

ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED RWENZORI TOWERS, NAKASERO ROAD, KAMPALA CENTRAL DIVISION, KAMPALA

2009



PINE INVESTMENTS LTD

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The EIA Team

This EIS has been prepared by the following Certified Environmental Impact Assessment (EIA) Practitioners

Name	Responsibilities	Signatures
Edith Birungi Kahubire	Sociologist	
Bazira Ananias Ammar	Environmentalist	

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LIST OF ABBREVIATIONS

In order to ensure a more reader-friendly document, this impact statement has limited the use of acronyms and abbreviations in this environmental impact statement. In addition, acronyms and abbreviations are defined the first time they are used in each chapter or appendix. The acronyms and abbreviations used in the text of this document are listed below:

EIA:	Environmental Impact Assessments
EIS:	Environmental Impact Statement
KCC:	Kampala City Council
LC:	Local Council
MTN:	Mobile Telephone Network
NEMA:	National Environment Management Authority
NWSC:	National Water and Sewerage Corporation
QA:	Quality Assurance
UECDL:	Uganda Electricity Distribution Company Limited
UTL:	Uganda Telecom Limited

EXECUTIVE SUMMARY

Background

Pine Investments Limited is a private company that carries out business of real estate; management, consultancy; purchase, sell, lease real estate and generally maintenance in real estate. The company also undertakes business of builders, contractors, consultants, architects, surveyors, decorators and other related business. The company proposes to build Rwenzori Towers; a low-rise development; coordinating and integrating with the existing Rwenzori developments (Rwenzori Towers and Rwenzori Courts and respecting their traditionally-inspired design concepts but with a more modern and sophisticated style. The development will have a central courtyard/atrium concept; 2 cores and 2 entrance points for absolute flexibility of accommodation, enabling even 2 major corporate tenants to have their own identity. Furthermore, the complex will have inherently flexible space arrangements for maximum long-term letting flexibility and tenancy sizes ranging from 50 square meters up to 6,000 square meters with no compromise of quality accommodation.

The design proposals of the Rwenzori Towers development area are based on the Pine Investments proposal for a project of approximately 12,000 square meters of highly flexible state of the art office accommodation and 2,700 square meters of retail space, creating approximately 12,000 square meters of prime lettable commercial space, with some 450 parking bays, in an excellent location on Nakasero Hill, adjacent to the Rwenzori Courts and Rwenzori House developments. The location is ideal for the development being away from the increasing problematic circumstances on Kampala Road, but within the corporate business district of Kampala and eminently situated to top grade office accommodation. The proposed site forms the third element of the existing Rwenzori Commercial Developments, the design for the building is to integrate with and benefit the existing elements.

Objectives of the Environmental Impact Study

The Environmental Impact study was carried out in accordance with the National Environment Act CAP 153, the Environmental Impacts Assessments Regulations, 1998, EIA guidelines for the urban infrastructural sector and approved terms of reference for the EIA. The National Environment Act CAP 153 section 19 introduced the requirement for an Environmental Impact Assessment into the Uganda laws. Under section 19 (3) of the NEA Cap 153, all projects or policies that may, are likely to or will have significant impacts on the environment should be subjected to EIA so that adverse impacts can be eliminated or mitigated. The EIS evaluates not only impacts associated with constructing, operating, Rwenzori Towers, but also those associated with transporting the materials to the project site. In addition to evaluating the near-term impacts of those activities, the EIS evaluates impacts that could occur hundreds of thousands of years in the future. The Objective of the EIA study is:

- To identify all likely positive and negative environmental impacts due to the proposed development of the Rwenzori Towers in Plot 3 Nakasero Road;
- To identify and evaluate all significant negative environmental impacts, and propose appropriate mitigation and enhancement measures for the attention of Pine Investments, for incorporation into the construction and operational phases;
- To compile an environmental impacts statement report including an environmental management plan for all aspects of the proposed developments for submission to NEMA for consideration for approval.

The report details the findings, conclusions and recommendations of an environmental impact assessment for Pine Investment Limited's proposed Rwenzori Towers located on Plot 6

Nakasero Road. Utilizing a stakeholder-based life cycle assessment approach to identify and analyze impacts in order to support sustainable decision making in multi-stakeholder contexts, the EIA team used a number of techniques and methods at each stage of data gathering and information synthesis that varied from one expert to another (social and bio-physical standard methods). These techniques and methods include, but are not limited to, literature review, stakeholder consultations, onsite observation and specialist studies and analyses.

Legislative and Regulatory Considerations

The primary legislative instruments for the environmental management in Uganda are: The National Environment Act Cap 153; The Constitution of the Republic of Uganda, 1995 The guidelines for environmental impact assessment in Uganda, 1997; The National Environment (standards for discharge of effluent into water or on land) Regulations, 1999; The Land Act, 1998; The Town and Country Planning Act CAP 30; The Public Health Act, 1964; The National Environment (Waste Management) Regulations 1999; The water statute 1997; The water (discharge) Regulations, 1998, the National Water and Sewerage Corporation Act, 1995, the National Environment (NOISE Standards) Regulations, 2003' the National Environment (Control of Smoking) Regulations, 2003; The investment CODE 1991; The Penal Code Act CAP. 106; the Factories Act, 2000; the National Environment (Noise Standard and Control) Regulations (2002) and the Occupational Safety and Health Act, 2006. On the institutional side political and policy setting responsibility for the sector rests primarily with the Minister of Water and Environment (MWE). The Vision of MWE is sound management and sustainable utilisation of water and environment resources for the betterment of the Ugandan population (GOU, 2007). The Ministry oversees and coordinates the operations of three autonomous institutions that include the National Environment Management Authority, National Water and Sewerage Corporation (NWSC) and the National Forestry Authority (NFA).

The legislative and regulatory framework for environmental management provides Pine Investments Limited with information on the suggested structure and content for an environmental management policy. An environment management will ensure that there is consistency in departmental activities and compliance with relevant policies and statutory requirements. It will assist departmental managers and maintenance service providers to manage and undertake planning, construction and maintenance of the proposed Rwenzori Towers effectively and efficiently. Pine Investment understands that tightening environmental regulation may stimulate innovation or adoption of more efficient technologies. In the execution of this project, the above regulations will be put under consideration and observed for the smooth implementation of the development. The selection of professional team and development of quality assurance plans are some of the measures that Pine Investments has put in place in order to ensure that recommendations of this statement are implemented. This EIS includes the evaluation the Rwenzori Towers' capability to satisfy Environmental regulations. In particular the subsidiary plans developed in the EIS take into account the roles and responsibilities of different stakeholders in the construction, operation and maintenance of proposed Rwenzori Towers whilst promoting sustainable environment management as mandated by law.

Project Need and Analysis of Alternatives

The purpose of the Rwenzori Towers Project is to meet the increasing demand for top grade office accommodation within the corporate business district of Kampala. The building is primarily a commercial venture set up to maximize returns while providing high quality, convenience, safety, comfort and amenities that provide a quiet and safe atmosphere that fosters a quality working environment. Additionally, it provides a living environment that

separates its potential tenants from the noisy, dirty inconvenience of average commercial living that is characteristic of most commercial buildings in Kampala. The project will:

- Minimize traffic and parking-related impacts to neighbourhoods.
- Support and enhance existing neighbourhood character in an environmentally sensitive manner.
- Provide additional office accommodation choices in the Nakasero Road
- Anticipate future needs and impacts and not preclude future expansion opportunities.

Proposed Action and No Action Alternatives

There are two project options that have been identified: the Action and the NO development Action alternatives. Pine Investment selects the best option on the basis of financial, logistical, technical design, safety and environmental/socio-economic criteria. As part of the Proposed Action, which Pine Investments has identified as its preferred *alternative*, the EIS analyzes the potential impacts of constructing and maintaining the proposed Rwenzori Towers. The main alternatives concern location of related infrastructure like road, water supply and sewage networks and market demand. This EIS analyzes a *Proposed Action* to construct, operate and monitor, Rwenzori Towers. The EIS also analyzes a *No-Action Alternative*, under which Pine Investment would not build a well designed building that will balance safety, boost cutting edge facilities and features and provide positive working atmosphere for all tenants. The No-Action Alternative is included in the EIS to provide a basis for comparison with the Proposed Action. The analysis uses information from the public consultations in form of priorities, community consent and ownership as well as viability assessments.

The “Action” Alternative as described in this EIS has exhaustively discussed the impacts and proposed mitigation measures thereof if considered as the decision choice. Pine Investments understands that the environment impact assessment provides information on location, construction and operational activities that have negative impact on the environment. In this regard, the selection of Rwenzori Towers as the best option is assessed in terms of technical design and engineering solutions, compliance to legal framework, market analysis, financial analysis and economic analysis.

Under the “No-Action” Alternative, Pine Investment would end select an alternative location for the proposed Rwenzori Towers and the current structure would remain hosting a limited number of tenants in an area that is rapidly expanding. The No development action alternative assumes that the no development action alternative would upgrade the existing structure and utilities.

The EIS analysis demonstrated that the long-term performance Pine Investments does not expect the development will result in impacts to public health beyond those that could result from the prescribed in national guidelines. Therefore, considering the current status of the building and taking into account the increasing demand for decent working space for corporate working space in Kampala plus the proposed measures to mitigate adverse impacts of the proposed development, the “Action” alternative is preferred. Pine Investments Limited’s decision is based on the findings that make the action alternatives the most viable option because of its appropriateness of scope and size, technical, financial, economic and distributional justifications.

Key Findings

On the biophysical and social landscape, Pine Investments has developed the information about the potential environmental impacts that could result from either the Proposed Action for the NEMA's consideration, along with other factors required by the Kampala City Council in making a determination on whether to recommend Rwenzori Towers: a high level, demand driven investment. In general, the Proposed Action would cause small, short-term public health impacts due primarily to the construction and operation of high quality office space and corporate retail units. The specific impacts at the project site would not be significant most construction impacts would mainly be associated with air quality, noise and dust as well as increased pedestrian and motor vehicle traffic.

Positive impacts associated with the construction and operation of the office and retail building by Pine Investments Ltd, which will include:

- Provision of much needed decent office facilities in Kampala Central Division;
- Provision of employment opportunities both during the construction and operation phases;
- Revenue generation to the developer and contribution in terms of taxes to KCC and the National Economy;
- Upgrading the area status with a high value development project in place;
- Landscape and visibility

Although the proposed Rwenzori Towers Office and Commercial development does not have identifiable irreversible impacts on the environment; the likely impacts if not mitigated can cause harm to the environment. The negative impacts associated with the construction and operation of the Rwenzori Towers include impacts on air quality, noise and vibrations, water, soils and ground water, population increase and social disruption, public health and increased traffic and transportation. In more detail, the project impacts based on its life cycle include:

Planning and Design Phase

Site baseline conditions indicate that while the current land use category for the proposed project site is "Residential", while the proposed activity is of "Commercial" nature. This could mean that the proposed development could be in conflict with the existing land use. Furthermore, the is located close to mainstream surface and utility services, sewer, water mains, storm water drains, telephone cables, overhead electrical transmission lines, electric pipes, traffic signals etc. These utilities/ services are essential and have to be maintained in working order during different stages of construction by temporary/permanent diversions or by supporting in position. However, during construction, the water supply and sewerage network might be damaged affected due to excavation activities. Furthermore, the tenants from the existing Rwenzori developments have been benefiting from the scenic view provided by the trees on the existing structure. Many World Bank members prefer the view of the development because it helps them cope with stress.

Construction Phase

Construction of the proposed Rwenzori Towers may be disruptive to the surrounding area. In particular transport of material for building usually generates environmental and social impacts. The following analysis describes the types of construction-period impacts likely to occur.

- **Soil and Ground Water** Impacts: Considering that the construction phase will begin with excavation of soil for the basement floors and site levelling, soil compaction and collapse of structure could occur if site investigations are not undertaken.

- **Storm Water Impacts:** Runoff from the construction site may contain increased loads of suspended solids and contaminants. Potential sources of water pollution from site runoff might include runoff and erosion from site surfaces, drainage channels, and earth working areas and stockpiles; wash water from dust suppression sprays and wheel washing facilities; and fuel, oil and lubricants from maintenance of construction vehicles and equipment. At the time of the assessment, it was observed that the site has soils with have a low permeability and that storm water drains in the East to South direction.
- **Air Quality:** The principle air quality impact associated with construction activities is the generation of dust due to excavation of soil and demolition of the existing structure. Like any other construction site in the urban area, activities like excavation and demolition affect the quality of air. Construction activities are likely to modify the local climate, creating a heat island effect, with which is associated an urban dust-dome in which; fine particles and gases are trapped. However, construction should not result in any significant increased carbon monoxide levels and emissions from diesel-powered equipment would not be enough to produce any significant local or regional impacts.
- **Noise and Vibrations:** It is likely that noise and ground vibration will occur especially during the site preparation phase. This impact was analyzed in terms of the kind and number of pieces of construction equipment being operated, the hours when construction activities are taking place, and the location of potentially sensitive noise receptors.
- **Flora and Fauna:** The assessment required that both the value of the affected ecological resource and the nature and severity of the impact be taken account of and thus there is an emphasis on obtaining site information. There are a range of spaces and locations along Nakasero Road with confirmed or potential resources. Others have little or no ecological importance. Trees occur frequently along the road. A number of different species of mammals, birds and other fauna inhabit these areas, using them for food sources, nesting areas or intermediary habitats.
- **Waste Management:** The construction works will generate significant amounts of debris when undertaking site landscaping amongst other construction activities. There is a possibility of contaminating the site and its environs especially land from the inevitable loose soil, gravel and debris that will lie on the site. Construction activities could potentially lead soil contamination from fuels, oil, and other hazardous materials.
- **Hazards and harmful working conditions:** Pine Investments Limited is committed to observing and ensuring safety of their workforce and the office occupants both during the construction and operational phases. Therefore standard safety procedures, protective wear and close supervision of works, including the provision of appropriate training for the workforce and office occupants in handling emergency cases will be a priority. Hazards like the collapse of the building can occur due to various reasons including poor construction practices and construction on unstable ground that lacks sufficient bearing capacity to support the tower foundation. This could result in damage to property and the nearby residential houses and offices.
- **Traffic and Transportation:** The development will result in reasonable vehicular volume around the area and may be perceived as a nuisance for motorists on Nakasero Road. The main traffic generated by the construction sites is likely to be vehicles carrying construction materials and debris and vehicles used for access by site workers. Hence, the impacts of traffic and transportation are analysed in terms in impact to traffic conditions, impact road and infrastructure and impact on traffic safety.
- **Population Increase and Social Disruption:** The potential for employment may attract unauthorised people on the site which is likely to disrupt social systems and way of life

that is characteristic of community of Nakasero Road and Lumumba Avenue. Insecurity at the project site and in the neighbourhood as a concern was ranked very high for the tenants in the Rwenzori developments.

- **Landscape and Visual:** The landscape character and visual amenity of parts of the Nakasero Road is of high quality. The construction of Rwenzori Towers will be associated with the construction of temporary infrastructure that may affect the landscape and visuals in the area. However, due to the nature of the activity, this impact is not likely to be critical.

Operation and Maintenance Phase

The operations phase has potential for both positive and negative impacts on environmental, as well as local and regional socio-economic, systems, including some cumulative effects.

- **Air Quality due to** the increased number of vehicles driving into the parking bays could lead to increased atmospheric gases. Such effects could be increased carbon emissions and dust could lead to modifications in the local climate.
- **Noise generation Impacts from** cooling fans, electric generator and miscellaneous noise from vehicles. Infrastructure for the project and the necessary back-ups would be catered for by a central stand-by generator to cover all essential services.
- **Waste Generation and Management:** the building is expected to contain up to 5 office levels and 2400 square meters of retail space and more people will result in increased waste generation that has to be managed properly.
- **Employment Opportunities and Trade** since new jobs may be created and economic growth stimulated, and the growth of local business enterprises supported. Opportunities for growth and development will be created through complementary services and the local economy may benefit from the influx of capital and the increase in disposable income (from employees), both of which may be manifested in a multiplier effect in the local economy.
- **Landscape and Visual Impacts:** The plot is in a very prime location and being elevated above the Rwenzori structures will have a major visual impact. The new structure will promote aesthetically clean and appealing Environment and bring about change in visual look of street where it is located.
- **Social Anxiety and Reputational Sensitivity:** The social environments likely to be affected Rwenzori Towers operations include tenants and local communities
- **Traffic and Transportation:** Increased traffic and transportation will affect the traffic conditions on Nakasero Road and additional delays for motorists are likely. Furthermore, safety of motorists will be affected
- **Occupational Health and Safety:** There is a possibility that occupational health and safety of workers and contractors, workplace conditions (e.g. wages, benefits, security, rights and growth opportunities), as well as job satisfaction and pride will be compromised. The health and safety risks in Rwenzori House during operations include potential for respiratory diseases, burns, allergies and industrial accidents. All such hazards can be successfully controlled by the adoption of safety methods, training programs and occupational health and safety management systems.

Public Consultations

Substantial emphasis is placed on informing and consulting with people affected by the project and actively engaging those communities in addressing issues and opportunities associated with the project. In every step of the process, from project needs identification to the technical

design and engineering, the public consultation and disclosure process has relied on the active participation of the affected communities.

During the exercise, Pine Investments received comments and concerns that included impacts of dust, noise and vibrations, increased traffic, security, landscape and visuals as well as technical design. As a result of these public comments enabled a more detailed discussion of impacts, analysis project alternatives based on technical designs and engineering features. This information has been used to further recommend mitigation measures and develop environmental management plans.

Environmental Management Plan

The long term goal of the Environmental Management Plan is to ensure that environmental and socio-economic issues continue to be fully integrated into the business decisions of Pine Investments while promoting resource allocation efficiency of resources throughout the lifetime of the project. In addition, the plan helps encourage employees and contractors to achieve the highest environmental and socio-economic performance and provide the standards for overall planning, operation, audit and review. In more detail, the Environmental Management Plan is required in order to:

- Guiding Pine Investments and related coordinating institutions in ensuring continuing compliance of construction and operational activities with national legislation;
- Provide a framework for allocating resources (human and financial) in order to mitigate and enhance impacts
- Provide a framework for mitigating impacts that may be unforeseen or unidentified until construction is underway;
- Provide assurance to regulators and stakeholders that their requirements with respect to environmental and socio-economic performance will be met; and
Provide a framework for Pine Investment's compliance auditing and inspection programs.

Key Recommendations

As point of reflection for the future interventions, the assessment team, Pine Investments, Kampala City Council and the public proposed the following interventions:

1. The Project Manager should work with the Client, the design team, and the KCC in order to modify the current design based on site characterisation and conditions. The structural plans should plan for site drainage, the height of the building based on the geotechnical investigations and recommended skyline by KCC.
2. The developer must apply for land use change to KCC since the current land use type in the current land use plan is residential yet the development is commercial.
3. Environmental engineering solutions: recycling of waste is recommended
4. Habitat programmes: In order to maximise benefits for the clients and in line with conservation principles and for purposes of maintaining the aesthetic value of the proposed site, the developer should, as much as possible, maintain a reasonable amount of greenery around the project area through planting of tree, shrub and grass species or develop green spaces
5. Information and feedback systems: During the consultations a number of issues were raised regarding pre construction arrangement. Several dishes will have to be moved

within the existing Rwenzori establishments. In particular, affected dishes are those belonging to British Council and the World Bank. Work out modalities with designated persons; in the case of the World Bank contact Francis Bogere; Human Resources Manager on 0772730094

6. Effective site management is crucial in the mitigation measures proposed in this EIS are to be implemented. Earth movements through grading of the area should be regulated so as not to severely distort the landscape value of the proposed site.
7. In this regard, construction plan incorporating erosion best management practices, health and safety, traffic, air and water quality strategies should be developed and implemented. All effluent and sewerage as the case may be, should be appropriately and in accordance with prescribed regulations, discharged into the existing main Kampala City Council system.
8. Management Systems: Given that changes (biophysical and human) are likely to be observed during the project cycle, regular monitoring is recommended so that further investigations on the environmental and social impacts are undertaken and situation specific recommendations made.
9. Operational Measures: Public involvement and stakeholder coordination are crucial for project planning and implementation. This will help capture environmental concerns during the implementation and in decision making. Regular meetings with stakeholders regarding land use planning, environmental management, civil works and labour will help improve decision making and avoid delays in the construction period.
10. Emergencies: Fire assembly point should be in place and route for fire brigade should be planned for within the complex.

1 INTRODUCTION

1.1 General

Pine Investments Limited is a private company that carries out business of real estate; management, consultancy; purchase, sell, lease real estate and generally maintenance in real estate. The company also undertakes business of builders, contractors, consultants, architects, surveyors, decorators and other related business. Pine Investments proposes to build Rwenzori Towers; a low-rise development; coordinating and integrating with the existing Rwenzori developments (Rwenzori Towers and Rwenzori Courts and respecting their traditionally-inspired design concepts but with a more modern and sophisticated style. The development will have a central courtyard/atrium concept; 2 cores and 2 entrance points for absolute flexibility of accommodation, enabling even 2 major corporate tenants to have their own identity. Furthermore, the complex will have inherently flexible space arrangements for maximum long-term letting flexibility and tenancy sizes ranging from 50 square meters up to 6,000 square meters with no compromise of quality accommodation.

1.2 The Rwenzori Towers particulars

The design proposals of the Rwenzori Towers development area are based on the Pine Investments proposal for a project of approximately 12,000 square meters of highly flexible state of the art office accommodation and 2,700 square meters of retail space, creating approximately 12,000 square meters of prime lettable commercial space, with some 450 parking bays, in an excellent location on Nakasero Hill, adjacent to the Rwenzori Courts and Rwenzori House developments. Pine Investments further proposes a corporate retail Courtyard at Nakasero Ground Level to cater for the existing and new tenants with flexible vehicular circulation with 3 access points for vehicles: 2 off Nakasero Road and 1 off Rwenzori House parking to ease the flow of traffic to and from the building and the other Rwenzori Developments. The feature entrance tower visible from Lumumba/Ternon roundabout and Sheraton Gardens will create strong visual links to town and add aesthetic value to the area and all provide formal “Corporate” façade to Nakasero Road. The Towers will have lighting “reflecting” façade facing and reflecting the existing Rwenzori House and Courts and superb views over Kampala City above the Rwenzori rooflines; and covered Parking provision for 400 cars, by being set into the hillside, the parking becomes effectively “invisible.

