

**CONSULTANCY SERVICES (ToR) FOR DETAILED DESIGN AND PREPARATION OF TENDER DOCUMENTS FOR THE MILK COLLECTION CENTERS AT EMALI.**

**1. Background**

ChildFund International is a non-sectarian and non-profit development organization working in more than 30 countries worldwide to improve the well-being of about 15.2 million children and families, regardless of race, creed, religion and gender. ChildFund Kenya's core intent is to help deprived, excluded and vulnerable children have the capacity to improve their lives and the opportunity to become young adults, parents and leaders who bring lasting and positive change in their communities; and societies whose individuals and institutions participate in valuing, protecting and promoting the worth and rights of children.

The MFAT funded Agriculture, Dairy and Economic Development Project (ADED) will deliver improved agriculture, diversified livelihoods and reliable and beneficial market pathways for 1,250 farming households, who are included within the 2,875 direct beneficiaries (5,750 indirect). By the end of the project, food security and incomes in Emali farming communities will be improved and Maasai and Kamba households will be more resilient to climatic and economic shocks.

ChildFund Kenya has undertaken a Farmers mobilization around growing and production of Moringa which has increased the yield of the crop. To minimize post-harvest loses of the crop, ChildFund intends to put up a moringa processing plant to maximize income for the farmers. ChildFund Kenya therefore wishes to engage a reputable Architectural Firm with experience in design of similar infrastructure to carry out the designs of the proposed plant.

**ChildFund Kenya is required to report to the New Zealand Government, ChildFund New Zealand, ChildFund Kenya, Samli Dairy Co-operative Society Limited and Private Equity Investors on the impact of the dairy processing plant proposed to be set up at Oltinka along Oloitoktok road in Kajiado County**

## 1. TECHNICAL DETAIL OF THE PROJECT

**Description of Work:** Construction of a five Milk Collection Centres

**Location:** Emali

MILK COLLECTION CENTRE	DESCRIPTION
Samuli Milk Collection centre	<ul style="list-style-type: none"> <li>• Located in Oltinka, Poka location, Kajiado East Subcounty of Kajiado Couty</li> <li>• To host two 5000 litres capacity milk cooling tank adjacent to the container in a shaded area</li> <li>• The facility should be housed in two 40ft shipping containers</li> <li>• The facility to house:               <ul style="list-style-type: none"> <li>○ MCC office</li> <li>○ MCC store</li> <li>○ Board room</li> <li>○ Can wash area</li> <li>○ Washed can storage</li> <li>○ Milk Dumping, weighing and recording area</li> </ul> </li> <li>• The milk cooling tank should be outdoor with provision for shade construction and a concrete pad for loading and loading milk into/out of road tankers</li> <li>• The shipping containers should be raised using concrete dwarfs at least 2ft above ground level</li> <li>• The two containers should be in such a way that they provide enough space for all the necessary facilities</li> <li>• The soak pit should be able to handle at least 3000 litres of waste water per day</li> <li>• There is need to provide for a 30 KVA generator room that is</li> </ul>

MILK COLLECTION CENTRE	DESCRIPTION
	<p>well ventilated.</p> <ul style="list-style-type: none"> <li>• The floor should be made of concrete with epoxy resin. The containers floors should be made of materials resistant to cleaning detergents (caustic and nitric acid solutions)</li> <li>• The walls should be finished with Epoxy paint</li> </ul>
Osutua Milk collection centre, Sultan Hamud	<ul style="list-style-type: none"> <li>• Building already constructed</li> <li>• Provide for Floor refurbishment with concrete and epoxy resin. The floors should be made of materials resistant to cleaning detergents (caustic and nitric acid solutions)</li> <li>• The milk cooler room should provide for: <ul style="list-style-type: none"> <li>○ Can wash area</li> <li>○ Washed can storage</li> <li>○ Milk Dumping, weighing and recording area</li> <li>○ Proper drainage of liquid effluent</li> <li>○ The floor area onto which milk cans are off-loaded should be resistant to damage from cans</li> </ul> </li> <li>• There should be provision for a concrete pad for loading and loading milk into/out of road tankers</li> <li>• There is need to provide for a 30 KVA generator room that is well ventilated.</li> <li>• Provide for screens at the ventilation</li> <li>• Provide for milk and water plumbing, electrical connection and installation of the existing cooler</li> <li>• Provide for soak pit with ability to handle 2,000 litres per day</li> <li>• Located at Sultan Hamud</li> </ul>
Simba Milk collection centre	<ul style="list-style-type: none"> <li>• Located at Simba Shopping centre</li> <li>• Building already constructed</li> <li>• Provide for Floor refurbishment with concrete and epoxy resin. The containers floors should be made of materials resistant to cleaning detergents (caustic and nitric acid solutions)</li> <li>• In the milk cooling area, the facility should house; <ul style="list-style-type: none"> <li>○ Can wash area</li> <li>○ Washed can storage</li> <li>○ Milk Dumping, weighing and recording area</li> <li>○ The floor area onto which milk cans are off-loaded should be resistant to damage from cans</li> </ul> </li> <li>• Provide for screens at the ventilation</li> <li>• Provide for milk and water plumbing, electrical connection and installation a 1000 litre capacity milk cooler</li> </ul>

