



**Kenya Marine Fisheries Socioeconomic  
Development Project (KEMFSED)  
P.O. Box 58187-00200  
NAIROBI**



**MINISTRY OF MINING, BLUE ECONOMY AND MARITIME  
AFFAIRS**

**Request for Bids**

**CONSTRUCTION OF LAMU FISHERIES OFFICE**

**Employer:** State Department for Blue Economy & Fisheries  
**Project:** Kenya Marine Fisheries Socio-Economic  
Development Project (KEMFSED)  
**Contract Title:** **CONSTRUCTION OF LAMU FISHERIES  
OFFICE**  
**Country:** Republic of Kenya  
**Loan No./Credit No/Grant No.:** 6540-KE  
**RFBNo.:** KE-MOMBE&MA-LM-2024-011-CW  
**Issued on:** **13<sup>TH</sup> FEBRUARY 2024**

**VOLUME 2 OF 4**

**BILLS OF QUANTITIES**

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## **A. PREAMBLE**

1. The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, General and Particular Conditions, Technical Specifications, and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices bid in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
3. The rates and prices bid in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the Contract, include all Constructional Plant, labour, supervision, materials, erection, maintenance, insurance, profit, taxes, and duties, together with all general risks, liabilities, and obligations set out or implied in the Contract.
4. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
5. The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the priced Bill of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
6. General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering prices against each item in the priced Bill of Quantities.
7. Provisional Sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance with Sub-Clauses 13.4 and 13.5 of the General Conditions except with respect to DAAB Fees and Expenses for which no instruction will be required from the Engineer.
8. The method of measurement of completed work for payment shall be Admeasurement in accordance with ICE Conditions of Contract measurement clauses.<sup>1</sup>

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<sup>1</sup> The method of measurement should be spelled out precisely in the Preamble to the Bill of Quantities, describing for example the allowances (if any) for timbering in excavation, etc. Many national standard reference guides have been prepared on the subject, and one such guide is the Standard Method of Measurement of the U.K. Institution of Civil Engineers.

## **B. WORK ITEMS**

1. The Bill of Quantities contains the following part Bills, which have been grouped according to the nature or timing of the work:
  1. **BILL NO. 1: PARTICULAR PRELIMINARIES**
  2. **BILL NO. 2 : GENERAL PRELIMINARIES**
  3. **BILL NO. 3: ENVIRONMENTAL SOCIAL MANAGEMENT PLAN**
  4. **BILL NO. 4 : OFFICE BUILDING**
  5. **BILL NO. 5 : FOUL WATER DRAINAGE**
  6. **BILL NO. 6: DRIVEWAY AND PARKING**
  7. **BILL NO. 7: LANDSCAPING**
  8. **BILL NO. 8: MECHANICAL WORKS**
  9. **BILL NO. 9: ELECTRICAL WORKS**
  10. **BILL NO. 10: DAYWORKS**
  11. **BILL NO. 11: PROVISIONAL SUMS**
2. Bidders shall price the Bill of Quantities in local currency only and shall indicate in the Appendix to Bid the percentage expected for payment in foreign currency or currencies.

## **DAYWORK SCHEDULE**

### **General**

1. Reference should be made to Sub-Clause 13.5 of the General Conditions. Work shall not be executed on a daywork basis except by written order of the Engineer. Bidders shall enter basic rates for daywork items in the Schedules, which rates shall apply to any quantity of daywork ordered by the Engineer. Nominal quantities have been indicated against each item of daywork, and the extended total for Daywork shall be carried forward as a Provisional Sum to the Summary Total Bid Amount. Unless otherwise adjusted, payments for daywork shall be subject to price adjustment in accordance with the provisions in the Conditions of Contract.

### **Daywork Labour**

2. In calculating payments due to the Contractor for the execution of daywork, the hours for labour will be reckoned from the time of arrival of the labour at the job site to execute the particular item of daywork to the time of return to the original place of departure, but excluding meal breaks and rest periods. Only the time of classes of labour directly doing work ordered by the Engineer and for which they are competent to perform will be measured. The time of gangers (charge hands) actually doing work with the gangs will also be measured but not the time of foremen or other supervisory personnel.
3. The Contractor shall be entitled to payment in respect of the total time that labour is employed on daywork, calculated at the basic rates entered by the Contractor in the Schedule of Daywork Rates:
  1. Labour, together with an additional percentage payment on basic rates representing the Contractor's profit, overheads, etc., as described below:
    - a) The basic rates for labour shall cover all direct costs to the Contractor, including (but not limited to) the amount of wages paid to such labour, transportation time, overtime, subsistence allowances, and any sums paid to or on behalf of such labour for social benefits in accordance with [country of Borrower]Kenya law. The basic rates will be payable in local currency only.
    - b) The additional percentage payment to be quoted by the bidder and applied to costs incurred under (a) above shall be deemed to cover the Contractor's profit, overheads, superintendence, liabilities, and insurances and allowances to labour, timekeeping, and clerical and office work, the use of consumable stores, water, lighting, and power; the use and repair of stagings, scaffolding, workshops, and stores, portable power tools, manual plant, and tools; supervision by the Contractor's staff, foremen, and other supervisory personnel; and charges incidental to the foregoing. Payments under this item shall be made in local currency.

## **Daywork Materials**

4. The Contractor shall be entitled to payment in respect of materials used for daywork (except for materials for which the cost is included in the percentage addition to labour costs as detailed heretofore), at the basic rates entered by the Contractor in the Schedule of Daywork Rates: 2. Materials, together with an additional percentage payment on the basic rates to cover overhead charges and profit, as follows:
  - a) the basic rates for materials shall be calculated on the basis of the invoiced price, freight, insurance, handling expenses, damage, losses, etc., and shall provide for delivery to store for stockpiling at the Site. The basic rates shall be stated in local currency, but payment will be made in the currency or currencies expended upon presentation of supporting documentation.
  - b) the additional percentage payment shall be quoted by the bidder and applied to the equivalent local currency payments made under (a) above. Payments under this item will be made in local currency.
  - c) the cost of hauling materials for use on work ordered to be carried out as daywork from the store or stockpile on the Site to the place where it is to be used will be paid in accordance with the terms for Labour and Construction in this schedule.

## **Daywork Contractor's Equipment**

5. The Contractor shall be entitled to payments in respect of Contractor's Equipment already on Site and employed on daywork at the basic rental rates entered by the Contractor in the Schedule of Daywork Rates: **3. Contractor's Equipment.** Said rates shall be deemed to include due and complete allowance for depreciation, interest, indemnity, and insurance, repairs, maintenance, supplies, fuel, lubricants, and other consumables, the cost of drivers, operators, and assistants and all overhead, profit, and administrative costs related to the use of such equipment.
6. In calculating the payment due to the Contractor for Contractor's Equipment employed on daywork, only the actual number of working hours will be eligible for payment, except that where applicable and agreed with the Engineer, the travelling time from the part of the Site where the Contractor's Equipment was located when ordered by the Engineer to be employed on daywork and the time for return journey thereto shall be included for payment.
7. The basic rental rates for Contractor's Equipment employed on daywork shall be stated in local currency, but payments to the Contractor will be made in local currency.

**PARTICULAR PRELIMINARIES**

**BILL NO.1**

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (K.SHS)
	<b><u>PARTICULAR PRELIMINARIES</u></b>	
<b>A</b>	<b>EMPLOYER</b> The Employer is <b>Ministry of Mining, Blue Economy and Maritime Affairs P.O Box 30009-00100 Nairobi, Kenya</b>  The term "Employer" and "Ministry of Mining, Blue Economy and Maritime Affairs" wherever used in the contract document shall be synonymous.	
<b>B</b>	<b>PROJECT MANAGER</b> The term "PM" wherever used in these Bills of Quantities shall be deemed to imply the ENGINEER as defined in the Conditions of Contract or such person or persons as may be duly authorised to represent him/her on behalf of the employer.	
<b>C</b>	<b>ARCHITECT</b> The term "Architect" shall be deemed to mean "The ARCHITECT" as defined above whose address unless otherwise notified is Project Engineer	
<b>D</b>	<b>QUANTITY SURVEYOR</b> The term "Quantity Surveyor" shall be deemed to mean "The Quantity Surveyor" as defined above whose address unless otherwise notified is Project Engineer	
<b>E</b>	<b>ELECTRICAL ENGINEER</b>  The term "Electrical Engineer" shall be deemed to mean "The Electrical Engineer" as defined above whose address unless otherwise notified is Project Engineer	
<b>F</b>	<b>MECHANICAL ENGINEER</b>  The term "Mechanical Engineer" shall be deemed to mean "The Mechanical Engineer" as defined above whose address unless otherwise notified is Project Engineer	
<b>G</b>	<b>CIVIL/ STRUCTURAL ENGINEER</b>  The term "Structural Engineer" shall be deemed to mean "The Structural Engineer" as defined above whose address unless otherwise notified is Project Engineer	
<b>F</b>	<b>PROJECT ENGINEER (PE) (Member of NPCU, State Department of Fisheries)</b>  The term "Project Engineer" shall be deemed to mean "The ENGINEER " as defined above whose address unless otherwise notified is National Project Coordination Unit (NPCU), State Department of Fisheries. P.O. Box 58187-00200 NAIROBI	
	<i>Carried to collection</i>	



**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (K.SHS)
<b>A</b>	<b>LOCATION OF SITE</b>  The site of the proposed works is in Mukowe, Lamu County. The Contractor is advised to visit the site, to familiarize with the nature and position of the site. No claims arising from the Contractor's failure to do so will be entertained.	
<b>B</b>	<b>DESCRIPTION OF THE WORKS</b>  The works to be carried out under this contract is the construction of Fisheries Office in Mukowe, Lamu County. The project consists of the following: 1. Excavation & Earthworks including fillings 2. Waterproofing. 3. Concrete works 4. Reinforcement 5. Formwork. 6. Walling. 7. Roofing. 8. Doors 9. Windows 10. Fittings. 11. Finishes. 12. Electrical works. 13. Mechanical works	
<b>C</b>	<b>FORM OF CONTRACT</b>  The Form of Contract shall be as stipulated in the World Bank's Standard Procurement Document for Small Works(March 2021 Edition) included herein	
<b>D</b>	<b>BID BOND</b>  A bid bond shall be required in the amount stated in the invitation to tender or advertisement. Bid bond shall be from a bank.	
<b>F</b>	<b>CLEARING AWAY</b>  The Contractor shall remove all temporary works, rubbish, debris and surplus materials from the site as they accumulate and upon completion of the works, remove and clear away all plant, equipment, rubbish, unused materials and stains and leave in a clean and tidy state to the reasonable satisfaction of the Engineer.  The whole of the works shall be delivered up clean, complete and in perfect condition in every respect to the satisfaction of the ENGINEER.	
	<i>Carried to collection</i>	

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (K.SHS)
<b>A</b>	<p><b>WORKING CONDITIONS</b></p> <p>The Contractor shall allow in his rates for any interference that he may encounter in the course of the works for the Client may in some cases ask the Contractor not to proceed with the works until some activities within the site are completed, as the facility will be operating as usual during the course of the contract. The contractor must allow for compliance with all County &amp; Statutory Authorities' laws &amp; regulations.</p>	
<b>B</b>	<p><b>CLAIMS</b></p> <p>It shall be a condition of this contract that upon it becoming reasonably apparent to the Contractor that he has incurred losses and / or expenses due to any of the contract conditions, or by any other reason whatsoever, he shall present such a claim or intent to claim notice to the ENGINEER within the contract period. No claim shall be entertained upon the expiry of the said contract period.</p>	
<b>C</b>	<p><b>LABOUR CAMPS</b></p> <p>The Contractor shall not be allowed to house labour on site. Allow for transporting workers to and from the site during the tenure of the contract.</p>	
<b>D</b>	<p><b>PRICING RATES</b></p> <p>The tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. <b>Items for which no rate or price is entered by the tenderer will not be paid for when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities.</b> The tenderer shall include for all costs in executing the whole of the works, including transport, replacing damaged items, fixing, all to comply with the said Conditions of Contract.</p> <p>Prices quoted should be net inclusive of all taxes, must be in Kenya shillings</p> <p>Prices shall remain valid for One Hundred and twenty (120) days from the closing date of tender.</p> <p>The rates and prices quoted by the tenderer shall only be subject to adjustment during the performance of the Contract if provided for in the Appendix to Conditions of Contract and provisions made in the Conditions of Contract.</p>	
<b>E</b>	<p><b>MATERIALS FROM DEMOLITIONS</b></p> <p>Any materials arising from demolitions SHALL NOT BE re-used shall become the property of the client unless otherwise advised.</p>	
<b>F</b>	<p><b>URGENCY OF THE WORKS</b></p> <p>The Contractor is notified that these “<b>works are urgent</b>” and should be completed within the period stated in these Particular Preliminaries.</p> <p>The Contractor shall allow in his rates for any costs he/ she deems that he/she may incur by having to complete these works within the stipulated contract period.</p>	
	<i>Carried to collection</i>	

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (K.SHS)
<b>A</b>	<p><b>PAYMENTS GENERALLY</b></p> <p>The tenderer's attention is drawn to the fact that the CLIENT WILL NOT MAKE ADVANCE PAYMENTS but pays for work done and materials delivered to sit: all in accordance with the Conditions of Contract Agreement. In order to facilitate this, a list of the general component elements for the works is given at the summary page of these specifications and the tenderer is requested to break down his tender sum commensurate to the said elements. The contractor is advised to deliver &amp; concur on his claim for payment with the ENGINEER before the following site visit to enable approval of the same by the Acceptance &amp; Approval Committee. The claim shall be prepared in the same format as these bills clearly showing quantities &amp; rates (both work &amp; materials). Both the ENGINEER &amp; contractor should be able to locate &amp; identify the items claimed from the main bill.</p>	
<b>B</b>	<p><b>PAYMENT FOR MATERIALS ON SITE</b></p> <p>All materials for incorporation in the works must be stored on site before payment is effected, unless specifically exempted by the ENGINEER. This is to include materials of the Contractor, nominated sub-Contractors and nominated suppliers.</p>	
<b>C</b>	<p><b>ADVANCE PAYMENTS</b></p> <p>The tenderer's attention is drawn to the fact that the Client does not make any advance payments</p>	
<b>D</b>	<p><b>EXISTING SERVICES</b></p> <p>Prior to the commencement of any work, the Contractor is to ascertain from the relevant authority the exact position, depth and level of all existing services in the area and he/she shall make whatever provisions may be required by the authorities concerned for the support, maintenance and protection of such services.</p>	
<b>E</b>	<p><b>TENDER DOCUMENTS</b></p> <p>Tender documents are as listed in Clause 2.1 of the Instruction to Tenderer's Page 8</p>	
<b>F</b>	<p><b>DELIVERY OF TENDER</b></p> <p>Tenders and all documents in connection therewith, as specified above must be delivered in the addressed envelope which should be properly sealed and deposited at the offices as specified in the letter accompanying these documents or as indicated in the advertisement. Tenders will be opened at the time specified in the letter accompanying these Tender Documents or as indicated in the advertisement. Tenders delivered/received later than the above time will not be opened.</p>	
<b>G</b>	<p><b>SIGNING OF THE TENDER DOCUMENTS</b></p> <p>The bidder shall append his / her signature and / or company's rubberstamp on each and every page of tender document.</p>	
	<i>Carried to collection</i>	

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (K.SHS)
<b>A</b>	<b>MEASUREMENTS</b> In the event of any discrepancies arising between the Bills of Quantities and the actual works, the site measurements shall generally take precedence. However, such discrepancies between any contract documents shall immediately be referred to the ENGINEER in accordance with Clause 22 of the Conditions of Contract. The discrepancies shall then be treated as a variation and be dealt with in accordance with Clause 22 of the said Conditions.	
<b>B</b>	<b>VALUE ADDED TAX</b> The Contractor's attention is drawn to the Legal Notice in the Finance Act part 3 Section 21(b) operative from 1 <sup>st</sup> September, 1993 which requires payment of VAT on all contracts. The Contractor should therefore include allowance in his rates and prices for prices for VAT and any other Government taxes currently in force.  <b>NB:</b> The Contractor should therefore include the tax within the rates.	
<b>E</b>	<b>CONTRACT COMPLETION PERIOD</b> The contract completion period in accordance with conditions of the Conditions of contract must be adhered to.  The 'ENGINEER' shall strictly monitor the Contractors progress in relation to the progress chart and should it be found necessary the 'ENGINEER' shall inform the Contractor in writing that his actual performance on site is not satisfactory. In all such cases the Contractor shall accelerate his rate of performance production and progress by all means such as additional labour, plant, e.t.c and working overtime all at his cost.	
	<i>Carried to collection</i>	

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (K.SHS)
A	<p><b><u>PARTICULARS OF INSERTIONS TO BE MADE IN APPENDIX TO CONTRACT AGREEMENT</u></b></p> <p>The following are the insertions to be made in the appendix to the Contract Agreement: -</p> <p><b>Period of Final Measurement - 3 Months From Practical completion</b></p> <p><b>Defects Liability Period - 6 Months from Practical completion</b></p> <p><b>Date for Possession - To be agreed with the ENGINEER</b></p> <p><b>Date for Completion - 12 Months from date of Possession</b></p> <p><b>Liquidated and Ascertained - 0.04 % of the Accepted Contract Amount, less provisional sum</b></p> <p><b>Period of Interim Certificates - Monthly</b></p> <p><b>Period of Honouring Certificates - 56 days</b></p> <p><b>Percentage of Certified Value Retained - 10%</b></p> <p><b>Limit of Retention Fund - 5%</b></p>	
	<i>Carried to collection</i>	

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (K.SHS)
	<p><b><u>COLLECTION</u></b></p> <p>Brought forward from page PP/1</p> <p>Brought forward from page PP/2</p> <p>Brought forward from page PP/3</p> <p>Brought forward from page PP/4</p> <p>Brought forward from page PP/5</p> <p>Brought forward from page PP/6</p>	
	TOTAL FOR PARTICULAR PRELIMINARIES CARRIED TO GRAND SUMMARY	

**GENERAL PRELIMINARIES**

**BILL NO.2**

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (KSHS)
	<b><u>GENERAL PRELIMINARIES</u></b>	
<b>A</b>	<p><b>PRICING OF ITEMS OF PRELIMINARIES AND PREAMBLES</b></p> <p>Prices will be inserted against items of Preliminaries in the Contractor's priced Bills of Quantities and Specification.</p> <p>The Contractor shall be deemed to have included in his prices or rates for the various items in the Bills of Quantities or Specification for all costs involved in complying with all the requirements for the proper execution of the whole of the works in the Contract.</p> <p>Failure to price an item shall not exempt the contractor from carrying out works described therein. Should the contractor fail to carry out works which he/she did not price and after having received a written instruction from the ENGINEER, then the value of such works shall be deducted from the very immediate certificate issued to the contractor.</p> <p><b>MoPW current rates, JBC, IQSK, manufacturers or fair rates shall be used by the ENGINEER in valuation of unpriced items which the contractor shall fail to execute.</b></p> <p>The contractor is advised to read and understand all preliminary items.</p> <p>The Contractor is advised to visit the site, to familiarize with the nature and position of the site. No claims arising from the Contractor's failure to do so will be entertained.</p>	
<b>B</b>	<p><b>VISIT SITE AND EXAMINE DRAWINGS</b></p> <p>The Contractor is recommended to examine the drawings and visit the site the location of which is described in the Particular Preliminaries hereof. He shall be deemed to have acquainted himself therewith as to its nature, position, means of access or any other matter which, may affect his tender. No claim arising from his failure to comply with this recommendation will be considered.</p>	
<b>C</b>	<p><b>SUFFICIENCY OF TENDER</b></p> <p>The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of this tender for the works and of the rates and prices stated in the Priced Bills of Quantities, which rates and prices shall cover all his obligations under the Contract and all matters that are necessary for the proper completion and maintenance of the works.</p>	
	<i>Carried to collection</i>	



**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (KSHS)
<b>A</b>	<p><b>BONDS</b></p> <p>The Contractor shall find and submit with the Form of Tender a guarantor and who will be willing to be bound the Government in the amount of the bond. The amount of the bond is SPECIFIED IN THE PARTICULAR PRELIMINARIES The guarantor shall be an approved institution as specified in the particular preliminaries or invitation to tender and who will when and if called upon, sign a Bond to that effect on the relevant standard form included herein. (without the addition of any limitations) on the same day as the Contract Agreement is signed, by the Government, the Contractor shall furnish within seven days another Surety to the approval of the Government.</p>	
<b>B</b>	<p><b>PERFORMANCE BOND</b></p> <p>10% bond shall be required from the specified institution.</p> <p>The period for supplying the bond shall be 14 days.</p> <p>No contract shall be signed, NOR shall any payment be made before the bidder has complied with the bond requirements</p> <p>Failure to deliver the bond within the specified period shall automatically disqualify the bidder and the tender shall be awarded to next most responsive bidder without reference to the defaulting bidder.</p> <p>Should the bidder commence works and subsequently fail to provide the bond, he shall be evicted from site without any reimbursement notwithstanding the site having been handed over by the PM and client. The handing over only kick-starts the process and is not a waiver to bond conditions. The bond for the due performances of the Contract shall be valid up to the date of completion as certified by the PROJECT ENGINEER.</p> <p>Any bond which provides otherwise or attempts to vary the duration of validity shall be invalid.</p> <p>The bond shall comply in all respects with the PPOA copy enclosed in the instructions to tender. A bond that does not match the PPOA copy shall be</p>	
<b>C</b>	<p><b>EXCEPTION TO THE STANDARD METHOD OF MEASUREMENT</b></p> <p><b>Attendance ;</b> Clause B19(a) of the Standard Method of Measurement is deleted and the following clause is substituted:-</p> <p>Attendance on nominated Sub-Contractors shall be given as an item in each case shall be deemed to include: allowing use of standing scaffolding, mess rooms, sanitary accommodation and welfare facilities; provision of special scaffolding where necessary; providing space for office accommodation and for storage of plant and materials; providing light and water for their work: clearing away rubbish; unloading checking and hoisting: providing electric power and removing and replacing duct covers, pipe casings and the like necessary for the execution and testing of Sub- Contractors' work and being responsible for the accuracy of the same.</p> <p><b>Fix Only:-</b></p> <p>"Fix Only" shall mean take delivery at nearest railway station (Unless otherwise stated), pay all demurrage charges, load and transport to site where necessary, unload, store, unpack, assemble as necessary, distribute to position, hoist and fix only.</p>	
	<i>Carried to collection</i>	

