates,
Oyaki Plaza, Gandhi Avenue, Next to Nairobi West Hospital, 1st Floor, Suite 67,
P.O. Box 1985-00200, NAIROBI.
Tel: 0725-144039 | Email: info@ukaw.co.ke

REPUBLIC OF KENYA IN THE PRINCIPAL MAGISTRATE'S COURT AT MASENO CIVIL SUIT NO. 34 OF 2018

ISAAC ONYANGO OKELLO & ANO PLAINTIFFS

REGENCY CAPITAL LTD formerly
KISUMU REAL ESTATES LTD 1st DEFENDANT
WYCLIFF ABOK 2nd DEFENDANT

SUBSTITUTED SERVICE BY ADVERTISEMENT

TO: WYCLIFF ABOK
C/O REGENCY CAPITAL LTD
P.O. BOX 1772-40100
KISUMU.

REGENCY CAPITAL LTD formerly KISUMU REAL ESTATE LTD summons you by way of this advertisement and the same may be collected from the Plaintiff's Advocates offices or in the court registry during working hours.

TAKE NOTICE that the above suit has been filed in the Principal Magistrate's Court, Maseso, wherein you are named as the Defendants. Pursuant to the orders made on March 28, 2019, summons were directed to be served upon you by way of this advertisement and the same may be collected from the Plaintiff's Advocates offices or in the court registry during working hours.

TAKE FURTHER NOTICE that you are required to enter appearance within FIFTEEN (15) DAYS from the date of this advertisement by yourself or somebody authorized on your behalf, failing to which judgment in default of appearance shall be entered against you and orders issued as the court deems fit, your absence notwithstanding.

DATED AT MASENO this 6th day of April 2019

**ROGO, OKELLO, WANGARI & COMPANY
ADVOCATES FOR THE PLAINTIFFS**

DRAWN & FILED BY:
ROGO, OKELLO, WANGARI & COMPANY ADVOCATES
MILIMANI ESTATE ADJACENT TO
FIDA
KISUMU OFFICE, OFF BUSIA ROAD
P.O. BOX 366-40100 KISUMU
MOMBASA.

REPUBLIC OF KENYA IN THE ENVIRONMENT AND LAND COURT AT NAKURU ELC CASE NO. 62 OF 2019

IN THE MATTER OF ORDER 37 AND ORDER 40 OF THE CIVIL PROCEDURE RULES AND SECTION 3 OF THE LAND REGISTRATION ACT NO. 8 OF 2012 AND SECTION SEVEN AND 38 OF THE LIMITATION OF ACTION CAP 22 LAWS OF KENYA AN ARTICLE 64 & 162 (2) B OF THE CONSTITUTION

KASARANI NO. 41 MATYARE DANCERS (SUNG THROUGH ITS OFFICIALS) NOUNGU NDIKATI, DAVID WANGANGA ... PLAINTIFF

**SEVEN SELF HELP GROUP (THROUGH ITS OFFICIALS) ELIUD MUGUGU, PETER MUCHIRI AND MOSES MUCHIRI ... 1st DEFENDANT
ELMUNA SELF HELP GROUP (THROUGH ITS OFFICIALS) GEORGE GICHUKI, GACHUHI KARIUKI AND ALFRED KINYAMARI ... 2nd DEFENDANT
DEREK KINUNGI NGAMBA ... 3rd DEFENDANT
MARK WAGITHIRU CHEGE ... 4th DEFENDANT
FREDERICK MACHARIA WAKAD ... 5th DEFENDANT
AGRICULTURAL & INDUSTRIAL HOLDINGS LIMITED ... 6th DEFENDANT
LAND REGISTRAR-NAIYASHA ... 7th DEFENDANT
THE ATTORNEY GENERAL ... 8th DEFENDANT**

SUBSTITUTED SERVICE BY ADVERTISEMENT (pursuant to leave granted on 14th day of October, 2019) TO: FREDERICK MACHARIA WAKAD, P.O. BOX 846, THAKALTAKE NOTICE that an Application and Originating Summons both dated 2nd June 2019 have been filed at Nakuru, Environment and Land Court vide Case No. 62 of 2019 in which you are named as the 3rd Defendant. Service of summons has been ordered by means of an advertisement. A copy of the Application and Originating Summons may be obtained from Nakuru, Environment and Land Court P.O. Box 61-20200 Nakuru. TAKE FURTHER NOTICE that, unless you enter an appearance within 15 days from the date of this notice the case will be heard in your absence. TAKE FURTHER NOTICE that the case is scheduled for hearing before the Honorable Judge on 14th November 2019 at 9:30 a.m. or soon thereafter. If you do not appear at the time and place above mentioned, such order will be made and proceedings taken as the court may deem fit and expedient.

DATED AT NAIROBI this ... day of ... 2019.
**WAGIRI KIRIARI AND ASSOCIATES
ADVOCATES FOR THE PLAINTIFF.**
DRAWN & FILED BY: WAUSEGI KIRIARI AND ASSOCIATES

BOOK CLASSIFIEDS VIA SMS TO 2011

Format of sending SMS
AD#advert Category#your ad
E.G if booking for cars
type: AD#B085#TOYOTA NZE ... Call

PUBLIC NOTICE Physical Planning & Land Use Act of 2019.

SUB-DIVISION AND CHANGE OF USER

The registered owner of L.R. No. E1964/27, situated in Nakuru West Sub-County, proposes to sub-divide and Change the Use of land parcel from Educational to Residential (Town Houses), subject to approval by Nakuru County Government, Individuals, Institutions or organizations with objections or comments should submit them in writing within 14 days of the date of this notice to:
County Secretary, Nakuru County Government, P.O. Box 2870-20106, Nakuru.

PUBLIC NOTICE Physical And Land Use Planning Act Of 2019

SUBDIVISION AND CHANGE OF USER

The registered owner of Parcel L.R.No. 3880/4 S.W of Voi Township at Mwatate proposes to subdivide and to change user of resultant parcels A and B from Agricultural to Comprehensive Mixed Use, subject to approval by the County Government of Taita Taveta. Individuals, organizations, institutions and members of the public with objections to the proposed development should forward them in writing within fourteen (14) days of this notice to:
County Director of Physical & Land Use Planning, County Government of Taita Taveta P.O.Box 1068-80304, WUNDANGI.

PUBLIC NOTICE THE PHYSICAL AND LAND USE PLANNING ACT NO. 13, 2019

CHANGE OF USER

The registered owner(s) of Baheti/Kaburini Block 7/12270 situated in Baheti within Nakuru County wishes to change the use of land from Single Dwelling Unit to Multi Dwelling Units (flats) subject to the approval of the County Government of Nakuru. Any individual or institution wishing to make any representation or objection to the above application is requested to forward the same in writing within 14 days of the date of this notice to:
The CECM-Lands, Housing & Urban Development, County Government of Nakuru, P.O. Box 2870-20100, Nakuru.

WHERE TO EAT

A534 Picnic Sites
PICNIC Site Natural Waterfalls Original Cool Picnic Site Tigoni (1963) Restaurant 0746682387 private parties; office Parties

WHERE TO STAY

A571 Hotels
GLORY Palace Hotel, Murang'a rd, serviced apartments, b'fast: 1,500/- p.p sharing, free wifi 0723176777, 0733954682

HOTEL RIO

Tranquility. Hospitality!
Centrally located in Nairobi West.



@SELDOM How accommodation si Conferences & Sal 0722511159

@UPRUMYS accomm. single 5 rences 079636413

CLEANING S

A699 Detergen

INDUSTRIAL cosmetics and Chemicals is located jainjala Rd junction.

A716 Office Cl

SERVICES We C Home Cleaning, Upholstery Cleani Sets), Cleaning aft Landscaping and G 0737407983 or 079

FOR SALE O

A822 Compute

ETR-APPROVED Systems Dejavu Te bid app Bazaar! TS Avenue 0726106253

A836 Electrical

VACA

Sales executiv with 4 to 5 year in local market neighbouring c required for a sewing machin company. Must be gradu driving licence

Applicants sho CV starsewir gmail.com +254722

A871 Miscellan

my Polytan

UPPER HILL SCHOOL Tel: 0733 442 563

INVITATION TO TENDER 2020

Upper Hill School invites tenders from eligible bidders for supply of goods and services provision.

S/No. - TENDER NO - ITEM DESCRIPTION - ELIGIBILITY

1. UHS/01/2020 - Supply of dry white maize and beans - OPEN
2. UHS/02/2020 - Supply of white rice and green grams - OPEN
3. UHS/03/2020 - Supply of foodstuffs - OPEN
4. UHS/04/2020 - Supply of bakers' flour - OPEN
5. UHS/05/2020 - Supply of fresh vegetables - OPEN
6. UHS/06/2020 - Supply of beef (meat on bones) - OPEN
7. UHS/07/2020 - Supply of fresh milk - OPEN
8. UHS/08/2020 - Supply of fruits (bananas, oranges and pears) - OPEN
9. UHS/09/2020 - Supply of cleaning equipment and detergents - OPEN
10. UHS/10/2020 - Supply of printed exercise books - OPEN
11. UHS/11/2020 - Supply of laboratory chemicals and equipment - OPEN
12. UHS/12/2020 - Supply of firewood/ briquettes - OPEN
13. UHS/13/2020 - Supply of sports goods (equipment and uniforms) - OPEN
14. UHS/14/2020 - Supply of students uniform and staff uniforms - OPEN
15. UHS/15/2020 - Supply of eggs - RESERVED
16. UHS/16/2020 - Supply of computer equipment and accessories - RESERVED
17. UHS/17/2020 - Supply and servicing of fire-fighting equipment - OPEN
18. UHS/18/2020 - General stationery - OPEN
19. UHS/19/2020 - Hardware and electrical items - OPEN
20. UHS/20/2020 - Servicing and repair of school generator - RESERVED

PUBLIC NOTICE THE PHYSICAL AND LAND USE PLANNING ACT (ACT NO. 13 OF 2019)

CHANGE OF USER

The Owner of Plot No. MN/V/3758, Changanwe, Mombasa County off Mopenge Road wishes to change the use of the plot from Residential to Public Purpose (Religious Institution) subject to the approval of the County Government of Mombasa. Any interested person or institution

15.2 Attendance list of members of Master Plan Consultative Committee

ATTENDANCE SHEET

ACTIVITY: CONSULTATIVE MEETING ON TEITA ESTATES LTD PROPOSED DEVELOPMENT

PLAN

DATE

22/04/2022

VENUE

101 WILDLIFE LODGE

NO	NAME	DESIGNATION	P/No	I.D NO	SIGN
1	LEONARD LAMONT	CCO LANDS	200912366	24070453	[Signature]
2	Margaret Mwaniki	DCC Mwatate	2007001641	12760255	[Signature]
3	JAMES NJOA	ASS. DIR LANDS	20170095230	28552577	[Signature]
4	Michael Mutuku	Chief physical planner	20170095226	27830631	[Signature]
5	HASSAN. A. MOHAMUD	CLAD	2200026713	30660568	[Signature]
6	RAPHAEL KIMBIO	WARD ASST. - MTT	2020009970	2637369	[Signature]
7	ENG. MWANIRU ALBERT	AG. CCO PW, PWR, PWRK	20120006135	27113209	[Signature]
8	ENG. MUKHOMBA HARRISON	MUNICIPAL ENGINEER	20030000395	11651161	[Signature]
9	EDWARD MWAKALAMU	MUNICIPAL MANAGER	10759195	0721255071	[Signature]
10	KIPROTICH NGENO	Env. Officer, NEMA	NEMA/0540/17	25738416	[Signature]
11	David Makori	Director Geomatics		2346850	[Signature]
12	LOISE MAKENYA	GEOSURVEYS		30819021	[Signature]
13	MARK NYAMU	GEOSURVEYS		29308925	[Signature]
14					
15					

15.3 List of persons who participated in questionnaire administration

Name	Relation to the proposed plan site locality
Ruth Majala	Resident
Yusuf Juma	Resident
Apollo Njenga	Resident
Musa	Resident
Oliver Mwanjumba	Resident
Jonnes Mwakisha	Sargent at Arms-T/T County assembly

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Roahus Mwadime	Resident
Amon M. M.	Resident
Timothy Mwa	Resident
Fredrick Mwandee	Resident
Zipporah M.	Resident
Kevin Kanyingiri	Physical Planner-T/T County gov't
Rebecca Wanjiru	Health care worker
Caroline Kipande	Accountant-Mwatate
Peter Msembi	Security guard Mwatate
Renson Mjomba	Worker-Teita Estat Sisal Plantation
Stephen Mwanana	Worker-Teita Estat Sisal Plantation
Stephen Mborele	Businessman
Jane Wakio	D.H.P
Ndoyo Sakayo	Businessman
Nicholas Kambucha	Chief
Paul Kangangi	Church Leader
Raphael Shimba	T/T County gov't
Masden Mwangangi	Sub-county water officer
D. K. Sewene	Enforcement and Compliance
Peter Shulo	Dep. Director Energy
Justus Kioko	Env. Officer
Emanuel N.	H.O.D Mining
Anyonah Kalo	National Government

16 Appendix 3

16.1 List and photos of identified birdlife in the study area

1. ork-tailed drongo



2. House Crow



3. Common swift



4. Little Swift



5. Common Myna



6. Rosy-throated Longclaw



7. Swahili sparrow



8. African Rail



9. Red-billed firefinch



10. Cardinal quelea



11. Bearded woodpecker



12. Stone partridge



13. Common bulbul



14. Barn Owl



15. Rufous-naped lark



16. Golden-breasted bunting



17. Rufous-tailed scrub robin



18. Black-lored babbler



19. Orange-tufted sunbird



20. Black-crowned tchagra



21. Common Sandpiper



22. Dusky crested flycatcher



23. Mourning dove collared



24. Little ringed plover



25. Mocking cliff chat



Grouse



26. Somali Bunting



27. Grosbeak Weaver



28. Gray Wren-Warbler



29. Grey-headed kingfisher



30. Eastern chanting-goshawk



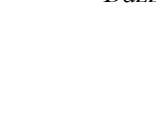
31. Black-winged stilt



32. Caspian Tern



33. Grasshopper Buzzard



34. Egyptian Goose



35. Eurasian Marsh-Harrier



36. Eurasian Sparrowhawk



37. Lesser black-backed gull



38. Montagu's harrier



39. Red-rumped Swallow



40. White wagtail



41. Cattle egret



42. Cattle egret



43. White-rumped Swift



44. Great grey shrike



45. Eurasian Golden-
Oriole



46. Chestnut-headed
Sparrow-Lark



47. Common quail



48. Thrush Nightingale



49. Tufted duck



50. African pipit



51. Guinea Fowls



52. Taita thrush



53. Dunlin



54. Laughing dove



17 Appendix 4

17.1 SESA Media Adverts

17.1.1 Public Notice Letter by NEMA



NEMA/SEA/5/2/081

06th July 2023

**The Government Printers,
P.O. Box 30128-00100,
NAIROBI.**

RE: PUBLIC NOTICE IN THE KENYA GAZETTE

Please find attached herewith a notice for publication in the Kenya Gazette for submission of public comments for **Draft Strategic Environmental and Social Assessment (SESA) report for the Teita Estate Comprehensive Mixed Land Use Development Master Plan on Plot No. Mwatate/Mwatate/Block/1/14 Taita Taveta County**. in accordance with the provisions of section 57 A of the Environment Management and Coordination Act (EMCA) 1999, Regulations 42 and 43 of the Environmental (Impact Assessment and Audit) Regulations Legal Notice No. 101 of 2003 and the National Guidelines for Strategic Environmental Assessment 2012.