1.3 Purpose and Scope of this EIA

The National Environment Act CAP 153 section 19 introduced the requirement for an Environmental Impact Assessment into the Uganda laws. Under section 19 (3) of the NEA Cap 153, all projects or policies that may, are likely to or will have significant impacts on the environment should be subjected to EIA so that adverse impacts can be eliminated or mitigated. The EIS evaluates not only impacts associated with constructing, operating, Rwenzori Towers, but also those associated with transporting the materials to the project site. In addition to evaluating the near-term impacts of those activities, the EIS evaluates impacts that could occur hundreds of thousands of years in the future.

1.4 Objective of the EIA Study

The Objective of the EIA study is:

- To identify all likely positive and negative environmental impacts due to the proposed development of the Rwenzori Towers in Plot 3 Nakasero Road;
- To identify and evaluate all significant negative environmental impacts, and propose appropriate mitigation and enhancement measures for the attention of Pine Investments, for incorporation into the construction and operational phases;
- To compile an environmental impacts statement report including an environmental management plan for all aspects of the proposed developments for submission to NEMA for consideration for approval.

1.5 Methodology of this EIA

The Environmental Impact study was carried out in accordance with the National Environment Act CAP 153, the Environmental Impacts Assessments Regulations, 1998, EIA guidelines for the urban infrastructural sector and approved terms of reference for the EIA. Specifically, this assessment utilizes a stakeholder-based life cycle assessment approach to identify and analyze impacts in order to support sustainable decision making in multi-stakeholder contexts. Life cycle thinking is not just a way to examine environmental impacts of activities, but also a way to comprehend and visualize a broader set of upstream and downstream consequences of decisions in development planning and implementation (Thabrewa, Wiek, & Ries, 2008) A life cycle framework including the mapping of stakeholder involvement at each activity in upstream and downstream stages would give stakeholders a holistic view that they otherwise may not have.

Hence, the EIA team used a number of techniques and methods at each stage of data gathering and information synthesis. However, the techniques and methods varied from one expert to another (social and bio-physical standard methods). These techniques and methods include, but are not limited to, literature review, stakeholder consultations, onsite observation and specialist studies and analyses. Some of these methods are further described below.

Review of relevant literature - In order to understand the scope and relevance of the study, the team reviewed relevant documents that will include but not limited to, urban infrastructural development, regulatory and institutional context guiding the sector. This helped the team in identification of stakeholders, development of a study framework that included data collection tools and an updated work plan.

Consultations with stakeholders - Consultative meetings were held with various stakeholders and regulatory institutions 8) to facilitate public participation in the activities of proposed substation as recommended by the National Environmental Act, CAP 153, EIA Regulations (1998), and Conduct of Environmental Practitioners Regulations (2001) and Guidelines for EIA in Uganda. The process for public consultation and disclosure during the performance of the environmental assessment included public surveys that captured opinions of affected communities and, meetings with key institutions. The aim of these meetings was to identify and take note of environmental concerns and views of all the stakeholders at an early stage so that their proposed mitigations are incorporated in the final implementation plan of the project (Interorganizational Committee on Guidelines and Principles, 1994; Vanclay, 2003). It

not only provided feedback on the proposed plan but also contributed to the development community participation plans.

Other quantitative and qualitative methods applied - Qualitative methods such as direct observation and photography were used to obtain information on the site and the neighbourhood. Quantitative techniques were applied in the assessment of the flora and fauna status of the site and surroundings. Additionally in order to establish the baseline environment quality soil samples were taken from the site.

1.6 Structure of EIS

This Environmental Impact Statement was prepared in accordance with terms of reference approved by NEMA. The structure of the report is as follows:

1. An Executive Summary, stating the major findings of the study;
2. **Chapter 1:** Background information on the proposed investment, including location, , previous and planned extent and operations, planned infrastructure/installations and timing, safety provisions, methodology for undertaking this EIA study
3. **Chapter 2:** Site baseline bio-physical and sociological information, area infrastructure and activities in relation to the proposed site and proposed development of the Rwenzori Towers
4. **Chapter 3:** A review of policies, laws, regulations and standards, and the project's conformance;
5. **Chapter 4:** Project description outlining the key components of the project including location, schedule, physical presence, operations and its extent, including required infrastructure and provisions to mitigate impacts;
6. **Chapter 5:** Discusses project need and alternatives;
7. **Chapter 6:** Presents an analysis of project impacts and their mitigation;
8. **Chapter 7:** Presents the public and stakeholders consultation outlining issues raised and how their concerns will be addressed once the proposed land use is implemented.
9. **Chapter 8:** An environmental management and monitoring plan for negative impacts due to proposed developments and assessing effectiveness of mitigation measures;
10. **Chapter 9:** Recommendations and conclusions regarding future operations of the development as an environmentally and economically sustainable project.

2 SITE BASELINE CONDITIONS

2.1 Background

The site characterization program consists of scientific, engineering, and technical studies and activities. This section presents findings of site investigations including investigations of the hydrology and geology of the site; studies of socioeconomics, cultural resources, and terrestrial ecosystems; and monitoring of air quality, meteorological, radiological, and water resource data.

2.2 Location

The proposed development is to be located at Plot 3 Nakasero road. The proposed site is located at latitude 0.190291° N and at longitude 32.344758° E. It is located in a prime area which demands corporate office space and parking. The location is ideal for the development being away from the increasing problematic circumstances on Kampala Road, but within the corporate business district of Kampala and eminently situated to top grade office accommodation. The proposed site forms the third element of the existing Rwenzori Commercial Developments, the design for the building is to integrate with and benefit the existing elements.

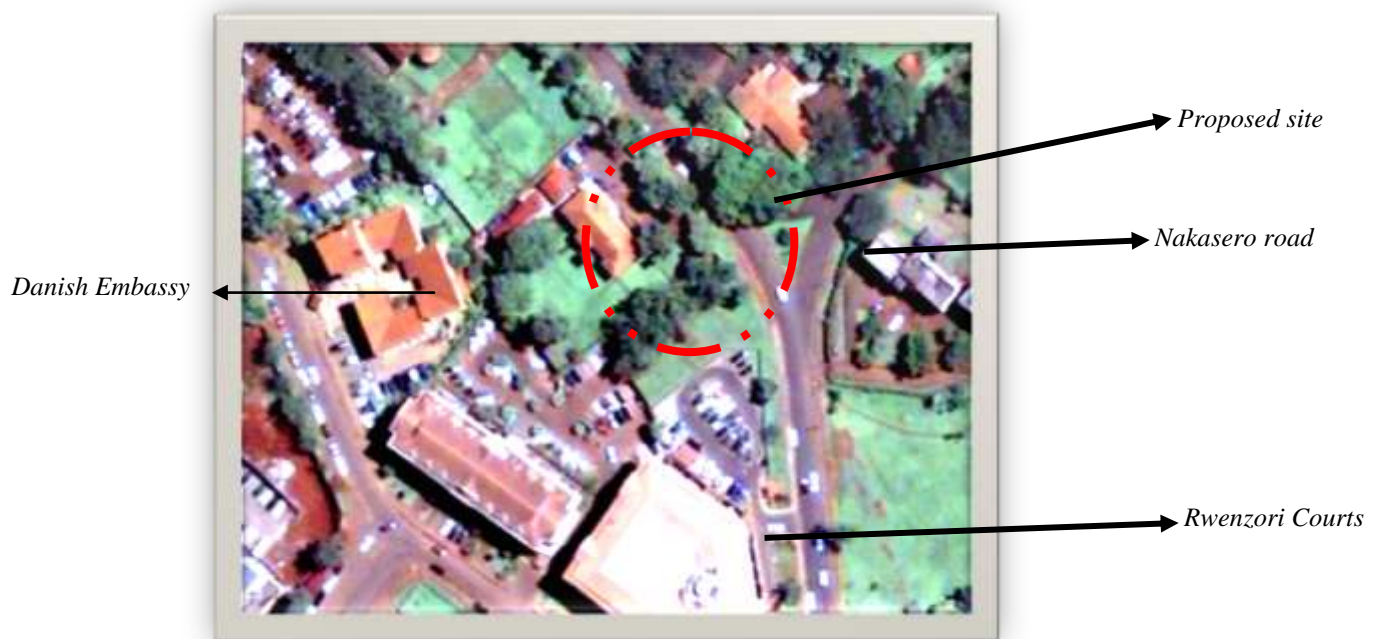


Figure 1: Satellite Image of Project Site

2.3 The Biophysical Environment

The proposed project site is to be located in Kampala District within the Nakasero sub-location. District level information has been used to describe the climate.

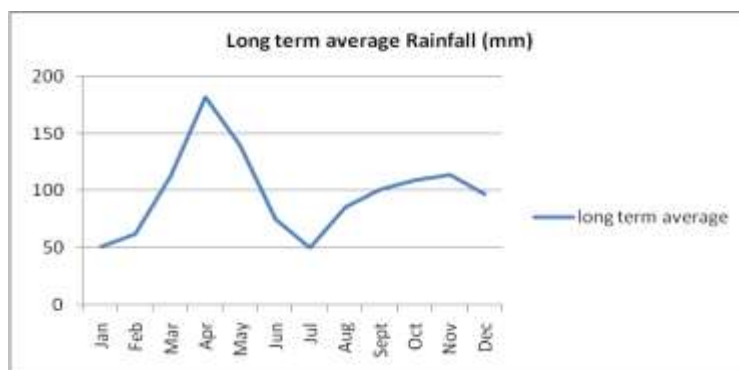


Figure 2: Long term average rainfall for Kampala

Rainfall occurs throughout the year, but follows a bi-modal pattern with a long term annual average of 1180 mm. The wetter periods occur from March to May and September to November and two drier periods occurring from June to August and December to February (UBOS 2008).

Temperatures are moderate averaging between 16.4 and 28.4°C (UBOS 2008). The relative humidity is highest in May and lowest in January, following the temperature pattern. For Kampala, the minimum and maximum long term average humidity recorded was 53 and 89 in January and May respectively (department of meteorology, 2008).



Figure 3: The proposed site and its surrounding environment

2.3.1 Land Cover

The land cover type at the proposed project site is characterised as being primarily non-vegetated terrestrial. The artificial cover at the site is due to human activities such as construction. In more detail, the current structure is a residential house that

is housing Group 4 Security Company that employs approximately 60 members of staff. The area has a medium density low density¹ impervious structures (concrete). In addition to this, the site is generally surrounded by permanently built structures² some of which lie along Nakasero Road include the road, shops and leisure facilities and commercial areas.



Figure 4: A section on Nakasero Road close to the Project Site

The site can be characterised as primarily being non vegetated with a total vegetative cover of less than 4% for more than 10 months of the year, or in the absence of woody or herbaceous life forms less than 25% cover of Lichens/Mosses. While most of the flora in the area is planted there are three tree species that exist within the project site namely *Pseudocedrela sp.*, *Aleurites moluccana* and *Autocarpous heterophyllus* (Jackfruit tree). Other vegetated areas related to the existing structure show a regular pattern including vegetated gardens with planted ornamental trees within the compound include *Roystonea regia*. The immediate neighbourhood on Nakasero road is lined with old trees including *Jakaranda*, *Syzygium guineense*, and *Aleurites moluccana*. None of these trees will be affected by the construction activities.

2.3.2 Hydrology

The effect of moisture on the soils is greatly influenced by the drainage, which is largely a matter of degree of slope, but this is generally a localised characteristic. Although geotechnical investigations did not conclusively encounter the water table, Kampala is characterized as having a high water table. There were no surface water resources observed on the site and within the boundaries of the Project site which could be attributed to the disturbed hydrology in the area and to increased human activity.

2.3.3 Geology, Geomorphology and Soils

Except for tiny portions underlain by recent deposits of alluvial and lacustrine formations, (occupied by wetlands), most of Kampala and its immediate neighbourhood is underlain by the Pre-Cambrian rock system – Basement Complex represented by

¹ Low Density: Less than 50% of the total surface area consists of impervious surfaces (Gregorio & Jansen, 2000)

² Built up areas are characterized by the substitution of original (semi-) natural cover or water surface by an artificial, often impervious, cover. This artificial cover is characterized usually by long cover duration (Gregorio & Jansen, 2000).

undifferentiated gneisses with granites. Considering that the nature of the parent material has great influence, particularly through the proportion of quartz in granites and sandstones which give rise to sandy soils in contrast to more clayey soils derived from lavas. Hence under similar climates, the sandier the soils are generally less fertile and more liable to erosion. However, the soil at the site is aggregated/ compacted, and slightly impermeable which is an implication that it is of a fine texture despite the fact that the aggregation of soil particles is intercepted by the presence of gravel. This soil structures is indicative of past deposition of murram and gravel.

2.4 Socio-economic Environment

2.4.1 Administrative structure

The administrative set up of Kampala Central Division where the proposed project is located is based on a five tier local Government Council comprising of LCI (one) at village level, LC3 at Parish Level and LCV (five) at district level. The LCI executive is headed by a chairperson who has the authority to facilitate implementation of programmes and projects within his or her area of jurisdiction. It is divided into 5 divisions, 99 parishes and 811 sub-parishes.

2.4.2 Land use

The current land use category for the proposed project site is “Residential”, while the proposed activity is of “Commercial” nature. This calls for an application for ‘change of user’ to conform to the proposed activity. This application needs to be made with KCC, who will advise on the steps to be taken. Otherwise the land use for the target site as it is currently is for residential purpose until 2011. There is a long term plan to formally convert many sections of the City including Nakasero hill into civic centres to answer the acute demand for civic services by the public / facility developers. KCC has been working on a number of City up-grading proposals. Thus, it is important that an interpretation of these proposals is made in connection with the proposed project. This will eliminate elements of land use conflict.

2.4.3 Neighbourhood characteristics and dynamics

The nature of construction around the project area can be classified as permanent structures and usually have a foundation of concrete block on which a cement cap is poured and a concrete block or brick walls are built. The neighbourhood is characterised as being sensitive to security and changes in living standards. In the first instance, most of the neighbours are organisations that value their corporate image. These include UMEME, Deloitte and Touche, UTL, World Bank, KPMG amongst others. The area is also home to embassies that include Netherlands, Belgian and Danish Embassies. The residences in the area include Ministry of Lands, Water and Environment and the UN residential structures. In addition to this, the neighbourhood has schools, offices and restaurants. For security reasons, it is very important that State House clearance is sought preferably at the earliest possible opportunity. The general observation is that the neighbourhood is a mixture of residential and commercial accommodation. Given that the demand for office space is increasing, the area is developing into an urban ecosystem with a rapid change in land cover due to increasing human activity.

2.4.4 Population and demographics

One main challenge to the population growth and development is the poor supply of social services, including safe water, health and education facilities. The Central Division of Kampala where the site for the proposed Rwenzori Towers is to be located lies had a population of 88,094 at the time of the Nationwide population and housing census in 2002 (UBOS 2005). Results from the Census demonstrated that the majority of Kampala district's population lived in the suburbs and the central division which was the most lowly populated is mainly used for business/commerce or recreation.

2.4.1 Social Interaction

Within the different social contexts characterised by diversity in ethnicity, the way people within Kampala Central Division interact and relate with each other is regulated by vested interest, conflict situations, social class, social status differences and reference group affiliations. The nature of the clients within the existing developments is characterised as corporate professionals and diplomats. Hence, the network characteristic of existing clients can best be described as the Small World network which corresponds to modern, reasonably dense cities and suburbs. Individuals have substantially overlapping networks, but each also has some chance to influence individuals outside these clusters (Siegel, 2009). These networks form when a tightly regimented series of connections, such as childhood friendships, is perturbed, as when individuals move away and join new groups of friends.

2.4.2 Cultural Resources

The landscape at the project site does not indicate any signs of cultural heritage. Additionally, there are no known underground remains of significant historical importance and buildings or places of cultural, spiritual, or religious meanings, created or used by recent/current generations (cemeteries, places of worship, symbolic markers, etc.).

2.4.3 Economic activities

The project site and the neighbourhood is home to a number of economic activities from different sectors including, telecommunication, electricity supply, education, trade and security. The sectors provide the main source of livelihood of a number of people in Kampala district which is accrued from self employed and formal employment sectors. Nakasero where the Tower will be constructed is an area of commerce mostly dominated by the affluent of society.

2.4.4 Social services and existing infrastructure

The provision of social and infrastructure services plays a vital role in supporting accelerated and sustainable social, political and economic development. The UEDCL grid line serving the Central Division covers the proposed area. The Rwenzori Towers will be connected to this line and a standby generator will be installed in case of power failure. Like electricity, the area enjoys the services of piped water and sewerage by NWSC. The project site also has access to both NWSC sewage and water supply networks. The current water supply systems are designed for domestic consumption but can be expanded in order to meet the needs of the growing populations.

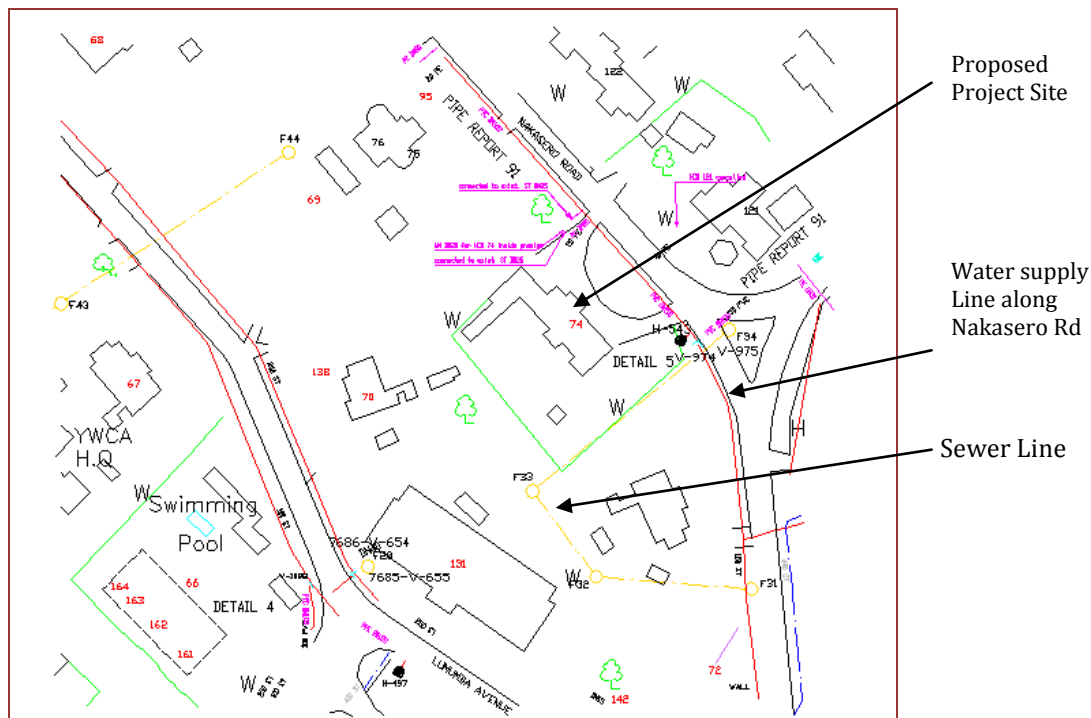


Figure 5: Water supply and Sewerage Networks on the project area

2.4.5 Solid Waste Management

Kampala City Council used to be the sole institution charged with management of solid waste in the municipality. Of late this service has been privatized and private garbage collection firms have now joined the industry. In the current Rwenzori Development, the property managers are utilizing the services of a private garbage collector (at a fee) to ensure timely disposal of the waste generated. Kampala City Council is entrusted with the proper management of the final disposal site (landfill)

2.4.6 Transport and communication

There are several all-weather roads in good condition within the reach of the project area. Nakasero Road, though narrow, is used by a number of motorists going to their work places, picking children from school and undertaking their business in the city. Kampala district has access to all operational telecommunication signals within Uganda. The location of the project gives it a better access to telecommunication services. The site enjoys the services of all the four major telecommunication service providers [the Mobile Telecommunications Network (MTN), Zain, Uganda Telecom limited (UTL) and Warid Telecom].

2.4.7 Health Care

A number of private and public health facilities exist within the surroundings of the proposed project. They offer quality health services with some even open 24 hours a day.

2.4.8 Security

Security is provided by both government and private security institutions. Government agencies include Uganda Police, Local Defense Forces, Uganda Peoples Defense Forces,

Military Police, and Internal Security Organization, Chieftaincy of Military Intelligence, and Anti terrorism squad. Several private security firms are also available for hire. The Rwenzori Towers will hire the services of a Security Group to secure the lives and property of its tenants on a 24 hr basis. The incidence of major crime is very minimal although one may not rule out the existence of pick-pockets and night hangers.

2.4.9 Fire Brigade

The Uganda Police Force has a fire brigade section. Though overwhelmed, it always responds to eventualities in case they happen. The private sector has also started to invest in this area but for private protection and not open to subscription. The proposed building complex will be at liberty to use the services of Uganda Police Fire Brigade. An efficient fire fighting system and fire prevention mechanism will be installed within the building complex to supplement the police brigade. The building design has incorporated a fire control system with a series of fire hydrants, fire extinguishers, smoke detectors and fire alarms.

3 LEGISLATIVE AND REGULATORY CONSIDERATIONS

3.1 Introduction

Pine Investment understands that tightening environmental regulation may stimulate innovation or adoption of more efficient technologies. The strong interest of the developed world in environmental quality could, moreover, facilitate the technological transfer. Against this background, this chapter presents a brief overview of the current legal, regulatory and institutional framework of the Environmental Management in Uganda that is guiding the planning and design of the proposed Rwenzori Towers. The main objective of this review is to analyze whether the proposed development of Rwenzori Towers by Pine Investments conforms to current legislative framework and regulatory considerations. It gives an overview of the primary legislative framework, the institutional arrangement within which planning and regulation are undertaken and Pine Investments plans for ensuring environmental compliance and hence environmental quality assurance.

