Ministry of Lands and Natural Resources (MLNR)

LAND ADMINISTRATION PROJECT (LAP) II
PROPOSED OFFICE BUILDING IN KUMASI

FINAL DRAFT REPORT
Environmental & Social Impact Assessment (ESIA) Study

Environ Engineering & Management Consult
7th Floor, Trust Towers, Adabraka, Accra
P.O. Box CO1344, Tema, Ghana
Tel: +233 302 235403/4
Email: eemchld@yahoo.com
www.eemcgh.com

October 2010
**LIST OF ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP</td>
<td>Bank Procedure</td>
</tr>
<tr>
<td>CDP</td>
<td>Community Development Programme</td>
</tr>
<tr>
<td>EA</td>
<td>Environmental Assessment</td>
</tr>
<tr>
<td>EEMC</td>
<td>Environ Engineering and Management Consult</td>
</tr>
<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
</tr>
<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
</tr>
<tr>
<td>EMP</td>
<td>Environmental Management Plan</td>
</tr>
<tr>
<td>EMS</td>
<td>Environmental Management Systems</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>ESIA</td>
<td>Environmental and Social Impact Assessment</td>
</tr>
<tr>
<td>ESMP</td>
<td>Environmental and Social Management Plan</td>
</tr>
<tr>
<td>GEPA</td>
<td>Ghana Environmental Protection Agency</td>
</tr>
<tr>
<td>GoG</td>
<td>Government of Ghana</td>
</tr>
<tr>
<td>I&amp;APs</td>
<td>Interested and Affected Parties</td>
</tr>
<tr>
<td>LVB</td>
<td>Land Valuation Board</td>
</tr>
<tr>
<td>MLGRD</td>
<td>Ministry of Local Government and Rural Development</td>
</tr>
<tr>
<td>NGOs</td>
<td>Non-Governmental Organisations</td>
</tr>
<tr>
<td>OP</td>
<td>Operational Policy</td>
</tr>
<tr>
<td>PAPs</td>
<td>Project Affected People</td>
</tr>
<tr>
<td>PCDP</td>
<td>Public Consultation and Disclosure Plan</td>
</tr>
<tr>
<td>PPP</td>
<td>Public Participation Programme</td>
</tr>
<tr>
<td>RAP</td>
<td>Resettlement Action Plan</td>
</tr>
<tr>
<td>RFP</td>
<td>Request for Proposal</td>
</tr>
<tr>
<td>RPF</td>
<td>Resettlement Policy Framework</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS

EXECUTIVE SUMMARY .............................................................................................................................................. V

1.0 INTRODUCTION .......................................................................................................................................................... 1

1.1 BACKGROUND ........................................................................................................................................................... 1
1.2 LAP 2 PROJECT COMPONENTS ................................................................................................................................. 1
1.3 APPLICABLE ENVIRONMENTAL AND SOCIAL SAFEGUARDS ................................................................................ 2
1.4 OBJECTIVES OF THE PROPOSED STUDY .................................................................................................................. 2
1.5 SCOPE OF WORK ........................................................................................................................................................ 3

2.0 POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK .............................................................................................. 4

2.1 NATIONAL ENVIRONMENTAL POLICY REQUIREMENTS ............................................................................................ 4
2.1.1 Ghana’s Environmental Policy ................................................................................................................................... 4
2.1.2 The Environmental Protection Agency Act .................................................................................................................. 4
2.1.3 EA Regulations and Procedures .................................................................................................................................... 5
2.1.4 EA (Amendment) Regulations, 2002 .......................................................................................................................... 5
2.1.5 Land Acquisition and Compensation Laws .................................................................................................................. 5

2.2 NATIONAL LAND POLICY ............................................................................................................................................... 6
2.2.1 Land Ownership and Administration in Ghana ............................................................................................................ 6

2.3 THE WORLD BANK REQUIREMENTS ........................................................................................................................ 8
2.3.1 Environmental Assessment (OP 4.01) .......................................................................................................................... 8
2.3.2 Involuntary Resettlement (OP/BP 4.12) .......................................................................................................................... 8
2.3.3 Bank’s Policy on Disclosure (BP 17.50) .......................................................................................................................... 8

2.4 INSTITUTIONAL FRAMEWORK .................................................................................................................................. 9
2.4.1 Ministry of Environment and Science .......................................................................................................................... 9
2.4.2 Ministry of Lands and Natural Resources ................................................................................................................... 9
2.4.3 Ministry of Local Government and Rural Development ............................................................................................ 10

3.0 DESCRIPTION OF THE PROJECT ENVIRONMENT .................................................................................................. 11

3.1 PHYSICAL ENVIRONMENT .......................................................................................................................................... 11
3.1.1 Location and Size ...................................................................................................................................................... 11
3.1.2 Relief and Drainage ................................................................................................................................................... 12
3.1.3 Climate .................................................................................................................................................................... 12
3.1.4 Vegetation ............................................................................................................................................................. 14
3.1.5 Geology ............................................................................................................................................................... 14
3.1.6 Soils .................................................................................................................................................................... 14

3.2 BIOLOGICAL ENVIRONMENT .................................................................................................................................. 15
3.2.1 Biodiversity .......................................................................................................................................................... 15
3.2.2 Flora ................................................................................................................................................................. 15
3.2.3 Fauna ............................................................................................................................................................... 15

3.3 SOCIO-ECONOMIC ENVIRONMENT ........................................................................................................................ 16
3.3.1 Population ........................................................................................................................................................ 16
3.3.2 Distribution and Density ....................................................................................................................................... 16
3.3.3 Ethnic and Religious Background ........................................................................................................................ 17

3.4 FACILITIES AND SERVICES .................................................................................................................................... 17
3.4.1 Public Health ...................................................................................................................................................... 17
3.4.2 Education ......................................................................................................................................................... 17
3.4.3 Telecommunication ............................................................................................................................................ 18
3.4.4 Electricity .......................................................................................................................................................... 18
3.4.5 Security .......................................................................................................................................................... 18
3.4.6 Water ............................................................................................................................................................... 18
3.4.7 Land Use ........................................................................................................................................................ 18

4.0 PROJECT ALTERNATIVES ............................................................................................................................................. 20

4.1 PROJECT ALTERNATIVES CONSIDERED AND REASONS FOR REJECTION ............................................................ 20
4.2 ALTERNATIVE PROPOSED SITES DEVELOPMENT ................................................................. 20
4.3 NO DEVELOPMENT ALTERNATIVE .................................................................................. 20

5.0 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS .............................................. 21

5.1 POTENTIAL ENVIRONMENTAL IMPACTS .................................................................. 21
5.1.1 Flora and Fauna ........................................................................................................ 21
5.1.2 Soil Erosion ............................................................................................................. 21
5.1.3 Air Quality ............................................................................................................... 21
5.1.4 Wastewater Discharges .......................................................................................... 22
5.1.5 Vehicular Traffic and Safety ...................................................................................... 22
5.1.6 Water Resources ..................................................................................................... 22
5.1.7 Solid Waste ............................................................................................................ 22
5.1.8 Positive Environmental Impacts ............................................................................. 23

5.2 POTENTIAL SOCIAL IMPACTS ...................................................................................... 23
5.2.1 Loss of Livelihood .................................................................................................. 23
5.2.2 Disruption of Utility Services ................................................................................ 23
5.2.3 Occupational Health and Safety ........................................................................... 23
5.2.4 Traffic .................................................................................................................... 24
5.2.5 Positive Social Impacts .......................................................................................... 24
5.2.5.1 Improved land tenure security ........................................................................... 24
5.2.5.2 Increased land-related investment ..................................................................... 24
5.2.5.3 Improved efficiency of land resource use ......................................................... 24
5.2.5.4 Increased information benefits ......................................................................... 24
5.2.5.5 Sustainable land use behaviour ......................................................................... 25

6.0 PROPOSED MITIGATION MEASURES ............................................................................ 26

6.1 ENVIRONMENTAL IMPACTS MITIGATION .................................................................. 26
6.1.1 Flora and Fauna ...................................................................................................... 26
6.1.2 Soil Erosion ............................................................................................................ 26
6.1.3 Air Quality ............................................................................................................. 26
6.1.4 Solid Wastes ......................................................................................................... 26
6.1.5 Water Discharges .................................................................................................. 27
6.1.6 Vehicular Traffic ................................................................................................... 28
6.2 SOCIAL IMPACTS MITIGATION .................................................................................... 28
6.2.1 Loss of Livelihood ................................................................................................ 28
6.2.2 Disruption of Utility Services ................................................................................. 28
6.2.3 Occupational Health and Safety ........................................................................... 29

7.0 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) .................................... 30

7.1 IMPLEMENTATION ARRANGEMENT .......................................................................... 30
7.2 MONITORING PLAN ..................................................................................................... 31
7.2.1 Monitoring ............................................................................................................ 31
7.3 ESMP BUDGET ............................................................................................................ 32

8.0 PUBLIC CONSULTATION AND DISCLOSURE .................................................................. 38

9.0 CONCLUSIONS AND RECOMMENDATIONS .................................................................... 39

10.0 ANNEXES ......................................................................................................................... 40
10.1 ANNEX 1: SITE PLAN FOR PROPOSED PROJECT, KUMASI ......................................... 40
10.2 ANNEX 2: OUTCOME OF CONSULTATIONS HELD ...................................................... 41
10.3 ANNEX 3: SITE PHOTO GALLERY ............................................................................... 44
10.4 ANNEX 4: IN-COUNTRY DISCLOSURE REPORT .......................................................... 45
List of Figures

Figure 3.1: Average Rainfall Distribution Data for the Kumasi Metropolis (1961-2005) .......................... 13
Figure 3.2: Mean Daily Potential Evapotranspiration (1964-2004) for the Kumasi Metropolis .......... 14

List of Tables

Table 7.2: Budget and Responsibilities ................................................................................................. 32
Table 7.3: Environmental and Social Management Plan ....................................................................... 33
EXECUTIVE SUMMARY

Introduction

The Government of Ghana has received funding from the International Development Association (IDA) towards the cost of the second phase of the Land Administration Project (LAP II). In 1996, the Ghana Government developed a National Land Policy to guide land administration and its transactions in Ghana. To implement the policy, a Land Administration Project (LAP I) was developed with support from development partners including the IDA. The LAP I have been under implementation since 2003. After initial implementation challenges, the project has advanced with some success stories over the last couple of years. As a result of the improved performance and the fact that LAP I laid the basis for land administration in Ghana, it has become expedient that the second phase is developed even as LAP I comes to an end by December 2010.

LAP I triggered two World Bank safeguard policies, the environmental assessment (OP 4.01) and the involuntary resettlement (OP 4.12). This led to the preparation of an environmental impact assessment and a resettlement policy framework respectively as the specific site of the potential impact were not known at the time of project preparation. Under LAP II, the project activities triggered the same safeguards policies. However, the instruments to be developed will be different since the sites for the impacts are known. As a result, the Government of Ghana has prepared this Environmental and Social Impact Assessment (ESIA) in compliance with the Environmental and Social Safeguards requirement.