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (KSHS)
<b>A</b>	<p><b>ABBREVIATIONS</b></p> <p>Throughout these Bills, units of measurement and terms are abbreviated and shall be interpreted as follows:-</p> <p><b>C.M.</b> Shall mean cubic metre</p> <p><b>S.M.</b> Shall mean square metre</p> <p><b>L.M.</b> Shall mean linear metre</p> <p><b>MM</b> Shall mean Millimetre</p> <p><b>Kg.</b> Shall mean Kilogramme</p> <p><b>No.</b> Shall mean Number</p> <p><b>Prs.</b> Shall mean Pairs</p> <p><b>B.S.</b> Shall mean the British Standard Specification Published by the British Standards Institution, 2 Park Street, London W.I., England.</p> <p><b>"K.S"</b> Shall mean the current Kenya Standard specification published by the Kenya Bureau of Standards, P.O. Box 54974, NAIROBI, Kenya.</p> <p><b>Ditto</b> Shall mean the whole of the preceding description except as qualified in the description in which it occurs.</p> <p><b>m.s.</b> Shall mean measured separately.</p> <p><b>a.b.d</b> Shall mean as before described.</p> <p><b>"Approved"</b> <i>Shall mean approved by the PROJECT ENGINEER and the Employer in writing.</i></p> <p><b>"As directed"</b> <i>Shall mean as directed by the PROJECT ENGINEER and the Employer in writing.</i></p> <p><b>"Demolish"</b> Shall be deemed to mean cutting away, breaking up, demolishing, pulling down, taking down, removing, etc., as the context requires and shall include in all cases temporarily strutting and supporting and making good remaining work as necessary, and clearing away and removing from Site all debris, etc.</p> <p><b>"Remove"</b> Shall mean taking down, hacking up, breaking down, removing etc., and clearing away from Site and all other expenses thereby entailed.</p> <p><b>"Make good"</b> Shall be deemed to mean all making good, fitting, facing up, plastering, paving, repairing and painting to match and jointing to remaining existing work.</p> <p><b>To "match"</b> Shall mean to be equal to relevant existing work in design, workmanship and all other respects.</p> <p><b>"Re-fix"</b> Shall apply to existing materials arising from the Works and shall mean take from store and fix in new position, including making good, repairing and adjusting as necessary.</p>	
	<i>Carried to collection</i>	

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (KSHS)
<b>A</b>	<p><b>PLANT, TOOLS AND VEHICLES</b></p> <p>Allow for providing all scaffolding, plant, tools and vehicles required for the works except in so far as may be stated otherwise herein and except for such items specifically and only required for the use of nominated Sub-Contractors as described herein. No timber used for scaffolding, formwork or temporary works of any kind shall be used afterwards in the permanent work.</p>	
<b>B</b>	<p><b>TRANSPORT.</b></p> <p>Allow for transport of workmen, materials, etc., to and from the site at such hours and by such routes as may be permitted by the competent authorities.</p>	
<b>C</b>	<p><b>MATERIALS AND WORKMANSHIP.</b></p> <p>All materials and workmanship used in the execution of the work shall be of the best quality and description unless otherwise stated. The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that they are onsite when required for use in the works. The Bills of Quantities shall not be used for the purpose of ordering materials.</p>	
<b>D</b>	<p><b>SIGN FOR MATERIALS SUPPLIED.</b></p> <p>The Contractor will be required to sign a receipt for all articles and materials supplied by the PROJECT ENGINEER at the time of taking deliver thereof, as having received them in good order and condition, and will thereafter be responsible for any loss or damage and for replacements of any such loss or damage with articles and/or materials which will be supplied by the PROJECT ENGINEER at the current market prices including Customs Duty and V.A.T., all at the Contractor's own cost and expense, to the satisfaction of the PROJECT ENGINEER</p>	
<b>E</b>	<p><b>STORAGE OF MATERIALS</b></p> <p>The Contractor shall provide at his own risk and cost where directed on the site weather proof lock-up sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the PROJECT ENGINEER Nominated Sub-Contractors are to be made liable for the cost of any storage accommodation provided especially for their use.</p>	
<b>F</b>	<p><b>ORDERING OF MATERIALS</b></p> <p>The Contractor must assist in alleviating the effects or possible shortages of materials by advance ordering of materials in order to maintain a continuous supply. Early delivery of materials will be permitted and included in interim certificates and upon request by the PROJECT ENGINEER, the Contractor will be required to produce copies of order forms and invoices to establish that materials have been ordered in sufficient time and to check on material deliveries.</p>	
	<i>Carried to collection</i>	

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (KSHS)
<p align="center"><b>A</b></p>	<p><b>SAMPLES</b></p> <p>The Contractor shall furnish at his own cost any samples of materials or workmanship required for the works that may be called for by the PROJECT ENGINEER for his approval until such samples are approved by the PROJECT ENGINEER and the PROJECT ENGINEER, may reject any materials or workmanship not in his opinion to be up to approved samples. The PROJECT ENGINEER shall arrange for the testing of such materials as he may at his discretion deem desirable, but the testing shall be made at the expense of the Contractor and not at the expense of the PROJECT ENGINEER. The Contractor shall pay for the testing in accordance with the current scale of testing charges laid down by the Ministry of Public Works.</p> <p>The procedure for submitting samples of materials for testing and the method of marking for identification shall be as laid down by the PROJECT ENGINEER. The Contractor shall allow in his tender for such samples and tests except those in connection with nominated sub-contractors' work.</p> <p>Samples of paint, carpets, curtains &amp; covers, tiles &amp; timber shall be required for approval by the PM together with the employer.</p> <p>No alternate rate shall be offered on account that the employer has chosen a superior finish unless the bidder had attached the sample he priced.</p>	
<p align="center"><b>B</b></p>	<p><b>PUBLIC AND PRIVATE ROADS.</b></p> <p>Maintain as required throughout the execution of the works and make good any damage to public or private roads arising from or consequent upon the execution of the works to the satisfaction of the local and other competent authority and the PROJECT ENGINEER.</p>	
<p align="center"><b>C</b></p>	<p><b>EXISTING PROPERTY.</b></p> <p>The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains and other services and he will be held responsible for and shall make good all such damage arising from the execution of this contract at his own expense to the satisfaction of the PROJECT ENGINEER.</p>	
<p align="center"><b>D</b></p>	<p><b>ACCESS TO SITE AND TEMPORARY ROADS.</b></p> <p>Means of access to the Site shall be agreed with the PROJECT ENGINEER prior to commencement of the work and Contractor must allow for building any necessary temporary access roads for the transport of the materials, plant and workmen as may be required for the complete execution of the works including the provision of temporary culverts, crossings, bridges, or any other means of gaining access to the Site. Upon completion of the works, the Contractor shall remove such temporary access roads; temporary culverts, bridges, etc., and make good and reinstate all works and surfaces disturbed to the satisfaction of the PROJECT ENGINEER.</p>	
	<p align="center"><i>Carried to collection</i></p>	

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (KSHS)
<b>A</b>	<p><b>AREA TO BE OCCUPIED BY THE CONTRACTOR</b></p> <p>The area of the site which may be occupied by the Contractor for use of storage and for the purpose of erecting workshops, etc., shall be defined on site by the PROJECT ENGINEER.</p>	
<b>B</b>	<p><b>SECURITY OF WORKS ETC.</b></p> <p>The Contractor shall be entirely responsible for the security of all the works stores, materials, plant, personnel, etc., both his own and sub-contractors' and must provide all necessary watching, lighting and other precautions as necessary to ensure security against theft, loss or damage and the protection of the public.</p>	
<b>C</b>	<p><b>PROGRESS CHART.</b></p> <p>The Contractor shall provide within two weeks of Possession of Site and in agreement with the PROJECT ENGINEER a Progress Chart for the whole of the works including the works of Nominated Sub-Contractors ; one copy to be handed to the PROJECT ENGINEER and a further copy to be retained on Site. Progress to be recorded and chart to be amended as necessary as the work proceeds.</p>	
<b>D</b>	<p><b>INSURANCE</b></p> <p>The Contractor shall insure as required in Conditions No 30 of the Conditions of Contract. No payment on account of the work executed will be made to the Contractor until he has satisfied the PROJECT ENGINEER either by production of an Insurance Policy or and Insurance Certificate that the provision of the foregoing Insurance Clauses have been complied with in all respects. Thereafter the PROJECT ENGINEER shall from time to time ascertain that premiums are duly paid up by the Contractor who shall if called upon to do so, produce the receipted premium renewals for the PROJECT ENGINEER's inspection.</p>	
<b>E</b>	<p><b>CONTRACTOR'S SUPERINTENDENCE/SITE AGENT</b></p> <p>The Contractor shall constantly keep on the works a literate English speaking Agent or Representative, competent and experienced in the kind of work involved who shall give his whole experience in the kind of work involved and shall give his whole time to the superintendence of the works. Such Agent or Representative shall receive on behalf of the Contractor all directions and instructions from the PROJECT ENGINEER and such directions shall be deemed to have been given to the Contractor in accordance with the Conditions of Contract.</p>	
	<i>Carried to collection</i>	

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (KSHS)
<p align="center"><b>A</b></p>	<p><b>PROVISIONAL WORK</b></p> <p>All work described as "Provisional" in these Bills of Quantities is subject to remeasurement in order to ascertain the actual quantity executed for which payment will be made. All "Provisional" and other work liable to adjustment under this Contract shall left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the PROJECT ENGINEER. Immediately the work is ready for measuring, the Contractor shall give notice to the PROJECT ENGINEER. If the Contractor makes default in these respects he shall if the PROJECT ENGINEER so directs uncover the work to enable all measurements to be taken and afterwards reinstate at his own expense.</p>	
<p align="center"><b>B</b></p>	<p><b>PROVISIONAL SUMS.</b></p> <p>The term "Provisional Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7(i) of the Standard Method of Measurement. Such sums are net and no addition shall be made to them for profit.</p>	
<p align="center"><b>C</b></p>	<p><b>ADJUSTMENT OF PROVISIONAL SUMS.</b></p> <p>In the final account all Provisional Sums shall be deducted and the value of the work properly executed in respect of them upon the PROJECT ENGINEER's order added to the Contract Sum. Such work shall be valued , but should any part of the work be executed by a Nominated Sub-Contractor, the value of such work or articles for the work to be supplied by a Nominated Supplier, the value of such work or articles shall be treated as a P.C. Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.</p>	
<p align="center"><b>D</b></p>	<p><b>PRIME COST (OR P.C.) SUMS.</b></p> <p>The term "Prime Cost sum" or "P.C. sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7 (ii) of the Standard Method of Measurement . Persons or firms nominated by the PROJECT ENGINEER to execute work or to provide and fix materials or goods are described herein as Nominated Sub Contractors. Persons or firms so nominated to supply goods or materials are described herein as Nominated Suppliers.</p>	
	<p align="center"><i>Carried to collection</i></p>	

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (KSHS)
<p><b>A</b></p>	<p><b>ADJUSTMENT OF P.C. SUMS.</b></p> <p>In the final account all P.C. Sums shall be deducted and the amount properly expended upon the PROJECT ENGINEER'S order in respect of each of them added to the Contract sum. The Contractor shall produce to the PROJECT ENGINEER such quotations, invoices or bills, properly receipted, as may be necessary to show the actual details of the sums paid by the Contractor. Items of profit upon P.C. Sums shall be adjusted in the final account pro-rata to the amount paid. Items of "attendance" (as previously described) following P.C. Sums shall be adjusted pro-rata to the physical extent of the work executed (not pro-rata to the amount paid) and this shall apply even though the Contractor's priced Bill shows a percentage in the rate column in respect of them. Should the Contractor be permitted to tender and his tender be accepted of any work for which a P.C. Sum is included in these Bill of Quantities profit and attendance will be allowed at the same rate as it would be if the work were executed by a Nominated Sub-Contractor.</p>	
<p><b>B</b></p>	<p><b>NOMINATED SUB-CONTRACTORS</b></p> <p>When any work is ordered by the PROJECT ENGINEER to be executed by nominated sub-contractors, the Contractor shall enter into sub-contracts and shall thereafter be responsible for such sub-contractors in every respect. Unless otherwise described the Contractor is to provide for such Sub-Contractors any or all of the facilities described in these Preliminaries. The Contractor should price for these with the nominated Sub contract Contractor's work concerned in the P.C. Sums under the description "add for Attendance".</p>	
<p><b>C.</b></p>	<p><b>DIRECT CONTRACTS</b></p> <p>Notwithstanding the foregoing conditions, the Client reserves the right to place a "Direct Contract" for any goods or services required in the works which are covered by a P.C. Sum in the Bills of Quantities and to pay for the same direct. In any such instances, profit relative to the P.C. Sum the priced Bills of Quantities will be adjusted as described for P.C. Sums and allowed.</p>	
<p><b>D</b></p>	<p><b>ATTENDANCE UPON OTHER TRADESMEN, ETC.</b></p> <p>The Contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or other persons employed for the execution of any work not included in this Contract every facility for carrying out their work and also for use of his ordinary scaffolding. The Contractor, however, shall not be required to erect any special scaffolding for them. The Contractor shall perform such cutting away for and making good after the work of such tradesmen or persons as may be ordered by the PROJECT ENGINEER and the work will be measured and paid for to the extent executed at rates provided in these Bills.</p>	
	<p align="center"><i>Carried to collection</i></p>	

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (KSHS)
<b>A</b>	<p><b>OFFICE ETC. FOR THE PROJECT ENGINEER</b></p> <p>The Contractor shall provide, erect and maintain where directed on site a properly ventilated lockable office for the consultants, having a minimum floor area of 40 Square Metres complete with furniture (Tables, chairs e.t.c). Provision shall be made for artificial lighting and cleaning facilities for the duration of the works. Upon completion the Contractor shall dismantle and clear away the office. He shall also provide a strong metal trunk complete with strong hasp and staple fastening and two keys. He shall provide, erect and maintain a lock-up type water or bucket closet for the sole use of the PROJECT ENGINEER including making temporary connections to the drain where applicable to the satisfaction of Government and Medical Officer of Health and shall provide services of cleaner and pay all conservancy charges and keep both office and closet in a clean and sanitary condition from commencement to the completion of the works and dismantle and make good disturbed surfaces. The office and closet shall be completed before the Contractor is permitted to commence the works. The Contractor shall make available on the Site as and when required by the "PROJECT ENGINEER" a modern and accurate level together with levelling staff, ranging rods and 50 metre metallic or linen tape.</p>	1,000,000.00
<b>B</b>	<p><b>WATER AND ELECTRICITY SUPPLY FOR THE WORKS</b></p> <p>The Contractor shall provide at his own risk and cost all necessary water, electric lightling and power required for use in the works. The Contractor must make his own arrangements for connection to the nearest suitable water main and electricity main and for metering the water and electricity used. He must also provide temporary tanks and meters as required at his own cost and clear away when no longer required and make good on completion to the entire satisfaction of the PROJECT ENGINEER . The Contractor shall pay all charges in connection herewith. No guarantee is given or implied that sufficient water will be available from mains and the Contractor must make his own arrangements for augmenting this supply at his own cost. Nominated Sub--contractors are to be made liable for the cost of any water or electric current used and for any installation provided especially for their own use.</p>	
<b>C</b>	<p><b>SANITATION OF THE WORKS</b></p> <p>The Sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Government and/or Local Authorities, Labour Department and the PROJECT ENGINEER.</p>	
<b>D</b>	<p><b>SUPERVISION AND WORKING HOURS</b></p> <p>The works shall be executed under the direction and to the entire satisfaction in all respects of the PROJECT ENGINEER who shall at all times during normal working hours have access to the works and to the yards and workshops of the Contractor and sub-Contractors or other places where work is being prepared for the contract.</p>	
	<i>Carried to collection</i>	



**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (KSHS)
<b>A</b>	<p><b>PROTECTION OF THE WORKS.</b></p> <p>Provide protection of the whole of the works contained in the Bills of Quantities, existing property, finishes, workmen employed on the site, employer's agents and the public; including casing , casing up, covering or such other means as may be necessary to avoid damage to the satisfaction of the PROJECT ENGINEER and remove such protection when no longer required and make good any damage which may nevertheless have been done at completion free of cost to the Client. Any damage or loss incurred due to the insufficiency of such protection must be made good by the Contractor</p>	
<b>B</b>	<p><b>WORKS TO BE DELIVERED UP CLEAN</b></p> <p>Clean and flush all gutters, rainwater and waste pipes, manholes and drains, wash (except where such treatment might cause damage) and clean all floors, sanitary fittings, glass inside and outside and any other parts of the works and remove all marks, blemishes, stains and defects from joinery, fittings and decorated surfaces generally, polish door furniture and bright parts of metalwork and leave the whole of the buildings watertight, clean, perfect and fit for occupation to the approval of the PROJECT ENGINEER.</p>	
<b>C</b>	<p><b>GENERAL SPECIFICATION.</b></p> <p>For the full description of materials and workmanship, method of execution of the work and notes for pricing, the Contractor is referred to the Ministry of Roads and Public Works and Housing General Specification dated 1976 or any subsequent revision thereof which is issued as a separate document, and which shall be allowed in all respects unless it conflicts with the General Preliminaries, Trade Preambles or other items in these Bills of Quantities.</p>	
<b>D</b>	<p><b>TRAINING LEVY</b></p> <p>The Contractor's attention is drawn to the legal notice which requires payment by the Contractor of a Training Levy at the rate of 1/4 % of the Contract sum on all contracts of more than KShs. 50,000.00 in value.</p>	
<b>E</b>	<p><b>MATERIALS ON SITE</b></p> <p>All materials for incorporation in the works must be stored on or adjacent to the site before payment is effected unless specifically exempted by the PROJECT ENGINEER. This includes the materials of the Main Contractor, Nominated Sub-Contractors and Nominated Suppliers.</p>	
<b>F</b>	<p><b>HOARDING</b></p> <p>The Contractor shall enclose the site or part of the works under construction with a hoarding 2400 mm high consisting of iron sheets on 100 x 50 mm timber posts firmly secured at 1800 mm centres with two 75 x 50 mm timber rails. The Contractor is in addition required to take all precautions necessary for the safe custody of the works, materials, plant, public and Employer's property on the site.</p>	
<b>G</b>	<p><b>ALTERATIONS TO BILLS, PRICING, ETC.</b></p> <p>Any unauthorised alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored. The Contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the priced Bills of Quantities. All items of measured work shall be priced in detail and the Tenders containing Lump Sums to cover trades or groups of work must be broken down to show the price of each item before they will be accepted.</p>	
	<i>Carried to collection</i>	

## PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

ITEM	DESCRIPTION	AMOUNT (KSHS)
<b>A</b>	<p><b>MATERIALS ARISING FROM EXCAVATIONS</b></p> <p>Materials of any kind obtained from the excavations shall be the property of the client. Unless the PROJECT ENGINEER directs otherwise such materials shall be dealt with as provided in the Contract. Such materials shall only be used in the works, in substitution of materials which the Contractor would otherwise have had to supply with the written permission of the PROJECT ENGINEER. Should such permission be given, the Contractor shall make due allowance for the value of the materials so used at a price to be agreed.</p>	
<b>B</b>	<p><b>PREVENTION OF ACCIDENT, DAMAGE OR LOSS</b></p> <p>The Contractor is notified that these works are to be carried out on a restricted site where the client is going on with other normal activities. The Contractor is thus instructed to take reasonable care in the execution of the works as to prevent accidents, damage or loss and disruption of activities being carried out by the Client. The Contractor shall allow in his rates any expense he deemed necessary by taking such care within the site.</p>	
<b>C</b>	<p><b>GOVERNMENT ACTS REGARDING WORK, PEOPLE ETC.</b></p> <p>Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of Labour and other matters related to the execution of the works. In particular the Contractor's attention is drawn to the provisions of the Factory Act 1950 and his tender must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to Insurances, pensions and holidays for workpeople or so the safety, health and welfare of the workpeople.</p> <p>The Contractor must make himself fully acquainted with current Acts and Regulations, including Police Regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc. It is most important that the Contractor, before tendering, shall obtain from the relevant Authority the fullest information regarding all such regulations and/or restrictions which may affect the organisation of the works, supply and control of labour, etc., and allow accordingly in his tender. No claim in respect of want of knowledge in this connection will be entertained.</p>	
<b>D</b>	<p><b>BLASTING OPERATIONS</b></p> <p>Blasting will only be allowed with the express permission of the PROJECT ENGINEER in writing. All blasting operations shall be carried out at the Contractor's sole risk and cost in accordance with any Government regulations in force for the time being, and any special regulations laid down by the PROJECT ENGINEER governing the use and storage of explosives.</p>	
<b>E</b>	<p><b>SIGNBOARD</b></p> <p>Allow for providing, erecting, maintaining throughout the course of the Contract and afterwards clearing away a signboard as designed, specified and approved by the PROJECT ENGINEER.</p>	
	<i>Carried to collection</i>	

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	AMOUNT (KSHS)
<b>A</b>	<p><b>NUISANCE</b> The Contractor must take such steps and exercise such care and diligence so as to minimize nuisance from dust, noise or any other cause, to the occupiers of adjacent properties</p>	
<b>B</b>	<p><b>PROTECTION OF TREES</b> The Contractor shall in the course of construction take all necessary precautions to preserve any existing trees. The contractor will not cut down any tree(s) without express authority or written instruction by the PROJECT ENGINEER and relevant authorities. He must at all times liaise with the PROJECT ENGINEER in this regard. The cost of obtaining any necessary permits will be borne by the Contractor.</p>	
<b>C</b>	<p><b>EXTENDED PRELIMINARIES</b> In case the Contractor suffers costs due to extended preliminaries as a result of excusable delays. Then the Employer shall compensate the Contractor the ACTUAL COST of such extended preliminaries plus 10% administrative costs. Such costs will be proven with payment receipts, payroll etc. No further claims shall be allowed with respect to the same.</p>	
<b>D</b>	<p><b>TIMELY PAYMENT FOR LABOURERS</b> The Contractor shall ensure that his workers are paid their wages promptly and on time. If such payments are effected weekly the Contractor shall ensure that workers are paid on the appointed day to avoid any disruption of work occasioned by the failure of the Contractor to pay workers on time and shall be required to furnish proof to that effect,</p>	
	<i>Carried to collection</i>	

## PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

ITEM	DESCRIPTION	AMOUNT (KSHS)
	<p style="text-align: center;"><u>COLLECTION</u></p> <p>Brought Forward From Page GP/1</p> <p>Brought Forward From Page GP/2</p> <p>Brought Forward From Page GP/3</p> <p>Brought Forward From Page GP/4</p> <p>Brought Forward From Page GP/5</p> <p>Brought Forward From Page GP/6</p> <p>Brought Forward From Page GP/7</p> <p>Brought Forward From Page GP/8</p> <p>Brought Forward From Page GP/9</p> <p>Brought Forward From Page GP/10</p> <p>Brought Forward From Page GP/11</p> <p>Brought Forward From Page GP/12</p>	
	TOTAL FOR GENERAL PRELIMINARIES CARRIED TO GRAND SUMMARY	

**ESMP**

**BILL NO.3**

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3.1.1	<p><b>ELEMENT NO.1</b></p> <p><b><u>PRELIMINARIES FOR HEALTH AND SAFETY, AIR AND NOISE MONITORING &amp; CONTROL, WASTE MANAGEMENT</u></b></p> <p><u>The Tenderer's attention is drawn to the fact that the Employer reserves the right to hold back the amount priced against below items either in full or in part due to any non-performance on the Contractor's part of his obligations.</u></p> <p><u>The Contractor will be required to monitor, keep records and report on the following environmental and social issues for the project in manner acceptable to the World Bank and Government of Kenya:</u></p> <p><b><u>SAFETY, HEALTH AND WELFARE OF WORKERS</u></b></p> <p>The Contractor shall allow for providing for the safety, health and welfare of work people and for complying with any relevant Ordinances, Regulations or Union Agreement</p> <p>In addition to complying with the requirements of the Occupational Safety &amp; Health Act 2007 and the Factories Act, the Contractor and Sub-Contractors shall be required to comply in all respects with the Factories (Building Operations and Work of Engineering Construction) rules together with the Construction Safety Plan in compliance with International Labour Organizations (ILO) Regulations.</p> <p>The Contractor will further be required to identify a Site <b>Environment Health and Safety</b> Officer in accordance with the above Rules who will be responsible for the health and safety of workers on the site. This includes awareness and sensitization <b>on environmental protection, occupational and community health and safety, code of conduct for contractors personnel, risk of spread of communicable diseases including sexually transmitted diseases such as HIV/AIDS, Gender Equity, Sexual Harassment and abuse amongst workers in the workplace, Spread of COVID-19 amongst community members during the consultation processes and Grievance redress mechanism.</b></p>				
		Item	1	1,100,000	1,100,000
	<b>Total Carried to Collection</b>			<b>Ksh</b>	<b>1,100,000</b>

# PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p>The Contractor will also be required to provide approved <b>personal protective equipment such as</b> good quality hard hats, gumboots, safety boots and other necessary protective gear for all workers on site including Sub-Contractors' workers and also for the exclusive use by the Clerk of Works and representatives of the Employer and Consultants.</p> <p>The tenderer's attention is further drawn to the fact that he is required to submit with his tender a detailed write-up on how he intends to implement the above Construction Safety Plan. It should be noted that this write-up will form a heavily weighted criteria in the evaluation of the tenders.</p> <p>The contractor will be required to provide adequate temporary Notices and Signs shall be posted to indicate e.g. that "construction is in progress" and "entry is at ones own risk" or "trespassers are liable to be prosecuted" or such other Notices and Signs as the Architect may consider necessary from time to time. The design and location of such signs will be to the approval of the Architect.</p> <p>The Contractor is expected to also come up with an Emergency Response plan</p> <p><b><u>SANITATION OF THE WORKS</u></b></p> <p>The sanitation of the works shall be provided, maintained and removed on completion of works by the Contractor to the satisfaction of the Architects, health department and local Authorities.</p> <p>The sanitation facilities should be gender sensitive (separate for male and female )shall be for the use by Contractors and sub- Contractors workmen etc without charge.</p> <p>The Latrine/toilet shall be enclosed plastered and painted masonry wall, corrugated sheets roofs ,with concrete tiled floors to facilitate washing. Their location shall be agreed with the Architects and the works shall not be commenced before the sanitary accommodation has been approved by the above mentioned authorities.</p>				
3.2.1		Item	1	250,000	250,000
	<b>Total Carried to Collection</b>			Ksh	250,000

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p>The Contractor will be required to pay all conservancy charges and shall ensure clean daily maintenance and disinfecting of the latrines/toilet, and not less than once per week, the whole area shall be sprayed with disinfectant and insecticides and any temporary drains shall be removed and all works and surfaces disturbed made good and then the whole area disinfected and left clean and free from pollution to the satisfaction of the Architect and local authorities.</p> <p><b><u>PREVENTION OF DISTURBANCE AND NUISANCE</u></b></p> <p><b>3.3.1</b> Tenderers should note that normal activities shall be continuing in the surrounding buildings during the construction period.</p> <p>Minimum disturbance by noise, dust, water or movement of vehicles, materials, labour or plant must be caused to the function of the existing adjacent buildings in the vicinity and the occupants and staff therein. The Contractor shall comply with all instructions issued by the Employer or Architect with regard to minimizing such disturbances.</p> <p>The Contractor shall not directly or indirectly or otherwise by himself or through his agents cause nuisance. Should he do so he shall be directly responsible for such acts.</p> <p>The works and such sections of the site necessary shall be under the entire care and control of the contractor during the whole period of the contract and shall take all possible precautions to prevent any nuisance, inconvenience or injury to the holder or occupiers of the existing or surrounding properties and to the public generally, and shall at all times keep all paths and roads affected by the works in a safe and clear state, and shall use proper precautions to ensure the safety of all wheeled traffic and pedestrians.</p> <p><b><u>GRIEVANCE REDRESS MECHANISM (GRM) WORKER</u></b></p> <p><b>3.3.2</b> The Contractor shall employ, maintain and equip throughout the project duration staff assigned the functions for GRM and the implementation of social safeguard issues.</p>				
		Item	1	250,000	250,000
		Item	1	1,020,000	1,020,000
	<b>Total Carried to Collection</b>			<b>Ksh</b>	<b>1,270,000</b>



**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3.4.1	<b><u>CLEANING, REMOVAL OF PLANT AND RUBBISH ETC</u></b>  The Contractor shall upon completion of the works remove and clear away all temporary buildings, scaffolding, plant, rubbish and unused materials, surplus excavated materials and shall leave the whole of the site of the works in a clean and tidy state to the satisfaction of the Architect, including clearing away and making good all traces of dirt.  The contractor will come up with a Solid and liquid Waste Management and handling Plan to guide and manage the collection and disposal of solid/liquid waste at the site.  Particular care shall be taken in leaving windows, floors and fittings clean and the removal of all paint and cement stains therefrom.  He shall also remove all rubbish and dirt from the site as it accumulates or as directed by the Architect. The Contractor is to find his own dump and shall pay all charges in connection therewith.	Item	1	150,000	150,000
	<b><u>AMBIENT AIR QUALITY AND NOISE MONITORING</u></b>  The Contractor to carry out continuous monitoring of the ambient air quality and Noise measurements as well as vibration monitoring on quarterly basis during the construction phase and this should be done at different weather and seasons to ensure that all the weather patterns are taken into consideration during the monitoring process.				
	<b><u>TRAFFIC CONTROL AND MANAGEMENT</u></b>  It will be necessary for the Contractor to provide safety road signage on busy roads around the construction site, temporarily during the construction period. The contractor should arrange diversions for providing alternative route for transport. After breaking up, closing or otherwise interfering with any street or footpath to which the public has access, the Contractor shall make such arrangements as may be reasonably necessary so as to cause as little interference with the traffic in that entrance road or footpath during construction as shall be reasonably practicable.				
	<b>Total Carried to Collection</b>			<b>Ksh</b>	<b>550,000</b>

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p>The Contractor will also come up with a Traffic Management Plan to ensure safety of local communities from construction traffic</p> <p><b><u>MOVEMENT OF TRUCKS OR MACHINERY</u></b></p> <p>The Contractor moving solid or liquid construction materials and waste shall take strict measures to minimize littering of roads by ensuring that vehicles are licensed and loaded in such a manner as to prevent falling off or spilling of construction materials and by sheeting the sides and tops of all vehicles carrying mud, sand, other materials and debris. Construction materials should be brought from registered/approved sources in the city or from the city and debris should be transferred to assigned places in the landfill with documented confirmation.</p> <p><b><u>PROTECTION OF EXISTING INSTALLATION</u></b></p> <p>The Contractor shall take all necessary measures required for the support and protect structures, pipes, cables, sewers and other apparatus during the construction period, and to repair any damage occurs in coordination with local resident association, Government and any concerned authorities.</p> <p><b><u>PHYSICAL CULTURAL RESOURCES</u></b></p> <p>The contractor will train construction crews and supervisors to spot potential archaeological finds. In the event of a potential find, the contractor will inform the implementing partner who will in turn liaise with the archaeological department at the Ministry of Culture, and Social Services or a local university for quick assessment and action. Clear record keeping and expert verification procedures, criteria for temporary work stoppages that may be required to allow for rapid resolution of issues in the field and the chain of custody must be clear from the onset.</p> <p>The Contractor will come up with a Water Resource Protection Plan to prevent contamination of drinking water</p>				
3.5.1		Item	1	150,000	150,000
3.5.2		Item	1	100,000	100,000
3.5.3		Item	1	100,000	100,000
	<b>Total Carried to Collection below</b>			<b>Ksh</b>	<b>350,000</b>

## PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SECTION SUMMARY- ESMP</u>				
	Total Brought Forward from Page ESMP/1				1,100,000
	Total Brought Forward from Page ESMP/2				250,000
	Total Brought Forward from Page ESMP/3				1,270,000
	Total Brought Forward from Page ESMP/4				550,000
	Total Brought Forward from Page ESMP/5 above				350,000
	TOTAL FOR ESMP CARRIED TO GRAND SUMMARY				3,520,000

OFFICE BUILDING

BILL NO.4

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>ELEMENT 01-SUBSTRUCTURE (ALL PROVISIONAL)</b>				
	<b>Site clearance</b>				
4.1.1	Clear the site of all bushes, grass, shrubs, undergrowth and small trees not exceeding 600mm girth and burn	SM	570		
4.1.2	Cut down tree between 1500 - 1800mm girth, grub up their roots and cart away arisings	NO	5		
	<b>Excavation</b>				
	<u>Excavation including maintaining and supporting sides and keeping free from water, mud and falling materials</u>				
4.1.3	Excavate oversite to remove top vegetable soil average 300mm deep; dispose off site	SM	570		
4.1.4	For column bases commencing at reduced level not exceeding 1.50 metres deep	CM	270		
4.1.5	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	CM	243		
4.1.6	Excavate trenches for strip foundations; not exceeding 1.5m deep from reduced level	CM	253		
4.1.7	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	CM	127		
4.1.8	Extra over all descriptions of excavations and removal from site for breaking up rocks: irrespective of class	CM	300		
	<b>Disposal of water</b>				
4.1.9	Allow for keeping the excavations free from all water including spring and running water	Item			
	<b>Planking and strutting</b>				
4.1.10	Allow for planking and strutting sides of excavations and keeping excavations clear of all fallen material,	Item			
	<b>Disposal</b>				
4.1.11	Return, fill-in and rum selected excavated material	CM	649		
4.1.12	Load and cart away from site surplus excavated material as directed	CM	244		
	<b>TOTAL CARRIED TO COLLECTION PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>Imported Fill</b>				
4.1.13	Imported filling to make-up levels; compacted in layers not exceeding 150 mm thick; To atleast 95% MDD (AASHTO T99) compaction	CM	241		
4.1.14	300mm thick hardcore fill in making up levels, deposit and compacting in layers of 150mm maximum thickness	SM	482		
4.1.15	50mm thick murrum blinding to surfaces of hardcore fill	SM	482		
	<b>Damp-proof Membrane</b>				
4.1.16	1000 Gauge polythene; 150mm laps; no allowances made for laps	SM	538		
	<b>Anti-termite treatment</b>				
4.1.17	Treat hardcore surface with approved antitermite applied in accordance with the manufacturer's instructions and subject to a TEN YEAR guarantee	SM	482		
	<b>Mass concrete class 15/20</b>				
4.1.18	50mm thick blinding to strip foundation	SM	169		
4.1.19	Ditto to column bases	SM	180		
	<b>Concreting</b>				
	<u>Reinforced vibrated insitu concrete; class 25/(20mm)to:-</u>				
4.1.20	Foundation strips	CM	34		
4.1.21	Column bases	CM	72		
4.1.22	Stub columns	CM	8		
4.1.23	Steps	CM	1		
4.1.24	150mm thick base slab	SM	526		
4.1.25	150mm thick external ramp slab	SM	12		
	<b>Reinforcements</b>				
	<u>High Tensile Reinforcement Bars to B. S. 4449</u>				
	<u>including cutting, bending and all necessary spacer</u>				
	<u>blocks : (Provisional) :-</u>				
	<u>Ribbed bars to KS ISO 6935-2:2007</u>				
4.1.26	Assorted bars	KG	10340		
TOTAL CARRIED TO COLLECTION PAGE					

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4.1.27	<b>Steel mesh fabric reinforcement to B.S. 4483</b> Reference A142 mesh 200 x 200 mm , weighing not less than 2.22 kgs per square metre ( measured net - no allowance made for laps) including tying wire and distance blocks	SM	538		
	<b>Marineply formwork as Described. Allow for setting to special steel proping, strutting, fillets, nails, etc to:</b>				
4.1.28	Sides of strip foundations	SM	113		
4.1.29	Sides of column bases	SM	144		
4.1.30	Sides of stub columns	SM	125		
4.1.31	Edges of ground floor slab; 75 to 150mm high	LM	126		
4.1.32	Ditto external ramp; 75-150mm high	LM	13		
4.1.33	Ditto steps; 75-150mm high	LM	37		
	<b>Foundation walling</b> Approved natural stone or coral stone ; load bearing 7.5 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar	SM	561		
	<b>Plinth finish</b> 15mm Thick cement sand (1:3) rendering to plinth; wood float finish (PLEASE NOTE: The render shall be at least 450 mm below natural ground level)	SM	58		
4.1.36	Prepare and apply three coats of premium quality marine grade bituminous paint to rendered walls; externally	SM	58		
4.1.37	<b>Paving slabs</b> 600x600x50mm pre-cast concrete class 20/20 paving slabs pointed in cement sand (1:3) mortar and laid on and including 50mm approved bed of sand; including excavations, cart away and hardcore fill	SM	80		
TOTAL CARRIED TO COLLECTION					

PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

ITEM	DESCRIPTION	AMOUNT
	<p>ELEMENT 01-SUBSTRUCTURE</p> <p>COLLECTION</p>	
1	Total brought down from page OB/1	
2	Total brought down from page OB/2	
3	Total brought down from page OB/3	
	TOTAL FOR SUBSTRUCTURE CARRIED TO SUMMARY	



**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>ELEMENT 02 - R.C. SUPERSTRUCTURE</b>				
	<b>Insitu Concrete</b>				
	<u>Reinforced vibrated insitu concrete; class 25/20mm</u>				
4.2.1	Columns	CM	29		
4.2.2	Beams	CM	66		
4.2.3	Gutter beams	CM	16		
4.2.4	200mm thick suspended slabs	SM	160		
4.2.5	175mm thick slanting ramp	SM	114		
4.2.6	150mm thick suspended slabs	SM	594		
4.2.7	150mm thick roof slabs; with and including approved waterproofing admixture	SM	296		
	<b>Reinforcements</b>				
	<u>High Tensile Reinforcement Bars to B. S. 4449</u>				
	<u>including cutting, bending and all necessary spacer blocks : (Provisional) :-</u>				
	<u>Ribbed bars to KS ISO 6935-2:2007</u>				
4.2.8	Assorted bars	KG	47318		
	<b>Marineply formwork as Described. Allow for setting to special steel propping, strutting, fillets, nails, etc to:</b>				
4.2.9	Soffits of suspended slabs	SM	754		
4.2.10	Sides and soffits of beams	SM	849		
4.2.11	Sides and soffits of gutter beams	SM	149		
4.2.12	Sides of columns	SM	482		
4.2.13	Soffits of slanting ramp	SM	114		
4.2.14	Edges of slabs; 75-150mm high	LM	324		
4.2.15	Edges of slabs; 150-225mm high	LM	80		
4.2.16	Edges of slanting ramp; 150-225mm high	LM	170		
	<b>Staircase</b>				
	<b>Insitu Concrete</b>				
	<u>Reinforced vibrated insitu concrete; class 25/20mm</u>				
4.2.17	Staircase steps & waist	CM	16		
4.2.18	150mm thick horizontal landing	SM	18		
	<b>Reinforcements</b>				
	<u>High Tensile Reinforcement Bars to B. S. 4449</u>				
	<u>including cutting, bending and all necessary spacer blocks : (Provisional) :-</u>				
	<u>Ribbed bars to KS ISO 6935-2:2007</u>				
4.2.19	Assorted bars	KG	3285		
Total Carried to next page					

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<i>Brought Forward</i>				
	<b>Marineply formwork as Described. Allow for setting to special steel proping, strutting, fillets, nails, etc to:</b>				
4.2.20	Sloping soffits of stairs	SM	39		
4.2.21	Soffits of horizontal landing	SM	18		
4.2.22	Edges of landing 75-150mm high	LM	27		
4.2.23	Ditto; risers	LM	117		
4.2.24	Open stair edge string 300mm wide including raking cutting to profile of the threads	LM	30		
	<b>Creation of Arches</b>				
4.2.25	Construction and formation of decorative arches around windows and the main door externally and main arches at terrace finished same as external walls;1000 - 3000 mm diameter;including all necessary formworks and reinforcements; all to Architect's details	NO	25		
<b>TOTAL FOR R.C. SUPERSTRUCTURE CARRIED TO SUMMARY</b>					

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>ELEMENT 03 - WALLING</b>				
	<b>Walling (Natural Stone Walling)</b>				
	<b>External walling</b>				
	<u>Machine cut natural stone or machine cut coral stone or hollow concrete block walling ; load bearing 7.05N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</u>				
4.3.1	200mm thick walling	SM	840		
4.3.2	200mm thick parapet walling	SM	192		
	<b>Internal walling</b>				
	<u>Machine cut natural stone or machine cut coral stone or hollow concrete block walling ; load bearing 7.05N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</u>				
4.3.3	200mm thick walling	SM	1050		
4.3.4	150mm thick ditto	SM	57		
4.3.5	100mm thick ditto	SM	88		
	<b>Bituminous or other equal approved damp-proof course; 3 ply membrane</b>				
4.3.6	200mm wide damp proofing course including levelling bed	LM	232		
4.3.7	150mm ditto	LM	6		
4.3.8	100mm ditto	LM	11		
	<b>Pre-cast concrete class 20/20 precast ventilation blocks</b>				
4.3.9	600x600x200mm thick vents block with floral motifs; bedded and jointed in cement and sand (1:3) mortar and reinforced every alternate course with hoop iron.:To architect's details	SM	176		
	<b>Crennelations</b>				
4.3.10	Crennelation objects on 200mm thick parapet walling fixed in cement and sand mortar (1:3); finished same as external walls; to Architect approval	LM	153		
	<b>TOTAL FOR WALLING CARRIED TO SUMMARY</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>ELEMENT 04 - ROOF STRUCTURE, COVERING AND RAINWATER DISPOSAL</u></b>				
	<b><u>Roof covering</u></b>				
	Supply and fix 26 gauge approved Prepainted 115 Aluminium roofing sheets to mild steel purlins including bolts,nails,cups,washers and all necessary accessories; fixing in accordance with manufacturers specification				
4.4.1	Roof covering : to slopes not exceeding 15 degrees to horizontal	SM	483		
4.4.2	Extra over for ridge capping;600mm girth	LM	21		
4.4.3	Extra over for flashing; 600mm girth	LM	23		
4.4.4	50mm thick heavy duty roof sisalation from approved supplier; with and including fixing with strainin wires; fix as per manufacturer's specifications	SM	483		
	<b><u>The following in trusses, girders and independent members made of cold-rolled heavy gauge Steel Sections including grinding all 6-8FW welds smooth; shoped prime with two pack epoxy zinc phosphate primer before hoisting and fixing, then 6-8FW welded and bolted with gusset plates, head, nuts, washers and all other necessary fittings in accordance with the fabricators shop drawings to the Engineer's approval</u></b>				
4.4.5	75 x 50 x 3mm Thick (5.42Kg/m) R.H.S rafters,tiebeams welded to gusset plate-M1	LM	813		
4.4.6	50 x 50 x 3mm Thick (4.43Kg/m) S.H.S struts-M2	LM	505		
4.4.7	177.8 x 50.8 x 2mm Thick (5.90Kg/m) Zed purlins welded to rafters	LM	378		
	<b><u>Sundries</u></b>				
4.4.8	200 x 100 x 8 mm mild steel base plates with 4 no. holes countersunk of diameter 18 mm for 16 mm diameter x 200 mm long bolts	NO	34		
4.4.9	100 x 75 x 6 mm thick angle cleats 2 no. holes countersunk of diameter 14 mm for 12 mm diameter rag bolts; welded to truss rafter and bolted with 2no. M12 bolts to base plate.	NO	68		
4.4.10	75 x 75 x 6 mm thick angle cleats 2 no. holes countersunk of diameter 14 mm for 12 mm diameter rag bolts; welded to truss rafter and bolted with 2no. M12 bolts to the Z - purlins	NO	153		
4.4.11	220 x 60 x 3 mm thick angle cleats 1 no. holes countersunk of diameter 14 mm for 12 mm diameter rag bolts; welded to truss rafter and bolted with 1no. M12 bolts to the Z - purlins	NO	153		
Total Carried to next page					

