



**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 KWALE FISHERIES CPIU OFFICE

Employer: State Department for Blue Economy & Fisheries
Project: Kenya Marine Fisheries Socio-Economic
Development Project (KEMFSED)
Contract Title: **CONSTRUCTION OF KWALE FISHERIES
CPIU OFFICE**
Country: Republic of Kenya
Loan No./Credit No./Grant No.: 6540-KE
RFBNo.: KE-MOMBE&MA-KWL-2024-005-CW
Issued on: **13TH 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.¹

¹ 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: BUILDING WORKS**
 4. **BILL NO.4 GATE HOUSE BUILDING WORKS**
 5. **BILL NO.5 ELECTRICAL INSTALLATIONS**
 6. **BILL NO.6 MECHANICAL WORKS**
 7. **BILL NO.7 PERIMETER WALL**
 8. **BILL NO.8 CIVIL WORKS**
 9. **BILL NO.9 LANDSCAPING WORKS**
 10. **BILL NO.10 E.S.M.P**
 11. **BILL NO.11 DAYWORKS**
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.

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
	<p><u>BILL NO 1: PARTICULAR PRELIMINARIES</u></p> <p>(All Rates are V.A.T Inclusive)</p> <p>1.0.1 EMPLOYER The Employer is MINISTRY OF MINING, BLUE ECONOMY AND MARITIME AFFAIRS The term "Employer" and "MINISTRY OF MINING, BLUE ECONOMY AND MARITIME AFFAIRS" wherever used in the contract document shall be synonymous.</p> <p>1.0.2 PROJECT MANAGER The term "PM" wherever used in these Bills of Quantities shall be deemed to imply the project Manager 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.</p> <p>1.0.3 ARCHITECT The term "Architect" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Project Engineer.</p> <p>1.0.4 QUANTITY SURVEYOR The term "Quantity Surveyor" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Project Engineer.</p> <p>1.0.5 ELECTRICAL ENGINEER The term "Electrical Engineer" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Project Engineer.</p> <p>1.0.6 MECHANICAL ENGINEER The term "Mechanical Engineer" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Project Engineer.</p> <p>1.0.7 STRUCTURAL ENGINEER The term "Structural Engineer" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Project Engineer.</p> <p>1.0.8 PROJECT ENGINEER (PE) (Member of NPCU, State Department of Fisheries) 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</p> <p>1.0.9 EMPLOYER'S REPRESENTATIVE Wherever the term "Architect, Quantity Surveyor and Engineer" as defined above are used in all Contract Documents they shall be deemed to imply the "Employer's Representatives" and shall include such other persons as they may duly authorize to represent them on behalf of the Employer or the Successor in Office of such persons as may be deputed by such representatives to act on their behalf for the purpose of this Contract.</p>	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
1.0.10	<p><u>CONTRACTOR</u></p> <p>The term "the Contractor" wherever used hereinafter and in all Contract Documents shall mean the person or persons, partnership firm or Company whose Tender for the works hereinafter defined has been accepted by the Employer and who has, or have signed this Contract and shall include his or their heirs, executors, administrators, assignees, successors and duly appointed.</p>	
1.0.11	<p>LOCATION OF SITE</p> <p>The site of the proposed works is at Msambweni Livestock Compound in Kwale 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.</p>	
1.0.12	<p>DESCRIPTION OF THE WORKS</p> <p>The works to be carried out under this contract is the Construction of PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE, IN KWALE COUNTY.</p> <p>The project consists of the following:</p> <ol style="list-style-type: none"> 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. Mechanical works 13. Electrical Installations. 14. Landscaping works 15. Civil works 	
1.0.13	<p>FORM OF CONTRACT</p> <p>The Form of Contract shall be as stipulated in the Tender documents</p>	
1.0.14	<p>BID BOND</p> <p>A bid bond shall be required in the amount stated in the invitation to tender or advertisement.</p>	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
1.0.15	<p>CLEARING AWAY</p> <p>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 Project Manager.</p> <p>The whole of the works shall be delivered up clean, complete and in perfect condition in every respect to the satisfaction of the Project Manager.</p>	
1.0.16	<p>WORKING CONDITIONS</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 & Statutory Authorities' laws & regulations.</p>	
1.0.17	<p>CLAIMS</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 PROJECT MANAGER within the contract period. No claim shall be entertained upon the expiry of the said contract period.</p>	
1.0.18	<p>LABOUR CAMPS</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>	
1.0.19	<p>PRICING RATES</p> <p>The tenderer shall fill in rates and prices for all items of the Works described in the Bill of Quantities. 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. 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.</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>	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
1.0.20	<p>MATERIALS FROM DEMOLITIONS</p> <p>Any materials arising from demolitions SHALL NOT BE re-used shall become the property of the client unless otherwise advised.</p>	
1.0.21	<p>URGENCY OF THE WORKS</p> <p>The Contractor is notified that these “ works are urgent” 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>	
1.0.22	<p>PAYMENTS GENERALLY</p> <p>The tenderer’s attention is drawn to the fact that the client will only make advance payments and pay for work done and materials delivered to site: 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 & concur on his claim for payment with the PE before the following site visit to enable approval of the same by the Acceptance & Approval Committee. The claim shall be prepared in the same format as these bills clearly showing quantities & rates (both work & materials). Both the PM & contractor should be able to locate & identify the items claimed from the main bill.</p>	
1.0.23	<p>PAYMENT FOR MATERIALS ON SITE</p> <p>All materials for incorporation in the works must be stored on site before payment is effected, unless specifically exempted by the Project Engineer. This is to include materials of the Contractor, nominated sub-Contractors and nominated suppliers.</p>	
1.0.24	<p>ADVANCE PAYMENTS</p> <p>The tenderer’s attention is drawn to the fact that the Client does not make any advance payments</p>	
1.0.25	<p>EXISTING SERVICES</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>	
1.0.26	<p>TENDER DOCUMENTS</p> <p>Tender documents are as listed in the Instruction to Tenderers</p>	
1.0.27	<p>DELIVERY OF TENDER</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>	
1.0.28	<p>SIGNING OF THE TENDER DOCUMENTS</p> <p>The bidder shall append his / her signature and / or company ‘s rubberstamp on each and every page of tender document.</p>	
	Carried to collection	

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ITEM	DESCRIPTION	AMOUNT (KSHS)
1.0.29	<p>MEASUREMENTS</p> <p>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 PROJECT ENGINEER in accordance with the Conditions of Contract. The discrepancies shall then be treated as a variation and be dealt with in accordance with the said Conditions.</p>	
1.0.30	<p>VALUE ADDED TAX</p> <p>The Contractor's attention is drawn to the Legal Notice in the Finance Act part 3 Section 21(b) operative from 1st 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.</p> <p>NB: The Contractor should therefore include the tax within the rates.</p>	
1.0.31	<p>CONTRACT COMPLETION PERIOD</p> <p>The contract completion period in accordance with conditions of the Conditions of contract must be adhered to.</p> <p>The 'ENGINEER' shall strictly monitor the Contractors progress in relation to the progress chart and should it be found necessary the 'PE' 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.</p>	
1.0.32	<p>GEOTECHNICAL SURVEY</p> <p>Allow a sum of KES. 700,000.00 (Seven Hundred Thousand only) for conducting geotechnical survey on site before commencement of works. The survey and investigation to be conducted by a specialist subject to the Engineer's approval.</p>	700,000.00
1.0.33	<p><u>Record (As Installed) Drawings</u></p> <p>Prepare and submit three sets of record (as installed) plan and isometric layout drawings to easily readable scale, A1 or A0 paper size format as follows:</p> <ul style="list-style-type: none"> i) general arrangement drawings of all architectural Works ii) any other details as per specifications <p>Drawings are to be submitted in soft copy (REVIT 2023) and hard copy to the client, the architect and the engineer. The soft copies to be stored in 1TB Harddisk and 32GB flash disc. Allow sum of KES. 300,000.00 (Three Hundred Thousand only) for preparation and submitting draft and three final copies of operation, instruction and maintenance manuals to Engineers approvals.</p>	300,000.00
1.0.34	<p><u>Record (As Installed) Drawings</u></p> <p>Prepare and submit three sets of record (as installed) plan and isometric layout drawings to easily readable scale, A1 or A0 paper size format as follows:</p> <ul style="list-style-type: none"> i) general arrangement drawings of all Structural and Civil Works ii) any other details as per specifications <p>Drawings are to be submitted in soft copy (AUTOCAD 2023) and hard copy to the client, the architect and the engineer. The soft copies to be stored in 1TB Harddisk and 32GB flash disc. Allow sum of KES. 300,000.00 (Three Hundred Thousand only) for preparation and submitting draft and three final copies of operation, instruction and maintenance manuals to Engineers approvals.</p>	300,000.00
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BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
1.0.35	<p><u>PARTICULARS OF INSERTIONS TO BE MADE IN APPENDIX TO CONTRACT AGREEMENT</u></p> <p>The following are the insertions to be made in the appendix to the Contract Agreement: -</p> <p>Period of Final Measurement - 3 Months From Practical completion</p> <p>Defects Liability Period - 6 Months from Practical completion</p> <p>Date for Possession - To be agreed with the Engineer</p> <p>Date for Completion - 12 months from date of Possession</p> <p>Liquidated and Ascertained - At the rate of Kshs.. 100,000... per week or part thereof:</p> <p>Prime cost sums for which the Contractor desires to tender </p> <p>Period of Interim Certificates - After 2 Months</p> <p>Period of Honouring Certificates - 60 days</p> <p>Percentage of Certified Value Retained - 10%</p> <p>Limit of Retention Fund - 5%</p>	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

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

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
	(All Rates are V.A.T Inclusive) <u>BILL NO 2: GENERAL PRELIMINARIES</u>	
2.0.1	<p>PRICING OF ITEMS OF PRELIMINARIES AND PREAMBLES</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 (V.A.T Inclusive) 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. 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 PM, then the value of such works shall be deducted from the very immediate certificate issued to the contractor.</p> <p>MoPW current rates, JBC, IQSK, manufacturers or fair rates shall be used by the PM in valuation of unpriced items which the contractor shall fail to execute.</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>	
2.0.2	<p>FIRM PRICE CONTRACT</p> <p>Unless otherwise specifically stated in the Contract Data and/or Particular preliminaries this is a firm price contract and the contractor must allow in his tender rates for any increase in the cost of labour and/or materials during the currency of the contract.</p>	
2.0.3	<p>VISIT SITE AND EXAMINE DRAWINGS</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>	
2.0.4	<p>SUFFICIENCY OF TENDER</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>	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
2.0.5	<p>BONDS</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.</p> <p>The amount of the bond is SPECIFIED IN THE INVITATION TO TENDER</p> <p>The guarantor shall be an approved institution as specified in the 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>	
2.0.6	<p>PERFORMANCE BOND</p> <p>Specified amount of bond in the tender documents shall be required from the specified institution.</p> <p>The period for supplying the bond shall be specified in the tender documents.</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.</p> <p>The bond for the due performances of the Contract shall be valid up to the date of completion as certified by the 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 Specified copy shall be treated as NO BOND</p>	
2.0.7	<p>EXCEPTION TO THE STANDARD METHOD OF MEASUREMENT</p> <p>Attendance ; 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>Fix Only:-</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>	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
2.0.8	<p>ABBREVIATIONS</p> <p>Throughout these Bills, units of measurement and terms are abbreviated and shall be interpreted as follows:-</p> <p>C.M. Shall mean cubic metre</p> <p>S.M. Shall mean square metre</p> <p>L.M. Shall mean linear metre</p> <p>MM Shall mean Millimetre</p> <p>Kg. Shall mean Kilogramme</p> <p>No. Shall mean Number</p> <p>Prs. Shall mean Pairs</p> <p>B.S. Shall mean the British Standard Specification Published by the British Standards Institution, 2 Park Street, London W.I., England.</p> <p>"K.S" Shall mean the current Kenya Standard specification published by the Kenya Bureau of Standards, P.O. Box 54974, NAIROBI, Kenya.</p> <p>Ditto Shall mean the whole of the preceding description except as qualified in the description in which it occurs.</p> <p>m.s. Shall mean measured separately.</p> <p>a.b.d Shall mean as before described.</p> <p>"Approved" Shall mean approved by the Project Manager and the Employer in writing.</p> <p>"As directed" Shall mean as directed by the Project Manager and the Employer in writing.</p> <p>"Demolish" 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>"Remove" Shall mean taking down, hacking up, breaking down, removing etc., and clearing away from Site and all other expenses thereby entailed.</p> <p>"Make good" 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>To "match" Shall mean to be equal to relevant existing work in design, workmanship and all other respects.</p> <p>"Re-fix" 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>	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
2.0.9	<p>PLANT, TOOLS AND VEHICLES</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>	
2.0.10	<p>TRANSPORT.</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>	
2.0.11	<p>MATERIALS AND WORKMANSHIP.</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>	
2.0.12	<p>SIGN FOR MATERIALS SUPPLIED.</p> <p>The Contractor will be required to sign a receipt for all articles and materials supplied by the PROJECT MANAGER 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 MANAGER 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 MANAGER</p>	
2.0.13	<p>STORAGE OF MATERIALS</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 MANAGER Nominated Sub-Contractors are to be made liable for the cost of any storage accommodation provided especially for their use.</p>	
2.0.14	<p>ORDERING OF MATERIALS</p> <p>The Contractor must assist in alleviating the effects of 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 Manager, 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>	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
2.0.15	<p>SAMPLES</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 MANAGER for his approval until such samples are approved by the PROJECT MANAGER and the PROJECT MANAGER, may reject any materials or workmanship not in his opinion to be up to approved samples. The PROJECT MANAGER 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 MANAGER. 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 MANAGER 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 & covers, tiles & 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>	
2.0.16	<p>PUBLIC AND PRIVATE ROADS.</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 MANAGER.</p>	
2.0.17	<p>EXISTING PROPERTY.</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 MANAGER.</p>	
2.0.18	<p>ACCESS TO SITE AND TEMPORARY ROADS.</p> <p>Means of access to the Site shall be agreed with the PROJECT MANAGER 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 MANAGER.</p>	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
2.0.19	AREA TO BE OCCUPIED BY THE CONTRACTOR 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 MANAGER.	
2.0.20	SECURITY OF WORKS ETC. 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.	
2.0.21	PROGRESS CHART. The Contractor shall provide within two weeks of Possession of Site and in agreement with the PROJECT MANAGER a Progress Chart for the whole of the works including the works of Nominated Sub-Contractors ; one copy to be handed to the PROJECT MANAGER and a further copy to be retained on Site. Progress to be recorded and chart to be amended as necessary as the work proceeds.	
2.0.22	INSURANCE 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 MANAGER 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 MANAGER 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 MANAGER's inspection.	
2.0.23	CONTRACTOR'S SUPERINTENDENCE/SITE AGENT 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 Manager and such directions shall be deemed to have been given to the Contractor in accordance with the Conditions of Contract.	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
2.0.24	<p>PROVISIONAL WORK</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 MANAGER Immediately the work is ready for measuring, the Contractor shall give notice to the PROJECT MANAGER. If the Contractor makes default in these respects he shall if the PROJECT MANAGER so directs uncover the work to enable all measurements to be taken and afterwards reinstate at his own expense.</p>	
2.0.25	<p>PROVISIONAL SUMS.</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>	
2.0.26	<p>ADJUSTMENT OF PROVISIONAL SUMS.</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 MANAGER'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>	
2.0.27	<p>PRIME COST (OR P.C.) SUMS.</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 MANAGER 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>	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
2.0.28	<p>ADJUSTMENT OF P.C. SUMS.</p> <p>In the final account all P.C. Sums shall be deducted and the amount properly expended upon the PROJECT MANAGER'S order in respect of each of them added to the Contract sum. The Contractor shall produce to the PROJECT MANAGER 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>	
2.0.29	<p>NOMINATED SUB-CONTRACTORS</p> <p>When any work is ordered by the PROJECT MANAGER 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>	
2.0.30	<p>DIRECT CONTRACTS</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>	
2.0.31	<p>ATTENDANCE UPON OTHER TRADESMEN, ETC.</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 MANAGER and the work will be measured and paid for to the extent executed at rates provided in these Bills.</p>	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
2.0.32	<p>OFFICE ETC. FOR THE PROJECT MANAGER</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 MANAGER 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 MANAGER" a modern and accurate level together with levelling staff, ranging rods and 50 metre metallic or linen tape.</p>	
2.0.33	<p>WATER AND ELECTRICITY SUPPLY FOR THE WORKS</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 for metering the water 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 MANAGER . 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>	
2.0.34	<p>SANITATION OF THE WORKS</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 MANAGER.</p>	
2.0.35	<p>SUPERVISION AND WORKING HOURS</p> <p>The works shall be executed under the direction and to the entire satisfaction in all respects of the PROJECT MANAGER 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>	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
2.0.36	PROTECTION OF THE WORKS. 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 MANAGER 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	
2.0.37	WORKS TO BE DELIVERED UP CLEAN 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 MANAGER.	
2.0.38	GENERAL SPECIFICATION. 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.	
2.0.39	TRAINING LEVY 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.	
2.0.40	MATERIALS ON SITE 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 MANAGER. This includes the materials of the Main Contractor, Nominated Sub-Contractors and Nominated Suppliers.	
2.0.41	HOARDING 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.	
2.0.42	ALTERATIONS TO BILLS, PRICING, ETC. 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.	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
2.0.43	MATERIALS ARISING FROM EXCAVATIONS Materials of any kind obtained from the excavations shall be the property of the client. Unless the PROJECT MANAGER 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 MANAGER 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.	
2.0.44	PREVENTION OF ACCIDENT, DAMAGE OR LOSS 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.	
2.0.45	GOVERNMENT ACTS REGARDING WORK, PEOPLE ETC. 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. 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.	
2.0.46	BLASTING OPERATIONS Blasting will only be allowed with the express permission of the PROJECT MANAGER 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 MANAGER governing the use and storage of explosives.	
2.0.47	SIGNBOARD 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 Manager.	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
2.0.48	NUISANCE 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	
2.0.49	PROTECTION OF TREES 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 Manager and relevant authorities. He must at all times liaise with the Project Manager in this regard. The cost of obtaining any necessary permits will be borne by the Contractor.	
2.0.50	EXTENDED PRELIMINARIES 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.	
2.0.51	TIMELY PAYMENT FOR LABOURERS 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,	
	Carried to collection	