Objectives of Proposed Study

The objective of this assignment is to screen for potential environmental and social impacts; identify and implement measures that will either minimize or help manage negative environmental and social impacts, monitor and report on the status of implementation of the plans and measures for better environmental and social outcome for the project. In carrying out this consultancy, the consultant would undertake the following activities:

- Policy, legal and Administration Framework;
- Description of the Project Environment;
- Project Alternatives;
- Baseline Data Study;
- Potential Impacts Assessment (positive and negative) and Mitigation Measures;
- Public Consultation, Stakeholder participation and disclosure; and
- Preparation of an Environmental and Social Management Plan.
Policy, Legal and Administrative Framework

The relevant policies, legal and administrative frameworks considered are:

- Ghana’s Environmental Policy;
- National Land Policy
- Resettlement and Compensation Policy
- The Environmental Protection Agency Act of 1994 (Act 490);
- The Environmental Assessment Regulations (LI 1652), and EIA procedures;
- Local Government Act, 1993 (Act 462); and
- The World Bank's policies and guidance on Environmental Assessment (OP 4.01), and also the Involuntary Resettlement (OP/BP 4.120

Institutional Framework

This includes:

- Ministry of Environment and Science;
- Ministry of Lands and Natural Resources; and
- Ministry of Local Government and Rural Development

Description of the Project Environment

Under the Land Administration Project II (LAP II), the Ministry of Lands and Natural Resources intends to provide office buildings for the public land sector agencies for the regional office in Kumasi. The site proposed for these civil works is a land belonging to the Lands Commission. The Kumasi project site is all the piece of land known as site for Civic and Cultural uses situated at Danyame, Ridge residential area layout. It is located to the South-east of the Junior Military Officers Mess at Danyame, near the Catering Rest House in Kumasi (Site plan attached). It is an 11.21 acres land bounded to the East by Government Road, on the South by a public park, on the South-West by the Pine Avenue and on the North-West by Mess Avenue. It is currently undeveloped but has few people farming on the site. Conditions at the site proposed for the project triggers World Bank OP 4.12 and OP 4.01. Consequently, this Environmental and Social Impact Assessment (ESIA) and an abbreviated Resettlement Action Plan has been prepared to address the potential environmental and social impacts
Project Alternatives

Alternative Proposed Sites Development

The site proposed for the office building for the LSA’s in Kumasi has been selected taking cognizance of the ownership of the site, its proximity to the Administrative Centre of Kumasi, current zoning status by the Town and Country Planning Department of Kumasi, etc which best meet the needs of the stakeholders as well as the overall broad goal and objectives of the LAP project. If the selected site rejected, getting alternative suitable land in the neighbourhood of the Kumasi Ministries Annex will be impossible. The result will be that, the Public Sector Land Agencies in Kumasi will continue to remain scattered thus not promoting the needed restructuring and improvement of land administration in Ghana.

No Development Alternative

The no development alternative scenario is to allow the status quo to remain. The implication is that the Public Sector Land Agencies will continue to operate from their present offices/locations. This will not help to remove the inherent inefficiencies identified in the land sector, which is not promoting efficient land administration.

Potential Environmental and Social Impacts

The proposed project does not have major environmental and social impacts. The minimal environmental and social impacts identified, which could be adequately mitigated through the adoption of basic construction best practices and observance of sound environmental practices covered the following areas:

Flora and fauna, soil erosion, air quality, vehicular traffic and safety, and occupational health and safety related issues.

The Positive Environmental Impacts

- Improved aesthetics of Public Sector Land Agencies offices;
- Improved efficiency in resource use, administration and cost effectiveness of the land sector agencies;
- Improved working environment and occupational health and safety of staffs of land sector agencies;
- Proper demarcations of forest reserves, conservation areas, prevention of encroachment and reduced land degradation and loss of biodiversity.

The minimal potential social impacts identified are related to loss of livelihood by affected crop farmers, disruption of utility services and traffic impact. The related positive social impacts are:
• Employment opportunities for both high and skill labour
• Improved land tenure security
• Increased land-related investment
• Improved efficiency of land resource use
• Increased information benefits
• Sustainable land use behaviour

Environmental and Social Management Plan (ESMP)

An ESMP (see table 7.1 below) as an EA instrument defining the project-specific proposed environmental and social control and mitigation measures, monitoring programs, and responsibilities developed based upon an assessment of environmental and social impacts and risks for the proposed project has been prepared.

Summary of Consultation Activities

The consultations focused on:
1. Assessing the views and understandings of the Land Administration Project (LAP);
2. Identifying and Assessing environmental and social impacts of the proposed project;
3. Examining the zoning status of the proposed project site and compliance and enforcement of environmental regulations regarding the proposed project.
4. Environmental and social concerns of the stakeholder institutions and affected persons for integration into the ESMP to ensure sustained environmental and social compliance monitoring.

The consultation was mainly in the form of open interviews with key informants from the Ministry of Lands and Natural Resources, The Lands Commission, Regional Land Survey Department, Town and Country Planning, the Environmental Protection Agency, Kumasi and the affected persons. The consultations revealed that there are no major negative environmental and social concerns of the proposed project. The summary of the outcome of the consultation is presented in Annex 2.
INTRODUCTION

BACKGROUND

The Government of Ghana has received funding from the International Development Association (IDA) towards the cost of the second phase of the Land Administration Project (LAP II). In 1996, the Ghana Government developed a National Land Policy to guide land administration and its transactions in Ghana. To implement the policy, a Land Administration Project (LAP I) was developed with support from development partners including the IDA. The LAP I have been under implementation since 2003. After initial implementation challenges, the project has advanced with some success stories over the last couple of years. As a result of the improved performance and the fact that LAP I laid the basis for land administration in Ghana, it has become expedient that the second phase is developed even as LAP I comes to an end by December 2010.

LAP II PROJECT COMPONENTS

The project objectives will be achieved through the implementation of four (4) main components as follows:

Component 1: Strengthening the Policy, Legal and Regulatory Framework for Land Administration. The component will provide a platform for continued work on the legal and regulatory framework governing land administration and land use, building upon the accomplishments achieved under LAP I. It will support completion of the Land Bill and Land Use and Planning Bill (currently in draft forms) and their associated legislative instruments (LI). LI's will also be prepared for the Administration of Stool Lands Act, Act 481 of 1994 and the Lands Commission Act, Act 767 of 2008. In addition, the component will support the dissemination of information concerning the new laws and regulations, and training of stakeholders. The judiciary will be supported under this component to review court processes and rules in order to improve court performance in the adjudication of land cases and to build capacity of relevant land sector players (including the Judiciary) in alternative dispute resolution mechanisms.

Component 2: Decentralizing and Improving Business and Service Delivery Processes. This component will improve transparency and reduce the time and cost involved in delivery of services such as deed and title registration and other services provided by the land sector agencies. To achieve these objectives the project will finance the functional decentralization of services to the regions and selected districts; and consultant services to re-engineer and automate business processes to shorten the time taken to deliver services. As part of decentralization of land administration services, new and selected existing Customary Land Secretariats (CLS) will be supported in collaboration with traditional authorities. This component will also support automation and proper records management by making functional and upgrading the LIS piloted under Phase 1.
and the open source Cadastre and registration system proposed by FAO which will be integrated with the LUPMIS and the UMLIS.

Component 3: Improved Maps and Spatial Data for Land Administration.
This component will provide up to date maps and other spatial products and develop the infrastructure for collecting and sharing data and information to be used as inputs directly or indirectly in land administration.

The component aims to develop human resources capacity and provide logistical support and equipment to the land sector agencies, land owners as well as the private sector to improve service delivery. A comprehensive review of the human capacity skill requirements will be undertaken for the land sector agencies. The Human Resource Division of the Lands Commission (LC) will be strengthened to carry out skill gap analysis in order to develop a coordinated staff training and recruitment program for the LC, OASL and T&CPD. A new Lands Commission regional office will be constructed in Kumasi in the Ashanti region. The component will also provide capacity for private and public sector service providers including surveyors, planners, valuers, real estate agents, tenant farmers and NGOs involved in land administration such as CICOL. The implementation of the gender, civil society engagement and communication (i.e. public education and outreach) strategies prepared under Phase 1 will be supported under this component and integrated across all the project components.

**Applicable Environmental and Social Safeguards**

LAP I triggered two World Bank safeguard policies, the environmental assessment (OP 4.01) and the involuntary resettlement (OP 4.12). This led to the preparation of an environmental impact assessment and a resettlement policy framework respectively as the specific site of the potential impact were not known at the time of project preparation. Under LAP II, the project activities triggered the same safeguards policies. However, the instruments to be developed will be different since the sites for the impacts are known. As a result, the Ministry of Lands and Natural Resources has been prepared this Environmental and Social Impact Assessment (ESIA).

**Objectives of the Proposed Study**

The objective of this assignment is to screen for potential environmental and social impacts; identify and implement measures that will either minimize or help manage negative environmental and social impacts, monitor and report on the status of implementation of the plans and measures for better environmental and social outcome for the project.
**Scope of Work**

In carrying out this assignment, the consultant would undertake the following activities:

- Policy, legal and Administration Framework
- Description of the Project Environment
- Project Alternatives
- Baseline Data
- Potential Impacts (positive and negative) and Mitigation Measures:
  - Public Consultation, Stakeholder participation and disclosure
  - Environmental and Social Management Plan:
POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

This section reviews the national policies, regulations, procedures and legal provisions relating to the environment, land ownership or acquisition, resettlement and compensations. The reviews have been in comparison with World Bank safeguards policies. The relevant policies, legal and administrative frameworks considered are:

- Ghana’s Environmental Policy;
- National Land Policy
- Resettlement and Compensation Policy
- The Environmental Protection Agency Act of 1994 (Act 490);
- The Environmental Assessment Regulations (LI 1652), and EIA procedures;
- Local Government Act, 1993 (Act 462); and
- The World Bank’s policies and guidance on Environmental Assessment (OP 4.01), and also the Involuntary Resettlement (OP/BP 4.120

NATIONAL ENVIRONMENTAL POLICY REQUIREMENTS

Ghana’s Environmental Policy

The environmental policy of Ghana formulated in the National Environmental Action Plan (NEAP) of 1993 hinges strongly on “prevention” as the most effective tool for environmental protection. The policy aims at a sound management of resources and environment, and the reconciliation between economic planning and environmental resources utilization for sustainable national development. It also seeks among others, to institute an environmental quality control and sustainable development programs by requiring prior environmental assessment of all developments, and to take appropriate measures to protect critical eco-systems, including the flora and fauna they contain against harmful effects, nuisance or destructive practices. The adoption of the NEAP led to the enactment of the EPA Act 1994 (Act 490); and subsequently the passing of the Ghana EIA Procedures into the EA Regulations, 1999 (LI 1652).

The Environmental Protection Agency Act

The Environmental Protection Agency (EPA) Act, 1994 (Act 490) grants the Agency enforcement and standards-setting powers, and the power to ensure compliance with the Ghana environmental assessment requirements/procedures. Additionally, the Agency is required to create environmental awareness and build environmental capacity as it relates to all sectors, among others. The Agency (including its Regional and District Offices) is also vested with the power to determine what constitutes an ‘adverse effect on the environment’ or an activity posing “a serious threat to the environment or public health”, to require environmental assessments (EA), environmental
management plans (EMP) etc. of an ‘undertaking’, to regulate and serve an enforcement notice for any offending or non-complying undertaking. The Agency is required to conduct monitoring to verify compliance with given approval/permit conditions, required environmental standard and mitigation commitments. Furthermore, a requirement by EPA for an EA precludes any authorising MDA from licensing, permitting, approving or consenting such undertaking, unless notified otherwise.

**EA Regulations and Procedures**

The EA Regulations combine both assessment and environmental management systems. The regulations prohibit commencing an undertaking/activity without prior registration and environmental permit (EP). Undertakings are grouped into schedules for ease of screening and registration and for EP. The schedules include undertakings requiring registration and EP (Schedule 1), EIA mandatory undertakings (Schedule 2), as well as Schedule 5-relevant undertakings (located in Environmentally Sensitive Areas).