3.2 Legislative Framework

The primary legislative instruments for the environmental management in Uganda are: The National Environment Act Cap 153; The Constitution of the Republic of Uganda, 1995; The guidelines for environmental impact assessment in Uganda, 1997; The National Environment (standards for discharge of effluent into water or on land) Regulations, 1999; The Land Act, 1998; The Town and Country Planning Act CAP 30; The Public Health Act, 1964; The National Environment (Waste Management) Regulations 1999; The water statute 1997; The water (discharge) Regulations, 1998, the National Water and Sewerage Corporation Act, 1995, the National Environment (NOISE Standards) Regulations, 2003; the National Environment (Control of Smoking) Regulations, 2003; The investment CODE 1991; The Penal Code Act CAP. 106; the Factories Act, 2000; the National Environment (Noise Standard and Control) Regulations (2002) and the Occupational Safety and Health Act, 2006. Each is described below:

The National Environment Act Cap 153 was enacted the National Environment Statute in 1995 as an umbrella law on environment management in Uganda. The statute was later changed into an Act in 2000. Under Section 19(1), a developer of a project described in the Third Schedule is required to submit a project brief to the lead agency. The format and the information required are prescribed in the national EIA guidelines prepared by NEMA (NEMA 1997). The Third Schedule provides a list of projects to be considered for EIA. The Schedule requires that an activity that is out of character with its surroundings, or a structure that is of a scale not in keeping with its surroundings or a major change of land use should be subject to an EIA in Kampala Central Division. The Environmental Impact Statement is prepared in order to ensure that the developer in collaboration with Kampala City Council complies with all set guidelines are complied with as stipulated in the Law of Uganda.

The Constitution of the Republic of Uganda, 1995 which gives The Parliament of The Republic of Uganda a duty to protect and preserve the environment from abuse, pollution and degradation. It also calls upon The Parliament to provide for measures to

manage the environment for sustainable development. Through Articles 39 and 41, everyone is given a duty to maintain a sound environment.

Objective XXVII calls upon the State to:

- “... promote sustainable development and public awareness of the need to manage land, air and water resources in a balanced and sustainable manner for posterity;
- take all possible measures to prevent or minimize damage and destruction to land, air and water resources resulting from pollution or other causes;
- Promote the rational use of natural resources so as to safeguard and protect the biodiversity of Uganda”.

The guidelines for environmental impact assessment in Uganda, 1997

The Guidelines for Environmental Impact Assessment in Uganda, 1997 and the Reference Manual for Environmental Impact Assessment, 2000 section 3.0 subsections 3.2.1 and section 2.0 subsections 2.2.2 respectively; were reviewed and were adhered to in the course of preparation of this Environment Impact Statement.

The National Environment (standards for discharge of effluent into water or on land) Regulations, 1999

This regulation provides for standards (maximum permissible limits) for effluent or waste water before discharge into water or on land, a general obligation to mitigate pollution, and a duty to keep records of amount of waste generated and parameters of the discharges. While operating the Rwenzori Towers, the developer will take into account the requirements of this regulation.

The Land Act, 1998

Section 44 of the Land Act provides that whoever owns land or occupies land shall manage and utilize it in accordance with the National Environmental Statute of 1995, the Water Statute of 1995, Uganda Wild Life Statute of 1996, and other laws. Section 46 requires use of land to conform to the provisions of the law relating to the Town and Country Planning Act and any other law.

The Town and Country Planning Act CAP 30

The Constitution of the Republic of Uganda provides that government may, pursuant to laws made by Parliament and Government policies, regulate the use of land. The principal Act on land use and land planning in urban and rural areas is the Town and Country Planning Act. The Act establishes the Town and Country Board, which is charged with the duty of planning for the orderly development of towns and rural areas.

Securing human health, especially in urban environments, is still today viewed as one of the major challenges for spatial planning and urban governance (Kørnø, 2008). Land use and transport strategies affect air quality and noise; industrial waste can affect, both directly and indirectly, human health through the influence on e.g. water quality and land contamination; housing strategies affect access to adequate housing for all groups in society, and use of building materials influence physical health; mobility planning

affects the choice of different transport modes such as walking and cycling and the access for people with impairments. These are a few examples of linkages and indicate that almost every planning decision potentially affects human health.

The Public Health Act, 1964

Section 7 of the Act provides local authorities with administrative powers to take all lawful, necessary and reasonable practical measures for preventing the occurrence of, or for dealing with any outbreak or prevalence of any infectious, communicable or preventable disease to safeguard and promote public health; and to exercise the powers and perform the duties in respect of public health conferred or imposed by this Act or other relevant laws. Section 105 of the Act permits the local authorities to take measures to prevent any pollution dangerous to health of any water supply which the public has a right to use for drinking or any other domestic purposes (GOU, 2008a).

The National Environment (Waste Management) Regulations 1999

Section 5 provides for a person who owns or controls a facility or premises, which generate waste, to minimize the waste generated by adopting cleaner production methods. Subsection 1 (b) Identify and eliminate potential negative impacts of the product/waste (c) incorporate environmental concerns in the design and disposal of a product. Section 12 provides that an establishment/industry shall not discharge or dispose of waste of any state into the environment, unless the waste has been treated in a treatment facility and in a manner approved by the lead agency in consultation with the authority.

The water statute 1997

The Water Statute provides for the management of water in Uganda. Under section 107, the water regulations 1996 and Sewerage regulations 1997 were formulated and are aimed at minimising pollution of public waters by developers and other users. Section 34 makes it an offence to pollute or cause risk of water pollution. This provision will be upheld.

The investment CODE 1991

The Investment Code number I of 1991, section 19 stipulates that “an investment license may also contain an understanding by the investor to take steps to ensure that the operations of his/her business do not cause injury to the ecology or environment”. Governments world-wide increasingly see energy efficiency as an important aspect of sustainability (Hanleya, McGregorb, Swalesb, & Karen Turnerb, 2008).The economic factors underpinning rebound effects are straightforward: energy efficiency improvements result in an effective cut in energy prices, which produces output, substitution, competitiveness and income effects that stimulate energy demands. However, the presence of strong rebound or even backfire does not mean that efficiency-enhancing policies are irrelevant: rather it suggests that such policies operating alone are insufficient to generate environmental improvements.

The Factories Act, 2000

This Act provides for the health, safety and welfare of persons employed in the factories and other places. In this regard, the developer plans to employ someone in charge of health and safety work workers in order improve working conditions. This will be further supported by *The Occupational Safety and Health Act, 2006*

The Penal Code Act CAP. 106

In section 171, 172, 173, it creates offence against pollution and adulteration of air, water as well as noise pollution. The developer plans to undertake activities like demolition and exaction during the night in order to control the impacts of noise and dust. The National Environment (Noise Standard and Control) Regulations (2002) will further guide the developer in ensuring that noise levels at the project site do not exceed recommended levels. Other laws considered in this study include: The water (discharge) Regulations, 1998, the National Water and Sewerage Corporation Act, 1995, the National Environment (NOISE Standards) Regulations, 2003' the National Environment (Control of Smoking) Regulations, 2003. In the implementation of the Rwenzori Towers project, the reviewed pieces of legislation will be put under consideration and observed for the smooth development and operation of the establishment.

3.3 Institutional framework: current arrangements

On the institutional side political and policy setting responsibility for the sector rests primarily with the Minister of Water and Environment (MWE). The Vision of MWE is sound management and sustainable utilisation of water and environment resources for the betterment of the Ugandan population (GOU, 2007). The Ministry oversees and coordinates the operations of three autonomous institutions that include the National Environment Management Authority, National Water and Sewerage Corporation (NWSC) and the National Forestry Authority (NFA).

NEMA is the principal agency in Uganda for the management of the environment and shall coordinate, monitor and supervise all activities in the field of the environment and it has the functions of authority, relationship with lead agencies and delegation. Hence the functions of the authority are:

1. To coordinate the implementation of Government policy and the decisions of the policy committee;
2. To ensure the integration of environmental concerns in overall national planning through coordination with the relevant Ministries, departments and agencies of the Government;
3. To liaise with the private sector, intergovernmental organisations, nongovernmental agencies and governmental agencies of other States on issues relating to the environment;
4. To propose environmental policies and strategies to the policy committee;
5. To initiate legislative proposals, standards and guidelines on the environment in accordance with this Act;
6. To review and approve environmental impact assessments and environmental impact statements submitted in accordance with this Act or any other law;
7. To promote public awareness through formal, non formal and informal education about environmental issues;
8. To undertake such studies and submit such reports and recommendations with respect to the environment as the Government or the policy committee may consider necessary;
9. To ensure observance of proper safeguards in the planning and execution of all development projects, including those already in existence that have or are likely

- to have significant impact on the environment determined in accordance with Part V of this Act;
10. To undertake research and disseminate information about the environment
 11. To prepare and disseminate a state of the environment report once in every two years;
 12. To mobilise, expedite and monitor resources for environmental management;
 13. To perform such other functions as the Government may assign to the authority or as are incidental or conducive to the exercise by the authority of any or all of the functions provided for under this Act.

The authority may in the performance of its functions under subsection (1) delegate, by statutory instrument, any of those functions to a lead agency, a technical committee, the executive director or any other public officer.

In the exercise by the authority of its coordinating, monitoring and supervisory function in the field of the environment, a lead agency shall not be released from performing its duties as prescribed by law.

Each lead agency charged with the management of any segment of the environment under any law shall submit to the authority— within two months after the expiry of every two years, a report on its operation during that period; such other reports as may be prescribed by the policy committee and at such times as may be so prescribed, on the state of that segment of the environment and the measures taken by the lead agency to maintain or improve the environment.

3.4 Environmental Quality Assurance

The legislative and regulatory framework for environmental management provides Pine Investments Limited with information on the suggested structure and content for an environmental management policy. An environment management will ensure that there is consistency in departmental activities and compliance with relevant policies and statutory requirements. It will assist departmental managers and maintenance service providers to manage and undertake planning, construction and maintenance of the proposed Rwenzori Towers effectively and efficiently. This section gives an overview of the political and policy setting responsibility for environmental management in Uganda and in particular Kampala Central Division. Furthermore, it shows how it will be interacting with related agencies in order to implement recommendations of this EIS.

3.4.1 Environmental Compliance

The development of Rwenzori Towers will be undertaken within the legal and regulatory framework of environmental regulation in Uganda. Hence if approved, the EIS recommended actions acknowledge that National Environment Management Authority and other lead agencies work within the framework that ensures that the principles of environment management set out in subsection 2 of the act are observed. Pine Investments will address each the project components in order to identify how planning, construction, operation and maintenance should be managed in order to ensure compliance. Hence, any department-specific compliance requirements should be addressed in the same way. This may include statements related to compliance with statutory, legislative and other requirements such as:

- environmental legislation;
- health and safety;
- security;
- risk management;
- compliance with other related government policy

The environmental management principles referred to include the following: assure all people living in the country the fundamental right to an environment adequate for their health and well-being; to encourage the maximum participation by the people of Uganda in the development of policies, plans and processes for the management of the environment; to use and conserve the environment and natural resources of Uganda equitably and for the benefit of both present and future generations, taking into account the rate of population growth and the productivity of the available resources; to conserve the cultural heritage and use the environment and natural resources of Uganda for the benefit of both present and future generations; to maintain stable functioning relations between the living and nonliving parts of the environment through preserving biological diversity and respecting the principle of optimum sustainable yield in the use of natural resources; to reclaim lost ecosystems where possible and reverse the degradation of natural resources; and to establish adequate environmental protection standards and to monitor changes in environmental quality (GOU, 2004). In particular, it will adopt technologies and designs that promote sustainable utilisation of resources and mitigate negative impacts on the biophysical environment. Additionally, it will work with existing stakeholders in order to participate in environmental regulation.

3.4.2 Stakeholder Participation and Coordination

Pine Investments understands that while there are different institutions whose mandates may differ in terms of resource management; the overall goal of attaining environmental sustainability lies in stressing coordination, cooperation and concentration on partnerships (Lean, 1995). Global managers report that high unforeseen costs impact project outcomes and that many unforeseen costs arise from national institutional differences – differences in participants’ core beliefs, values, norms and legal, political and economic regulative systems (Orr, 2004).

The linkages between increased local participation in decision making and sustainable development can best be understood by considering the interrelated issues of inequity, empowerment and consensus (Desai & Potter, 2002). Pine Investments will utilize the wide scope of spatial planning as a major opportunity to strengthen links between National Environment Authority and Kampala City Council, Community Strategies, and a range of other plans and strategies in which it has an interest. Seeking for support between plans and strategies in the policy at national and local level will help the Rwenzori Towers project to have linkages across different sectors, including economic, social and environmental plans and strategies.

Hence, the related agencies will be able to address economic, social and environmental issues together; ensure that necessary development is sustainable, of high quality, in the right place and benefits local communities; ensuring that the economic and social value of environmental assets is recognized; enhancing the environment and promoting local distinctiveness; maintaining and where necessary restoring healthily-functioning

natural systems and processes; and ensuring the potential contribution to the regional and local economy is unlocked in ways that protect and enhance the environment and stimulate regeneration and renewal. The capacity of local institutions to implement more sustainable development will be enhanced when they address different needs of society –Governmental and Non Governmental.

3.4.3 Capacity Building

Pine Investments respects the ability of the environment to accommodate change. There are a wide range of studies that have been undertaken to assess the environment's ability to accommodate change. For example, the location and design of development were investigated and site characterization considered in ways that achieve a good environmental fit now, address past losses and, where appropriate, build in new capacity to help meet future development needs and environmental change.

Additionally, environmental information, feedback on inefficiencies, improvement potentials within the organization and the possible impact of new technologies will be disseminated to staff and contractors so that they reduce the uncertainty and lower environmental risk and adopt environmental innovations. By staff training, raising the awareness, the knowledge and skills of the personnel, they tend to reduce the implementation costs and raise the value of a new environmental technology. The adoption of an environmental management system will therefore be considered a meta-innovation that raises the possibility of the adoption of new technologies.

3.5 Conclusion

In the execution of this project, the above regulations will be put under consideration and observed for the smooth implementation of the development. The selection of professional team and development of quality assurance plans are some of the measures that Pine Investments has put in place in order to ensure that recommendations of this statement are implemented. This EIS includes the evaluation the Rwenzori Towers' capability to satisfy Environmental regulations. In particular the subsidiary plans developed in the EIS take into account the roles and responsibilities of different stakeholders in the construction, operation and maintenance of proposed Rwenzori Towers whilst promoting sustainable environment management as mandated by law.

4 PROJECT DESCRIPTION

4.1 Introduction

Pine Investments proposes to build Rwenzori Towers; a low-rise development coordinating and integrating with the existing Rwenzori developments (Rwenzori Towers and Rwenzori Courts and respecting their traditionally-inspired design concepts but with a more modern and sophisticated style. The development will have a central courtyard/atrium concept; 2 cores and 2 entrance points for absolute flexibility of accommodation, enabling even 2 major corporate tenants to have their own identity. Furthermore, the complex will have inherently flexible space arrangements for maximum long-term letting flexibility and tenancy sizes ranging from 50 sq m. up to 6,000 with no compromise of quality accommodation.



Figure 6: Perspective View of the Proposed Rwenzori Towers

4.1.1 The Development

Retail

Ground Floor Retail space at Nakasero Road totalling approximately 2,400 square meters, envisaged as Banking/Corporate retail components and fully flexible unit sizes. There is additional retail space provided at Rwenzori House Level comprising of approximately 300 square meters, anticipated for service retail and square meters; all retail units.

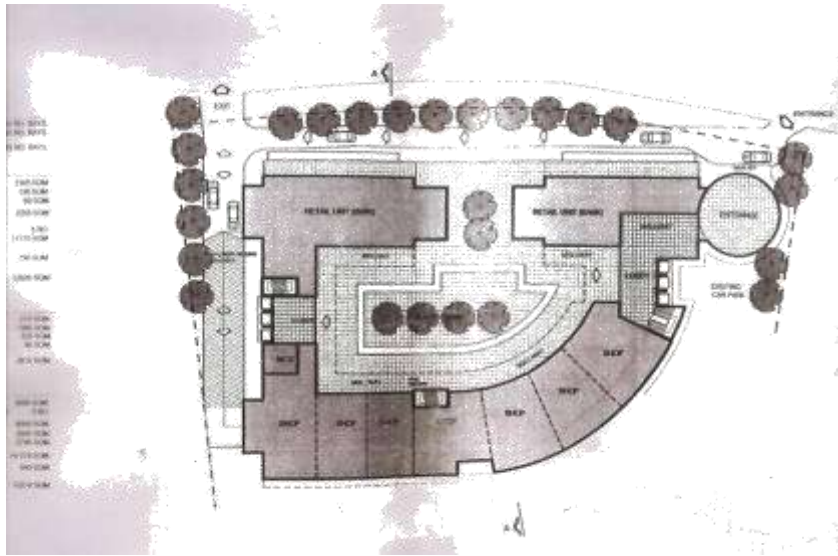


Figure 7: Ground Floor Layout

Office Space

The development has flexible sub-divisible office space of approximately 12,000 square meters gross area arranged over 5 office levels including rooftop penthouse office space. Each office floor comprises approximately 2,000 square meters of lettable space which can be potentially formed into up to 4 self-contained varying sized tenancies of approximately 500 square meters each. Full or half-floor tenancies can equally be accommodated thus catering for all types of potential users.

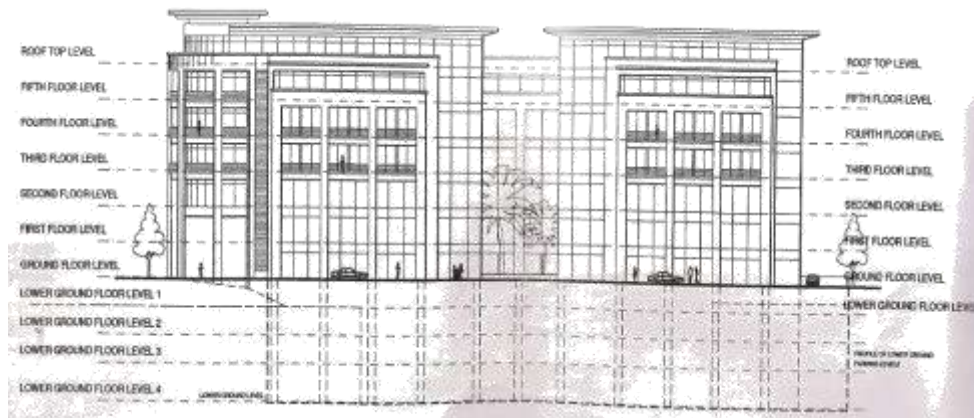


Figure 8: Elevation from Nakasero Road

The office floors are served by 5 glass backed passenger lifts arranged in 2 separate cores centrally located in the atrium courtyard, ensuring no congestion to lift lobbies and also allowing the building to be formed into 2 entirely separate corporate blocks each within their identity, but with shared parking. The planning of the office blocks and floors themselves is such that they are equally suited to single user occupancy or multiple tenancies, with flexible plans and WC arrangements, including catering for Executive/additional WC facilities by way of services provision.

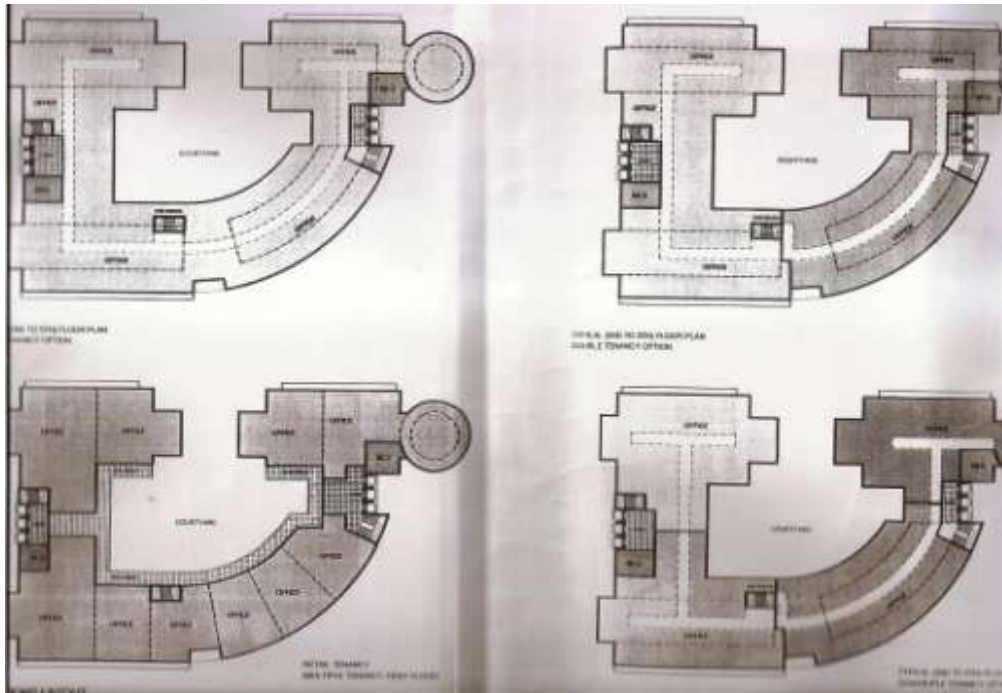


Figure 9: Tenancy Options Layout

Parking

The development is provided with 400 covered parking bays on 4 sub-basement levels open to fresh-air on one side, planned for ease of circulation. A further approximately 20 bays are provided at the ground floor level retail, with a further 25 bays envisaged for off-plot parking, subject to negotiation with Kampala City Council (KCC). Parking provision is generous but is necessary to cater for existing Rwenzori developments which are under-provided for in terms of parking.

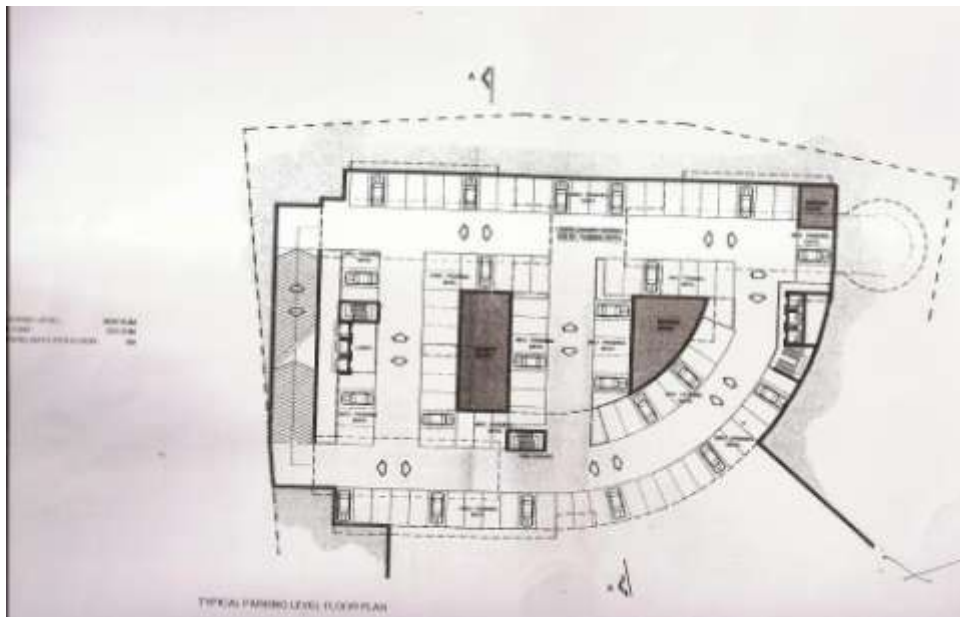


Figure 10: Lower Ground Floor Level 4 Plan

Up to approximately 100 bays could potentially be allocated to the existing developments, dependent on budgetary constraints. We would advocate that there is no compromise on parking provision, with a target provision, with a target provision of 1 bay per sq m. of lettable area being provided.