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	AMOUNT (KSHS)
	<u>COLLECTION</u>	
A	Brought Forward From Page GP/1	
B	Brought Forward From Page GP/2	
C	Brought Forward From Page GP/3	
D	Brought Forward From Page GP/4	
E	Brought Forward From Page GP/5	
F	Brought Forward From Page GP/6	
G	Brought Forward From Page GP/7	
H	Brought Forward From Page GP/8	
J	Brought Forward From Page GP/9	
K	Brought Forward From Page GP/10	
L	Brought Forward From Page GP/11	
M	Brought Forward From Page GP/12	
TOTAL FOR GENERAL PRELIMINARIES CARRIED TO GRAND SUMMARY		

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p><u>BILL NO 3: OFFICE BUILDING WORKS</u></p> <p><u>ELEMENT NO 3.1</u></p> <p><u>SUBSTRUCTURE WORKS (All Provisional)</u></p> <p><u>Please note that ALL substructure works are Measured Provisionally. The contractor must ensure that the actual measurements are taken by the Project Quantity Surveyor before any works are covered. Failure to do so will necessitate works to be open up for verification at your (contractor's) cost.</u></p> <p>NOTE: Classes of Rock</p> <p><u>(1) Class 1 :</u></p> <p>Soft rock of the type known locally as "CORAL" which in the opinion of the Engineer cannot be considered as hard rock shall be known as Class 1 rock. Soft Rock shall be rock with compressive strength not exceeding 15N/mm². Murram and Kunker is specifically excluded and will be reckoned as normal/common excavation. Extremely weathered and weak Tuff shall also be considered as normal excavation.</p> <p><u>(2) Class 2 :</u></p> <p>Class 2 Rock shall be with compressive strength exceeding 15N/mm². This type of rock contains stones and boulders of unweathered or incompletely weathered Tuff, trachyte, black trap or lava with compressive strength exceeding 15N/mm² in a formation which is massive and geologically homogeneous. A boulder or outcrop with such compressive strength will be deemed to be Class 2 rock or Hard Rock</p> <p>The opinion of the Engineer in classifying rock shall be final and binding.</p> <p>Explosives must not be used without the prior approval of the Engineer. Blasting operations are carried out at the Contractor's sole risk, and all blasting must be carried out in accordance with government regulations and approval</p>				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>EXCAVATION AND EARTHWORKS</u>				
	<u>Excavation including maintaining and supporting sides and keeping free from water, mud and falling materials; No allowance is made in the excavations for working space; contractor to factor in working space in his rates:</u>				
3.1.1	Clear site of all bushes, tufts and any small or large trees, including grubbing out roots and burn on site where directed	SM	449		
3.1.2	Excavate oversite average 150mm deep and cart away	SM	449		
3.1.3	Excavate trench for strip foundation: not exceeding 1.5m deep	CM	232		
3.1.4	Excavate for column bases: not exceeding 1.5m deep	CM	93		
3.1.5	Extra over excavation from rock in any position	CM	325		
	<u>Disposal of excavated material</u>				
3.1.6	Return, fill and ram extra excavation materials around foundation	CM	137		
3.1.7	Load and cart away surplus material	CM	188		
	<u>Disposal of Water</u>				
3.1.8	Allow for keeping the whole of the excavation free from mud, water and fallen materials	Item	1		
	<u>Planking and strutting</u>				
3.1.9	Allow for planking and strutting sides of excavation	Item	1		
	<u>Filling</u>				
3.1.10	250 mm thick approved red soil filling consolidated in 150mm thick layers to make up levels	CM	120		
3.1.11	300mm thick (minimum) approved hardcore handpacked in layers not exceeding 150mm	CM	144		
3.1.12	50mm thick murrum dust or any other equal and approved material in blinding surface of hardcore	SM	480		
	<u>Insecticide Treatment</u>				
3.1.13	Treat hardcore surface with approved antitermite applied in accordance with the manufacturer's instructions and subject to a TEN YEAR guarantee	SM	480		
	<u>External Paving</u>				
3.1.14	100 mm thick murrum fill well watered and compacted to 95% MDD.	SM	81		
3.1.15	60 mm thick precast concrete slabs laid and jointed in cement/sand mortar mix 1:3	SM	81		
	TOTAL EXCAVATION AND EARTHWORKS, CARRIED FORWARD TO ELEMENT COLLECTION				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SUBSTRUCTURES CONTINUED</u>				
	<u>CONCRETE WORKS</u>				
3.1.16	50mm thick Mass concrete blinding to surfaces of strip footing & column bases	SM	216		
	<u>Vibrated reinforced concrete class 25/20 to:-</u>				
3.1.17	Strip footing	CM	31		
3.1.18	Columns Bases	CM	27		
3.1.19	Lift base	CM	11		
3.1.20	Foundation Columns	CM	3		
3.1.21	150mm thick floor slab	SM	449		
3.1.22	150mm thick Ramp	SM	31		
3.1.23	Stairs Steps	CM	1		
3.1.24	200mm thick of R.C Wall	SM	21		
	<u>High Tensile Ribbed Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u>				
3.1.25	Assorted bars	KG	11,580		
3.1.26	BRC mesh type A142	SM	480		
	<u>Marineply formwork as Described. Allow for setting to special steel propping, strutting, fillets, nails, etc to:</u>				
3.1.27	Edges of strip footing	SM	129		
3.1.28	Ditto but to column bases	SM	61		
3.1.29	Ditto but to sides of foundation columns	SM	25		
3.1.30	Ditto but to edges of floor slab 75mm - 150mm thick	LM	83		
3.1.31	Ditto but to edges of Ramp 75mm - 150mm thick	LM	21		
3.1.32	Surfaces of Staircase risers 150-225mm high	LM	39		
3.1.33	Sides of R.C Wall	SM	42		
	<u>FOUNDATION WALLING</u>				
3.1.34	200mm solid coral block foundation wall in cement:sand (1:3) reinforced with hoop iron at every to alternative course	SM	580		
	<u>WATERPROOFING</u>				
3.1.35	1000 gauge polythene DPM	SM	480		
	<u>PLINTH FINISHES</u>				
3.1.36	15mm cement and sand (1:4) render trowelled smooth and comprising 12mm thick backing and 3mm finishing coat.	SM	52		
	<u>Painting and Decoration</u>				
3.1.37	Prepare and apply 3 coats of first quality bituminous paint or equal and approved to rendered surfaces	SM	52		
	TOTAL SUBSTRUCTURE WALLING AND CONCRETE WORKS, CARRIED FORWARD TO ELEMENT COLLECTION				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE[illegible]

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SUPERSTRUCTURES</u>				
	<u>ELEMENT NO 3.2</u>				
	<u>SUPERSTRUCTURE REINFORCED CONCRETE WORKS</u>				
	<u>Vibrated reinforced concrete class 25/20 to:-</u>				
3.2.1	Suspended beams	CM	66		
3.2.2	Columns	CM	14		
3.2.3	150mm thick suspended slabs	SM	892		
3.2.4	200mm thick R.C Wall	SM	92		
	<u>Stairs</u>				
3.2.5	Stairs (steps and waist)	CM	8		
3.2.6	150mm thick landing	SM	13		
	<u>High Tensile Reinforcement Bars to B. S. 4449</u> <u>including cutting, bending and all necessary spacer</u> <u>blocks : (Provisional) :-</u>				
3.2.7	Asorted bars	KG	36,323		
	<u>Marineply formwork as Described. Allow for setting to</u> <u>special steel proping, strutting, fillets, nails, etc to:</u>				
3.2.8	Sides and soffits of suspended Beams	SM	759		
3.2.9	Sides of columns	SM	136		
3.2.10	To soffits of suspended slabs	SM	892		
3.2.11	To Edges of slab 75-150mm high	LM	255		
3.2.12	Sides of R.C Wall	SM	184		
	<u>Stairs</u>				
3.2.13	Sloping soffites of staircases	SM	52		
3.2.14	Surfaces of risers 150-225mm high	LM	16		
3.2.15	Raking string edge to staircases 300mm high cut and fitted to profile of treads and risers	LM	55		
3.2.16	Soffits of landing	SM	13		
3.2.17	Edges of Ditto 150-225mm high	LM	31		
	TOTAL FOR ELEMENT NO. 3.2 (SUPERSTRUCTURE REINFORCED CONCRETE WORKS), CARRIED FORWARD TO SUMMARY				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 3.3</u> <u>WALLING</u>				
3.3.1	200mm machine cut coral stone wall in cement:sand (1:3) reinforced with hoop iron at every to alternative course externally.	SM	480		
3.3.2	Ditto but 200 mm thick parapet walling ditto	SM	164		
3.3.3	150mm machine cut coral stone wall in cement:sand (1:3) reinforced with hoop iron at every to alternative course internally.	SM	740		
3.3.4	Ditto but 100 mm thick wall.	SM	82		
	<u>WATERPROOFING</u>				
3.3.5	Hessian based bituminous felt damp proof course 200mm wide	LM	199		
	<u>Precast concrete coping</u>				
3.3.6	300 x 75 mm thick insitu concrete coping reinforced in 4No. 10mm diameter bars and 8mm diameter rings; weathered and throated saddled-back on both sides for handling finished fair and jointed to 200 thick dwarf and parapet walls in cement sand mortar 1:3 all to approval	LM	109		
3.3.7	Ditto 550 x 350mm pier cap ditto to columns	NO	10		
	<u>Balcony Glass Balustrade Wall</u>				
3.3.8	Supply assemble and fix 10mm thick toughened/tempered glass balcony balustrade wall framed with 75mm dia x 2mm thick stainless steel grade 316 CHS Balustrade Rails and Balusters Welded and bedded to concrete slab with cement and sand (1:3) mortar including all accessories to approval.	SM	35		
	TOTAL FOR ELEMENT NO. 3.3 (WALLING), CARRIED FORWARD TO SUMMARY				

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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 3.4</u>				
	<u>ROOFING</u>				
	<u>FLAT ROOF FINISHES</u>				
3.4.1	50 mm cement sand 1:3 water proof screed to flat roof slab laid to fall and crossfalls	SM	449		
3.4.2	Apply one coat bituminous primer to surface of screed.	SM	449		
3.4.3	Supply, torch and apply bituminous membrane to primed screed surfaces	SM	449		
3.4.4	Ditto sides of wall 200mm high	LM	109		
3.4.5	50 x 50mm internal angle fillet	LM	109		
3.4.6	200 x 200 x 25mm thick approved interlocking clay tiles at roof covering bedded and jointed in cement mortar 1:3 and 25mm joint pointed with red cement slurry	SM	449		
3.4.7	Ditto sides of wall 200mm high	LM	109		
	<u>STEEL TRUSSES</u>				
	<u>The following in trusses, girders and independednt members made of cold-rolled light gauge Steel Sections including grinding all welds smooth and painting with red oxide primer before delivery to site, then 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>				
3.4.8	75 x 50 x 3mm Thick (5.42Kg/m) R.H.S external members welded to gusset plate	LM	35		
3.4.9	Ditto hip rafters.	LM	11		
3.4.10	50 x 50 x 3mm Thick (4.43Kg/m) S.H.S struts and ties	LM	10		
	<u>Sundries</u>				
3.4.11	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.	8		
3.4.12	16 mm diameter x 200 mm long bolts with head , nut and washers : fixed to concrete or masonry walls	NO.	32		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ROOFING CONTINUED...</u>				
	BROUGHT FORWARD				
	<u>SKYLIGHT</u>				
3.4.13	Skylight in 12 mm thick laminated glass fixed on steel trusses including stainless steel angle line / brackets, watertight structural silicon and any other necessary accessories to details.	SM	42		
	<u>Rainwater goods</u>				
3.4.14	Extra over for running outlet	NO	10		
3.4.15	100mm x 75 x 0.6mm PVC down pipes fixed to wall with holding clips at 1200mm centres	LM	60		
3.4.16	Extra over for swan neck 1000mm long	NO	10		
3.4.17	Extra over for shoe 1000mm long	NO	10		
	<u>Supply and fix the following approved uPVC Cylindrical Water Storage Tanks, (Diameter x Ht).</u>				
3.4.18	10,000Litres 2400mm x 2800mm. The tank has screwed connections for inlet, outlet, no overflow, 25mm medium pressure ball valve. A 500mm thick x 3000mm dia R.C tank base should be constructed on which the tank will be mounted.	NO	2		
	TOTAL FOR ELEMENT NO. 3.4 (ROOFING) CARRIED TO SUMMARY				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 3.5</u> <u>WINDOWS</u>				
	<u>Supply, assemble and fix the following purpose made powder coated aluminium framed sliding windows to B.S 3987, 1984 from approved manufacturer(s) in 75 x 50 x 2 mm thick aluminium transomes and mullions at 600 mm C/C; railing and necessary intermediate reinforcement elements complete with and including all necessary bolts, nuts, rubber nosing and; necessary fixing gaskets including all weather strips, rubber glazing strips,couplings, sliding rails bars, window boards; panes fixed with 6mm thick one way glass fixed with beadings.</u>				
3.5.1	Overall size 2000 x 2100mm high.	NO.	24		
3.5.2	Overall size 2000 x 1800mm high.	NO.	2		
3.5.3	Overall size 2000 x 1500mm high.	NO.	2		
3.5.4	Overall size 1500 x 1500mm high.	NO.	10		
3.5.5	Overall size 2000 x 8200mm high.	NO.	1		
3.5.6	Overall size 2000 x 5700mm high.	NO.	1		
	<u>Window cill</u>				
3.5.7	250 x 25 mm Precast concrete window cill bedded and jointed with cement and sand (1:3) mortar all to approval	LM	83		
	<u>Fabricate, supply and fix mild steel window grill; constructed with 25 x 25 x 3mm RHS vertical framing; infilled with 12 mm diameter solid bars at 150 mm center in both directions to form diamond shape; fixed with lugs built into concrete or stone walls; all primed with red oxide .(Refer to architect's detail)</u>				
3.5.8	To window openings	SM	-		
	TOTAL FOR ELEMENT NO. 3.5 (WINDOWS), CARRIED FORWARD TO SUMMARY				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 3.6</u>				
	<u>DOORS</u>				
	<u>Aluminium Doors</u>				
	<u>Supply, assemble and fix the following purpose made powder coated aluminium framed door to B.S 3987, 1984 in 100 x 50 x 2 mm thick frames; complete panes fixed with 8mm thick One way tinted glass fixed with beadings with a complete set of industrial galvanised ironmongery comprising of 3 lever mortice locks complete with lever furniture, 100mm heavy duty aluminium butt hinges, brass door stops, guardsman pull handle XL003820 and rubber buffers as directed by the project Architect.All exposed aluminium section are to be powder coated. (Ref Architects Detailing)</u>				
3.6.1	Single leaf single swing door size 900mm x 2600mm high with 500mm high fanlight	NO	17		
3.6.2	Ditto but door size 1500mm x 2600mm high with 500mm high fanlight.	NO	4		
	<u>Suply and fix the following ironmongery all to approved specification</u>				
3.6.3	Door closer (Heavy duty)	NO	21		
3.6.4	Stainless steel satin Rectangular door signage size 150 X 75	NO	21		
	<u>Wrot Mvule, or equal and approved Hardwood</u>				
3.6.5	50mm Thick(finished) framed Single leaf single swing door size 900 x 2600mm high comprising of 500 mm fanlight, 150 x 45mm grooved top rails and stiles, 200 x 45mm grooved bottom and middle rails, 20mm thick panel infills all finished for painting (m.s)	NO	6		
3.6.6	Ditto but double acting door overall size 1100 x 2600 mm high comprising 500 mm high fanlight.	NO	12		
3.6.7	Ditto but single leaf louvred door size 800 x 2100mm high door	NO	10		
	<u>FRAMES</u>				
3.6.8	150 x 50mm once rebated frame with labour: plugged	LM	181		
3.6.9	45 x 38mm architrave	LM	181		
3.6.10	25mm diameter quadrant	LM	181		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>DOORS CONTINUED...</u>				
	BROUGHT FORWARD				
	<u>Supply and fix the following ironmongery all to 'industrial galvanised' or equal and approved specification</u>				
3.6.11	100mm heavy duty brass butt hinges	PRS	24		
3.6.12	Ditto but double action hinges.	PRS	18		
3.6.13	Three lever rebated door lock complete with furniture	NO	6		
3.6.14	Two lever rebated door lock complete with furniture	NO	2		
3.6.15	Indicator bolt	NO	20		
3.6.16	Rubber door stop	NO	40		
3.6.17	Kick plate 900 x 450 x 2mm thick	NO	24		
3.6.18	Door closer hold open power 2/3 (with cover)	NO	28		
	<u>Signage</u>				
3.6.19	Supply and fix Stainless steel satin Rectangular signage to offices and washrooms size 150 x 75mm	NO	18		
	<u>Glazing</u>				
3.6.20	5mm clear sheet glass with putty and beadings to detail.	SM	10		
	TOTAL FOR ELEMENT NO. 3.6 (DOORS), CARRIED FORWARD TO SUMMARY				
	<u>ELEMENT NO. 3.7</u>				
	<u>FINISHES</u>				
	<u>EXTERNAL FINISHINGS</u>				
	<u>Walls</u>				
	<u>25mm thick cement and sand (1:3) render to:-</u>				
3.7.1	25mm thick cement and sand Rendering to walls and Concrete Surfaces, finished with a wood float.	SM	445		
3.7.2	Ditto backing to receive stone cladding.	SM	363		
3.7.3	Prepare and apply 3 coats of first quality exterior silicone paint to plastered surfaces.	SM	445		
	<u>Mazeras cladding</u>				
3.7.4	25 mm Thick machine cut stone cladding of approved size and pattern on backing including hoop iron hooks installed to architect's details.	SM	363		
	<u>INTERNAL FINISHES</u>				
	<u>Wall and Concrete Finishes</u>				
3.7.3	12mm cement and sand (1:4) plaster to walls and concrete surfaces trowelled smooth.	SM	2,124		
3.7.4	Prepare and apply 3 coats of first quality emulsion paint or equal and approved to plastered surfaces.	SM	2,124		
	TOTAL CARRIED FORWARD				

