

TERMS OF REFERENCE (TOR) FOR AFEASIBILITY STUDY AND DETAILED PROJECT REPORT FOR KAMPALA INDUSTRIAL AND BUSINESS PARK, NAMANVE – JULY 2017

1: Introduction:

The Government of Uganda has identified Industrial Parks as key enablers to sustained Industrial Development and growth. The ongoing infrastructural developments along the Standard Gauge Railway corridor present enormous opportunity to provide world class infrastructure to investors to participate in various diverse manufacturing activities. The Government of Uganda obtained a loan from Indian Exim Bank and wishes to use part of the funds to carry out a feasibility study as well as a detailed project report for the Kampala Industrial Business Park (KIPB).

The Kampala Industrial and Business Park (KIBP) located 11 km East of Kampala, is a 2,200 acre facility located partly in Wakiso (Kira Municipal) and Mukono (Mukono municipal) Districts. To date, all the land has been allocated to 296 prospective investors for development in various sub-sectors such as agro processing, mineral processing, ICT, logistics and freight, warehousing, general manufacturing as well as Tourism promotion activities.

Twenty Two (22) industries are currently in operation within the Kampala Industrial and Business Park directly employing 11,000 Ugandans within the park, Seventy five (75) projects have commenced physical construction and have created an additional 17,000 indirect short term contract/ technical jobs during this period while 1809 industries are still processing their paper work in terms of obtaining the environmental impact assessment certificates, architectural designs, land titling, geo-technical and hydrological studies. These too create employment to the various white collar professionals such as Architects, Environmental Consultants, Civil Engineers; Quantity Surveyors. The rest of the projects have been newly allocated plots.

The park road network comprises of a total of 44km of planned roads of which 6.5km is tarmacked while 30km is at marram level. The rest of the planned network still remains un-opened.

Uganda Investment Authority therefore wishes to identify a consultancy firm to provide services for carrying out an economic feasibility study for this park, Update the existing detailed master plan as well as carry out a detailed project report for the Kampala Industrial Business Park.

2. The objectives of the Consultancy:

The general objective is to establish a competitive modern Industrial Park with all attendant facilities within this Industrial Park -KIPB.

Scope of Works

The identified Consultancy will:-

- a. Carry out a feasibility study on the establishment of Kampala Industrial and Business Park, Namanve in terms of carrying out a cost benefit analysis for this industrial park.
- b. Review the industrial park Master Plan and detailed plans and realistic budgets for the provision of all the necessary infrastructure to support the development of this Industrial Park:
- c. Produce detailed engineering designs for critical infrastructure and utilities in this industrial park including the industrial park roads, high voltage power, bulk water, solid waste management system, sewerage treatment plant, Public open spaces, Parking areas, railway extension sidings as well as the ICT fibre optic extension.
- d. Produce prototype models for the desired industrial buildings that will be implemented in this industrial park.
- e. Develop a comprehensive marketing and promotion plan for attracting potential investors to the Industrial Park that will ensure at least a high level of occupancy within the three years of operation (Focus on the key areas and if there are other areas of consideration), f. Develop appropriate financing models and funds mobilization strategies to realize funds for the development of this industrial park.
- g Develop an appropriate management model that will ensure the success of this industrial park based on successful international models.

3. Deliverables of the study

The Consultant or Consortium will deliver the following documents as key outputs:-

- a. A detailed economic feasibility study
- b. A reviewed Master Plan which will include but not limited to the land use plan, utility services plan and an infrastructure extension plan
- c. Detailed engineering designs for all the roads, power, water, sewerage treatment plant, solid waste facility, ICT fibre optic, Parking areas, public open space and railway sidings.
- d. Tender documents that shall be used by the client during tendering process for the construction of the Roads, Power, Water extension, Sewage Treatment, Railway sidings and Solid Waste Disposal Plant
- e. Review the environmental impact assessment study report for the industrial park
- f. A detailed drainage masterplan for the industrial park.
- g. A detailed updated budget to fully service the industrial park to completion.
- h. A suitable management model for the maintenance of infrastructure services in this industrial park.

- i. A comprehensive marketing and promotion plan for the industrial park

4: Duration of the assignment:

The assignment is expected to last for a duration of **6 (Six) calendar months** from signature of contract.