The Regulations also define the relevant stages and actions, including: registration, screening, preliminary environmental assessment (PEA), scoping and terms of reference (ToR), environmental impact assessment (EIA), review of EA reports, public notices and hearings, environmental permitting and certification, fees payment, EMP, suspension/revocation of permit, complaints/appeals etc.

**EA (Amendment) Regulations, 2002**

The EA (Amendment) Regulations were made to amend sections of the EA fees regime of LI 1652 (the "principal enactment") on fee payment for environmental permit (EP) and certificate issued by the Agency.

**Land Acquisition and Compensation Laws**

Acquisition of land for infrastructure projects is regulated by the Lands (Statutory Wayleaves) Act 1963 Act 186 (Vide Section 1, 2(1) and 2, 6 (1-5). A wayleave instrument contains the following: A description (with measurements) of the land affected by the statutory wayleave together with a plan showing the position of the works. A copy of wayleave instrument is served on the owner or occupier of the land affected by the statutory wayleave. Under Section 6(1) of the Act, any person who suffers any loss or damage as a result of the construction, maintenance etc shall be entitled to compensation. A claim for compensation shall be made to the Minister in the prescribed form not more than three months after the date of declaration made by the President under Section 1 of the Act.
The relevant legal and regulatory provisions include:

- The State Lands Act, 1962
- The Lands (Statutory Wayleaves) Act, 1963

Land ownership may be categorized into these 2 main forms:

- Customary land comprising stool and family lands; and
- Public land comprising state and vested lands.

Public Institutions involved in Land Administration include:

- Land Commission
- Land Title Registry
- Survey Department
- Land Valuation Board
- Department of Town and Country Planning
- Office of the Administrator of Stool Lands
- Ministry of Lands and Natural Resources

**National Land Policy**

The Land Policy of Ghana (1999, revised in 2002) aims at promoting “the judicious use of the nation’s land and all its natural resources by all sections of the Ghanaian society in support of various socio-economic activities undertaken in accordance with sustainable resource management principles and in maintaining viable ecosystems”. Key policy provisions include facilitating equitable access to land, guaranteeing security of tenure and protection of land rights, ensuring sustainable land use and enhancing land capability and land conservation

**Land Ownership and Administration in Ghana**

There are four categories of land ownership in Ghana governed by both customary practices and enacted legislation. These are:

a) State lands, compulsorily acquired by the government through the invocation of appropriate legislation and held in trust for the entire people of Ghana;
b) Private lands belonging to stools, skin or family communities, and held in trust on their behalf (by chiefs, tendana, family heads, etc.);

c) Vested lands, belonging to stools or skins, but vested in the State in trust for the people of the stool or skin or family from which it was vested; and

d) Private lands given or sold as freehold by stools, skins and families to individuals, corporations and institutions [only freehold private ownership obtained prior to the enactment of the 1992 Constitution is legally recognized as Act. 267 (5) bars creation of freehold interests in land out of Stool land and by implication Skin land as well].

The Lands Commission is responsible for and managing State and vested lands and for providing consent to the disposition of stool, skin and family lands provided the development is consistent with the approved planning schemes of the area. Private lands, estimated to account for more than 80 percent of the country's total land area are communally owned and held in trust for the community and its future generations by a stool, a skin, or family as symbols of customary authority. A famous Ghanaian saying depicts this tradition - “land belongs to the many that are dead, to the few that are alive and to the numerous who are yet to be born.” Irrespective of the governance structure established according to their customary practices, all allodial (original) title holders hold the land in trust for the subjects of the stool, skin, clans or families in accordance with their customary laws. Although allocation of usufruct rights is retained by the allodial owners, the Office of the Administrator for Stool Lands (OASL), collects rents and distributes the proceeds in accordance with the provisions of the 1992 Constitution in the proportion of: (a) the district assembly 49.5 percent; (b) the stool or skin 22.5 percent; (c) the customary council 18 percent and (d) OASL 10 percent to cover its administrative expenses as provided in the 1992 Constitution.

In addition to these two public sector agencies, there are four other agencies involved in land administration. These are: (a) the Land Title Registry responsible for registering interests in land and issuing title certificates; (b) the Survey Department responsible for cadastral, geodetic and hydrographic surveying and the production of base maps and cadastral plans for each individual parcels of land for which title certificate is issued (c) the Land Valuation Board responsible for Government property valuation functions such as compiling valuation rolls for local authorities for taxation purposes, assessing compensation in state acquisitions, establishing the capital value of state-owned properties and valuing mineral and forest concessions; and (d) the Town and Country Planning Department (TCPD) responsible for land use planning in urban and peri-urban areas. All of these agencies operate under the Ministry of Lands and Forestry except TCPD which is under the Ministry of Environment Science.
THE WORLD BANK REQUIREMENTS

The World Bank's ten safeguard policies are designed to help ensure that programs proposed for financing are environmentally and socially sustainable, and thus improve decision-making. The Bank’s Operational Policies (OP) are meant to ensure that operations of the Bank do not lead to adverse impacts or cause any harm. They include guidance on EA requirements.

Of the Bank’s Safeguard Policies, two are relevant for consideration under the project. These are:

- Environmental Assessment (OP 4.01);
- Involuntary Resettlement (OP/BP 4.12);

Environmental Assessment (OP 4.01)

The OP 4.01 requires among others that screening for potential impacts is carried out early, in order to determine the level of EA to assess and mitigate potential adverse impacts. The Bank’s project screening criteria group projects into three categories:

- Category A – A proposed project is classified as Category A if it is likely to have adverse impacts that are insignificant (based on type, location, sensitivity, and scale of the project and the nature and magnitude of its environmental impacts).
- Category B – A proposed project is classified as category B if the potential impacts are typically site specific, reversible in nature, less adverse than category A projects, and for which mitigatory measures can be designed more readily.
- Category C – A proposed project is classified as a category C if there are minimal or no adverse impacts.

Involuntary Resettlement (OP/BP 4.12)

The Policy on Involuntary Resettlement is intended to assist displaced people arising from development projects, in order not to impoverish any affected people within the area of influence of projects. An action plan that at least restores the standard of living must be instituted, in cases where resettlement is inevitable or loss of assets and impacts on livelihood occurs.

Bank’s Policy on Disclosure (BP 17.50)

The Bank’s policy on disclosure requires that all the people residing in the given areas of a project have the right to be informed of the proposed development project. Prior to project appraisal therefore, the summary of the study of the development action along with other relevant information should be disclosed in the info-shop and in the project area as well as nationally. The ESIA and
Abbreviated Resettlement Action Plan (ARAP) will be submitted to the Bank’s Info shop and disclosed on the project website. The ESIA is also being distributed to relevant ministries, DA offices, and other relevant public locations. The issues raised in the documents will continue to be discussed with different stakeholders during implementation.

INSTITUTIONAL FRAMEWORK

Ministry of Environment and Science

The Ministry of Environment and Science (MES) was established in 1994. Its creation was in response to a national development need to integrate environmental, scientific and technological considerations into the country’s sectoral, structural and socio-economic planning processes at all levels.

The declared mission of MES is to establish a strong national scientific and technological base for accelerated sustainable development of the country to enhance the quality of life for all. Among other things, this will be done through the development and promotion of cost-effective use of appropriate technologies.

Among the main areas of policy thrust for MES, are Sanitation and Waste Management (Technical Options) and Science and Technology promotion, education and acculturation.

Ministry of Lands and Natural Resources

The Vision and Mission of the MLNR is to ensure the sustainable management and utilisation of Ghana’s lands, forests, wildlife and mineral resources for socio-economic growth and development.

The Ministry's activities and implementation of the current reforms are in pursuance of its set aims and objectives. These are:

- Develop and manage sustainable lands, forest, wildlife and mineral resources;
- To facilitate equitable access, benefit sharing from and security to land, forest and mineral resources;
- Promote public awareness and local communities participation in sustainable forest, wildlife and land use management and utilization;
- To review, update, harmonise and consolidate existing legislation and policies affecting land, forest and mineral resources;
- To promote and facilitate effective private sector participation in land service delivery, forest, wildlife and mineral resource management and utilization;
- Develop and maintain effective institutional capacity and capability at the national, regional, district and community levels for land, forest, wildlife and mineral service delivery;
• Develop and research into problems of forest, wildlife, mineral resources and land use;

Ministry of Local Government and Rural Development

The Constitution of any country constitutes the basic law of the land and any law that derogates from it could be said to be unconstitutional to the extent of the derogation.

Chapter 20 of the Constitution provides for decentralization and local government. It prescribes the features that the decentralized system must possess.

Parliament is given power to enact laws and to provide for the taking of such measures as are necessary to enhance the capacity of local government authorities to plan, initiate, co-ordinate, manage and execute policies in respect of all matters affecting the people within their areas with a view to achieving the localization of those activities.

The Local Government Act and the Ministry of Local Government and Rural Development are the legislative and institutional expressions of the provisions in Chapter 20 of Ghana’s 1992 Constitution.
DESCRIPTION OF THE PROJECT ENVIRONMENT

PHYSICAL ENVIRONMENT

Location and Size

A proposed centralized Regional Head Office building will be constructed for the Land Sector Agencies in Kumasi. Expression of Interest (EOI) are yet to be issued in order to select firms to be subjected to further procurement processes for selection to design and supervise the construction of the Head office building of the Lands Commission. Upon completion of the design of the proposed building and granting of no objection Request for Proposals (RfPs) will be issued to prospective firms to be short-listed through the required procurement processes.

As part of the processes to ensure that the appropriate office building with adequate facilities is constructed, the Ministry of Lands, Natural Resources and Mines/LAPU will engage the services of consultants to undertake a “Feasibility Study on the implementation of the construction of the new Lands Commission’s Office building in Kumasi”. Based on preliminary discussions LAPU has held in July 2010 with other stakeholders, the proposed office building would be expected to meet the following broad specifications:

- The building should house approximately 200 people.
- The building is not required to go beyond 3-4 levels.
- The proposed building will provide approximately 3200m² of office space and parking space for about 100 cars.

The consultancy for the geotechnical analysis of the site for the proposed building are yet to be conducted by the Architectural and Engineering Services Limited (AESL) so as to inform the design of the building for protection against earthquake and compliance with the required building standards. Mitigation measures will be put in place for any possible new impacts that will be identified after the geotechnical analysis as part of the implementation.

The Kumasi project site is all the piece of land known as site for Civic and Cultural uses situated at Danyame, Ridge residential area layout. It is located to the South-east of the Junior Military Officers Mess at Danyame (see Annex 1: Site Plan for Proposed project, Kumasi), near the Catering Rest House in Kumasi. (Site plan attached). The proposed site for the project is a 3acre parcel of land bounded to the East by Government Road, on the South by a public park, on the South-West by the Pine Avenue and on the North-West by Mess Avenue. It is currently undeveloped but has few people farming on the site.
Relief and Drainage

The Kumasi Metropolis lies within the plateau of the South–West physical region which ranges from 250-300 metres above sea level. The topography is undulating. The city is traversed by major rivers and streams, which include the Subin, Wiwi, Sisai, Owabi, Aboabo, Nsuben among others.

Climate

The Metropolis falls within the wet sub-equatorial type. The average minimum temperature is about 21.5°C and a maximum average temperature of 30.7°C. The average humidity is about 84.16 per cent. It has the double maxima rainfall regime (214.3mm in June and 165.2mm in September).