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<i>Brought Forward</i>				
4.4.12	16 mm diameter x 200 mm long bolts with head , nut and washers : fixed to concrete or masonry walls	NO	136		
4.4.13	12 mm diameter x 100 mm long grade 4.6 bolts with head , nut and washers : fixed to truss members.	NO	306		
	<b><u>FLAT ROOF FINISHES</u></b>				
4.4.14	50 mm cement sand 1:3 water proof screed to flat roof slab,gutters and sides of parapet walls; laid to fall and crossfalls	SM	484		
4.4.15	Apply one coat bituminous primer to surface of screed.	SM	484		
	Supply and apply 4mm thick bituminous felt membrane heat welded in 200mm overlaps and all necessary surface preparations; applied strictly in accordance with printed manufacturer's instructions; provide a 10 year guarantee				
4.4.16	To roof slabs and watertank area	SM	303		
4.4.17	To gutters	SM	128		
4.4.18	Ditto sides of wall 200mm high	LM	263		
4.4.19	50 x 50mm internal angle fillet	LM	263		
	<b><u>Floor Finishes</u></b>				
	<b><u>Cement and sand (1:4) screeding smooth trowelled</u></b>				
4.4.20	32mm Thick floor screed to receive concrete tiles	SM	303		
4.4.21	200 x 200 x 25mm thick concrete interlocking tiles at roof slab; bedding and jointing in cement mortar mix 1:4(m/s)	SM	303		
4.4.22	100mm high matching skirting	LM	263		
	<b>Unplasticized PVC downpipes and fittings: solvent welded joints</b>				
	<b><u>Rainwater goods</u></b>				
4.4.23	150mm dia PVC down pipes fixed to wall with holding clips at 1200mm centres	LM	121		
4.4.24	Extra over for running outlet	NO	10		
4.4.25	Extra over for swan neck 1000mm long	NO	10		
4.4.26	Extra over for shoe 1000mm long	NO	10		
4.4.27	Extra over 150mm fulbora outlets including galvanised expanded metal mesh	NO	10		
	<b>TOTAL FOR ROOF STRUCTURE, COVERING &amp; RAINWATER DISPOSAL; CARRIED TO SUMMARY</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>ELEMENT 05 - WINDOWS</b>				
	<p><b>Aluminium Windows</b>  <u>Heavy Duty powder coated Aluminium windows to B.S. 4813 to be executed by an approved sub contractor</u></p> <p><u>The following in Heavy Duty Powder Coated Aluminium windows from approved manufacturer(s) complete with 80x55x3 mm frames mullions trasomes railing and necessary intermediate reinforcement elements including all weather strips, rubber glazing strips, couplings, ironmongery including hinges, fasteners and stays, sliding rails( where necessary) bars; all ironmongery to be of stainless steel grade 316 marine grade; panes left open for glazing to Architects detail</u></p> <p><u>Please note that the sliding panels, hingeed panels and fixed lights should not be spaced more than 1200 mm wide</u></p>				
4.5.1	Window size: 2000 x 2100mm as W-01	NO	13		
4.5.2	Ditto; size: 1500 x 2100mm as W-02	NO	25		
4.5.3	Ditto; size: 1000 x 1500mm as W-03	NO	2		
4.5.4	Ditto; size: 3000 x 1500mm as W-04	NO	6		
	<b>Glazing</b> laminated oneway glass fixed with and including beadings.				
4.5.5	6mm thick glass in panes (0.50-1.00m <sup>2</sup> )	SM	164		
	<b>Window Cill</b>				
4.5.6	200x50mm thick precast concrete window cill; bedding and jointing in cement and sand mortar (1:4)	LM	93		
	<b>Window blinds</b> supply and fix 25mm x 0.25mm thick vertical venetian aluminium retractable blinds; comprising of black out/translucent heavy fire retardant fabrics complete with rings,rollers brass l section rails and all other necessary accessories				
4.5.7		SM	160		
Total Carried to next page					

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<i>Brought Forward</i>				
	<b>Mvule: selected and kept clean</b>				
4.5.8	250 x 20 mm Window board; plugged	LM	73		
4.5.9	35 x 35 mm decorated beading	LM	73		
	<b>Burglar Proofing</b>				
4.5.10	Mild steel grille framed with 50 x 25 x 3mm thick RHS sections, 25x3mm MS bars welded to frame at 150 mm centres both sides; including assembly and fixing to opening cutting and pinning lugs to concrete and bedding frame in cement and sand mortar (1:3)	SM	164		
	<b>Painting &amp; Decoration</b>				
4.5.11	Prepare surface of steel by sand blasting; apply one coat of 2 pack epoxy zinc phosphate primer; apply three coats of marine grade gloss paint	SM	328		
	<u>Prepare and apply three coats of premium quality marine grade clear varnish; Matt quality to:-</u>				
4.5.12	General surfaces of wood exceeding 200mm but not exceeding 300mm girth	LM	73		
4.5.13	Ditto; girth not exceeding 100mm	LM	73		
<b>TOTAL FOR WINDOWS CARRIED TO SUMMARY</b>					

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>ELEMENT 06 - DOORS</b>				
	<u>50mm thick mvule panelled door: comprised of 200 x 50mm thick stiles, top and middle rail: 200 x 50mm thick bottom rail ; complete with moulded grooves to door leaf on both sides ;solid blocking to iron mongery (m/s) to door</u>				
4.6.1	Double leaf door overall size 1800 x 2600mm high; 6mm thick laminated glass(m/s) at fanlight size 1800x500mm high as D-01	NO	1		
4.6.2	Double leaf door overall size 1500 x 2600mm high; 6mm thick laminated glass(m/s) at fanlight size 1500x500mm high as D-06	NO	5		
4.6.3	Single leaf door overall size 1100 x 2600mm high; 6mm thick laminated glass(m/s) at fanlight size 1100x500mm high as D-04	NO	20		
4.6.5	Single leaf door overall size 900 x 2600mm high; 6mm thick laminated glass(m/s) at fanlight size 900x500mm high as D-02	NO	23		
	<u>Louvred Doors</u>				
	<u>50mm thick mvule louvred door comprising of 50x3mm louvres set at 45 degrees at 50mm centres;solid blocking for iron mongery (m/s) to door : all in accordance with Architect's details</u>				
4.6.7	Double leaf door overall size 900 x 2600; complete with timber louvred fanlight size 900x500mm high as D-03	NO	6		
4.6.8	Single leaf door overall size 800 x 2100mm high as D-05	NO	6		
	<b>Door Frame</b>				
	<u>Wrot mvule prime grade:</u>				
4.6.9	Frame; 150 x 50 mm; rebated with rounded edge	LM	368		
4.6.10	Transome with two labour; 150 x 50mm	LM	52		
	<b>TOTAL FOR WINDOWS CARRIED TO SUMMARY</b>				



**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<i>Brought Forward</i>				
4.6.11	Architrave; 75 x 25 mm	LM	368		
4.6.12	Quadrant beading; 20mm	LM	368		
4.6.13	Glazing bead; 15 x 15 mm	LM	153		
	<b>Glazing</b>				
4.6.14	6 mm thick laminated glass with glazing beads (m.s) to timber door fanlights; area exceeding 0.15M but not exceeding 0.55M	SM	26		
	<u>Ironmongery</u> <u>Supply and fix the following ironmongery from an approved manufacturer including all necessary matching screws;all ironmongery to be stainless steel grade 3.1.6 marine grade</u>				
4.6.15	3 - Lever mortice lock; complete with lockcase and handle	NO	49		
4.6.16	2 - Lever mortice lock; ditto with indicator	NO	12		
4.6.17	100mm. Pressed butt hinges	PRS	70.5		
4.6.18	150mm heavy duty double action spring hinges	PRS	20		
4.6.19	38mm. Diameter door stop on floor / wall to approval	NO	87		
4.6.20	Heavy duty Door closer to an approved sample	NO	47		
4.6.21	Ditto double action door closer	NO	20		
4.6.22	800 x 200mm high stainless steel kick plate onto both sides to approval	NO	40		
4.6.23	150 x 150mm sex indicator plate	NO	12		
4.6.24	500 x 150mm signage plate	NO	28		
4.6.25	Coat and hat hook	NO	14		
	Total Carried to next page				

## PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

[illegible]

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>ELEMENT 07 - FINISHES</b>					
<b>Internal Finishes</b>					
<b><u>Ceiling Finish</u></b>					
<u>Plaster; 9mm first coat of cement and sand (1:3) and 3mm second coat of cement and lime putty (1:5) as described in:-</u>					
4.7.1	12mm thick plaster to soffits of slab; steel trowelled	SM	930		
4.7.2	Ditto to staircase landing	SM	18		
4.7.3	Ditto to sloping soffits of staircase	SM	39		
4.7.4	Ditto to raking edges of staircase average girth of 350mm	LM	30		
4.7.5	Ditto to sloping soffits of ramp	SM	114		
4.7.6	Ditto to raking edges of ramp average girth of 200mm	LM	73		
<b><u>Chipboard Ceiling</u></b>					
4.7.7	12mm thick chipboard ceiling : fixed to and including 50 x 50mm sawn cypress brandering at 600 centre to centre; secrete nailed	SM	248		
4.7.8	100mm girth polyutherane cornice	LM	220		
<u>Prepare surface, apply undercoat and apply three coats PVA based premium quality marine grade silk vinyl emulsion paint or other equal and approved to plastered surfaces</u>					
4.7.9	To plastered ceilings	SM	930		
4.7.10	Ditto to staircase landing	SM	18		
4.7.11	Ditto to sloping soffits of staircase	SM	39		
4.7.12	Ditto to raking edges of staircase average girth of 350mm	LM	30		
4.7.13	Ditto to sloping soffits of ramp	SM	114		
4.7.14	Ditto to raking edges of ramp average girth of 200mm	LM	73		
4.7.15	To chipboard ceilings	SM	248		
Total Carried to next page					

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<i>Brought Forward</i>				
	<b><u>Wall Finish</u></b>				
	<u>Plaster; 9mm first coat of cement and sand (1:3) and 3mm second coat of cement and lime putty (1:5) as described in:-</u>				
4.7.16	12mm thick plaster to wall,beams and columns	SM	3428		
4.7.17	15mm cement and sand (1:3) plaster to walls and concrete surfaces trowelled smooth; to receive wall tiles (m/s)	SM	505		
	<b><u>Ceramic wall tiles</u></b>				
4.7.18	300 x 300 x 10mm Thick glazed ceramic wall tiles bedding and jointing in cement and sand (1:3) mortar and flush pointed with white cement;including matching grouting, waterproof adhesive,spacers and edge protectors where required	SM	505		
4.7.19	12mm girth PVC Edgings	LM	278		
	<u>Prepare surface, apply undercoat and apply three coats PVA based premium quality marine grade silk vinyl sheen emulsion paint or other equal and approved to plastered surfaces</u>				
4.7.20	To plastered walls,beams and columns	SM	3428		
	<b><u>Floor Finishes</u></b>				
4.7.21	32mm thick cement and sand (1:4) screed; wood floated backing to receive ceramic tiles	SM	204		
4.7.22	Ditto to receive terrazzo	SM	142		
4.7.23	Ditto to receive granito tiles	SM	807		
4.7.24	Ditto to receive granito staircase landing	SM	18		
4.7.25	Ditto to treads 300mm wide	LM	117		
4.7.26	Ditto to risers 150mm high	LM	117		
	<b><u>Ceramic floor tiles</u></b>				
4.7.27	Supply and fix 10 mm thick non-slip ceramic floor tiles on prepared backing including matching grouting, waterproof adhesive,spacers and edge protectors where required; overall size 600mm x 600mm.	SM	204		
4.7.28	Skirting ditto; 100mm high	LM	287		
Total Carried to next page					

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<i>b/f</i>				
	<u>Polished Terrazzo paving</u>				
4.7.29	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	SM	142		
4.7.30	20 x 100mm high skirting	LM	111		
4.7.31	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	LM	100		
4.7.32	32 x 3mm thick plastic dividing strips	LM	213		
4.7.33	Supply and fix 10 mm thick non-slip granito floor tiles on prepared backing including matching grouting, waterproof adhesive, spacers and edge protectors where required; overall size 600mm x 600mm.	SM	807		
4.7.34	Ditto at staircase landing	SM	18		
4.7.35	Ditto to treads 300mm wide; with non-slip grooves and rounded nose	LM	117		
4.7.36	Ditto to risers 150mm high	LM	117		
4.7.37	Skirting ditto; 100mm high	LM	651		
	<b>External Finishes</b>				
	<b><u>Ceiling Finish</u></b>				
	<u>Plaster; 9mm first coat of cement and sand (1:3) and 3mm second coat of cement and lime putty (1:5) as described in:-</u>				
4.7.38	12mm thick plaster to soffits of slab; steel trowelled	SM	74		
	<u>Prepare surface, apply undercoat and apply three coats PVA based premium quality marine grade silk vinyl emulsion paint or other equal and approved to plastered surfaces</u>				
4.7.39	To plastered ceilings	SM	74		
	<b><u>Walls</u></b>				
	<u>25mm thick cement and sand (1:3) render to:-</u>				
4.7.40	25mm thick cement and sand Rendering to walls, beams and columns, finished with a wood float,	SM	1890		
Total Carried to next page					

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<i>b/f</i>				
4.7.41	<u>Prepare and apply one undercoat and two finishing coats marine grade weatherguard(silicone based) exterior paint as approved to:</u> Fair faced surfaces of walls,beams and columns	SM	1890		
4.7.42	<u>Floor Finishes</u> 32mm thick cement and sand (1:4) screed; wood floated backing to receive granito tiles	SM	72		
4.7.44	Ditto to 300mm wide treads	LM	37		
4.7.45	Ditto to 150mm high risers	LM	37		
4.7.46	32mm thick cement and sand (1:4) screed; wood floated backing to receive terrazzo at ramp	SM	12		
4.7.47	Supply and fix 10 mm thick non-slip granito floor tiles on prepared backing including matching grouting, waterproof adhesive,spacers and edge protectors where required; overall size 600mm x 600mm.	SM	72		
4.7.48	Ditto to treads 300mm wide;with non-slip grooves and rounded nose	LM	37		
4.7.49	Ditto to risers 150mm high	LM	37		
4.7.50	Skirting ditto; 100mm high	LM	24		
4.7.51	<u>Polished Terrazzo paving</u> 25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	SM	12		
4.7.54	20 x 100mm high skirting	LM	10		
4.7.55	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	LM	10		
4.7.56	32 x 3mm thick plastic dividing strips	LM	18		
<b>TOTAL FOR FINISHES CARRIED TO SUMMARY</b>					

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>ELEMENT 8 - FITTINGS &amp; FIXTURES</u></b>				
	<b>Worktop</b>				
4.8.1	100mm thick plain concrete class 15/20 in plinth	SM	32		
4.8.2	Reinforced concrete class 25/20 in 100mm worktops	SM	26		
	<b>Formwork to:-</b>				
4.8.3	Soffites of worktops	SM	26		
4.8.4	Edges of worktops and plinths 75-150mm high	LM	105		
4.8.5	10mm diameter high yield reinforcement bars as described before	KG	390		
4.8.6	100mm thick coral block walling in cement/sand 1:3 mortar	SM	40		
4.8.7	15mm thick cement sand (1:3) plaster of worktop	SM	26		
4.8.8	Ditto walls	SM	80		
	<b>Granito tiles at worktop</b>				
4.8.9	Supply and fix 10 mm thick non-slip granito tiles on prepared backing including matching grouting, waterproof adhesive, spacers and edge protectors where required: overall size 600mm x 600mm.	SM	106		
4.8.10	12mm girth aluminium edgings	LM	50		
Total Carried to next page					

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<i>b/f</i>				
	<u>Vanity cabinets: comprising of 20mm thick PVC celuka foam board in internal shelvings, doors, sides and partitions; including 20 x 50mm mvule timber runners ; including matching lipping to edges; secret nailing/screwing on prime timber substructures; All exposed surfaces in PVC celuka foam board as before described; complete with drawers in 20mm thick PVC celuka foam board as before described ; complete with doors in 20mm thick PVC celuka foam board as before described; including stainless steel malpa hinges, stainless steel D handle, magnetic ball catches and all other necessary ironmongery;all ironmongery to be of stainless steel grade 316 marine grade. Including making hole for sinks all as per Architect's details</u>				
4.8.11	Vanity cabinets overall size :average length 1900mm x 600mm wide x 900mm high	NO	7		
4.8.12	Vanity overall size :average length 1500mm x 600mm wide x 900mm high;including  Low level cabinets: comprising of 20mm thick PVC celuka foam board in internal shelvings, doors, sides and partitions; including 20 x 50mm mvule timber runners ; including matching lipping to edges; secret nailing/screwing on prime timber substructures; All exposed surfaces in 20mm thick PVC celuka foam board as before described; complete with drawers in 20mm thick PVC celuka foam board as before described ; complete with doors in 20mm thick PVC celuka foam board as before described; including malpa hinges, stainless steel D handle, magnetic ball catches and all other necessary ironmongery;all ironmongery to be of stainless steel grade 316 marine grade. Including making hole for kitchen sink all as per Architect's details	NO	2		
4.8.13	Low level cabinet overall size :overall length 6300mm x 600mm wide x 900mm high at kitchenette	1	No		
Total Carried to next page					



**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<i>b/f</i>				
4.8.14	Low level cabinet overall size :overall length 5800mm x 600mm wide x 900mm high at kitchenette	3	No		
4.8.15	Low level cabinet overall size :overall length 3200mm x 600mm wide x 900mm high at kitchenette	1	No		
	<u>Handrail -Stainless Steel</u>				
4.8.16	Supply, assemble and fix 1000mm high purpose made stainless steel (grade 3.1.6) comprising of 50mm diameter x 3mm thick stainless steel tube handrail welded to 50mm diameter x 3mm thick stainless steel balusters at fixed to concrete floor at 1000mm centres; balusters fixed to and including 200mm x 150mm x 15mm thick stainless steel base plate fixed to concrete; complete with 4no. 25mm diameter x 3mm thick horizontal middle rails ; including all necessary cleats, brackets,lugs stiffeners and the like; all to Architect's instructions and approval-staircase	LM	31		
4.8.17	Ditto at ramp	LM	70		
4.8.18	Ditto at external ramps	LM	10		
	TOTAL FOR FITTINGS & FIXTURES CARRIED TO MAIN SUMMARY				
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT 9 -BUILDERS WORK IN CONNECTION WITH SERVICES (BWICS)</u>				
	<b>Builder's Work incidental to sanitary fittings, ventilation, plumbing, drainage, electrical installations, concealed fixings</b>				
4.9.1	Allow for making holes, chasing walls, floors, inclusion of sleeves and other items necessary for the proper carrying out of the installations including making good all surfaces	ITEM	1		
	TOTAL FOR BWICS CARRIED TO MAIN SUMMARY				

PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

OFFICE BUILDING

SUMMARY PAGE

BILL	DESCRIPTION	page	AMOUNT
1	SUBSTRUCTURE	<i>OB/4</i>	
2	R.C. SUPERSTRUCTURE	<i>OB/6</i>	
3	WALLING	<i>OB/7</i>	
4	ROOF	<i>OB/9</i>	
5	WINDOWS	<i>OB/11</i>	
6	DOORS	<i>OB/14</i>	
7	FINISHES	<i>OB/18</i>	
8	FITTINGS AND FIXTURES	<i>OB/21</i>	
9	BWICS	<i>OB/21</i>	
	TOTAL CARRIED TO GRAND SUMMARY		

**FOUL DRAINAGE**

**BILL NO.5**

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>EXTERNAL WORKS</u></b>				
	<b><u>ELEMENT NO. 1</u></b>				
	<b><u>EXTERNAL FOUL WATER DRAINAGE</u></b>				
5.1.1	Excavate trench for drain pipe average 1500 mm deep, part return fill and ram and remainder cart away	LM	100		
5.1.2	150 mm diameter "Golden Brown" UPVC pipe laid in trench and jointed	LM	100		
	<b>Plain in situ concrete : class 15/20: as per Engineer's detail</b>				
5.1.3	150mm bed and surround to 150mm diameter pipe : including all necessary formwork	LM	100		
	<b>Manholes</b>				
	The following manholes of various sizes to be executed in accordance with the Engineer's drawings, average depths as stated complete and including filling, 150mm thick masonry walling abd, 150mm thick concrete floor slab Class 25/20, concrete blinding and benching Class 15/20, 20mm diameter cast iron stepping irons where necessary; waterproof plaster to internal and external surfaces; complete with and including heavy duty double air seal cast iron cover and frame, all to Engineer's details. (Rate to include cost of all excavations, concrete, formwork, reinforcement, lifting key hole and associated works); prepare surface of steel by Sand blasting; prime with 2 pack epoxy zinc phosphate primer ; apply three coats of marine grade gloss oil paint				
5.1.4	Internal dimensions: 600x 450x 1000mm deep	NO	10		
5.1.5	Ditto 850x1200x1500mm deep	NO	4		
	<b>Carried to Forward</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Brought forward from page FD/1				
	<b>Gulley traps</b>				
5.1.6	Supply and lay 730 x 730 x 500mm deep gulley traps complete with 400 x 400 x 10mm thick mild steel grating welded to 10mm thick mild steel frame at 30mm centres, hot galvanized and painted to approval [Rate to include excavation, 150mm thick plastered masonry walls, class 25/20 concrete base, concrete cover too receive grating and all surface finishes];prepare surface of steel by Sand blasting; prime with 2 pack epoxy zinc phosphate primer ; apply three coats of marine grade gloss oil paint; to Eng details	NO	8		
	<b>Grease Trap</b>				
	The following gulley trap to be executed in accordance with the Engineer's drawings, average depths as stated complete and including filling; 100mm thick concrete class 25/20 to external and internal walling; 150mm thick concrete floor slab Class 25/20, concrete blinding and benching Class 15/20, complete with and including heavy duty double air seal cast iron cover and frame, all to Engineer's details. (Rate to include cost of all excavations, concrete, formwork, reinforcement, lifting key hole and associated works); prepare surface of steel by Sand blasting; prime with 2 pack epoxy zinc phosphate primer ; apply three coats of marine grade gloss oil paint				
5.1.7	Internal dimensions size 1300x 500x 950mm deep	NO	1		
5.1.8	Extra over for back filling with selected imported material all to Project managers approval	CM	50		
	<b>TOTAL OF EXTERNAL SOIL WATER DRAINAGE CARRIED TO ELEMENT SUMMARY</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>ELEMENT NO. 2</u></b>				
	<b><u>1NO. BIODIGESTER-AS PER ENG DETAILS</u></b>				
5.2.1	Clear site of shrubs,grass and carting away the arisings	SM	102		
5.2.2	Excavate pit for biodigester not exceeding 1.5m deep	CM	153		
5.2.3	Ditto 1.5 - 3.0M deep	CM	153		
5.2.4	Ditto 3 - 4.5M deep	CM	26		
5.2.5	Extra over excavation in compacted fill	CM	100		
5.2.6	Extra over excavation in rock of any class	CM	50		
5.2.7	Return fill and ram selected excavated soil around walling	CM	50		
5.2.8	Cart away surplus excavated material	CM	282		
5.2.9	Planking and strutting to sides of all excavations: keep excavations free from all fallen materials	Item	1		
5.2.10	Allow for keeping the excavations free from all water by all means	Item	1		
5.2.11	50mm thick blinding class 15/20	SM	102		
5.2.12	200mm thick reinforced concrete class 25/20 slab in surface bed	SM	102		
5.2.13	200mm thick ditto to external walls	SM	114		
5.2.14	Ditto in baffle wall	SM	106		
5.2.15	200mm thick reinforced concrete class 25/20 in cover slab	SM	102		
5.2.16	<b>Marineply formwork to:</b> Sides of Rc external walling	SM	228		
5.2.17	Soffits of suspended slap	SM	102		
5.2.18	Sides of scum baffle wall	SM	212		
5.2.19	Edges of base slab 150-225mm girth	LM	41		
5.2.20	Edges of base slab 150-225mm girth	LM	41		
5.2.21	Box out formwork to opening size 600x450mm	NO	10		
	<b>Carried to Forward</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5.2.20	<u>High Tensile Reinforcement Bars to B. S. 4449</u> <u>including cutting, bending and all necessary spacer</u> <u>blocks : (Provisional) :-</u> <u>Ribbed bars to KS ISO 6935-2:2007</u> Assorted sizes	KG	12720		
5.2.21	Form or leave hole in 200mm concrete walling for 100mm pipe including making good disturbed surfaces	NO	8		
5.2.22	15mm thick cement/sand (1:3) waterproof plaster to walls and soffit of cover slab	SM	404		
5.2.23	30mm thick cement/sand (1:3) waterproof screed to surface bed of internal floor	SM	84		
5.2.24	600x450mm heavy duty double air seal cast iron cover and frame	NO	10		
5.2.25	<b>Soak Pit</b> Provide materials and erect soak pit 1.2m internal diameter with 150mm thick perforated stone walling and 100mm thick concrete base class 25/20 and 150mm thick RC slab class 25/20 ; including 600 x 450mm heavy duty manhole cover and frame and 200mm dia crushed stone chips filling; allow for inlet; and all necessary excavations, reinforcement and formwork; to Eng details	NO	1		
	<b>Carried to collection</b>				
	<b><u>BIODIGESTER</u></b>  Brought forward from page FD/3  Brought down from page FD/4 above				
	<b>TOTAL OF BIODIGESTER CARRIED TO ELEMENT SUMMARY</b>				
	<b><u>SUMMARY</u></b>  <b><u>ELEMENT</u></b>				
1	External soil water drainage				
2	1No.Biodigester				
	<b>TOTAL FOR EXTERNAL FOUL WATER DRAINAGE CARRIED TO MAIN SUMMARY</b>				