The notice should appear in the Kenya Gazette and the Plan owner, **Teita Estate Limited** of P.O. Box 36 Mwatate, Kenya, shall bear the cost of publication.

**ZEPHANIAH OUMA
FOR: DIRECTOR GENERAL**

**CC: Business Administrator
Teita Estate Limited
P. O. Box 36
MWATATE**



National Environment Management Authority
Popo Road, Off Mombasa Road, P O BOX 67839-00200, Nairobi, Kenya.
Tel: 0724253398, 0735013046, Email: dgnema@nema.go.ke, Website:
www.nema.go.ke

**NOTICE TO THE PUBLIC TO SUBMIT COMMENTS ON THE DRAFT
STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT (SESA) REPORT
FOR THE TEITA ESTATE COMPREHENSIVE MIXED LAND USE
DEVELOPMENT MASTER PLAN ON PLOT L.R. NO.
MWATATE/MWATATE/BLOCK/1/14 TAITA TAVETA COUNTY**

In light of the provisions of section 57 A of the Environment Management and Coordination Act (EMCA) 1999, Regulation 42 and 43 of Environmental (Impact Assessment and Audit) Regulations Legal Notice No. 101 of 2003, the National Environmental Management Authority (NEMA) has received a Draft Strategic Environmental and Social Assessment (SESA) report for the Teita Estate Comprehensive Mixed Land Use Development Master Plan on Plot No. Mwatate/Mwatate/Block/1/14 Taita Taveta County. The SESA findings are expected to integrate the existing sectoral plans and programs to establish sustainable development mechanisms.

Teita Estate Limited, the Plan Owner, intends to develop a 3,000-acre comprehensive mixed land use development Mwatate Municipality, Taita Taveta County. The Master Plan is anchored on the tenets of mixed-use developments which is one of the ten principles of smart growth that promotes community design and developments and incorporates it with economy, public health and environment. The end game is a well thought out sustainable human settlement where people can live, work and play.

The Master Plan development consists of the following key zones; Residential Zone, Agricultural zones, Public utility zones, Public purpose zones, Medical facilities, Religious facilities, Commercial zones, Industrial zones and Wetland areas

A summary of the proposed environmental management and monitoring plan for the Teita Estate Master Plan is highlighted below. The proposed mitigation strategies are aimed at minimizing the negative impacts while enhancing the positive ones.

Issues	Mitigation Strategy	Recommended mitigation measures
Integrated environmental landscaping	Sustainable protection of the region's species and habitats	<ul style="list-style-type: none"> • Ensure integrated land use and landscaping of different zones • Ensure adequate tree cover to enable percolation of rainfall and reduction of runoff • Ensure compliance with the Environmental Management and Co-ordination (Conservation of Biological Diversity and Resources, and Access to Genetic Resources and Benefits Sharing) Regulations, 2006

Biodiversity conservation	Sustainable protection of species and habitats	<ul style="list-style-type: none"> • Ensure non-interference with migratory routes/corridor in the region • Conservation of indigenous plant species • Ensure compliance with the Wildlife Conservation and Management Act, 2013
Water resources conservation	Sustainable water resources utilization	<ul style="list-style-type: none"> • Undertake hydrogeological survey for the development area to determine the sustainable ground water abstraction levels • Promote integrated water resources management in the development area through water recycling systems and re-use practices • Adherence to Water Act 2016, Water Resource Management Rules 2007, Water Resources Management (Amendment) Rules, 2012 and Environmental Management and Co-ordination (Water Quality) Regulations, 2006
Energy conservation	Sustainable energy utilization	<ul style="list-style-type: none"> • Energy conservation through use of renewable energy, efficient technologies and systems. • Ensure compliance with the Energy Act, 2019 and subsidiary legislations under Energy Act, 2019
Solid and effluent waste management	Sustainable solid waste and effluent waste management practices	<ul style="list-style-type: none"> • Adopt integrated solid waste management plans • Adopt waste water management plans • Adherence to Environmental Management and Co-ordination (Waste Management) Regulations 2006 • Ensure compliance to Environmental Management and Co-ordination (Water Quality) Regulations 2006
Occupational Health and Safety	Adherence to workplace health and safety protocols	<ul style="list-style-type: none"> • Adhere to procedures for hazard identification, risk assessments and Safe Work Method Statements (SWMS) • Ensure health and safety trainings and awareness programmes • Adherence to Occupational safety and health Act (OSHA, 2007), Subsidiary legislations under OSHA 2007 and Work Injury Benefits Act, 2007
Enhancing socio-economics of the region	Catalyze economic growth of Taita Taveta County	<ul style="list-style-type: none"> • Adherence to labour rights including gender non-discrimination, equal pay for work done, and mainstreaming gender requirements • Ensure compliance to statutory and non-statutory records and Employment Act, 2007
Socio-Cultural Protection	Protection of cultural resources for future generations	<ul style="list-style-type: none"> • Ensure stakeholder's engagement for cultural resources communication • Ensure all developers/contractors have in place 'chance find procedure' • Ensure compliance with the National Museums and Heritage Act, 2006

The full Draft Strategic Environmental and Social Assessment report for the proposed **Teita Estate Comprehensive Mixed Land Use Development Master Plan** is available for inspection during working hours at:

1. Principal Secretary,
Ministry of Environment, Climate Change and Forestry,
NHIF Building,
P.O. Box 30126-00100,
NAIROBI
2. Director General, NEMA
Popo Road, off Mombasa Road,
P.O. Box 67839-00200,
NAIROBI
3. County Director of Environment
TAITA TAVETA COUNTY

A copy of the Draft SEA report can be downloaded from www.nema.go.ke
(NEMA/SEA/5/2/081)

NEMA invites members of the public to submit oral or written comments within thirty (30) working days from the date of publication of this notice to the Director General, NEMA, to assist the Authority in the decision making process regarding this SEA. Comments can also be e-mailed to dgnema@nema.go.ke

MAMO B. MAMO, EBS
DIRECTOR GENERAL

* *This advertisement is sponsored by the proponent.*

14th July, 2023

THE KENYA GAZETTE

3059

Impacts	Proposed Mitigation Measures	Impacts	Proposed Mitigation Measures
	<ul style="list-style-type: none"> In the event of a spillage: <ul style="list-style-type: none"> (a) Take immediate steps to avoid the spillage spreading. (b) Keep other people and vehicles away from the site. (c) Wear protective clothing appropriate to the use of the hazardous material. (d) Soak up the hazardous material with absorbent material such as dry sand. (e) Decontaminate any remaining traces of spillage on surfaces. 		<ul style="list-style-type: none"> Employ security guards from reputable firms. Document and display at the site emergency contacts. Obtain indemnity cover for all the workers on site. Provision of wholesome drinking water to workers. Use permits to work for critical tasks such as electrical installations and hot works (welding). Maintain a register of workers on site. Designate an emergency assembling point. Hold pre-job and monthly safety meetings with the hired workers to discuss safety issues pertinent to the job.
Waste generation and disposal	<ul style="list-style-type: none"> Provide suitable solid waste containers. Segregate waste as necessary. Contract a waste transporter with a valid license from NEMA to collect waste from the site for disposal. Construct suitable pit latrines for use by construction workers on site. Used oil should be accumulated in suitable labelled containers for recycling during project operation phase. Safely accumulate oily rags for collection and incineration by NEMA licensed incinerator operators. Implement an oil skimming programme for oil/water interceptors to ensure normal functioning. 	Fire	<ul style="list-style-type: none"> Provide appropriate firefighting equipment. Train workers on fire fighting. Ensure inspection of the fire equipment. Post No smoking signs at the storage area for the fuel and/or oil. Designate a fire assembly point. Provide and maintain a well-stocked first aid kit.
Falls and injuries from elevated and overhead work	<ul style="list-style-type: none"> Provide safety nets/traps prior to commencing work at height. Use of appropriate notices and signage to warn workers against falling objects. Restrict access to the site by unauthorized personnel. Ensure statutory inspection of all lifting equipment (Chain blocks and cranes). Ensure cranes are operated only by trained and experienced personnel. Lifting equipment should not be overloaded. Provide safety harnesses and scaffolding while working at high levels. Provide appropriate personal protective equipment (helmets, safety boots, and coveralls). Provide appropriate number of first aid kits which should be restocked on regular basis. Adequate number of workers to be trained on first aid administration. Names of trained first aiders to be conspicuously displayed at the site. Maintain a record of incidents and accidents on site. Document the procedure for working at heights. 	<p>The full report of the proposed project is available for inspection during working hours at:</p> <p>(a) Principal Secretary, Ministry of Environment and Forestry, NHIF Building, 12th Floor, Ragati Road, Upper Hill, P.O. Box 30126-00100, Nairobi.</p> <p>(b) Director-General, NEMA, Popo Road, off Mombasa Road, P.O. Box 67839-00200, Nairobi.</p> <p>(c) County Director of Environment, Kilifi County.</p> <p>A copy of the report can be downloaded at www.nema.go.ke</p> <p>The National Environment Management Authority invites members of the public to submit oral or written comments within thirty (30) days from the date of publication of this notice to the Director-General, NEMA, to assist the Authority in the decision making process regarding this project.</p> <p>Comments can also be emailed to dg@nema.go.ke</p> <p>MAMO B. MAMO, Director-General, National Environment Management Authority.</p>	
Occupational safety risks	<ul style="list-style-type: none"> Construction of a site office for co-ordinating construction activities. Appoint a responsible person to be oversee all health and safety issues. Document appropriate emergency response procedures. 	<p>GAZETTE NOTICE No. 9282</p> <p>THE ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT</p> <p>(No. 8 of 1999)</p> <p>NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY</p> <p>THE DRAFT STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT (SESA) REPORT FOR THE TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN ON PLOT L.R. NO. MWATATE/MWATATE/BLOCK/U/14, TAITA TAVETA COUNTY</p> <p>INVITATION OF PUBLIC COMMENTS</p> <p>IN LIGHT of the provisions of section 57 A of the Environment Management and Coordination Act (EMCA) 1999, Regulation 42 and 43 of Environmental (Impact Assessment and Audit) Regulations Legal Notice No. 101 of 2003, the National Environment Management Authority (NEMA) has received a Draft Strategic Environmental and Social Assessment (SESA) report for the Teita</p>	

Estate Comprehensive Mixed Land Use Development Master Plan on Plot No. Mwatate/Mwatate/Block/1/14 Taita Taveta County. The SESA findings are expected to integrate the existing sectoral plans and programs to establish sustainable development mechanisms.

Teita Estate Limited, the plan owner, intends to develop a 3,000-acre comprehensive mixed land use development Mwatate Municipality, Taita Taveta County. The Master Plan is anchored on the tenets of mixed-use developments which is one of the ten principles of smart growth that promotes community design and developments and incorporates it with economy, public health and environment. The end game is a well thought out sustainable human settlement where people can live, work and play.

The Master Plan development consists of the following key zones; residential zone, agricultural zones, public utility zones, public purpose zones, medical facilities, religious facilities, commercial zones, industrial zones and wetland areas.

A summary of the proposed environmental management and monitoring plan for the Teita Estate Master Plan is highlighted below. The proposed mitigation strategies are aimed at minimizing the negative impacts while enhancing the positive ones.

Issues	Mitigation Strategy	Recommended Measures	Mitigation
Integrated environmental landscaping	Sustainable protection of the region's species and habitats	<ul style="list-style-type: none"> • Ensure integrated land use and landscaping of different zones. • Ensure adequate tree cover to enable percolation of rainfall and reduction of runoff. • Ensure compliance with the Environmental Management and Co-ordination (Conservation of Biological Diversity and Resources, and Access to Genetic Resources and Benefits Sharing) Regulations, 2006. 	
Biodiversity conservation	Sustainable protection of species and habitats	<ul style="list-style-type: none"> • Ensure non-interference with migratory routes/corridor in the region. • Conservation of indigenous plant species. • Ensure compliance with the Wildlife Conservation and Management Act, 2013. 	
Water resources conservation	Sustainable water resources utilization	<ul style="list-style-type: none"> • Undertake hydrogeological survey for the development area to determine the sustainable ground water abstraction levels. • Promote integrated water resources management in the development area through water recycling systems and re-use practices. • Adherence to Water Act 2016, Water Resource Management Rules 2007, Water Resources Management (Amendment) Rules, 2012 and Environmental Management and Co-ordination (Water Quality) Regulations, 2006. 	
Energy conservation	Sustainable energy utilization	<ul style="list-style-type: none"> • Energy conservation through use of renewable 	

Issues	Mitigation Strategy	Recommended Measures	Mitigation
		energy, efficient technologies and systems.	
		<ul style="list-style-type: none"> • Ensure compliance with the Energy Act, 2019 and subsidiary legislations under the Energy Act, 2019. 	
Solid effluent management	Sustainable solid waste and effluent waste management practices	<ul style="list-style-type: none"> • Adopt integrated solid waste management plans. • Adopt waste water management plans. • Adherence to Environmental Management and Co-ordination (Waste Management) Regulations, 2006. • Ensure compliance to Environmental Management and Co-ordination (Water Quality) Regulations, 2006. 	
Occupational health and safety	Adherence to workplace and health safety protocols	<ul style="list-style-type: none"> • Adhere to procedures for hazard identification, risk assessments and Safe Work Method Statements (SWMS). • Ensure health and safety trainings and awareness programmes. • Adherence to Occupational safety and health Act (OSHA, 2007), Subsidiary legislations under OSHA, 2007 and The Work Injury Benefits Act, 2007. 	
Enhancing socio-economics of the region	Catalyze economic growth of Taita Taveta County	<ul style="list-style-type: none"> • Adherence to labour rights including gender non-discrimination, equal pay for work done, and mainstreaming gender requirements. • Ensure compliance to statutory and non-statutory records and the Employment Act, 2007. 	
Socio-cultural protection	Protection of cultural resources for future generations	<ul style="list-style-type: none"> • Ensure stakeholder's engagement for cultural resources communication. • Ensure all developers/contractors have in place 'chance find procedure'. • Ensure compliance with the National Museums and Heritage Act, 2006. 	