The project site is located within the Kumasi Metropolis which falls within the moist semi-deciduous forest zone of Ghana and characterized by a double maximum rainfall pattern. Rainfall in Kumasi varies from 36.0 to 549.0 mm/month. The major rainy season is between May and July, with the highest rainfall in June (214.3 mm average) while the minor rain is between September (165.2 mm) and October. The dry season starts in November and lasts until March. The dry Harmattan winds (North Easterly Trade winds) are usually severe between January and February. The average humidity of the Kumasi Metropolis area is about 84% at 0900 GMT and 60% 1500 GMT. The highest mean monthly temperature for the project area is about 30°C occurring between March and April while the lowest which is about 22°C occurs in August.
Figure 0.1: Average Rainfall Distribution Data for the Kumasi Metropolis (1961-2005)
Vegetation

The city falls within the moist semi-deciduous South-East Ecological Zone. Predominant species of trees found are Ceiba, Triplochlon, Celtis with Exotic Species.

Geology

The metropolitan area is dominated by middle Pre-cambrian rock. It is within the plateau of the south-west physiological region, which ranges between 250 and 350 metres above sea level.

Soils

The major soil type of the metropolis is the Forest Ochrosol. The detailed soil associations are the following: Kumasi - Offin Compound Association; Bomso – Offin Compound Association; Nhyanao - Tinkong Association; Bomso – Suko Simple Association; Bekwai – Oda Compound Association and Bekwai – Akumadan – Oda Compound Association.
**BIOLOGICAL ENVIRONMENT**

**Biodiversity**

Biodiversity is a measure of the variety of life, and its processes, including the variety of living organisms, genetic differences among them, and the communities and ecosystems in which they occur (Langner and Flather 1994). Biodiversity is often interpreted as a measure of biological complexity and variation within an area. Although there is no specific regulatory guidance on methods for assessing and monitoring biodiversity, the concept is widely interpreted as a measure of ecosystem integrity and stability.

**Flora**

The project area falls under the moist semi-deciduous forest type of vegetation, comprising of trees, thickets and grassland as a result of continuous farming practices. The vegetation consists of a cover of grasses interspersed with herbaceous, tree and shrub species. No unique plant growth or plant communities of ecological sensitivity occur on the site.

**Fauna**

The fauna in the project area is similar to that of the moist semi-deciduous forest but with the exception of some species of birds, reptiles and insects, most of them have been decimated through hunting and general habitat degradation.

i. Birds - Resident species include the hooded vulture (*Neophron monachus*), Pied crow (*Corvus albas*) Cattle egrets (*Ardeola ibis*) and Grey headed/Common bulbul (*Pycnonotus barbatus*). These are common Ghanaian species that are associated with forest habitats. No globally threatened species was observed in the project area.

ii. Reptiles - The common ones include the Agama lizard (*Agama agama*), wall gecko (*Gekkonidae*) and black cobra (*Naja melanoleuca*).

iii. Insects - Various insects both pests and beneficial, can be found in the area. These include various species of bees (eg. *Apis mellifera*), moths (eg. *Thaumatotibia leucotreta*), butterflies (eg. *Battus polydamas*), mosquitoes (*Anopheles gambiae*) and ants (*Cataulacus guineensis*).

iv. Mammals – Various rodents and some domesticated animals can be found in the area. These include mice, rats, sheep, goats, and pigs.
SOCIO-ECONOMIC ENVIRONMENT

The primary purpose of documenting the socioeconomic setting of the Project area is to provide an understanding of socioeconomic forces that have shaped the area. Knowledge of the socioeconomic setting provides a framework by which to measure socioeconomic effects of the Project and develop alternatives and programs to effectively mitigate those impacts.

Population

The Kumasi Metropolis is the most populated district in the Ashanti Region. The 2000 Population Census recorded 1,170,270 persons for the Metropolis. A projected population of 1,625,180 for the metropolis for 2006 was based on a growth rate of 5.4% and this account for about one-third of the region's population.

There are six (6) farmers\(^1\) on the Kumasi site earmarked for the proposed office building; one female and five males aged between 28 years and 65 years. All of them are Ghanaians with three being Dagaabas, two Akans from the Ashanti Region and one from the Western Region. Whilst two are engaged in only piggery, the rest are into only crop farming. The major crops are cassava, plantain and maize. Earnings from these activities vary widely from GH\$10 to GH\$400 per month. Two of the farmers had two and three employees respectively and two had three helpers each. It is important to disclose that an Abbreviated Resettlement Action Plan (ARAP) has been prepared to ensure that people who may be displaced as a result of the project are assisted in their efforts to improve their livelihoods and standards of living or at least helped to restore their standard of living, in real terms to pre-displacement levels or to levels prevailing prior to the beginning of the project implementation, whichever is higher.

Distribution and Density

There are slightly more males (50.3%) than females (49.7%) in the region. This translates into a sex ratio of 101.3 males to 100 females in 2000. In 1960, the male population (51.2%) also exceeded that of females (48.8%) but in 1970 and 1984, the female population exceeded that of males.

The region has a youthful population with about two-fifths (41.9%) below 15 years of age. This proportion has declined consistently from 1970 (49.3%) and 1984 (45.3%), an indication of a decline in fertility. On the other hand, the proportion of the population aged 65 years and older has increased from 2.5 per cent in 1960 to 3.0 per cent in 1970 and 3.6 per cent in 1984 to the current level of 6.1 per cent in 2000.

\(^1\) A seventh person was identified tapping palm wine. He has been excluded as a PAP because his activity was considered to be very temporary and will be completed long before LAP II starts.

LAP II: Draft Report-Environmental and Social Impact Assessment Study -EEMC Ltd

16
The Kumasi Metropolitan Area has a total surface area of 254 sq km with a population density of 5,419 persons per sq. km (2000 population census). The Kumasi metropolis is second to the Accra metropolis (5,530).

**Ethnic and Religious Background**

The dominant religion is Christianity (78.8%), followed by Islam (16%), and traditional religion 0.3%. There is also about 0.7% without any religion. The Metropolis is Asante dominated; almost all the other ethnic groups in Ghana are represented. Ethnic and cultural diversity abounds tremendously in the metropolis, but they are closely knit together in a harmonious relationship. Some ethnic groups from neighbouring West African countries are Hausa, Yurobas (from Nigeria), Moshii (from Burkina Faso) are also present.

**Facilities and Services**

**Public Health**

The Metropolitan Health Services are organized around five (5) Sub Metro Health Teams; namely, Bantama, Asokwa, Manhyia North, Manhyia South and Subin. The metropolis has a number of health facilities in both the public and private sectors. Notable among them are the Komfo Anokye Teaching Hospital (KATH), which is one of the two national teaching hospitals, four quasi health institutions, five health care centers owned by religious organizations. In addition, there are over two hundred known private health institutions and thirteen industrial clinics. These facilities are evenly distributed in space. Diseases regularly reported at health centres in the metropolis include malaria, diarrhoea/dysentery, cholera, tuberculosis, typhoid fever, hypertension, diabetes and HIV-AIDS.

**Education**

Educational facilities in the city are provided by the public, private (individual and religious bodies) sectors. The private sector provides the bulk of these institutions at the pre-school, first and second cycle levels, whereas the public sector is the leader at the tertiary levels. These are evenly distributed in space. Analysis of the educational sector focuses on four main levels. These are:

* Pre-School;
* Basic School – Primary and Junior High Schools;
* Second Cycle Schools – Senior High Schools, Special Education and Vocational / Technical / Commercial Schools;
* Tertiary - Teacher Training Colleges, Polytechnics and Universities

Kumasi is the Ashanti Regional capital and it has two State universities, one Private University, a Polytechnic, two Teacher Training Colleges, many Senior High Schools and a host of Basic Schools.
Telecommunication

The major telecommunication service providers in the metropolis are Vodafone, MTN, Tigo, Zain and Kasapa which offers a wide range of both internal and international dialing services. There are 15 post offices in the metropolis with a total of 14,470 letter boxes. The Regional Post Office is located in the central business district of Adum.

Electricity

Kumasi is by far the largest electricity local centre in Ashanti Region. It is well connected to the national grid. Most parts of the metropolis have electricity supply and well lighted streets although demand exceeds supply capabilities.

Security

There is a full representation of all the security services in the metropolis. It is the headquarters of the Northern Command of the Ghana Armed Forces as well as the Regional Headquarters of the Ghana Police Service, Ghana National Fire Service, Customs Excise and Preventive Service, the Immigration Service and the Prison Service.

There are also a countless number of private security firms in the metropolis. In order to ensure adequate and maximum security, the metropolis has the Metropolitan Security Council that is chaired by the Mayor of Kumasi. The Membership consists of all the heads of the security agencies and the Kumasi Traditional Council.

Water

The metropolis and its surrounding areas are supplied with clean potable pipe-borne water from two sources namely, the Owabi and the Barekese headworks. The main distribution centre in the metropolis is located at Suame and it's by the Ghana Water Company Limited (GWCL).

Land Use

The total land coverage of KMA is approximately 254 sq. Km (25,415 hectares). Out of this, 20,054.1 hectares (79.0%) has been planned, approved and developed. The major land use that make up the metropolis are Residential (8,003.8 hectares (43.9%)), Commercial (481.3 hectares (2.4%)), Industrial, Educational (3,469.4 hectares (17.3%)), Civic (1,458.1 hectares (7.3%)) and culture, open spaces and circulation. Table 3.1 shows land use over the years (1988-2000) and projections for 2010.
Table 0.1: Land Use Composition over the Years (1988-2005) and Projections for 2010

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hectare</td>
<td>%</td>
<td>Hectare</td>
<td>%</td>
<td>Hectare</td>
<td>%</td>
<td>Hectare</td>
<td>%</td>
<td>Hectare</td>
<td>%</td>
</tr>
<tr>
<td>Residential</td>
<td>7688.0</td>
<td>43.6</td>
<td>8311.8</td>
<td>43.7</td>
<td>8512.2</td>
<td>43.7</td>
<td>8803.8</td>
<td>43.9</td>
<td>9088.6</td>
<td>44.0</td>
</tr>
<tr>
<td>Commercial</td>
<td>388.0</td>
<td>2.2</td>
<td>452.5</td>
<td>2.4</td>
<td>460.5</td>
<td>2.4</td>
<td>481.3</td>
<td>2.4</td>
<td>495.7</td>
<td>2.4</td>
</tr>
<tr>
<td>Industrial</td>
<td>723.0</td>
<td>4.1</td>
<td>785.5</td>
<td>4.1</td>
<td>796.3</td>
<td>4.1</td>
<td>802.2</td>
<td>4.0</td>
<td>826.2</td>
<td>4.0</td>
</tr>
<tr>
<td>Educational</td>
<td>3263.0</td>
<td>18.5</td>
<td>3321.5</td>
<td>17.5</td>
<td>3408.1</td>
<td>17.5</td>
<td>3469.4</td>
<td>17.3</td>
<td>3573.5</td>
<td>17.3</td>
</tr>
<tr>
<td>Civic &amp; Culture</td>
<td>1375.0</td>
<td>7.8</td>
<td>1428.1</td>
<td>7.5</td>
<td>1446.8</td>
<td>7.5</td>
<td>1463.9</td>
<td>7.3</td>
<td>1487.2</td>
<td>7.2</td>
</tr>
<tr>
<td>Open Space</td>
<td>1975.0</td>
<td>11.2</td>
<td>2179.5</td>
<td>11.5</td>
<td>2229.2</td>
<td>11.5</td>
<td>2306.2</td>
<td>11.5</td>
<td>2375.4</td>
<td>11.5</td>
</tr>
<tr>
<td>Circulation</td>
<td>2221.0</td>
<td>12.6</td>
<td>2527.0</td>
<td>13.3</td>
<td>2597</td>
<td>13.4</td>
<td>2727.3</td>
<td>13.6</td>
<td>2809.2</td>
<td>13.6</td>
</tr>
<tr>
<td>Total (Planned)</td>
<td>17632.0</td>
<td>69.4</td>
<td>19005.0</td>
<td>74.8</td>
<td>19449.2</td>
<td>76.5</td>
<td>20054.1</td>
<td>79</td>
<td>20655.8</td>
<td>81.6</td>
</tr>
<tr>
<td>Undeveloped</td>
<td>7783.0</td>
<td>30.6</td>
<td>6410.0</td>
<td>25.2</td>
<td>5965.8</td>
<td>23.5</td>
<td>5360.3</td>
<td>21</td>
<td>4759.2</td>
<td>18.7</td>
</tr>
<tr>
<td>Total Area</td>
<td>25415.0</td>
<td>100</td>
<td>25415.0</td>
<td>100</td>
<td>25415.0</td>
<td>100</td>
<td>25415.0</td>
<td>100</td>
<td>25415.0</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Metro Town and Country Planning Department, 2006.
PROJECT alternatives

PROJECT ALTERNATIVES CONSIDERED AND REASONS FOR REJECTION

Key design alternatives contemplated for the project were whether: (i) the project would be financed through a learning and innovation loan (LIL) or adaptable program loan (APL); (ii) the focus would be on broad policy, legislative and institutional reform or narrower institutional reform that would emphasize improving efficiency of land administration via titling, records management and promoting private participation in cadastral surveys and titling, etc. (iii) titling and registration of only rural lands or both rural and urban lands would be included; (iv) sporadic or systematic contiguous land registration approach would be used; and (v) pilot areas would be selected for cadastral mapping, registration and titling or coverage of the whole country would be attempted.