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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>FINISHES CONTINUED...</u> BROUGHT FORWARD				
	<u>Wall Tiles</u>				
3.7.5	12mm cement and sand (1:4) backing to receive tiles. 150 x 150 x 6mm Thick White glazed ceramic wall tiles	SM	168		
3.7.6	bedding and jointing in cement and sand (1:3) mortar and flush pointed with white cement:	SM	168		
	<u>Floor Finishes</u>				
	<u>Cement and sand (1:4) screeding smooth trowelled</u>				
3.7.7	32mm Thick floor screed to receive tiles	SM	913		
3.7.8	Ditto 100mm high skirting	LM	1,087		
	<u>Ceramic floor tiles</u>				
3.7.9	Supply and fix 6 mm thick non-slip ceramic floor tiles on prepared backing including grouting and edge protectors where required; overall size 330mm x 330mm.	SM	274		
3.7.10	Ditto 100mm high skirting	LM	218		
	<u>Granito floor tiles</u>				
3.7.11	Supply and fix 10 mm thick polished granito floor tiles on prepared backing including grouting and edge protectors where required.	SM	639		
3.7.12	Ditto but to 100 mm high skirting	LM	553		
	<u>Ceiling</u>				
3.7.13	12mm cement and sand (1:4) plaster to concrete surfaces trowelled smooth.	SM	913		
3.7.14	Prepare and apply 3 coats of first quality emulsion paint or equal and approved to plastered surfaces.	SM	913		
	TOTAL FOR ELEMENT NO. 3.7 (FINISHES) CARRIED TO SUMMARY				

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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 3.8</u> <u>BALUSTRANDING AND RAILING</u> <u>ENTRANCE RAMP</u> <u>Metal Work (All in Grade 316 Stainless Steel sections in 1,000 mm high railing complete with handrail saddles and brackets, balusters base covers, endcaps, spacer brackets and adapters, and all fixing accessories as necessary and to architect's details and approval)</u>				
3.8.1	50mm diameter x 3mm Thick CHS balusters bedded to concrete with cement and sand (1:3) mortar	LM	14		
3.8.2	50mm diameter x 3 mm thick CHS top rail	LM	6		
3.8.3	25mm diameter x 2mm thick ditto bottom rail	LM	6		
3.8.4	Ditto midrails	LM	24		
	<u>Sundries</u>				
3.8.5	Make hole in concrete slab size 50 x 50 x 50mm deep	NO	11		
3.8.6	Welded end of 25mm dia. CHS 3mm rails to 50mm dia. CHS 3mm balusters	NO	11		
	<u>Staircase railing</u> <u>Metal Work (All in Stainless Steel and to architect's details and approval)</u>				
3.8.7	50mm diameter x 3mm Thick CHS balusters bedded to concrete with cement and sand (1:3) mortar	LM	50		
3.8.8	50mm diameter x 3 mm thick CHS top rail	LM	40		
3.8.9	25mm diameter x 2mm thick ditto bottom rail	LM	40		
3.8.10	Ditto midrail	LM	160		
	<u>Sundries</u>				
3.8.11	Make hole in concrete slab size 50 x 50 x 50 mm deep	NO	41		
3.8.12	Welded end of 25mm dia. CHS 3mm rails to 50mm dia. CHS 3mm balusters	NO	41		
	TOTAL FOR ELEMENT NO. 3.8 (BALUSTRANDING AND RAILING) CARRIED TO SUMMARY				

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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 3.9</u> <u>FITTINGS AND FIXTURES</u>				
	<u>Cupboards / Shelving</u>				
	<u>The following in cupboards, shelving, cabinets and the like; comprising 50 x 25 mm wrot cypress frames; 50 x 25 mm sawn cypress bearers plugged and screwed; 25 mm thick MDF board to doors, shelves, partitions, sides and divisions, hardwood lipping on all exposed edges; drawers consisting of 20 mm thick MDF boards sides and front and 8 mm thick veneer bottom, rollers, tracks and knobs; Aluminium D-handles; malpa hinges to doors; prepare and apply undercoat and two finishing coats gloss oil paint.</u>				
3.9.1	Low level kitchen cupboards overall size 7,200 mm long x 600 mm wide x 900 mm high; Top finished in 20 mm thick terrazzo (m/s); 1 No. tier x 7,200 mm long shelf; 4 No. equal vertical division; 4 no. doors, size 550 x 525 mm high; all to Architect's details.	NO	2		
	<u>Shelving</u>				
3.9.2	Allow for construction in 20 mm thick veneered MDF boarding shelving; hardwood lipped to edges; of overall length 3,000 mm and width of 600 mm with varnishing in 6 No. Rows; including 50 x 50 mm cypress bearers and complete with 1,200 x 2,100 mm high double leaf mdf door with all ironmongery.	NO	2		
3.9.3	<u>In situ concrete class 25/20 including approved waterproofing admixture.</u> 100 mm Thick plinths	SM	9		
3.9.4	75 mm Thick slab with and including BRC mesh ref A 98 to worktops.	SM	9		
3.9.5	Extra over for boxing to form opening for sinks to the top of washroom and kitchen counter slabs	NO	4		
3.9.6	<u>In sawn soft wood formwork</u> Formwork to soffits of suspended slab.	SM	9		
3.9.7	Ditto to edges 75 - 150 mm girth.	LM	15		
3.9.8	<u>FINISHES</u> 20mm thick light Cement and Sand weight (1:4) screeding smooth trowelled	SM	18		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>FITTINGS CONTINUED...</u> BROUGHT FORWARD				
	<u>Terrazzo paving</u> 20 mm Thick homogenous mix terrazzo laid on screed backing; cement sand marble chippings (1:4:8) grinded and polished including dividing strips.	SM	18		
3.9.9					
3.9.10	Ditto but to 100 mm high fascia and skirting	LM	15		
	<u>Prepare and apply three coats of silk vinyl Emulsion paint to:-</u>				
3.9.11	Plastered soffits.	SM	9		
	<u>Fire Escape Ladder</u> Fabricate, Supply and fix Aluminium fire escape ladder comprising of handrails, treads and protective cage; all to Engineer's details	LM	8		
3.9.12					
	TOTAL FOR ELEMENT NO. 3.9 (FITTINGS AND FIXTURES) CARRIED TO SUMMARY				
	<u>OFFICE BUILDING WORKS SUMMARY</u>				
A	Total for Element No. 3.1 (Substructure Works), brought forward from page OBW/4				
B	Total for Element No. 3.2 (Superstructure Reinforced Concrete Works), brought forward from page OBW/5				
C	Total for Element No. 3.3 (Walling), brought forward from page OBW/6				
D	Total for Element No. 3.4 (Roofing) brought forward from page OBW/8				
E	Total for Element No. 3.5 (Windows) brought forward from page OBW/9				
F	Total for Element No. 3.6 (Doors) brought forward from page OBW/11				
G	Total for Element No. 3.7 (Finishes) brought forward from page OBW/12				
H	Total for Element No. 3.8 (Balustrading and Railing) brought forward from page OBW/13				
J	Total for Element No. 3.9 (Fittings and fixtures) brought forward from above.				
	TOTAL FOR OFFICE BUILDING WORKS, CARRIED TO GRAND SUMMARY				

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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p><u>BILL NO 4: GATE HOUSE BUILDING WORKS</u></p> <p><u>ELEMENT NO. 4.1</u></p> <p><u>SUBSTRUCTURE WORKS (All Provisional)</u></p> <p><u>Please note that ALL substructure works are Measured Provisionally. The contractor must ensure that the actual measurements are taken by the Project Quantity Surveyor before any works are covered. Failure to do so will necessitate works to be open up for verification at your (contractors) cost.</u></p> <p>NOTE: Classes of Rock</p> <p><u>(1) Class 1 :</u></p> <p>Soft rock of the type known locally as "CORAL" which in the opinion of the Engineer cannot be considered as hard rock shall be known as Class 1 rock. Soft Rock shall be rock with compressive strength not exceeding 15N/mm². Murram and Kunker is specifically excluded and will be reckoned as normal/common excavation. Extremely weathered and weak Tuff shall also be considered as normal excavation.</p> <p><u>(2) Class 2 :</u></p> <p>Class 2 Rock shall be with compressive strength exceeding 15N/mm². This type of rock contains stones and boulders of unweathered or incompletely weathered Tuff, trachyte, black trap or lava with compressive strength exceeding 15N/mm² in a formation which is massive and geologically homogeneous. A boulder or outcrop with such compressive strength will be deemed to be Class 2 rock or Hard Rock</p> <p>The opinion of the Engineer in classifying rock shall be final and binding.</p> <p>Explosives must not be used without the prior approval of the Engineer. Blasting operations are carried out at the Contractor's sole risk, and all blasting must be carried out in accordance with government regulations and approval</p>				

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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>EXCAVATION AND EARTHWORKS</u>				
	<u>Excavation including maintaining and supporting sides and keeping free from water, mud and falling materials; No allowance is made in the excavations for working space; contractor to factor in working space in his rates:</u>				
4.1.1	Clear site of all bushes, tufts and any small or large trees, including grubbing out roots and burn on site where directed	SM	14		
4.1.2	Excavate oversite average 150mm deep and cart away	SM	14		
4.1.3	Excavate trench for strip foundation: not exceeding 1.5m deep	CM	14		
4.1.4	Extra over excavation from rock in any position	CM	14		
	<u>Disposal of excavated material</u>				
4.1.5	Return, fill and ram extra excavation materials around foundation	CM	5		
4.1.6	Load and cart away surplus material	CM	9		
	<u>Disposal of Water</u>				
4.1.7	Allow for keeping the whole of the excavation free from mud, water and fallen materials	Item	1		
	<u>Planking and strutting</u>				
4.1.8	Allow for planking and strutting sides of excavation	Item	1		
	<u>Filling</u>				
4.1.9	250 mm thick approved red soil filling consolidated in 150mm thick layers to make up levels	CM	4		
4.1.10	300mm thick (minimum) approved hardcore handpacked in layers not exceeding 150mm	CM	5		
4.1.11	50mm thick murrum dust or any other equal and approved material in blinding surface of hardcore	SM	14		
	<u>Insecticide Treatment</u>				
4.1.12	Treat hardcore surface with approved antitermite applied in accordance with the manufacturer's instructions and subject to a TEN YEAR guarantee	SM	14		
	<u>CONCRETE WORKS</u>				
4.1.13	50mm thick concrete blinding to surfaces of strip footings class 15/20	SM	9		
	TOTAL EXCAVATION AND EARTHWORKS, CARRIED FORWARD TO ELEMENT COLLECTION				

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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SUBSTRUCTURES CONTINUED</u>				
	<u>Vibrated reinforced concrete class 25/20 to:-</u>				
4.1.14	Strip footing	CM	3		
4.1.15	150mm thick floor slab	SM	14		
4.1.16	Steps	CM	1		
	<u>High Tensile Ribbed Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u>				
4.1.17	Assorted bars	KG	400		
4.1.18	BRC mesh type A142	SM	14		
	<u>Marineply formwork as Described. Allow for setting to special steel propping, strutting, fillets, nails, etc to:</u>				
4.1.19	Edges of strip footing	SM	8		
4.1.20	Ditto but to edges of floor slab 75mm - 150mm thick	LM	15		
	<u>FOUNDATION WALLING</u>				
4.1.21	200mm solid coral block foundation wall in cement:sand (1:3) reinforced with hoop iron at every to alternative course	SM	27		
	<u>WATERPROOFING</u>				
4.1.22	1000 gauge polythene DPM	SM	14		
	<u>PLINTH FINISHES</u>				
4.1.23	15mm cement and sand (1:4) render trowelled smooth and comprising 12mm thick backing and 3mm finishing coat.	SM	8		
	<u>Painting and Decoration</u>				
4.1.24	Prepare and apply 3 coats of first quality bituminous paint or equal and approved to rendered surfaces	SM	8		
	TOTAL SUBSTRUCTURE WALLING AND CONCRETE WORKS, CARRIED FORWARD TO ELEMENT COLLECTION BELOW				
	<u>ELEMENT NO. 4.1 (SUBSTRUCTURE WORKS) COLLECTION</u>				
A	Total Excavation and Earthworks brought forward from page GH/2				
B	Total Substructure Walling and Concrete Works brought forward from above				
	TOTAL ELEMENT NO. 4.1 (SUBSTRUCTURE WORKS), CARRIED TO SUMMARY				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SUPERSTRUCTURES</u>				
	<u>ELEMENT NO. 4.2</u>				
	<u>SUPERSTRUCTURE REINFORCED CONCRETE WORKS</u>				
	<u>Vibrated Reinforced Concrete Class - 25/20 to:-</u>				
4.2.1	Suspended beams	CM	2		
4.2.2	Concrete gutters	CM	4		
	<u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u>				
4.2.3	Asorted bars	KG	600		
	<u>Marineply formwork as Described. Allow for setting to special steel propping, strutting, fillets, nails, etc to:</u>				
4.2.4	Sides of Suspended Beams	SM	21		
4.2.5	Sides and Soffits of gutters	SM	49		
	TOTAL FOR ELEMENT NO. 4.2 (SUPERSTRUCTURE REINFORCED CONCRETE WORKS), CARRIED FORWARD TO SUMMARY				
	<u>ELEMENT NO. 4.3</u>				
	<u>WALLING</u>				
4.3.1	200mm machine cut coral stone wall in cement:sand (1:3) reinforced with hoop iron at every to alternative course externally.	SM	33		
4.3.2	Ditto but 200 mm thick parapet walling ditto	SM	9		
4.3.3	150mm machine cut coral stone wall in cement:sand (1:3) reinforced with hoop iron at every to alternative course internally.	SM	14		
	<u>WATERPROOFING</u>				
4.3.4	Hessian based bituminous felt damp proof course 200mm wide	LM	15		
	<u>Precast concrete coping</u>				
4.3.5	300 x 75 mm thick insitu concrete coping reinforced in 4No. 10mm diameter bars and 8mm diameter rings; weathered and throated saddled-back on both sides for handling finished fair and jointed to 200 thick dwarf and parapet walls in cement sand mortar 1:3 all to approval	LM	15		
	TOTAL FOR ELEMENT NO. 4.3 (WALLING), CARRIED FORWARD TO SUMMARY				