**DRIVE WAY AND PARKING**

**BILL NO.6**



**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>PARKING, DRIVEWAY AND WALKWAYS</u></b> <b><u>ALL PROVISIONAL</u></b>				
6.1.1.	Clear the site of all bushes, grass, shrubs, undergrowth and small trees not exceeding 600mm girth and burn arising	SM	1680		
6.1.2.	Cut down tree between 1500 - 1800mm girth, grub up their roots and cart away arisings	NO	6		
6.1.3.	<b>Excavation</b> to reduced levels not exceeding 1.50 m deep starting from the ground level	CM	840		
6.1.4.	Extra over all descriptions of excavations and removal from site for breaking up rocks: irrespective of class	CM	100		
	<b><u>Disposal of excavated material</u></b>				
6.1.5	Load and cart away surplus material from the site as directed by the project manager.	CM	840		
	<b><u>Road formation and subbase</u></b>				
6.1.6	Trim and compact formation to correct levels, cross-falls and longitudinal falls	SM	1680		
	<b>Imported Filling</b>				
6.1.7.	Provide and lay Imported and approved murram backfill or other approved materials to make up levels, well watered, rolled and compacted to 100% MDD at optimum moisture content in 150mm thick Layers to Engineer's approval	CM	840		
6.1.8.	Provide, lay and compact hand packed hardcore to maximum thickness of 300mm for the parking area. To atleast 100% MDD (AASHTO T99) compaction, including all necessary scarification and water in layers of at most 150mm.	SM	1680		
	<b>Quarry dust</b>				
6.1.9.	50mm thick quarry dust or any other equal and approved material in blinding surface of hardcore	SM	1680		
	<b>Herbicide Treatment</b>				
6.1.10.	Herbicides to approval applied to the manufacturer's written instructions and subject to a TEN YEAR guarantee	SM	1680		
	<b>Carried to collection</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6.1.11.	<b>Concrete Paving Blocks</b> Provide, lay and compact 60mm thick medium duty paving blocks min strength 45N/mm2	SM	1680		
6.1.12.	<b>Precast Concrete Channels Class 20/20</b> Provide, lay and joint 200x100mm channel in and including concrete Class 20/20 bed and haunch. Include for all necessary excavation and formwork to Eng details	LM	331		
6.1.13.	Ditto curved to plan	LM	9		
6.1.14.	<b>Precast Concrete Kerbs Class 20/20</b> Provide, lay and joint 250x125mm precast concrete half battered kerb and 200x100mm channel on and including Class 20/20 bed and haunch. Include for all necessary excavation and formwork to Eng details	LM	331		
6.1.15.	Ditto curved to plan	LM	9		
	<b><u>WALKWAYS</u></b>				
6.1.16.	Clear the site of all bushes, grass, shrubs, undergrowth and small trees not exceeding 600mm girth and burn arising	SM	250		
6.1.17.	<b>Excavation</b> to reduced levels not exceeding 1.50 m deep starting from the ground level	CM	125		
6.1.18.	Extra over all descriptions of excavations and removal from site for breaking up rocks: irrespective of class	CM	50		
6.1.19.	<b><u>Disposal of excavated material</u></b> Load and cart away surplus material from the site as directed by the project manager.	CM	125		
6.1.20.	<b><u>Road formation and subbase</u></b> Trim and compact formation to correct levels, cross-falls and longitudinal falls	SM	250		
6.1.21.	<b>Imported Filling</b> Provide and lay Imported and approved murram backfill or other approved materials to make up levels, well watered, rolled and compacted to 100% MDD at optimum moisture content in 150mm thick Layers to Engineer's approval	CM	125		
	<b>Carried to collection</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6.1.22.	Provide, lay and compact hand packed hardcore to maximum thickness of 300mm for the parking area. To atleast 100% MDD (AASHTO T99) compaction, including all necessary scarification and water in layers of at most 150mm.	SM	250		
6.1.23.	50mm thick quarry dust or any other equal and approved material in blinding surface of hardcore	SM	250		
6.1.24.	Herbicides to approval applied to the manufacturer's written instructions and subject to a TEN YEAR guarantee	SM	250		
	<b>Concrete Paving Blocks</b>				
6.1.25.	Provide, lay and compact 60mm thick medium duty paving blocks min strength 45N/mm2	SM	250		
	<b>Precast Concrete Channels Class 20/20</b>				
6.1.26.	Provide, lay and joint 200x100mm channel in and including concrete Class 20/20 bed and haunch. Include for all necessary excavation and formwork to Eng details	LM	272		
6.1.27.	Ditto curved to plan	LM	14		
	<b>Precast Concrete Kerbs Class 20/20</b>				
6.1.28.	Provide, lay and joint 250x125mm precast concrete half battered kerb and 200x100mm channel on and including Class 20/20 bed and haunch. Include for all necessary excavation and formwork to Eng details	LM	272		
6.1.29.	Ditto curved to plan	LM	14		
	<b>ROAD AND PARKING MARKING</b>				
	Prepare and apply three coats of approved road marking thermoplastic paint on asphalt to surfaces not exceeding 100mm girth				
6.1.30.	Yellow in colour	SM	50		
	<b>Carried to collection</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>STORM OF WATER DRAINS</u></b>				
	<b>Precast Concrete Invert Block Drains Class 20/20</b>				
6.1.31.	300mm diameter round precast concrete invert blocks drain manufactured in accordance with BS 340 laid to slope and including 100mm murrum bed;including 600 x 225 x 75mm thick side slabs : jointed and pointed in cement and sand 1:3 mortar : on compacted murrum : as per Engineer's details jointing in cement and sand mortar;including all necessary excavations, strutting, formwork, reinforcements; all as per Eng details.	LM	140		
	<b>Pump Cage</b>				
6.1.32.	Construction of a pump cage Approx.size 1800mm x 1800 x 1500mm high consisting of 150mm thick vibrated concrete class 25/20 slab on and including 100mm thick well compacted hardcore filling, 50mm thick blinding class 15/20, Approved Damp proof membrane, A142 BRC Mesh; complete with heavy duty galvanised wiremesh mesh size 25mmx25mm with 4mm dia wire; complete with lockable door; 15mm thick screed on the general faces of the slab in (1:3) cement/sand mortar, prepare surface by Sand blasting; apply one coat of 2 pack epoxy zinc phosphate primer; apply three coats of marine grade gloss paint to wiremesh; including all reinforcement, formwork, excavations and disposal	NO	2		
	<b>Watertank Base</b>				
6.1.33.	Clear the site of all bushes, grass, shrubs, undergrowth and small trees not exceeding 600mm girth and burn arising	SM	25		
6.1.34.	Excavate oversite to remove top vegetable soil average 300mm deep; dispose off site	SM	25		
6.1.35.	Excavate trenches for strip foundations; not exceeding 1.5m deep from reduced level	CM	23		
6.1.36.	<b>Disposal of water</b> Allow for keeping the excavations free from all water including spring and running water	Item			
	<b>Carried to collection</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6.1.37.	<b>Planking and strutting</b> Allow for planking and strutting sides of excavations and keeping excavations clear of all fallen material, rubbish, etc	Item			
6.1.38.	<b>Disposal</b> Return, fill-in and rum selected excavated material	CM	23		
6.1.39.	Load and cart away from site surplus excavated material as directed	CM			
6.1.40.	<b>Imported Fill</b> Imported filling to make-up levels; compacted in layers not exceeding 150 mm thick; To atleast 95% MDD (AASHTO T99) compaction	CM	20		
6.1.41.	300mm thick hardcore fill in making up levels, deposit and compacting in layers of 150mm maximum thickness	SM	20		
6.1.42.	50mm thick murrum blinding to surfaces of hardcore fill	SM	20		
6.1.43.	<b>Damp-proof Membrane</b> 1000 Gauge polythene; 150mm laps; no allowances made for laps	SM	25		
6.1.44.	<b>Anti-termite treatment</b> Treat hardcore surface with approved antitermite applied in accordance with the manufacturer's instructions and subject to a TEN YEAR guarantee	SM	20		
6.1.45.	<b>Mass concrete class 15/20</b> 50mm thick blinding to strip foundation	SM	15		
6.1.46.	<b>Concreting</b> <u>Reinforced vibrated insitu concrete; class 25/(20mm)to;-</u> Foundation strips	CM	3		
6.1.47.	<b>Reinforcements</b> <u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u> <u>Ribbed bars to KS ISO 6935-2:2007</u> Assorted bars	KG	180		
	<b>Carried to collection</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6.1.48.	<b>Steel mesh fabric reinforcement to B.S. 4483</b> Reference A142 mesh 200 x 200 mm , weighing not less than 2.22 kgs per square metre ( measured net - no allowance made for laps) including tying wire and distance blocks	SM	25		
6.1.49.	<b>Marineply formwork as Described. Allow for setting to special steel proping, strutting, fillets, nails, etc to:</b> Sides of strip foundations	SM	10		
6.1.50.	Edges of ground floor slab; 75 to 150mm high	LM	22		
6.1.51.	<b>Foundation walling</b> Approved natural stone or coral stone ; load bearing 7.5 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar	SM	38		
6.1.52.	<b>Plinth finish</b> 15mm Thick cement sand (1:3) rendering to plinth; wood float finish (PLEASE NOTE: The render shall be at least 450 mm below natural ground level)	SM	10		
6.1.53.	Prepare and apply three coats of premium quality marine grade bituminous paint to rendered walls; externally	SM	10		
6.1.54.	<b>Floor Finishes</b> 32mm thick cement and sand (1:4) screed; wood floated backing	SM	25		
	<b>Carried to collection</b>				
	<b><u>COLLECTION</u></b> <b><u>PARKING, DRIVEWAY, WALKWAYS AND STORM WATER DRAINAGE</u></b> Brought forward from page DW/1  Brought forward from page DW/2  Brought down from page DW/3  Brought down from page DW/4  Brought down from page DW/5  Brought down from page DW/6 above				
	<b>TOTAL FOR PARKING, DRIVEWAY, WALKWAYS AND STORM WATER DRAINAGE SUMMARY</b>				

**LANDSCAPING**

**BILL NO.7**

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>LANDSCAPING WORKS</u></b>				
	<b><u>ELEMNET NO 1.</u></b>				
	<b><u>GROUND PREPARATION AND GRASSING</u></b>				
	<b><u>Clearing and Levelling</u></b>				
7.1.1	Clear the site of all existing unwanted materials and scarify oversite commencing from main Contractor,s reduced levels, average 150 mm deep to allow for water seepage and retention remove all hardened ground, weeds and any deleterious materials; including carting away all arising wastes, raking and fine levelling of the ground.	SM	500		
7.1.2	Approved imported red soil filling to receive planters irrespective of size and spread; spread at varying depths as directed by the landscape architect or Project Manager	CM	150		
7.1.3	<b><u>Supply and application of Manure.</u></b> Supply and apply prime quality fertilizers or compost manure at designated locations and as directed by the landscape architect or Project Manager	SM	500		
	<b><u>Supply and Installation of Grass and Lawns</u></b>				
7.1.4	Supply, plant, water, weed and tend well undermentioned grass sprigs untill fully established / to reasonable maturity. Grass should also be rolled with a light weight roller to even out 'bumby' areas. This should be carried out one to two weeks after installation				
7.1.4	Pemba grass springs spaced at 100mm centres both ways	SM	300		
	<b><u>Planting of ground Covers</u></b>				
7.1.4	Clear site, level,excavate pits,supply,import red soil with manure,plant,weed,water and tend well assorted species of ground covers till full establishment as per the designs of the landscape architect or as directed by the Project Manager	SM	100		
	<b><u>Planting of Shrubs</u></b>				
7.1.5	Clear site, level,excavate pits,supply,import red soil with manure,plant, weed, water and tend well assorted species of Shrubs; till full establishment/reasonable maturity as per the designs of the landscape achitect or as directed by the Project Manager	SM	100		
	<b>TOTAL CARRIED FORWARD</b>				



## PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	LANDSCAPING WORKS CONTINUED...  BROUGHT FORWARD FROM PAGE LW/1  <u>Clear site, excavate pit,supply, import red soil with manure, plant, weed, water and tend well under-mentioned trees/large shrubs till full establishment/reasonable maturity and support the same with strong bamboo stakes, adequate in thickness for each tree.</u>				
7.1.6	Assorted Species of Palm trees and other ornamental trees as per the designs of the landscape architect or as directed by the project manager	NO	40		
7.1.7	Assorted Species of other indegenous trees as per the designs of the landscape architect or as directed by the project manager.	NO	30		
	<b><u>MAINTENANCE</u></b>  Allow for a follow up of all installations and constructions to insure establishment and concept preservation. Mowing, watering, training and trimming all included	Months	6		
	<b><u>LITTER BINS</u></b>  <u>Supply, deliver and install litter bins to specification</u>  Supply and install standard round swivel openable litter bin of galvanised steel with detailed pattern perforation, fixing to concrete footing or any other approved by project architect; overall size 600mm dia x 1200mm high	NO	6		
	TOTAL LANDSCAPING WORKS CARRIED FORWARD TO GRAND SUMMARY				

MECHANICAL WORKS

BILL NO.8

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<p align="center"><i>(All Rates are V.A.T Inclusive)</i></p> <p align="center"><b><u>BILL NO. 8; MECHANICAL WORKS</u></b></p> <p><b><u>ELEMENT NO. 1 (INTERNAL PLUMBING):</u></b></p> <p><i>Supply, deliver and install pipes, tubing and fittings as described and shown on the drawings. The pipes shall be PN 25PPR pipes where exposed to adverse weather conditions and all conforming to the current European standards for PPR installations and to the Engineers Approval. Pipe jointing shall be by polyfusion or use electric coupling, Rates must allow for all metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints support raceways, isolating sheaths, elastic materials, expansion arms and bends cross overs, couplings, clippings, connectors, joints etc. as required in the running legths of pipe work and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system. The pipes will be pressure tested before the plastering of wall commences and as per the manufactures recommended testing pressures</i></p> <p><b><u>PPR Pipes</u></b></p> <p><b>8.1.1</b> 20mm diameter pipework in wall chase LM 40</p> <p><b>8.1.2</b> 25mm Ditto LM 140</p> <p><b>8.1.3</b> 32mm ditto LM 88</p> <p><b>8.1.4</b> 40mm ditto LM 60</p> <p><b>8.1.5</b> 50mm ditto LM 140</p> <p><b>8.1.6</b> 63mm ditto LM 153</p> <p><b><u>Sockets:</u></b></p> <p><b>8.1.7</b> 20mm diameter socket No. 15</p> <p><b>8.1.8</b> 25mm ditto No. 35</p> <p><b>8.1.9</b> 32mm ditto No. 25</p> <p><b>8.1.10</b> 40mm ditto No. 47</p> <p><b>8.1.11</b> 50mm ditto No. 40</p> <p><b>8.1.12</b> 63mm ditto No. 30</p> <p><b><u>Bends</u></b></p> <p><b>8.1.13</b> 20mm diameter bends No. 40</p> <p><b>8.1.14</b> 25mm ditto No. 20</p> <p><b>8.1.15</b> 32mm ditto No. 15</p> <p><b>8.1.16</b> 40mm ditto No. 35</p> <p><b>8.1.17</b> 50mm ditto No. 33</p> <p><b>8.1.18</b> 63mm ditto No. 30</p> <p><b><u>Tees</u></b></p> <p><b>8.1.19</b> 20mm diameter equal tees No. 25</p> <p><b>8.1.20</b> 25mm ditto No. 50</p> <p><b>8.1.21</b> 32mm ditto No. 30</p> <p><b>8.1.22</b> 40mm ditto No. 25</p> <p><b>8.1.23</b> 50mm ditto No. 38</p> <p><b>8.1.24</b> 63mm ditto No. 15</p>				
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
	<u><b>Reducers</b></u>				
<b>8.1.25</b>	25 x 20mm diameter Reducer	No.	32		
<b>8.1.26</b>	32 x 25mm ditto	No.	30		
<b>8.1.27</b>	40 x 32mm ditto	No.	12		
<b>8.1.28</b>	40 x 25mm ditto	No.	8		
<b>8.1.29</b>	50 x 32mm ditto	No.	10		
<b>8.1.30</b>	63 x 40mm ditto	No.	12		
	<u><b>Threaded Fittings</b></u>				
<b>8.1.19</b>	20mm diameter male/female threaded 90° bend/Elbow	No.	120		
<b>8.1.20</b>	25mm diameter mle/female PPR-M Adapter	No.	35		
<b>8.1.21</b>	32mm ditto	LM	40		
	<u><b>Nipples</b></u>				
<b>8.1.22</b>	20mm diameter G.I. nipple	No	10		
<b>8.1.23</b>	25mm ditto	No.	40		
	<u><b>Valves</b></u>				
<b>8.1.24</b>	20mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 5154 PN 20 for series B rating, with wheel and hand jopints to steel tubing and complete with round male threaded transion fittings.	No.	2		
<b>8.1.25</b>	25mm ditto	LM	10		
<b>8.1.26</b>	32mm ditto	LM	13		
<b>8.1.27</b>	40mm ditto	LM	14		
<b>8.1.28</b>	50mm ditto	LM	15		
<b>8.1.29</b>	63mm ditto	LM	16		
	<b>TOTAL INTERNAL PLUMBING CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b><u>ELEMENT NO. 2:</u></b>  <b><u>SANITARY FITTINGS:</u></b>  Supply,deliver,install,test and commission the following sanitary appliances complete with all the accessories including all connections to the services,waste,jointing to water supply,overflows,supports and all plugging and screwing to walls and floors.  <b><u>Note.</u></b> (i). All sanitary fittings shall be in approved colour. (ii). The model and Ref. No. Indicated is only a guide to the type and quality of fittings. (iii). Equivalent and Approved models may be acceptable <b><u>Flexible Tubing</u></b> 15mm diameter x 300mm long flexible connectors complete with <b>8.2.2.1</b> Integral chrome plated angle valve for connecting the Sanitary fitting to water supply. No. 45  <b><u>Robe Hook</u></b> <b>8.2.2</b> Robe hook in approved vitreous mounted to concealed screw to wall wedges. No. 15  <b><u>Close Couple Water Closet Suite</u></b> Close Couple water closet suite in approved colour comprising of W.C. bowl,'p'or's' trap connector,heavy duty matching plastic seat and cover with metal top fixed to (chrome plated) hinges and secured to floor or wall and complete with horizontal outlet to BS 3402 with 6 litre valveless Ceramic cistern and fittings including siphon,15mm diameter side inlet ball valves,20mm diameter side overflow,plastic flush bend,inlet connection,and chrome-plated lever. <b>8.2.3</b> No. 9  <b><u>Pedestal wash hand basin</u></b> Wash Hand Basin with pedestal size 510x420mm with one tap hole and chain stay hole,32 mm diameter chrome-plated pop up chain waste and fittings,approved first quality plastic bottle trap(32mm bottle trap) with 75mm seal.The basin to be supplied and installed complete with 15mm diameter heavy duty chrome plated -Brass Basin Tap <b>8.2.4</b> No. 15  <b><u>Urinal Set</u></b> Urinal system comprising of approved 1No. Ceramic urinal bowl and division complete with doomed waste fitting, sparge and spreader including concealed Push Button-Type Urinal Flush Valve for 3/4" top spud urinals and accessories for proper functioning of the set <b>8.2.5</b> SET 3  <b><u>Toilet Roll Holder</u></b> Semi recessed toilet roll holder in approved Vitreous of size 165 x 165mm in approved colour. <b>8.2.6</b> No. 15  <b><u>Mirrors</u></b> 610 X 610 X 6mm thick polished plate silver backed with beveled edges mirror fixed with clear silicon to 100 x 25mm thick wrot mahogany molded framing in 4 labors plugged to wall using 4No. Wall plugs with 75mm long stainless steel screws, painted in three coats polyurethane varnish all to approval <b>8.2.7</b> No. 7  <b>8.2.8</b> As above but 1200mmX600mmX25mm No. 6  <b><u>Shower Fittings</u></b> Concealed shower fitting consisting of 25mm diameter x 2500mm long PPR riser pipe for showers,25mm diameter chrome plated brass cold water swivel/adjustable shower rose, Carina handle and Stop Cock <b>8.2.9</b> No. 1				
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
8.2.10	<b><u>Soap Dispenser</u></b> Wall mounted soap dispenser with a capacity of about 1.5 Litre and having a press action soap release mechanism complete with fixing screws.including allowing for initial soap supply.The soap dispenser shall be size125x100x290mm high.	No	13		
8.2.11	<b><u>Bib Tap</u></b> 15mm diameter heavy duty bib tap or other equal and to approved catalogue	No	5		
8.2.12	<b><u>Soap dish</u></b> Semi recessed built in soap dish in approved vitreous of size 150x150mm in approved colour.	No.	14		
8.2.13	<b><u>Towel Rail</u></b> Chrome plated 20mm diameter x 800mm long approved towel rail and brackets as one piece, plugged and screwed into the wall.	No	1		
8.2.14	<b><u>Single bowl, single drainer kitchen sink</u></b> 16SWG Double Bowl,single Drainer, stainless steel (Grade 316) kitchen sink suitable for mounting on counter of size 1200x600mm.The bowl size to be 450x420x 300mm deep complete with chrome plated 40mm diameter waste fittings,plugs,chain stays,overflow including 1No.15mm diameter heavy duty wall mount stainless steel bib tap.	No.	5		
8.2.15	<b><u>Disabled persons Water Closet and Wash Hand Basin Facility</u></b> Wheel chair accessible W.C facility Comprising of the following:- (i)Close coupled w.c with 7.5 litre cistern with bottom inlet and overflow.The bowl shall e of size 375 x 560 x 420mm high.The bowl and cistern shall be manufactured from approved vitreous complying with B.S 3402.The unit shall be complete with valveless cistern fitting including syphon,15mm side inlet ball valve,20mm diameter side overflow,plastic flush bend,inlet connector and reversible metallic chrome plated cistern lever.There shall also be a heavy duty seat(25mm high) and cover with chrome plated metal hinges,toilet roll holder,900 x 450 x 6mm thick mirror and Robe hook (ii)Semi-recessed wall mounted W.H.B of size 600 x 500 x 545mm high with flexible connectors to water taps.The basin shall be manufactured from approved vitreous complying with B.S 3402.It shall have one L/H tap hole with 15mm chrome plated lever action pillar tap,chrome plated waste,first quality bottle trap,pedestal and wall fixing bolts. (iii)Hinged support rail with toilet roll holder 770mm long manufactured in nylon coated aluminium and mounted on a wall fixing plate size 230x100mm,4No. 600mm grab rails with covered wall plates.The Disabled set shall be wheelchair accessible W.C facility.	SET	6		
8.2.16	<b><u>Hand Drier</u></b> Automatic Hand Drier in approved colour operating on infra-red automatic sensing system with heating element,safety cut-out complete with a 30-seconds safety timer,plastic rawl plugs and fixing screws.The hand drier to have a heating capacity of 3.1Kw and performance flow rate of 3.82 Litres/Min and to be of size270x264x143mm deep.It shall have anoise level of below72.5dBA at 1.5m.	No	12		
8.2.17	Arabic Shattaf Bidet spray c/w tube and head and fixing to wall.	NO	15		
	<b>TOTAL SANITARY FITTINGS CARRIED FORRWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b><u>ELEMENT NO. 7.3:</u></b>				
	<b><u>FOUL DRAINAGE:</u></b>				
	Supply,deliver and install the following UpVC,MUpVC,soil and waste systems,respectively to B.S 5255 with fittings fixed Key Terrain High Grade Golden Brown and Grey UPVC soil and waste pipe and jointing in accordance with manufacture's printed instructions and manufactured by reputable manufacturers.Tenderers must allow in their pipework prices for all the couplings,clippingsconnectors,joints,e.t.c as required in the running lengths of pipework and also where necessary,for pipe fixing clips,holder bats plugged and screwed for the proper and satisfactory functioning of the system				
	<b><u>Internal</u></b>				
8.3.1	40mm diameter Grey UPVC waste pipe	LM	40		
8.3.2	50mm ditto	LM	60		
8.3.3	75mm ditto	LM	15		
8.3.4	100mm ditto	LM	107		
	<b><u>Extra Ovetubing For:-</u></b>				
8.3.5	100x50mm diameter UPVC floor trap,grating and cover	No	33		
8.3.6	100mm WC connector	No	16		
8.3.7	40mm diameter access tee and cap	No	13		
8.3.8	50mm ditto	No	13		
8.3.9	100mm diameter inspection bend and acces cap.	No	16		
	<b><u>Extra Ovetubing For Cont'd:-</u></b>				
8.3.10	100mm diameter vent cowl	No	7		
8.3.11	100mm diameter medium duty UPVC gulley trap,grating cover and waste	NO	16		
	<b><u>External</u></b>				
8.3.12	100mm diameter Grey UPVC soil vent pipe with expansion coupling and fixing to wall with holder bats ducts	LM	75		
8.3.13	150mm diameter Golden Brown UPVC waste pipe in soil	LM	150		
	<b>TOTAL FOUL DRAINAGE CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

## PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<p><b>ELEMENT NO. 8.4:</b></p> <p><b>STERILIZATION AND TESTING:</b></p>				
8.4.1	Allow for sterilization and flushing out of entire cold water installation with chlorine to the Engineer's Satisfaction	ITEM	1		
8.4.2	Ditto for setting to work and testing the whole of the plumbing and drainage installation works both during progress and at completion to the satisfaction of the Engineer's satisfaction and to leave the whole installation in good working condition	ITEM	1		
	TOTAL TESTING CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE				



**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b><u>ELEMENT NO. 8.5:</u></b>				
	<b><u>BUILDER'S WORK IN CONNECTION WITH PLUMBING AND DRAINAGE:</u></b>				
	<b><u>Masonry Gulley Trap</u></b>				
<b>8.5.1</b>	Construct masonry gulley trap size 200x200mm, approx depth 300mm, complete with seal and concrete cover, including all disposal	No.	8		
	<b><u>Manholes and Covers</u></b>				
<b>8.5.2</b>	Construct Manholes size 600 x 450mm and averaging 750mm deep constructed in 100mm thick concrete base class 15/20, approved 150mm block sides rendered all around in cement and sand (1:4).It shall have an approved heavy duty Fibre Reinforced Plastic cover and frame ,Including all necessary excavations, disposal and form work.	No.	17		
	<b><u>Excavations</u></b>				
<b>8.5.3</b>	Excavate trench in soil/murram for Water Mains supply pipes not exceeding 1200mm deep ,lay pipe,part return in fill, ram and surplus cart away	LM	170		
	<b><u>Chasing</u></b>				
<b>8.5.4</b>	Form chase in both 100mm and 200mm thick coral block wall to receive necessary pipe work and make good disturbed areas	LM	328		
	<b><u>Holes</u></b>				
<b>8.5.5</b>	Make a hole through 100mm thick coral block wall for small pipe and make good disturbed areas	No.	18		
<b>8.5.6</b>	Ditto but 200mm thick and for large	No.	12		
	<b>TOTAL BUILDERS WORK CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b><u>ELEMENT NO. 8.6:</u></b>				
	<b><u>WATER RETICULATION - ALL PROVISIONAL</u></b>				
	<b><u>Roof Top Water Tanks</u></b>				
8.6.1	Supply, deliver and install vertical close end plastic moulded tank of capacity <b>5,000 litres</b> and. The tank to be assembled complete with cover and having screwed connections fo inlet, outlet, overflow, 32mm high pressure ball valve, drain pipes and any other item necessary for its proper functioning.. The tank shall be installed on a flat roof base	ITEM	4		
	<b><u>Excavations</u></b>				
8.6.2	Excavate trench in soil/murram for Water Mains supply pipe not exceeding 1200mm deep ,lay pipe,part return in,fill ram and surplus cart away	LM	120		
	<b><u>Pipe Work</u></b>				
8.6.3	100mm diameter PN 16 HDPE pump suction lines	LM	30		
8.6.4	100mm diameter Ditto but Delivery line	LM	70		
8.6.5	63mm diameter Ditto but Delivery line	LM	80		
8.6.6	32mm diameter (PN-20) PPR Pipe laid and jointed in trench from water mains	LM	60		
8.6.7	40mm ditto	LM	45		
	<b><u>Extra Overtubing for:</u></b>				
	<b><u>Sockets:</u></b>				
8.6.8	32mm diameter PPR Sockets	No.	20		
8.6.9	40mm ditto	LM	15		
8.6.10	63mm ditto	LM	15		
	<b><u>Bends</u></b>				
8.6.11	40mm diameter bend/Elbow	No.	10		
8.6.12	63mm ditto	No.	15		
	<b><u>Tees</u></b>				
8.6.13	40mm diameter (PN-20) PPR equal tee	No.	12		
	<b><u>Valves</u></b>				
8.6.14	32mm diameter supply mains full way approved gate valve	No.	14		
8.6.15	40mm ditto	No.	6		
8.6.16	63mm ditto	No.	8		
	<b><u>Water Connection to Supply mains &amp; Testing</u></b>				
8.6.17	50mm diameter G.I. equal tee	No	1		
8.6.18	50x40mm diameter G.I. reducer	No	1		
8.6.19	40mm diameter G.I. nipple	No	2		
8.6.20	50mm diameter PPR Adaptor	No	1		
8.6.21	40mm diameter full Way approved gate valve	No	1		
	<b><u>Meter Connection</u></b>				
8.6.22	Allow for 25mm diameter approved Meter Connection from the Local Water Authority including paying for all the necessary charges,if any	ITEM	1		
	<b><u>Stand Pipe</u></b>				
8.6.23	15mm diameter bib tap suitable for connecting to a hose pipe complete with threaded adaptors.The tap to be complete with 5-metre long 20mm diameter pipe,bends,e.t.c.The chrome plated bib tap to be approved by the engineer	ITEM	8		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
7.6.24	<p><b><u>Mains Valve Chamber</u></b> Construct Mains Valve Chamber size 600x600x500mm deep with 100mm thick concrete block rendered all round in cement and sand mortar (1:4) including hinged iron cover and frame in grease</p>	ITEM	3		
7.6.25	<p><b><u>Booster Pump Sets</u></b> Booster Pump Sets (2No) for Roof Top water Tanks mounted on a common Galvanized Steel base Frame and to approval, each set comprising of, One pump duty, One pump stand by, and each of capacity 5m<sup>3</sup>/hr against a Maximum Head of 40metres. Each pump set shall be complete with control panel, MCBS, Pressure and Float switches, Overload protection, ON/OFF Buttons, Indicator Lights, Non -Return and Gate valves and a Pressure Vessel of Approx Capacity 60Litres including all other accessories for proper functioning. The pumps shall be connected in that when the Running Duty pump fails the Standby Pump starts up automatically.</p>	ITEM	1		
7.6.26	<p><b><u>Testing</u></b> Allow for connecting the above earlier described Booster pumps to the pump delivery and suction lines, including Test Pumping and testing the whole of the water Reticulation system both during progress and at commissioning to the Engineer's satisfaction and to leave the system in and good sound working condition.</p>	ITEM	1		
7.6.27	<p><b><u>Surface Mounted Water Storage Tanks</u></b> Supply, deliver and install vertical close end plastic moulded water storage tank of capacity 24,000 litres and (size 3220mm diameterx3400mm high). The tank to be assembled complete with cover and having screwed connections for inlet, outlet, overflow, 32mm high pressure ball valve, drain pipes and any other item necessary for its proper functioning.. The tank shall be installed on a reinforced flat surface platform base approx. 900mm high (M/S).</p>	ITEM	2		
7.6.28	<p><b><u>Tank Base</u></b> Allow for the construction of the above mentioned tank base Approx.size 3500mm diameter x 900mm high consisting of 200mm thick coral block wall, 100mm thick well compacted hardcore filling, 50mm thick blinding, Approved Damp proof membrane, A142 BRC Mesh, 100mm thick vibrated class 20/20 concrete floor slab, 15mm thick screed on the general faces of the tank base in (1:3) cement/sand mortar, 600mm wide x 1500mm deep strip foundation, including all Excavations and disposal</p>	ITEM	2		
7.6.29	<p><b><u>Testing</u></b> Allow for testing the general water supply and reticulation systems to level in sound working condition and to the Engineer's satisfaction</p>	ITEM	1		
	<b>TOTAL WATER RETICULATION CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b><u>ELEMENT NO.8.7:</u></b>				
	<b><u>FIRE FIGHTING AND PROTECTION SERVICES</u></b>				
	<b><u>Supply,deliver and install the following fire fighting equipment in positions indicated on the contract drawings or as shall be instructed by the Engineer.Tenderers during pricing should allow for all fittings,jointings,couplings,including unions and clamps,where necessary for the proper functioning of the installation.</u></b>				
	<b><u>Hose Reels.</u></b>				
8.7.1	20mm diameter x 30Metre long swinging type hose reel complete with delivery hose,nozzle,mild steel feed pipe,isolation valve,guide,bracket and all other accessories.	No.	4		
	<b><u>Hose Reel Fire Tank</u></b>				
8.7.2	Supply, deliever and install vertical close end plastic moulded tank of capacity <b>10,000 Litre (Size 1830 diameter x 2020mm high)</b> .The tank to be assembled complete with cover and having screwed connections for inlet, outlet and overflow, 32mm medium pressure ball valve, drain pipes and any other necessary item for its proper functioning. The tank shall be mounted on a flat roof slab.	ITEM	1		
	<b><u>Pipework (G.I)</u></b>				
8.7.3	20mm diameter medium grade galvanized mild steel supply pipe	LM	12		
8.7.4	25mm ditto	LM	10		
8.7.5	32mm Ditto	LM	10		
8.7.6	40mm ditto	LM	30		
8.7.7	50mm Ditto	LM	60		
	<b><u>Sockets</u></b>				
8.7.8	25mm diameter (G.I)socket	No.	8		
8.7.9	32mm Ditto	No.	5		
8.7.10	40mm ditto	No.	9		
8.7.11	50mm Ditto	No.	16		
	<b><u>Unions</u></b>				
8.7.12	20mm diameter (G.I)union	No.	8		
	<b><u>Bends/Elbows</u></b>				
8.7.13	20mm diameter (G.I) bend	No.	8		
8.7.14	32mm Ditto	No.	2		
8.7.15	40mm Ditto	No.	6		
	<b><u>Tees</u></b>				
8.7.16	25mm diameter (G.I)equal tee	No.	2		
8.7.17	50mm Ditto	No.	5		
	<b><u>Reducers</u></b>				
8.7.18	25x20mm diameter G.I. Reducer	No.	2		
8.7.19	32x25mm ditto	No	2		
8.7.20	40x32mm ditto	No	2		
8.7.21	50x40mm ditto	No	2		
	<b><u>Nipples</u></b>				
8.7.22	20mm (G.I) nipple	No.	4		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
8.7.23	<b><u>Painting</u></b> Prepare prime and apply two coats of gloss oil paint - RED - on the general surfaces of the above described Hose Reel supply pipes	ITEM	1		
8.7.24	<b><u>Hose Reel Booster Pump Set</u></b> Booster Pump Set for Hose Reels consisting of 2No. parallel duty pumps mounted on a common Mild Steel base Frame to approval, each of capacity <b>12m<sup>3</sup>/hr</b> against a Maximum Head of <b>40(metres)</b> . The pump set shall be complete with control panel, MCBS, Pressure and Float switches, Overload protection, ON/OFF Buttons, Indicator Lights, Non -Return and Gate valves and a Pressure Vessel of Approx Capacity <b>300Litres</b> including all other accessories for proper functioning. The pumps shall be connected in that when the Running Duty pump fails the Standby Pump starts up automatically.	ITEM	1		
8.7.25	<b><u>Testing</u></b> Allow for connecting the above earlier described Booster pumps to the pump delivery and suction lines, including Test Pumping and testing the whole of the water Reticulation system both during progress and at commissioning to the Engineer's satisfaction and to leave the system in good and sound working condition	ITEM	1		
8.7.26	<b><u>Breeching Inlet /Booster inlets</u></b> Supply and Install Fire service 4" x 2 way breeching inlet connection complete with Drain Valves complying with BS 336:2010, PN16 Rated and non-return valves. The breeching inlets to be manufactured to comply to BS 5041	ITEM	1		
8.7.27	<b><u>Breeching Inlet Cabinet</u></b> Supply and install breeching inlet cabinet, recessed type to accommodate 6" x 4 way breeching inlet manufactured to comply to BS5041-5	ITEM	1		
8.7.28	<b><u>Valve Chamber</u></b> Construct Mains Valve Chamber size 600x600x500mm deep with 100mm thick concrete block rendered all round in cement and sand mortar (1:4) including hinged iron cover and frame in grease	ITEM	2		
8.7.29	<b><u>External Fire Hydrant</u></b> Supply 2 way pillar type fire hydrant with dia 63 outlet to LCPB/EN 12845 standard	ITEM	2		
8.7.30	<b><u>100 mm hydrant isolation valve</u></b> UL Listed/ FM Approved, Connection: Flanged as BS EN 1092-2/ Flanged as ASME B16.1, PN 16	ITEM	2		
8.7.31	<b><u>Underground Piping</u></b> Supply, install below HDPE PN 20 to BS EN 12201, ISO 4427 ground pipe providing, fixing, jointing, testing in position & commissioning, including excavation & backfilling as required.				
8.7.32	<b><u>Pipe connection, tees must be electrofusion/butt fusion fittings</u></b> 100Ø HDPE	LM	160		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
	<u>Supply,deliver and install the following Portable Fire extinguishers to positions indicated on the conract drawings and as instructed by the Engineer:-</u>				
	<u><b>Dry Powder Fire Extinguisher</b></u>				
8.7.33	9Kg catridge type general purpose portable dry powder fire extinguisher fully charged or equal and approved.	No.	4		
	<u><b>Carbon dioxide Gas Fire Extinguisher</b></u>				
8.7.34	5kg carbon dioxide gas portale fire extinguisher complete with pressure gauge,initial charge and mounting brackets	No.	4		
	<u><b>Water Carbon Dioxide Fire Extinguisher</b></u>				
8.7.35	9.0Litre Water carbon dioxide (WCo2) portable fire extinguisher complete wth pressure gauge,initial charge and mounting brackets.	No.	4		
	<u><b>Signage</b></u>				
8.7.36	Allow for the Signage of fire hose Reel,fire exits and fire instructions all as described in the particular specifications and to the Project Enginneer's Approval.	ITEM	4		
	<u><b>Testing</b></u>				
8.7.37	Testing the whole fire fighting equipments to leave in sound working condition and to the Engineer's satisfaction	ITEM	1		
	<b>TOTAL FIRE FIGHTING CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b>ELEMENT NO. 8.8:</b> <b>ON-SITE WASTEWATER TREATMENT PLANT</b>				
	<b><u>Preliminaries, Drawings, Manuals, Handovers, Training, Regulatory Matters, Operation &amp; Maintenance</u></b>				
8.8.1	Allow for Start-Up & Training Programme of Clients designated Site Operators & Maintenance Personnel. A start-up and operator training program enables the operator to learn about the treatment process and the equipment used in the process. Start-up involves pre-commissioning checks of the process mechanical and electrical equipment. After wet-testing procedures, maintenance and servicing requirements are given. When the process has been commissioned, operator training will take place so that the operator/s can learn operational monitoring, process cycle changes, and troubleshooting. Personel to be full capable of of regular and routine maintence tasks and reporting.	SUM	1		
8.8.2	Allow for Monthly Maintenance visits for period of Twelve (12) Months	SUM	1		
8.8.3	Allow to liase with the NEMA authorities, assit client with submitting application and obtaining discharge licence for the Waste Water treatment Plant	SUM	1		
8.8.4	On completion of the Waste water treatment plant, take water samples as necessary to Certified Laboritory for testing. Submit tests and results to NEMA along with all necessary application forms and obtain NEMA approval and licence to operate the Waste Water treatment Plant	SUM	1		
8.8.5	Allow for any other item not necessarily mentioned here to provide a complete working system to the Satisfaction of the engineer	SUM	1		
	<b><u>WASTE WATER TREATMENT SYSTEM</u></b>				
	Supply, Install, Test and Commission the Moving Bed Biofilm Reactor (MBBR) Waste Water Treatment System, With a capacity of treating <b>100PE</b> with an average flow rate of <b>15,000 lts per day</b> . With a <b>BOD load of 40Kgs per day</b> . <b>Ammonia Nitrogen load of 4Kgs per day</b> . With minimum treated discharge requirment of <b>BOD &lt;30mg/lit, TSS &lt;30mg/lit, Ammonia Nitrogen &lt;20mg/lit</b> . Complete with all Media, Screens, Pumps, Aeration Blowers, Aeration Diffusers, Manifolds, Level sensors, Valves, Piping, Fittings and Accessories to fully conform to the specified discharge requirements				
8.8.6	Main control panel (MCP), NEMA 4 free-standing enclosure with forced air ventilation. The MCP is the "intelligence" of the treatment process. Electrical Control Panel with PLC, electrial isolators, overload protction, Equipment running and trip indication lights, automatic and manual override switches. Minimum IP 55 enclosure. Audio-visual alarm indicator to be provided outside the control shed. Allow for PLC complete with Graphical Human Machine Interface (HMI). Alarm, fault and process indicators will be displayed on the process control panel. Allow for high specification internet based Remote Monitoring & Control using GSM/GPRS/IoT technology with real-time monitoring, control and alerts of the status and alarms of the plant's operations by both supplier and client parties. User acess via mobile phone App, web protal, SMS/Email alterts for critical plant condition.	NO	1		
8.8.7	Allow for MBBR media of High Quality Virgin High Density Polyethylene (HDPE). Quality of media shall have Specific Gravity of 0.96 and bulk density of 125kg/m3. Required Surface Area specification shall be 675m2/m3.	SUM	1		
8.8.8	Process Aeration Blowers 1.6 kW / 3 HP positive displacement (PD), one (1) duty, one (1) standby.	NO	2		
8.8.10	Fine bubble aeration system, in-basin pipes and connections to the top of the wall of the basin.	SUM	1		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
<b>8.8.11</b>	9" Fine Bubble Disc diffusers. Specification is PTFE coated EPDM membranes. PTFE protective layer is to ensure extended useful lifespan of diffusers over standard EPDM diffuser products.	NO	35		
<b>8.8.12</b>	Allow for Coarse inlet Screen 2" slots for capture of large rags and solids. Fabricated with 50mm polypropylene structure & Stainless Steel.	NO	1		
<b>8.8.13</b>	Allow for PolyLok PL-625 Effluent Filter with 1/32" linear feet filter slot size for capture of smaller fine solids. Effluent Filter shall come with automatic shutoff ball for closing outlet to avoid solids wash through during servicing, as acting as a gas deflector.	NO	3		
<b>8.8.14</b>	1 HP submersible RAS/WAS pumps	NO	1		
<b>8.8.15</b>	Influent pumps, one (1) duty and one (1) standby	NO	2		
<b>8.8.16</b>	Chemical dosing pumps and controls for sodium hypochlorite, plus chemical makeup tank. System for Chlorine Disinfection of Treated Waste Water.	SUM	1		
<b>8.8.17</b>	All pipe & fittings as required to complete the interconnecting system and all necessary fittings, valves and accessories.	SUM	1		
<b>8.8.18</b>	All Electrical wiring as required to complete the interconnecting system and all necessary conduits, fittings and accessories.	SUM	1		
<b>8.8.19</b>	Allow for Installation of Wastewater Treatment Plant Equipment, include all Labour, Transport & Sundries Costs	SUM	1		
	<b><u>TOTAL FOR ON-SITE WASTEWATER TREATMENT PLANT CARRIED TO SUMMARY</u></b>				