ALTERNATIVE PROPOSED SITES DEVELOPMENT

Under the LAP II, it has been proposed under the civil work component to construct centralized offices for the Public Sector Land Agencies in Kumasi. The site proposed for these civil works have been selected taking cognizance of the ownership of such sites, their proximity, current land use considerations, etc that best meet the needs of the stakeholders as well as the overall broad goal and objectives of the LAP II. If the selected site, is rejected, getting alternative suitable land will be difficult. Consequently, the Public Sector Land Agencies will continue to remain scattered thus not promoting the needed restructuring and improvement of land administration in Ghana.

NO DEVELOPMENT ALTERNATIVE

The no development alternative scenario is to allow the status quo to remain. The implication is that the Public Sector Land Agencies will continue to operate from their present offices/locations. This will not help to remove the inherent inefficiencies identified in the land sector, which is not promoting efficient land administration.
POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

The proposed civil works under the project that is offices for the Land Sector Agencies in Kumasi may cause minor negative environmental and social impacts. Poor planning or bad practices in construction, rehabilitation and maintenance could have negative effects. Below are the main potential environmental and social impacts which may result from the construction and operation of LAP II civil works.

POTENTIAL ENVIRONMENTAL IMPACTS

CONSTRUCTION PHASE

Flora and Fauna

The office building construction could result in clearing and depletion of vegetation that will result in: loss of plant cover, disturbance and loss of fauna habitats, weakening and degradation of soils, disturbance of the natural landscape and disfiguring of the natural morphology.

Soil Erosion

Soil erosion may be caused by exposure of soil surfaces to rain and wind during site clearing, earth moving, and excavation activities. The mobilization and transport of soil particles may, in turn, result in sedimentation of surface drainage networks, which may result in impacts to the quality of natural water systems, particularly the Danyame stream that traverse the project area and ultimately the biological systems that use these waters.

Air Quality

Proposed construction activities relating to the Kumasi Office building project may generate emission of fugitive dust and particulate matter caused by a combination of on-site excavation and movement of earth materials, contact of construction machinery with bare soil, and exposure of bare soil and soil piles to wind. A secondary source of emissions may include exhaust from diesel engines of earth moving equipment, as well as from open burning of solid waste on-site.

Non-hazardous solid waste generated at construction and decommissioning sites includes excess fill materials from grading and excavation activities, scrap wood and metals, and small concrete spills. Other non-hazardous solid wastes include office, kitchen, and dormitory wastes when these types of operations are part of construction project activities. Hazardous solid waste includes contaminated soils, which could potentially be encountered on-site due to previous land use activities, or small amounts of machinery maintenance materials, such as oily rags, used oil filters, and used oil, as well as spill cleanup materials from oil and fuel spills. Proposed measures and techniques to prevent and
control non-hazardous and hazardous construction site solid waste include those already presented in Section 6.4.

**Wastewater Discharges**

Water quality will be impacted by wastewater discharges from construction activities. These will include discharges from onsite sewage system and rainwater run-off from the developed areas such as workshops etc. The discharge of this wastewater into surface waters will impact water quality by causing changes to its physical, chemical and biological properties.

**Vehicular Traffic and Safety**

The vehicular traffic volume in the vicinity could be described as light. The construction activities relating to the proposed project may result in a significant increase in movement of heavy vehicles\(^2\) for the transport of construction materials and equipment increasing the risk of traffic-related accidents and injuries to workers and locality of the project area in Danyame, Kumasi. As part of the design of the office building and associated infrastructure such as service roads, drains, and utilities etc, a traffic impact assessment study will be done. The outcome of the traffic impact study would facilitate the integration of measures to minimise the incidence of road accidents involving project vehicles during construction and the development of education and awareness-raising programmes to promote a proper traffic control and management practices.

**OPERATION PHASE**

**Water Resources**

The completion of the proposed office building construction will provide an increased office capacity for a corresponding increased staff numbers and occupancy levels. Consequently water resource demand and consumption by office staffs and for general administration will exert pressure on the existing water resources available which could affect the community and the neighbourhood water supply levels. Further, non observance of good sanitation practices will contaminate stormwater and available water resources.

**Solid Waste**

The main solid wastes to be generated are paper, electronic wastes such as disposable printers, computers used toner catridges and kitchen wastes. A lack of an onsite centralized waste-bin

---

\(^2\) Numbers of vehicles to transport construct materials will be estimated during the design of the office building and related infrastructure and preparation of bill of quantities.
collection system in collaboration with the Kumasi Metropolitan Assembly for a regular collection and disposal of solid wastes may attract pests and disease vectors and pollute soil and water.

Positive Environmental Impacts

- Improved aesthetics of Public Sector Land Agencies offices;
- Improved efficiency in resource use, administration and cost effectiveness of the land sector agencies;
- Improved working environment and occupational health and safety of staffs of land sector agencies;
- Proper demarcations of forest reserves, conservation areas, prevention of encroachment and reduced land degradation and loss of biodiversity.

POTENTIAL SOCIAL IMPACTS

CONSTRUCTION PHASE

Loss of Livelihood

The Ministry of Lands and Natural Resources is not acquiring land for the construction of the Kumasi Office building. The Lands Commission owns a dedicated land for the construction of the office building. However, there are persons undertaking crop farming on parts of the land. Now that the land is to be used for the construction of the office building the crop farmers, though only six (6) would be involuntarily displaced, thus potential affecting their means of livelihood. An abbreviated resettlement action plan has however been prepared to ensure that the loss of livelihood is adequately compensated for.

Disruption of Utility Services

The site for the proposed office building is a built up area. The anticipated excavation and site clearing activities during construction may cause temporary disruptions of utility services such as telecommunication, electricity, water, drainage. Such disruptions as well as noise that may be associated with activity may be a nuisance to other facility users in the neighbourhood.

Occupational Health and Safety

The safety of the workers may be at risk during construction activities. The movement of trucks to and from the site, the operation of various equipment and machinery and the actual construction activities will expose the workers to work-related accidents and injuries. Potential air pollutants such
as dust, particulate matter and noise could also have negative implications for the health of workers
and users of near-by facilities.

The civil work contractor will have to establish and operate a camp which will temporarily house
offices, workshops, store construction materials etc. Potential impacts such as the disposal of liquid
and solid wastes, theft, alcoholism and sexually transmitted diseases (especially HIV/AIDS) could be
associated with the use of the contractor's camp

Traffic

The neighbourhood of the proposed office building site will experience an increased human and
vehicular traffic. The haulage of construction materials and related activities will be a nuisance to
road users e.g. dust nuisance to road users and pedestrians due to the haulage and storage of
construction sand and stones.

Positive Social Impacts

**Improved land tenure security**

The project will reduce land security risks of land grabbing, encroachment, land disputes, and
expropriation. Lack of tenure security has been identified as one of major problems which
contributes to poverty and inhibits economic and social development. Procedures through which land
rights may be swiftly and cheaply recorded and titled will be identified and tested to facilitate mass
use of titling opportunities;

**Increased land-related investment**

Investments on land, from both domestic and international sources, will increase as a result of
increased confidence of investors towards a more secure, stable and predictable investment
environment and improved access to formal financial credit;

**Improved efficiency of land resource use**

Formation of rural land markets and improvements of urban land market will result in a more efficient
use of land resources;

**Increased information benefits**

Land valuation system, tax collection system, and land use planning system will benefit from the
information provided by an improved land registry and cadastre system, and the information
generated from the titling process;
Sustainable land use behaviour

A secure land tenure environment may induce more sustainable resource use behaviour because landholders will pay more attention to the long-term productivity of their land;
PROPOSED MITIGATION MEASURES

ENVIRONMENTAL IMPACTS MITIGATION

Flora and Fauna

The MLNR/LAP project implementation unit shall ensure that potential harm and degradation of flora and fauna is minimised or avoided during the project implementation. The removal of the vegetative cover and cutting of trees (non-economic trees) shall be done in a controlled manner and in consultation with the Forestry Division and the EPA. A comprehensive landscaping plan appropriate to the site shall be prepared as part of the project implementation.

Soil Erosion

Through the adoption of standard best construction practices the potential impact of soil erosion as a result of the proposed project could be mitigated. Specific mitigation measures that could be implemented include the following:

- Reducing or preventing erosion by Scheduling to avoid heavy rainfall periods (i.e., during the dry season) to the extent practical
- Contouring and minimizing length and steepness of slopes
- Re-vegetating areas promptly
- Designing channels and ditches for post-construction flows

Air Quality

Measure and techniques to consider for the reduction and control of air emissions from the proposed office building construction activities include:

- Minimizing dust from material handling sources, such as conveyors and bins, by using covers and/or control equipment (water suppression, bag house, or cyclone)
- Minimizing dust from open area sources, including storage piles, by using control measures such as installing enclosures and covers, and increasing the moisture content
- Dust suppression techniques should be implemented, such as applying water or non-toxic chemicals to minimize dust from vehicle movements
- Selectively removing potential hazardous air pollutants, such as asbestos, from existing infrastructure prior to demolition
- Avoiding open burning of solid wastes

Solid Wastes

Solid wastes to be generated should characterize their waste according to composition, source, types of wastes produced, generation rates, or according to EPA regulatory requirements. An effective planning and implementation of waste management strategies should be put in place.
Measures and procedures should be designed and operated to prevent, or minimize, the quantities of wastes generated and hazards associated with the wastes to be generated. The following specific strategies shall be adopted:

- Substituting construction materials or inputs with less hazardous or toxic materials, or with those where usage generates lower waste volumes
- Instituting good housekeeping and best construction practices, including inventory control to reduce the amount of waste resulting from materials that are out-of-date, off specification, contaminated, damaged, or excess to the project construction needs
- Instituting procurement measures that recognize opportunities to return usable materials such as containers and which prevents the over ordering of materials
- Minimizing hazardous waste generation by implementing stringent waste segregation to prevent the commingling of non-hazardous and hazardous waste to be managed characterization of waste streams by type, quantities, and potential use/disposition
- Adoption of source reduction, as well as reuse and recycling
- Accredited agent of the Kumasi Metropolitan Assembly would cart disposable solid wastes to be generated from the offices to an approved Landfill site.