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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 4.4</u>				
	<u>ROOFING</u>				
	<u>STEEL TRUSSES</u>				
	<u>The following in trusses, girders and independent members made of cold-rolled light gauge Steel Sections including grinding all welds smooth and painting with red oxide primer before delivery to site, then 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>				
4.4.1	75 x 50 x 3mm Thick (5.42Kg/m) R.H.S external members welded to gusset plate	LM	36		
4.4.2	50 x 50 x 3mm Thick (4.43Kg/m) S.H.S struts and ties	LM	7		
4.4.3	177.8 x 50.8 x 2mm Thick (5.90Kg/m) Zed purlins welded to rafters	LM	11		
	<u>Sundries</u>				
4.4.4	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.	6		
4.4.5	16 mm diameter x 200 mm long bolts with head , nut and washers : fixed to concrete or masonry walls	NO.	24		
	<u>ROOF COVERING</u>				
4.4.6	28 Gauge prepainted Corrugated aluminium roofing sheets fixed with and including bolts, nails, cups and washer on purlins and rafter sides as (high quality) or approved equivalent	SM	11		
4.4.7	Ditto but matching ridge caps and Valley Gutters	LM	4		
	<u>GUTTER FINISHES</u>				
4.4.8	50 mm cement sand 1:3 water proof screed to flat roof slab laid to fall and crossfalls	SM	25		
4.4.9	Apply one coat bituminous primer to surface of screed.	SM	25		
4.4.10	Supply, torch and apply bituminous membrane as per 'high quality' or equal and approved to primed screed surfaces	SM	25		
4.4.11	Ditto sides of wall 200mm high	LM	15		
4.4.12	50 x 50mm internal angle fillet	LM	15		
	<u>Rainwater goods</u>				
4.4.13	Extra over for running outlet	NO	2		
4.4.14	100mm x 75 x 0.6mm PVC down pipes fixed to wall with holding clips at 1200mm centres	LM	6		
4.4.15	Extra over for swan neck 1000mm long	NO	2		
4.4.16	Extra over for shoe 1000mm long	NO	2		
	TOTAL FOR ELEMENT NO. 4.4 (ROOFING) CARRIED TO SUMMARY				

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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 4.5</u> <u>WINDOWS</u>				
	<u>Supply, assemble and fix the following purpose made powder coated aluminium framed sliding windows to B.S 3987, 1984 from approved manufacturer(s) in 75 x 50 x 2 mm thick aluminium transomes and mullions at 600 mm C/C; railing and necessary intermediate reinforcement elements complete with and including all necessary bolts, nuts, rubber nosing and; necessary fixing gaskets including all weather strips, rubber glazing strips,couplings, sliding rails bars, window boards; panes fixed with 6mm thick one way glass fixed with beadings.</u>				
4.5.1	Overall size 750 x 900mm high.	NO.	2		
4.5.2	Overall size 750 x 1200mm high.	NO.	3		
	TOTAL FOR ELEMENT NO. 4.5 (WINDOWS), CARRIED FORWARD TO SUMMARY				
	<u>ELEMENT NO. 4.6</u> <u>DOORS</u>				
	<u>Supply, assemble and fix the following purpose made powder coated aluminium framed door to B.S 3987, 1984 in 100 x 50 x 2 mm thick frames; complete panes fixed with 8mm thick One way tinted glass fixed with beadings with a complete set of industrial galvanised ironmongery comprising of 3 lever mortice locks complete with lever furniture, 100mm heavy duty aluminium butt hinges, brass door stops, guardsman pull handle XL003820 and rubber buffers as directed by the project Architect.All exposed aluminium section are to be powder coated. (Ref Architects Detailing)</u>				
4.6.1	Single leaf single swing door size 900mm x 2600mm high with 500mm high fanlight	NO	1		
4.6.2	Ditto but size 800mm x 2600mm high with 500mm high fanlight	NO	1		
4.6.3	<u>Suply and fix the following ironmongery all to approved specification</u> Door closer (Heavy duty)	NO	2		
4.6.4	Stainless steel satin Rectangular door signage size 150 X 75	NO	2		
	TOTAL FOR ELEMENT NO. 4.6 (DOORS), CARRIED FORWARD TO SUMMARY				

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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 4.7</u>				
	<u>FINISHES</u>				
	<u>EXTERNAL FINISHINGS</u>				
	<u>Walls</u>				
	<u>25mm thick cement and sand (1:3) render to:-</u>				
4.7.1	25mm thick cement and sand Rendering to walls and Concrete Surfaces, finished with a wood float.	SM	51		
4.7.2	Prepare and apply 3 coats of first quality exterior silicone paint to plastered surfaces.	SM	51		
	<u>INTERNAL FINISHES</u>				
	<u>Wall and Concrete Finishes</u>				
4.7.3	12mm cement and sand (1:4) plaster to walls and concrete surfaces trowelled smooth.	SM	40		
4.7.4	Prepare and apply 3 coats of first quality emulsion paint or equal and approved to plastered surfaces.	SM	40		
	<u>Wall Tiles</u>				
4.7.5	12mm cement and sand (1:4) backing to receive tiles.	SM	21		
4.7.6	150 x 150 x 6mm Thick White glazed ceramic wall tiles bedding and jointing in cement and sand (1:3) mortar and flush pointed with white cement:	SM	21		
	<u>Floor Finishes</u>				
	<u>Cement and sand (1:4) screeding smooth trowelled</u>				
4.7.7	32mm Thick floor screed to receive tiles	SM	14		
4.7.8	Ditto 100mm high skirting	LM	15		
	<u>Ceramic floor tiles</u>				
4.7.9	Supply and fix 6 mm thick non-slip ceramic floor tiles on prepared backing including grouting and edge protectors where required; overall size 330mm x 330mm.	SM	14		
4.7.10	Ditto 100mm high skirting	LM	15		
	TOTAL FOR ELEMENT NO. 4.7 (FINISHES) CARRIED TO SUMMARY				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>GATE HOUSE BUILDING WORKS SUMMARY</u>				
A	Total for Element No. 4.1 (Substructure Works), brought forward from page GH/3				
B	Total for Element No. 4.2 (Superstructure Reinforced Concrete Works), brought forward from page GH/4				
C	Total for Element No. 4.3 (Walling), brought forward from page GH/4				
D	Total for Element No. 4.4 (Roofing) brought forward from page GH/5				
E	Total for Element No. 4.5 (Windows) brought forward from page GH/6				
F	Total for Element No. 4.6 (Doors) brought forward from page GH/6				
G	Total for Element No. 4.7 (Finishes) brought forward from page GH/7				
	TOTAL FOR GATE HOUSE BUILDING WORKS, CARRIED TO GRAND SUMMARY				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	(All Rates are V.A.T Inclusive) BILL NO. 5: ELECTRICAL WORKS SCHEDULE 1: GROUND FLOOR & GATE HOUSE Supply Install, Test and Commission Following:- LIGHTING POINTS				
5.1.1	Lighting points wired in 3x4.5mm ² 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.	44		
	ii)Two Way switching	No.	22		
5.1.2	10A plastic switch plates as follows				
	i)One gang one way	No.	19		
	ii)One gang two way	No.	5		
	iii)Two gang two way	No.	2		
	LIGHTING FITTINGS				
5.1.3	Light fittings complete with all the necessary fixing accessories and rated energy lamps as follows:-				
	i) Exit Light	No.	4		
	ii) Type 600X600	No.	9		
	iii)Type 2	No.	15		
	iv) Type 2D	No.	7		
	v) Type 4	No.	1		
	vi) Type N	No.	17		
	vii) Type X	No.	1		
	viii) Type 4C	No.	2		
	ix) Type M	No.	10		
5.1.4	Motion Sensors for lighting in washrooms	No.	4		
	POWER OUTLETS				
5.1.5	Socket outlet point in Ring wiring of 3x2.5 mm ² PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	48		
5.1.6	13A Twin switched moduled socket outlet plate	No.	48		
5.1.7	20A Double Pole outlet point comprising of wiring in 3x4.0 mm ² PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	13		
5.1.8	20A Double pole switch complete with neon light	No.	13		
	KITCHENETTE				
5.1.9	Cooker point comprising wiring in 3x6.0mm ² PVC SC Cu cables drawn inside trunking	No.	1		
5.1.10	45A Cooker Control Unit incorporating a 13A switched socket outlet and neon indicator	No.	1		
5.1.11	Cooker connector	No.	1		
	ELECTRICAL SWEEP FANS				
5.1.12	Ceiling fan points wired in 3x2.5mm ² PVC/SC copper cables drawn in concealed 20mm diameter heavy gauge PVC conduit including all boxes, saddles and all accessories	No.	8		
5.1.13	CEILING FANS				
	i) 49W 1400mm 3-arm 5- speed, Ceiling fan complete with the regulator	No.	8		
5.1.14	Ceiling fan hook (M-10) complete with rawl bolt.	No.	8		
	TOTAL C/F TO NEXT PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F/ FROM PREVIOUS PAGE				
	<u>FIRE DETECTION AND ALARM SYSTEM</u>				
5.1.15	Fire alarm panel/Fire alarm bell/Break glass Unit Points/Smoke detector points comprising iring in 3x1.5mm ² fire risistant cables concealed in PVC conduits concealed in ceiling space but excluding bell and break glass unit	No.	16		
5.1.16	Addressable Call point	No.	2		
5.1.17	Addressable Sounder complete with beacon	No.	2		
5.1.18	Addressable Smoke detectors complete with base	No.	10		
5.1.19	Heat detectors complete with base	No.	1		
5.1.20	Single Loop, Expandable to 8, Intelligent Addressable fire alarm panel with atleast 200 addresses complete with full network capability,stand-by batteries and intergral battery charger, touch screen, thermal printer and CAN modules	No.	1		
	<u>TELEVISION, CCTV AND DATA WORKS</u>				
5.1.21	16 SW/G,(450 x 300 x 100)mm ³ flush mounted galvanised powder coated draw box for telephone & data works	4	No		
5.1.22	Telephone/Data outlet point comprising of concealed 20mm diameter HG PVC conduits plus draw wire	22	No		
5.1.23	RJ45, Single Data outlet plate a) Single b) Double	2 20	No No		
	<u>DISTRIBUTION BOARDS</u>				
5.1.24	10-Way TP/N distribution board flush mounted complete 1No. 125A TPN integral isolator.	No.	1		
5.1.25	4- way SP/N Consumer Unit flush mounted complete 1No. SP/N intergral isolator	No	1		
5.1.26	MCBs for the above boards i)16A SP ii)20ASP iii)32ASP iv)45ASP v) 80ATP vi) Blanking Plates	No. No. No. No. No. No.	4 11 4 1 1 6		
	<u>SUB-MAINS CABLES</u>				
5.1.27	4 core 25mm ² PVCC/SWA/PVC (armoured) + 1X16mm ² single Core copper cables drawn inside HG conduits	LM	100		
5.1.28	3 core 10mm ² PVC/SWA/PVC (armoured) copper cables drawn inside 50mm diameter HG conduits	Lm	30		
	TOTAL C/F TO NEXT PAGE				

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BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SCHEDULE 2:</u>				
	<u>FIRST FLOOR</u>				
	<u>Supply Install, Test and Commission Following:-</u>				
	<u>LIGHTING POINTS</u>				
5.2.1	Lighting points wired in 3x4.5mm ² 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.	37		
	ii)Two Way switching	No.	18		
5.2.2	10A plastic switch plates as follows				
	i)One gang one way	No.	13		
	ii)One gang two way	No.	6		
	iii)Two gang two way	No.	2		
5.2.3	<u>LIGHTING FITTINGS</u>				
	Light fittings complete with all the necessary fixing accessories and rated energy lamps as follows:-				
	i) Exit Light	No.	3		
	ii) Type 600X600	No.	10		
	iii)Type 2	No.	15		
	iv) Type 2D	No.	6		
	v) Type 4	No.	1		
	vi) Type N	No.	13		
	vii) Type 4C	No.	6		
	viii) Type M	No.	2		
5.2.4	Motion Sensors for lighting in washrooms	No.	4		
	<u>POWER OUTLETS</u>				
5.2.5	Socket outlet point in Ring wiring of 3x2.5 mm ² PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	40		
5.2.6	13A Twin switched moduled socket outlet plate	No.	40		
5.2.7	20A Double Pole outlet point comprising of wiring in 3x4.0 mm ² PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	12		
5.2.8	20A Double pole switch complete with neon light		12		
	<u>KITCHENETTE</u>				
5.2.9	Cooker point comprising wiring in 3x6.0mm ² PVC SC Cu cables drawn inside trunking	No.	1		
5.2.10	45A Cooker Control Unit incorporating a 13A switched socket outlet and neon indicator	No.	1		
5.2.11	Cooker connector	No.	1		
	<u>ELECTRICAL SWEEP FANS</u>				
5.2.12	Ceiling fan points wired in 3x2.5mm ² PVC/SC copper cables drawn in concealed 20mm diameter heavy gauge PVC conduit including all boxes, saddles and all accessories	No.	8		
5.2.13	49W 1400mm 3-arm 5- speed, Ceiling fan complete with the regulator	No.	8		
	TOTAL C/F TO NEXT PAGE				