MILK COLLECTION CENTRE	DESCRIPTION
	<ul style="list-style-type: none"> <li>• Provide for soak pit with ability to handle 1,000 litres per day</li> <li>• There is need to provide for a 30 KVA generator room that is well ventilated.</li> <li>• There should be a concrete pad for loading and loading milk into/out of road tankers</li> <li>• Provide for milk and water plumbing, electrical connection and installation of the existing cooler</li> <li>• Construction of pit latrines for men and women</li> </ul>
Illamiror Milk Collection centre	<ul style="list-style-type: none"> <li>• Located in Illamiror, Poka location, Kajiado East Subcounty of Kajiado Couty</li> <li>• To host a 1,000 litres capacity milk cooling tank</li> <li>• The facility should be housed in a 40ft shipping containers</li> <li>• The facility to house: <ul style="list-style-type: none"> <li>○ MCC office</li> <li>○ MCC store</li> <li>○ Agro vet shop</li> <li>○ Can wash area</li> <li>○ Washed can storage</li> <li>○ Milk Dumping, weighing and recording area</li> <li>○ The floor area onto which milk cans are off-loaded should be resistant to damage from cans</li> </ul> </li> <li>• The milk cooling tank should be outdoor with provision for shade construction and a concrete pad</li> <li>• The shipping containers should be raised using concrete dwarfs at least 2ft above ground level</li> <li>• The soak pit should be able to handle at least 1000 litres of waste water per day</li> <li>• There is need to provide for a 20KVA generator room</li> <li>• The floor should be made of concrete with epoxy resin. Provide for Floor refurbishment with concrete and epoxy resin. The containers floors should be made of materials resistant to cleaning detergents (caustic and nitric acid solutions)</li> <li>• The walls should be finished with Epoxy paint</li> </ul>
Mwanyani Milk Collection centre	<ul style="list-style-type: none"> <li>• To host a 1,000 litres capacity milk cooling tank</li> <li>• The facility should be housed in a 40ft shipping containers</li> <li>• The facility to house: <ul style="list-style-type: none"> <li>○ MCC office</li> <li>○ MCC store</li> <li>○ Agro vet shop</li> </ul> </li> </ul>

MILK COLLECTION CENTRE	DESCRIPTION
	<ul style="list-style-type: none"> <li>○ Can wash area</li> <li>○ Washed can storage</li> <li>○ Milk Dumping, weighing and recording area</li> <li>○ The floor area onto which milk cans are off-loaded should be resistant to damage from cans</li> <li>• The milk cooling tank should be outdoor with provision for shade construction and a concrete pad</li> <li>• The shipping containers should be raised using concrete dwarfs at least 2ft above ground level</li> <li>• The soak pit should be able to handle at least 1000 litres of waste water per day</li> <li>• There is need to provide for a 20KVA generator room</li> <li>• The floor should be made of concrete with epoxy resin. Provide for Floor refurbishment with concrete and epoxy resin. The containers floors should be made of materials resistant to cleaning detergents (caustic and nitric acid solutions)</li> <li>• The walls should be finished with Epoxy paint</li> </ul>

***Scope of the consultancy***

The scope of the consultancy services shall comprise of the following:

- i. Site survey and develop site layout for the 5 milk collection centers.
- ii. Architectural drawings including water and wastewater treatment system preferably soak pits for effluent treatment.
- iii. Structural drawings with complete detailing and bar bending schedule for the foundation.
- iv. Electrical drawings complete with cable connection from nearby pole inclusive of transformer if needed.
- v. Detailed MCC schematics consisting both water and mill piping as well as HVAC system
- vi. Detailed specifications for the various items of works.
- vii. Detailed cost estimate, BOQ and rate analysis wherever necessary.
- viii. Obtaining the building permit and the necessary approvals of the designs for construction of the building from the authorities concerned.

***It shall be the responsibility of the consultancy firm to:***

- i. Carry out the physical verification of the site for assessing the scope of work; and

## 2. DETAILED DESIGN WORK

<b>Description of Work:</b>	Design, Drawing and Estimation of the five Milk collection centres construction and equipping
<b>Location:</b>	Emali
<b>Duration:</b>	4 Weeks

### *3.1. Objective*

The consultant is expected to prepare master plan of the Milk Collection Centres, carry layout of the proposed infrastructure and site development works, detail electrical, and soak pits design, preparation of drawings of all designs, Bill of Quantities (BoQ), cost estimate including rate analysis for the whole project and obtaining of necessary design approval for construction from authority concerned.