The full report of the proposed project is available for inspection during working hours at:

- Principal Secretary, Ministry of Environment and Forestry, NHIF Building, 12th Floor, Ragati Road, Upper Hill, P.O. Box 30126-00100, Nairobi.
- Director-General, NEMA, Popo Road, off Mombasa Road, P.O. Box 67839-00200, Nairobi.
- County Director of Environment, Taita Taveta County.

A copy of the report can be downloaded at www.nema.go.ke

14th July, 2023

THE KENYA GAZETTE

3061

The National Environment Management Authority invites members of the public to submit oral or written comments within thirty (30) days from the date of publication of this notice to the Director-General, NEMA, to assist the Authority in the decision making process regarding this project.

Comments can also be emailed to dgnema@nema.go.ke

MAMO B. MAMO,
Director-General,
National Environment Management Authority.

MR/5161423

GAZETTE NOTICE No. 9283

REPUBLIC OF KENYA
IN THE HIGH COURT OF KENYA AT NAIROBI

FAMILY DIVISION

MSC APP. NO. E90 OF 2023

IN THE MATTER OF THE LAW OF SUCCESSION ACT

IN THE MATTER OF THE ESTATE OF DAVID NJUGUNA
MUGAI (DECEASED)

ON 2ND JUNE, 2023 BEFORE THE HON. LADY JUSTICE P. M.
NYAUNDI

ORDER

THIS matter coming up for judgement before Hon. Lady Justice P. M. Nyaundi virtually, and upon delivering of the said judgement its ordered—

(1) THAT David Njuguna Mugai (the subject) be and is adjudged to be suffering from mental disorder pursuant to section 26 of the Mental Health Act, (Cap. 248) laws of Kenya.

(2) THAT Priscilla Nduru Njuguna be and is appointed the legal guardian to David Njuguna Mugai.

(3) THAT Priscilla Nduru Njuguna is appointed manager of the estate of David Njuguna Mugai under section 28 of Mental Health Act, to manage his estate including any such description of moveable or immovable property, money, debts and legacies, power to execute, sign all deeds and instruments relating to or evidencing the title or right to any property or giving a right to receive any money or goods.

(4) THAT Priscilla Nduru Njuguna be and is ordered to access funds from the subject's bank account.

(5) THAT pursuant to this appointment the petitioner shall deliver to court and the public trustee, within six (6) months, an inventory of the property belonging to David Njuguna Mugai.

(6) THAT in accordance with section 27 (4) of the Mental Health Act 2022, the petitioner shall cause within thirty (30) days the publication of notice in the Gazette, informing the public of her appointment as the manager of the estate David Njuguna Mugai.

(7) THAT as Manager of the estate of David Njuguna Mugai the petitioner may dispose of the property only with the sanction of the court.

(8) THAT the matter will be mentioned before court on 30th November, 2023, to confirm compliance.

(9) THAT costs to be met out of the estate of the subject.

Dated the 15th June, 2023.

DEPUTY REGISTRAR,
High Court of Kenya at Nairobi.

GAZETTE NOTICE No. 9284

REPUBLIC OF KENYA

IN THE HIGH COURT OF KENYA AT NAIROBI

MILIMANI COMMERCIAL COURTS

MILIMANI COMMERCIAL AND TAX DIVISION

IN THE MATTER OF THE COMPANIES ACT, 2015

AND

IN THE MATTER OF THE INSOLVENCY ACT, 2015

INSOLVENCY CAUSE NO. HCCOMMIP 041 OF 2023

RE: BEYOND AFRICA FREIGHTERS LIMITED

PETITION FOR LIQUIDATION

NOTICE is given that a petition for the liquidation of the above mentioned company by the High Court was on the 26th June, 2023, presented to the said court by Justin Njeru Gicovi and the said petition is directed to be mentioned for directions on 18th July, 2023 at 9:00 O'clock and any creditor or contributory of the said company desirous to support or to oppose the making of an order on the said petition may appear at the time of the hearing in person or by his advocate for that purpose and a copy of the petition will be furnished by the undersigned to any creditor or contributory of the said company requiring such a copy on payment of regulated charge on the same.

Dated the 5th July, 2023.

NJERI WAINAINA & COMPANY,

MR/5161361

Advocates for the Petitioner.

GAZETTE NOTICE No. 9285

THE CO-OPERATIVE SOCIETIES ACT

(Cap. 490)

INQUIRY ORDER

WHEREAS members of the society have requested for an inquiry into the affairs of Nyamira Tea Farmers Sacco, and whereas I am of the opinion that an inquiry be carried out in—

- (i) the by-laws;
- (ii) working and financial condition;
- (iii) the conduct of present or past management committee of Nyamira Tea Farmers Sacco C/S 7593;
- (iv) and in accordance with section 58 as read together with section 73 of the Co-operative Societies Act, Cap. 490, laws of Kenya.

Now therefore, I authorize (1) Anthony Mureithi, Principal Co-Operative Officer of Nairobi Headquarters and (2) Agnes Machora, Principal Co-operative Auditor of Nairobi Headquarters, to hold an inquiry within ten (10) days from the date thereof at such place and time as may be expedient and duly notified by them.

The attention of all officers and members of the society is directed to the following sections of the Co-operative Societies Act.

Section 60 (1)	—	Cost of inquiry
Section 60 (2)	—	Recovery of costs of expenses
Section 94	—	Offences
Section 73	—	Surcharges

Dated the 12th July, 2023.

DAVID K. OBONYO,

MR/5161460

Commissioner for Co-operative Development.

GAZETTE NOTICE No. 9286

SHANZULUCK BAYS LIMITED

(C.72806)

(In Liquidation)

MEMBERS VOLUNTARY LIQUIDATION

NOTICE is given that a second and final general meeting in the above matter will be held at the Priderock, No. 6 Donyo Sabuk Avenue, Nairobi, on 31st July, 2023, at 11.30 a.m. for the purposes of laying before it the company's final account showing the manner in which the liquidation has been conducted and the property of the company disposed of and giving any explanations hereof.

JOY VIPINCHANDRA BHATT,

MR/5161205

Liquidator.

DAILY NATION TUESDAY, JULY 18, 2023

25



JOB ADVERTISEMENT

Everyone deserves the opportunity to build a better future. This simple idea has been at the heart of Technoserve's work around the world for over 50 years. Technoserve is a pioneer in leveraging the power of business and markets to create sustainable pathways out of poverty. We have an exciting role open for applications - **Chief of Party - Feed the Future Scaling Inclusive Food Systems**.
Technoserve is anticipating a three-year, USAID-funded Feed the Future Scaling Inclusive Food Systems activity focused on agricultural growth, enhancing investments in the agricultural market, building resilience through economic growth opportunities, and improving welfare.

Roles and Responsibilities

- Lead overall implementation and management of the program, from inception to close out, ensuring that the program achieves established goals, objectives and targets.
- Provide strategic guidance, leadership, management and general technical oversight of the program.
- Continuously develop operational efficiencies and drive innovation in delivery.
- Oversee development and submission of project deliverables on time and within budget.
- Recruit, lead, manage, and supervise delivery teams comprising long- and short-term team members and consultant partners.
- Serve as the primary liaison with USAID, Kenya Government officials and all counterparts, implementing partners, and stakeholders involved with the program.
- Act as a spokesperson for the program and present its work regionally globally.

Required Skills and Experience

- A master's degree or equivalent in business, international development, economics, public policy, education, agricultural economics, or other relevant field with 10+ years of experience (or a bachelor's degree with 12+ years of experience).
- At least eight years of relevant professional experience in international development.
- Experience leading and managing large teams with a high level of leadership, interpersonal, technical, and analytical experience, as Team Leader, Chief of Party, or other Program Director level role.
- Experience in private sector development.
- Experience leading USAID or other bilateral-funded projects.
- Prior private sector experience in the food and agricultural sector preferred.

To Apply: Review the full job description by visiting our website on www.tns.org under careers. Only short-listed candidates will be contacted.



Transforming Higher Education... Empowering Lives

CAREER OPPORTUNITIES

Kenya University seeks to recruit competent and dedicated applicants to fill up the following positions:

- DENTIST - GRADE 11
- DENTAL ASSISTANT - GRADE II/V
- BRILLIANT FRANCHISE - GRADE C/D
- PUBLIC HEALTH OFFICER - GRADE C/D
- PHYSIOLOGIST - GRADE C/D
- DEPARTMENT OF MUSIC AND DANCE
 - PROFESSOR
 - SENIOR LECTURER
 - LECTURER
- DEPARTMENT OF GENERAL SURGERY
 - SENIOR LECTURER
- DEPARTMENT OF EDUCATIONAL COMMUNICATION & TECHNOLOGY
 - ASSOCIATE PROFESSOR
- DEPARTMENT OF SOCIOLOGY, GENDER AND DEVELOPMENT STUDIES
 - LECTURER
- DEPARTMENT OF PUBLIC POLICY AND ADMINISTRATION
 - LECTURER
 - TUTORIAL FELLOW

TERMS OF SERVICE:
A competitive remuneration package which includes basic salary, generous house allowance, medical cover as per University Scheme will be provided.

For teaching positions above, employment will be on permanent and person-to-person terms.

The applicants should provide full details of educational and professional qualification, work experience, present post and salary, applicant's telephone number and e-mail address.

Copies of certificates and testimonials should also be enclosed giving the names and addresses of three (3) referees who are convenient with the applicant's competence in area of specialization.

Applicants should write directly to:
Deputy Vice-Chancellor (Administration & Finance)
Kenya University
P.O. BOX 43641 - 00100
NAIROBI

Applications should be received not later than:
4 August 2023

For details related to job specification and general requirements, kindly visit our website: www.ku.ac.ke

*Kenya University is an equal opportunity employer and recruiting will not be subject to discrimination.

*Women and persons with disability are encouraged to apply.

*Only short-listed candidates will be contacted.

www.ku.ac.ke



NOTICE TO THE PUBLIC TO SUBMIT COMMENTS ON THE DRAFT STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT (SESA) REPORT FOR THE TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN ON PLOT 118, NO. MUAUATE/AMAUATE/BLOCK 1/14 TAITA TAVETA COUNTY

In light of the provisions of section 37(4) of the Environmental Management and Coordination Act (EMCA) 1999, Regulation 42 and 43 of Environmental Impact Assessment and Audit Regulations, and Notice No. 10 of 2003, the National Environment Management Authority (NEMA) has received a Draft Strategic Environmental and Social Assessment (SESA) report for the Teita Estate Comprehensive Mixed Land Use Development Master Plan in Plot No. MUAUATE/AMAUATE/BLOCK 1/14, Taita Taveta County. The SESA findings are expected to inform the existing sectoral plans and programs to establish sustainable development mechanisms.

Teita Estate Limited, the Kenyan Developer, intends to develop a 3,000-acre comprehensive mixed land use development Muvata Municipality, Taita Taveta County. The Master Plan is anchored on the tenets of mixed-use development which is one of the ten pillars of smart growth that promotes community design and development and incorporates with economic, public health and environment. The envisaged is a well-thought-out sustainable human settlement where people live, work and play.

The Master Plan development consists of the following six zones: Residential Zone, Agricultural zone, Public utility zone, Public purpose zone, Industrial facilities, Religious facilities, Commercial zone, Industrial zone and Wetland zone.

A summary of the proposed environmental management and monitoring plan for the Teita Estate Master Plan is highlighted below. The proposed mitigation strategies are aimed at minimizing the negative impacts while enhancing the positive ones.

Issues	Mitigation Strategy	Recommended Mitigation Measures
Integrating environmental and social considerations into the project planning and implementation	Sustainable protection of the region's species and habitats	<ul style="list-style-type: none"> Integrate integrated land use and landscape of different zones Ensure adequate time to enable assessment of rainfall and distribution of runoff Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016) Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016)
Ecological conservation	Sustainable protection of species and habitats	<ul style="list-style-type: none"> Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016) Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016)
Water resources conservation	Sustainable water resource utilization	<ul style="list-style-type: none"> Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016) Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016)
Energy conservation	Sustainable energy utilization	<ul style="list-style-type: none"> Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016) Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016)
Solid waste management	Sustainable solid waste management practices	<ul style="list-style-type: none"> Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016) Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016)
Accidental health and safety	Adherence to workplace health and safety protocols	<ul style="list-style-type: none"> Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016) Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016)
Enhancing socio-economic growth of Taita Taveta County	Enhance economic growth of Taita Taveta County	<ul style="list-style-type: none"> Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016) Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016)
Local Cultural Protection	Protection of cultural resources for future generations	<ul style="list-style-type: none"> Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016) Ensure compliance with the Environmental Management and Co-ordinator (Conservation-Biological Diversity and Resources and Access to Genetic Resources and Biocultural Heritage Regulations, 2016)

The full Draft Strategic Environmental and Social Assessment report for the proposed Teita Estate Comprehensive Mixed Land Use Development Master Plan is available for inspection during working hours.

- Principal Secretary, Ministry of Environment, Climate Change and Forestry, WFP Building, P.O. Box 30556-00100, NAIROBI
- Director General, NEMA, P.O. Box 43641 - 00100, NAIROBI
- County Director of Environment, TAITA TAVETA COUNTY

A copy of the Draft SESA report can be downloaded from www.nema.go.ke (NEMA/SESA/2023/001).
NEMA invites members of the public to submit oral or written comments within thirty (30) working days from the date of publication of this notice to the Director General, NEMA, to assist the Authority in the decision making process regarding the SESA. Comments can also be e-mailed to sema@nema.go.ke

HAND D. MANDERS
DIRECTOR GENERAL

* This advertisement is sponsored by the proponent.



PUBLIC AUCTION

Under instructions received from our client, the charges, we shall sell by Public Auction the under mentioned property together with buildings and improvements standing and erected thereon.

PRIME RESIDENTIAL PROPERTY IN MILIMANI KISUMU TOWN



ON TUESDAY 8TH AUGUST 2023 AT 12.00 NOON AT THE CENTRAL SQUARE OPPOSITE ABSA BANK PLC, KISUMU CITY.