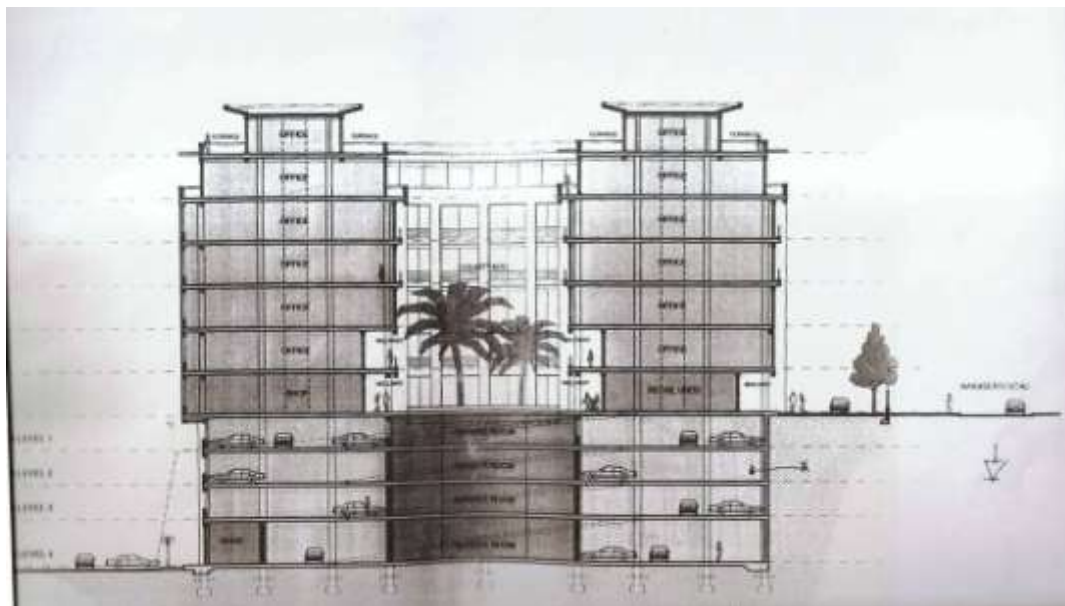


Figure 11: Section through Courtyard

Planning

The plot is in a prime location and being elevated above the Rwenzori structures will have a major visual impact. The design and frontage creates a signature statement building fitting the prime location, with excellent visibility from the direction of Sheraton Gardens by means of the Feature Tower as well as a formal corporate façade to Nakasero Road.

4.1.2 Environmental Design

The building has been designed to maximize on natural environmental design factors, to ensure the comfort of building users through tested natural techniques of solar shading, orientation and natural cross-ventilation, enabled by shallow floor plates. These simple but critical design considerations will ensure that internal ambient temperatures will be comfortable at all times and are thereby economical and energy saving in use. Air Conditioning will however be fully catered for in the buildings' infrastructure, with full provision of all necessary sleeves and conduiting for future installation of A/C anywhere required by the tenant user to their individual requirements.

4.1.3 Infrastructure

The offices will be fitted with compartmented perimeter trunking for incorporation of all electrical and data cabling, with provision for all data links and future intelligent cabling via comprehensive routing and conduit layouts back to data intake rooms. Infrastructure for the project and the necessary back-ups would be catered for by a central stand-by generator to cover all essential services and a minimum 50,000 litre potable water storage tank will be built at the lowest level of the building.

4.2 Project Activities

4.2.1 Project Design and Planning

Planning/policy development refers to all activity that takes place from the time a project or policy is conceived to the point of construction activity or policy implementation. Examples include project design, revision, public comment, licensing, the evaluating of alternatives, and the decision to go ahead (Interorganizational Committee on Guidelines and Principles, 1994).

It is expected that the proposed development would involve construction of Rwenzori Towers and commence in 2009, and lasting approximately eighteen months. Construction activities would normally take place Monday through Friday, although the delivery or installation of certain critical equipment could occur on weekend days. The planning phase included preparation of architectural drawings and structural designs as well as project planning.

4.2.2 Construction phase

The construction/implementation stage begins when a decision is made to proceed, a permit is issued or a law or regulation takes place. The activities will begin with hooding of the site or fencing in order to protect the public from any falling debris and any other accidents. This will be in addition to this there will be signage will be placed in strategic positions of the project site to warn people on related hazards.

Land grading to stabilize the foundation

Excavations and grading of the site will be undertaken in order to create a firm foundation for the structure. The contractor will excavate for a basement floor. The waste from the excavation will be taken away from the site and disposed off.

Construction of concrete columns and the main building

Concrete columns will be constructed to form a firm framework for the building. The mixture of construction materials will be according to the standard specifications by the ministry of Works, Housing and Telecommunications and the construction industry. The structures will be constructed of both local materials and imported ones. Local materials will include sand, timber, and aggregate stones of different sizes, cement and water among others. Materials to be imported include the firefighting equipment, plumbing and electrical equipment and all furnishing materials.

Sewerage system construction

The proposed building will generate a small amount of wastewater and sewerage waste that will require efficient disposal. The building's wastewater/sewerage disposal system will be connected to the main NWSC sewerage line.

Landscaping of the site

The site is not level and will require some landscaping. In addition to this in order to improve the view of the area, the developer will plant some ornamentals and create a greenery environment within the project site.

Site Drainage

Structural plans will be developed in relation to the site characterization. In particular, issues of storm water that are currently being experienced at the site will be addressed.

Required materials and workforce

The raw materials required during the construction phase include water, ordinary sand, bitumen, hard core and stone aggregate, gravel, cement, earth bricks / cement and sand blocks, various sizes and types of iron bars, aluminum doors and windows, timber and clay tiles among others. These will be accessed locally from private dealers/suppliers within and around the project area.

Contractors will be informed to use as much as possible manual labor save for those activities that will require use of machines. However, most of the works in this phase will be labor intensive. The project is expected to employ approximately 40 people who will be both skilled and unskilled during this phase. There will be an officer in charge of health and safety standards during the construction phase. All the construction wastes will be restricted to the project site and a private firm contracted to effectively dispose it off.

4.2.3 The Operation and Maintenance Phase

The operation/maintenance stage will occur after the construction is complete. This stage will require fewer workers than the construction/implementation phase. If operations continue at a relatively stable level for an extended period of time, effects during this stage can often be the most beneficial of those at any stage. It is also during this stage that the communities can adapt to new social and economic conditions, accommodation can take place, and the expectations of positive effects-such as stable population, a quality infrastructure, and employment opportunities-can be realized.

The Rwenzori Towers will offer corporate retail units and office space for those who will be in need of high quality corporate working space. In order to keep a high level of service delivery to its clientele the management of the building will have to carry out periodic maintenance of some facilities such as:

Emergency/safety support systems

Knight Frank property managers will periodically upgrade all safety support systems including firefighting equipment, and make sure fire escape routes are kept free of any obstacle at all times. The main building will be fitted with smoke detectors and fire alarms that will periodically be inspected to ensure effective performance. Regular painting of the interior with flameproof paint will be undertaken. There will also be periodic drill lessons to ensure that the public will, in time of need, promptly react to warnings, comply with them and with instructions issued by the emergency authorities.

Periodic upgrading of the energy, water supply and sanitation systems

Efforts will be geared towards periodic upgrading and maintenance of the energy systems to avert any fire occurrence due to electric short circuits. On the other hand, water reservoir tanks will be put in place to avert any water shortages. Sanitation is a crucial factor that will be taken into consideration. Effective collection, storage, disposal of all wastes and housekeeping will be given priority. The property managers will acquire several garbage bins to facilitate segregation of different types of wastes generated, and make sure they are timely disposed of by a private firm.

Furthermore, periodic maintenance of the sewerage system such as the toilet systems, shower rooms and sewer lines connecting to the main sewerage system will be undertaken. The objective is to ensure that there is no leakage along the sewer system. In addition to this proper maintenance of the physical structures plus refurbishing of the entire facilities will be among the regular maintenance activities that will be carried out during the operation phase. The developer will also ensure a highly motivated workforce for high quality service delivery.

5 PROJECT NEED AND ANALYSIS OF ALTERNATIVES

5.1 Background

The effects of actions that are not accounted for in the normal market transactions need to be considered explicitly in the decision-making processes on projects. These effects are to be identified, assessed, and evaluated against the economic advantages arising out of a given action. In this context, the environmental impact assessments/appraisals are considered to be the first step in this process because they given an opportunity to man to consider the effects of his actions on the environment. Economic development is the result of the interaction between natural resources and technology supported by and designed for people. People are the centre for development. Therefore, it is rightly said that all human activity, be it economic, social or anything else, is essentially directed at satisfying “needs” and “wants” of man through “altering” and “using” environmental resources (Lydia Illgea & Schwarzeb, 2008);Smith, 2008;RockefellerFoundation, 2003 and ADB, 1997). Therefore, it is a requirement to have alternatives to the proposed project to ensure that all options are exhausted. The EIS has identified the major environmental impacts upon which analysis of possible options for the final development is based.

5.2 Project Need

The purpose of the Rwenzori Towers Project is to meet the increasing demand for top grade office accommodation within the corporate business district of Kampala. The building is primarily a commercial venture set up to maximize returns while providing high quality, convenience, safety, comfort and amenities that provide a quiet and safe atmosphere that fosters a quality working environment. Additionally, it provides a living environment that separates its potential tenants from the noisy, dirty inconvenience of average commercial living that is characteristic of most commercial buildings in Kampala. The project will:

- Minimize traffic and parking-related impacts to neighbourhoods.
- Support and enhance existing neighbourhood character in an environmentally sensitive manner.
- Provide additional office accommodation choices in the Nakasero Road
- Anticipate future needs and impacts and not preclude future expansion opportunities.

5.3 Project Options

Pine Investments has developed the information about the potential environmental impacts that could result from either the Proposed Action for the NEMA’s consideration, along with other factors required by the Kampala City Council in making a determination on whether to recommend Rwenzori Towers: a high level, demand driven investment. In making that determination, the Executive Director NEMA would consider not only the potential environmental impacts identified in this EIS, but also other factors. There are two project options that have been identified: the Action and the NO development Action alternatives. Pine Investment selects the best option on the basis of financial, logistical, technical design, safety and environmental/socio-economic criteria.

As part of the Proposed Action, which Pine Investments has identified as its preferred *alternative*, the EIS analyzes the potential impacts of constructing and maintaining the proposed Rwenzori Towers. The main alternatives concern location of related infrastructure like road, water supply and sewage networks and market demand. This EIS analyzes a *Proposed Action* to construct, operate and monitor, Rwenzori Towers. The EIS also analyzes a *No-Action Alternative*, under which Pine Investment would not build a well designed building that will balance safety, boost cutting edge facilities and features and provide positive working atmosphere for all tenants. The No-Action Alternative is included in the EIS to provide a basis for comparison with the Proposed Action. The analysis uses information from the public consultations in form of priorities, community consent and ownership as well as viability assessments.

5.3.1 The “Action” Alternative

The “Action” Alternative as described in this EIS has exhaustively discussed the impacts and proposed mitigation measures thereof if considered as the decision choice. Pine Investments understands that the environment impact assessment provides information on location, construction and operational activities that have negative impact on the environment. In this regard, the selection of Rwenzori Towers as the best option is assessed in terms of technical design and engineering solutions, compliance to legal framework, market analysis, financial analysis and economic analysis.

The proposed Rwenzori Towers, will comply with regulatory framework on environmental management as stipulated in The Constitution of the Republic of Uganda, 1995, The National Environment Act Cap 153, the guidelines for environmental impact assessment in Uganda, 1997, National Environment (standards for discharge of effluent into water or on land) Regulations, 1999, The Town and Country Planning Act CAP 30, The Public Health Act, 1964, The National Environment (Waste Management) Regulations 1999, The water statute 1997, The investment CODE 1991 and the Penal Code Act CAP. 106.

Furthermore, the description of the technical characteristics of the building are show that Pine Investments understand the economic and social local impacts of the projects, its environmental impacts and the total financial and economic costs and benefits involved. The outline of design statistics include:

Areas

Gross Area:	26,800 square meters
Basement Parking:	12,200 square meters
Gross Built Area:	14,600 square meters. (Gross Lettable Area: 9,550 square meters.)
Retail Space:	2,700 square meters
Office Space:	11,900

Parking

Basement: 4 levels: approx 100 cars per level: total 400 covered parking bays
Surface: Nakasero Road: approx 20 cars
Off-lot parking: approx 20 cars (subject to statutory approvals)

Plot Entrances

3 distinct entrances
Off Nakasero Road (Rwenzori Courts entrance point upgraded)
Off Nakasero Road: adjacent to vehicular ramp
Off Rwenzori House parking

Ramps to Parking

Proposed single ramp, 2-way 8m wide
(Alternative 2nd ramp location to be reviewed/proposed)

Retail Space

Ground Floor: Nakasero Road: approx 2,000 square meters flexible corporate retail space

Lower Basement: Rwenzori House: Approx 300 square meters. retail space: square meters; all units

Office Space levels of approx 2,000 square meters flexible office accommodation

1 penthouse level of approx 750 square meters flexible office accommodation

Office Entrances

2 distinct entrance points: off Nakasero Road and off central courtyard respectively

Lifts

5 glass backed lifts: triplex and duplex arrangement, in 2 separate cores

Facilities

Perimeter trunking to all offices

Stand-by generator

Water storage tank

Perimeter Security

Hence, the technical design and engineering features of the proposed Rwenzori Towers take into account social, economic and physical considerations in order to promote resource efficiency. The building will have the most up to date technology provided to the tenants such as unmatched high speed wireless internet connection, fully integrated allowing for wide range of applications, 24 hour access to the building with guaranteed security and comfort, fully air-conditioned system with temperature sensors and an elaborate security system that provides easy access to bona fide occupants, and enables screening for visitors.

Pine Investments has planned project siting measures that take into account demand for water supply and sewage facilities. Additionally, proposed structures are not in conflict with existing land use activities. Furthermore, Pine Investments has taken into account socio economic measures that will mitigate negative impacts on people and enhance the benefits of the proposed structure. The developer has conducted a property market assessment in order to determine demand for the facility and predict future returns. Pine Investments also appreciates the effect of construction activities on air quality, noise and pollution and has proposed pollution abatement measures in form of waste management, air quality, noise reduction plans amongst others. Pine Investments has also undertaken site investigations like geotechnical investigations and public consultations and results will be used to modify the design.

In addition to this, the proposed building shall offer a higher level of quality building than average found in Kampala central business district. This targets those up market tenants who do not want their working situation to inhibit their comfort or enjoyment of their workplace. In addition to this, it will provide residents with the best internet access, excellent working environment and any other service that a tenant may individually suggest so long as it does not impact negatively on any other occupant in the building.

That notwithstanding, Pine Investments assumes that there is already extensive marketing within target markets that already have an established relationship with the Rwenzori Towers through its joint shareholders' companies. The main competition in the immediate locality is the average lower cost premises like small individual houses in Nakasero. However, Rwenzori Towers target clients may not be attracted to such buildings because Rwenzori Towers' unmatched services within the same building. However, in terms of structure, the competition is with other buildings of the same caliber like Rwenzori House, Rwenzori Courts, Workers House, Communications House and Crested Towers which will be matched (and surpassed) in quality.

In terms of financial analysis, Pine Investments estimates that the total cost of the constructing the Rwenzori Towers will be US \$ 13, 526,000 that will be financed by:

- | | |
|-----------------|----------------|
| • Equity – Land | US\$ 2,000,000 |
| • Equity – Cash | US\$ 3,000,000 |
| • Debt - | US\$ 8,526,000 |

The project is expected to generate annual rental income of US\$ 1.31 M in the second year growing to US\$ 3.58 M in the 12th year. The cash balances are positive throughout the life of the project save for year two. In terms of profitability, the project is profitable from the onset of cash flows from rentals in the 3rd and 4th years and ratios are all positive over the 10-year period.

- Gross and net profit margins (profitability) are anticipated to rise from 2.12 (for both) in the 3rd year to 74.13 and 51.89 respectively in the 11th year.
- Return on capital to rise from 0.24 in the 3rd year to 14.73 in the 11th year
- Asset turnover from 11.39 to 28.38 over the same period
- Interest cover from 2.92 in the 4th year to 13.98 in the 11th year
- Gearing to fall from 1.71 in the 3rd year to 0.51 in the 11th year

Therefore, the proposed development shows that the project has both internal and external resources and effective cost recovery mechanisms have been planned in order to recoup project costs.

Finally, the economic analysis shows the project's contribution to the economic welfare of the region or country as presented in this EIS including the benefits (positive externalities) of the proposed project will include access to top grade quality office accommodation, aesthetic value, job opportunities and trade and facilities that improve general quality of life for professions. The negative externalities or costs of the proposed project relate to impacts on human health (morbidity or mortality due to air, water or soil pollution), environmental damages induced such as water and soil contaminations, aesthetic and landscape impact during construction, the economic impacts, such as

changes in land prices or economic development, impacts on mobility due to increase in local traffic and impacts on existing infrastructures (ADB, 2008; Liu, Tanaka, & Matsui, 2008). Mitigation measures for these negative impacts have been identified and planned for.

5.3.1 The “NO – Action” Alternative

Under the “No-Action” Alternative, Pine Investment would end select an alternative location for the proposed Rwenzori Towers and the current structure would remain hosting a limited number of tenants in an area that is rapidly expanding. The No development action alternative assumes that the no development action alternative would upgrade the existing structure and utilities.

Technical and Engineering Features

Gross Built Area:

Parking: Surface: approx 10 cars

Plot Entrances: 2 entrances but only 1 functional entrance

Retail Space: Office Space includes on building and other smaller buildings

Office Entrances: 1 entrance point

Facilities: Stand-by generator

Water storage tank

Security

Type of infrastructure: Residential

Pine Investments recognizes that the existing structure does not meet the growing demand for top quality office accommodation. In order to adopt this option Pine Investments would have to upgrade the existing structure by changing the technical and engineering features. The benefits of this would be low cost investment, minimizing negative costs (externalities) like pollution and impacts on public health.

Yet, with an investment cost of US \$ 13, 526,000, Pine Investments would not be able to have effective cost recovery mechanisms because of inadequate pricing strategies, failed market targeting, outdated technology and inadequate facilities. Moreover, if the “*no action*” is selected, Pine Investments would continue having the existing structure providing minimum office space and mitigate adverse environmental impacts from those activities.

5.3.2 Conclusion

The alternative action selected by Pine Investments is the most viable option because of its appropriateness of scope and size, technical, financial, economic and distributional justifications. In general, the Proposed Action would cause small, short-term public health impacts due primarily to the construction and operation of high quality office space and corporate retail units. The specific impacts at the project site would not be significant most construction impacts would mainly be associated with air quality, noise and dust as well as increased pedestrian and motor vehicle traffic. The EIS analysis demonstrated that the long-term performance Pine Investments does not expect the development will result in impacts to public health beyond those that could result from the prescribed in national guidelines. Therefore, considering the current status of the building and taking into account the increasing demand for decent working space for corporate working space in Kampala plus the proposed measures to mitigate adverse impacts of the proposed development, the “Action” alternative is preferred.

6 ENVIRONMENTAL IMPACTS IDENTIFICATION AND ANALYSIS

6.1 Introduction

Dramatic changes in any urban ecosystem, both in terms of the total urban population as well as increased percentage of the individual country's population living in urban areas impacts on the environments (Piracha & Marcotullio, 2003 and World Resources Institute, 1997). Human-induced changes in land use and land cover often have significant ecological and economic impacts that are especially acute in ecologically sensitive greater ecosystems experiencing rapid economic development (Prato, 2001). This chapter identifies and evaluates significant environmental consequences of the construction and operation phases of the planned project.

During the course of the EIA study, a number of likely impacts on the biophysical and socio-economic environment were identified and evaluated and appropriate mitigation was suggested. A major challenge facing land managers and planners in greater ecosystems is to distinguish between the impacts of natural and human-caused disturbances. Hence, in order to systematically evaluate the impacts associated with this development, an impact matrix has been constructed as per the categories identified.

- Extent: within limited area (<200m from site), local (up to 10 km) or wide (regional or global)
- Duration- Temporary (1 year), short term (1-5 years), medium term (5 -10 years long term (> 10 years - L) or permanent;
- Consequence: None, Negligible, Minor, Moderate, Major, Catastrophic (Positive or Negative)
- Likelihood of occurrence: Certain, Very Likely, Unlikely and Very Unlikely
- Overall assessment of impact: Negligible, minor, moderate, substantial or severe
-

6.2 Summary of Impacts

The proposed Rwenzori Towers Office and Commercial development does not have identifiable irreversible impacts on the environment. However, the likely impacts if not mitigated can cause harm to the environment. While positive impacts should be enhanced, mitigation measures should be put in place to minimise or eliminate negative environmental impacts. Positive impacts associated with the construction and operation of the office and retail building by Pine Investments Ltd, which will include:

- Provision of much needed decent office facilities in Kampala Central Division;
- Provision of employment opportunities both during the construction and operation phases;
- Revenue generation to the developer and contribution in terms of taxes to KCC and the National Economy;
- Upgrading the area status with a high value development project in place;
- Landscape and visibility

The negative impacts associated with the construction and operation of the Rwenzori Towers include impacts on air quality, noise and vibrations, water, soils and ground water, population increase and social disruption, public health and increased traffic and transportation.