### *3.2. Scope of the consultancy services*

The services to be provided by the consultant will include, but not limited to the following:

**a) Site Investigation and Survey Works:**

- i. Prospective consultancy firms should visit the proposed sites at its own costs to familiarize with the existing site conditions.

**b) Soil Investigation:**

- i. All the pre-requisite studies such as site study, surface study and investigations, tests, collection of data, (adequate trial pits) etc. should be carried out (Bearing capacity of soil) and incorporate in the structural design before detail design of building structures.

**c) Design of the Building/Infrastructure**

- i. The facilities should be housed in 40 ft shipping containers and the designs should be based on that
- ii. The infrastructure should be properly laid out in the appropriate location.
- iii. The detail design should conform to the requirements of the Client. The consultants are required to make changes considering the site conditions.

**d) Detail Drawings for the Building and other infrastructure**

- i. The drawings should be done in an appropriate style and the scales suitably fixed so that they are easily readable at site or workshop by naked eye. Except for the general views, the drawings should preferably be made to the scale of 1:50 and for showing minute details to 1:20 / 1:10 where necessary.

- ii. Adequate number of drawings should be produced to appropriately represent all the necessary details, views, etc.
- iii. Except for similar components, each different component shall have separate drawings in cross section, elevation and plan.
- iv. For the purpose of tendering, drawings printed on A3 sizes would be accepted. However, the drawings should be easily readable by naked eye.
- v. All drawing dimensions shall be in metric system (i.e. meter, cm and mm)

**e) Bill of Quantities**

- i. The BoQ should be explicit covering all items of work. It should be as exhaustive as possible to avoid changes, additions, deletions and substitutions during execution and therefore the undesired disputes and claims.
- ii. The detailed technical and material specifications should be a part of the BoQ. One copy of the Technical Specifications shall be submitted to Project Office for its comments & suggestions before making the required number of copies.
- iii. The quantities should be worked out as accurate as possible to avoid unnecessary variations during the execution of the work.
- iv. Due to the nature of the use of the structure, the client recommends the use of Epoxy resin as part of floor materials as well as epoxy paints on the wall

**f) Rate Analysis & Cost Estimates**

- i. The cost estimates should be appropriately worked out to indicate the approximate cost of the entire project. It should be accompanied by analysis of rates where necessary.
- ii. All forms of taxes - excise duties, sales tax, royalties, etc. applicable in Kenya and abroad when materials are imported, should be incorporated in the cost analysis.
- iii. The cost estimate should be treated as highly confidential.

**3.3. Key Personnel**

While building the team the Consultant has to have the flexibility to propose adequate team composition, in order to provide most appropriate and well-targeted expertise to ensure fulfilment of his duties, including more appropriate distribution of the m/m amongst the experts. The Consultant shall provide qualified experts with a minimum of five years professional experience, required for the implementation of the services described in this ToR. For the execution of the project the following expertise is required:

- i. Team leader
- ii. Civil Engineer
- iii. Electrical Engineer

- iv. Heating, ventilation, all-conditioning and cooling (HVAC) expert
- v. Quantity Surveyor

i. Team Leader

ii. Team Leader

#### **Qualifications and skills**

- university degree in architecture from a recognized University
- project management skills
- fluency in English and Kiswahili
- computer skills – MS Office, AutoCAD
- Certificate for designer's qualification registered in the Chamber of engineers in investment designing
- Registered with the relevant professional body with a valid practising certificate

#### **General professional experience**

At least 10 years sound professional experience, including:

- Implementation and management of site planning, landscape planning, design works and constructions projects;
- consultancy and building supervision in designing and construction of public services, road buildings, industrial buildings, electrical networks, telecommunication networks;
- Geodesic surveying or metal structures surveying
- Experience in organizing and overseeing administrative and logistical support;

#### **Specific professional experience**

- Knowledge about the Kenyan legislation in the sphere of construction works



- At least 5 years' experience in supervision of works conducted in conformity with the requirements of the National Construction Authority
- Experience in managing a supervision team
- Experience in supervising and coordinating all technical aspects of supervision

### iii. **Civil Engineer Expert**

#### **Qualifications and skills**

- University degree in industrial or civil engineering at a recognized University
- Fluency in English
- Computer skills – MS Office, AutoCad
- Registered with the relevant professional body with a valid practising certificate

#### **General professional experience**

At least 10 years of experience in the construction engineering, including:

- constructional engineering for industrial projects
- consultant and building supervisor in designing and construction projects in the scope of public services, road building, construction of office-buildings and industrial buildings
- consultant and building supervisor in designing and construction projects in the scope of electrical networks, telecommunication networks