All that parcel of land known as L.R. NO. KISUMU MUNICIPALITY/ BLOCK 12/ 434 registered in the name of OKION GENERAL WORKS LTD. P.O. BOX 2280 - 40100, KISUMU. The property is situated off Tom Mbayi Drive directly opposite Red Cross Offices in Milimani approximately 4km due South of Kisumu CBD in Kisumu City. It measures approximately 0.14a or 0.2471 Acres. Developed on the property is a double storey residential house and a gate house. The title is a leasehold interest for a term of 99 years v.e. F.O.I./06/1970 with annual ground rent of Kshs. 3,000/- and annual Municipal rate of Kshs. 1,250/-.

CONDITIONS OF SALE

- All intending purchasers are requested to view the property and verify the details as these are not warranted by the auctioneer or client.
- A deposit of 10% must be paid in cash or banker's cheque at the fall of the hammer. The balance will thereafter be payable to the charges within ninety (90) days from the date of sale. A refundable bidding deposit of Kshs. 1,000,000/- by way of Bankers cheque will be mandatory.
- The sale is subject to a Reserve Price and Land control Board Consent (where applicable).
- Conditions of sale are available on request at our offices and viewing of the property is possible during normal working hours by prior arrangements with us.

ALL ARE WELCOME!!



PUBLIC AUCTION

Under instructions received from our client, the charges we shall sell by Public Auction the under mentioned property at Public Auction.

ON TUESDAY 17TH AUGUST 2023 AT OUR AUCTION MART NEW KIRITA BUILDING, KIRITA ROAD ATTORI J.M.

PRIME RESIDENTIAL PROPERTY SITUATED WITHIN GIMBARA, ATR RIVER MACHAKOS COUNTY.
All that parcel of land known as L.R. MAYIRO TOWN BLOCK 66 (SMB) 7/72 GIMBARA ATR RIVER MACHAKOS COUNTY measuring 0.0456 Ha and registered in the name of KENEDY EXACT MUYIAA OF P.O. BOX 10475-00200 NAIROBI (P.O. BOX 10475-00200 NAIROBI) and is situated along an unimproved road in the neighborhood of 14th Street, about 200 meters off Makenyer Road, 100 meters off Makenyer road and approximately 3 kilometers from ATR River Trading Center within Gimbara, Machakos County Machakos County. The property is three (3) bedroom single storey residential house, external kitchen and internal block.

Conditions of Sale
i) All intending purchaser(s) are requested to view and verify the details themselves as these are not warranted by the auctioneer or our clients.
ii) A refundable deposit of Kshs 500,000/- must be paid to obtain a bidding number. Please note that NO bidding without a valid bidding number.
iii) A deposit of 25% must be paid in cash, Bankers cheque or RTGS at the fall of the hammer and the balance within 04 days from the date of the auction to the charges advocate.
iv) Sale is subject to a reserve price.

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DAILY NATION

The Standard, Thursday, July 13, 2023

43

Dalali Traders

Auctioneers, Repossessors & Investigators
Kijabe Street, Opp. EA BRED Co. Ltd
P.O. Box 2218-00100, NAIROBI, Tel: 0722680900, 0722680285
Email: info@dalalitraders.co.ke www.dalalitraders.co.ke

PUBLIC AUCTION

Duly instructed by our principals (the financiers), we shall sell by public auction the under mentioned Motor Vehicles on 25th July 2023 at our offices, Kijabe street, building No. 3 next to Universal Church starting at 10:30 a.m.

NO.	REG. NO.	MAKE	MODEL	Y.O.M	TO BE VIEWED AT
1	KDH 484C	TOYOTA	NOAH	2015	PURPLE ROYAL-KAMBU RD
2	KBN 451B	TOYOTA	PREMIO	2003	BIMAS PLAZA-EMBU

CONDITIONS OF SALE

1. Viewing can be done at the indicated location to verify details as these are not warranted by the auctioneers or our principals.
2. A deposit of 25% to be paid at the fall of the hammer and balance to be paid within 14 days.
3. Sale is subject to reasonable reserve price.

GARTH DAY YEAR AUCTIONEERS

Deves Plaza, 7th Floor
Crossway Road, Westlands
Tel: 0722700030 - 0722548190
P.O. Box 39868-00100, NAIROBI

PUBLIC AUCTION

Duly instructed by our Principal, the CHARGES, we shall sell by public auction two property described herein:
ON 31st JULY 2023 STARTING FROM 11:00 AM AT OUR OFFICES DEVAN PLAZA 7th FLOOR, WESTLANDS, NAIROBI
All that property known as mweko town block 12/5122 measuring 0.036ha in Devengo Odhiambo City, p.o. box 7570-00300, Nairobi guarantor to (DCCS Beauty) Farag Limited of a plot 7570 - 00300 m/s.
The subject property is situated in situated within devengo, within larger kamukha area in machakos County. The estate is approximately 4.3 kilometres south of Kamukha Shopping Centre. The area can be accessed either from Katari or Kamukha off Mombasa and Kisumu Roads respectively.
The geographical coordinates of the property are 1°18'39"S and 37°02'23"E. The title is held as a Freehold interest. Mains water and electricity services are readily available for connection from the immediate neighborhood of the subject property. The main access from Kamukha Shopping is graded tarmac.

CONDITIONS OF SALE

1. All interested Purchasers are required to view the property and verify the details as these are not warranted by the Auctioneers or the Principals, viewing is on appointment.
2. A deposit of at least 25% must be paid in BANKERS CHEQUE at the close of the day and the balance to be paid within 90 days to the Charges.
3. Local area bidding number cannot pay a refundable deposit of sh.100,000 by bankers cheque.
4. Sale subject to reserve price.
5. The conditions of sale may be obtained from our offices.



KENYA POST BANK PENSION TOWERS,
7th FLOOR, SUITE 17, SUPARA ROAD, NAIROBI
P.O. Box 75188-00100, NAIROBI, KENYA
Office: 0722680285
Email: immediateauctioneers@gmail.com
Representatives & Auctioneers of Charges Securities

PUBLIC AUCTION

DULY INSTRUCTED BY OUR PRINCIPAL, WE SHALL SELL BY PUBLIC AUCTION BELOW LISTED MOTOR VEHICLES ON 20th JULY, 2023 AT 11:00 AM AT OUR OFFICES KPOSB, 3RD FLOOR, SUITE NO. 17.

FINANCIER VS. RAYMOND OKEYO OWIGO

M/V REG NO.	MAKE	YARD
KBT 600P	SCANIA BUS	VALUERS YARD

FINANCIER VS. JULIET MARGARET WANJA

M/V REG NO.	MAKE	YARD
KBP 2B2G	TOYOTA NOAH	PAMBO YARD

FINANCIER VS. MMATTA MARTIN OMIDO

M/V REG NO.	MAKE	YARD
KCX 871V	TOYOTA LANDCRUISER TX	GREYPOST YARD

CONDITION OF SALE

- CASH AT FALL OF THE HAMMER.



NATIONAL ENVIRONMENTAL MANAGEMENT AUTHORITY

Pope Road, Off Mombasa Road, P.O. BOX 67838-00200, NAIROBI, Kenya.
Tel: 0724253356, 0735013046, Email: dgm@nema.go.ke, Website: www.nema.go.ke

NOTICE TO THE PUBLIC TO SUBMIT COMMENTS ON THE DRAFT STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT (SESA) REPORT FOR THE TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN ON PLOT L.R. NO. MWATATE/MWATATE/BLOCK/1/14 TAITA TAVETA COUNTY

In light of the provisions of section 57A of the Environmental Management and Coordination Act (EMCA) 1999, Regulation 42 and 43 of Environmental (Impact Assessment and Audit) Regulations, Legal Notice No. 101 of 2003, the National Environmental Management Authority (NEMA) has received a Draft Strategic Environmental and Social Assessment (SESA) report for the Teita Estate Comprehensive Mixed Land Use Development Master Plan on Plot No. Mwataate/Mwataate/Block/1/14 Taita Taveta County. The SESA findings are expected to integrate the existing sectoral plans and programs to establish sustainable development mechanisms.

Taita Estate Limited, the Plan Owner, intends to develop a 3,000-acre comprehensive mixed land use development Mwataate Municipality, Taita Taveta County. The Master Plan is anchored on the tenets of mixed-use developments which is one of the ten principles of smart growth that promotes community design and of plans is a well thought out sustainable human settlement where people can live, work and play.
The Master Plan development consists of the following key zones: Residential Zone, Agricultural zone, Public utility zones, Public purpose zones, Medical facilities, Religious facilities, Commercial zones, Industrial zones and Wildlife areas.

A summary of the proposed environmental management and monitoring plan for the Teita Estate Master Plan is highlighted below. The proposed mitigation strategies are aimed at minimizing the negative impacts while enhancing the positive ones.

Issues	Mitigation Strategy	Recommended mitigation measures
Integrated environmental landscaping	Sustainable protection of the region's species and habitats	<ul style="list-style-type: none"> Ensure integrated land use and landscaping of different zones Ensure adequate tree cover to enable percolation of rainfall and reduction of runoff Ensure compliance with the Environmental Management and Coordination (Conservation of Biological Diversity and Resources, and Access to Genetic Resources and Benefits Sharing) Regulations, 2006 Ensure non-interference with migratory outcrops in the region Ensure compliance with the Wildlife Conservation and Management Act, 2019
Biodiversity conservation	Sustainable protection of species and habitats	<ul style="list-style-type: none"> Understand hydrogeological survey for the development area to determine the sustainable ground water abstraction levels Promote integrated water resources management in the development area through water recycling systems and re-use practices Adherence to Water Act 2016, Water Resource Management Rules 2007, Water Resources Management (Amendment) Rules, 2012 and Environmental Management and Co-ordination (Water Quality) Regulations, 2006
Water resources conservation	Sustainable water resources utilization	<ul style="list-style-type: none"> Energy conservation through use of renewable energy, efficient technologies and systems. Ensure compliance with the Energy Act, 2019 and subsidiary legislations under Energy Act, 2019
Energy conservation	Sustainable energy utilization	<ul style="list-style-type: none"> Adopt integrated solid waste management plans Adopt waste water management plans Adherence to Environmental Management and Co-ordination (Waste Management) Regulations 2009 Ensure compliance to Environmental Management and Co-ordination (Water Quality) Regulations 2006
Solid and effluent waste management	Sustainable solid waste and effluent waste management practices	<ul style="list-style-type: none"> Adhere to procedures for hazard identification, risk assessments and Safe Work Method Statements (SWMS) Ensure health and safety trainings and awareness programmes Adherence to Occupational safety and health Act (OSHA, 2007), Subsidiary legislations under OSHA 2007 and Work Injury Benefits Act, 2007
Occupational Health and Safety	Adherence to work place health and safety protocols	<ul style="list-style-type: none"> Adherence to labour rights including gender non-discrimination, equal pay for work done and mainstreaming gender requirements Ensure compliance to statutory and non-statutory records and Employment Act, 2007 Ensure stakeholder engagement for cultural resources communication Ensure all developers/contractors have in place change first priorities Ensure compliance with the National Museums and Heritage Act, 2006
Enhancing socio-economics of the region	Catalyzes economic growth of Taita Taveta County	
Socio-Cultural Protection	Protection of cultural resources for future generations	

The full Draft Strategic Environmental and Social Assessment report for the proposed available for inspection during working hours at:

1. Principal Secretary, Ministry of Environment, Climate Change and Forestry, NRB Building, P.O. Box 30128-00100, NAIROBI
2. Director General, NEMA, Pope Road, off Mombasa Road, P.O. Box 67838-00200, NAIROBI
3. County Director of Environment, TAITA TAVETA COUNTY

A copy of the Draft SEA report can be downloaded from www.nema.go.ke (NEMA/SEA/5/2/081)
NEMA invites members of the public to submit oral or written comments within thirty (30) working days from the date of publication of this notice to the Director General, NEMA, to assist the authority in the decision making process regarding the SEA. Comments can also be e-mailed to dgm@nema.go.ke

MAMO S. MAMO, EBS

DIRECTOR GENERAL

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17.1.5 Radio Advert Details on July 17th to 19th, 2023

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Customer PIN: P000607275E
Customer LPO No:
Sales Person Name: PAULINE KUNGU
Sales Person Tel No:
Sales Person Email: pauline.kungu@royalmedia.co.ke

Item No	Item description	Start Date	End Date	Qty	Unit Price	Net Amount
RST01073	Classifieds Package D	17/07/2023	19/07/2023	1	65,000.00	65,000.00
	3 Classifieds per day for 3 days					
	1 Insert 10.00AM-2.00PM, 2.00-4.00PM & 4.00-8.00PM					

Net Sales Amount (KES)	65,000.00
VAT (16%)	10,400.00
Total Sales Amount(KES)	75,400.00

Signed: 

Title: Estate Administrator

Name of signatory:

Anthony Nielsen

Date:

12/07/2023

Rubber Stamp



18 Appendix 5

18.1 Meeting Minutes and Notes

18.1.1 NEMA Consultative Meeting

**MINUTES FOR A CONSULTATIVE MEETING HELD ON 27TH, MARCH 2023 AT
9AM AT NEMA HQ BOARDROOM FIRST FLOOR FOR THE PROPOSED
COMPREHENSIVE MIXED LAND USE MASTER PLAN FOR TEITA ESTATE
PLAN IN MWATATE SUB COUNTY, TAITA TAVETA COUNTY**



LIST OF ATTENDANCE

NAME	INSTITUTION	DESIGNATION	CONTACT
Mr. Reagan Awino	NEMA	Officer	rawino@nema.go.ke
Mrs. Oceanic Sakwa	NEMA	Officer	osakwa@nema.go.ke
Dr. David Makori	Geosurveys	Director	davidmakori@gmail.com
Mr. Henry Oindo	Geosurveys	Env. Expert	henryoindo2208@gmail.com
Mr. Erick Deche	NEMA	Pego	Edeche2nema.go.ke
Mrs. Selilah Okoth	NEMA	Pceo-Nema	sokoth@nema.go.ke

Item	Discussion
1. Introduction	<p>The consultative meeting was called to order by Mr. Regan Awino, the the Head of Strategic Environmental Assessment department, NEMA Headquarters. Mr. Regan explained the purpose the meeting where in compliance to relevant government regulations and to ensure compliance while undertaking the Strategic Environmental and Social Assessment NEMA deems it procedural and necessary to hold such consultative meeting in order to clearly understand the plan components and adequately advice on plan related issues. Each member was asked to introduce themselves by mentioning their names and the capacity under which they were attending the consultative meeting.</p> <p>Dr. Makori gave a brief of the proposed Comprehensive Master Plan outlining the distinct land use for the different sections of the plans as proposed in the master plan. During his brief, Dr. Makori noted that the team of experts while developing the Master plan had from time to time consulted with the key institutional stakeholders such as the NEMA- Taita Taveta County, Taita Taveta County Government among other key stakeholders. Mrs. Okoth, in her interjection highlighted that ideally it was always advisable to undertake an integrated process that systematically undertakes both the SESA and the master plan development as in most cases the SESA greatly influences the sustainable implementation of the master plan. In integrated process in her professional view would lead to a comprehensive master plan that has adequately addressed all the possible SESA issues.</p> <p>Dr. Makori while giving the brief noted that the master plan had been subjected to all the existing regulatory approvals where the cunty had already approved the proposed master plan.</p> <p>Mr. Regan raised concerns on whether the inputs that shall result from the SESA would be adequately considered in the master plan considering that the master plan has already been developed.</p>