5: Key Personnel requirements: (Key areas of specialty)

The required Consultancy firm shall have experience in having successfully completed at least three similar assignments (in nature and magnitude) in the last five years; have relevant competent professionals comprising of at least the following:

1) Team Leader/Civil Engineer/ Senior Institutional Expert (Design and Construction)

The Team Leader will need to be a professionally qualified graduate registered/chartered civil Engineer and shall have:

- a) At least a Masters Degree in Project Management or a related field and at least 15yrsexperience in design and management of large scale infrastructure projects in urban/ industrial areas.
- b) Fifteen (15) years' experience in:
 - (i) Infrastructure Designing
 - (ii) Project Management and
 - (iii) Contract Management

The Team Leader shall be solely responsible for:

- The design review and construction supervision of the infrastructure and utilities.
- He/She shall also be responsible for overseeing the implementation of this assignment.
- He/She will report directly to the Project Manager
- The Team leader should be competent in planning, designing, contractual management, resolving problems, quality, maintenance, budgeting and financial control, progress monitoring, international procurement procedures, communication skills and documentation.

2) Sewerage and Wastewater Treatment Engineer/ Specialist (Network Modeling Design)

The Sewerage and Wastewater Treatment Engineer/ Specialist will need to be a professionally qualified registered/chartered Civil/Water Engineer with post graduate qualifications with not less than ten (10) years' experience in managing major projects in the design of sewerage systems in water and sanitation sector.

The specific tasks include:

- (i) Designing and reviewing topographical, geotechnical, hydrological and other surveys;
- (ii) Prepare a hydrological model for the project waste water treatment schemes and optimize

system operations;

- (iii) Conduct a full detailed engineering design waste water transmission lines for the park, distribution networks, storage structures other parts of the system, as deemed necessary;
- (iv) Assess the current and projected quantity and quality of effluent from industries;
- (v) Plan and organize a wastewater sampling and analysis programme, to determine the concentration and volume of wastewater presently discharged review material selection options taking into account local conditions, and in particular pipe corrosion;
- (vi) Plan and organize a sampling and analysis programme of the receiving water body;
- (vii) Identify major wastewater producers and pollution sources that may require additional treatment prior to discharge to the public sewer and recommend appropriate actions required;
- viii) Conduct detailed designs including calculations, BOQs, specifications and drawings for the sewerage system and sewage treatment plant'
- (vi) Based on bill of quantities, prepare detailed engineering cost estimates for the scheme;
- (ix) Ensure adequate site investigations are carried out for the design of the sewerage and other works;
- (x) Assist in tender document preparations;
- (xi) Prepare O&M manual and construction record drawings;
- (xii) Liaise with other specialists to ensure a consistent philosophy and integrated approach to the design and operation of the sewerage system.
- (xiii) Provide overall guidance and advice to the design team on matters pertaining to sewerage and sanitation policies and their application;
- (xiv) Review the detailed designs prepared for the park's sewerage and provide advice to the design team;
- (xv) Prepare an overall strategy for sanitation leading to the prioritization of an ensuing sanitation program (including construction of public sanitation blocks);
- (xvi) Develop a manual for effluent discharge quality checks and assurance
- (xvii) Develop O&M manuals for comprehensive (future) maintenance of the sewerage system
- (xxiv) Assist the team to establish water treatment and sewage treatment guidelines and procedures for the detailed design of the water treatment plants in the scheme.

3) Senior Physical Planner

A minimum of a relevant Master's Degree in Urban and regional planning, or spatial planning or urban planning with training in project management and 10 years' experience in related assignments. Previous participation in the preparation of an industrial parks master plan is an added advantage. Registration with relevant professional bodies is required.

His/her specific tasks shall include:

- i) Review the detailed master plan for the industrial park to ensure conformity with the existing designs.
- ii) Review the location and land sizes reserved for critical infrastructure and utility services planned for in the industrial park such as a sewerage treatment plant, solid waste facility and many others.
- iii) Develop adequate proposals on how to integrate the development of the industrial park into the general municipal master plan.

4) Geotechnical Engineer

The Geotechnical Engineer shall be a professionally qualified Civil/Water Engineer. He/she shall have not less than ten (10) years' experience in the design of foundations and assessment of soil stability of structures.

His/her specific tasks shall include:

- (i) Advise and assist in undertaking the planning and implementation of the "Location and Condition Assessment Surveys" and reviewing of the existing/ planned waste water treatment infrastructure and design appropriate foundations for the structures
- (ii) Advise and assist on the planning of design studies in coordination and cooperation with the results of the relevant soil tests
- (iii) Carry out geotechnical investigations in the project area, test and analyze results and interpretations for purposes of design

5) Solid Waste Management Specialist

The sewerage specialist shall be a professionally qualified Civil/Water Engineer. He shall have not less than ten (10) years' experience as an engineer in the design of solid waste systems.