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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F FROM PREVIOUS PAGE				
5.2.14	Ceiling fan hook (M-10) complete with rawl bolt.	No.	8		
	<u>FIRE DETECTION AND ALARM SYSTEM</u>				
5.2.15	Fire alarm panel/Fire alarm bell/Break glass Unit Points/Smoke detector points comprising iring in 3x1.5mm ² fire risistant cables concealed in PVC conduits concealed in ceiling space but excluding bell and break glass unit	No.	17		
5.2.16	Addressable Call point	No.	2		
5.2.17	Addressable Sounder complete with beacon	No.	2		
5.2.18	Addressable Smoke detectors complete with base	No.	11		
5.2.19	Addressable Heat detectors complete with base	No.	2		
	<u>TELEVISION, CCTV AND DATA WORKS</u>				
5.2.20	16 SWG,(450 x 300 x 100)mm ³ flush mounted galvanised powder coated draw box for telephone & data works	4	No		
5.2.21	Telephone/Data outlet point comprising of concealed 20mm diameter HG PVC conduits plus draw wire	22	No		
5.2.22	RJ45, Data outlet plate a) Single b) Double	4 18	No No		
5.2.23	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		
5.2.24	Single TV face plate	1	NO		
	<u>DISTRIBUTION BOARDS</u>				
5.2.25	8-Way TP/N distribution board flush mounted complete 1No. 125A TPN integral isolator.	No.	1		
5.2.26	MCBs for the boards above i)16A SP ii)20ASP iii)32ASP iv)45A SP v)Blanking Plates	No. No. No. No. No.	6 11 3 1 3		
5.2.27	<u>SUB-MAINS CABLES</u> 4 core 16mm ² PVCC/SWA/PVC (armoured) + 1X16mm ² single Core copper cables drawn inside HG conduits	LM	105		
5.2.28	Cable glands for the above cable	No.	4		
5.2.29	Cable lugs for the above cable complete with hydraulic crimping	No.	20		
5.2.30	Powder Coated Electrical Pedestal Socket Box with provision for 4No. Standard Twim sockets and 4 No. Standard Single Sockets	No.	9		
	TOTAL FOR FIRST FLOOR C/F TO SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5.3.1	<u>SCHEDULE 5 MAIN POWER DISTRIBUTION</u>				
	<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 & 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) 20 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) 2 No 5 KVAR's 415 V, 50Hz, 3-Phase</p> <p>c) 3 No Special contactors for capacitor switching</p> <p>d) 3 No Fuse bases and fuses for each capacitor protection</p> <p>e) 3 No Step indicator lamps</p> <p>f) 3 No Control circuit protection fuse/fuse holder</p> <p>g) 1 No. 5-Step automatic control regulator for maintaining power factor at the set level and regulating the switching of capacitor steps</p> <p>h) 1 No 150/5A Current transformer (to be mounted after the mains incoming circuit breaker)</p> <p>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.</p> <p>xv) Allow for Fireman's switch connection as indicated in the schematic drawing</p> <p>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. 120mm² green earth lead complete with all accessories. (Note: Use parallel rods if effective earthing cannot be achieved with 1 No. rod).</p>	Item	1		
	TOTAL C/F TO NEXT PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F FROM PREVIOUS PAGE				
5.3.2	50mm ² 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		
	UNDERGROUND CABLE DUCTING				
5.3.3	Allow for 300mm deep trenching and back filling for the cable mentioned before, Telecommunication and street lighting.	Lm	365		
5.3.4	Ducting for the above in 150mm HGPVC Pipes complete with haunching	Lm	365		
5.3.5	Allow for cable markers in concrete tiles marked "HATARI" for the item above	No.	36		
	WATER PUMPS PROVISIONS				
5.3.6	3 core 6mm ² PVC/SWA/PVC (armoured) copper cables drawn inside 32mm diameter HG conduits	Lm	60		
5.3.7	32A Single phase Isolator complete with 3 pin industrial socket and plug	No.	2		
	BIO- DIGETSTER PROVISIONS				
5.3.8	4 core 25mm ² PVC/SWA/PVC (armoured) copper cables drawn inside 32mm diameter HG conduits	Lm	50		
5.3.9	Cable glands for the above cable	No.	2		
5.3.10	Cable lugs for the above cable complete with hydraulic crimping	No.	10		
5.3.11	8-Way TP/N distribution board flush mounted complete 1No. 100A TPN integral isolator.	No.	1		
5.3.12	MCBs for the boards above				
	i)16A SP	No.	4		
	ii)20ASP	No.	11		
	iii)32ASP	No.	4		
	iv)32A TP	No.	1		
	v)Blanking Plates	No.	4		
5.3.14	Single phase isolator point comprising of wiring in 3x6.0 mm ² PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	3		
5.3.16	Three phase isolator point comprising of wiring in 5x6.0 mm ² PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	3		
5.3.18	32A Single phase Isolator complete with 3 pin industrial socket and plug	No.	3		
5.3.20	32A Three phase Isolator complete with 3 pin industrial socket and plug	No.	3		
5.3.22	150 x 100mm 12 gauge galvanised steel perforated cable tray for support of the cables.	Lm,	150		
5.3.24	Build 600 x 600 x 600mm deep power/communications manhole complete with internal plaster and heavy duty EAFW steel cover.	No.	20		
	TOTAL FOR POWER DISTRIBUTION C/F TO SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SCHEDULE 6</u>				
	<u>55KW SOLAR SYSTEM</u>				
5.4.1	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.	96		
5.4.2	10KWh Lithium Battery Pack Smart String Energy Storage System (ESS) including a smart Rack Controller. Max Charging & Discharge power: 10kW, IP65, Class A EMC Protection Rating, Type II DC Lightning Protection. Smart Rack efficiency: +98.5%,	No.	1		
5.4.3	DC/AC off-grid 48V Power inverter full protection function:over-voltage, over-frequency, over-current, over-temperature, AC short-circuit automatic protection Rated Output power 55KW MPPT efficiency of upto 99.5% Pure Sinewave output	No.	1		
10.4.4	Solar MPPT charge controller with the following characteristics; PV open circuit voltage 500V, Max PV power 55KW, 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		
5.4.5	Racks/brackets to fit for item "4.31" above. To be Aluminium or approved equivalent resisting corrosion	No.	75		
5.4.6	Non-corrosive brackets to fit item "4.32" above	No.	75		
5.4.7	Non-corrosive brackets to fit item "4.33" above	No.	2		
5.4.8	Non-corrosive brackets to fit item "4.34" above	No.	1		
5.4.9	Solar surge protection device rated for 60VDC or to the Engineers approval	No.	1		
5.4.10	List any other item necessary to complete the installation of the 55KW solar system Contractor to note that the inverter and batteries together with their associated works should be housed in a container. Rates included should include the container housing	Lot	1		
	TOTAL FOR HYBRID SOLAR POWER C/F TO SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SCHEDULE 7</u>				
	<u>STANDBY POWER SUPPLY SYSTEM (GENERATOR SET)</u>				
	GENERATING SET				
5.5.1	Supply, deliver to site, install, test and commission a prime rated 66 KVA 3 phase, 415V, 50Hz diesel generating set with a continuous power factor of 0.8 lagging as directed by the Engineer's specifications. The generator set is to be complete with a sound attenuated canopy and an integral base/belly daily service fuel tank with an operational running capacity of 8 hours.	No	1		
5.5.2	Supply, deliver to site and install a steel exhaust pipe of not less than 14 SWG and of adequate diameter running from the generating set to the outside of the generator house	LM	10		
5.5.3	Connect the exhaust pipe above in item above using steel pipes of adequate diameter, and flexible piping off engine exhaust manifold complete with heavy duty silencer	Item	1		
5.5.4	Complete earthing of generating set to electrical engineer's approval	Item	1		
	<u>AMF CONTROL PANEL</u>				
	Supply, deliver to site, install, test and commission the following:				
5.5.5	An electrical control panel complete with 150A ncoming MCCBs and contactors for automatic change over operation and complete with all other control accessories	No	1		
5.5.6	Suitable rated manual by-pass switch with clearly labeled NORMAL-OFF-BYPASS positions, and shall such be wired that when the switch is on either OFF or BYPASS position, the generator shall receive no signal to start	No.	1		
5.5.7	240V AC/12V DC mains power supply trickle battery charger as directed by the Engineer's specifications. The trickle charger shall charge the battery when the set is on IDLE mode , otherwise when the set is RUNNING , the battery shall be charged by the generator charger .	No.	1		
5.5.8	12 volts battery as directed by the Engineer's specifications	No.	1		
	<u>RECOMMENDED SPARE PARTS AND LUBRICATORS</u>				
	For the supply to the site of the following spare parts and lubricators:				
5.5.9	Oil Filters	No.	2		
5.5.10	Air Filters	No.	2		
5.5.11	Fuel filters to suit the set	No.	2		
5.5.12	Set of Fan belts to suit the set	No.	1		
5.5.13	10 litres container of sump oil of grade.....*	No.	1		
	TOTAL C/F TO NEXT PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F FROM PREVIOUS PAGE				
5.5.14	2 kilogram grease in a tin of grade*	No.	1		
5.5.15	10 litre plastic container of distilled water	No.	1		
5.5.16	20 litre of engine oil in a tin of grade*	No.	1		
5.5.17	Any other spare parts recommended by Tenderer **	Sum	1		
	*The tenderer to fill in the Grade quality to be supplied				
	**The tenderer to fill in the details and price of items but the price not to be included in total carried forward to summary page				
	<u>SCHEDULE 4 -TOOLS TO BE SUPPLIED WITH THE SET</u>				
	For the supply to site of the following tools:				
5.5.18	Metal tool box with lock and two keys	No.	1		
5.5.19	Set of 8 No. Chrome vanadium ring spanners in sizes to suit the set	No.	1		
5.5.20	Set of 3 screwdrivers, 75mm, 200mm and 300mm plus one 200mm Philips type	No.	1		
5.5.21	- ditto -but open ended spanners	No.	1		
5.5.22	Set of feeler gauges	No.	1		
5.5.23	Set of 8 No. Ratchets in sizes to suit the set	No.	1		
5.5.24	Grease gun to suit greasing points complete with compressor	No.	1		
5.5.25	Oil can, trigger type	No.	1		
5.5.26	Any other special tools which the tenderer recommends should be purchased as an optional:*	Item	1		
	<u>NOTE*</u> Tenderer should give detail and prices of item 5.7.26 but the price not to be included in total carried forward.				
	TOTAL FOR 100KVA GENERATOR C/F TO SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SCHEDULE 6 SOLAR STREET LIGHTING				
5.6.1	Type P4	No.	5		
5.6.2	7 meter Long Class B Galvanized Iron Solar Street Lighting pole as per detail for Type P4 lighting	No.	5		
5.6.3	Excavate holes to take the poles above, average depth 1000mm, install pole back-fill with concrete, and compact to natural ground level.	No.	5		
	TOTAL FOR SOLAR STREET LIGHTING C/F TO SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SCHEDULE 7</u>				
	<u>LIGHTNING PROTECTION</u>				
	Air Termination				
5.7.1	15mm diameter multiple point copper air terminal complete with base	No.	3		
5.7.2	Copper junction clamps for tape.	No.	3		
5.7.3	25 x 3mm turned copper tape	Lm	60		
5.7.4	Copper ridge saddle	No.	10		
5.7.5	D.C. tape clip	No.	27		
	Down Conductors				
5.7.6	25 x 3mm turned copper tape	Lm	30		
5.7.7	D.C. tape clip	No.	15		
5.7.8	Oblong test/junction clamp	No.	3		
5.7.9	Diameter 38mm HG PVC conduits for the down conductors above.	Lm	30		
	Earth Termination				
5.7.10	15mm diameter, 1200mm long solid copper earth rod, complete with driving stud and spike.	No.	3		
5.7.11	Earth rod-to-tape clamp type A.	No.	3		
5.7.12	Concrete inspection earth pit with 5 hole earth bar	No.	3		
5.7.13	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		
5.7.14	Soil treatment around the earth pits with marconite to achieve the required conductivity and obtain acceptable reading	Item	1		
5.7.15	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		
	TOTAL FOR LIGHTNING ARRESTORS C/F TO SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	ELEMENT 10.9 <u>Supply, install, test, commission and set to work (To the full satisfaction of all parties to the contract) the following: -</u> CCTV				
5.9.1	Dome Camera 4MP resolution, Excellent low light performance, Efficient H.265+ compression technology, IP67, 24/7 colourful imaging	No.	10		
5.9.2	Ditto but Bullet Cameras	No.	7		
5.9.3	Network Video Recording System base to be mounted in a 42U data Cabinet with the following features:- <ul style="list-style-type: none"> • Up to 32 channel IP cameras can be connected • Up to 576 Mbps high incoming bandwidth ensures IP cameras can be connected • 2 HDMI (different source) and 1 VGA interfaces • 16 HDD can be used for continuous video recording • 16 HDD can be used for continuous video recording • Supports some specialist cameras, including people counting camera/ANPR (automatic number plate recognition) camera/fisheye camera • Advanced streaming technology enables smooth live view in poor network conditions • Supports RAID 0, 1, 5, 6, 10 and N+1 hot spare for even more reliable data storage, effectively avoids data loss risks 	No.	1		
5.9.4	24 Port layer 2 100Mbps POE SFP Switch with Min 30W Power availability per port	No.	2		
5.9.5	GBIC transceiver modules (LC to LC) multimode for the switches above	No.	2		
5.9.6	Fibre Patch Panels for Data cable termination	No.	2		
5.9.7	9 U 600X600 wall mounted data cabinet complete with all accessories including power supply points	No.	2		
5.9.8	10TB Surveillance Hard Disk Drive	No.	8		
5.9.9	STP Cat 6 structured cables	Rolls	10		
5.9.10	STP Cat. 6 patch cord, 3M for the Cameras.	No.	15		
5.9.11	UPT Cat. 6A patch cord, 1M	No.	15		
5.9.12	Associated Fiber and UTP (CAT 6) cabling between field devices and Main Switch	Item	1		
TOTAL FOR CCTV CARRIED FORWARD TO SUMMARY PAGE					

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	ELEMENT 10.10 <u>Supply, install, test, commission and set to work (To the full satisfaction of all parties to the contract) the following: -</u>				
	ICT Horizontal Cabaling				
5.10.1	CAT 6A cable for Data/Telephone outlets	10	Rolls		
5.10.2	24 port CAT 6 Data Modular Patch Panel for 4-Pair UTP termination	4	No.		
5.10.3	1M Factory terminated Cat 6 4 pair-SFTP RJ 45- RJ 45 patch cords to be used inside cabinet (includes 15No Spares)	82	No.		
5.10.4	3M Factory terminated Cat 6 4 pair-SFTP RJ 45- RJ 45 patch cords for data outlets (includes 15No Spares)	82	No.		
5.10.5	2U Cable managers/organisers	4	No.		
	ACTIVE EQUIPMENT				
5.10.7	24 Port layer 2 100Mbps POE SFP Switch with Min 30W Power availability per port	4	No.		
	BACKBONE CABLING				
5.10.8	24 Port ST Multimode, sliding Fibre Optic patch panel complete with LC type connectors for Multimode fibre	2	No.		
5.10.9	1M Factory Terminated Fibre optic patch cords complete with LC-LC TYPE connectors to be used inside cabinet	20	No.		
5.10.10	8 core Loose tube multimode fibre optic cable linking floor edge switches to core switch in the Server room	400	LM		
5.10.11	RJ45-ST media converters for each edge switch	4	No.		
	SERVER				
5.10.12	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.		
5.10.13	24 port Core network switch for routing voice	1	No.		
5.10.14	24 port Core network switch equivalent for routing data	1	No.		
5.10.15	Router	1	No.		
5.10.16	2U Cable managers/organisers	4	No.		
5.10.17	Wireless Access point	8	No.		
	TOTAL C/F TO NEXT PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F FROM PREVIOUS PAGE				
	TELEPHONY				
5.10.18	Hybrid IP-PABX capable of handling 50 extensions to include GSM modules plus all accessories to work	1	No.		
5.10.19	Standard UC Phone complete with all accessories	11	No.		
5.10.20	Executive UC Phone complete with all accessories	6	No.		
5.10.21	Operator Phones complete with all accessories. Each takes up to 16 concurrent lines	8	No.		
5.10.22	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			
5.10.23	Any other items necessary to complete the system installation satisfactorily. (List, give quantities and price of the items) i)..... ii)..... ii)..... iv).....				
TOTAL FOR ICT ARRIED FORWARD TO SUMMARY PAGE					