**Water Discharges**

The main wastewater to be generated is sanitary wastewater. The following are the proposed recommended sanitary wastewater management strategies:

- Segregation of wastewater streams to ensure compatibility with selected treatment option (e.g. septic system which can only accept domestic sewage);
- Segregation and pre-treatment of oil and grease containing effluents (e.g. use of a grease trap) prior to discharge into sewer systems;
- Sewage to be discharged to surface water, must be treated to meet EPA national or local standards for sanitary wastewater discharges or, in their absence, the indicative guideline values applicable to sanitary wastewater discharges of the World Bank.
- Sewage is to be discharged to either a septic system, or where land is used as part of the treatment system, treatment to meet applicable national or local standards for sanitary wastewater discharges must be ensured.
- Sludge from sanitary wastewater treatment systems should be disposed in compliance with local regulatory requirements, in the absence of which disposal has to be consistent with protection of public health and safety, and conservation and long term sustainability of water and land resources.
Vehicular Traffic

Traffic accidents have become one of the most significant causes of injuries and fatalities among members of the public in Ghana. Traffic safety should be promoted by all project personnel during displacement to and from the workplace, and during the occupation of the office building to be completed. Prevention and control of traffic related injuries and fatalities should include the adoption of safety measures that are protective of project workers and of road users, including those who are most vulnerable to road traffic accidents. Some of the traffic control and management measures should include:

- Emphasizing safety aspects among drivers
- Improving driving skills and requiring licensing of drivers
- Adopting limits for trip duration and arranging driver rosters to avoid over tiredness
- Avoiding dangerous routes and times of day to reduce the risk of accidents
- Use of speed control devices (governors) on trucks, and remote monitoring of driver actions
- Minimizing pedestrian interaction with construction vehicles
- Visibility and overall safety of Roads, particularly along stretches located near the project site or other locations where children may be present.
- Coordination with emergency responders to ensure that appropriate first aid is provided in the event of accidents
- Using locally sourced materials, whenever possible, to minimize transport distances. Locating associated facilities such as worker camps close to project sites and arranging worker bus transport to minimizing external traffic

SOCIAL IMPACTS MITIGATION

Loss of Livelihood

A Resettlement Action Plan has been formulated as required by the Resettlement Policy Framework for the LAP and in compliance with the World Bank Policy on Involuntary Resettlement (OP4.12).

The objective of this RAP is to ensure that people who may be displaced as a result of this project are assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms to pre-displacement levels or to levels prevailing prior to the beginning of the project implementation, whichever is higher.

Disruption of Utility Services

The Ministry of Lands and Natural Resources and the LAP Secretariat shall engage professional architectural and engineering services to design the proposed LSA’s office building in Kumasi and the required infrastructural services within and around the proposed site. As part of the architectural and engineering services the potential conflict of the proposed office building construction with
existing utility infrastructural services shall be examined at the early planning and permitting stages through consultation with the various utility service providers such as the Electricity Company of Ghana (ECG), Ghana Water Company Limited (GWCL) etc as well as Urban Roads Department of the Ministry of Roads, Town and Country Planning, EPA etc.

**Occupational Health and Safety**

Recognising the potential health hazards in the workplace environment, MLNR/LAP shall follow a comprehensive health and safety hazard prevention practice and quality assurance procedures to ensure the safety of life, property and the environment so as to prevent accidents on the plant and achieve the objectives of the occupational health and safety policy.

Workplace hazard prevention or minimisation is generally achieved through the use of Administrative Controls, Personnel Protection, Occupational health and safety Training; Good Management Practice, workplace environmental monitoring.

The project shall be registered with the Department of Factories Inspectorate where officers of the Department carry out routine safety inspections and recommendations are to the manager in charge of safety, health and welfare.

In addition with regard to occupational health effects on workers, the MLNR/LAP shall implement a safety and health programme to:

i) Monitor and control hazards to employees

ii) Design safe operating procedures

iii) Provide protective gear and equipment to forklifts and hoisting machine operators.
Environmental and Social Management Plan (ESMP)

This ESMP (see table 7.1 below) defines the project-specific proposed environmental and social control and mitigation measures, monitoring programs, and responsibilities developed based upon an assessment of environmental and social impacts and risks for the proposed project. These would be part of the contract documents.

IMPLEMENTATION ARRANGEMENT

The resources required for implementing the ESMP are basically personnel and finance. The key stakeholders in the ESMP implementation are the LAP II Coordinating office, contractor/consultants, Ministry of Environment and Science (MESS) and the EPA. In implementing the ESMP, the LAP II PIU is responsible for ensuring compliance with the World Bank safeguards policies. The World Bank provides for review and clearance of the ESIA and ESMP and based on monitoring reports provided by the PIU, will review the safeguard compliance status.

The LAP II-Project Implementation Unit will provide staff to achieve the following objectives:

- Propose management rules and specific measures that are compatible with sustainable development while implementing the project
- Promote awareness by its personnel and the general public regarding environmental protection,
- Propose concrete means of applying the ESMP.

The LAP II will be responsible for the implementation of the ESMP in close collaboration with EPAs and MESS. Alternatively, the Consultant has identified several skills that are requisite to ensuring compliance with the ESMP.

The environmental specialist or designated person at LAP II will be responsible for the implementation of the environmental monitoring and the ESMP. His/her responsibilities shall include:

- Coordination, liaison with and monitoring of the contractors;
- Compilation and preparation of periodic environmental reports for submission to the World Bank;
- Review of EIA reports from consultants in collaboration with EPA;
- Data Management; and
- Sub-project Inspections
**MONITORING PLAN**

The objective of the monitoring plan is to establish appropriate criteria to verify the predicted impact of the project, and to ensure that any unforeseen impacts are detected and the mitigation adjusted where needed at an early stage. The plan will ensure that mitigating measures are implemented during renovation, upgrading and maintenance. Specific objectives of the monitoring plan are to:

- Check the effectiveness of recommended mitigation measures;
- Demonstrate that sub-project activities are carried out in accordance with the prescribed mitigation measures and existing regulatory procedures; and
- Provide early warning signals whenever an impact indicator approaches a critical level.

Oversight for the environmental and social management process of the sub-projects will be assured by the supervisory consultants in collaboration with the LAP II Project Secretariat. Monitoring will be conducted during all phases of the project: design, construction, execution, operation and maintenance.

**Monitoring**

The LAP II Project Secretariat Environmental and Social Specialists will prepare a long term monitoring strategy that will encompass clear and definitive parameters to be monitored for each sub-project. The monitoring plan will take into consideration the scope of development, the environmental and social sensitivity and the financial and technical means available for monitoring. The plan will identify and describe the indicators to be used, the frequency of monitoring and the standard (baseline) against which the indicators will be measured for compliance with the ESMP.

A number of indicators would be used in order to determine the status of the affected environment as follows:

1. Has the pre-project human and natural environmental state been maintained or improved at the education facilities and;
2. Has the effectiveness of the ESIA technical assistance, review, approval and monitoring process been adequate to pre-empt and correct negative impacts inherent in certain types of infrastructure projects;
3. Environmental Indicators: Loss of vegetation; Land degradation; Compliance with Legislations.
4. Social indicators: Population incomes; number of people provided with environmental training to implement the ESIA; The number of local workers used during of the works.
ESMP BUDGET

It is assumed that the LAPU will engage or task an officer to supervise environmental management activities to ensure compliance and enforcement. It is estimated that it will take 18 months for the project to complete. It is recommended that the Environmental Supervisor be remunerated at a rate of $1500 per month. The breakdown of the estimates is as indicated in the table below:

<table>
<thead>
<tr>
<th>Item</th>
<th>Budget (US$)</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitigation</td>
<td>$15,000</td>
<td>LAPU/EPA/MESS</td>
</tr>
<tr>
<td>Management&lt;sup&gt;3&lt;/sup&gt;</td>
<td>$10,000</td>
<td>LAPU/LAP II-SIU</td>
</tr>
<tr>
<td>Capacity Strengthening</td>
<td>$2,000</td>
<td>LAPU/World Bank</td>
</tr>
<tr>
<td>Monitoring</td>
<td>$10,000</td>
<td>LAPU/EPA/MESS</td>
</tr>
<tr>
<td>Total&lt;sup&gt;4&lt;/sup&gt;</td>
<td>$37,000</td>
<td></td>
</tr>
</tbody>
</table>

<sup>3</sup> This estimated amount is for the registration and permitting by EPA

<sup>4</sup> It is estimated that the project will take 18 months with monthly environmental supervisor fee of $1500/month
Table 0.2: Environmental and Social Management Plan