Table 1: Impact Analysis Matrix

Development of Rwenzori Towers at Plot 3 Nakasero Road, Kampala Central Division								
change	Impact	Type	Extent	Duration	Comments	Likelihood of Occurrence	Consequence	Significance (Likelihood of Occurrence x Consequence)
Design and Planning Phase								
Plan for top grade office accommodation	Land Use Change	Positive	Local	Long term	<i>From residential structure to modern structure with traditional, classical design references, in the manner of international corporate City Centre commercial buildings</i>	Very Likely	Major	High
	Drainage and Utilities Problems	Negative	Local	Temporary	<i>increased demand for utilities, the site is located close to water and sewage networks</i>	Likely	Negligible	Low
	Land Ownership and Compensation	Negative	Within limited area	Temporary	<i>there are no encumbrances</i>	Likely	None	Low
	Loss of Cultural Resources	Negative	Within limited area	Permanent	<i>there are no resources of high cultural value</i>	Very Likely	None	None
Construction Phase								
Development of Site	Soil and Ground Water Impacts	Negative	Local	Permanent	<i>Allowable soil bearing capacity at depth of 4.50 m to 4.95 m</i>	Not Likely	Minor	Medium
	Water Impacts	Negative	Local	Temporary	<i>poor site drainage soil erosion</i>	Very Likely	Moderate	

	Air quality	Negative	Local	Temporary	<i>dust and poor visibility, most Rwenzori tenants have satellite dishes that are affected by dust</i>	Very Likely	Minor	Medium
	Noise and Vibrations	Negative	Within limited area	Temporary	<i>excavations and vehicle movements</i>	Very Likely	Minor	Medium
	Biodiversity and Ecology	Negative	Within Limited Area	Permanent	<i>No habitats of ecological value were observed in the area</i>	Not Likely	Minor	
	Waste Generation	Negative	Within limited area	Temporary	<i>Increased Solid waste from building activities</i>	Very Likely	Minor	Medium
	Hazards and harmful working conditions	Negative	Within limited area	Temporary	<i>Hazards and harmful construction practices, developer to ensure that there good quality of works</i>	Likely	Minor	Medium
	Increased Traffic and transportation	Negative	Local	Temporary	<i>transportation of construction materials and waste</i>	Likely	Minor	Medium
	Population Increase and Social Disruption	Negative	Within limited area	Temporary	<i>Increased insecurity due to casual laborers</i>	Likely	Minor	Medium
	Landscape and Visual	Negative	Within limited area	Temporary	<i>Incompatibility of site infrastructure with existing infrastructure due to hording</i>	Likely	Moderate	Medium
Operation and Maintenance Phase								
Corporate Retail Units	Employment Opportunities and Trade	Positive	Local	Long term	<i>increased trade and economic opportunities</i>	Likely	Moderate	Medium
Upgrade of Space on Nakasero Road	Landscape and Visuals	Positive	Within limited area	Long term	<i>Removal of ageing infrastructure and Opportunity to provide appealing streetscape and improvements to the urban environment with appropriate controls on future development</i>	Very Likely	Major	Very High

Provision of top grade office accommodation	Social Anxiety and Reputational Sensitivity	Negative	Local	Long term	<i>Reputational attachments to neighbourhood existing facilities</i>	Likely	Moderate	High
	Occupational Health and Safety	Positive	Within limited area		<i>Compliance to all international, national or local health and safety standards</i>	Likely	Moderate	Low
	Traffic and Transportation	Negative	Local	Long term	<i>Traffic safety and traffic conditions to deteriorate</i>	Likely	Moderate	Medium
	Waste Generation and Poor Management practices	Negative	Within limited area	Long term	<i>waste management system to be developed</i>	Likely	Negligible	Low
	Noise and Vibrations	Negative	Within limited area	Long term	<i>increased vehicular movement and running of heavy machinery like generators</i>	Likely	Negligible	Low
	Air Quality	Negative	Local	Long term	<i>increased traffic and generators</i>	Likely	Negligible	Low
Upgrade space on Nakasero Road	Population Increase and high pedestrian traffic	Negative	Local	Long term	<i>Increased insecurity and demand for utilities</i>	Likely	Minor	Medium

6.3 Planning and Design Phase

The findings of site investigations including those of the hydrology and geology of the site; studies of socioeconomics, cultural resources, and terrestrial ecosystems; and monitoring of air quality, meteorological, radiological, and water resource data indicate that the proposed project does not lead to loss of cultural resources since its neighborhood and dynamics are characterized as built up area with a number schools, office space, boutiques, residents and restaurants. The impacts related to this location are discussed in the following sections.

6.3.1 Change of land use

Site baseline conditions indicate that while the current land use category for the proposed project site is “Residential”, while the proposed activity is of “Commercial” nature. This could mean that the proposed development could be in conflict with the existing land use. According to (Driessen & Konijn, 1992), a combination of one land unit and one land utilization type (with one set of land use requirements) constitutes a land use system. Both the land unit and the attributes of land use can be altered by man and activities that cause changes of a permanent nature can only be accomplished by big investors or Government agencies and are called major land improvements.

In order to assess the land use change impacts related to this major improvement qualitative analysis of land suitability was undertaken in order to assess the fitness of the land for a defined use in terms of comparative suitability that include selection of relevant land-use requirements, matching of selected land-use requirements with corresponding land characteristics and land qualities including the sufficiency of each land characteristic or land quality expressed in rating and conversion of various ratings to a qualitative indication of the suitability of the land for defined land use (an indication of the comparative success of the land use system examined)

Table 2: Land Suitability Classes Source (Driessen & Konijn, 1992)

Class		Definition
S1	Highly Suitable	Land having no significant limitations to sustained applications of the defined use, or only minor limitations that will not significantly reduce productivity or benefits and will not raise input requirements above an acceptable level
S2	Moderately Suitable	Land having limitations that in aggregate are severe for sustained application of the defined use; the limitations reduce productivity or benefits, or increase required inputs to the extent that the general advantage to be gained from the use, although still attractive, will be appreciably inferior to the expected from class S1
S3	Marginally Suitable	Land having limitations that in aggregate are severe for sustained application of the defined use and will reduce productivity or benefits, or increase required inputs to the extent that defined use will only be marginally justified
N1	Currently unsuitable	Land having limitations that may not be

N2	Permanently Unsuitable	surmountable in time but that cannot be corrected with existing knowledge at a currently acceptable cost; the limitations are so severe as to preclude that defined land –use at preset Land having limitations that appear so severe as to preclude any possibility of successful sustained application of the defined land use
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While the current land use category for the proposed project site is “Residential”, while the proposed activity is of “Commercial” nature. This could mean that the proposed development could be in conflict with the existing land use. However, in response to the acute demand for civic services by the public / facility developers, KCC has a long term plan of formally converting many sections of Nakasero hill into civic centers.

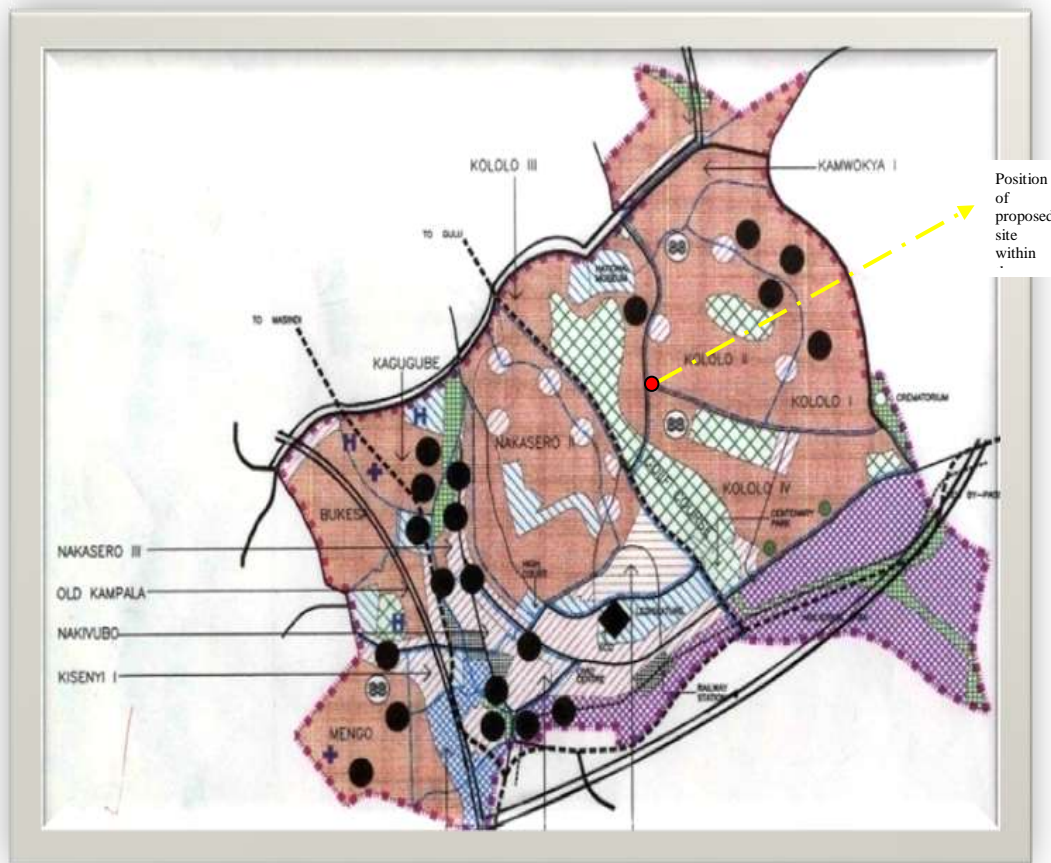


Figure 12: Current Land Use Plan for Kampala City Council, Central Division

Mitigation

While the proposed development will not bring any significant changes in the land use pattern, as provided in the Kampala City Council land use plan, Pine Investments should

ensure that it works within the proposed KCC land use plan. This measure is guided by the Town and Country Planning Act 1951:

PART II—Declaration of Planning Areas

The areas of the towns set out in the First Schedule to this Act are declared to be planning areas, and this Act shall apply to those areas in all respects as if the areas had been declared to be planning areas under subsection (2).

If in respect of any area being, or being within, a municipality or a town, the board, upon representation made by or after consultation with the local authority concerned, is of the opinion that an outline scheme should be made in respect of that area and makes recommendations to that effect to the Minister, submitting with its recommendations a plan of the area, the Minister may by statutory order declare the area to be a planning area.

6.3.2 Social Impacts

Drainage and Utilities Problems

The proposed development is running through the urban area with access to surface and utility services, sewer, water mains, storm water drains, telephone cables, overhead electrical transmission lines, electric pipes, traffic signals etc. These utilities/ services are essential and have to be maintained in working order during different stages of construction by temporary/permanent diversions or by supporting in position. However, during construction, the water supply and sewerage network might be damaged affected due to excavation activities.

Mitigation

During construction, care has to be exercised by the contractors to ensure that pipes are not broken or blocked. Prior to construction, the construction company should contact James Maitek, Manager NWSC Bugolobi branch or Angelo Kwitonda, Engineer Bugolobi Branch so that they can be shown the exact location of the sewer line.

Natural Scenery

The tenants from the existing Rwenzori developments have been benefiting from the scenic view provided by the trees on the existing structure. Many World Bank members prefer the view of the development because it helps them cope with stress. Most of the flora in the area is planted with three types of trees namely *Pseudocedrella exelsa*, *Aleurites moluccana* and *Autocarpous heterophyllus* (Jackfruit tree) as well as planted ornamental trees within the compound namely *Roystonea regia*. However, the immediate neighbourhood on Nakasero road is lined with old trees including *Jakaranda*, *Syzygium guineense*, and *Aleurites moluccana* that will not be affected by the construction.

Mitigation

Trees lost during the construction phase should be replanted as they not only add aesthetic value to the building but also helps boost the micro climate in the area.

Land Ownership and Compensation

The land tenure is leasehold under the names of Nakasero Properties and is held on a lease hold title (register volume 208 folio 17) and is free of any encumbrances. Therefore no land ownership conflicts are expected to arise during and after development work. Therefore there is no compensation required as Group 4 Security is only a tenant.

Enhancement

Ensure that Group 4 are given enough time to find alternative office space in order to minimise negative effects and conflicts between the two parties

6.4 Construction Phase

Construction of the proposed Rwenzori Towers may be disruptive to the surrounding area. In particular transport of material for building usually generates environmental and social impacts. The following analysis describes the types of construction-period impacts likely to occur.

6.4.1 Environmental Impacts

Soil and Ground Water Impacts

According to (Shrestha, 2000), as slope gradient increases, erosion is expected to increase and soil properties such as particle size distribution, permeability, structure, organic matter content amongst others influence soil susceptibility/resistance to erosion. Clay content gives an indication of soil erodibility, while the proportion of water dispersible clay to the total clay is an indicator of structural stability. Physical properties of soil such as particle size distribution, water holding capacity, consistency and shear strength indicate whether soil induced mass movements may take place on a given slope. Consistency limits indicate the form of mass movement.

The results of the soil tests suggested that the mineral composition of the sample was found to have normal typical levels of top and silt-stony loams. The soils at the site are capable of supporting the weight of the tower and its foundation at a depth of 9 metres and below. Geotechnical investigations further suggested that soil permeability was low with the bearing capacity becoming firm after 9 meters of depth. The soil compressibility from 5 meters of depth is okay and water table was not conclusively encountered. These results are also indicative of strata disturbance.

Mitigation

In this assessment, the impacts of these activities were analysed in terms of consistency, density, deformation characteristics and bearing capacity of the in situ sub soils. Additionally, soil tests will be undertaken to identify any potential sources of hazardous materials resulting from previous and existing uses on the site that could pose a hazard during and after construction of the proposed project.

Considering that the construction phase will begin with excavation of soil for the basement floors and site levelling, soil compaction and collapse of structure could occur if site investigations are not undertaken. Hence the design of the foundation should take into account these results and it is recommended that during excavation, further observation be made and that the supervisor should advise accordingly. Regular site

inspections by supervisors from the Subcontractor should guarantee quality assurance for all construction and installation processes.

Storm Water Impacts

Runoff from the construction site may contain increased loads of suspended solids and contaminants. Potential sources of water pollution from site runoff might include runoff and erosion from site surfaces, drainage channels, and earth working areas and stockpiles; wash water from dust suppression sprays and wheel washing facilities; and fuel, oil and lubricants from maintenance of construction vehicles and equipment.

At the time of the assessment, it was observed that the site has soils with have a low permeability and that storm water drains in the East to South direction. Resultantly, the area has high likelihood flooding in the Rwenzori house compound. In depth interviews with stakeholders revealed that the existing developments normally experience flooding in the basements which is indicative of poor site drainage.

Mitigation

Proper site management will be essential to minimize surface water runoff, soil erosion and sewage effluents. Construction site runoff and drainage will be controlled in accordance with the guidelines stipulated Water Act (GOU, 2008b). Good housekeeping and storm water best management practices will be implemented to ensure that runoff from construction areas and any stored excavated material comply with the environmental management guidelines. In more detail, storm waters channels will be constructed in order to divert the flow of surface water around the site and prevent the contamination of storm water (by pollutants, soil or any other material from the site) where necessary. It is also important to develop a site drainage plan to reduce storm water flow and sediment load before storm water is discharged from the site. Structural designs should take into account the nature of the drainage pattern of the entire property, as well as that of adjacent properties.

Air Quality

The principle air quality impact associated with construction activities is the generation of dust due to excavation of soil and demolition of the existing structure. Like any other construction site in the urban area, activities like excavation and demolition affect the quality of air. Construction activities are likely to modify the local climate, creating a heat island effect, with which is associated an urban dust-dome in which; fine particles and gases are trapped. However, construction should not result in any significant increased carbon monoxide levels and emissions from diesel-powered equipment would not be enough to produce any significant local or regional impacts.

Mitigation

Dust suppression measures, including water spraying practices, will be implemented to prevent exposure of students, residents or workers to any fugitive dust during construction. Excavation of all contaminated soil will be conducted within temporary enclosures (tent structures) which will be maintained at a negative pressure to contain and treat any fugitive dust and vapors from discharging to the outside air.

Noise and Vibrations

It is likely that noise and ground vibration will occur especially during the site preparation phase. This impact was analyzed in terms of the kind and number of pieces of construction equipment being operated, the hours when construction activities are taking place, and the location of potentially sensitive noise receptors. It was assumed that the level of impact from these noise sources depends on the noise characteristics of the equipment and activities involved the construction schedule. In general, construction noise during the early phases of construction, site clearing, and excavation would be intrusive and be readily perceptible. In addition, small increases in noise levels from the operation of trucks delivering equipment and supplies and removing debris, and worker trips to the project area are expected to occur in the immediate vicinity of the project area and near the road.

Mitigation

In order to mitigate the impact of noise and vibrations, it is recommended that site clearing activities be undertaken in the day when the neighborhood is less sensitive considering that there are residential premises that may be disturbed during the night. In addition, appropriate low-noise emission level equipment and operational procedures should be used. Compliance with noise control measures could be ensured by including them in the contract documents and by directives to the construction contractors.

Flora and Fauna

The assessment required that both the value of the affected ecological resource and the nature and severity of the impact be taken account of and thus there is an emphasis on obtaining site information. There are a range of spaces and locations along Nakasero Road with confirmed or potential resources. Others have little or no ecological importance. Trees occur frequently along the road. A number of different species of mammals, birds and other fauna inhabit these areas, using them for food sources, nesting areas or intermediary habitats.

Species richness or simply the number of species in a given area is commonly used as an important indicator of biological diversity. Spatial variability of species richness has been postulated to depend on environmental factors such as climate and climate variability, which in turn may affect net primary productivity(Oindo, 2001) A study in Kenya showed that bird species richness increases with moisture availability hence environmental factors favour bird species richness (i.e. quantity and vigour of vegetation).

Mitigation

Since the area to be affected by construction activities is relatively small, it is expected that minimal disturbance will occur. While the higher class macro-organisms will not be affected by the project, A few subterranean micro-organisms such as millipedes and ants may be affected. Such losses are not expected to extend beyond the site boundary. However, effort will be made to minimise disturbance to both flora and fauna included to birds like the Black, White Casqued Hornbill and Fire finches that occur in habited areas. Only those species that have to be removed will be cut down. The contractor will be expected to cause minimal disturbance to the fauna and flora in the area.

Waste Management

The construction works will generate significant amounts of debris when undertaking site landscaping amongst other construction activities. There is a possibility of contaminating the site and its environs especially land from the inevitable loose soil, gravel and debris that will lie on the site. Construction activities could potentially lead soil contamination from fuels, oil, and other hazardous materials.

Mitigation

The early establishment of a waste management policy and plans will provide a sustainable base for future operations on the site, and needs to take both hazardous and nonhazardous wastes into account. According to environmental regulations, every person has the duty to manage any waste generated by his or her activities or the activities of those persons working under his or her direction in such a manner that he or she does not cause ill health to the person or damage to the environment. Hence the negative impacts of waste from the construction phase will be addressed through careful planning of the location of all types of waste to mitigate the negative visual impacts of the works, and the use of topsoil elsewhere.

Erosion will be minimized by replanting any exposed soils as quickly as possible. Significant reductions in the need to dispose of waste materials of all kinds can be achieved by establishing an effective reuse and recycling regime. The contractor will make sure that all the unused materials or any loose substances, (mainly gravel, construction debris and steel off-cuts) after the construction phase, are removed from the site and disposed of in an acceptable manner. Construction debris void of sharp objects will be used to fill potholes on the earth roads within the proximity.

6.4.2 Social Impacts

Hazards and harmful working conditions

Pine Investments Limited is committed to observing and ensuring safety of their workforce and the office occupants both during the construction and operational phases. Therefore standard safety procedures, protective wear and close supervision of works, including the provision of appropriate training for the workforce and office occupants in handling emergency cases will be a priority. Hazards like the collapse of the building can occur due to various reasons including poor construction practices and construction on unstable ground that lacks sufficient bearing capacity to support the tower foundation. This could result in damage to property and the nearby residential houses and offices.

Mitigation

Management of Pine Investments Ltd. is keen to avoid use of substandard materials or poor construction works and use of standard and ISO certified quality materials will be ensured. The services of credible building contractors will be put to use and in addition periodic testing of the concrete mixture and iron bar diameter through certified consultants and calling in inspections from qualified entities. If found lacking the contractor will be made to comply with the required standards or have the contract cancelled and a credible contractor taken on. A functional First Aid Kit will be in place during the construction and operation phases, and in case of any serious emergency,

nearby hospitals/health facilities will be utilised. It will be mandatory for the workforce to put on protective gear during the construction phase.

Traffic and Transportation

The development will result in reasonable vehicular volume around the area and may be perceived as a nuisance for motorists on Nakasero Road. The main traffic generated by the construction sites is likely to be vehicles carrying construction materials and debris and vehicles used for access by site workers. Hence, the impacts of traffic and transportation are analysed in terms in impact to traffic conditions, impact road and infrastructure and impact on traffic safety.

The proposed project would generate trips including the movement of goods and equipment. The traffic conditions on Nakasero road are characterized by heavy traffic hours of 7.30 – 10.00 am and 5.30 – 8.30 pm. In addition to changes in traffic conditions, the vehicles transporting construction debris could damage the road and infrastructure due to deposits of mud and dust. Furthermore, impacts on traffic safety are likely to occur considering that Nakasero Road is a narrow road. The impact of increased traffic volumes on traffic safety are considered to be high. Moreover, parking for construction vehicles outside project site may affect the businesses of its neighbours and pedestrians.

Mitigation

The impact of traffic and transportation can be mitigated by concentrating movement of materials in off-peak hours. Truck movements should be spread throughout the day, depending on the period of construction. In addition to this, contractors should find parking for their vehicles so that other road users and pedestrians do not face any inconveniences.

Construction Site Entrance/Exit should be stabilized to reduce the tracking of mud onto public roads by construction vehicles. A stabilized construction entrance is a pad of aggregate underlain with filter cloth. The purpose is to reduce or eliminate sediment being tracked onto public roadways by construction vehicles.

Population Increase and Social Disruption

The potential for employment may attract unauthorised people on the site which is likely to disrupt social systems and way of life that is characteristic of community of Nakasero Road and Lumumba Avenue. Insecurity at the project site and in the neighbourhood as a concern was ranked very high for the tenants in the Rwenzori developments.

Mitigation

In order to reduce the number of unauthorised people, the site should be fenced off and a security company deployed to manage the security at the site and in the area. This will reduce incidences of theft and damage of property.