Item	Discussion
2. Plan background	<p>Dr. Makori indicated that Teita Estate Limited, had identified the need to introduce a comprehensive mixed land use pattern at the Teita Sisal Estate, that is aimed at enhancing the economic productivity of the area through the proposed estate zoning and subdivision into distinct land use zones. The development is anchored on the tenets of mixed-use developments which is one of the ten principles of smart growth that promotes community design and developments and incorporates it with economy, public health and environment. In this case, the proposed development blends various compatible land uses including commercial, light industrial, residential with pockets of adequate public amenities and support infrastructure. The end game is a well thought out sustainable human settlement where people can live, work and play.</p> <p>While seeking further clarification, Mrs. Okoth sought to know the proposed power source for the proposed plan as well as the category of industries that were being proposed to be implemented in the industrial zone. She had concerns over the tendency of proponents continuously scaling down and alternating the proposed plans upon approval where for instance she noted that in previous cases NEMA had witnessed cases where areas approved for heavy industries would be from time to time changed to light industries and then mixed use where in the eventuality you end up having residential units in what had been priorly approved to be an industrial zone.</p> <p>Dr. Makori in his response said that the industrial zone, the plan was considering light industries which deal in i.e., processing and packaging among other light activities. In regards to power source, plan had incorporated a power sub-station which would source its power from the national power grid (Kenya Power).</p> <p>Mrs Okoth advised that for sustainability purposes, it was important for the proponent to consider greener energy sources such the solar power and hydro-power this would as well consider reducing pressure on increasing power demand as well as play a key role in environmental safeguarding.</p>
3. Opinion/ remarks	<p>Mrs. Sakwa in giving her considerations noted the importance reviewing existing documentations such as plans that were similar to the proposed plan i.e., the Vipingo master plan, Diaspora University master plan, the CIDP Taita Taveta County, National Environmental Action Plan. In her opinion she advised that it was key to review such documents and identify the key inter-linkages that would inform adjustments and possible exclusions on the proposed master plan for effective implementation. Additionally, the experts were advised to consider undertaking an adequate stakeholder mapping and identification and engagement process. More emphasis should be given to institutional consultation considering the magnitude of the proposed master plan. However, it was noted that it was still very important to consider consulting the common mwanainchi as well to avoid cases of exclusion.</p>

Item	Discussion
	<p>Mr. Erick acknowledged the ongoing meeting and appreciated the issues that had been addressed. In his comments he observed that the Taita Taveta county being a key wildlife area, wildlife issues and biodiversity aspects were key and thus required adequate consideration during the SESA process. In regards to these, he outlined that it would be prudent to consider KWS as stakeholders as well as review the Lake Jipe management master plan.</p> <p>Mr. Erick also noted that waste management issue should be given considerations in view of the existing dumpsite that serves the Mwatate area adjacent to the proposed site. This would be addressed if the New Sustainable Solid Waste Management Act of 2022 was adequately reviewed and incorporated in the master plan to come up with integrated waste management strategies.</p> <p>In his final comments, Mr. Erick also emphasized on the need to interrogate the mining component which is a significant income source in the Taita Taveta county and its linkage to the proposed master plan. As well as the community concerns over access to land and settlement issues which is pertinent issue in the coastal regions.</p> <p>Additionally, Mr. Erick also observed that with the plans to revamp the old railway line, it was important to put inconsideration the possible impacts on the implementation of the master plan.</p>
	<p>Mr. Reagan noted that due to the expansive nature of the SESA process the team of expert should be considered to be all representative where all the key professionals should be involved in the study to ensure that the study is all inclusive and adequately captures and addresses all issues.</p> <p>Mr. Reagan also highlighted the need for justification on what informed the need for the change of use from its current sisal plantation to the proposed mixed land use development as outlined in the master plan.</p>
Closing remarks	<p>Mr. Regan thanked the attending members for attending the meeting and for sharing their views. It was his pleasure that through the meeting it was possible to get a clear overview of the master plan and have key issues addressed. He noted the importance of having such consultative meetings as they inform on the smooth flow of the SESA process and ensure that each process is effectively and adequately undertaken.</p> <p>Dr. Makori, appreciated the members and thanked them for creating time to attend the Consultative meeting. All the raised concerns, views and feedbacks he assured them were noted and will be put into consideration in the SESA process.</p> <p>There being no other business, Mr. Reagan ended the meeting at 10am.</p>

Question asked/comment Response

Will the SESA inform adjustments on the comprehensive master plan	The Comprehensive mixed land use development master plan considering is still on the proposal stages is open to constructive adjustments that will result into sustainable implementation. The experts are thus open to any critic that will positively inform the implementation process of the proposed master plan.
What category of industries are proposed to be implemented in the designated industrial zone	Based on the proposed master plan, the proponent has proposed establishment of light industries in the designate industrial zone. This is specifically focusing on the processing and packaging industries.
What will be the energy source to power the proposed development master plan	Based on the master plan, the proponent has set aside a section for power sub-station that will be fed with energy from the national Kenya Power grid. However, the positive suggestion on the consideration for renewable energy sources such harnessing of solar energy, hydro-power among other possible energy sources.

SIGNED FOR CIRCULATION

Secretary: Mr. Henry Oindo

Date: 03/04/2023

Sign: 



NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY (NEMA)

PRE-APPLICATION CONSULTATION MEETING ON THE STRATEGIC ENVIRONMENTAL AND SOCIAL
 ASSESSMENT (SESA) PROCESS FOR THE PROPOSED TEITA ESTATE COMPREHENSIVE MIXED LAND USE
 DEVELOPMENT PLAN

ATTENDANCE LIST

Date: 27th March 2023

No.	Name	Institution	Designation	Contacts (Phone No. & Email)	Signature
1.	Selach Oloth	NEMA	CEO	selach@nema.go.ke	
2.	Oscaric Sakya	NEMA		oscaric@nema.go.ke	
3.	David Makeni	Geosurveys	Director	davidmaki@gmail.com	
4.	Henry Oindo	Geosurveys	Env. Expert	henryosurveys@gmail.com	
5.	Mr. DCH	NEMA	DEED	edech@nema.go.ke	
6.	Deugna Amira	NEMA	SCO	deugna@nema.go.ke	
7.					
8.					
9.					
10.					





18.1.2 Public Baraza

**MINUTES FOR A CONSULTATIVE PUBLIC BARAZA HELD ON 31ST MARCH
2023 AT 1400HRS AT MWATATE CHIEF'S OFFICE GROUNDS FOR THE
PROPOSED COMPREHENSIVE MIXED LAND USE MASTER PLAN FOR TEITA
ESTATE PLAN IN MWATATE SUB COUNTY, TAITA TAVETA COUNTY**



KEY PARTICIPANTS/HIGH INFLUENCE REPRESENTATIVES

Name	Institution	Designation
Mr. Nicholas Kambucha	NGAO	Chief
Mr. Josecc Mbella	NGAO	Ass. Chief
Ms. Prudence Lewo	NGAO	Ass. Chief
Dr. David Makori	Geosurveys	Director/Lead Expert
Mr. Henry Oindo	Geosurveys	Env. Expert
Ms. Christine Chonya	Local Leadership	Village Elder-Jombe
Hon. Christopher M.	County Leadership	Former MCA
Mr. Mwamkono Mwanyasi	NGAO	Rtd. Chief
Mr. Kevin Kamau	County Govt.	County Planner
Mr. Meshack Njumwa	Media	Reporter- Mtaani TV
Mr. Samuel Mwanga	NGAO	Ass. Chief
Mrs. Elizabeth Wakufwa	Local Leadership	Village Elder- Singila
Mr. Patience Mwachoji	Local Leadership	Village Elder- Peleleza
Mr. Marzihe Mwazo	Local Leadership	Village Elder- Kariobangi
Mrs. Esther Vose	Business Community	Business Representative
Mr. Anthony Mwasi	Local Leadership	Village Elder- Majengo

Item	Discussion
1. Introduction	<p>The Public Baraza was called to order by the area Chief Mr. Nicholas Kambucha, in his opening remarks Mr. Kambucha appreciated the commitment of the participants who heeded to the call indicating that it was a positive indication of their interest in matters that were affecting the locality. Mr. Kambucha, highlighted the purpose of the meeting noting that as a constitutional requirement for public engagement and consultation prior to any development plan implementation. He introduced the team of experts from Geosurveys and Geospatial Informations Limited who were tasked with the responsibility as a consultant to undertake a Strategic Environment and Social Impact Assessment (SESA) for the proposed Teita Estate Mixed Land Use Development Masterplan. Mr. Kambucha additionally, acknowledged the various representatives of the distinct interest groups that had attended the meeting.</p> <p>Mr. Kambucha, invited Dr. Makori to explain to the attending stakeholders on the technical aspects of the meeting the proposed plan details as well as the role of the SESA and the role of the public regarding the proposed plan. He urged the attending stakeholders to keenly follow through the discussions and take notes as well as ask questions at the questions and answers stage to fully understand the proposed plan's components. He reminded the attendees that it was their responsibility to effectively represent those that couldn't make it to the meeting.</p> <p>Dr. Makori in his remarks gave a brief of the proposed Comprehensive Master Plan outlining the distinct land use for the different sections of the plans as proposed in the master plan. During his brief, Dr. Makori noted that the team of experts while developing the Master plan had from</p>

Item	Discussion
	<p>time to time consulted with the key institutional stakeholders such as the NEMA- Taita Taveta County, Taita Taveta County Government among other key stakeholders. Mrs. Okoth, in her interjection highlighted that ideally it was always advisable to undertake an integrated process that systematically undertakes both the SESA and the master plan development as in most cases the SESA greatly influences the sustainable implementation of the master plan. In integrated process in her professional view would lead to a comprehensive master plan that has adequately addressed all the possible SESA issues.</p> <p>Dr. Makori while giving the brief noted that the master plan had been subjected to all the existing regulatory approvals where the county had already approved the proposed master plan.</p> <p>Mr. Regan raised concerns on whether the inputs that shall result from the SESA would be adequately considered in the master plan considering that the master plan has already been developed.</p>
2. Plan background	<p>Dr. Makori indicated that Teita Estate Limited, had identified the need to introduce a comprehensive mixed land use pattern at the Teita Sisal Estate, that is aimed at enhancing the economic productivity of the area through the proposed estate zoning and subdivision into distinct land use zones. The development is anchored on the tenets of mixed-use developments which is one of the ten principles of smart growth that promotes community design and developments and incorporates it with economy, public health and environment. In this case, the proposed development blends various compatible land uses including commercial, light industrial, residential with pockets of adequate public amenities and support infrastructure. The end game is a well thought out sustainable human settlement where people can live, work and play.</p> <p>Mr. Kelvin Kamau the County Planner in his remarks, applauded the members in attendance for attending the meeting. He explained that the proposed masterplan had been presented to the county offices for approval and that having met all the regulatory approval requirements it had been given a green line to proceed to the next step which is the SESA. He gave reassurance on the county commitment to ensuring that all the necessary legal provisions are adhered to during the planning and implementation stages should the public agree with the proposed plan.</p> <p>Hon. Christopher Mwambingu, commended the proposed plan noting that it was bound to significantly elevate the economic status of the area. He pleaded with the community to fully support the proposed development as during the implementation stages it would result into creation of employment opportunities, lead to availability of land to which the community members were to endeavour and mobilize resources to also get a chance to own part the noble plan.</p>

Item	Discussion
	<p>Hon. Mwambingu lamented that in the past the coastal region and Mwatate in particular had suffered effects of isolation when it came to development plans and such opportunities were key towards improving the economic status of the area. He emphasized the need for consideration of locals while recruiting the workforce that would be tasked with the implementation of the proposed development masterplan.</p> <p>Hon. Mwambingu proposed that the proponent should consider having a discounted rate for the locals as a show of good will to the neighbouring community so as to make it possible for the locals to equally benefit from the arising opportunity.</p> <p>Mr. Mwamkono Mwanyasi in his address reiterated the importance of the community according such plans support. He gave a narrative of how during his tenure as the area chief, developers came up with a proposal of a similar magnitude plan that was vehemently opposed due to political misrepresentation to which the plan was relocated to a different location and implemented from where so much benefits have been accrued by the locals in the plan area.</p> <p>While outlining his reasons for supporting the plan he noted that the locality was bound to significantly grow economically both directly and indirectly attributed to the plan. Among the key benefits he highlighted were :-</p> <ul style="list-style-type: none"> • Employment opportunities • Availability of symbiotic business opportunities • Land owning opportunities to locals • Revenue sourcing from the plan to both the County and National government • Future generation empowerment <p>In checking the support level, the retired Chief, sort to know how many were willingly supporting the proposed plan, to which the attending members unanimously agreed to the proposed plan.</p> <p>Mr. Mwanyasi pleaded with the proponent to consider donating a portion to the community for community related developments as well as invest in Corporate Social Responsibility such as the Mwatate Dam restoration to supplement the water needs of the people of Mwatate.</p> <p>Assistant Chief Mr. Mwanga, in his brief comments highlighted the importance of the plan proponent giving the locals first priority towards acquisition and ownership of the land parcels once it shall be open for sale. He advised the locals that it was prudent for them to form Saccos through which it would be easier to bargain for better deals as this boosts their financial capacity through resource pool.</p>
3. Opinion/ remarks	Mr. Samuel Mwanyasi expressed fear of discrimination of locals with low financial capacity who would not be in apposition to easily afford the