**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b><u>ELEMENT NO.8.9:</u></b> <b><u>A. C.</u></b> <b><u>Supply, deliver, install, test and commission the following</u></b>				
<b>8.9.1</b>	24000btu/ hr (7.5KW) hi- wall split unit air conditioner set inclusive of wireless remote and wall mounted outdoor unit complete with all the support brackets and anti- vibration mountings. The unit shall operate on a non- ozone depleting refrigerant. The entire system should be able to restart automatically within three minutes after faliure	No.	1		
<b>8.9.2</b>	24000btu/ hr (7.5KW) ceiling cassette split unit air conditioner set inclusive of wireless remote and wall mounted outdoor unit complete with all the support brackets and anti- vibration mountings. The unit shall operate on a non- ozone depleting refrigerant. The entire system should be able to restart automatically within three minutes after faliure	No.	1		
<b>8.9.3</b>	Allow for liquid and gas insulated copper and indoor to outdoor power and communication cables	Lm.	50		
<b>8.9.4</b>	Allow for 30A Automatic Voltage Stabilizer	No.	2		
<b>8.9.5</b>	Allow for floor mounted condenser bracket to raise the unit by at least 200mm above the slab to prevent waterlogging in case of flooding	Item	1		
<b>8.9.6</b>	32mm diameter UPVC condensate drain pipe	Lm	50		
	<b><u>TOTAL FOR SERVER ROOM AC CARRIED TO SUMMARY</u></b>				

## PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

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**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<u>MECHANICAL WORKS SUMMARY PAGE:</u>				
8.1	INTERNAL PLUMBING				
8.2	SANITARY FITTINGS				
8.3	FOUL DRAINAGE				
8.4	TESTING				
8.5	BUILDERS WORK				
8.6	WATER RETICULATION				
8.7	FIRE FIGHTING				
8.8	ON-SITE WASTEWATER TREATMENT PLANT				
8.9	A.C.				
8.10	GENERAL ITEMS				
	TOTAL FOR MECHANICAL WORKS CARRIED FORWARD TO GRAND SUMMARY PAGE				

ELECTRICAL WORKS

BILL NO.9

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p align="center"><i>(All Rates are V.A.T Inclusive)</i></p> <p align="center"><b><u>BILL NO. 9: ELECTRICAL WORKS</u></b></p> <p><b><u>SCHEDULE 1:</u></b></p> <p><b><u>GROUND FLOOR</u></b></p> <p><u>Supply Install, Test and Commission Following:-</u></p> <p><b><u>LIGHTING POINTS</u></b></p> <p>Lighting points wired in 3x4.5mm<sup>2</sup> PVC/SC copper cables drawn in concealed 20mm diameter heavy gauge PVC conduit including all boxes, saddles and accessories for</p> <p>9.1.1 i)One way switching No. 69</p> <p>ii)Two Way switching No. 20</p> <p>9.1.2 10A plastic switch plates as follows</p> <p>i)One gang one way No. 16</p> <p>ii)One gang two way No. 5</p> <p>iii)Two gang two way No. 2</p> <p><b><u>LIGHTING FITTINGS</u></b></p> <p>9.1.3 Light fittings complete with all the necessary fixing accessories and rated energy lamps as follows:-</p> <p>i) Type C No. 8</p> <p>ii) Exit Light No. 5</p> <p>iii) Type 600X600 No. 12</p> <p>iv)Type 2 No. 13</p> <p>v) Type 2D No. 7</p> <p>vi) Type 4C No. 1</p> <p>vii) Type N No. 27</p> <p>viii) Type 4 No. 3</p> <p>ix) Type M No. 13</p> <p>9.1.4 Motion Sensors for lighting in washrooms No. 7</p> <p><b><u>POWER OUTLETS</u></b></p> <p>9.1.5 Socket outlet point in Ring wiring of 3x2.5 mm<sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits No. 45</p> <p>9.1.6 13A Twin switched moduled socket outlet plate No. 45</p> <p>9.1.7 20A Double Pole outlet point comprising of wiring in 3x4.0 mm<sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits No. 7</p> <p>9.1.8 20A Double pole switch complete with neon light 7</p> <p>9.1.9 Single phase isolator point comprising of wiring in 3x6.0 mm<sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits 1</p> <p>9.1.10 32A Single phase Isolator complete with 3 pin industrial socket and plug 1</p> <p><b>TOTAL C/F TO NEXT PAGE</b></p>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>BALANCE B/F/ FROM PREVIOUS PAGE</b>				
	<b><u>KITCHENETTE</u></b>				
9.1.11	Cooker point comprising wiring in 3x6.0mm <sup>2</sup> PVC SC Cu cables drawn inside trunking	No.	2		
9.1.12	45A Cooker Control Unit incorporating a 13A switched socket outlet and neon indicator	No.	2		
9.1.13	Cooker connector	No.	2		
	<b><u>ELECTRICAL SWEEP FANS</u></b>				
9.1.14	Ceiling fan points wired in 3x2.5mm <sup>2</sup> PVC/SC copper cables drawn in concealed 20mm diameter heavy gauge PVC conduit including all boxes, saddles and all accessories	No.	28		
	<b><u>CEILING FANS</u></b>				
9.1.15	i) 49W 1400mm 3-arm 5- speed, Ceiling fan complete with the regulator	No.	10		
9.1.16	Ceiling fan hook (M-10) complete with rawl bolt.	No.	10		
	<b><u>FIRE DETECTION AND ALARM SYSTEM</u></b>				
9.1.17	Fire alarm panel/Fire alarm bell/Break glass Unit Points/Smoke detector points comprising wiring in 3x1.5mm <sup>2</sup> fire resistant cables concealed in PVC conduits concealed in ceiling space but excluding bell and break glass unit	No.	24		
9.1.18	Addressable Call point	No.	5		
9.1.19	Addressable Sounder complete with beacon	No.	5		
9.1.20	Addressable Smoke detectors complete with base	No.	11		
9.1.21	Addressable Heat detectors complete with base	No.	2		
9.1.22	Single Loop, Expandable to 8, Intelligent Addressable fire alarm panel with atleast 200 addresses complete with full network capability, stand-by batteries and integral battery charger, touch screen, thermal printer and CAN modules	No.	1		
	<b><u>TELEVISION, CCTV AND DATA WORKS</u></b>				
9.1.23	16 SWG, (450 x 300 x 100)mm <sup>3</sup> flush mounted galvanised powder coated draw box for telephone & data works	4	No		
9.1.24	Telephone/Data outlet point comprising of concealed 20mm diameter HG PVC conduits plus draw wire	24	No		
	<b>TOTAL C/F TO NEXT PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>BALANCE B/F/ FROM PREVIOUS PAGE</b>				
<b>9.1.25</b>	RJ45, Single Data outlet plate a) Single	17	No		
<b>9.1.26</b>	TV outlet point comprising of 75Ω aerial cable (Co-axial) drawn in 25mm Ø full length heavy gauge plastic conduits cast in floor slab and concealed in the walls but without the outlet plate running from the TV point to the MATV on the roof	1	NO		
<b>9.1.27</b>	Single TV face plate	1	NO		
	<b><u>DISTRIBUTION BOARDS</u></b>				
<b>9.1.28</b>	8-Way TP/N distribution board flush mounted complete 1No. 100A TPN integral isolator.	No.	1		
<b>9.1.29</b>	MCBs for the above boards				
	i)16A SP	No.	7		
	ii)20ASP	No.	7		
	iii)32ASP	No.	4		
	iv)32ATP	No.	2		
	v)Blanking Plates	No.	4		
	<b><u>SUB-MAINS CABLES</u></b>				
<b>9.1.30</b>	4 core 25mm <sup>2</sup> PVCC/SWA/PVC (armoured) + 1X16mm <sup>2</sup> single Core copper cables drawn inside 50mm diameter HG conduits	LM	15		
<b>9.1.31</b>	Cable glands for the above cable	No.	2		
<b>9.1.32</b>	Cable lugs for the above cable complete with hydraulic crimping	No.	10		
	<b>TOTAL GROUND FLOOR C/F TO COLLECTION SUMMARY PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>SCHEDULE 2:</u></b> <b><u>FIRST FLOOR</u></b> <b><u>Supply Install, Test and Commission Following:-</u></b>				
	<b><u>LIGHTING POINTS</u></b> Lighting points wired in 3x4.5mm <sup>2</sup> PVC/SC copper cables drawn in concealed 20mm diameter heavy gauge PVC conduit including all boxes, saddles and accessories for				
9.2.1	i)One way switching	No.	44		
	ii)Two Way switching	No.	20		
9.2.2	10A plastic switch plates as follows				
	i)One gang one way	No.	16		
	ii)One gang two way	No.	5		
9.2.3	<b><u>LIGHTING FITTINGS</u></b> Light fittings complete with all the necessary fixing accessories and rated energy lamps as follows:-				
	i) Type C	No.	0		
	ii) Exit Light	No.	3		
	iii) Type 600X600	No.	15		
	iv)Type 2	No.	13		
	v) Type 2D	No.	7		
	vi) Type 4C	No.	1		
	vii) Type N	No.	22		
	viii) Type 4	No.	3		
9.2.4	Motion Sensors for lighting in washrooms	No.	7		
	<b><u>POWER OUTLETS</u></b> Socket outlet point in Ring wiring of 3x2.5 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits				
9.2.5		No.	43		
9.2.6	13A Twin switched moduled socket outlet plate	No.	43		
9.2.7	20A Double Pole outlet point comprising of wiring in 3x4.0 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	7		
9.2.8	20A Double pole switch complete with neon light	No.	7		
	<b><u>KITCHENETTE</u></b> Cooker point comprising wiring in 3x6.0mm <sup>2</sup> PVC SC Cu cables drawn inside trunking				
9.2.9		No.	1		
9.2.10	45A Cooker Control Unit incorporating a 13A switched socket outlet and neon indicator	No.	1		
9.2.11	Cooker connector	No.	1		
	<b><u>ELECTRICAL SWEEP FANS</u></b> Ceiling fan points wired in 3x2.5mm <sup>2</sup> PVC/SC copper cables drawn in concealed 20mm diameter heavy gauge PVC conduit including all boxes, saddles and all accessories				
9.2.12		No.	9		
	<b>TOTAL C/F TO NEXT PAGE</b>				



**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
9.2.13	49W 1400mm 3-arm 5- speed, Ceiling fan complete with the regulator	No.	9		
9.2.14	Ceiling fan hook (M-10) complete with rawl bolt.	No.	9		
	<b><u>FIRE DETECTION AND ALARM SYSTEM</u></b>				
9.2.15	Fire alarm panel/Fire alarm bell/Break glass Unit Points/Smoke detector points comprising iring in 3x1.5mm <sup>2</sup> fire risistant cables concealed in PVC conduits concealed in ceiling space but excluding bell and break glass unit	No.	19		
9.2.16	Addressable Call point	No.	3		
9.2.17	Addressable Sounder complete with beacon	No.	3		
9.2.18	Addressable Smoke detectors complete with base	No.	12		
9.2.19	Addressable Heat detectors complete with base	No.	1		
	<b><u>TELEVISION, CCTV AND DATA WORKS</u></b>				
9.2.20	16 SWG, (450 x 300 x 100)mm <sup>3</sup> flush mounted galvanised powder coated draw box for telephone & data works	4	No		
9.2.21	Telephone/Data outlet point comprising of concealed 20mm diameter HG PVC conduits plus draw wire	26	No		
9.2.22	RJ45, Data outlet plate a) Single	19	No		
9.2.23	TV outlet point comprising of 75Ω aerial cable (Co-axial) drawn in 25mm Ø full length heavy gauge plastic conduits cast in floor slab and concealed in the walls but without the outlet plate running from the TV point to the MATV on the roof	1	NO		
9.2.24	Single TV face plate	1	NO		
	<b><u>DISTRIBUTION BOARDS</u></b>				
9.2.25	8-Way TP/N distribution board flush mounted complete 1No. 100A TPN integral isolator.	No.	1		
9.2.26	MCBs for the boards above i)16A SP ii)20ASP iii)32ASP iv)45A SP v)Blanking Plates	No. No. No. No. No.	5 8 3 1 7		
9.2.27	<b><u>SUB-MAINS CABLES</u></b> 4 core 25mm <sup>2</sup> PVCC/SWA/PVC (armoured) + 1X16mm <sup>2</sup> single Core copper cables drawn inside 50mm diameter HG conduits	LM	20		
9.2.28	Cable glands for the above cable	No.	2		
9.2.29	Cable lugs for the above cable complete with hydraulic crimping	No.	20		
	<b>TOTAL FOR FIRST FLOOR C/F TO SUMMARY PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>SCHEDULE 3:</u></b>				
	<b><u>SECOND FLOOR</u></b>				
	<u>Supply Install, Test and Commission Following:-</u>				
	<b><u>LIGHTING POINTS</u></b>				
9.3.1	Lighting points wired in 3x4.5mm <sup>2</sup> PVC/SC copper cables drawn in concealed 20mm diameter heavy gauge PVC conduit including all boxes, saddles and accessories for				
	i)One way switching	No.	61		
	ii)Two Way switching	No.	23		
9.3.2	10A plastic switch plates as follows				
	i)One gang one way	No.	18		
	ii)One gang two way	No.	6		
9.3.3	<b><u>LIGHTING FITTINGS</u></b>				
	Light fittings complete with all the necessary fixing accessories and rated energy lamps as follows:-				
	i) Type C	No.	8		
	ii) Exit Light	No.	4		
	iii) Type 600X600	No.	17		
	iv)Type 2	No.	15		
	v) Type 2D	No.	8		
	vi) Type 4C	No.	5		
	vii) Type N	No.	23		
	viii) Type 4	No.	3		
	ix) Type X	No.	1		
9.3.4	Motion Sensors for lighting in washrooms	No.	9		
	<b><u>POWER OUTLETS</u></b>				
9.3.5	Socket outlet point in Ring wiring of 3x2.5 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	45		
9.3.6	13A Twin switched moduled socket outlet plate	No.	45		
9.3.7	20A Double Pole outlet point comprising of wiring in 3x4.0 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	9		
9.3.8	20A Double pole switch complete with neon light		9		
	<b><u>KITCHENETTE</u></b>				
9.3.9	Cooker point comprising wiring in 3x6.0mm <sup>2</sup> PVC SC Cu cables drawn inside trunking	No.	2		
9.3.10	45A Cooker Control Unit incorporating a 13A switched socket outlet and neon indicator	No.	2		
9.3.11	Cooker connector	No.	2		
	<b><u>ELECTRICAL SWEEP FANS</u></b>				
9.3.12	Ceiling fan points wired in 3x2.5mm <sup>2</sup> PVC/SC copper cables drawn in concealed 20mm diameter heavy gauge PVC conduit including all boxes, saddles and all accessories	No.	11		
	<b>TOTAL C/F TO NEXT PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
9.3.13	49W 1400mm 3-arm 5- speed, Ceiling fan complete with the regulator	No.	11		
9.3.14	Ceiling fan hook (M-10) complete with rawl bolt.	No.	11		
	<b><u>FIRE DETECTION AND ALARM SYSTEM</u></b>				
9.3.15	Fire alarm panel/Fire alarm bell/Break glass Unit Points/Smoke detector points comprising iring in 3x1.5mm <sup>2</sup> fire risistant cables concealed in PVC conduits concealed in ceiling space but excluding bell and break glass unit	No.	16		
9.3.16	Addressable Call point	No.	3		
9.3.17	Addressable Sounder complete with beacon	No.	3		
9.3.18	Addressable Smoke detectors complete with base	No.	8		
9.3.19	Addressable Heat detectors complete with base	No.	2		
	<b><u>TELEVISION, CCTV AND DATA WORKS</u></b>				
9.3.20	16 SWG,(450 x 300 x 100)mm <sup>3</sup> flush mounted galvanised powder coated draw box for telephone & data works	4	No		
9.3.21	Telephone/Data outlet point comprising of concealed 20mm diameter HG PVC conduits plus draw wire	26	No		
9.3.22	RJ45, Sinnle Data outlet plate	18	No		
9.3.23	TV outlet point comprising of 75Ω aerial cable (Co-axial) drawn in 25mm Ø full length heavy gauge plastic conduits cast in floor slab and concealed in the walls but without the outlet plate running from the TV point to the MATV on the roof	2	NO		
9.3.24	Single TV face plate	2	NO		
	<b><u>DISTRIBUTION BOARDS</u></b>				
9.3.25	8-Way TP/N distribution board flush mounted complete 1No. 100A TPN integral isolator.	No.	1		
9.3.26	MCBs for the boards above				
	i)16A SP	No.	13		
	ii)20ASP	No.	10		
	iii)32ASP	No.	4		
	iv)45A SP	No.	1		
	v)Blanking Plates	No.	8		
9.3.27	<b><u>SUB-MAINS CABLES</u></b>				
	4 core 25mm <sup>2</sup> PVCC/SWA/PVC (armoured) + 1X16mm <sup>2</sup> single Core copper cables drawn inside 50mm diameter HG conduits	LM	25		
9.3.27	Cable glands for the above cable	No.	2		
9.3.28	Cable lugs for the above cable complete with hydraulic crimping	No.	20		
	<b>TOTAL FOR SECOND FLOOR C/F TO CSUMMARY PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
9.4.1	<p><b><u>SCHEDULE 4 MAIN POWER DISTRIBUTION</u></b></p> <p><b><u>LOW VOLTAGE BOARD</u></b></p> <p>Free-standing purpose made front access sub main switchboard, modular, metal clad, manufactured in 12 SWG galvanised mild steel sheet and finished in cream (or appropriate colour) powder coating as shown on the schematic. The switchboard should consist of a PLC section. The switchboard to be complete with the following:-</p> <p>i) Digital multimeter with CTs and fuse protection capable of measuring voltage in the range 0 – 1000V, 3-phase, current in the range 0-630A, 3-phase, and all power system parameters (KW, KVA, KWHr, KVARs, Frequency, P.F., harmonics and all the parameters). The multimeter should be complete with selector switches for viewing/displaying the various parameters.</p> <p>ii) Set of neon phase presence indicator lamps</p> <p>iii) 150A adjustable TPN MCCB main incomer and having a short-circuit breaking capacity of 100KA at 415Vac, 50Hz.</p> <p>iv) 4 No. 150A TPN copper bus bars</p> <p>v) 3 No. 100A 3 P TPN MCCBs</p> <p>vi) 1 No. 63A SPN MCBs</p> <p>vii) 2 No. 32A TPN MCBs</p> <p>viii) Sufficient spare capacity for future development all fitted with 2 No. 63A SP MCBs &amp; 2 No. 100A TP MCCB</p> <p>x) Sealable studs for all cover plate screws and all necessary accessories</p> <p>xi) 6mm perspex viewing window</p> <p>xii) Heavy duty rubber lining for all the perspex viewing windows</p> <p>xiii) 415V three-phase surge diverter, wired as shown, complete with enclosure with viewing window.</p> <p>xiv) 30 KVAR's automatic Power Factor Correction Capacitor Bank comprising the following:-</p> <p>a) 1 No 10 KVAR's 415 V, 50Hz, 3-Phase</p> <p>b) 4 No 5 KVAR's 415 V, 50Hz, 3-Phase</p> <p>c) 5 No Special contactors for capacitor switching</p> <p>d) 5 No Fuse bases and fuses for each capacitor protection</p> <p>e) 5 No Step indicator lamps</p> <p>f) 5 No Control circuit protection fuse/fuse holder</p>	Item	1		
	<b>TOTAL C/F TO NEXT PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b> g) 1 No. 5-Step automatic control regulator for maintaining power factor at the set level and regulating the switching of capacitor steps  h) 1 No 150/5A Current transformer (to be mounted after the mains incoming circuit breaker)  <i>The bank to be made from low-loss bio-degradable capacitive units, complete with earthed enclosure. All the contactors, controls and indicator lamps, including a digital read-out screen, to be included.</i>  xv) Allow for Fireman's switch connection as indicated in the schematic drawing  xvi) Comprehensive protective multiple earthing of the board in 1500mm long 12mm diameter pure electrolytic copper earth rod deep driven to permanent moisture level, copper clamp. 120mm <sup>2</sup> green earth lead complete with all accessories. (Note: Use parallel rods if effective earthing cannot be achieved with 1 No. rod).				
9.4.2	50mm <sup>2</sup> PVC/SWA/PVC 4C armoured copper cable laid in ducts in trench from KPLC Meter to main low voltage board complete with glands and lugs	LM	100		
	<b>UNDERGROUND CABLE DUCTING</b>				
9.4.3	Allow for 300mm deep trenching and back filling for the cable mentioned before, Telecommunication and street lighting.	Lm	365		
9.4.4	Ducting for the above in 150mm HGPVC Pipes complete with haunching	Lm	365		
9.4.5	Allow for cable markers in concrete tiles marked "HATARI" for the item above	No.	36		
	<b><u>WATER PUMPS PROVISIONS</u></b>				
9.4.6	3 core 6mm <sup>2</sup> PVC/SWA/PVC (armoured) copper cables drawn inside 32mm diameter HG conduits	Lm	60		
9.4.7	32A Single phase Isolator complete with 3 pin industrial socket and plug	No.	2		
	<b><u>BIO- DIGETSTER PROVISIONS</u></b>				
9.4.8	4 core 25mm <sup>2</sup> PVC/SWA/PVC (armoured) copper cables drawn inside 32mm diameter HG conduits	Lm	50		
9.4.9	Cable glands for the above cable	No.	2		
9.4.10	Cable lugs for the above cable complete with hydraulic crimping	No.	10		
9.4.11	8-Way TP/N distribution board flush mounted complete 1No. 100A TPN integral isolator.	No.	1		
9.4.12	<b>MCBs for the boards above</b>				
	i)16A SP	No.	1		
	ii)20ASP	No.	3		
	iii)32ASP	No.	5		
	<b>TOTAL C/F TO NEXT PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
	iv)32A TP	No.	4		
	v)Blanking Plates	No.	3		
<b>9.4.13</b>	Single phase isolator point comprising of wiring in 3x6.0 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	5		
<b>9.4.14</b>	Three phase isolator point comprising of wiring in 5x6.0 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	4		
<b>9.4.15</b>	32A Single phase Isolator complete with 3 pin industrial socket and plug	No.	5		
<b>9.4.16</b>	32A Three phase Isolator complete with 3 pin industrial socket and plug	No.	4		
<b>9.4.17</b>	150 x 100mm 12 gauge galvanised steel perforated cable tray for support of the cables.	Lm,	50		
<b>9.4.18</b>	Build 600 x 600 x 600mm deep power/communications manhole complete with internal plaster and heavy duty EAFW steel cover.	No.	20		
<b>9.4.19</b>	Powder Coated Electrical Pedestal Socket Box with provision for 4No. Standard Twim sockets and 4 No. Standard Single Sockets	No.	25		
	<b><u>AC PROVISIONS</u></b>				
<b>9.4.20</b>	Single phase isolator point comprising of wiring in 3x6.0 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	7		
<b>9.4.21</b>	Three phase isolator point comprising of wiring in 5x6.0 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	2		
<b>9.4.22</b>	32A Single phase Isolator complete with 3 pin industrial socket and plug	No.	7		
<b>9.4.23</b>	32A Three phase Isolator complete with 3 pin industrial socket and plug	No.	2		
	<b>TOTAL FOR POWER DISTRIBUTION C/F TO SUMMARY PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>SCHEDULE 9: 80KW SOLAR SYSTEM</u></b>				
9.5.1	72- cell 575W Monocrystalline Solar Modules, Efficiency 80%, Cell Specific Safety - Class II, Application Class A, Life time - 25Years, Guarantee - 10Years Rated Current (Im) 8.8A Rated voltage (Vm) 17.5v, Cell Efficiency - 15.0%	No.	160		
9.5.2	25KWh Lithium Battery Pack Smart Storing Energy Storage System (ESS) including a smart Rack Controller. Max Charging & Discharge power: 25kW, IP65, Class A EMC Protection Rating, Type II DC Lightning Protection. Smart Rack efficiency: +98.5%,	No.	1		
9.5.3	Smart Power Control System, 80kW DC/AC hybrid Power inverter full protection function: over- voltage, over-frequency, over-current, over- temperature, AC short-circuit automatic protection,  Rated Output power 40kW MPPT efficiency of up to 99.5% Pure Sinewave output	No.	1		
9.5.4	Solar MPPT charge controller with the following characteristics; PV open circuit voltage 500V, Max PV power 80kW, PV rated current 100A, MPPT input voltage 100-150Vdc  LCD display: Solar panel current, Solar panel voltage, Solar panel power, Battery group voltage, charge & current Protection function against solar reverse charge, solar reverse connection, battery reverse connection, battery overcharge, battery overcurrent	No.	1		
9.5.5	80 kW DC Isolators as ABB or schneider or an approved equivalent	No.	1		
9.5.6	100A TPN AC isolator as ABB or schneider or an approved equivalent	No.	1		
9.5.7	Irradiance sensor (Pyranometer) with Modbus RTU output as Huawei FusionSolar or an approved equivalent	No.	1		
9.5.8	Aluminium mounting frames, brackets and all accessories required to mount the P.V modules as per the specifications	No.	160		
9.5.9	Solar surge protection device rated for 300VDC or to the Engineers approval	No.	1		
9.5.10	List any other item necessary to complete the installation of the 40KW grid- tied solar system  <i>Contractor to note that the inverter and batteries together with their associate works should be housed in a container. Rates included should include the container housing</i>	Lot			
	<b>TOTAL FOR HYBRID SOLAR POWER C/F TO SUMMARY PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>SCHEDULE 6</u></b> <b><u>SOLAR STREET LIGHTING</u></b>				
<b>9.6.1</b>	Type P4	No.	18		
<b>9.6.2</b>	Type M	No.	32		
<b>9.6.3</b>	7 meter Long Class B Galvanized Iron Solar Street Lighting pole as per detail for Type P4 lighting	No.	18		
<b>9.6.4</b>	7 meter Long Class B Galvanized Iron Solar Street Lighting pole as per detail for Type M lighting	No.	9		
<b>9.6.5</b>	Excavate holes to take the poles above, average depth 1000mm, install pole back-fill with concrete, and compact to natural ground level.	No.	27		
	<b>TOTAL FOR SOLAR STREET LIGHTINNG C/F TO SUMMARY PAGE</b>				