<table>
<thead>
<tr>
<th>Potential Impact</th>
<th>Mitigation Measures</th>
<th>Implementation Schedule</th>
<th>Monitoring Indicators</th>
<th>Monitoring</th>
<th>Responsibility</th>
<th>Frequency</th>
<th>Cost Estimate (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTRUCTION PHASE IMPACTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil Erosion</td>
<td>Re-vegetate the construction site by planting rapidly growing vegetation/plants</td>
<td>During and after the construction activities</td>
<td>Erosion</td>
<td>Monitor erosion occurrence within and around the construction site</td>
<td>Contractor/supervising consultant</td>
<td>LAPU</td>
<td>Weekly</td>
</tr>
<tr>
<td>Possible increase in soil erosion as a result of the construction activities (clearing of vegetation and soil excavation)</td>
<td>Use excavated soil for construction work</td>
<td>During construction</td>
<td>Soil</td>
<td>Ensure that all the excavated soil are used for construction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss of productive topsoil resulting from soil excavation</td>
<td>Ensure immediate clean up of the area by removing the contaminated topsoil and disposing properly in a designated place</td>
<td>During construction</td>
<td></td>
<td>Monitor and document the contaminated soil disposal procedure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil contamination resulting from the release of chemicals (lubricant, fuel, paint) from the machineries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Run-off erosion may occur from unprotected excavated areas during heavy rain resulting to sedimentation of nearby water-bodies</td>
<td>Attend to any excavation area as quick as possible or create an embankment to avoid run off</td>
<td>During excavation activities</td>
<td>Sediments</td>
<td>Monitor BOD, Nitrate, pH, Heavy metals of the nearby water bodies before the construction and thereafter weekly during the construction activities</td>
<td>Contractor/supervising consultant</td>
<td>LAPU</td>
<td>Weekly</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Run-off erosion may occur from heaps of excavated soils during heavy rain resulting to sedimentation of nearby water-bodies Potential water pollution through run off of hazardous construction waste (lubricants, paint)</td>
<td>Create barrier for appropriate containment measures</td>
<td>During construction</td>
<td>Sediments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proper disposal of construction waste</td>
<td></td>
<td>During construction</td>
<td>Heavy metals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air</td>
<td>Spray water periodically to control dust</td>
<td>During excavation and construction activities</td>
<td>PM</td>
<td>Monitor PM, NOx, SOx, THC and CO in the surrounding air before the construction and thereafter hourly during the construction</td>
<td>Contractor/supervising consultant</td>
<td>LAPU</td>
<td>Weekly</td>
</tr>
<tr>
<td>Particulate matters emission from excavation and construction activities Potential emission of pollutants from the construction machineries (NOx, SOx, CO, THC)</td>
<td>Limit the vehicles allowed into the site and use efficient machineries</td>
<td>During construction activities</td>
<td>NOx, SOx, THC and CO</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td>Equipment (e.g. cement-sand mixer machine) to be placed as far as possible from the sensitive area/ human settlement Construction staff to wear ear muffs</td>
<td>During construction activities</td>
<td>Noise</td>
<td>Monitor staff compliance to the use of ear muffs/plugs</td>
<td>Contractor/supervising consultant</td>
<td>LAPU</td>
<td>Daily</td>
</tr>
<tr>
<td>Noise resulting from the construction works</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flora and Fauna</td>
<td></td>
<td>During and after</td>
<td>Monitor the re-</td>
<td>Contractor/supervising consultant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetation, loss of habitat and biodiversity</td>
<td>Re-vegetate the construction site by planting rapidly growing vegetation/plants</td>
<td>Construction</td>
<td>Vegetation</td>
<td>Vegetation process</td>
<td>Re-vegetating consultant</td>
<td>LAPU</td>
<td>Monthly</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Possible loss of endangered and rare species</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in land use and disturbance of ecosystem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in land use and disturbance of ecosystem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OPERATIONAL PHASE IMPACTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible displacement of settlements and business.</td>
<td>Relocate the affected people in accordance with appropriate regulations (World Bank OP/BP.4.12: Involuntary Resettlement Policy) Provide alternative route for traffic</td>
<td>Before construction begins</td>
<td>Complaints from the affected people</td>
<td>Road traffic</td>
<td>Document relocation procedures</td>
<td>Monitor the road traffic before and during construction activities</td>
<td>Contractor/supervising consultant</td>
</tr>
<tr>
<td>Possible loss of crops, properties, and sources of livelihood</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible disruption of vehicle movement pattern, leading to traffic congestion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil</td>
<td>Contamination of soil as a result of waste (chemical, solid waste) disposal</td>
<td>Pre-treat waste before disposal (through neutralization, thermal pretreatment, oxidation, etc)</td>
<td>Before disposal</td>
<td>pH, BOD, COD, Nitrate etc (based on the type of chemical waste generated)</td>
<td>Monitor the surrounding soil pH, BOD, COD, Nitrate etc (based on the type of chemical waste generated): Monitoring to be before construction and monthly during the construction</td>
<td>Respective institution’s supervisors</td>
<td>Respective institution’s LAPU</td>
</tr>
<tr>
<td>Water</td>
<td>Depletion of water resources</td>
<td>Reuse and recycle water, also minimize water usage</td>
<td>During operation</td>
<td>Increase in water utility payment.</td>
<td>Monitoring the water flow meter</td>
<td>Respective institution’s LAP II-SIU</td>
<td>Respective institution’s LAPU</td>
</tr>
<tr>
<td>Contamination of surrounding water bodies through improper disposal of</td>
<td>Install water flow meter</td>
<td>Before waste water disposal</td>
<td>Increase in water flow meter reading</td>
<td>Monitor the surrounding water bodies pH, BOD, COD, Nitrate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-treat waste water</td>
<td>During site</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LAP II: Draft Report—Environmental and Social Impact Assessment Study - EEMC Ltd
<table>
<thead>
<tr>
<th>Waste Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible run off from the temporary solid waste storage site into the drainage system</td>
</tr>
<tr>
<td>Be before disposal (through neutralization, thermal pretreatment, oxidation, etc)</td>
</tr>
<tr>
<td>Avoid siting temporary solid waste storage close to drainage system or water ways.</td>
</tr>
<tr>
<td>Dispose waste as soon as possible to avoid leachate generation</td>
</tr>
<tr>
<td>Ensure proper containment of the temporary waste storage site</td>
</tr>
<tr>
<td>Selection</td>
</tr>
<tr>
<td>Implement mitigation measures through the operation phase</td>
</tr>
<tr>
<td>pH, BOD, COD, Nitrate etc (based on the type of chemical waste generated)</td>
</tr>
<tr>
<td>etc (based on the type of chemical waste generated). Monitoring to be before construction and monthly during the construction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible release of microorganism to the air</td>
</tr>
<tr>
<td>Ensure appropriate bio-safety procedures are observed in the laboratories (e.g. International Best Practice in Safety of Research Laboratories)</td>
</tr>
<tr>
<td>Implement mitigation measures through the operation phase</td>
</tr>
<tr>
<td>pH, BOD, COD, Nitrate etc (based on the type of chemical waste generated)</td>
</tr>
<tr>
<td>etc (based on the type of chemical waste generated). Monitoring to be before construction and monthly during the construction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Noise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction activity will involve use of equipment that are expected to generate noise</td>
</tr>
<tr>
<td>Install sound proof at the areas where the noise can not be reduced or mitigated to limit the noise to these areas. Ensure staff at these areas are adequately protected with ear muffs/plugs</td>
</tr>
<tr>
<td>Ensure that efficient equipment are used</td>
</tr>
<tr>
<td>Implement mitigation measures through the operation phase</td>
</tr>
<tr>
<td>Noise</td>
</tr>
<tr>
<td>Monitor noise level daily to ensure that it does not exceed the national acceptable limit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LAP U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LAP U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LAP U</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAP U</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LAP U</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAP U</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LAP U</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAP U</td>
</tr>
<tr>
<td>Social</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

LAP II: Draft Report-Environmental and Social Impact Assessment Study -EEMC Ltd
public consultation and disclosure

To adequately appreciate the views and concerns of stakeholders with regard to the proposed project, field visit and consultation with key stakeholders, Ministries, Departments and Agencies, selected Land Sector Agencies (LSAs), affected persons was undertaken. The consultations focused on:

- Assessing the views and understandings of the Land Administration Project (LAP);
- Identifying and Assessing environmental and social impacts of the proposed project;
- Examining the zoning status of the proposed project site and compliance and enforcement of environmental regulations regarding the proposed project.
- Environmental and social concerns of the stakeholder institutions for integration into the ESMP to ensure sustained environmental and social compliance monitoring.

The consultation was mainly in the form of open interviews with key informants from the Ministry of Lands and Natural Resources, The Lands Commission, Regional Land Survey Department, Town and Country Planning, the Environmental Protection Agency, Kumasi and the affected persons. The consultations revealed that there are no major negative environmental and social concerns of the proposed project. The summary of the outcome of the consultation is presented in Annex 2. The ESIA will be disclosed in country and at the World Bank InfoShop.
CONCLUSIONS AND RECOMMENDATIONS

- The proposed project does not have significant negative environmental and social impacts. The identified potential environmental and social impacts are minor construction-related impacts which could be addressed through the adoption of best constructional practices and compliance with basic construction and development procedures, building and environmental permitting conditions.

- The proposed project has significant social positive impacts that far outweigh the potential negative impacts.

- There will be employment generation for both skilled and unskilled labour during the planning and construction stages of the project. Thus the project has the potential to contribute to economy through labour absorption and the supply of construction materials.

It is recommended that:

The Land Administration Project Unit be tasked to undertake the following:

- Checking the progress of the Contractor in implementing the mitigation measures outlined in the Contract documents and ESIA report.

- Liaising with the appropriate regulatory authorities like the Environmental Protection Agency (EPA,) regarding policies, procedures, contracts and approaches for administering and monitoring environmental protection activities;

- Coordinating parties involved in the impact mitigation and enhancement process, including: Contractors, Consultants, Governmental and Non-Governmental Officials at all levels, as well as the public;

- Facilitating environmental monitoring and evaluation of the bio-physical and socio-economic concerns pertaining to the road;

- Helping to administer resources designated for assistance at the local level

- Undertake the registration of the proposed construction of the Lands Commission Offices in Kumasi with the EPA and relevant building and environmental permits acquired.
ANNEXES

ANNEX 1: SITE PLAN FOR PROPOSED PROJECT, KUMASI
## ANNEX 2: OUTCOME OF CONSULTATIONS HELD

<table>
<thead>
<tr>
<th>Date</th>
<th>Organizations/Institutions</th>
<th>Persons Contacted</th>
<th>Issues Discussed</th>
</tr>
</thead>
</table>
| 30th September 2010 | Ministry of Lands and Natural Resources            | Jimmy Aidoo, James Blankson, Dela, Kitcher | • The purpose, scope and schedule of the LAP II project  
• Terms of reference of the ESIA, deliverables and relevant contractual issues  
• Literature and list of relevant project documents to be provided to the ESIA Consultant |
| 5th October 2010  | LAP Secretariat, MLNR                              | Dela Williams                          | • Relevant LAP II project reference documents                                      |
|                   | Lands Commission-Regional Survey Department, Kumasi | C.B. Antwi (Regional Surveyor), James Berko (Technical officer), | • Size, location of the site for the proposed Office building for the LSA’s in Kumasi and the adjoining lands: The size of the land is about 3 acres. It is undeveloped and is located at Danyame along the Mess Avenue. Undeveloped adjoining lands belong to the National Communications Authority (on the western end), and the National Health Insurance Authority is directly opposite.  
• Ownership of the proposed site: The site belongs to the Lands Commission.  
• Zoning status of the proposed site: It was disclosed that the zoning status is Civic and Cultural.  
• Affected persons undertaking crop (Cassava and plantain) farming, piggery and palm-wine tapping.  
• Ecology: There site is a virgin site, semi forest with palm trees and non-economic trees. There are cassava farms and few plantain shrubs. There is a stream called the Danyame stream which traverses the site from Suntreso to the Subin River. |
<table>
<thead>
<tr>
<th>Date</th>
<th>Department/Role</th>
<th>Name/Email</th>
<th>Comments</th>
</tr>
</thead>
</table>
| 2-11-2010  | Lands Commission-Regional Lands Officer | James E.K. Dadson dadsonjames@hotmail.com                                | • **Centralized Office Building for LSA’s**: This concept is very good but it only addresses the issue of physical access among the LSA’s. There is the need for a provision of an integrated information system and a database to facilitate online communication among the LSA’s in order to facilitate a timely and an efficient delivery of services to the public by the various LSA’s since the LSA’s services are interdependent. For example access to a database on an approved land title deed or a transferred lease must be online.  
• There is no conflict of the proposed development regarding the ownership and the zoning status.  
• There regional survey department has no environmental concerns regarding the proposed project. |
| 2-11-2010  | Town and Country Planning Department-Kumasi | Rosamund Edusei roydusei@yahoo.com                                        | • **Site Zoning Status and Layout**: The site has been zoned as for civic and cultural uses by a Statutory Planning Committee of which the EPA is a member. The entire area for the proposed project and its surrounding has been earmarked as Ministries Annex.  
• **Ownership of the site**: The site was originally owned by the Military but has now been allocated to the Lands Commission after the Military has been reallocated a new site at Nyankyrereniase. There are no disputes about the ownership of the site. However, the Military, who were the original owners are requesting that they are provided social amenities such as hospitals and schools at the new site where they have been relocated. |
<table>
<thead>
<tr>
<th>Date</th>
<th>Entity</th>
<th>Contact Person</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-11-2010</td>
<td>Environmental Protection</td>
<td>Mr Omane-Senior Programme Officer</td>
<td>• The EPA is aware of the LAP 2 project. However the proposed office building project is yet to be registered with the EPA Office in Kumasi</td>
</tr>
<tr>
<td></td>
<td>Agency, EPA, Kumasi</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-11-2010</td>
<td>Affected Persons (Crop</td>
<td></td>
<td>• These affected persons are aware of the proposed project. It was disclosed that they were enumerated in a socio-economic survey conducted as part of the process of the resettlement action plan preparation under LAP II in compliance with OP 4.12.</td>
</tr>
<tr>
<td></td>
<td>farmers and Palmwine Tapper)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# ANNEX 3: SITE PHOTO GALLERY

<table>
<thead>
<tr>
<th>Mess Avenue Road, Danyame</th>
<th>Proposed Project Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Palm wine Tapper)</td>
<td>Stream from Suntreso to Subin</td>
</tr>
</tbody>
</table>

02/11/2010
ANNEX 4: IN-COUNTRY DISCLOSURE REPORT

DRAFT
THE LAND ADMINISTRATION PROJECT II
MINUTES OF DISCLOSURE WORKSHOP OF ABBREVIATED RESETTLEMENT ACTION PLAN (ARAP) AND ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) FOR LAP II (KUMASI OFFICE BUILDING PROJECT) WITH STAKEHOLDERS AT LANDS COMMISSION GUEST HOUSE IN KUMASI ON 29TH NOVEMBER 2010

1.0 INTRODUCTION

As part of the proposed World Bank (IDA) funded LAND ADMINISTRATION PROJECT II, the construction of the Lands Commission office in Kumasi in the Ashanti Region will entail involuntary resettlement and environmental assessments. Two documents addressing these concerns have been prepared by the Government of Ghana (GOG) through the Ministry of Lands and Natural Resources and the LAPU. The following documents regarding the safeguard requirements for the project were prepared:

• ABBREVIATED RESETTLEMENT ACTION PLAN (ARAP) AND
• ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA)

The Bank’s policy on disclosure requires that all the people residing in the given areas of a project have the right to be informed of the proposed development project. Prior to project appraisal therefore, the summary of the study of the development action along with other relevant information should be disclosed in the info-shop and in the project area as well as nationally. In compliance with these procedures a disclosure workshop was held in Kumasi with the relevant stakeholders to discuss the issues raised in the documents. This report presents the minutes of the discussions on the issues raised in the ESIA.