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SCHEDULE 11</u> <u>LIFTS INSTALLATIONS</u> <u>Supply,deliver and install the following Lift and accessories to positions indicated on the Architectural drawings and as instructed by the Engineer:-</u> <u>Elevator</u> Supply, install , test and commission 1050kg/13 passenger capacity elevator to serve 5 floors of 1.5 m/s speed for operation on 415 V, 3 Phase, 50 Hz AC supply, having AC variable voltage and variable frequency type traction control, electro magnetic brake system, simple operation, operating panel with luminous buttons, over load warning indicator, battery operated alarm bell, CFL type emergency light, infrared rays sensing door protection for suitable height, reverse phase relay on controller, fireman's switch at ground floor, digital car position indicator in car and at all positions indicator in car at all floors with UP/DOWN directions, light fixtures, ventilation fan etc. complete with all accessories including automatic rescue device and having following other features Travel Height: 3.6m No. of Stops: 1				
5.11.1		No	1		
5.11.2	<u>Testing</u> Allow for testing the lift to Engineers satisfaction and to leave in sound working condition.	ITEM	1		
	415V Surge diverter as Furze ESP 415, or approved equivalent, complete with purpose-made enclosure with viewing window	No.	2		
5.11.3	<u>Training</u> Provide all necessary lift manuals and maintenance contract schedules including four weeks training programme for 4 persons (identified by the project manager) on how to operate.	ITEM	1		
5.11.4	<u>Maintenance Contract schedule</u> Maintenance for 12 months of the 2 lifts after end of defects and liability period	ITEM	1		
5.11.5	Supply and installation of standard lift canvas complete with hooks and mountings to cover the entire lift car interior walls.	No.	2		
	TOTAL FOR LIFT CARRIED FORWARD TO SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SCHEDULE 12</u>				
	<u>GENERAL ITEMS</u>				
5.12.1	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. (Note: Parameters must be satisfactory before building is switched on).	Item			
5.12.2	Allow for presentation of all the required samples as per specifications, Bills of Quantities and Drawings.	Item			
5.12.3	Working/ Shop Drawings Prepare and submit three sets of record (shop) plan and isometric layout drawings to easily readable scale, A1 or A0 paper size format as follows: 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 (AutoCad/REVIT 2023) 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			
5.12.4	As Installed Drawings As above but for as built/ installed drawings	Item			
5.12.5	Prepare and submit Maintenance Manuals for all items installed.				
5.12.6	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. 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. Provisional Sum for Contribution to KPLC for power upgrade	Item			
	TOTAL C/F TO NEXT PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F FROM PREVIOUS PAGE				
5.12.7	<p>Allow for sub-contractors charges for liaison with Kenya Power and Lighting comprising the following:-</p> <p>i)Extracting load details from the drawings</p> <p>ii)Calculating total load, together with necessary diversity</p> <p>iii)Verifying the details with the engineer.</p> <p>iv)If need be getting the required documentation and letters from client for the purposes of Additional Load Applications</p> <p>v)Filling all the required forms, and generating correspondences for power application.</p> <p>vi)Presenting application and getting reference number.</p> <p>vii)Making regular follow-ups with Kenya Power</p> <p>viii)Facilitating inspection, approvals and certification by Kenya Power</p> <p>ix)Providing attendance and materials required for power connection.</p> <p>x)Filling out and submitting Commencement and Completion certificates</p> <p>xi)Handing over all approved drawings and certificates to the client.</p> <p>xii)Performing all other services required for power supply to site.</p> <p>xiii)Building/modifying all power manholes to KPLC standards.</p> <p>xiv)All other incidental KPLC requirements/charges.</p>				
	TOTAL FOR AUDITORIUM AUDIO-VISUAL C/F TO SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELECTRICAL INSTALLATIONS SUMMARY PAGE</u>				
5.1	TOTAL FOR SCHEDULE 1 GROUND FLOOR				
5.2	TOTAL FOR SCHEDULE 2 FIRST FLOOR				
5.3	TOTAL FOR SCHEDULE 3 MAINS DISTRIBUTION				
5.4	TOTAL FOR SCHEDULE 4 SOLAR POWER				
5.5	TOTAL FOR SCHEDULE 5 STANDBY GENERATOR				
5.6	TOTAL FOR SCHEDULE 6 SOLAR STREET LIGHTING				
5.7	TOTAL FOR SCHEDULE 7 LIGHTNING PROTECTION				
5.8	TOTAL FOR SCHEDULE 9 CCTV				
5.9	TOTAL FOR SCHEDULE 10 ICT				
5.10	TOTAL FOR SCHEDULE 8 LIFTS				
5.11	TOTAL FOR SCHEDULE 8 GENERAL ITEMS				
	TOTAL FOR ELECTRICAL WORKS, CARRIED TO GRAND SUMMARY				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	(All Rates are V.A.T Inclusive) <u>BILL NO. 4; MECHANICAL WORKS</u>				
	<u>ELEMENT NO. 4,1 (INTERNAL PLUMBING):</u>				
	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				
	<u>PPR Pipes</u>				
6.1.1	20mm diameter pipework in wall chase	LM	30		
6.1.2	25mm Ditto	LM	140		
6.1.3	32mm ditto	LM	70		
6.1.4	40mm ditto	LM	60		
6.1.5	50mm ditto	LM	140		
6.1.6	63mm ditto	LM	100		
	<u>Sockets;</u>				
6.1.7	20mm diameter socket	No.	5		
6.1.8	25mm ditto	No.	30		
6.1.9	32mm ditto	No.	25		
6.1.10	40mm ditto	No.	47		
6.1.11	50mm ditto	No.	30		
6.1.12	63mm ditto	No.	23		
	<u>Bends</u>				
6.1.13	20mm diameter bends	No.	40		
6.1.14	25mm ditto	No.	20		
6.1.15	32mm ditto	No.	15		
6.1.16	40mm ditto	No.	29		
6.1.17	50mm ditto	No.	23		
6.1.18	63mm ditto	No.	17		
	<u>Tees</u>				
6.1.19	20mm diameter equal tees	No.	25		
6.1.20	25mm ditto	No.	41		
6.1.21	32mm ditto	No.	18		
6.1.22	40mm ditto	No.	17		
6.1.23	50mm ditto	No.	28		
6.1.24	63mm ditto	No.	3		
	TOTAL CARRIED TO NEXT PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F FROM PREVIOUS PAGE				
	<u>Reducers</u>				
6.1.25	25 x 20mm diameter Reducer	No.	18		
6.1.26	32 x 25mm ditto	No.	15		
6.1.27	40 x 32mm ditto	No.	6		
6.1.28	40 x 25mm ditto	No.	8		
6.1.29	50 x 32mm ditto	No.	12		
6.1.30	63 x 40mm ditto	No.	8		
	<u>Threaded Fittings</u>				
6.1.19	20mm diameter male/female threaded 90° bend/Elbow	No.	120		
6.1.20	25mm diameter mle/female PPR-M Adapter	No.	30		
6.1.21	32mm ditto	LM	36		
	<u>Nipples</u>				
6.1.22	20mm diameter G.I. nipple	No	4		
6.1.23	25mm ditto	No.	36		
	<u>Valves</u>				
6.1.24	20mm diameter approvded medium pressure screw down full way non-rising stem wedge gate valve to BS 5154 PN 20 for series B rating,with wheel and head jopints to steel tubing and complete with round male threaded transion fittings.	No.	2		
6.1.25	25mm ditto	LM	6		
6.1.26	32mm ditto	LM	6		
6.1.27	40mm ditto	LM	14		
6.1.27	50mm ditto	LM	15		
6.1.27	63mm ditto	LM	10		
	TOTAL INTERNAL PLUMBING CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p><u>ELEMENT NO. 6.2:</u></p> <p><u>SANITARY FITTINGS:</u></p> <p>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.</p> <p><u>Note.</u></p> <p>(i). All sanitary fittings shall be in approved colour.</p> <p>(ii). The model and Ref. No. Indicated is only a guide to the type and quality of fittings.</p> <p>(iii). Equivalent and Approved models may be acceptable</p> <p><u>Flexible Tubing</u></p> <p>15mm diameter x 300mm long flexible connectors complete with Integral chrome plated angle valve for connecting the Sanitary fitting to water supply.</p> <p><u>Robe Hook</u></p> <p>Robe hook in approved vitreous mounted to concealed screw to wall wedges.</p> <p><u>Close Couple Water Closet Suite</u></p> <p>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.</p> <p><u>Pedestal wash hand basin</u></p> <p>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</p> <p><u>Urinal Set</u></p> <p>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</p> <p><u>Toilet Roll Holder</u></p> <p>Semi recessed toilet roll holder in approved Vitreous of size 165 x 165mm in approved colour.</p>				
6.2.1		No.	44		
6.2.2		No.	1		
6.2.3		No	14		
6.2.4		No	12		
6.2.5		SET	6		
6.2.6		No.	14		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F FROM PREVIOUS PAGE				
	<u>Mirrors</u>				
6.2.4	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	No	16		
6.2.5	As above but 1200mmX600mmX25mm	No.	16		
	<u>Shower Fittings</u>				
6.2.6	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	No.	1		
	<u>Soap Dispenser</u>				
6.2.7	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	14		
	<u>Bib Tap</u>				
6.2.9	15mm diameter heavy duty bib tap or other equal and to approved catalogue	No	5		
	<u>Soap dish</u>				
6.2.10	Semi recessed built in soap dish in approved vitreous of size 150x150mm in approved colour.	No.	16		
	<u>Towel Rail</u>				
6.2.11	Chrome plated 20mm diameter x 800mm long approved towel rail and brackets as one piece, plugged and screwed into the wall.	No	2		
	<u>Single bowl, single drainer kitchen sink</u>				
6.2.12	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.	3		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F FROM PREVIOUS PAGE				
	<u>Disabled persons Water Closet and Wash Hand Basin Facility</u>				
	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 viterous 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				
6.2.13	(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	4		
	<u>Hand Drier</u>				
6.2.12	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		
6.2.13	Arabic Shattaf Bidet spray c/w tube and head and fixing to wall.	NO	18		
	TOTAL SANITARY FITTINGS CARRIED FORRWARD TO MECHANICAL WORKS SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 6.3:</u>				
	<u>FOUL DRAINAGE:</u>				
	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				
	<u>Internal</u>				
6.3.1	40mm diameter Grey UPVC waste pipe in wall chase.	LM	20		
6.3.2	50mm ditto	LM	40		
6.3.3	40mm ditto but boxed in concrete floor slab	LM	20		
6.3.4	50mm ditto	LM	70		
	<u>Extra Ovetubing For:-</u>				
6.3.5	100x50mm diameter UPVC floor trap,grating and cover	No	33		
6.3.6	100mm WC connector	No	16		
6.3.7	40mm diameter access tee and cap	No	13		
6.3.8	50mm ditto	No	19		
6.3.9	100mm diameter inspection bend and acces cap.	No	16		
	<u>Extra Ovetubing For Cont'd:-</u>				
6.3.10	100mm diameter vent cowl	No	7		
6.3.11	100mm diameter medium duty UPVC gulley trap,grating cover and waste	NO	22		
	<u>External</u>				
6.3.12	100mm diameter Grey UPVC soil vent pipe with expansion coupling and fixing to wall with holder bats ducts	LM	100		
6.3.13	150mm diameter Golden Brown UPVC waste pipe in soil	LM	80		
	TOTAL FOUL DRAINAGE CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 6.4:</u>				
	<u>STERILIZATION AND TESTING:</u>				
6.6.1	Allow for sterilization and flushing out of entire cold water installation with chlorine to the Engineer's Satisfaction	ITEM	1		
6.6.2	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				
	<u>ELEMENT NO. 6.5:</u>				
	<u>BUILDER'S WORK IN CONNECTION WITH PLUMBING AND DRAINAGE:</u>				
	<u>Masonry Gulley Trap</u>				
6.6.1	Construct masonry gulley trap size 200x200mm, approx depth 300mm, complete with seal and concrete cover, including all disposal	No.	7		
	<u>Manholes and Covers</u>				
6.6.2	Construct Manholes size 600 x 450mm and averaging 750mm deep constructed in 100mm thick concrete base(1:3:6), 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.	16		
	<u>Excavations</u>				
6.6.3	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	120		
	<u>Chasing</u>				
6.6.4	Form chase in both 100mm and 200mm thick coral block wall to receive necessary pipe work and make good disturbed areas	LM	300		
	<u>Holes</u>				
6.6.5	Make a hole through 100mm thick coral block wall for small pipe and make good disturbed areas	No.	16		
6.6.6	Ditto but 200mm thick and for large	No.	12		
	TOTAL BUILDERS WORK CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 6.6:</u>				
	<u>WATER RETICULATION - ALL PROVISIONAL</u>				
	<u>Roof Top Water Tanks</u>				
6.6.1	Supply, deliver and install vertical close end plastic moulded tank of capacity 5,000 litres 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		
	<u>Excavations</u>				
6.6.2	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		
	<u>Pipe Work</u>				
6.6.3	100mm diameter PN 16 HDPE pump suction lines	LM	30		
6.6.4	100mm diameter Ditto but Delivery line	LM	70		
6.6.5	63mm diameter Ditto but Delivery line	LM	80		
6.6.6	32mm diameter (PN-20) PPR Pipe laid and jointed in trench from water mains	LM	60		
6.6.7	40mm ditto	LM	10		
	<u>Extra Overtubing for:</u>				
	<u>Sockets:</u>				
6.6.8	32mm diameter PPR Sockets	No.	20		
6.6.9	40mm ditto	LM	15		
	<u>Bends</u>				
6.6.10	40mm diameter bend/Elbow	No.	10		
	<u>Tees</u>				
6.6.11	40mm diameter (PN-20) PPR equal tee	No.	12		
	<u>Valves</u>				
6.6.12	32mm diameter supply mains full way approved gate valve	No.	14		
6.6.13	40mm ditto	No.	6		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F FROM PREVIOUS PAGE				
6.6.14	<u>Water Connection to Supply mains & Testing</u> 50mm diameter G.I. equal tee	No	1		
6.6.15	50x40mm diameter G.I. reducer	No	1		
6.6.16	40mm diameter G.I. nipple	No	2		
6.6.17	50mm diameter PPR Adaptor	No	1		
6.6.18	40mm diameter full Way approved gate valve	No	1		
6.6.19	<u>Meter Connection</u> Allow for 25mm diameter approved Meter Connection from the Local Water Authority including paying for all the necessary charges,if any	ITEM	1		
6.6.20	<u>Stand Pipe</u> 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		
6.6.21	<u>Mains Valve Chamber</u> 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 amd frame in grease	ITEM	3		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F FROM PREVIOUS PAGE				
6.6.22	<p><u>Booster Pump Sets</u></p> <p>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 5m³/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 fuctioning. The pumps shall be connected in that when the Running Duty pump fails the Standby Pump starts up automatically.</p>	ITEM	1		
6.6.23	<p><u>Testing</u></p> <p>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		
6.6.24	<p><u>Surface Mounted Water Storage Tanks</u></p> <p>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 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 reinforced flat surface platform base approx. 900mm high (M/S).</p>	ITEM	2		
6.6.25	<p><u>Tank Base</u></p> <p>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 harcore filling,50mm thick blinding,Approved Damp proof membrane,A142 BRC Mesh,100mm thick vibrated (1:2:4)concrete floor slab, 15mm thick screed on the general faces of the tank base in (1:3) cement/sand mortar, 600mm widex1500mm deep srip foundation,including all Excavations and disposal</p>	ITEM	2		
6.6.26	<p><u>Testing</u></p> <p>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		
	TOTAL WATER RETICULATION CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO.6.7:</u>				
	<u>FIRE FIGHTING AND PROTECTION SERVICES</u>				
	<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>				
6.7.1	<u>Hose Reels.</u> 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		
6.7.2	<u>Hose Reel Fire Tank</u> Supply, deliever and install vertical close end plastic moulded tank of capacity 10,000 Litre (Size 1830 diameter x 2020mm high) .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		
6.7.3	<u>Pipework (G.I)</u> 20mm diameter medium grade galvanized mild steel supply pipe	LM	12		
6.7.4	25mm ditto	LM	10		
6.7.5	32mm Ditto	LM	10		
6.7.6	40mm ditto	LM	30		
6.7.7	50mm Ditto	LM	60		
6.7.7	<u>Sockets</u> 25mm diameter (G.I)socket	No.	8		
6.7.8	32mm Ditto	No.	5		
6.7.9	40mm ditto	No.	9		
6.7.10	50mm Ditto	No.	16		
6.7.11	<u>Unions</u> 20mm diameter (G.I)union	No.	8		
6.7.12	<u>Bends/Elbows</u> 20mm diameter (G.I) bend	No.	8		
6.7.13	32mm Ditto	No.	2		
6.7.14	40mm Ditto	No.	6		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F FROM PREVIOUS PAGE				
	<u>Tees</u>				
6.7.15	25mm diameter (G.I)equal tee	No.	2		
6.7.16	50mm Ditto	No.	5		
	<u>Reducers</u>				
6.7.17	25x20mm diameter G.I. Reducer	No.	2		
6.7.18	32x25mm ditto	No	2		
6.7.19	40x32mm ditto	No	2		
6.7.20	50x40mm ditto	No	2		
	<u>Nipples</u>				
6.7.21	20mm (G.I) nipple	No.	4		
	<u>Painting</u>				
6.7.22	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		
	<u>Hose Reel Booster Pump Set</u>				
6.7.23	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 12m3/hr against a Maximum Head of 40(metres) . 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 300Litres including all other accessories for proper fuctioning. The pumps shall be connected in that when the Running Duty pump fails the Standby Pump starts up automatically.	ITEM	1		
	<u>Testing</u>				
6.7.24	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		
	<u>Breaching Inlet /Booster inlets</u>				
6.7.25	Supply and Install Fire service 4" x 2 way breaching inlet connection complete with Drain Valves complying with BS 336:2010, PN16 Rated and non-return valves. The breaching inlets to be manufatured to comply to BS 5041	ITEM	1		
	<u>Breeching Inlet Cabinet</u>				
6.7.26	Supply and install breaching inlet cabinet, recessed type to accommodate 6" x 4 way breaching inlet manufactured to comply to BS5041-5	ITEM	1		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F FROM PREVIOUS PAGE				
	<u>Valve Chamber</u>				
6.7.27	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		
	<u>External Fire Hydrant</u>				
6.7.28	Supply 2 way pillar type fire hydrant with dia 63 outlet to LCPB/EN 12845 standard	ITEM	2		
	<u>100 mm hydrant isolation valve</u>				
6.7.29	UL Listed/ FM Approved, Connection: Flanged as BS EN 1092-2/ Flanged as ASME B16.1, PN 16	ITEM	2		
	<u>Underground Piping</u>				
	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.				
	Pipe connection, tees must be electrofusion/butt fusion fittings				
	100Ø HDPE	LM	100		
	<u>Supply, deliver and install the following Portable Fire extinguishers to positions indicated on the contract drawings and as instructed by the Engineer:-</u>				
	<u>Dry Powder Fire Extinguisher</u>				
6.7.30	9Kg cartridge type general purpose portable dry powder fire extinguisher fully charged or equal and approved.	No.	4		
	<u>Carbon dioxide Gas Fire Extinguisher</u>				
6.7.31	5kg carbon dioxide gas portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets	No.	4		
	<u>Water Carbon Dioxide Fire Extinguisher</u>				
6.7.32	9.0Litre Water carbon dioxide (W/CO2) portable fire extinguisher complete with pressure gauge, initial charge and mounting brackets.	No.	4		
	<u>Signage</u>				
6.7.33	Allow for the Signage of fire hose Reel, fire exits and fire instructions all as described in the particular specifications and to the Project Engineer's Approval.	ITEM	4		
	<u>Testing</u>				
6.7.34	Testing the whole fire fighting equipments to leave in sound working condition and to the Engineer's satisfaction	ITEM	1		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BALANCE B/F FROM PREVIOUS PAGE				
	<u>ELEMENT NO.6.8 CONT'D:</u>				
6.7.35	Record (As Installed) Drawings Prepare and submit three sets of record (as installed) plan and isometric layout drawings to easily readable scale, A1 or A0 paper size format as follows: 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 (REVIT 2023) and hard copy to the client, the architect and the engineer. The soft copies to be stored in 1TB Harddisk and 32GB flash disc. Allow for preparation and submitting draft and three final copies of operation, instruction and maintainance manuals to Engineers approvals.	ITEM	1		
	TOTAL FIRE FIGHTING CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE				
	<u>ELEMENT NO.6.8:</u>				
	<u>ON-SITE WASTEWATER TREATMENT PLANT</u>				
	<u>Preliminaries, Drawings, Manuals, Handovers, Training, Regulatory Matters, Operation & Maintenance</u>				
6.8.1	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.	1	SUM		
6.8.2	Allow for Monthly Maintenance visits for period of Twelve (12) Months	1	SUM		
6.8.3	Allow to liase with the NEMA authorities, assit client with submitting application and obtaining discharge licence for the Waste Water treatment Plant	1	SUM		
6.8.4	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	1	SUM		
6.8.5	Allow for any other item not necessarily mentioned here to provide a complete working system to the Satisfaction of the engineer	1	SUM		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD FROM PREVIOUS PAGE				
	<u>WASTE WATER TREATMENT SYSTEM</u>				
	<u>Waste Water Treatment Plant</u>				
6.8.5	Supply, Install, Test and Commission the Moving Bed Biofilm Reactor (MBBR) Waste Water Treatment System, With a capacity of treating 350PE with an average flow rate of 103,000 lts per day . With a BOD load of 40Kgs per day , Ammonia Nitrogen load of 4Kgs per day . With minimum treated discharge requirement of BOD <30mg/lit, TSS <30mg/lit, Ammonia Nitrogen <20mg/lit . 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.	1	Item		
6.8.6	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, electrical isolators, overload protection, 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.	1	NO		
6.8.7	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 access via mobile phone App, web portal, SMS/Email alerts for critical plant condition.	1	SUM		
6.8.8	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/m ³ . Required Surface Area specification shall be 675m ² /m ³ .	1	SUM		
6.8.9	Process Aeration Blowers 1.6 kW / 3 HP positive displacement (PD), one (1) duty, one (1) standby.	2	NO		
6.8.10	Fine bubble aeration system, in-basin pipes and connections to the top of the wall of the basin.	1	SUM		
6.8.11	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.	35	NO		
6.8.12	Allow for Coarse inlet Screen 2" slots for capture of large rags and solids. Fabricated with 50mm polypropylene structure & Stainless Steel.	1	NO		
6.8.13	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.	3	NO		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD FROM PREVIOUS PAGE				
6.8.14	1 HP submersible RAS/WAS pumps	1	NO		
6.8.15	Influent pumps, one (1) duty and one (1) standby	2	NO		
6.8.16	Chemical dosing pumps and controls for sodium hypochlorite, plus chemical makeup tank. System for Chlorine Disinfection of Treated Waste Water.	1	SUM		
6.8.17	All pipe & fittings as required to complete the interconnecting system and all necessary fittings, valves and accessories.	1	SUM		
6.8.18	All Electrical wiring as required to complete the interconnecting system and all necessary conduits, fittings and accessories.	1	SUM		
6.8.19	Allow for Installation of Wastewater Treatment Plant Equipment, include all Labour, Transport & Sundries Costs	1	SUM		
	<u>TOTAL FOR ON-SITE WASTEWATER TREATMENT PLANT CARRIED TO SUMMARY</u>				
	<u>ELEMENT NO.6.9:</u> <u>GENERAL ITEMS</u>				
6.9.1	Allow for mobilization, tools and all necessary equipment on site	1	Item		
6.9.2	Allow for co-ordination of works with the Main Contractor and other Sub-contractors	1	Item		
6.9.3	Allow for preparation of all "shop" drawings and submitting to the Engineers for approval prior to commencement of work on site	1	Item		
6.9.4	Allow for preparation of all "As Built" Drawings immediately after Practical Completion of the works.	1	Item		
6.9.5	Allow for the preparation of all "Operations & Maintenance Manuals" immediately after Practical Completion of the works.	1	Item		
6.9.6	Allow for on-site Training of the Operators for specialised equipment	1	Item		
6.9.7	Allow for city council water connection & borehole meter connection	1	Item		
	<u>TOTAL FOR GENERAL ITEMS CARRIED TO SUMMARY</u>				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>MECHANICAL WORKS SUMMARY PAGE:</u>				
6.1	INTERNAL PLUMBING				
6.2	SANITARY FITTINGS				
6.3	FOUL DRAINAGE				
6.4	TESTING				
6.5	BUILDERS WORK				
6.6	WATER RETICULATION				
6.7	FIRE FIGHTING				
6.8	ON-SITE WASTEWATER TREATMENT PLANT				
6.9	GENERAL ITEMS				