Her/his roles shall include:

- (i) Assess the current and projected quantity and quality of solid waste from industrial premises;
- (ii) Plan and organize a solid sampling and composition, to determine the amount of biodegradables and recyclables present and prepare recovery projections accordingly;
- (iii) Identify major wastewater producers and pollution sources that may require careful attention and separation from the main sewerage line and recommend appropriate actions required;
- (iv) Conduct detailed designs including calculations, BOQs, specifications and drawings for:
 - (a) The Industrial Park compost plant;
 - (b) Landfill site and
 - (c) Transfer stations, primary and secondary collection and vehicles;
- (v) Based on bill of quantities, prepare detailed engineering cost estimates for the scheme;
- (vi) Ensure adequate site investigations are carried out for the design of the solid waste management works;
- (xi) Review the detailed designs prepared for KIBP solid waste management and provide advice to the client;
- (xii) Prepare an overall strategy for solid waste management in KIBP with a time bound action plan for implementation;
- (xiv) Conduct a compost marketing study for KIBP;
- (xv) Prepare the implementation of a solid waste segregation and 3R (reduce, reuse and recycle) community awareness campaign manual;
- (xvi) Prepare a manual and operational plan to optimize operation and maintenance of the site and thus maximize the life of the sanitary landfill site

6) Electrical/Mechanical Engineer

The specialist shall be a graduate engineer in the field of Electrical and/or Mechanical Engineering and must possess a minimum experience of ten years. The engineer(s) shall be very

competent in the design of:

- (a) Plan for high voltage power extension
- (b) Highly automated systems and shall have a minimum of five years' experience working on Power systems.

The specific tasks include:

- (i) Design/Review the design of electrical and mechanical plant equipment including specifications and schedules;
- (ii) Preparation of tender documentation;
- (iii) Provision of specification for electromechanical goods to be supplied by the contractor;
- (iv) Preparation of documentation and supervision of the refurbishment of the existing power supply systems;
- (v) Review the contractor's assessment of the power requirements and establish power availability and designing of adequate systems;
- (vi) Providing O&M manuals prepared for use in the electrical and mechanical equipment for future maintenance; and
- (vii) Provide testing manuals of electrical and mechanical equipment upon commissioning.
- (viii) Provide necessary training manuals for O&M staff

7) Civil/Structural Engineer

The structural engineer shall be a graduate Engineer (civil) with relevant postgraduate experience in structural engineering. He/she should have a minimum of ten years' experience of which six years shall be in structural design of concrete water retaining structures. The duties of Structural engineer are:

- (i) To review soil investigations;
- (ii) To review all structural designs and necessary structural drawings and specifications, including components relating to reservoir construction/rehabilitation, water supply components, and sewerage components and building construction;
- (iii) Ensure compliance with applicable building rules of the State, with a specific focus on compliance on seismic resistant requirements
- (iv) Preparation of tender documents, wherever necessary

8) Environmental Specialist

The Environmental specialist should possess a BSc degree in Environmental Science/ natural resource management and registered with NEMA. The international expert will have at least fifteen years' experience of which ten years shall be in the performance of environmental assessments

The expert's specific tasks include:

- (i) The preparation of the necessary environmental impact assessments in accordance with NEMA/Government of Uganda standards for environmental assessment of Investment Program tranches and subprojects
- (ii) The reviewing, preparing and updating initial environmental examinations and environmental management plan for the Project;
- (iii) Ensure the implementations of EIAs are consistent with Government and NEMA policies

agreed upon by the Government

(iv) Provide, advise and support to ensure all the necessary Government approvals are obtained

(v) Provide necessary guidance in the classification, and development of all environmental safeguard documents to the sub-projects, including the provision of training manuals in the development and implementation of EIAs.

(vi) Review all classifications and environmental assessment (EIAs) developed by UIA and ensure comments from NEMA and other stakeholders are integrated in finalized documents.

(viii) Provide advice on environmental impacts and review the contractor's mitigation measures for all proposed construction works including reservoir construction/rehabilitation, water supply and sewerage schemes;

(xvii) Review surveys of municipal water quality, sludge and effluent, nutrient surveys in water bodies (lagoon or surface waters) in the surrounding areas and public health data.

9) Economist/ Financial Analyst

The Economist/Financial specialist should possess a BSc/BA degree in Economics/Finance or related field and Post graduate qualifications in Project Management or related business field. He/she should have at least ten years' experience in Project Management or consultancy work in feasibility studies of big projects.