2.0 PRESENTATION

The ESIA Consultant made a presentation on the ESIA covering the following:

Policy, Legal and Administrative Framework

The relevant policies, legal and administrative frameworks considered are:

• Ghana’s Environmental Policy;
• National Land Policy
• Resettlement and Compensation Policy
• The Environmental Protection Agency Act of 1994 (Act 490);
• The Environmental Assessment Regulations (LI 1652), and EIA procedures;
• Local Government Act, 1993 (Act 462); and
• The World Bank’s policies and guidance on Environmental Assessment (OP 4.01), and also the Involuntary Resettlement (OP/BP 4.120

Description of the Project Environment

The site proposed for these civil works is a land belonging to the Lands Commission. The Kumasi project site is all the piece of land known as site for Civic and Cultural uses situated at Danyame, Ridge residential area layout. It is located to the South-east of the Junior Military Officers Mess at Danyame, near the Catering Rest House in Kumasi (Site plan attached). The proposed site for the project is a 11.21 acre parcel of land (see Annex 1: Site Plan) bounded to the East by Government Road, on the South by a public park, on the South-West by the Pine Avenue and on the North-West by Mess Avenue. It is currently undeveloped but has few people farming on the site. Conditions at the site proposed for the project triggers World Bank OP 4.12 and OP 4.01.
**Potential Environmental and Social Impacts**

The proposed project does not have major environmental and social impacts. The minimal environmental and social impacts identified, which could be adequately mitigated through the adoption of basic construction best practices and observance of sound environmental practices covered the following areas:

Flora and fauna, soil erosion, air quality, vehicular traffic and safety, and occupational health and safety related issues.

The Positive Environmental Impacts

- Improved aesthetics of Public Sector Land Agencies offices;
- Improved efficiency in resource use, administration and cost effectiveness of the land sector agencies;
- Improved working environment and occupational health and safety of staffs of land sector agencies;
- Proper demarcations of forest reserves, conservation areas, prevention of encroachment and reduced land degradation and loss of biodiversity.

The minimal potential social impacts identified are related to loss of livelihood by affected crop farmers, disruption of utility services and traffic impact.

**Environmental and Social Management Plan (ESMP)**

Environmental and social control and mitigation measures, monitoring programs, and responsibilities developed based upon an assessment of environmental and social impacts and risks for the proposed project.

**Summary of Consultation Activities undertaken as part of the ESIA preparation**

The consultations with the Ministry of Lands and Natural Resources, The Lands Commission, Regional Land Survey Department, Town and Country Planning, the Environmental Protection Agency, Kumasi and the affected persons.

Subject of the consultation included the following:

- Identifying and Assessing environmental and social impacts of the proposed project;
- Examining the zoning status of the proposed project site and compliance and enforcement of environmental regulations regarding the proposed project.
- Environmental and social concerns of the stakeholder institutions and affected persons for integration into the ESMP to ensure sustained environmental and social compliance monitoring.

**CONCLUSIONS AND RECOMMENDATIONS OF THE ESIA**

The main conclusions and recommendations made were:

- That the proposed project does not have significant negative environmental and social impacts. The identified potential environmental and social impacts are minor constructional related impacts which could be addressed through the adoption of best constructional practices and compliance with basic construction and development procedures, building and environmental permitting conditions.
- The need for LAPU to undertake the registration of the proposed construction of the Lands Commission Office in Kumasi with the EPA and acquisition of relevant building and environmental permits acquired.

**3.0 COMMENTS & RESPONSES :**

- **Concern about Flora and Fauna:** What is to be done to protect the trees in the area? There is the need to ensure that the design of the proposed office building and its construction is done in a manner to avoid an indiscriminate destruction of the flora and fauna.
• The protection of the flora and fauna is vital for an environmentally sound office building development. Due cognizance of the trees at the site will be taken into consideration whilst design the office building layout so as to ensure that adequate green environment is maintained. LAPU need to ensure that the Forestry Department should is involved is the design of the site layout of the building so as sufficiently integrate the vegetation onsite.

• **Vehicular traffic** could be a major impact considering how bad the traffic situation is on the Danyame Street at certain times of the day and anticipated increase in vehicular movement to the proposed office building for all the Land Sector Agencies in Kumasi. How is it being ensured that the vehicular traffic impact is adequately addressed?

• This is a planning issue, which has been already clearly identified by the ESIA. It is however good that it is being flagged again at this forum, where some of the relevant stakeholders are present. It is very important that the site layout design considering the existing road network and the prevailing traffic situation comes out quickly and made available to the Kumasi Metropolitan Assembly, Urban Roads, Architectural and Engineering Services, Town Planning Department, the EPA etc for the necessary assessment and recommendations.

• The location of the Military Baracks with the associated restrictions to movement being imposed by the Military is a contributing factor to heavy traffic situation in the vicinity. Though the Military has been allocated new land and relocated, they continue to possess the defunct Barracks. There is the need for an intervention by the stakeholder Ministries such as the Ministry of Lands, Natural Resources and Mines, the Ministry of Environment and Science, Ministry of Defence and the Ministry of Local Government and Rural Development to impress upon the Ministry of Defence to relinquish their hold on the old barracks so as to help plan an improved traffic system within the neighbourhood of the Ministries Annex.

• A comprehensive Traffic Impact Assessment has to be done as part of the design of the layout of the office building and management of car parking and traffic system for the entire Ministries Annex, where the office building is to be located.

• **Existing Utility Lines:** The KMA disclosed that there is an existing sewer line in the neighbourhood of the site for the proposed project. Prior to site clearance it is necessary that more consultations are done with utility providers to avoid interruption of any other utility infrastructure traversing the neighbourhood.

• Mentioned is made of an existing stream or cannal that takes its source from Suntreso to the Subin River traversing the eastern boundary of the site. What measures are being put in place to ensure that the stream is not polluted?
The ESMP has stipulated the appropriate measures to control the discharge of storm water or sewerage so as to avoid or minimize water pollution. The drainage design for the office building would take cognizance of the existing canal.

- The stakeholders expressed satisfaction of the steps being taken by the Ministry of Lands Forestry and Mines/LAP with the support of the World Bank to comply with the Environmental and Social Safeguard Policies. It was disclosed that other MDA’s have been allocated pieces of land in the vicinity for their offices and concerns were raised as to how these other MDA’s would be made to comply with similar environmental and social requirements in order not to negate the positive impacts that will be realised by this project as a result of the World Bank Environmental and Social Safeguards Policies compliance.

- The Consultant explained that the appropriate National Environmental and Social Regulatory polices and laws as well as the institutional mechanisms for sound environmental stewardship by all developers are available. What is needed is the enforcement of such policies and regulations by the relevant Ministries, Departments and Agencies (MDA’s). It is therefore proper that some of these institutions such as the Town and Country Planning Department, the Lands Commission, the Kumasi Metropolitan Assembly are present in this disclosure workshop and are taking good note of what MLNRM/LAP II are doing. It was recommended that the Lands Commission should disclose to the relevant MDAs, the names of other Institutions to whom parcels of land have been allocated in the Ministries Annex area.

### 4.0 CONCLUSION

Overall there was a high level of support for the project and its objectives, with valuable suggestions provided for its improvement, but without any serious criticism of the project approach or the measures proposed for mitigation of social and environmental impacts.

### List of Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution/PAP</th>
<th>Tel No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dyson T. Jumpah</td>
<td>Environ Engineering and Mgt Consult (EEMC)</td>
<td>0244649873</td>
</tr>
<tr>
<td>Hannah Musah</td>
<td>Survey and Mapping Division</td>
<td>0244470987</td>
</tr>
<tr>
<td>Ato Hanson</td>
<td>Lands Commission</td>
<td>0244686700</td>
</tr>
<tr>
<td>Joyce Afukaar (Mrs)</td>
<td>Town and Country Planning Dept, Kumasi Metro</td>
<td>0244624763</td>
</tr>
<tr>
<td>Frank A. Fosuhene</td>
<td>Kumasi Metro Assembly, Works Dept.</td>
<td>0244933933</td>
</tr>
<tr>
<td>Yaw Danso</td>
<td>Praisel Consulting</td>
<td>0244928176</td>
</tr>
<tr>
<td>Alice Addai-Yeboah</td>
<td>Praisel Consulting</td>
<td>0244571474</td>
</tr>
<tr>
<td>Richard Sarfo</td>
<td>Friends of Rivers and Water Bodies</td>
<td>0207832398</td>
</tr>
<tr>
<td>Grace Nankara</td>
<td>PAP</td>
<td>0241340198</td>
</tr>
<tr>
<td>Name</td>
<td>Organization</td>
<td>Phone</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Kwao Samuel</td>
<td>PAP</td>
<td>0243333385</td>
</tr>
<tr>
<td>Kenneth Nankara</td>
<td>PAP</td>
<td>0207288953</td>
</tr>
<tr>
<td>Kwaku Botwo</td>
<td>PAP</td>
<td>0545325537</td>
</tr>
<tr>
<td>Benyo Peter</td>
<td>PAP</td>
<td>0200239094</td>
</tr>
<tr>
<td>Kwaku Kyei</td>
<td>PAP</td>
<td></td>
</tr>
<tr>
<td>Kwaku Nyarko-Ababio</td>
<td>Lands Commission (Valuation)</td>
<td>0268114750</td>
</tr>
<tr>
<td>Samuel Anini</td>
<td>Lands Commission (Valuation)</td>
<td>0244618902</td>
</tr>
<tr>
<td>Daniel Asiedu</td>
<td>Praisel Consulting</td>
<td>0244570390</td>
</tr>
<tr>
<td>Franklin Oppong-Obiri</td>
<td>OASL/RLAPCU</td>
<td>0207339887</td>
</tr>
</tbody>
</table>
Some Disclosure Photos

<table>
<thead>
<tr>
<th>ESIA Consultant making Presentation</th>
<th>Project Affected Persons (PAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDA Representatives</td>
<td>Project Affected Persons (PAP)</td>
</tr>
</tbody>
</table>