Item	Discussion
	<p>parcel prices. In his remarks he noted that the plan was a good initiative towards empowerment of locals economically and socially.</p> <p>Mrs. Rose Mwaluda applauded the proposed plan claiming it will create economic enhancement opportunities in the locality. Job availability has been an emerging issue in the country with its impacts highly felt within the county at large, in addition to the drought cases thus inhibiting farming in the area, this calls for alternative income sources to guarantee economic growth.</p>
Closing remarks	<p>On behalf of the consultants Dr. Makori applauded the gesture shown by the public towards development matters that was likely to impact on their lives. He emphasized that the role of SESA and by extension such public consultation fora were to identify the possible anticipated impacts and endeavour to maximize on the positive impacts as well as inform on the development of an adequate environmental and social management plan that would focus on elimination, reduction and mitigation of any possible negative impacts. He acknowledged that plans of such magnitude were bound to have implications of varied magnitude and thus needed adequate management plan to ensure the positive aspects are harnessed to the maximum while mitigating the negative impacts. Dr. Makori encouraged the locals to consider coming up with initiatives that would make them beneficiaries to the proposed development masterplan such as the sacco and corporative societies that had been suggested during the meetings. In his reassurance to the public, he assured the attending members that similarly for a would be held from time to time and on need basis to guarantee the sustainable implementation of the proposed development masterplan.</p> <p>Mr. Nicholas Kambucha, the area chief thanked all the attending members for having taken their time to listen through and actively participate in the baraza. Mr. Kambucha noted that that was a great indication of citizen responsibility, he encouraged the locals to always show such commitment whenever called upon in regards to matters development. He urged the consults to put into considerations the comments, views and concerns raised during the public participation for adequate and effective implementation of the proposed masterplan. Additionally, he advised that such meetings should be held often to continuously keep the community and the locals informed as well as address any matters that shall arise in the cause of the pre-implementation and implementation phase of the proposed masterplan.</p>

Question asked/ comment	Response
Will the locals be given an opportunity to name the proposed plan	Dr. Makori in his response noted the necessity of having the locals interest covered in the proposed plan. To this regard the proposed masterplan had adopted a local name “Teita Estate”. He also added that the experts were open to taking further name proposals and submit as recommendations to the proponent for considerations.
Are their possibilities of flexible payment plans especially for locals who do not have the financial capacity to do a one-off payment	As an advisory, Dr. Makori made reference to a suggestion that had been made by an earlier speaker regarding formation of a Sacco by the locals. According to Dr. Makori and based on previous experience it would be much weighty bargaining as an entity as opposed to individuals. However, he noted that it was the responsibility of the consultant to present the public’s concern in its reporting as recommendations and thus the basis of the public participation forum.
Which criteria will be used to allocate lands to locals especially of lower financial capacity who are likely to be disadvantaged	Based on the proposed master plan, the key purpose of the land parcel designated as high density residential zone was to effectively cater for the interest of the locals especially those who were of lower income capabilities. This section consists of subdivision of lower sizes which would be relatively affordable during the implementation stages.
What are the likely estimate price range for the parcels	The prices are likely to be informed by market dynamics. Land values have a tendency of constantly shifting, however the values would be made public once established.
Are there plans to relocate the railway line that that traverses the periphery of the proposed plan area	The masterplan was articulately designed to accommodate the railway line with safety considerations factored such as crossing sections proposed at distinct points awaiting approvals from KENHA and the Railways authority. The existence of the railway line in itself is projected to positively impact on the business processes at the proposed plan area
Upon sub division, will each individual parcel have separate title	Based on the proposed masterplan, each individual parcel after sub-division will bear its title deed.
What arrangements are in place to ensure that locals that will be employed are not exploited through underpayment	The experts reiterates the importance of adherence of the existing legal framework that govern all aspects of such plan implementation to include the labour laws. Additionally, upon approval for implementation, the experts would recommend a formation of Grievance Redress Committee comprised of the proponent’s representative, local leadership, workers and other key government institution representatives purely tasked with the responsibility of handling issues that shall arise as a result of activities relating to the proposed plan implementation.


SIGNED FOR CIRCULATION

Secretary: Mr. Henry Oindo

Date: 05/04/2023

Sign: 

ANNEX I: ATTENDANCE














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CONSULTATIVE PUBLIC PARTICIPATION REGISTRATION FORM
STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR
THE PROPOSED TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN AT TEITA ESTATE

Venue: Nakuru, Chief Location Chief's Ground Date: 31/03/2023

CHIEF LOCATION
STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT

S/No.	Name	Organization/Designation	Contact	Signature
1.	ELIZABETH VAATI	MWATUNGU	0720085252	
2.	LINET MWATA	MWATUNGU	0795586683	
3.	ASSOCIATE CHIEF	MWATUNGU	0799184357	
4.	SAMUEL MURUNDA	MWATUNGU	0769917260	
5.	JUSTIN TAPAKA	MWATUNGU	070442359	
6.	MIRIAM ANUSU	MWATUNGU	07915185732	
7.	KENNY MACHANGU	FORMER CHIEF	0700051420	
8.	MWATUNGU MWATUNGU	MWATUNGU	078805440	
9.	SAMUEL MURUNDA	MWATUNGU	0797323300	
10.	Rachel Mwangi	MWATUNGU	0706005672	
11.	Loice Mwangi	MWATUNGU	0715496705	
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TEITA
MURATE SUB-COUNTY
MURATE LOCATION

CONSULTATIVE PUBLIC PARTICIPATION REGISTRATION FORM

STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR

THE PROPOSED TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN AT TEITA ESTATE -

Venue: Murate Location Chiefs Assembly Date: 31/03/2023

S/No.	Name	Organization/Designation	Contact	Signature
1.	Dorah Mwarero	Singila	0733789637	Mwarero
2.	Holiness Mghoi	Singila	0704977684	Mghoi
3.	Jane Mwarumba	Singila	0715514481	Jane
4.	Faith Mwarumba	Singila	07094084	Faith
5.	Grace Ngereri	Singila		Grace
6.	DOTCE Mwarero	Singila		
7.	Tabitha Mwarero	Merriland		Tabitha
8.	JANEITA NGIB	RELINNY	0712099864	Janeita
9.	ASYLOTI K. NJOKA	Merriland		ASYLOTI
10.	HANNAH Mwarero	Merriland	0726826041	Hanna
11.	HAN CHARLOTHER Mwarero	Singila	0723355587	Hanna
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STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR

THE PROPOSED TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN AT TEITA ESTATE

Venue: Murati Location Chief's Ground Date: 31/03/2023

S/No.	Name	Organization/Designation	Contact	Signature
1.	Abdulla Banda Mwangi	Peleeza	0723583308	[Signature]
2.	LORENE CHAO WANGI	Peleeza	0715545290	[Signature]
3.	JOSEPH KIMBO Mwangi	Peleeza	0769717710	[Signature]
4.	LILIAN Mwangi	MAGHODI	0721345617	[Signature]
5.	LAWRENCE M. Mwangi	MAGHODI	071682581	[Signature]
6.	JOSEPH Mwangi	MAGHODI	011985852	[Signature]
7.	PURVIS SARA	MAGHODI	0213325963	[Signature]
8.	GRACE SARU	MERLANDI	0728728649	[Signature]
9.	FUNICE Mwangi	MERLANDI	0725728649	[Signature]
10.	PERPETUAL Mwangi	MERLANDI	0703971966	[Signature]
11.	MURUGEMI Mwangi	Soko Kals	0113433227	[Signature]
12.	YAI Mwangi	Soko Kals	0716092203	[Signature]
13.	GRACE Mwangi	SINGILA	0721254438	[Signature]
14.	DOREEN Mwangi	SINGILA	0790365848	[Signature]
15.	JOHN Mwangi	TAMU	0713617121	[Signature]
16.				
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MASTERS LOCATION
MURATI ESTATE
MURATI ESTATE



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CONSULTATIVE PUBLIC PARTICIPATION REGISTRATION FORM

STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR

THE PROPOSED TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN AT TEITA ESTATE

Venue: Mt. Kenya National Park Date: 21/03/2023

S/No.	Name	Organization/Designation	Contact	Signature
1.	Samba Alice	Majengo	—	S.M
2.	Agnes Ngara	Majengo	—	A.G
3.	Jubius M. Mwangi	Majengo	—	Handwritten signature
4.	Francisca Rjai	Majengo	0713028549	Handwritten signature
5.	Grace Wanjau	Majengo	0711232172	Handwritten signature
6.	Dinais Mwangi	Majengo	0716222143	Handwritten signature
7.	EVANS MWALUGHA	Majengo	0704477230	Handwritten signature
8.	STEPHEN K. MWALUGHA	Majengo	071	Handwritten signature
9.	Mercy Tuma	Singila	0707051444	Handwritten signature
10.	DATE MUTHONI	Singila	0793803010	Handwritten signature
11.	Rose Atiati	Singila	0741474304	Handwritten signature
12.	Emest Mwangi Njiranga	Njiranga	0728624778	Handwritten signature
13.	JENNIFER MBALI	Singila	0703641216	Handwritten signature
14.	MESTHER MUTHIER	Majengo	0722420901	Handwritten signature
15.	Kasim Kimanga	Singila	0713037258	Handwritten signature
16.	Melissa Njiranga	Singila	0713410124	M.J
17.	Henry Oindo	Env. Expert - Geosurvey	0707961341	Handwritten signature
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TEITA ESTATE
MOUNT KENYA NATIONAL PARK
TEITA ESTATE
MOUNT KENYA NATIONAL PARK



14/01/2023 09:00 AM
The Teita Estate
Ward 14/01/2023 09:00 AM

TEITA ESTATE
WARD 14/01/2023 09:00 AM

CONSULTATIVE PUBLIC PARTICIPATION REGISTRATION FORM

STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR

THE PROPOSED TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN AT TEITA ESTATE

Venue: Mwamba Location Date: 31/03/2023

S/No.	Name	Organization/Designation	Contact	Signature
1.	Bernice Mwanari	Mwamba	0745054592	Bernice
2.	Teresa Kitusi	Mwamba	0728826576	Teresa
3.	Gasper Karia	KARIO - B	0797286963	Gasper
4.	Zilala Nyali	Pebeza	0706045462	Zilala
5.	Sophia Hassan	Pebeza	0703902782	Sophia
6.	Jenimah Magwira	Kidungungu	0711849143	Jenimah
7.	Kavita Mwakio	Singile	0727329269	Kavita
8.	ELIZABETH MWAKIO	MADUNGUNTI	0719541732	ELIZABETH
9.	Mwaka Magwira	Mwamba	0751681823	Mwaka
10.	Jennifer Asiko	Kanobangi	0715688757	Jennifer
11.	Kanfallah Biyuni	Mwamba	0741481250	Kanfallah
12.	Kwame Chepkemel	Kanobangi	0783307511	Kwame
13.	Floraline Mwangombe	Kanobangi	078554104	Floraline
14.	Patience Nyomba	Mwamba	0729239022	Patience
15.	FEEDBACK MWAKIO	Mwamba	070162016	FEEDBACK
16.	John R. Baku	Mwamba	078245917	John R. Baku
17.	Schlesterah Ngugi	Singile		Schlesterah
18.	MSONDO Mwanjani	Mwamba		MSONDO
19.	COSTABLE KASIA	SINGILE	0713627928	COSTABLE
20.	DIKID Mwanjani	SINGILE	0712993298	DIKID



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MAMBALE LOCATION
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STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR

THE PROPOSED TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN AT TEITA ESTATE

Venue: Mambole Location, Olkaria Date: 31/03/2023

S/No.	Name	Organization & Designation	Contact	Signature
1.	Esther D. Mwarungi	CHV / N. Elden	0704219556	[Signature]
2.	Anderson M. Mwarungi		07080711237	[Signature]
3.	Sammy Njunge		070202036	[Signature]
4.	Mwaherwa Kasimari		0790362547	[Signature]
5.	Michael Ngoni		0718694137	[Signature]
6.	JAMES OISANGA		0720416502	[Signature]
7.	Joseph Mzee Mwarungi	Kwapa General Agencies	07225243520	[Signature]
8.	Boniface M. Taro	N. Amwesi	0717588667	[Signature]
9.	PATRICK MWARUNGA		0745044440	[Signature]
10.	KEESON L. MISTOKI		0710296732	[Signature]
11.	Shant Mwangi		0743118250	[Signature]
12.	Valid Mwarigile		0745761330	[Signature]
13.	Martha Kimbi		0710564799	[Signature]
14.	Rammoth Mashohi		0115014048	[Signature]
15.	AVIOPU MWASA	N/ENGL	0115749622	[Signature]
16.	JOHN UAMIMO		0706549385	[Signature]
17.	JORGE JUMA KUBO		0724996717	[Signature]
18.	MERCY WAKESHO	PEUGEOT	0710563497	[Signature]
19.	JENIFA SAMBA	KARLOBANAC B.	07	[Signature]
20.	WINROSE MUTINDA		6713640667	[Signature]



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CONSULTATIVE PUBLIC PARTICIPATION REGISTRATION FORM

STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR

THE PROPOSED TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN AT TEITA ESTATE

Venue: Muramba Location, Chak's Office Date: 31.03.2023

S/No.	Name	Organization & Designation	Contact	Signature
1.	Jostina Malemba		0714 763262	Jostina
2.	Fatma Wanyika		0718229916	Fatma
3.	Catherine Wanyika		0717737372	Cathy
4.	Shirley Mwangi		0701619799	
5.	Fatuma Rashid		0719747108	
6.	Fatima Wani		0717320717	
7.	Euphonia Erenest		0711875972	
8.	Matha Mvainani		0729503762	
9.	Mary Wani		0759280992	
10.	Mwajuma Luvano		0777684956	
11.	Stella Mabishi		0725055994	
12.	Marcelina Mwangi		0710719203	
13.	Clemence Mwangi		0708717116	Clemence
14.	Tatu Kassim		0717657378	Tatu
15.	CLEMENTINA KINAMBO		0793382317	CK
16.	CHRISTINE MACHOHO		0701880437	Christine
17.	ALICE JOSEPH		0724783324	Alice
18.	HELEN MATHO		0724695779	Helen
19.	ELIZABETH MACHAKA		0718595456	Elizabeth
20.	BEATRICE N. MACHAKA		0720473995	Beatrice



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CONSULTATIVE PUBLIC PARTICIPATION REGISTRATION FORM

STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR

THE PROPOSED TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN AT TEITA ESTATE

Venue: Mwambwa Location: Chief's Ground Date: 31/03/2023

S/No.	Name	Organization & Designation	Contact	Signature
1.	Ramachandani Rasind		0717464903	
2.	Jules Mwangi		070193585	
3.	SARAH JOHN		074566572	
4.	Elizabeth Okari		0712325284	
5.	ISAAC OMARI		0112532703	
6.	ASHA ALP		0724647945	
7.	Elipindi ngale		0715112241	
8.	Grace Mwatika	SINGILA		
9.	Beatrice Mwatika		0702700466	
10.	Grace Shali	MAJENGO	0111985452	
11.	Dorothy Kamaka	SINGILA	0706903511	
12.	Luciana Mwangi	MAJENGO		
13.	Enies Mwangi	SINGILA	0726156465	
14.	JANE MUMA	SINGILA	0757470962	
15.	PERCIE SHALI	SINGILA	0712002172	
16.	ROSTACE BARISA	MWATUNGE	0704155007	
17.	Flomehah Kifuso	MWATUNGE	0737933035	
18.	Dina Mwangi	MWATUNGE	0748138099	
19.	GERARD Mzee	MWATUNGE	0726498756	
20.	Selestina WAMUWA	MWATUNGE	0741213290	