	TOTAL FOR MECHANICAL WORKS CARRIED FORWARD TO GRAND SUMMARY PAGE				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p><u>BILL NO. 7; PEREMETER WALL</u> (All prices are V.A.T inclusive)</p> <p><u>ELEMENT NO. 7.1</u></p> <p><u>SUBSTRUCTURE WORKS (All Provisional)</u></p> <p><u>Please note that ALL substructure works are Measured Provisionally. The contractor must ensure that the actual measurements are taken by the Project Quantity Surveyor before any works are covered. Failure to do so will necessitate works to be open up for verification at your (contractors) cost.</u></p> <p>NOTE: Classes of Rock</p> <p><u>(1) Class 1 :</u> Soft rock of the type known locally as "CORAL" which in the opinion of the Engineer cannot be considered as hard rock shall be known as Class 1 rock. Soft Rock shall be rock with compressive strength not exceeding 15N/mm2. Murram and Kunker is specifically excluded and will be reckoned as normal/common excavation. Extremely weathered and weak Tuff shall also be considered as normal excavation.</p> <p><u>(2) Class 2 :</u> Class 2 Rock shall be with compressive strength exceeding 15N/mm2. This type of rock contains stones and boulders of unweathered or incompletely weathered Tuff, trachyte, black trap or lava with compressive strength exceeding 15N/mm2 in a formation which is massive and geologically homogeneous. A boulder or outcrop with such compressive strength will be deemed to be Class 2 rock or Hard Rock</p> <p>The opinion of the Engineer in classifying rock shall be final and binding.</p> <p>Explosives must not be used without the prior approval of the Engineer. Blasting operations are carried out at the Contractor's sole risk, and all blasting must be carried out in accordance with government regulations and approval</p>				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>EXCAVATION AND EARTHWORKS</u>				
	<u>Excavation including maintaining and supporting sides and keeping free from water, mud and falling materials; No allowance is made in the excavations for working space; contractor to factor in working space in his rates:</u>				
	<u>Excavations & EarthWorks</u>				
7.1.1	Clear site of all shrubs and undergrowth including grubbing of roots and dispose off as directed.	SM	384		
7.1.2	Excavate oversite average 150mm deep and cart away as directed	SM	384		
	<u>Excavation including maintaining and supporting sides and water,mud and fallen materials supporting and nderpinning needbe trimming sides and bottom of excavations</u>				
7.1.3	Excavate trench for strip foundation: not exceeding 1.5metres for reduced level	CM	111		
7.1.4	Ditto columns pits for Pad Foundation ditto	CM	104		
7.1.5	Extra over excavation from rock in any position	CM	129		
	<u>Filling and carting away</u>				
7.1.6	Return, fill and ram with selected and approved excavated materials around excavations	CM	89		
7.1.7	Load and cart away excavated materials from site	CM	126		
	<u>Disposal of Water</u>				
7.1.8	Allow for keeping the whole of the excavation free from mud, water and fallen materials	Item	1		
	<u>Planking and strutting</u>				
7.1.9	Allow for planking and strutting sides of excavation	Item	1		
	<u>CONCRETE WORKS</u>				
	<u>Mass concrete to:-</u>				
7.1.10	50mm thick blinding to strip footing & column bases	SM	143		
	<u>Vibrated reinforced concrete class 25/20 to:-</u>				
7.1.11	Strip footing	CM	19		
7.1.12	Column Bases	CM	28		
7.1.13	Foundation columns	CM	9		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SUBSTRUCTURE WORKS CONTINUED...				
	BROUGHT FORWARD FROM PAGE PW/I				
	<u>Sawn Treated cypress formwork to: -</u>				
7.1.14	Sides of strip footing	SM	62		
7.1.15	Ditto Column bases	SM	111		
7.1.16	Ditto Foundation Columns	SM	108		
	<u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u>				
7.1.17	Assorted bars	KG	5,880		
	<u>Machine cut coral stone block minimum crushing strength 7N/mm² in cement and sand (1:4) in cement and sand mortar (1:4) with 18 gauge hoop iron in every alternate course:-mortar reinforced with and including 25 x 3mm thick hoop iron in every alternate course to:-</u>				
7.1.18	200mm foundation walling	SM	215		
	TOTAL ELEMENT NO. 7.1 (SUBSTRUCTURE WORKS) CARRIED TO COLLECTION				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>SUPERSTRUCTURES</u>				
	<u>ELEMENT NO. 7.2</u>				
	<u>SUPERSTRUCTURE REINFORCED CONCRETE WORKS</u>				
	<u>Vibrated Reinforced Concrete Class - 25/20 to:-</u>				
7.2.1	Beams	CM	12		
7.2.2	Columns	CM	10		
	<u>Expansion joint</u>				
7.3.2	Form or leave 25 mm thick joint in columns and bases including all necessary formwork	LM	21		
7.3.3	25mm Thick superior-grade polyethylene joint filler material.	SM	13		
7.3.4	25 mm x 25 mm deep bituminous joint sealer.	LM	42		
	<u>Sawn Treated cypress formwork to: -</u>				
7.2.3	Sides and soffits of beams	SM	116		
7.2.4	Ditto columns	SM	121		
	<u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u>				
7.2.5	Assorted bars	KG	2,860		
	TOTAL ELEMENT NO. 7.2 (SUPERSTRUCTURE REINFORCED CONCRETE WORKS) CARRIED TO COLLECTION				
	<u>ELEMENT NO. 7.3</u>				
	<u>WALLING</u>				
	<u>Machine cut coral stone block in cement and sand (1:4) mortar reinforced with and including 25 x 3mm thick hoop iron in every alternate course to:-</u>				
7.3.1	200mm thick walling	SM	412		
	<u>Weep holes</u>				
7.3.2	Extra over walling for formation of 200 mm long weep holes in 225 mm diameter UPVC pipe at 1500 mm centres	NO	30		
	TOTAL ELEMENT NO. 7.3 (WALLING) CARRIED TO COLLECTION				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 7.4</u>				
	<u>FINISHES</u>				
7.4.1	12mm thick cement, sand render with wood float finish to plinth both internal and external	SM	192		
7.4.2	Ditto to exposed sides of Concrete and wall surfaces	SM	1,061		
7.4.3	Prepare and apply 3 coats of first quality exterior silicone paint to plastered surfaces.	SM	1,061		
7.4.4	600 x 300 x 75mm PCC coping twice weathered and throated reinforced as necessary for handling finished fair on all exposed faces.to top of wall.	LM	172		
7.4.5	450 x 450 x 75mm PCC coping twice weathered and throated reinforced as necessary for handling finished fair on all exposed faces to columns	NO	69		
	TOTAL ELEMENT NO. 7.4 (FINISHES) CARRIED TO COLLECTION				
	<u>ELEMENT NO. 7.5</u>				
	<u>METAL WORK</u>				
	<u>MILD STEEL GATE</u>				
7.5.1	Supply and fix Prepainted Standard sliding Gate size 6000 x 2100mm high in two equal leafs eachsize 2250 x 2100mm high made of 3mm thick x 25mm x 25mm SHS framing with 3mm thick x 25mm x 25mm SHS infills spaced at 100mm framed onto 50 x 32mm R.H.S all round and 50 x 25mm mid stiles, and spiked studs with lugs, hooks, and lockable bolts, including sliding rail furniture and casting into columns; all to architect's details	NO	1		
7.5.2	Ditto but side pedestrian gate size 1800 x 2100mm high ditto.	NO	1		
7.5.3	<u>GRILL</u> Supply and fix 12.5x12.5mm steel square hollow sections bar grills fixed to masonrry in semicircular patterns as per Architects drawings.	SM	103		
7.5.4	<u>Prepare and apply three coats of premium quality marine metal paint or equal and approved to: -</u> Surfaces of metal	SM	206		
	TOTAL ELEMENT NO. 7.5 CARRIED TO (METAL WORK) COLLECTION				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>PERIMETER WALL COLLECTION</u>				
A	Total for Element No. 7.1 (Substructure Works), brought forward from page PW/3				
B	Total for Element No. 7.2 (Superstrcture Reinforced Concrete Works), brought forward from page PW/4				
C	Total for Element No. 7.3 (Walling), brought forward from page PW/4				
D	Total for Element No. 7.4 (Finishes), brought forward from page PW/5				
E	Total for Element No. 7.5 (Metal work), brought forward from page PW/5				
	TOTAL FOR PEREMETER WALL, CARRIED TO GRAND SUMMARY				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	(All prices are V.A.T Inclusive)				
	<u>BILL NO. 17: CIVIL WORKS</u>				
	<u>ELEMENT NO. 8.1 (ROAD WORKS AND PARKING):</u>				
	<u>Excavation and Earthworks</u>				
8.1.1	Clear site of all bushes, tufts and any small or large trees, including grubbing out roots and burn on site where directed by the project manager	SM	620		
8.1.2	Bulk excavation: not exceeding 1.5m deep and cart away or stock pile for re-use as directed by the project manager	CM	434		
	<u>Disposal of excavated material</u>				
8.1.3	Load and cart away surplus material from the site as directed by the project manager.	CM	434		
	<u>Road formation and subbase</u>				
8.1.4	Trim and compact formation to correct levels, cross-falls and longitudinal falls	SM	620		
8.1.5	Provide and lay 300mm thick Imported and approved murrum backfill materials to make up levels, well watered, rolled and compacted to 98% MDD at optimum moisture content in 150mm thick Layers to Engineer's approval	SM	620		
8.1.6	Provide, lay and compact 300mm thick approved handpacked stone base blinded to Engineer's specifications or as directed by the Engineer.	CM	186		
	<u>Concrete Paving blocks</u>				
8.1.7	Provide, lay and compact 60mm thick heavy duty interlocking paving blocks min strength 49N/mm ²	SM	620		
	<u>KERBS</u>				
8.1.10	Provide, lay and joint along the edge of the driveways, walkways, round about and parking 125x250mm pre-cast concrete kerb including excavation, 100x225mm bed, 100x350mm haunch (conc class 20/20) any necessary formwork and disposal of surplus material all to detail (50) 5332 'A'.	LM	165		
8.1.11	Provide, lay and joint along the edge of driveways, walkways, round about and parking 125x100mm pcc channels, including excavation 350x100mm bed, 350x100mm haunch (conc class 20/20) and any necessary excavation, formwork and disposal of surplus material to detail (50) 5332 'B'.	LM	165		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CIVIL WORKS CONTINUED... BROUGHT FORWARD FROM PAGE CIV/1 <u>CHANNELS</u>				
	<u>ROAD AND PARKING MARKING</u> <u>Prepare and apply three coats of approved road marking</u> <u>thermoplastic paint on asphalt to surfaces not exceeding</u> <u>100mm girth</u>				
8.1.12	Yellow in colour	SM	25		
8.1.13	White in colour	SM	25		
	TOTAL FOR ELEMENT NO. 8.1 (ROAD WORKS AND PARKING) CARRIED FORWARD TO SUMMARY				
	<u>ELEMENT NO. 8.2 (PAVING AROUND BUILDINGS)</u>				
	<u>Excavation and Earthworks</u>				
8.2.1	Clear site of all bushes, tufts and any small or large trees, including grubbing out roots and burn on site where directed by the project manager	SM	170		
8.2.2	Excavate oversite average 150mm deep and cart away or stock pile for re-use as directed by the project manager	SM	170		
	<u>Disposal of excavated material</u>				
8.2.3	Load and cart away surplus material from the site as directed by the project manager.	CM	26		
8.2.4	Provide, lay and compact 100mm approved gravel filling to 100% MDD well watered and compacted to 95% MDD and level ready to receive paving slabs	SM	170		
8.2.5	Treat trimmed surfaces with approved herbicide applied in accordance with the manufacturer's instructions and subject to a TEN YEAR guarantee	SM	170		
8.2.6	Provide, lay and joint in cement/sand mortar mix (1:3) 600 x 600 x 60mm precast concrete paving slab on 50mm sand or stone dust blinding.	SM	170		
8.2.7	Prepare and apply concrete 100mm wide class 15/20 to edges of Paving slabs lining	LM	707		
	TOTAL FOR ELEMENT NO. 8.2 (EXTERNAL PAVING) CARRIED FORWARD TO SUMMARY				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 8.3 (STORM WATER DRAINAGE)</u>				
	<u>STORM DRAINED (PIPED)</u>				
8.3.8	Excavate trench for 900mm diameter culvert, backfill after laying of pipes, compact and cart away surplus material average depth 1.5m.	CM	3		
8.3.9	Provide, lay and joint 900mm diameter OG pipe including 100 mm thick concrete bed and surround (class 15/20).	LM	10		
8.3.10	Excavate pit for headwalls, backfill after construction and cart away extra materials.	CM	8		
8.3.11	Provide all material for and construct masonry for 4 no. culverts headwalls.	No.	2		
	<u>INVERT BLOCK DRAIN</u>				
8.3.12	Excavate for 450x225mm external dimensions precast concrete IBD trim sides to slope and cart away excavated material depth not exceeding 1.5m.	CM	200		
8.3.13	Provide, install and joint 450x225mmx600mm external dimensions precast concrete IBD.	LM	121		
8.3.14	Provide and lay 225 x 600 x 50 mm side slabs	SM	145		
	<u>SHALLOW DRAIN</u>				
8.3.15	Provide, lay and joint 600 x 500 x 175mm precast concrete Storm Water Channel including 50mm thick concrete bed, class 15, any necessary excavation, formwork and disposal of surplus material to details.	LM	65		
	TOTAL FOR ELEMENT NO. 8.3 (STORM WATER DRAINAGE) CARRIED FORWARD TO SUMMARY				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 8.4</u>				
	<u>FOUL DRAINAGE</u>				
	<u>SEWERLINE</u>				
8.4.1	Excavate trench for 160mmØ UPVC pipe (ISO class 41), backfill after laying of pipes and cart away surplus material as directed be the Engineer. Excavation measured from ground level to a depth n.e. 1.5m.	CM	23		
8.4.2	Ditto depth over 1.5m but n.e 1.75m	CM	12		
8.4.3	Ditto depth over 1.75m but n.e 2.0m	CM	12		
8.4.4	E.O. Excavations in rock	CM	24		
	<u>PIPE LAYING</u>				
8.4.5	Provide, lay and joint 160mm diameter UPVC pipes (ISO class 41) to BS 4660 on gravel bedding and surround as per details	LM	50		
8.4.6	Provide lay and compact granular bed and surround.	CM	5		
8.4.7	Backfill after laying of pipe	CM	24		
8.4.8	Cart away surplus excavated materials	CM	23		
	<u>MANHOLES</u>				
8.4.9	Excavate in pit for rectangular manhole type return fill and ram selected approved material after construction of manholes, depth to invert n.e 1.0M.	CM	5		
8.4.10	Ditto, but rectangular manhole type depth to invert n.e 1.5m.	CM	3		
8.4.12	Extra over all excavation items for excavation in rock.	CM	4		
8.4.13	Cart away surplus excavations and spread on site 100m away.	CM	5		
	<u>Concrete Class 10</u>				
8.4.14	Provide all materials, mix and place 50mm thick concrete as blinding for manholes.	SM	8		
	<u>Vibrated Concrete Class 15/20</u>				
8.4.15	Ditto but 150mm thick base slab for manholes.	CM	2		
	<u>Vibrated reinforced concrete class 20/20</u>				
8.4.16	Provide all materials, mix and place 150mm thick concrete class 20 as cover for manholes.	CM	2		
8.4.17	Provide all materials; mix place concrete class 20 as benching for 150mm diameter pipe. Include for forming the main and branch channels as well as finishing benching to falls and building in pipes as per detailed drawings.	CM	1		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>BROUGHT FORWARD</u>				
	<u>Walling</u>				
8.4.18	Provide, lay and joint 150mm thick approved concrete block or dressed natural coral stone walling to manholes.	SM	8		
	<u>Step Iron</u>				
8.4.19	Provide and fix bitumen coated cast iron steps to B.S 1247 as per detailed drawings.	No.	10		
	<u>Rendering</u>				
8.4.20	Provide 12mm thick water proof cement and sand (mix 1:3) steel float finished rendering to walls.	SM	16		
8.4.21	Ditto but to cover slab	SM	8		
8.4.22	Provide 12mm thick cement and sand (mix 1:1) waterproof rendering trowelled smooth to surface of benching.	SM	8		
	<u>C.I Manhole Cover and Frame To B.S 497 & B.S 556</u>				
8.4.25	Provide and fix 600 x 450mm medium duty C.I manhole cover and frame and grease to detail.	No.	8		
8.4.26	Allow for connecting manholes to the biodigester and testing of the whole foul drainage system in the presence of the Engineer/Project Manager and make good any defects, re-test as necessary and leave the whole system perfect and to the satisfaction of the Engineer/Project Manager.	ITEM	1		
	<u>Biodigester Builder's Work</u>				
	<u>Excavate in pit for biodigester tank starting from ground level</u>				
8.4.27	Depth not exceeding (ne)1.5m	CM	73		
8.4.28	Ditto,depth 1.5 - 3.0m	CM	73		
8.4.29	Ditto,depth 3 - 4.5m	CM	12		
8.4.30	Trim bottom of excavated surface	SM	49		
8.4.31	Extra over for excavation in rock class II	CM	158		
8.4.32	Return fill and ram approved excavated material around foundations	CM	99		
8.4.33	Load and cart away surplus excavated material	CM	34		
8.4.34	Allow for keeping the whole excavation free from all water including spring and running water	ITEM	1		
8.4.35	Allow for plunking and strutting the whole excavation	ITEM	1		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>BROUGHT FORWARD</u>				
	<u>The following in Concrete class 15/20</u>				
8.4.36	Mix and place 50mm concrete blinding	CM	2		
	<u>Vibrated reinforced concrete class 25/20 in</u>				
8.4.37	150mm thick bottom slab	SM	49		
8.4.38	200X300 mm thickening	CM	3		
8.4.39	300mm thick walls	CM	45		
8.4.40	150 mm thick scum baffle wall	CM	1		
8.4.41	200mm thick suspended cover slab	SM	49		
8.4.42	Beams	CM	6		
	<u>High yied ribbed reinforcement steel to 8.S 4449</u>				
8.4.43	Arsorted bars	KG	9,621		
	<u>BRC Mesh Reinforcement to B.S 1483</u>				
8.4.44	BRC mesh No, 65/66	SM	49		
	<u>Formwork</u>				
	<u>Sawn formwork to:-</u>				
8.4.45	Interior sides of vertical walls	SM	150		
8.4.46	External sides of vertical walls	SM	150		
8.4.47	Soffits of suspended slab	SM	49		
8.4.48	Sides of suspended slab, 150 mm-225 mm wide	LM	29		
8.4.49	Ditto to sides of entry and exit manholes	SM	2		
8.4.50	Boxing in formwork to form opening in cover slab for 600 x 450 mm manhole cover and frame, 150 -225 mm wide	NO	8		
	<u>WATER PROOF CEMENT RENDERING</u>				
8.4.51	12mm thick sulphate resistant cement sand (mix 13) to base slab	SM	49		
8.4.52	Ditto to sides of vertical walls	SM	299		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD				
	<u>Sundries</u>				
8.4.53	Form or leave 100mm diameter hole in 200mm thick reinforced concrete wall and slab	NO	7		
8.4.54	Form or leave 600 x 600mm hole in 200mm thick reinforced concrete suspended slab	NO	8		
8.4.55	600 x 600mm heavy duty double sel manhole cover and frame including setting cover in concrete opening and forming rebate	NO	8		
8.4.56	20mm diameter galvanised mild steel step iron 450mm long twice bent and with both ends built 75mm deep into concrete wall	NO	8		
	<u>SOAKPITS</u>				
8.4.57	Excavate all unsuitable soils from soakage area and cart away as directed.	CM	10		
8.4.58	Provide red or similar approved soils and backfill pit and compact as required.	CM	10		
8.4.59	Excavate trench for 160mm Ø Upvc pipes (ISO class 41), backfill and ram after laying of pipes and cart away surplus material to tips as directed by the Engineer. Average depth 2.0m	LM	45		
8.4.60	Excavate pit for 5 No. Circular soak-pit internal Ø 1.2m, backfill after construction and cart away surplus material. Depth, n.e. 6.5m	CM	35		
8.4.61	E.O. for excavation in rock.	CM	20		
8.4.62	Provide all materials for and construct soak pits as per details, include for all reinforcement and any necessary formwork.	No.	5		
	TOTAL FOR ELEMENT NO. 8.4 (FOUL DRAINAGE) CARRIED FORWARD TO SUMMARY BELOW				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>ELEMENT NO. 8.5</u>				
	<u>TANKS PLINTHS</u>				
	<u>EXCAVATION AND EARTHWORKS</u>				
	<u>Excavation including maintaining and supporting sides and keeping free from water, mud and falling materials; No allowance is made in the excavations for working space; contractor to factor in working space in his rates:</u>				
8.5.1	Clear site of all bushes, tufts and any small or large trees, including grubbing out roots and burn on site where directed	SM	60		
8.5.2	Excavate oversite average 150mm deep and cart away	SM	60		
8.5.3	Excavate trench for strip foundation: not exceeding 1.5m deep	CM	46		
8.5.4	Extra over excavation from rock in any position	CM	23		
	<u>Disposal of excavated material</u>				
8.5.5	Return, fill and ram extra excavation materials around foundation	CM	22		
8.5.6	Load and cart away surplus material	CM	24		
	<u>Disposal of Water</u>				
8.5.7	Allow for keeping the whole of the excavation free from mud, water and fallen materials	Item	1		
	<u>Planking and strutting</u>				
8.5.8	Allow for planking and strutting sides of excavation	Item	1		
	<u>Filling</u>				
8.5.9	250 mm thick approved red soil filling consolidated in 150mm thick layers to make up levels	CM	12		
8.5.10	300mm thick (minimum) approved hardcore handpacked in layers not exceeding 150mm	CM	21		
8.5.11	50mm thick murram dust or any other equal and approved material in blinding surface of hardcore	SM	60		
	<u>Insecticide Treatment</u>				
8.5.12	Treat hardcore surface with approved antitermite applied in accordance with the manufacturer's instructions and subject to a TEN YEAR guarantee	SM	60		
	<u>CONCRETE WORKS</u>				
8.5.13	50mm thick Mass concrete blinding to surfaces of strip footing & column bases	SM	31		
	<u>Vibrated reinforced concrete class 25/20 to:-</u>				
8.5.14	Strip footing	CM	7		
8.5.15	150mm thick floor slab	SM	60		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>BROUGHT FORWARD</u>				
	<u>High Tensile Ribbed Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u>				
8.5.16	Assorted bars	KG	2,400		
	<u>Marineply formwork as Described. Allow for setting to special steel propping, strutting, fillets, nails, etc to:</u>				
8.5.17	Edges of strip footing	SM	26		
8.5.18	Ditto but to edges of floor slab 75mm - 150mm thick	LM	24		
	<u>FOUNDATION WALLING</u>				
8.5.19	200mm solid coral block foundation wall in cement:sand (1:3) reinforced with hoop iron at every to alternative course	SM	76		
	<u>WATERPROOFING</u>				
8.5.20	1000 gauge polythene DPM	SM	60		
	<u>PLINTH FINISHES</u>				
8.5.21	15mm cement and sand (1:4) render trowelled smooth and comprising 12mm thick backing and 3mm finishing coat.	SM	12		
	<u>Painting and Decoration</u>				
8.5.22	Prepare and apply 3 coats of first quality bituminous paint or equal and approved to rendered surfaces	SM	12		
	TOTAL ELEMENT NO. 8.5 (TANKS PLINTHS), CARRIED TO SUMMARY				
	<u>CIVIL WORKS SUMMARRY</u>				
8.1	TOTAL FOR ELEMENT NO 8.1. (ROAD WORKS AND PARKING) B/F FROM PAGE CW/2				
8.2	TOTAL FOR ELEMENT NO 8.2. (EXTERNAL PAVING)				
8.3	TOTAL FOR ELEMENT NO 8.3. (STORM WATER DRAINAGE)				
8.4	TOTAL FOR ELEMENT NO 8.4. (FOUL DRAINAGE)				
8.5	TOTAL FOR ELEMENT NO 8.5. (TANKS PLINTHS)				
	TOTAL FOR CIVIL WORKS CARRIED FORWARD TO GRAND SUMMARY				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p><u>(All rates are V.A.T Inclusive)</u></p> <p><u>BILL NO. 9: LANDSCAPING WORKS</u></p> <p><u>ELEMENT NO. 9.1.</u></p> <p><u>GROUND PREPARATION AND GRASSING</u></p> <p><u>Clearing and Levelling</u></p> <p>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.</p>	SM	416		
9.1.1					
9.1.2	<p>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</p>	SM	416		
	<p><u>Supply and application of Manure.</u></p> <p>Supply and apply prime quality fertilizers or compost manure at designated locations and as directed by the landscape architect or Project Manager</p>	SM	416		
9.1.3					
9.1.4	<p><u>Supply and Installation of Grass and Lawns</u></p> <p>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</p> <p>Penisetum clandestinum (KIKUYU GRASS) springs spaced at 100mm centres both ways</p>	SM	416		
	<p><u>Planting of ground Covers</u></p> <p>Supply,plant,weed,water and tend well assorted species of groundcovers till full establishment as per the designs of the landscape architect or as directed by the Project Manager</p>	SM	52		
9.1.5					
9.1.6	<p><u>Planting of Shrubs</u></p> <p>Supply, 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</p>	SM	173		
	TOTAL CARRIED FORWARD				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	LANDSCAPING WORKS CONTINUED... BROUGHT FORWARD FROM PAGE LW/1 <u>Supply, 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> 9.1.7 Assorted Species of Palm trees and other ornamental trees as per the designs of the landscape architect or as directed by the project manager 9.1.8 Assorted Species of other indegenous trees as per the designs of the landscape architect or as directed by the project manager. <u>MAINTENANCE</u> 9.1.9 Allow for a follow up of all installations and constructions to insure establishment and concept preservation. Mowing, watering, training and trimming all included <u>LITTER BINS</u> <u>Supply, deliver and install litter bins to specification</u> 9.1.10 Standard round swivel litter bin, galvanised steel with detailed pattern perforation, inclusive of installations, fixing to concrete footing or any other approved by project architect	NO Months NO	15 6 5		
	TOTAL LANDSCAPING WORKS CARRIED FORWARD TO GRAND SUMMARY				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
10.0.1	<p>(All Rates are V.A.T Inclusive) BILL NO. 10; ESMP</p> <p><u>PRELIMINARIES FOR HEALTH AND SAFETY, AIR AND NOISE MONITORING & CONTROL, WASTE MANAGEMENT</u></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><u>SAFETY, HEALTH AND WELFARE OF WORKERS</u> 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 & 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 Environment Health and Safety 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 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</p> <p>The Contractor will also be required to provide approved personal protective equipment such as 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 is expected to also come up with an Emergency Response plan</p>				
		Item	1	600,000.00	600,000.00
	Total Carried to Collection			Ksh	600,000.00