Landscape and Visual

The landscape character and visual amenity of parts of the Nakasero Road is of high quality. The construction of Rwenzori Towers will be associated with the construction of temporary infrastructure that may affect the landscape and visuals in the area. However, due to the nature of the activity, this impact is not likely to be critical.

Mitigation

The negative impacts of infrastructure development during construction may be managed by fencing it off so that it cannot be seen by the public.

6.5 Operation and Maintenance Phase

The operations phase has potential for both positive and negative impacts on environmental, as well as local and regional socio-economic, systems, including some cumulative effects.

6.5.1 Environmental Impacts

Air Quality

As urbanization proceeds, air quality deteriorates, helped by reductions in wind speed within the urban area, and water quality is invariably reduced due to discharge of wastes into the hydrological system (Desai & Potter, 2002). The increased number of vehicles driving into the parking bays could lead to increased atmospheric gases. Such effects could be increased carbon emissions and dust could lead to modifications in the local climate.

Mitigation

Green spaces within the building and outside the building can be used modify the heat caused by reduced air quality. These spaces can absorb some of the emitted greenhouse gases, provides recreation, add diversity to human life, may be of cultural value and may be part of flood control systems.

Noise generation Impacts

During operation, the main sources of noise are, cooling fans, electric generator and miscellaneous noise from vehicles. Infrastructure for the project and the necessary back-ups would be catered for by a central stand-by generator to cover all essential services. Additionally, the diesel storage for heavy equipment like the generator may also generate environmental impacts unless special mitigation designs are adopted

Mitigation

The generator will be fitted with an acoustic muffler in order to reduce noise to levels within the permissible limits.

Waste Generation and Management

During the operational phase, the building is expected to contain up to 5 office levels and 2400 square meters of retail space. It is envisaged that some retail space will be used as Banking/ Corporate retail components and will have potential to attracting hundreds of people daily. More people will result in increased waste generation that has to be managed properly.

Mitigation

For the generated waste, there will be coded waste bins strategically located on each floor. These will be emptied on a daily basis to a waste skip at a location outside the Rwenzori Towers premises and disposed by private or Kampala City Council waste collectors. There are different waste management options that can be analysed in order to promote sustainable development. In a recent analysis of waste management costs, it was the option with the lowest maintenance and operating costs and the highest cost recovery levels: once-a-week collection of residual waste by municipal workers with a garbage truck (Nykvist & Nilsson, 2008). However, recycling will be considered as an option. According to (Tilikidou & Delistavrou, 2008), an examination of non-purchasing ecological behaviors and their influential factors revealed that consumers who engage in recycling, pro-environmental, post-purchasing behavior and pro-environmental activities are highly educated people.

6.5.2 Social Impacts

Employment Opportunities and Trade

New jobs may be created and economic growth stimulated, and the growth of local business enterprises supported. Opportunities for growth and development will be created through complementary services and the local economy may benefit from the influx of capital and the increase in disposable income (from employees), both of which may be manifested in a multiplier effect in the local economy. As a result, the quality of the local labor force and standard of living may improve, as well as there being greater social stability due to greater economic prosperity.

Enhancement

The operations Rwenzori Towers will involve partnerships between the company and relevant stakeholders in order to negotiate and find common ground for the management of environmental and social issues. A property management company can understand client needs through such dialogue and can work with stakeholders to help meet expressed needs. Consultation with stakeholders and other proactive relationships can be valuable operations and are worth pursuing as community support is critical and ideas and suggestions from stakeholders can be insightful and useful in improving a facility's operation.

Landscape and Visual Impacts

The plot is in a very prime location and being elevated above the Rwenzori structures will have a major visual impact. The new structure will promote aesthetically clean and appealing Environment and bring about a change in visual look of street where it is located.

Enhancement

The design and frontage that creates a signature statement building fitting the prime location, with excellent visibility from the direction of Sheraton Gardens by means of the Feature Tower as well as a formal corporate façade to Nakasero Road will be promoted in order to add aesthetic value to the area.

Social Anxiety and Reputational Sensitivity

The social environments likely to be affected Rwenzori Towers operations include tenants and the local community .The organisations housed in the Rwenzori

developments and those along Nakasero Road need to constantly promote a good reputational image to their clients. Therefore, potential negative social impacts will include changes in perceptions due to the new tenants.

Following public consultations there were references to anxiety about the effects of the proposed the image of existing tenants, changes in shared norms and values of self contained working environment. Most of the organisations housed in the existing Rwenzori developments thrive on an exceptional corporate image with limited number of staff; the proposed retail units could attract more people from the public.

Mitigation

Pine Investments will use the services of Knight Frank that will be sensitive to the reputational image of tenants. This will ensure that the values that the current tenants uphold will be maintained as wells risk avoidance for any social aspects like crime and deviant behaviour.

Traffic and Transportation

The architectural designs have taken into account the different needs of its target and have planned for flexible vehicular circulation with 3 access points for vehicles: 2 of Nakasero Road and 1 off Rwenzori House parking. During the operation and maintenance of the Rwenzori Towers will have an increased number of vehicular movements given that the complex will house about 400 vehicles since the current tenants already have challenges with parking space. Increased traffic and transportation will affect the traffic conditions on Nakasero Road and additional delays for motorists are likely. Furthermore, safety of motorists will be affects

Mitigation

In order to mitigate the impacts of increased traffic and transportation, traffic calming is proposed. Traffic calming is a set of street designs and traffic rules that slow and reduce traffic while encouraging walkers and cyclists to share the street. Behind traffic calming is the belief that streets are valuable public spaces that should be shared equally by all users. Traffic calming devices are simple, inexpensive, self-enforcing, and easily modified to accommodate emergency vehicles, garbage trucks, and buses. Specifically, the measures that will be put in place to control traffic including traffic signs, pedestrian crossings, temporary speed restrictions especially during the construction phases and designated parking places for trucks and other vehicles used at the site.

Occupational Health and Safety

There is a possibility that occupational health and safety of workers and contractors, workplace conditions (e.g. wages, benefits, security, rights and growth opportunities), as well as job satisfaction and pride will be compromised. The health and safety risks in Rwenzori House during operations include potential for respiratory diseases, burns, allergies and industrial accidents. All such hazards can be successfully controlled by the adoption of safety methods, training programs and occupational health and safety management systems.

Mitigation

A system to measure, monitor and report on health and safety performance should developed covering common definitions, reporting indicators, guidelines for occupational health and safety management systems and for general health. In general, having safety tips brochures availing information on what to be done in case of an emergency will be very helpful. An emergency exit and stairs, as well as an assembly point should be provided for as well as a route for the fire brigade within the compound.

Furthermore, management of the Property will ensure that an emergency/safety support system is put in place for effective management of such occurrence. This includes provision of fire fighting equipment, ensuring that the escape routes are always free of any obstacle and the entire building is fitted with smoke detectors and fire alarms that will periodically be checked to ensure effective performance. Regular painting of the interior with flameproof paint will be undertaken and mock fire alertness drills and regular alarm testing conducted. The building will be provided with alternative fire escape routes to be used in case of a fire outbreak. Furthermore, the building will be equipped with modern lightening conductors to handle lightening strikes and the foundations will be strong enough to withstand stronger earthquakes in case such happens. Proper supervision of works and use of qualified contractors is recommended.

7 PUBLIC AND STAKEHOLDER CONSULTATIONS

7.1 Introduction

During the course of this EIA study, the public from Nakasero East, Tenants at Rwenzori Courts and Rwenzori Towers and Political leaders were consulted for their input towards the proposed Rwenzori Towers. In the public consultation process, a number of stakeholders requested that the EIS should discuss the history of the proposed repository with existing land uses, effects of earthquakes and volcanism, health and safety impacts and long-term impacts. Many of public consultation comments presented views and concerns related to the scope or content of the Proposed Action. Examples of these comments include statements in general support of the upcoming development, the security sensitivity because of the presence of embassies and how to manage security in the area during construction. Other issues raised during public consultation addressed the consistency of the proposed development with existing land uses, health and safety impacts, and long-term impacts.

7.2 Issues Raised By the Public

7.2.1 Draft Architectural Drawings and Design

Integrating the Rwenzori establishments: Part of the land for the proposed site lies in the parking yard for the Rwenzori house, how are they going to blend the three developments? How is the relationship between the tenants of the three properties going to be? The good thing is that Nakasero Road is not busy and I am wondering whether there will be a single entry from Lumumba Avenue with one or two exits

Site Investigations: Stakeholders asked that the EIS discuss Pine Investments' responsibility to begin, describe the potential decisions that the EIS would support, and examine activities other than construction, operation and monitoring.

Corporate Retail Units: With the retail units doesn't that mean more tenants, more traffic? Stakeholders wondered the market that was targeted for the retail units on the ground floor. Several concerns were raised on the proposed to retail units. They encouraged the developer to evaluate the type of market that is being target for these units and how the pedestrian traffic could be controlled.

Stakeholder involvement in Planning and Design: When planning and designing buildings, architects leave out the property managers and yet our input is very important in the design of the building. In case of any damages during the construction, we have taken out insurance and any compensation will be managed by the insurance claims

Height of the structure: The height of the building not a problem apart from taking away the green; it rejuvenates life, As long as the inconvenience is minimised, we have no problem, we would want a clearer image of the plan so that we send it to headquarters. However, the shops compromise security since they are public place. How do we ensure that the public does not have access to the rest of the building?

Branding: We currently have a parking problem especially for UTL which is a trading company. The type of tenants will determine the type of image that we will have. Do we have headquarter offices here or do we have any type of tenant who can pay the price.

Architectural drawings: There is an urgent need to present the Architectural and structural designs to KCC technical staff for project internalization and comments. This needs to be done by the M/s BOWMAN ASSOCIATES ARCHITECTS themselves as the lead designers.

Utilities: There are already proposals to up-grade the basic utilities (roads, sewerage, and storm water drains) to cater for the massive demand due to civic actualization. Hence, there is a need to provide for future expansions, especially the roads. There is need to establish the below surface utility infrastructure. This information will help in, for instance, understanding / computing how much water is available compared to the one that will be required by the Tower occupants.

Land use conflict: The current land use category for the proposed project site is "Residential", while the proposed activity is of "Commercial" nature. This calls for an application for 'change of user' to conform to the proposed activity.

Neighbourhood characteristics and dynamics: The proposed site shares a neighbourhood with sensitive communities. These include; Embassies, UN facilities, State house, restaurants, schools etc. For security reasons, it is very important that State House clearance is sought preferably at the earliest possible opportunity.

7.2.2 Issues Related to the Pre construction Phase

Services and utilities: Considerations for the sewage system prior site clearance begins as the existing system goes through the other Rwenzori developments in order to ensure that when construction starts you don't block the main

Preconstruction meetings with stakeholders including the existing tenants and neighbours so that they plan for the disruptions and seeking the consent of State House is aware of your activities

Storm water and soil erosion: There is the issue of storm water that has been flooding and damage to property. During the raining season, the basements of the current Rwenzori House and Rwenzori Courts flood. If possible it would be better to construct during the dry season, in order to avoid such incidences. Are we going to have a manual or mechanical mitigation measure? A detailed discussion with the City Engineer is paramount.

7.2.3 Issues related to the Construction Phase

Traffic and transportation: There is heavy traffic on Nakasero during lunch times, so the developer can consider having an entry from Lumumba Avenue. Heavy trucks ferrying materials should take into account safety of motorists and vehicles, safety measures should be taken into account. This will affect the existing parking facilities mostly during busy hours of lunch and dinner might pose a traffic hazards affecting both vehicles and people. I suggest that there be a provision of adequate parking of vehicles

that will be working on the project site. Furthermore, the kind of traffic, whether vehicular or pedestrian which might cause congestion.

Noise and Vibrations: With the drilling machines for the geotechnical survey, there have been complaints already from the tenants so during the construction noise and dust will be issues for the tenants at Rwenzori Courts and Rwenzori House. Due to the construction, there will be a lot of dust so most times the windows will be closed and air conditioning turned on. This means that we need constant supply of electricity to run the generators because most offices will close their windows in order to avoid the dust and noise. So it would be good that when electricity goes there is an immediate alternative for power; generator should be in perfect condition

Construction schedules: We propose that they work at night and weekends due to dust and noise.

Aesthetics: During the construction works the place might create an aesthetic offensive site to the public thus affecting our businesses. I am pleased that the area is going to improve in terms of parking and security as well as goods and services and also increased employment and improved aesthetic value in the area

7.2.4 Issues Related to Operation and Maintenance Phase

Operational issues: Parking at Rwenzori house should not be affected for more than three months and if they are to bring down the wall, how do we ensure security. Preference for one security firm. Will a perimeter wall be built? , Suggestions for it due to security reasons

Effect of activities on tenants: Our rent and tenants will not be affected because we have long term arrangements that would not affect the rent value for the current tenants. My only worry is how quick the developer will get tenants for the Towers

Health and Safety: Currently we have a challenge of the fire assembly point at Rwenzori House, what measures do we have in place to mitigate this negative impact? Can the three buildings have a common fire assembly point? Is there going to be a staircase between the developments so that the properties blend? At Rwenzori Courts there is a problem of water pressure and it affects our gardening, how do they intend to manage the gardening? or retail units? Fire and safety should be taken into account by increasing access to fire brigade; there should be a route around the building only for the fire brigade

Environment: Kinds of generators to be used should take into account the amount of noise. The type of air conditioning is it mechanical or artificial; is the building eco friendly? Are there natural or mechanical means of lighting?

Landscape and Visuals: The beauty of the area will be affected; most Bank members prefer the view of the development since there is a lot of green

Satellite Dish & Dust: There is a satellite dish next to the project site that should be dust free because dust and vibrations affect our internet connection. In collaboration with Knight Frank we will have to find an alternative site for the dish.

Security: We are worried that the Group 4 Security Company who are the tenants will be displaced which might lead to insecurity in the area since the construction will attract very many people and make the neighbourhood prone to thefts. Security should be boosted during the construction and operation phases.

In terms of security, the area is very secure and we have security guards that are armed. The challenge is that security in the area is likely to change due to increased population mainly due to people coming to seek employment at the construction site. I suggest that security at the site be tightened

Competition and Rent: The project is going to enhance competitiveness in terms of rent and other retail shops and boutiques. At present I am the only one owning a boutique at Faze2 and I expect to expand my business if the rent is not so high in the proposed complex, I am willing to get space there since the rent on Kampala Road is very high. Suggest that there be entertainment to attract more customers in the area like Garden City and more space for retail shops so that some of us can also get space. Regarding competition, Faze2 is not threatened by any form of competition; we rather encourage it because it leads to increased quality in our service delivery. Faze2 has its own special service and recipes that is unique; any upcoming restaurants in the area do not worry us.

7.3 Conclusion

Substantial emphasis is placed on informing and consulting with people affected by the project and actively engaging those communities in addressing issues and opportunities associated with the project. In every step of the process, from project needs identification to the technical design and engineering, the public consultation and disclosure process has relied on the active participation of the affected communities.

During the exercise, Pine Investments received comments and concerns that included impacts of dust, noise and vibrations, increased traffic, security, landscape and visuals as well as technical design. As a result of these public comments enabled a more detailed discussion of impacts, analysis project alternatives based on technical designs and engineering features. This information has been used to further recommend mitigation measures and develop environmental management plans.

8 MANAGEMENT AND MONITORING PLAN

Environmental and social issues are increasingly seen by industry as opportunities to drive business efficiencies, stimulate innovation, reduce costs, improve brand positioning and enhance business communications (O’Rafferty, 2008). As a design management process, ecodesign has always been concerned with minimizing full life-cycle impacts of products and services (e.g. energy, materials, distribution, packaging and end-of-life treatment). In preparing this Environmental Impact Statement, it is clear that there is need to avoid, minimize and reduce negative environmental and socio-economic impacts, while providing the opportunity to enhance positive impacts. In order to ensure that the mitigation and enhancement actions are managed fully and that unforeseen or unidentified impacts of the Project are detected and resolved, an integral part of the EIA is the development of the EMP (Darnall, Jolley, & Handfield, 2008). As the primary implementer of the construction activities, the Contractor will be provided with a copy of the Environmental Management Plan as well as the proposed property managers; Knight Frank who will manage actions related to the operation and maintenance phases.

8.1 Objectives of the Management and Monitoring Plan

The long term goal of the Environmental Management Plan is to ensure that environmental and socio-economic issues continue to be fully integrated into the business decisions of Pine Investments while promoting resource allocation efficiency of resources throughout the lifetime of the project. In addition, the plan helps encourage employees and contractors to achieve the highest environmental and socio-economic performance and provide the standards for overall planning, operation, audit and review (Johnstone & Labonneb, 2008). In more detail, the Environmental Management Plan is required in order to:

- Guiding Pine Investments and related coordinating institutions in ensuring continuing compliance of construction and operational activities with national legislation;
- Provide a framework for allocating resources (human and financial) in order to mitigate and enhance impacts
- Provide a framework for mitigating impacts that may be unforeseen or unidentified until construction is underway;
- Provide assurance to regulators and stakeholders that their requirements with respect to environmental and socio-economic performance will be met; and Provide a framework for Pine Investment’s compliance auditing and inspection programs.

This section provides a framework for managing and monitoring impacts for the life of the project and whether it is necessary to introduce corrective measures. It should be designed to ensure that the commitments made in the ESIA, and in any subsequent assessment reports, together with any license approval or similar conditions, are implemented. In executing the project, the developer shall take all practicable measures to ensure that the requirements of the environmental impact statement are complied with (GOU, 2004).

8.2 Roles and Responsibilities

Based on our analysis, we conclude that to enhance the potential for integrating sustainability concerns in the proposed Rwenzori Towers projects, it seems less fruitful to develop more advanced and complex assessment frameworks and models than strengthening institutional arenas for social learning. The gap between political visions on sustainable development and the reality of policy reveal that range of institutional constraints emerge in the interface between policy makers and knowledge providers in committees. Therefore, there is need for assigning clear roles and responsibilities to dominant professionals, contractors and sub contractors so as ensure that environmental plans are implemented effectively.

8.2.1 The Role of the Government

According to (GOU, 2004) the National Environmental Management Authority shall, in consultation with a lead agency, monitor— all environmental phenomena with a view to making an assessment of any possible changes in the environment and their possible impacts; the operation of any industry, project or activity with a view to determining its immediate and long-term effects on the environment. An environmental inspector appointed under section 79 may enter upon any land or premises for the purpose of monitoring the effects upon the environment of any activities carried out on that land or premises.

8.2.2 The Role of ProPlan Partners

Although the contractors will have the primary roles in delivering on the measures set out in the EMP, as the developer, Pine Investments through their project managers ProPlan Partners will have the ultimate responsibility for ensuring the measures are delivered. In this respect Pine Investments will review and approve contractor and property managers' plans for delivery of the actions contained in the EMP and subsequently during project operation, will review contractor and property managers' performance through monitoring, audits and inspection. During construction of the Project Managers will be responsible for ensuring the overall objectives of the environmental and social mitigation measures are met.

8.2.3 The Contractor's Role

During site preparation and construction, the contractor will be responsible for ensuring compliance with all relevant legislation as well as adherence to all environmental and socio-economic mitigation measures specified in the Environment Management Plan. The contractor is also responsible under the contract for managing the potential environmental, socio-economic, safety and health impacts of all contract activities whether these are undertaken by themselves or by their subcontractors. There is therefore no intention to differentiate between the responsibilities of contractors and subcontractors; all contractors must meet all requirements.

The contractor will also be expected to demonstrate commitment to the EMP at all levels in the contractor's management structure. The contractor will be required to identify individuals responsible for overall environment, socio-economic (including community relations), safety and health management. The contractor's community liaison team will be required to work with Proplan to implement the stakeholder engagement plan. The

contractor will be required to participate in community meetings that will be held in affected communities prior to, during and upon completion of construction. The contractor in collaboration with the project managers will be required to undertake regular environmental and socioeconomic inspections and provide reports to Pine Investments to monitor and evaluate performance against the measures and objectives established in the EMP. In this regard, the contractor's performance in complying with the EMP will be monitored and audited by ProPlan Partners on behalf of Pine Investments.

8.2.1 The Property Manager's Role

During operation and maintenance phase, the property manager will be responsible for ensuring compliance with all relevant legislation as well as adherence to all environmental and socio-economic mitigation measures specified in the Environment Management Plan. The contractor is also responsible under the contract for managing the potential environmental, socio-economic, safety and health impacts of all contract activities whether these are undertaken by themselves or by other service providers.

8.3 Standards and Subsidiary Plans

Environmental and socio-economic management issues at various stages in the life of the Project from detailed design through decommissioning, are governed or guided by a number of 'standards', including those contained in Ugandan legislation; those established by industry codes of practice; those within relevant international standards (e.g. World Bank environmental guidelines, World Health Organization, International Labor Organization); and commitments made in the EIA and elsewhere. Primary contractors will be required to compile a management plan to cover the issues identified in this EMP, for approval by the Project. This plan will be compliant with the legal and Project Standards as described above, as well as the mitigation actions made in the EIA. The subsidiary plans will include: Ambient Air Quality and Emissions Monitoring Plan; Construction Site Management Plan; Conservation Management Plan; Spill Prevention Control, Containment and Emergency Response Plan; Operational Discharge Management Plan; Integrated Waste Management Plan; Vehicle and Traffic Management Plan and Employee and Subcontractor Training Plans.

8.4 The Impact-Mitigation-Responsibility Matrix

The EMP sets out the following in tabular format: a comprehensive listing of the mitigation measures (actions) that the Project will implement; suggested designation of responsibility for ensuring full implementation of that action; the parameters that will be monitored to track how effectively actions and mitigation are implemented; and the timing for implementation of the action to ensure that the objectives of mitigation are fully met.

The proposed Impact-Mitigation-Responsibility Matrix is for the developer and the environmental monitoring team to ensure proper implementation of the proposed Building project in a sustainable manner. Regular inspections will be conducted by the developer and the monitoring team to ensure that the contractor adheres to the proposed mitigation measures. NEMA together with lead agencies will monitor the construction and operation of the project activities to ensure that environmental standards are not compromised and where it is found to the contrary, advice accordingly.