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TEITA ESTATE
CHIEF LOCATION

CONSULTATIVE PUBLIC PARTICIPATION REGISTRATION FORM
STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR

THE PROPOSED TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN AT TEITA ESTATE

Venue: Murute Location Chief's Ground Date: 31/03/2023

S/No.	Name	Organization & Designation	Contact	Signature
1.	Nicholas Kamukha	CHIEF	0722632461	[Signature]
2.	Samuel M. Mwangi	ASST CHIEF	0726368883	[Signature]
3.	Prudence Leito	ASST CHIEF	0725257872	[Signature]
4.	Ether Njere	Soubo/Business woman	0113031022	[Signature]
5.	Christine Chacha	Village Elder Soubo	0706149477	[Signature]
6.	Mary Kasiligi		0742265655	[Signature]
7.	Mwambaka Juma	Singila	0702862885	[Signature]
8.	Eliza Beth Wakufwa	Village Elder Singila	0713069656	[Signature]
9.	Eliza Mwakise	Soubo Zarami	0704744943	[Signature]
10.	Patience Mwachofi	Village Elder Peleleza	0710151444	[Signature]
11.	Agness Mjamba		0710151444	[Signature]
12.	Kamran Mwakidoko	MWAMUNGE GARDNER	07233122800	[Signature]
13.	Margaret Mcharo	V. Chair Lady Kariakangi V.	07256326031	[Signature]
14.	Margine Mwaro	Nzee Mbaa Kariakangi Village	0751527623	[Signature]
15.	Beatrice Mwacharo	Kisumu	0748467406	[Signature]
16.	Joseph Moya	MURUTU	0731826111	[Signature]
17.	Boniface Mwangi	MURUTU	0712288853	[Signature]
18.	George Mwaru	PELELEZA	0713497670	[Signature]
19.	Chalo Kilici	MAMENGO	0797060463	[Signature]
20.	Patrick Mwacharo	MURUTU	079685198	[Signature]



1. Lumbungu, 40/06/2022, 4:00 PM
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STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT FOR

THE PROPOSED TEITA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT, MASTER PLAN AT TEITA ESTATE

Venue: Mwaka Location: Chief's Ground Date: 31/03/2023

S/No.	Name	Organization & Designation	Contact	Signature
1.	JOSCE MBELA	ASST. CHIEF - Mwaka	0725932259	
2.	Samuel Nguni	Kanobangi	0719269027	
3.	PETER KILETA	SINGILA	0711803823	
4.	Ernest Mbokoma	Singila	015746656	
5.	Rose Kivusa	Soko ya zamani	0151652	
6.	Mary Mwakulawa	Majengo		
7.	Mary Mwangiwa	Singila	0746367917	
8.	Pavane Kizaka	Madunguraji	0706576712	
9.	Nancy Chari	Merry Land	0729038242	
10.	Mariam Jombo	Majengo		
11.	Mwai Mwachia	Majengo	0757898321	
12.	Holness Wamunda	Mwachungu	0705755058	
13.	Elizabeth Mwangi	Kipusi	0725257850	
14.	Daphne Churi	Mwenda	0723335782	
15.	Rainabu Mwaka	Kipusi	0705966627	
16.	Emelga Wamunda	Majengo	0711808627	
17.	Defence Sam	Mwachungu		
18.	PENIMAH MWAKA	Mwachungu		
19.	MARY MWAKU	KIPUSI	0720397627	
20.	PAUSEITA MSHOI	KIPUSI	0714967183	

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E-mail: andrew@chemistry.cam.ac.uk
Received: 2005-07-20, Accepted: 2005-08-04

THE PROPOSED TEIJA ESTATE COMPREHENSIVE MIXED LAND USE DEVELOPMENT MASTER PLAN AT TEIJA ESTATE

Venue: MIXTE location CHIEF'S Ground Date: 31/03/2023

Venue: MULTI-LOCATION CHEFS GROUND Date: 31/03/2023

S/No.	Name	Organization/Designation	Contact	Signature
1.	Constance Mbatia	Mwasitunge	0706250667	
2.	Rose Mwakula	Mutunga	0797922657	
3.	Dennis Mwangi	Mogno	0240473028	
4.	Linda Mwangi	Mogno	0705830084	
5.	Priscilla Mwangi	Mogno	0713036003	
6.	Josephine Mwangi	Mogno	0114158366	
7.	Emilia Mwangi	Mogno	0797129400	
8.	Hannah Mwangi	Mogno	0719150907	
9.	Mwai Mwangi	Mogno	0113057197	
10.	Charles Mwangi	Mogno	0722561401	
11.	Purity Mwangi	Mogno	0705520400	
12.	Said Mwangi	Mogno	0702852200	
13.	Regina Mwangi	Mogno	0707044400	
14.	SARAH Mwangi	Mogno	0707082111	
15.	William Mwangi	Mogno	0706204702	
16.	Linda Mwangi	Mogno	0710504728	
17.	Georgina Mwangi	Mogno	0720817910	
18.	Theresa Mwangi	Mogno	0718095596	
19.	Theresa Mwangi	Mogno	0718095596	
20.	William Mwangi	Mogno	0722844491	

CHIEF
PRIVATE SECRETARY
H.M. GOVERNMENT

Teita Estate Comprehensive Mixed Land Use Master Plan
Strategic Environmental and Social Assessment (SESA) Final Report
PHOTOS









18.1.3 Validation Workshop

**MINUTES FOR THE VALIDATION WORKSHOP HELD ON 6TH DECEMBER 2023 AT
0900HRS AT PANLIS HOTEL, MWATATE FOR THE PROPOSED COMPREHENSIVE
MIXED LAND USE MASTER PLAN FOR TEITA ESTATE PLAN IN MWATATE SUB
COUNTY, TAITA TAVETA COUNTY**



KEY PARTICIPANTS/HIGH INFLUENCE REPRESENTATIVES

INSTITUTION	DESIGNATION
KISHUSHE	VILLAGE ELDERS
VIRUGA LOCATION	VILLAGE ELDERS
TAITA CHAMBER OF COMMERCE	BUSINESS COMMUNITY
IMAM'S VOI SUBCOUNTY	RELIGIOUS LEADERS
NCA	NCA REPRESENTATIVE
TAITA TAVETA COUNTY	PLANNING, AGRICULTURE & ACCOUNTANT DIRECTOR AGRICULTURE
NGAO	ASSISTANT COUNTY COMMISSIONER RTD. CHIEF AREA CHIEF
POLITICAL REPRESENTATIVES	FORMER MEMBER OF PARLIAMENT FORMER MCA MP REPRESENTATIVE
CONSERVANCIES	TTWWCA - CHAIRPERSON
KPWU	WORKERS REPRESENTATIVES
DIASPORA UNIVERSITY TRUSTEES	DIASPORA UNIVERSITY TRUSTEES
SINGILA MAJENGO	RESIDENTS
KWS	WARDEN
OTHER PARTICIPANTS	<ul style="list-style-type: none">• RANCH MANAGEMENT• MEDIA• WARDENS• WOMEN SCOUT• NYUMBA KUMI• LAND CONTROL BOARD• MP REPRESENTATIVE• TEITA SISAL ESTATE

Item	Discussion																								
1. Introduction	<p>The Public Baraza was called to order by Dr. David Makori, the Lead Expert for the proposed plan who acted as the MC in the validation meeting. Dr. Makori invited Mrs Irene Mwakesho to lead in prayers.</p> <p>Thereafter, Mr. Philip Kyriazi, the Director of Teita Estate Limited gave a brief on the proposed comprehensive mixed land use master plan. The opening remarks highlighted on the benefits associated with the plan such as creation of employment, improved land use practices that would increase value of land in the proposed area and its environs. For the first six months; the purchase would be open for Taita locals. There would be proposed mortgage and loan facilities to safeguard locals' capital power. Additionally, for water and energy, there would be water supply from water harvesting sources, boreholes and energy sourced from clean supplies (such as solar).</p> <p>In his remarks, Mr. Kyriazi highlighted the land size distribution pattern on the proposed comprehensive mixed land use pattern as outlined on the masterplan map.</p> <table border="1"> <thead> <tr> <th>Land size</th><th>Proposed land use</th></tr> </thead> <tbody> <tr> <td>328</td><td>High density residential</td></tr> <tr> <td>487</td><td>Medium density residential</td></tr> <tr> <td>281</td><td>Low density residential</td></tr> <tr> <td>655</td><td>Super low density residential</td></tr> <tr> <td>122</td><td>Industrial</td></tr> <tr> <td>45</td><td>Educational</td></tr> <tr> <td>86</td><td>Recreational facilities</td></tr> <tr> <td>25</td><td>Public utilities</td></tr> <tr> <td>123</td><td>Commercial</td></tr> <tr> <td>247</td><td>Agriculture</td></tr> <tr> <td>53</td><td>Public spaces</td></tr> </tbody> </table> <p>The NEMA Representative, Mr. Reagan Awino presented SESA overview regarding the plan. During his presentation, he gave a brief on the processes that the Teita Estate SESA had undergone, notably</p> <ul style="list-style-type: none"> • The screening overview which was submitted on 21.03.2023 giving an overview of the proposed plan. • This was followed by submission of scoping report done on 20.04.2023. • The draft report submission followed which had been subjected to; <ol style="list-style-type: none"> i. Administrative review, ii. Stakeholders review and iii. Public review- Advert on 2 print medias (The Nation and Standard) and on Kenya Gazette iv. Validation- this was now the purpose of the meeting as mentioned by Mr. Reagan. <p>The NEMA representative informed the sitting that the validation reports will be incorporated in the final SESA report.</p>	Land size	Proposed land use	328	High density residential	487	Medium density residential	281	Low density residential	655	Super low density residential	122	Industrial	45	Educational	86	Recreational facilities	25	Public utilities	123	Commercial	247	Agriculture	53	Public spaces
Land size	Proposed land use																								
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25	Public utilities																								
123	Commercial																								
247	Agriculture																								
53	Public spaces																								

Item	Discussion
	Prior to submission of the final SESA report, the public would have 14 days from the date of the validation meeting for additional comments before submission of the final report.
Decision making and monitoring	Decision making and monitoring will be incorporated in the final SESA report. Teita Estate will be responsible for any implementation and monitoring exercise. NEMA in consultation with other lead agencies will oversee the implementation of the master plan.
Consultant presentation	<p>On behalf of the consultants, Dr. Makori made a presentation regarding impacts of the proposed plan, he highlighted on the various public consultation and stakeholder engagements noting the pertinent issues that were of concern together with the experts' recommendations.</p> <p>The following issues/concerns were raised during the previous engagements;</p> <ul style="list-style-type: none"> • Location of the master plan, • Effects of the project on wildlife, • Habitat fragmentation, • Increased water demand, • Waste management practices, • Increased energy demands, • Pollution concerns, • Effects of climate change, • Workplace health and safety and • Generally socio-economic concerns. <p>The area being semi-arid, there is projection of air pollution from dust emissions. The proponent was advised to be at the fore front for enhanced water supply and for the purpose of dust control through suppressing the dust emanating during any construction activities.</p> <p>Land ownership concerns with reference to the Mavoko Land saga/Athi River were also raised. There was a guarantee that the land ownership details are well documented.</p> <p>To curb the dust emissions negative impacts raised, Dr. Makori assured the sitting that there will be control of dust emissions, individual plan implementation to undertake independent EIAs that are site specific, any negative impacts to be curbed accordingly and lastly decisions on roles and responsibilities of each individual will be clearly defined.</p>
Plan background	<p>Mr. Focus Muwasi while giving a background on the baseline condition of the area, noted that the proposed plan was very timely. In reference to development plan of 1983 for Mwatate, there were no implemented plans as outlined in the previous plan. Land ownership according to Mr. Muwasi has been noted to be a concern in the area and with this master plan, the locals will have the opportunity to own land.</p> <p>Previously, investors willing to invest in development infrastructure failed to take off due to land concerns. However, from history, the proponent was noted to have been a pro-community person. As a result, of awaiting community response, there was request for extension of community grace period.</p>

Item	Discussion
Community concerns	<p>Mrs. Mwakisho in her remarks raised land ownership concerns from the lease holds regarding transfer details description, land ownership and County Government's plan to buy the Sisal estate.</p> <p>The community was assured by the County Government that there were no plans or intentions to take land ownerships.</p>
	<p>Dr. Mwanyumba, in his remarks urged the residents to integrate with others so as to enhance development within the County.</p> <p>Mr. Augustin George, suggested on the need to incorporate Njoro Kubwa in the proposed phase 2 to enhance water supply. He also emphasized on need for access roads to the proposed sites to be well defined and established. He pleaded with NEMA to follow up and ensure that all the negative environmental impacts are adequately addressed.</p> <p>Locals were cautioned against using land ownership details as guarantee for institutional loans which will risk their ownership. It was also noted that from previous engagement with KWS, there was a proposal to implement a water point development along each wildlife corridor.</p> <p>Mr. Ogesha Kamata, was worried on the fate of the workers who would be affected by the implementation of the proposed master plan. In his view, hiving off sections of the sisal plantation was bound to affect the labour force required and thus would render other individuals jobless.</p> <p>Mrs Irene Mwakesho, complimented the impression of the masterplan applauding how the plan took into consideration elephant as a masterprint. She recommended creation of a issues-redress structure to address emerging issues during the implementation phase. She also highlighted on the benefits that were likely to come with the proposed plan.</p> <p>Employment opportunities</p> <p>Mrs. Ankina Nyavu, expressed her support to the plan noting that it was bound to enhance economic growth in the area.</p>
Closing Remarks	<p>Mr. Philip Kyriazi, in his closing remarks thanked the public for honouring the invitation and urged them to be part and parcel of the community development as this was their constitutional right.</p> <p>Mr. Charles Mwemba, in his closing remarks thanked the proponent and NEMA for involving the public in pertinent decision making especially on matters that were likely to affect them. He made a request that the plan printout be made public for ease of access.</p> <p>Mr Celine Ambwasi, representing the Lands Control Board expressed her support to the stakeholder's engagement process saying it was key to success of any plan.</p> <p>Mrs. Constance, representative of KWS, applauded the experts highlighting that among the recommendations given during previous stakeholders' engagement had adequately been captured a show of the experts' willingness to accommodate inputs from the public and other professionals alike to safeguard the environment.</p>