(i) The consultant will conduct the project's economic and financial analysis

(ii) The consultant will describe the macroeconomic and sector context;

(iii) Assess project alternatives and confirm the least-cost solution;

(iv) Review cost recovery policies for all the costs to be injected in the implementation of this project.

(v) Propose a cost-recovery mechanisms (including necessary institutional arrangements) through taxes, user charges and/or other techniques for O&M and initial investment recovery, and

(vi) Estimate the detailed economic project cost for the selected alternative, applying appropriate disaggregation of costs, standard conversion factors, and shadow prices as required;

(vii) Identify all quantifiable and unquantifiable project economic benefits, considering both with and without scenarios, as well as incremental and non-incremental benefits;

(viii) Prepare financial projections for operations 10 years after project completion;

(ix) Compute relevant financial indicators for the park to assess financial viability;

(x) Assess the financial viability of the project;

(xi) Estimate economic and financial internal rates of return and perform sensitivity analyses, including switching values and calculation of the real weighted-average cost of capital;

10) Land Surveyor

The surveyor must have a degree in Engineering Surveying or equivalent and registered to practice in Uganda with a minimum of ten years professional experience.

She/he will carry out surveys to assist in review of the original surveys and the location of the various utilities and infrastructure services.

11) Quantity Surveyor

The Quantity Surveyor must have a degree in Quantity Surveying/Building Economics or equivalent and registered to practice in Uganda with a minimum of ten years professional experience.

She/he will study all the necessary detailed drawings and establish the quantities and cost estimates of all the works in relation to the specifications

12)Support Staff

- **A Cartographer/GIS technician** with a minimum of a diploma in Geo - informatics /Cartography with at least three years' experience in handling similar assignments. The consultant should have managed at least three assignments.

6: Clients inputs:

- a. Copies of the previous studies relating to the extension of services in the industrial park.
- b. The Kampala Industrial and Business Park Master Plan 2016 ???
- c. The Kampala Industrial and Business Park Environmental and Social Impact Assessment Report
- d. Introductory letters to the relevant agencies

7.0 Reporting Requirements and Time Table

Reporting will be used together with regular meetings to assess progress regarding the execution of the assignment. The Consultant will be required to produce and submit the following principal reports and documents:

	ACTIVITY	Timing from Start Date(calendar weeks)	Copies
1.0	Inception Report	2	8
2.0	Preliminary Master plan review and Engineering Design Report	8	8
3.0	Draft Final Feasibility Report, detailed project report and Tender Documents	14	8
4.0	Environmental and Social Impact Assessment Report as well as drainage master plan	18	8
4.0	Final Detailed feasibility study and engineering design Report	20	8
5.0	Final Tender Report	24	8

The Consultant will present the above reports to the Executive Director, UIA.

8.0 Payment Schedule

Payment will be on the basis of outputs as follows:

#	SUBMISSION	%
1.0	Upon submission and approval of Inception Report	20
2.0	Upon submission and approval of Preliminary Master plan review and Engineering Design Report	20
3.0	Upon submission and approval of final Environmental Impact Report and Drainage Master Plan	30
4.0	Upon submission and approval of final feasibility report, Detailed Final Engineering Reports, Designs, Drawings and Tender Documents	30

9.0 PROJECT MANAGEMENT AND OPERATIONS

The activity will be overseen by the Uganda Investment Authority (UIA). However, there shall be a Project Manager appointed by UIA who will be responsible for the daily supervision of the consultant and an Inter-Ministerial Steering Committee constituted by GoU responsible for the overall supervision of the exercise. The successful consultant must therefore work closely with the Project Manager and promptly brief him/her on emerging findings. Regular meetings to update the Authority and the Steering Committee on progress are anticipated.

The Consultant shall ensure the availability of the staff appointed for the delivery of the requirements of this contract. In the event that the staff are unavailable during the contract period, then the Consultant should provide details of contingency arrangements, including securing suitably qualified and experienced replacement staff.

The successful Consultant will be furnished with all relevant documentation upon award of the contract

The Inception Report, Interim Master Plan, draft final Master Plan shall be presented by the Consultant to stakeholders at meetings organized by the client.

All the reports shall be submitted in eight (08) hard copies and one (01) soft copy on CD/DVD/Memory stick, and should be in readable and editable form.

The maps and drawings/plans should be submitted in active GIS shape files, CAD drawings and PDF file formats.

ASSIGNMENT MANAGEMENT & ADMINISTRATION

The Consultant shall report to the Member in charge who shall be:

The Director

**Lands Development Division,
Uganda Investment Authority
Plot 22B TWED Plaza Lumumba Avenue
P.O. Box 7418
Kampala, Uganda**