Table 3: Impact Mitigation and Responsibility Matrix

Development of Rwenzori Towers at Plot 3 Nakasero Road, Kampala Central Division						
Significance ³	Impact	Aspect	Activities for mitigation and preservation measures	Objective	Responsible Institution	Due date of Works
Design and Planning Phase						
High	Land Use Change	Change from residential to commercial	Apply for certificate of approval from KCC	To comply with current construction guidelines	<i>Pine Investments and ProPlan</i>	Design and Planning
Low	Drainage and Utilities Problems	Access to existing network and capacity	Consult with NWSC establish water supply and sewage access.	To ensure that existing networks will meet the increased demand	<i>ProPlan,</i>	Design and Planning
Low	Land Ownership and Compensation	Access and utilisation	Consult with Registrar of Titles	To establish ownership	<i>EIA practitioner</i>	Design and Planning
None	Loss of Cultural Resources	preservation of cultural heritage	Social Survey	identify any cultural resources	<i>EIA practitioner</i>	Design and Planning
Construction Phase						
Medium	Air quality	Dust and visibility issues	<ul style="list-style-type: none"> Regular water spraying, transportation of dusty materials in closed vehicles, explore use of any other dust suppression means 	Reduction and prevention of atmospheric air pollution by solids	<i>Contractor</i>	Construction
Medium	Noise and Vibrations	negative health impacts	adopt noise reduction technologies	promote a good working environment	<i>Contractor</i>	Construction

³ Level of significance impact

Medium	Waste Generation	Increased Solid waste from building activities	<ul style="list-style-type: none"> • Collection and temporary storage of waste in accordance with regulations • Utilization of waste/transfer of unutilized waste to specialized organizations 	Prevention of littering Prevention of soil contamination, ground water and atmospheric air pollution at temporary waste storage	<i>Contractor to implement and ProPlan to monitor</i>	Construction
Medium	Health and safety	Hazards and harmful construction practices	<ul style="list-style-type: none"> • Personnel first aid support (arrangement of first aid station at construction site) • Arrangement of informatory and warning signs and fencings at the construction site Ensuring compliance with Labor Requirements to work places quality • Use of individual safety equipment, • Selection of contractor on the basis of preparedness to work within set standards, • monitoring environmental 	Incidence reduction, ensuring safe labour conditions.	<i>Contractor to implement and ProPlan to monitor</i>	through Construction

			safety and quality of construction			
Medium	Increased Traffic and transportation	Increased Traffic and transportation	design appropriate routing schedules and avoid peak hours	Reduction of disturbance to other motorists	<i>Contractor</i>	throughout construction
High	Storm water	Flooding	develop and implement site drainage plan	ensure that flooding and collapsing of building does not occur	<i>Engineers and architects</i>	During construction
Medium	Insecurity and Population Increase	Increased insecurity due to casual labourers	Recruit a security firm on site given the neighborhood sensitivity that include those of several embassies	ensure that mechanisms are put into place to ensure that there is security in the area	<i>Contractor in collaboration with Knight Frank</i>	Operation Planning
High	Loss of Aesthetic Value	Incompatibility with existing infrastructure	Hoard of site	Ensure that site infrastructure is not visible	<i>Contractor</i>	Before Construction
Operation and Maintenance Phase						
Medium	Socio Economic Benefits	Availability of corporate retail units for rent	Identify tenants that value the principles and values of having a reputable corporate image, consult with existing tenants on the type of services they require and incorporate these into selection criteria	Ensure that economic benefits are maximised without compromising on the quality of the building	<i>Knight Frank</i>	Operational Planning
High	Aesthetically clean and appealing environment	Beatification	Ensure that the services of a cleaning company are employed	To maintain the standards of the building and also promote good hygiene behavior	<i>Knight Frank</i>	Operational Phase
High	Reputational Sensitivity and Corporate image	Interaction with public	<ul style="list-style-type: none"> organizing and collecting opinions from the public on comments from the population 	establish and maintain relationships with stakeholders for smoother implementation	<i>Knight Frank</i>	Maintenance Phase

			<ul style="list-style-type: none"> informing the public on the socio benefits of the project, efficient maintenance of utilities and services 			
Low	Level of physical safety and health	observance of requirements and standards	Monitoring of environmental safety and quality of maintenance	environmental health and safety compliance		Operational Phase
High	Increased parking facilities	improved access to safe parking for tenants	recruit a security firm to manage security situation and manage traffic	Ensure that tenants have access to parking facilities and prevention of crime	<i>Knight Frank</i>	Operational Phase
Medium	Waste Generation and Poor Management practices	Increased Solid waste from retail units and offices	<ul style="list-style-type: none"> Collection and temporary storage of waste in accordance with regulations Utilization of waste/transfer of unutilized waste to specialized organizations 	Promote hygiene and reduce air pollution due to temporary waste	<i>Knight Frank</i>	Maintenance
Low	Noise	negative health impacts	adopt noise reduction technologies for machines	promote a good working environment	<i>Knight Frank</i>	Procurement
Low	Air Quality	gaseous emissions	<ul style="list-style-type: none"> Using equipment in compliance with the technical regulation Maintenance (including fuel filling) of machinery in specially appointed 	Reduction and prevention of atmospheric air pollution by gaseous substances	<i>Knight Frank</i>	Operation

			locations			
Medium	Population Increase and high pedestrian traffic and motor traffic	Increased demand for utilities	Allocate services appropriated target different customer groups	Reduced social conflict	<i>Knight Frank</i>	Operation

8.5 Environmental Monitoring

An environmental monitoring system acts as means of observing and obtaining authentic information on environment condition; assessment and alteration forecast of environment condition; making corrective managerial decisions based on data received to prevent and (or) mitigate adverse impact and unfavorable aftereffects for environment.

Impact	Subject Monitoring	Monitoring Method	Monitoring Schedule	Responsible Institution
Air quality	Storing and transportation methods of dusting materials and utilization of dust suppression means; Motor vehicle transport at construction site	Visual monitoring, technical documentation inspection	In compliance with inspection schedule	<i>Project Manager in charge of environmental condition monitoring, NEMA, KCC</i>
Soil Impact	Documents developed and works executed	Visual monitoring, technical documentation inspection	In compliance with inspection schedule	<i>Project Manager in charge of environmental condition monitoring, NEMA</i>
Noise and Vibrations	Noise and vibrations	Technical documentation	In compliance with inspection schedule	<i>Project Manager in charge of environmental condition monitoring, NEMA, KCC</i>
Waste Management	Waste disposal location; Contracts or other documentation garbage collection agencies	Visual monitoring and document analysis	In compliance with inspection schedule	<i>Project Manager in charge of environmental condition monitoring, NEMA, KCC</i>
Health and safety	Medical service quality in first aid station; Contractor compliance with the Company requirements in the field of health and safety, Construction Site, Work Place	Visual monitoring; Analysis of health and safety training materials	In compliance with inspection schedule	<i>Project Manager in charge of environmental condition monitoring, NEMA, KCC</i>
Storm water	Construction site	Visual monitoring	In compliance with inspection schedule	<i>Project Manager in charge of environmental condition monitoring, NEMA, KCC</i>

Social environment and infrastructure impact	Documentation developed and information materials	Document analysis	Upon development and prior completion	<i>Project Manager in charge of environmental condition monitoring, NEMA, KCC</i>
Reputational Sensitivity and Corporate image	Public Opinion	Surveys and consultations	Frequent	<i>Property Managers</i>

9 CONCLUSIONS AND RECOMMENDATIONS

9.1.1 Summary of Assessment

The overall aim of this EIS is to evaluate impacts associated with constructing, operating, Rwenzori Towers, and those associated with transporting the materials to the project site. In addition to evaluating the near-term impacts of those activities, the EIS evaluates impacts that could occur hundreds of thousands of years in the future. Specifically, this EIS identifies all likely positive and negative environmental impacts due to the proposed development of the Rwenzori Towers in Plot 6 Nakasero Road; identifies and evaluates all significant negative environmental impacts, and proposes appropriate mitigation measures for the attention of Pine Investments, for incorporation into the construction and operational phases; compiles an environmental impacts statement report including an environmental management plan for all aspects of the proposed developments for submission to NEMA for consideration for approval.

In conclusion, the proposed Rwenzori Towers Office and Commercial development does not have identifiable irreversible impacts on the environment. However, the likely impacts if not mitigated can cause harm to the environment. The negative impacts associated with the construction and operation of the Rwenzori Towers include impacts on air quality, noise and vibrations, water, soils and ground water, population increase and social disruption, public health and increased traffic and transportation. While positive impacts should be enhanced, mitigation measures should be put in place to minimise or eliminate negative environmental impacts. The positive impacts associated with the construction and operation of the office and retail building by Pine Investments Ltd:

- Provision of much needed decent office facilities in Kampala Central Division;
- Provision of employment opportunities both during the construction and operation phases;
- Revenue generation to the developer and contribution in terms of taxes to KCC and the National Economy;
- Upgrading the area status with a high value development project in place;
- Landscape and visibility

Pine Investments proposes the development of Rwenzori Towers as viable business option because of its appropriateness of scope and size, technical, financial, economic and distributional justifications. In general, the Proposed Action would cause small, short-term public health impacts due primarily to the construction and operation of high quality office space and corporate retail units. The specific impacts at the project site would not be significant most construction impacts would mainly be associated with air quality, noise and dust as well as increased pedestrian and motor vehicle traffic. The EIS analysis demonstrated that the long-term performance will provide benefits to the community and does not expect the development will result in impacts to public health beyond those that could result from the prescribed in national guidelines.

However, there are a number of critical issues that have been raised during site investigations and public consultation including geotechnical restraints will influence the technical and engineering design features. Furthermore, the proposed action is in conflict with Current land use plans show that selected site is a residential area; while KCC plans to change the land use type; necessary steps have to be taken in order to obtain permission. Furthermore, there are

plans to expand Nakasero Road in future necessary measures should be put in place in order to plan for this expansion. The site is not connected to a mainstream storm water drainage channel and flooding has been observed. In addition to this, there is neighbourhood sensitivity and dynamics, public health, traffic and transportation. These concerns are critical to the technical design, project planning and management of Rwenzori Towers.

9.1.2 Recommendations

Environmental and socio-economic management issues at various stages in the life of the Project from detailed design through decommissioning, are governed or guided by a number of 'standards', including those contained in Ugandan legislation. The environmental impact study has provided a detailed presentation of the likely impacts that could be associated with the project in the short and long term. If the project is approved by NEMA, the following are recommended

1. Management Systems: The subsidiary plans that should be developed to support the environmental management plan will include: Ambient Air Quality and Emissions Monitoring Plan; Construction Site Management Plan; Conservation Management Plan; Spill Prevention Control, Containment and Emergency Response Plan; Operational Discharge Management Plan; Integrated Waste Management Plan; Vehicle and Traffic Management Plan and Employee and Subcontractor Training Plans.
2. Resource Allocation: The relevant human and financial resources should be effectively planned during the project cycle
3. Architectural Drawings: the Project Manager should work with the Client, the design team, and the KCC in order to modify the current design. The structural plans should plan for site drainage since the area has been experiencing a lot of flooding. Location: Earth movements through grading of the area should be regulated so as not to severely distort the landscape value of the proposed site.
4. Project Management: Environmental engineering solutions: recycling of waste is recommended
5. Habitat programmes: In order to maximise benefits for the clients and in line with conservation principles and for purposes of maintaining the aesthetic value of the proposed site, the developer should, as much as possible, maintain a reasonable amount of greenery around the project area through planting of tree, shrub and grass species or develop green spaces
6. Stakeholder management: During the consultations a number of issues were raised regarding pre construction arrangement. Several dishes will have to be moved within the existing Rwenzori establishments. In particular, affected dishes are those belonging to British Council and the World Bank. Work out modalities with designated persons; in the case of the World Bank contact Francis Bogere; Human Resources Manager on 0772730094
7. Effective site management is crucial in the mitigation measures proposed in this EIS are to be implemented. In this regard, construction plan incorporating erosion best management practices, health and safety, traffic, air and water quality strategies should be developed and implemented. All effluent and sewerage as the case may be, should be appropriately and in accordance with prescribed regulations, discharged into the existing main Kampala City Council system.
8. Management Systems: Given that changes (biophysical and human) are likely to be observed during the project cycle, regular monitoring is recommended so that further

investigations on the environmental and social impacts are undertaken and situation specific recommendations made.

9. Operational Measures: Public involvement and stakeholder coordination are crucial for project planning and implementation. This will help capture new environmental concerns during the implementation and in decision making that can be used to update the current plans and designs. Regular meetings with stakeholders regarding land use planning, environmental management, civil works and labour will help improve decision making and avoid delays in the construction period.
10. Emergencies: Fire assembly point should be in place and route for fire brigade should be planned for within the complex.

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Appendix 1: Approved Terms of Reference

**TERMS OF REFERENCE FOR AN ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED
RWENZORI TOWERS LOCATED ON PLOT 3, NAKASERO ROAD, CENTRAL DIVISION, KAMPALA**

Submitted to:

**Executive Director
National Environment Management Authority
P.O.Box 22255
Kampala**

**By
Pine Investments Ltd
Kampala**

Project description

Pine Investments proposes to build Rwenzori Towers; a low-rise development coordinating and integrating with the existing Rwenzori developments (Rwenzori Towers and Rwenzori Courts and respecting their traditionally-inspired design concepts but with a more modern and sophisticated style. The development will have a central courtyard/atrium concept; 2 cores and 2 entrance points for absolute flexibility of accommodation, enabling even 2 major corporate tenants to have their own identity. Furthermore, the complex will have inherently flexible space arrangements for maximum long-term letting flexibility and tenancy sizes ranging from 50 square meters up to 6,000 with no compromise of quality accommodation.

The design proposals of the Rwenzori Towers development area are based upon the Pine Investments proposal for a project of approximately 12,000 square meters of highly flexible state of the art office accommodation and 2,700 square meters of retail space, creating approximately 12,000 square meters of prime lettable commercial space, with some 450 parking bays, in an excellent location on Nakasero Hill, adjacent to the Rwenzori Courts and Rwenzori House developments. The location is ideal being away from the increasing problematic circumstances on Kampala Road, but within the corporate business district of Kampala and eminently situated to top grade office accommodation. The proposed site forms the third element of the existing Rwenzori Commercial Developments, the design for the building is to integrate with and benefit the existing elements.

Proposed activities

- Feasibility Stage which includes appointment of professional teams comprising of consultants and audit consultants; Preparation of a services report including water, sewer, electricity and telephones; preliminary approval by the Local Authority; Project Capital costs, estimated operational costs and project cash flows; Geotechnical and topographic surveys; Project programme and programme strategy and funding requirements.
- Design and development and procurement Stage which includes completion and client approval of the detailed design and product samples followed by major contract packages
- Construction Stage which will comprise of award of contracts procured in stage three, the procurement of outstanding packages and construction of the project
- Project operation and maintenance which will comprise the contractual, financial and administrative closure of the construction contract and handover to the Property Management and Operation and Maintenance to ensure efficiency and to minimise adverse effects to the environment

Purpose and Objectives of the EIA Study

The overall purpose of this Environmental Impact Assessment is to produce an Environmental Impact Statement that will guide the developer and relevant stakeholders in making an informed investment decision. The National Environment Act CAP 153 section 19 introduced the requirement for an Environmental Impact Assessment into the Uganda laws. Under section 19 (3) of the NEA Cap 153, all projects or policies that may, are likely to or will have significant impacts on the environment should be subjected to EIA so that adverse impacts can be eliminated or mitigated. Therefore, the EIS evaluates not only impacts associated with constructing, operating, Rwenzori Towers, but also those associated with transporting the

materials to the project site. In addition to evaluating the near-term impacts of those activities, the EIS evaluates impacts that could occur hundreds of thousands of years in the future. Specifically, the EIA will:

- Identify all likely positive and negative environmental impacts due to the proposed development of the Rwenzori Towers in Plot 3 Nakasero Road;
- Identify and evaluate all significant negative environmental impacts in relation to their extent, duration, consequence and likelihood of occurrence and propose appropriate mitigation measures for the attention of Pine Investments, for incorporation into the construction and operational phases;
- Analyse the project alternative given data from the public consultations and make recommendations for the selected alternative
- Compile an environmental impacts statement report including an environmental management plan for all aspects of the proposed developments for submission to NEMA for consideration for approval.

Methodology for undertaking EIA

The consultants shall undertake the EIA using the following methods;

- Literature review to obtain background information on the project, the environmental setting data, policies, legal and institutional frameworks and reports from previous studies in the area like geotechnical investigations
- Consultations with stakeholders, including, KCC, Utility agencies such as National Water Sewerage Corporation, and other neighbours to obtain their concerns and/ input about the proposed development;
- Field activities to establish the site baseline conditions, including the bio-physical and socio-economic aspects in relation to the proposed development;
- Data Analysis, development of mitigation measures, analysis of alternatives and environmental management and monitoring plan; and
- Preparation of EIA report for submission to NEMA.

Scope of Work

The collected data will be collated and analysed through a combination of methods including expert judgements, and technical evaluations to identify significant positive and negative impacts. The proposed development is likely to benefit some environmental and social components but also likely to harm other environmental components. Measures will thus be prescribed to mitigate the negative impacts and to enhance the positive ones.

Based on previous experience with projects of such magnitude, the following are the principal areas that will be investigated by the consultants. This will be in relation to the Physical, Biological, Socio-economic and Cultural Environment. The study will comprehensively cover the following:

1. Bio-physical description of project location including Site drainage, soils and hydrogeology, land use and land cover of the area will be studied and described. Natural drainage around the site and management of run-off from the road will be studied, as well as historical or local indigenous knowledge on drainage pattern of the area and development of a civil solution as a mitigation measure if necessary. The flora, fauna and other sensitive biological components will be described, and their fate with regard to development of this Tower. There will be a count of existing flora and fauna and likely impact of proposed development on these components

2. Socio-cultural environment; Existing land use, developments, economic activities, infrastructure and their interrelationships with the proposed developments will be studied.
3. Considering that the project is to be integrated into the existing Rwenzori Developments (Rwenzori House and Rwenzori Courts, the project concept and its relationship with the existing environment, particularly the neighbouring land use, ecology and hydrology;
4. Description of the project components, extent and their likely impacts;

Principal impacts to be investigated include but are not limited to:

- Environmental concerns associated with the various phases of this project that include site preparation, construction and the operation phase;
- Concerns of stakeholders regarding development of the structure at proposed site;
- Socio-economic and socio-cultural impacts likely to arise due to this project;
- Conformity of the proposed development with national regulations and planning provisions of the area;
- Impacts associated with site landscaping;
- Impacts related to safety/welfare of contractor workers, as well as the neighbourhood.

Concerns associated with project siting:

In consideration of its location the following issues will be examined in detail;

- The proposed site and reasons for rejecting alternative sites if any;
- Conformity of the project with the planning provisions of the area and other regulatory requirements governing developments along major roads;
- Land tenure and competing land use at the proposed site;
- Traffic flow disruption and alternatives;
- Required infrastructure, including water supply, energy sources, and signage.

Concerns related to construction of the Rwenzori Towers

Impacts associated with this phase, which will have to be critically examined, include:

- Safety measures during site construction;
- Excavations, levelling, and compacting during landscaping with the associated effects of noise, dust, possibility of accidents, soil erosion, disruption to drainage and loss of landscape and visibility value;
- Poor management of construction debris;
- Site spatial planning.

Concerns associated with the Operation Phase

This study will have to investigate the following concerns and likely environmental impacts normally associated with operations of properties in Kampala.

- Safety concerns of workers and site neighbors;
- Site isolation from the neighborhood;
- Waste disposal;
- Change in land use, affecting ecological functions and economic activities;
- Impact on the socio-economic and cultural environment of the project area, such as pressure on existing infrastructure including traffic flow.

5. Extent of proposed development including material requirements and their sources, technology involved and the numbers of workers to be employed;
6. Conformity of activities or operations at the proposed development to the immediate neighbourhood or environmental setting, and with national regulations and standards.
7. Development of an Environmental Monitoring and Management Plan to Mitigate Negative Impacts:
An environmental monitoring and management plan for implementation of mitigation measures and ensuring environmental compliance will be developed. Having identified the likely impacts, indicators of such impacts will be listed, mitigation measures developed, as well as a monitoring schedule for the developer and stakeholders/lead agencies.

EIA output

The consultant shall undertake the EIA, and will produce an Environmental Impact statement, which will cover but are not limited to:

11. An Executive Summary, stating the major findings of the study;
12. Background information on the proposed development;
13. Site baseline bio-physical and sociological data, including spatial presentation of area land use and infrastructure;
14. A review of policies, laws and regulations, and the proposed project's conformance;
15. Environmental Impact Predictions, including assessment of :
16. Recommendation of appropriate mitigation measures for all significant negative environmental impacts predicted;
17. Propose an environmental management and monitoring plan for negative impacts and assessing effectiveness of mitigation measures;
18. Make recommendations regarding the proposed Rwenzori Towers Development at this site, as an environmentally sustainable project.

Resource Persons

The proposed primary resource persons for this assignment include the following EIA Practitioners

1. Edith Birungi Kahubire (MSc. Natural Resource Management, MPhil Development Geography, B. A. Social Sciences): Sociologist
2. Bazira Ananias Ammar (B. A Environment Management): Environmentalist

And these will be supported by the following specialists

1. Dr. Paul Ssegawa (PhD Plant Ecology)
2. Albert Mugenyi: (MSc Urban Planning)
3. Sheba Ndagire: (MSc. Environmental Health)
4. Galabuzi Denis (MSc. Civil Engineering)

Appendix 2: Certificate of Land Title

Appendix 3: Articles of Association of Pine Investments Ltd

Appendix 4: Report on Geotechnical Investigations

Appendix 5: Kampala City Council Concerns

(As shared by Eng. Kinyera Otto Stephen -Director of Works & Urban Planning at KCC and Mr. Peter Katebalirwe -Senior Urban Planner at KCC) --9th/Dec/2008.

Compressibility testing results

There is need to determine the pressure bearing capacity of the site soils. This should be done using the experienced services of Ministry of works team.

Plans for storm water drainage for the area

Designs for the area were carefully done at the planning phase of the entire Nakasero sub location. Therefore, it is true that adequate storm water drainage systems were provided for and put in place. Unfortunately, what is happening is that there is increased run-off due to upper hill land cover modifications. Most of the drainage channels are blocked and can no longer serve the purpose. This situation has led to constant flooding of the lower sections of Nakasero road neighbourhood where the project site is situated.

Efforts to regularly unblock the drains have been met with no funds. The City Engineer indicated that he has not been receiving any funds from City authorities to this effect. He however emphasized the availability of well constructed drainage channels in the project area. Proper de-silting of the storm water drainage systems for the project area and Nakasero Sub-location in general, was last done in 1986. According to the Engineer, all that needs to be done is to join efforts and provide a mechanism for de-silting the blocked channels. The developer, as a matter of urgency, needs to link up with the City Engineer's office to discuss and negotiate a solution to the problem.