**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>SCHEDULE 7</u></b>				
	<b><u>LIGHTNING PROTECTION</u></b>				
	<b>Air Termination</b>				
9.7.1	15mm diameter multiple point copper air terminal complete with base	No.	3		
9.7.2	Copper junction clamps for tape.	No.	3		
9.7.3	25 x 3mm turned copper tape	Lm	80		
9.7.4	Copper ridge saddle	No.	20		
9.7.5	D.C. tape clip	No.	40		
	<b>Down Conductors</b>				
9.7.6	25 x 3mm turned copper tape	Lm	50		
9.7.7	D.C. tape clip	No.	25		
9.7.8	Oblong test/junction clamp	No.	3		
9.7.9	Diameter 38mm HG PVC conduits for the down conductors above.	Lm	50		
	<b>Earth Termination</b>				
9.7.10	15mm diameter, 1200mm long solid copper earth rod, complete with driving stud and spike.	No.	3		
9.7.11	Earth rod-to-tape clamp type A.	No.	3		
9.7.12	Concrete inspection earth pit with 5 hole earth bar	No.	3		
9.7.13	1500mm x 1500mm copper earth mat made from 25mm x 3mm copper tape at 300mm spacing, buried at permanent moisture level and complete with all clamps, welding joints and 6m long 25mm x 3mm insulated copper tape clamped to the down conductors.	No.	3		
9.7.14	Soil treatment around the earth pits with marconite to achieve the required conductivity and obtain acceptable reading	Item	1		
9.7.15	Bonding and clamping to all metal work including water pipes, gas pipes, hand-rails, air-conditioning units, window frames, cladding, metal roof etc. and the main earth for the building.	Item	1		
	<b>TOTAL FOR LIGHTNING ARRESTORS C/F TO SUMMARY PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>ELEMENT 8</u></b> <b><u>Supply, install, test, commission and set to work</u></b> <b><u>(To the full satisfaction of all parties to the</u></b> <b><u>contract) the following: -</u></b>  <b><u>CCTV</u></b>  <b>Dome Camera</b> 4MP resolution, Excellent low light performance, Efficient H.265+ compression technology, IP67, 24/7 colourful imaging  Ditto but Bullet Cameras  Network Video Recording System base to be mounted in a 42U data Cabinet with the following features:-  <ul style="list-style-type: none"> <li>• Up to 32 channel IP cameras can be connected</li> <li>• Up to 576 Mbps high incoming bandwidth ensures IP cameras can be connected</li> <li>• 2 HDMI (different source) and 1 VGA interfaces</li> <li>16 HDD can be used for continuous video recording</li> <li>• 16 HDD can be used for continuous video recording</li> <li>• Supports some specialist cameras, including people counting camera/ANPR (automatic number plate recognition) camera/fisheye camera</li> <li>• Advanced streaming technology enables smooth live view in poor network conditions</li> <li>• Supports RAID 0, 1, 5, 6, 10 and N+1 hot spare for even more reliable data storage, effectively avoids data loss risks</li> </ul> 24 Port layer 2 100Mbps POE SFP Switch with Min 30W Power availability per port GBIC transceiver modules (LC to LC) multimode for the switches above Fibre Patch Panels for Data cable termination 9 U 600X600 wall mounted data cabinet complete with all accessories including power supply points 10TB Surveillance Hard Disk Drive STP Cat 6 structured cables STP Cat. 6 patch cord, 3M for the Cameras. UPT Cat. 6A patch cord, 1M  Associated Fiber and UTP (CAT 6) cabling between field devices and Main Switch				
9.8.1		No.	18		
9.8.2		No.	8		
9.8.3		No.	1		
9.8.4		No.	3		
9.8.5		No.	3		
9.8.6		No.	3		
9.8.7		No.	3		
9.8.8		No.	8		
9.8.9		Boxes	10		
9.8.10		No.	30		
9.8.11		No.	21		
9.8.12		Item	1		
	<b>TOTAL FOR CCTV CARRIED FORWARD TO SUMMARY PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>ELEMENT 9</b> <u>Supply, install, test, commission and set to work</u> <u>(To the full satisfaction of all parties to the</u> <u>contract) the following: -</u>  <b>ICT</b> <b>Horizontal Cabaling</b>				
9.9.1	CAT 6A cable for Data/Telephone outlets	300	Lm		
9.9.2	24 port CAT 6 Data Modular Patch Panel for 4-Pair UTP termination	3	No.		
9.9.3	1M Factory terminated Cat 6 4 pair-SFTP RJ 45- RJ 45 patch cords to be used inside cabinet (includes 15No Spares)	83	No.		
9.9.4	3M Factory terminated Cat 6 4 pair-SFTP RJ 45- RJ 45 patch cords for data outlets (includes 15No Spares)	83	No.		
9.9.5	2U Cable managers/organisers	3	No.		
	<b>ACTIVE EQUIPMENT</b>				
9.9.6	24 Port layer 2 100Mbps POE SFP Switch with Min 30W Power availability per port	4	No.		
	<b>BACKBONE CABLING</b>				
9.9.7	24 Port ST Multimode, sliding Fibre Optic patch panel complete with LC type connectors for Multimode fibre	2	No.		
9.9.8	1M Factory Terminated Fibre optic patch cords complete with LC-LC TYPE connectors to be used inside cabinet	20	No.		
9.9.9	8 core Loose tube multimode fibre optic cable linking floor edge switches to core switch in the	400	LM		
9.9.10	RJ45-ST media converters for each edge switch	4	No.		
	<b>SERVER</b>				
9.9.11	42U Server rack cabinet, black complete with mounting angles and rails in Server Room as described in the particular specification of this tender document	1	No.		
9.9.12	24 port Core network switch for routing voice	1	No.		
9.9.13	24 port Core network switch equivalent for routing data	1	No.		
9.9.14	Router	1	No.		
9.9.15	2U Cable managers/organisers	4	No.		
9.9.16	Wireless Access point	4	No.		
	<b>TOTAL C/F TO NEXT PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
	<b>TELEPHONY</b>				
<b>9.9.17</b>	Hybrid IP-PABX capable of handling 50 extensions to include GSM modules plus all accessories to work	1	No.		
<b>9.9.18</b>	Standard UC Phone complete with all accessories	15	No.		
<b>9.9.19</b>	Executive UC Phone complete with all accessories	3	No.		
<b>9.9.20</b>	Operator Phones complete with all accessories. Each takes up to 16 concurrent lines	4	No.		
<b>9.9.21</b>	Voice Gateways with 2 x E1 Cards each and 1 x 4 Port FXO Cards. These can host total of 136 ISDN + CO Lines	1			
<b>9.9.22</b>	Any other items necessary to complete the system installation satisfactorily. (List, give quantities and price of the items) i)..... ii)..... ii)..... iv).....				
	<b>TOTAL FOR ICT ARRIED FORWARD TO SUMMARY PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<b><u>SCHEDULE 10</u></b> <b><u>GENERAL ITEMS</u></b>				
9.10.1	Carry out comprehensive 24-hour power analysis, after installing main switchboard, but before switching on load with a digital power meter (with printer) to: i) Record and print all the power system parameters. ii) Submit 3 copies of the print-outs. <i>(Note: Parameters must be satisfactory before building is switched on).</i>	Item			
9.10.2	Allow for presentation of all the required samples as per specifications, Bills of Quantities and	Item			
9.10.3	<b>Working/ Shop Drawings</b> Prepare and submit three sets of record (shop) plan and isometric layout drawings to easily readable scale, A1 or A0 paper size format i) general arrangement drawings of all mechanical services, equipment, plant etc ii) routes-types and sizes and arrangement of all pipeworks iii) any other details as per specifications  Drawings are to be submitted in soft copy (CAD) and hard copy to the client, the architect and the engineer. The soft copies to be stored in SSD drive. Allow for preparation and submitting draft and three final copies of operation, instruction and maintainance manuals to Engineers approvals.	Item			
9.10.4	<b>As Installed Drawings</b> As above but for as built/ installed drawings Prepare and submit Maintenance Manuals for all items installed. All other items of general preliminary to cover, but not limited to:- i)Attendance on all other sub-contractors, such as for Communication Services, Mechanical Installations, Security Installations, Sound Equipment/ Wiring Installations, Generator Installations, Lift Services, Solar Water Heating, V-Sat services etc.	Item			
9.10.5	ii)Hiring and keeping a Supervisor/Foreman on site iii)Constant supervision of the works. iv)Provision of all the required spares. v)Testing and Inspection of materials/works. vi)Provision of labour camps. vii)Storage of materials. viii)Initial maintenance (During Defects Liability) ix)Providing water/electricity for the works. x)Protection of the works/materials xi)Clearing away on completion. xii)Preparing Final Account. xiii)Providing all Test Certificates, etc.	Item			
9.10.6	Provisional Sum for Contribution to KPLC for power upgrade	Item			
	<b>TOTAL C/F TO NEXT PAGE</b>				

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
9.10.7	<p><b>BALANCE B/F FROM PREVIOUS PAGE</b></p> <p>Allow for sub-contractors charges for liaison with Kenya Power and Lighting comprising the following:-</p> <ul style="list-style-type: none"> <li>i)Extracting load details from the drawings</li> <li>ii)Calculating total load, together with necessary diversity</li> <li>iii)Verifying the details with the engineer.</li> <li>iv)If need be getting the required documentation and letters from client for the purposes of Additional Load Applications</li> <li>v)Filling all the required forms, and generating correspondences for power application.</li> <li>vi)Presenting application and getting reference number.</li> <li>vii)Making regular follow-ups with Kenya Power</li> <li>viii)Facilitating inspection, approvals and certification by Kenya Power</li> <li>ix)Providing attendance and materials required for power connection.</li> <li>x)Filling out and submitting Commencement and Completion certificates</li> <li>xi)Handing over all approved drawings and certificates to the client.</li> <li>xii)Performing all other services required for power supply to site.</li> <li>xiii)Building/modifying all power manholes to KPLC standards.</li> <li>xiv)All other incidental KPLC requirements/charges.</li> </ul>				
	<b>TOTAL FOR AUDITORIUM AUDIO-VISUAL C/F TO SUMMARY PAGE</b>				

PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELECTRICAL INSTALLATIONS SUMMARY PAGE</u>				
9.1	TOTAL FOR SCHEDULE 1 GROUND FLOOR				
9.2	TOTAL FOR SCHEDULE 2 FIRST FLOOR				
9.3	TOTAL FOR SCHEDULE 3 SECOND FLOOR				
9.4	TOTAL FOR SCHEDULE 4 MAINS DISTRIBUTION				
9.5	TOTAL FOR SCHEDULE 5 SOLAR POWER				
9.6	TOTAL FOR SCHEDULE 7 SOLAR STREET LIGHTING				
9.7	TOTAL FOR SCHEDULE 8 LIGHTNING PROTECTION				
9.8	TOTAL FOR SCHEDULE 9 CCTV				
9.9	TOTAL FOR SCHEDULE 10 ICT				
9.10	TOTAL FOR SCHEDULE 8 GENERAL ITEMS				
	TOTAL FOR ELECTRICAL WORKS, CARRIED TO GRAND SUMMARY				

DAY WORKS

BILL NO.10



## PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	(All Rates are V.A.T Inclusive)				
	<u>The dayworks rates priced below should include all overheads and profits</u>				
10.1	<u>Provision of labour</u>				
10.1.1	Porter	Hrs	2		
10.1.2	Semi-skilled	Hrs	2		
10.1.3	Mason/	Hrs	2		
10.1.4	Steel fixer	Hrs	2		
10.1.5	Carpenter	Hrs	2		
10.1.6	Painter	Hrs	2		
10.1.7	Tile fixer	Hrs	2		
10.1.8	Welder/Electrician	Hrs	2		
10.1.9	Foreman	Hrs	2		
10.1.10	Carpenter for joinery	Hrs	2		
10.1.11	Plumber	Hrs	2		
10.1.12	Electrician	Hrs	2		
10.2	<u>Provision of plant</u>				
	<u>Any plant to be provided must be in good working condition. The day works rate provided must be inclusive of all running costs and overheads</u>				
10.2.1	Lorry (minimum 8 tonne capacity - or similar)	Hrs	3		
10.2.2	Tipper (8 tonne capacity - or similar)	Hrs	3		
10.2.3	Compressor	Hrs	3		
10.2.4	Roller	Hrs	3		
10.2.5	Plate compactor	Hrs	3		
10.2.6	Wheel loader	Hrs	3		
10.2.7	Grader	Hrs	3		
10.2.8	Crawl loader	Hrs	3		
10.2.9	Jack hammer	Hrs	3		
10.2.10	Dewatering pump	Hrs	3		
10.2.11	Concrete mixer	Hrs	3		
10.2.12	Dumper	Hrs	3		
10.2.13	Hand tools (power drills, grinders, torque wrenches, etc.)	Hrs	3		
10.2.14	Excavator	Hrs	3		
10.2.15	Bulldozer	Hrs	3		
10.2.16	Motor grade	Hrs	3		
10.2.17	Portable generator	Hrs	3		
10.2.18	3-Phase power generator	Hrs	3		
10.2.19	Vibrator	Hrs	3		
	Total Carried to Summary				

# PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

10.3	<b><u>Provision of material</u></b> <b><u>Any materials to be provided must be of good quality and upto standard for use in permanent works. The rate provided must be inclusive of all delivery costs and overheads</u></b>				
10.3.1	Ordinary portland cement @ 50kg bags	Bags	3		
10.3.2	Clean river sand	m3	3		
10.3.3	12-20mm graded course aggregate	m3	3		
10.3.4	Manufactured sand / Quarry dust / 0-6mm aggregate	m3	3		
10.3.5	Graded crushed stone (crusher run - 0 to 60mm)	m3	3		
10.3.6	Murram	m3	3		
10.3.7	Hardcore	m3	3		
10.3.8	Redsoil	m3	3		
10.3.9	Reinforcement steel	Kg	100		
10.3.10	Sawn timber formwork	m2	3		
10.3.11	6mm thick clear glass	m2	3		
10.3.12	Water	lts	100		
10.3.13	Diesel fuel	lts	3		
<b>Total Carried to Summary Below</b>					
<b><u>DAYWORKS SUMMARY</u></b>					
A	Total Brought Forward from page DW/1				
B	Total Brought Forward from DW/2 above				
<b>TOTAL FOR DAY WORKS CARRIED TO GRAND SUMMARY</b>					

PROVISIONAL SUMS

BILL NO.11

## PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY

[illegible]

## **GRAND SUMMARY**

**PROPOSED CONSTRUCTION OF FISHERIES OFFICE IN MUKOWE, LAMU COUNTY**

BILL NO	DESCRIPTION	FOR TENDERER'S USE ONLY	FOR OFFICIAL USE ONLY
1	PARTICULAR PRELIMINARIES		
2	GENERAL PRELIMINARIES		
3	ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN	3,520,000.00	
4	OFFICE BUILDING		
5	FOULWATER DRAINAGE		
6	DRIVEWAY AND PARKING		
7	LANDSCAPING		
8	MECHANICAL WORKS		
9	ELECTRICAL WORKS		
10	DAY WORKS		
11	PROVISIONAL SUMS	16,000,000.00	
	<b>TOTAL TENDER SUM CARRIED TO FORM OF TENDER</b>		

Amount in words. Kenya shillings .....

.....Cents .....

Tenderer's Signature and stamp.....

Address .....

Date .....

Witness Signature .....

Address .....

Date .....

## 12. GRAND SUMMARY

Contract Name: CONSTRUCTION OF LAMU FISHERIES OFFICE

RFBNo.: KE-MOMBE&MA-LM-2024-011-CW

<i>General Summary</i>	<i>Page</i>	<i>Amount</i>
BILL NO. 1: PARTICULAR PRELIMINARIES	PP/7	
BILL NO. 2: GENERAL PRELIMINARIES	GP/13	
BILL NO.3: ESMP	ESMP/6	
BILL NO.4 : OFFICE BUILDING	OB/22	
BILL NO.5: FOUL DRAINAGE	FD/4	
BILL NO.6: DRIVEWAY	DW/6	
BILL NO.7: LANDSCAPING	LW/2	
BILL NO.8: MECHANICAL WORKS	MECH/17	
BILL NO.9: ELECTRICAL WORKS	ELEC/19	
BILL NO.10: DAY WORKS	DW/2	
<i>Subtotal of Bills</i>	<i>(A)</i>	
<i>Total for Daywork (Provisional Sum)*</i>	<i>(B)</i>	
<i>Provisional Sum of Kenya Shillings Eight Million Only (Kes 8,000,000.00) for fluctuations<sup>ii</sup></i>	<i>(C)</i>	<i>8,000,000.00</i>
<i>Total of Bills Plus Provisional Sums (A + B + C)<sup>i</sup></i>	<i>(D)</i>	
<i>Add Provisional Sum of Kenya Shillings Eight Million Only (Kes 8,000,000.00) for Contingency Allowance<sup>ii</sup></i>	<i>(E)</i>	<i>8,000,000.00</i>
<i>Bid Price (D + E) (Carried forward to Letter of Bid)</i>	<i>(F)</i>	

i) All Provisional Sums are to be expended in whole or in part at the direction and discretion of the Engineer in accordance with Sub-Clauses 13.4 and 13.5 of the General Conditions except with respect to DAAB Fees and Expenses for which Sub-Clause 13.4 of the Particular Conditions – Part B shall apply.

ii) To be entered by the Employer.\* For evaluation purposes, Provisional Sum, other than Daywork will be excluded