#### **Specific professional experience**

- At least 5 years' experience in supervision of works conducted in conformity with the requirements of the National Construction Authority
- Experience in supervising and coordinating all technical aspects of supervision contracts;
  - Experience in organizing and overseeing on site activities
  - Registered with EBK with a valid practising certificate

### iv. **Electrical engineer expert**

#### **Qualifications and skills**

- University degree in electrical supply and equipment engineer at a recognized University
- Fluency of English
- Computer skills – MS Office
- Registered with the relevant professional body with a valid practising certificate

#### **General professional experience**

- At least 10 years of experience in the electrical engineering, including:
- design and service of transformers and electrical supply installations
- Specific professional experience
- At least 5 years in consultancy and building supervision in designing and construction projects public services, office buildings, industrial buildings, electrical networks, telecommunication networks, local exchanges, etc.

#### **v. Quantity Surveyor**

- Must have at least Diploma in Civil Engineering.
- Must have at least 5 years of experience in Quantity Survey.
- Must be fluent in spoken & written English.
- Registered with the relevant professional body with a valid practising certificate

#### ***3.4. Services and Facilities for the Consultant:***

The Consultant would be provided the copy of draft designs for the purpose of preparation of lay out plans, designs and drawings. For the purpose of detail design and layout, the Consultant will have to carry out detail survey of the site on its own and shall take full responsibility for accuracy of the data collected.

#### ***3.5. Reports and Documents:***

The selected Consultancy Firm shall be required to submit and present the followings reports for Client's review and approval:

- ❖ Inception Report, at the end of second week from the date of commencement of the services, and the followings:
  - i. Preliminary Master Plan
  - ii. Soil investigation data and report of the site

- ❖ Interim Report, at the end of Fourth week from the date of commencement of the services:
  - i. Master plan with complete site development works
  - ii. Architectural drawings with complete details
  - iii. Plant Drawings and schematics
  
- ❖ Draft Final Report, at the end of sixth week from the date of commencement of the services:
  - i. Master plan with complete site development works
  - ii. Architectural drawings with complete details
  - iii. Plant drawings with complete details
  - iv. Plumbing drawings
  - v. Drainage and sanitation drawings
  - vi. Electrical drawings
  - vii. Telephone and LAN line layout drawings
  - viii. Structural drawings with complete details
  - ix. Structural analysis and design calculations
  
- ❖ Final Report, at the end of last quarter from the date of commencement of the services are the followings:
  - i. Specification of the works
  - ii. Details of measurement and abstract of estimated cost and BOQ
  - iii. Tender documents
  - iv. Building permit and design approvals from concerned authority
  
- ❖ The final report shall also consist of the following documents:
  - i. A Compact Disc containing the plot files as well as the drawing (.dwg) files.
  - ii. Three sets of BoQ & Materials/Technical specifications printed and bound and also in CD.
  - iii. Three sets of detail design drawings printed on A3 size paper for the purpose of tendering.
  - iv. Three sets of detailed plant drawings printed on A3 size paper for the purpose of tendering.
  - v. Cost estimate and rate analysis for all items of work- one hard copy (properly sealed) and soft copy in a Compact disc in editable format.
  - vi. Two copies of detail structural analysis and design of the buildings for the reference of Departmental engineers.
  - vii. Post Approval Process: The consultancy should facilitate the approval of all the drawings. After obtaining the approved drawing, the Estimate shall be revisited for any changes on the structure marked by the drawing approving agency.

### 3. TERMS & CONDITIONS

- i. The consultant should be willing to work within the target areas for this assignment including but not limited to ChildFund Kenya catchment area and its Environs;
- ii. The consultant may have his/her own team to work with where in that case such a team will entirely be under the jurisdiction of the consultant and at no time will ChildFund Kenya be held responsible for them; and
- iii. All documents and data produced during the contract period will be sole property of ChildFund Kenya and the consultant will not be authorised to use the information, in any forum.
- iv. All taxes should be included in the financial proposal.

### 4. EXPRESSION OF INTEREST

Qualified consultants are invited to submit expression of interest through a capability statement, financial proposal and CVs of the technical team as follows:

- i. Technical proposal that summarizes the understanding of the assignment; specifically proposed Milk collection Centres technical design, and cost and maintenance requirements and;
- ii. Financial proposal providing cost of carrying out the consultancy services.

Bids clearly labelled 'Bids detailed Design for Milk Collection Centres' should be submitted in sealed envelope to Emali Dedicated Children's Agency in Emali office or ChildFund Kenya National Office during working hours not later than **5<sup>th</sup> Novemebr 2018**. Please note that the organization reserves the right not to award the lowest bidder and organization decision will be final.

Appendix 1: Proposed layout of the MCC

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