Drawings for the drainage networks for the project area were not readily available for viewing and scrutiny as they were reported to have been destroyed or vandalized during the 1979 war.

Vehicular movements

The complex will be situated in a traffic busy setting. Thus, proper planning of vehicle flow to and from the Towers complex must be undertaken. Prohibitive facilities to restrict movement of vehicles only in particular directions around the complex must be designed and put in place.

Future road expansion

It is clear that KCC management has plans of expanding the Nakasero Road to cater for the increasing traffic volume and flow demands. Developers need to be aware of this pending future plan. Fortunately, this road expansion will make use of the road reserve and will not affect the individual plots. This further implies that the complex site planning must assume that there is no road reserve.

Skyline

The average height of buildings for the area is 4-floors. Therefore a skyline of 8-floors as suggested by the development plans is not a problem. There are long term plans to convert the entire neighbourhood into high raised buildings with skyline of 10-15 floors.

Utility provisions

The project site is well serviced by water and sewerage utilities as underground facilities. However, the site planner needs to provide for the right spacing to avoid affecting this underground infrastructure. This may call for technical guidance and clearance from National Water and sewerage corporation management. For purposes of infrastructural access and maintenance, specific leeway distances are preferred by NW&SC. There is need to consult before site setting.

Parking provision

The in-building parking is set out on 4-levels (floors) and occupying a total height of approximately 12metres. From Nakasero road level, all these 4 parking floors are underground. There is need to measure the heights above sea level for both Upper part and lower part of the project site to confirm the required height difference of 12metres.

Compressibility tests

Tests to confirm the strength of the site soil structure to hold the weight of the proposed structure have been done and specific ideal distances for excavation determined. These are as contained in the official report of compressibility tests.

Appendix 6: Urban Planning and Management Component

Proposed siting

The proposed project will be located in one of the prime urban settings of the Kampala City, primarily classified as “high class residential” zone. The location is suitable being slightly away from the epicentre or core activity zone of the city, offering a conducive environment for civic activities. The location is at a height of 1214metres above sea level compared to the largest part of the city which is below 1200metres above sea level. This provides a unique opportunity for creation of a wide visual variety.

Technical / stakeholder concerns

Mr. Katende David, the Senior Architect of Kampala City council (KCC) indicated the need to maximize on the usage of the prime land in which the project is planned. He asserted that , the skyline should not be the limit since this area is planned to host structures with 8 floors and above. However seven floors is still acceptable.

Land use conflict

The current land use category for the proposed project site is “Residential”, while the proposed activity is of “Commercial” nature. This calls for an application for ‘change of user’ to conform to the proposed activity. This application needs to be made with KCC, who will advise on the steps to be taken. Otherwise the land use for the target site as it is currently is for residential purpose until 2011. Mr. Joseph Semambo, Physical Planner KCC, confirmed the availability of a long term plan to formally convert many sections of the City including Nakasero hill into civic centres to answer the acute demand for civic services by the public / facility developers.

Utilities

Mr. Joseph Semambo, also confirms that there are already proposals to up-grade the basic utilities (roads, sewerage, and storm water drains) to cater for the massive demand due to civic actualization. Hence, there is a need to provide for future expansions, especially the roads. The proposed project expects to host vehicular volume of about 300 vehicles at its maximum. Free flow of traffic will call for a flexible vehicular circulation with 3 access points for vehicles: 2 of Nakasero Road and 1 off Rwenzori House parking, as planned. However, the current access road (Nakasero road) will require expansion to cater for this new situation. Such expansion may require part of the project plot to be surrendered.

Relatedly, the water pipeline network (size and distribution) is adequate and only needs to be harmonized with the development plan. There is need to establish the below surface utility infrastructure. This information will help in, for instance, understanding / computing how much water is available compared to the one that will be required by the Tower occupants.

Storm water movement appears to be a big challenge for the proposed site and the lower neighbourhood. There is need to jointly (i.e Rwenzori Towers, Rwenzori courts and Rwenzori house) address the problem and find a solution before implementation of the project. A detailed structural design to address the storm water problem is paramount.

Neighbourhood compatibility, characteristics and dynamics

The proposed site shares a neighbourhood with sensitive communities. These include; Embassies, UN facilities, State house, restaurants, schools etc. For security reasons, it is very important that these entities are consulted and clearance is sought preferably at the earliest possible opportunity.

According to Mr. Katende David, KCC has been working on a number of City up-grading proposals. Thus, it is important that an interpretation of these proposals is made in connection with the proposed project. This will eliminate elements of land use conflict.

Appendix 7: Results of Soil Tests

Telegrams: _____
 Telephone: 250454/250470 (Gen. Lines)
 250474 (Chief Govt. Chemist)



Government Chemist and
 Analytical Laboratory,
 P.O. Box 2174,
 Kampala,
 Uganda.

In any correspondence on
 this subject please quote No. 232 / 126

THE REPUBLIC OF UGANDA

PINE INVESTMENT LTD
 KAMPALA

31ST OCTOBER 2008

SOIL ANALYSIS REPORT

RECEIVED FROM : MS. EDITH KAHUBIRE
 SOURCE OF SAMPLE : NAKASERO ROAD

This is to certify that the soil sample submitted has been analysed with the following results obtained.

PARAMETER	Mean - Results
pH	6.1
Conductivity (µs/cm)	113.0
Manganese [mg/kg]	0.135
Ammonia (NH ₃) [mg/kg]	0.03
Nitrate-Nitrogen (NO ₃ - N) [mg/kg]	0.851
Phosphates (Total) [mg/kg]	0.35
Sulphates [mg/kg]	45.0
Chloride [mg/kg]	56.0
Copper [mg/kg]	0.3
Calcium [mg/kg]	38.0
Lead [mg/kg]	<0.001
Potassium [mg/kg]	52.0
Sodium [mg/kg]	87.0
Iron [mg/kg]	0.39
Magnesium [mg/kg]	94.0
Iron content [mg/kg]	1.31
Bulk density g/cm ³	2.30
Ash content [mg/kg]	40.38
Organic carbon %	10.61
Zn [mg/kg]	0.03
% Sand distribution in the soil	8.6
% Silt distribution in the soil	82.4
% Clay distribution in the soil	9.0
Soil texture class	Silt - stony loam soils

REMARKS

NB: <0.001mg/kg implies below detection limits.

The mineral composition of the above soil sample was found to have the normal typical levels of top and Silt - stony loam soils

GOV. CHEMIST & ANALYST
 LABORATORY - WANDEGYI
 P. O. BOX 2174 KAMPALA
 GOVERNMENT ANALYST

Appendix 8: Map of Utilities on Project Area

Appendix 9: Records of Public Consultations

Meeting with	Name	Designation
	Richard Byakatonda Tel	Property Manager, Group4 Security
Date and Place	Group 4 Security Office, Plot 3, Nakasero Road	
Present	Edith Birungi Kahubire Albert Mugenyi, Sheba Ndagire, Sylvia Sabiiti,	
<p>Issues and Concerns Raised</p> <ul style="list-style-type: none"> • With the upcoming development, there is guaranteed security for cars, however, the area is sensitive because there are diplomats like the Danish Embassy, I cant even suggest to work at night given the sensitivity of the neighbourhood. However, they can hire the same security company so that the system becomes coherent • You have to consider, the sewage system as it goes through the other Rwenzori developments in order to ensure that when construction starts you don't block the main • You have to ensure that State House is aware of your activities because they can disrupt them • There is heavy traffic on Nakasero during lunch times, so the developer can consider having an entry from Lumumba Avenue • There is the issue of storm water that has been disturbing us very much since we had an incident where a wall fell over to the parking at Rwenzori House and vehicles were damaged. If possible it would be better to construct during the dry season, in order to avoid such incidences. • Heavy trucks ferrying materials should take into account safety of motorists and vehicles • Safety measures should be taken into account 		
Meeting with	Name	Designation
	Michael Kaguamba	Head, Property Management, Knight Frank Newmark Global
Date and Place	Knight Frank, Plot 4 Kimathi Avenue, Kampala	
Present	Edith Birungi Kahubire, Ananias Bazira	
<p>Issues and Concerns Raised</p> <ul style="list-style-type: none"> • With the drilling machines for the geotechnical survey, there have been complaints already from the tenants so during the construction noise and dust will be issues for the tenants at Rwenzori Courts and Rwenzori House • Parking at Rwenzori house should not be affected for more than three months and if they are to bring down the wall, how do we ensure security. I would prefer that they 		

use the same security firm.

- If they are going to build a perimeter wall, I suggest that they begin with it for security reasons
- I suggest that you schedule meetings with all the tenants so that you get their views prior to construction especially the embassies
- Part of the land for the proposed site lies in the parking yard for the Rwenzori house, how are they going to blend the three developments?
- How is the relationship between the tenants of the three properties going to be?
- The good thing is that Nakasero Road is not busy and am wondering whether there will be a single entry from Lumumba Avenue with one or two exits
- Our rent and tenants will not be affected because we have long term arrangements that would not affect the rent value for the current tenants. My only worry is how quick the developer will get tenants for the Towers
- When planning and designing buildings, architects leave out the property managers and yet our input is very important in the design of the building
- In case of any damages during the construction, we have taken out insurance and any compensations will be managed by the insurance claims
- Currently we have a challenge of the fire assembly point at Rwenzori House, what measures do we have in place to mitigate this negative impact.? Can the three buildings have a common fire assembly point?
- Is there going to be a staircase between the developments so that the properties blends
- At Rwenzori Courts there is a problem of water pressure and it affects our gardening, how do they intend to manage the gardening?
- How do we control the pedestrian traffic mainly caused by unsolicited shops or retail units?
- The storm water issue is a challenge especially during construction,. During the raining season, the basements of the current buildings flood. Are we going to have a manual or mechanical mitigation measure?
- Kinds of generators to be used should take into account the amount of noise
- The type of air conditioning is it mechanical or artificial
- Is the building eco friendly?
- Are there natural or mechanical means of lighting?

Meeting with	Name	Designation
	Ronald Kankya	Engineer
Date and Place	NWSC	
Present	Edith Birungi Kahubire	
Issues and Concerns Raised		

- The area has access to water and sewerage service because there are both water supply and sewer lines close to the site. However prior to construction, Construction Company should contact James Maitek, Manager Bugolobi or Angelo Kwitonda, Engineer Branch so that they can be shown the exact location of the sewer line.

Meeting with	Name	Designation
	Peace Byamugisha	Administrator, Deloitte and Touche
Date and Place	Rwenzori	
Present	Edith Birungi Kahubire, Solomon (Knight Frank)	

Issues and Concerns Raised

- We propose that they work at night and weekends due to dust and noise
- Concerned about the height of the building
- Definitely traffic will increase and parking still remains a problems. Can we share the parking in the new complex? With the retail units doesn't that mean more tenant, more traffic

Meeting with	Name	Designation
	Francis Bogere	Resource Management, The World Bank
Date and Place	World Bank Office	
Present	Edith Birungi Kahubire	

Issues and Concerns Raised

- The general issues of concern would be noise, the tractors make a lot of noise
- The beauty of the area will be affect, most Bank members prefer the view of the development since there is a lot of green
- Due to the construction, there will be alot of dust so most times the windows will be closed and air conditioning turned on. So it would be good that when electricity goes there is an immediate alternative for power; generator should be in perfect condition
- There is a dish next to the project site that should be dust free because dust and vibrations affect our internet connection. In collaboration with Knight Frank we will have to find an alternative site for the dish
- The height of the building not a problem apart from taking away the green; it rejuvenates life
- Traffic has been okay apart from the times when the area is sealed off due to activities of High Court
- As long as the inconvenience is minimised, we have no problem, we would want a

clearer image of the plan so that we send it to headquarters. However, the shops compromise on security since they are public place. How do we ensure that the public does not have access to the rest of the building?

Meeting with	Name	Designation
	John Ddumba	Support and Administration Manager, UTL
Date and Place	UTL	
Present	Edith Birungi Kahubire	

Issues and Concerns Raised

- Dust, noise and mud would be a problem during the construction due to trucks coming in and out of the project area
- We currently have a parking problem especially for UTL which is a trading company. The type of tenants will determine the type of image that we will have. Do we have headquarter offices here of we have any type of tenant who can pay the price.
- The busiest times in terms of traffic are 7.30 – 10.30 am and 4.30 – 8 pm construction activities should take into account these critical times
- Furthermore, the kind of traffic, whether vehicular or pedestrian which might cause congestion

Fire and safety should be taken into account by increasing access to fire brigade, there should be a route around the building only for the fire brigade

Meeting with	Name	Designation
		Dixter
Date and Place	10th November 2008	
Present	Ananias Bazira	

Issues and Concerns Raised

- We are worried that the at present the tenants Group 4 Security will be displaced which might lead to insecurity in the area since the construction will attract very many people and make the neighbourhood prone to thefts
- I suggest that security be boosted during the construction and operation phases. Its infact that the project site is going to increase employment opportunities for both skilled and semi skilled workers and also increase revenue for country in terms of taxes
- Competition and Rent: The project is going to induce a high growth of competition in terms of rent and other retail shops and boutiques. At present I am the only one owning a boutique at Faze2 and I expect to expand my business if the rent is not so high in the proposed complex, I am willing to get space there since the rent on Kampala Road is very high

- I suggest that there be entertainment to attract more customers in the area like Garden City and more space for retail shops so that some of us can also get space
- Aesthetics: During the construction works the place might create an aesthetic offensive site to the public thus affecting our businesses
- I am pleased that the area is going to improve in terms of parking and security as well as goods and services and also increased employment and improved aesthetic value in the area

Meeting with	Name	Designation
	Mr. Jackson	Manager, Faze2
Date and Place	10th November 2008	
Present	Ananias Bazira	

Issues and Concerns Raised

- The proposed development will mean that there will be an increase of traffic due to additional vehicular movement in and out of the project area. This will affect the existing parking facilities mostly during busy hours of lunch and dinner might pose a traffic hazards affecting both vehicles and people. I suggest that there be a provision of adequate parking of vehicles that will be working on the project site
- In addition, I suggest that any heavy work that includes transportation of materials be restricted to the night hours which are less busy hours.
- Regarding competition, Faze2 is not threatened by any form of competition; we rather encourage it because it leads to increased quality in our service delivery. Faze2 has its own special service and recipes that is unique; any upcoming restaurants in the area do not worry us
- In terms of security, the area is very secure and we have security guards that are armed. The challenge is that security in the area is likely to change due to increased population mainly due to people coming to seek employment at the construction site. I suggest that security at the site be tightened.

Meeting with	Name	Designation
	Mr. Katende David- Mob. 0772-427991	KCC Senior Architect
Date and Place	November 2008 - KCC Offices	
Present	Albert Mugenyi	

Issues and Concerns Raised

Architectural drawings

There is an urgent need to present the Architectural and structural designs to KCC technical staff for project internalization and comments. This needs to be done by the M/s BOWMAN ASSOCIATES ARCHITECTS themselves as the lead designers. Fortunately, KCC technical meetings involving all technical staff from headquarter and all divisions are held every Tuesday and Thursday starting at 9.00AM. We were advised take advantage of this arrangement to have the presentation of these drawings to the entire team for their comments. The contact Officer is the KCC Senior Architect (Mr. Katende David – Mob. 0772-427991). This is very important as it eases the process of clearing the proposals for implementation.

Meeting with	Name	Designation
	Mr. Joseph Semambo	KCC Physical Planner
Date and Place	November 2008 - KCC Offices	
Present	Albert Mugenyi	

Issues and Concerns Raised

Storm water

Storm water movement appears to be a big challenge for the proposed site and the lower neighborhood. There is need to jointly (i.e Rwenzori Towers, Rwenzori courts and Rwenzori house) address the problem and find a solution before implementation of the project. A detailed discussion with the City Engineer is paramount.

Utilities

There are already proposals to up-grade the basic utilities (roads, sewerage, and storm water drains) to cater for the massive demand due to civic actualization. Hence, there is a need to provide for future expansions, especially the roads. The proposed project expects to host vehicular volume of about 300 vehicles (see car parking information) at its maximum. The current access road will require expansion to cater for this new situation. Such expansion may require part of the project plot to be surrendered.

Relatedly, there is need to obtain the water pipeline network for harmonization with the proposed project. There is need to establish the below surface utility infrastructure. This information will help in, for instance, understanding / computing how much water is available compared to the one that will be required by the Tower occupants.

Land use conflict

The current land use category for the proposed project site is “Residential”, while the proposed activity is of “Commercial” nature. This calls for an application for ‘change of user’ to conform to the proposed activity. This application needs to be made with KCC, who will advise on the steps to be taken. Otherwise the land use for the target site as it is currently is for residential purpose until 2011. There is a long term plan to formally convert many sections of the City including Nakasero hill into civic centres to answer the acute demand for civic services by the public / facility developers.

Neighbourhood characteristics and dynamics

The proposed site shares a neighbourhood with sensitive communities. These include; Embassies, UN facilities, State house, restaurants, schools etc. For security reasons, it is very important that State House clearance is sought preferably at the earliest possible opportunity.

KCC has been working on a number of City up-grading proposals. Thus, it is important that an interpretation of these proposals is made in connection with the proposed project. This will

eliminate elements of land use conflict.

Meeting with	Name	Designation
	Kamukama Dixon	Speaker, Kampala Central Division
Date and Place	December 2008 - KCC Offices	
Present	Ananias Bazira	

Issues and Concerns Raised

Environment and Development are interdependent and for this case we as Kampala Central Division welcome the proposed development. We are in fact pro development and as a I look at this proposed plan, i can see that it is proposed to have a provision for parking and our main concern is that this be implemented since it will reduce on the congestion in the city. Most developers have also proposed such plans but have ended up not implementing them and instead the place becomes shops instead of parking. So we hope that this will be implemented.

A case to look at also is the trees that are going to be cut down in this area during the site clearance. In fact the proposed plan shows that there are no trees in the pictures apart from two or three palm trees. We suggest that some green be planted in form of trees and other plants to improve the visual impression in this area.

On site clearance and excavation is normally characterised with increased soil erosion and this is likely to cause our roads to become dirty with mud and dust and also pollution in form of noise. It is evident that we don't have any sophisticated mechanisms of operation to avoid this in Uganda. At present compared to other cities in the world but we suggest that to reduce the mud and dust. There should be careful tipping and transportation of the spoil of excavated murrum since it increases dust in our drains.

Transportation of the spoil should only be at night in order to avoid congestion and noise be minimised to avoid any disruption to other developments in the surroundings.

It is evident that transport and other traffic in this area is going to be distorted for this matter we suggest that the outlet points be properly planned and there should be use of traffic guides to avoid any accidents.

In terms of security in the area we are aware that this is near state house so were not worried about security apart from such kind of work always welcomes a high influx of people like casual labourers that might lead to security problems or changes and the only solution is to meet the surrounding neighbours and make them aware of the development so that they are alert

Meeting with	Name	Designation
	Rosebell Mutoro	Owner, New Auto Car Wash
Date and Place	December 2008 - Nakasero Road	
Present	Ananias Bazira	

Issues and Concerns Raised

- We are worried about what is going to happen now. Some people have been coming to look at our site and they were drilling holes
- Otherwise management supports the development
- We are worried about falling debris
- Erect a fence so that we avoid flying stones
- Security at the site should be catered for
- Traffic flow is important especially during the rainy season
- Parking in this area is a challenge so if the structure has a lot of parking that is very good
- Management is pleased that there is going to be some employment around the area which will mean more revenue

Meeting with	Name	Designation
	Placid Ssekamatte	Human Resource Manager, UMEME
Date and Place	Rwenzori House	
Present	Edith Kahubire, Solomon Byara	

Issues and Concerns Raised

- We foresee problems related to carrying soil away
- Noise, dust
- It is better we are informed in advance
- We need parking and we expect that the developer will pay for our parking or look for an alternative because our parking space is close to the bordering wall
- When construction start, there should be a shield against flying objects...safety concerns.. We don't want to see another NSSF experience
- It would be good if excavations are done on Saturday and Sunday or at night
- There should be professional cleaners to take care of the mess
- Please try and retain the green, when there are no windbreakers there is alot of dust and wind
- The retail units are interesting for us because at the moment there are not canteens in current establishments, pharmacy, supermarkets or even health centres. It would

be good if such services are provided so that we have a one stop centre

- Windows need to be resealed so that the dust from outside is avoided
- Tremors during excavation can cause high blood pressure among our staff

Meeting with	Name	Designation
	Jan C. M. Meijer	First Secretary, Head of Operations Management, Netherlands Embassy
Date and Place	December 2008 – Nakasero Road	
Present	Edith Kahubire, Solomon Byara	
<p>Issues and Concerns Raised</p> <ul style="list-style-type: none"> • Security is important to us anything that is as high as 20 floors becomes a problem for us...this height would be okay • Parking is important for us here • Disturbances during construction should be minimised because we are highly dependent on internet and our equipment is sensitive to noise and dust. We need a constant link with our headquarters in the Netherlands. Our satellite connection should not be interfered with..even on the weekends we have to update our systems • Our meeting room faces the construction site so we foresee our meetings getting disrupted due to the noise 		
Meeting with	Name	Designation
	Benson Ndung'u	Partner, KPMG
Date and Place	December 2008 – Nakasero Road	
Present	Edith Kahubire, Solomon Byara	

Issues and Concerns Raised

- Of course with the construction we expect noise and dust
- In terms of security at the site, Knight Frank should manage
- Hoarding off the site is very important
- Debris fallingshould take care of the health of the people
- Structural designs this is not a small building and therefore should be stable on the ground
- During operation and maintenance, we expect to increase in services like gym in order to attract the corporate market segment not too much public
- We don't want to see something equivalent to garden city if we have different types of businesses our image changes
- We have a certain type of clients and our image matters
- Linkage and access to the building, sharing is not recommended apart from parking

Meeting with	Name	Designation
	Abdu Mukasa	British Council
Date and Place	Rwenzori Courts	
Present	Edith Kahubire, Solomon Byara	

Issues and Concerns Raised

- Knight Frank to handle our dish as it is close to the site , the machines will affect our dish
- Noise from the construction site, work should not be disrupted at British Council
- Safety is of great concern as we don't want to see flying objects
- Alternative parking for our cars is required as our parking slots are close to the site
- We would be interested in the new building because headquarters is complaining that our current offices are too close to the road
- We should be informed at least two weeks before the work starts