Item	Discussion
	<p>Mr. Reagan, NEMA representative thanked each member for attending the important meeting and urged them to be always attending such meetings as public participation is their right as enshrined in the constitution of Kenya 2010. Mr. Reagan, emphasized on the importance of a continuous stakeholders' engagement process all through the plan phase. He said that NEMA shall take keen note on environmental concerns raised during the entire process.</p> <p>The meeting was officially closed by a word of prayer from Voi Mosque Imam.</p>













SIGNED FOR CIRCULATION







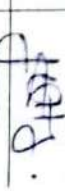

Secretary: Mr. Henry Oindo

Date: 11/12/2023


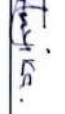










Sign: 

ANNEX I: ATTENDANCE

NO.	NAME	DESIGNATION(WORK/INSTITUTION)	LOCATION	MOBILE NO.	SIGNATURE
1.	STEFANIE KONDOL	FARMER	KISHAMBA	0724657508	
2.	Isaac Mwangi	TRUCK	VO1	0726986906	
3.	Claret Mwangi	RUKINGA-LENSA	VO1	0729583663	
4.	Daniel Mwangi	MALUNGU Hill Chairman	MALUNGU	0722480784	
5.	DORCAS MASONO	FARMER	MWATATE	0766551875	
6.	JOHAN MURALA	MKUNDAHA	MWATATE	0772200000	
7.	EVEN MURUDA	FARMER	MWATATE	0718986271	
8.	MATHIAS ALI	WAMU	VO1	0761465732	
9.	JEFFSON KITEI	NCA-VO1	VO1	0780264065	
10.	FARUK HAMISI	IMAM	VO1	0716724384	
11.	Maseo (Rtd) Mwalugwa	FARMER	VO1	0722288836	
12.	ANNA-K. NYAMBA	MEDIC	MWATATE	0717969700	

NO.	NAME	DESIGNATION(WORK/INSTITUTION)	LOCATION	MOBILE NO.	SIGNATURE
1.	ELIUD N. N. MAMANI	P.T.D SNR CHIEF	NHOLIA	09032201460	
2.	PENETERITA MURHVISWA	Women Leader	MGOLIN	07227489153	PR.
3.	MICHAEL MURHVISWA	Leader	VO1	0722710444	TR
4.	VIOLET KIRURI	Educationalist.	MURITATE	0721705678	Umbili
5.	DAVID K. MSHAKA	Chairman Mbede Land	KRONKE	0715394435	OR
6.	NORIAN MURUKA	BUSINESS	VO1	0720358886	
7.	HAMISI GIMARA	BUSINESSMAN	VO1	0724685557	
8.	AMOS MBELO	B SN	VO1	0713230954	
9.	DAVID KILIEL	BUSINESSMAN	VO1	0720781955	
10.	DANSON MURUKA	Chairman Singula Mayunga	MURUKA	0722602355	
11.	HENRY DINTO	GOVERNOR	GOVERNMENT	0707961341	
12.	FOTIAS MURUKA	N/A	BURRA	0722672469	






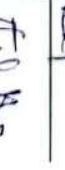






②

NO.	NAME	DESIGNATION(WORK/INSTITUTION)	LOCATION	MOBILE NO.	SIGNATURE
1.	GASPARY Mwambuni	FARMER	MGANGE	0711748417	
2.	JANE NGICHU MUNICA	FARMER	MWANDA	0726690158	
3.	Joseph Mzee Mwambuni	Business	MWITUNGE	0156820145	
4.	PATRICIA M. Mwambuni	TAITA TAVETA SOCIETY Finance Clerk	MWAMBUNI	0735492818	
5.	ROSETHINE Mwambuni	FORUMER MCA	SAGARA	0722297601	
6.	Jimmy Mwambuni	FARMER	MWAMBUNI	0722271143	
7.	Reuben Mng'ara	PETS	WANDARI	0726886328	
8.	Indira M. Mwasasi	MKULIMA	SAGARA	0719373352	
9.	Silas Othman	TAITA SOCIETY ESTATE	MWAMBUNI	0726905021	
10.	Anthony Ombaga	TAITA SOCIETY ESTATE	MWAMBUNI	0725051607	
11.	Reuben Mwambuni	TAITA SOCIETY	MWAMBUNI	07173255610	
12.	Lilian Mwasasi	Teita Estate Ltd	MWAMBUNI	0728744008	












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NO.	NAME	DESIGNATION(WORK/INSTITUTION)	LOCATION	MOBILE NO.	SIGNATURE
1.	JAVAH Muzata		Muzata		
2.	Malins Keme	0742949228	Mumtaz	Sison Dirmis	
3.	Jonah M. Niboga	Heavy Duty Worker 0721359486	Mumtaz	0721359486	
4.	Rebecca Manda	Business	Mumtaz	0711835935	
5.	Phylicia Mwangi	Farmer	VO1	0700610054	
6.	Charles M. Mwangi	TYCA	VO1	6727772079	
7.	Sebastian Atieno	Farmer	Mumtaz	0727933923	
8.	Doreen Mwangi	Business	VO1	072352448	
9.	Amos Kavulu	Heavy Duty Worker	Mumtaz	0721525590	
10.	Mwai Kuma	CHIT - PTO	Municipality	0710605198	
11.	Peter M. Mwangi	Business	Mumtaz	0722757587	
12.	Lytle Mwangi	Business	Mumtaz	0745905227	

4

NO.	NAME	DESIGNATION(WORK/INSTITUTION)	LOCATION	MOBILE NO.	SIGNATURE
1.	KABALEH NUGUMBEI	KECEI - BUSINESS	MURKIE	0720852521	
2.	VERONICA W. OTENO	FARMER	WEGURITA	0715563464	
3.	PETER MURAKIWE	FARMER	WEGURITA	0726219086	
4.	TOLE MURAKIBEN	BUSINESSMAN	BURA	0746244634	
5.	CHARLES WESAMBA	ASSISTANT COUNTY COMMISSIONER MURATHI - INTERIOR	MURATHI	0712252825	
6.	MURICA MURIKWA	FARMER	RONGENIKA	0712296168	
7.	MURUKA KAMUKHAKH	TCUCA	SAGULA	0717940645	
8.	ROBERT MUTHOKA	CGIT - AGRIC	CGIT COUNCIL	0720953557	
9.	ALBERT LENOJO	TCUCA READER	1/81	0720735619	
10.	SOLINA MURUMBI	CIVIL SOCIETY	MURUMBI	0708756813	
11.	JOSEPH MURUMBI	PP - DISCRETIONARY	NO 1	0708756813	
12.	KENNEDY MURORO	KUTIMA KUNUCH	MURATHI	0704021694	

(5)

NO.	NAME	DESIGNATION(WORK/INSTITUTION)	LOCATION	MOBILE NO.	SIGNATURE
1.	- RINE MACHIA WAKETHO	Kenya National Chamber Com.	Murteke	0923228561	
2.	- Ronell Muriyuba Shale	Referssional	Nyache	0722612599	
3.	- Samuel thumac	Baafura university	Mthumacodi	070449155	
4.	- Francis Murethada	Professionel Stethician	Nyache	0724812123	
5.	- Hon Joseph Kenney	MCA-MURTHADA	MURTHADA	0712113222	
6.	- Hon. Mubishi D. Kibaku	MCA-CHAWIA	CHAWIA	0709510332	
7.	- Anderson Kete	TERI R	Saravia	0718787705	
8.	- Daman's Mwaitau	M.N.W. Wundanyi. Sub-C	Mghambyu	0702563896	Daman's
9.	- Damarus Macaosa	Framca	Murata	0723422800	
10.	- Nicholas Kumbucata	Chief Murthite	MURTHITE	0722632461	
11.	- MEGUENGE MATHIA	MP's office	MATHIA	0794279142	
12.	- DION BATHU	KERICI	Mudafe	0726178820	

NO.	NAME	DESIGNATION(WORK/INSTITUTION)	LOCATION	MOBILE NO.	SIGNATURE
1.	Kilele S.M. EBS	Farmer	Voi	0725926223	
2.	Rev. Zachariah Kibira	Bishop's Representative TITA TRADER DIVISION	MURTAJE	0729163512	
3.	David Mwangi	Farmer's Representative Cooperatives	Nairobi	0720928721	
4.	Julia Ombati	Consultant	Nairobi	0716689926	
5.	Andrew Mwangi	LUPTENYA LUNCH	MURURIE	0720975087	
6.	Constance Mwangi	SW-KWS	VEL-TCA	0722290009	
7.	Wesley Kiprop		VOI	0227662890	
8.	Ali Ibrahim Adh	FRPOMER.	VOI	0722524953	
9.	Samuel M. Mwangi	INTERIOR	MURTAJE	0726368883	
10.	Reagan Lwiza	INTERIOR	MURTAJE	0726989993	
11.					
12.					

PHOTOS





19 Appendix 6

19.1 NEMA Licenses

FORM 5



{r.14(4)}

**NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY (NEMA)
THE ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT
CERTIFICATE OF REGISTRATION AS AN ENVIRONMENTAL IMPACT ASSESSMENT/
AUDIT EXPERT**

Certificate No: NEMA/EIA/RC/5449

Application Reference No: NEMA/EIA/ER/11948

This is to certify M/s **David Masereti Makori** of
P.O. Box 30775-00100, Nairobi (Address) has been registered as an Environmental
Impact Assessment Expert in accordance with the provisions of the Environmental Management and
Coordination Act Cap 387 and is authorized to practice in the capacity of a Lead Expert/Associate
Expert/Firm of Experts (Type) **Lead Expert**

Expert Registration No: **2917**

Issued Date : **3/16/2021**


Signature

(Seal)

 **Director-General
The National Environmental Management Authority**



Teita Estate Comprehensive Mixed Land Use Master Plan
Strategic Environmental and Social Assessment (SESA) Final Report

Conditions For Licensing

1. This license expires on 31st December of the year it is issued.
2. The expert shall comply with code of practice and Professional Ethics for EIA/EA experts.
3. The expert shall comply with the attached conditions.

General Conditions

1. All Environment Experts certified and registered in the accordance with the provision of relevant Regulations, may establish professional associations to complement and implement the objectives of the Code of Practice.
2. An Expert shall act professionally, accurately, fairly and in an unbiased manner in undertaking his work.
3. The Director General, in consultation with relevant stakeholders, may from time to time issue guidelines for the proper conduct of registered Environmental Impact and Audit Experts.
4. Every Environmental Expert shall each year attend at least two relevant seminars organized by the authority for the purposes of improving the professional expertise of its members.
5. No Expert shall exploit the inexperience, lack of understanding, illiteracy or other lack of technical knowledge in environmental matters of a project proponent, owner or the public, for his personal gain.

Receiving Instructions

1. No Environmental Expert shall act for any project proponent unless he has received written instructions from such project proponent or his authorized agent.
2. An Environmental Expert shall not unreasonably delay the carrying out of instructions received from the project proponent of his authorized agent.
3. An Environmental Expert shall discharge his responsibilities to the project proponent with due diligence and integrity.
4. An Environment Expert may terminate a contract on carrying out an environmental impact assessment or audit as stipulated in section 8 of the Code of Practice and Professional Ethics of EIA/EA Experts.

Carrying out an EIA/EA

1. An Environmental Expert shall follow relevant regulations or guidelines and directives issued by the Authority.
2. As Environmental Expert shall take due care and diligence to collect the relevant data to address the significant environmental issues in the various stages of the assessment or audit process and fully acknowledge the source of any data that is not the result of his findings.
3. Environmental Expert shall consult widely with all the relevant agencies, stakeholders, interested parties and the general public on all the matters that likely to affect them.
4. An Environmental Impact Assessment or Audit Report shall be based on the Terms of Reference of the Assignment and shall include all the matters relevant to the findings of the study, all the relevant matters are required by statutory provisions, and must be guided by professional standards and judgments.

Responsibility of Lead Environmental Experts

1. (1) An Environmental Lead Expert shall be responsible for the documents prepared by him/her on behalf of the project proponent.
(2) An Environmental Expert shall guide the proponent throughout the preparation of the environmental impact assessment and/or environmental audit, and/or during implementation of the Environmental Management Plan.
(3) An Environmental Expert shall disclose to a client or employer any relationships of conflicting or competing interests that may influence his judgment prior to the carrying out of work.

Misconduct of Environmental Experts

1. An Environmental Expert who contravenes a provision of Code of Practice and Professional Ethics shall be deemed to have committed professional misconduct and shall be subject to disciplinary action by the Authority as appropriate and as stipulated in the Code of Practice and Professional Ethics of Environmental Experts.

Disciplinary Action

1. Where an Environmental Expert is found to have committed professional misconduct by the Environmental Experts' Advisory Committee/Authority shall be punished as stated under section 19 of the code of Practice and Professional Ethics.

Appeals

1. (1) An Expert aggrieved by the decision of the Authority may apply for the review of such decision in the High Court.
(2) If an application for judicial review shall not have been filed at the expiry of 30 days from the date of the decision of the Authority, the director General may publicize the disciplinary action taken against the Expert.



nema
mazingira yetu | shai wetu | wajibu wetu

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/18867

Application Reference No: NEMA/EIA/EL/24916

M/S **David Masereti Makori**
(individual or firm) of address
P.O. Box 30772 - 00100 Nairobi

is licensed to practice in the
capacity of a (Lead Expert/Associate Expert/Firm of Experts) **Lead Expert**
General

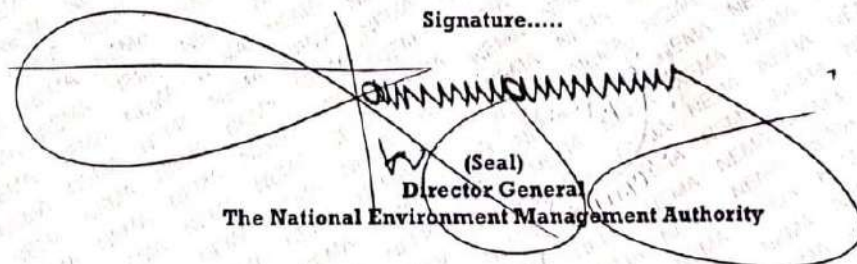
registration number **2917**

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

Issued Date: **2/2/2023**

Expiry Date: **12/31/2023**

Signature.....


(Seal)
Director General
The National Environment Management Authority

P.T.O.



ISO 9001:2015 Certified