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
10.0.2	<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><u>SANITATION OF THE WORKS</u></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> <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>	Item	1	400,000.00	400,000.00
	<p><u>PREVENTION OF DISTURBANCE AND NUISANCE</u></p> <p>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>				
	Total Carried to Collection			Ksh	700,000.00

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
10.0.4	<p><u>GRIEVANCE REDRESS MECHANISM (GRM) WORKER</u> 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	200,000.00	200,000.00
10.0.5	<p><u>CLEANING, REMOVAL OF PLANT AND RUBBISH AND GENERAL WASTE MANAGEMENT ETC</u> 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.</p> <p>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.</p> <p>Particular care shall be taken in leaving windows, floors and fittings clean and the removal of all paint and cement stains therefrom.</p> <p>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.</p>	Item	1	300,000.00	300,000.00
10.0.6	<p><u>AMBIENT AIR QUALITY AND NOISE MONITORING</u> 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.</p>	Item	1	300,000.00	300,000.00
10.0.7	<p><u>TRAFFIC CONTROL AND MANAGEMENT</u> 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.</p> <p>The Contractor will also come up with a Traffic Management Plan to ensure safety of local communities from construction traffic</p>	Item	1	300,000.00	300,000.00
	Total Carried to Collection			Ksh	1,100,000.00

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
10.0.8	<u>MOVEMENT OF TRUCKS OR MACHINERY</u> 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.	Item	1	300,000.00	300,000.00
10.0.9	<u>PROTECTION OF EXISTING INSTALLATION</u> 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.	Item	1	100,000.00	100,000.00
10.0.10	<u>PHYSICAL, CULTURAL & NATURAL RESOURCES</u> 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. The Contractor will come up with a Water Resource Protection Plan to prevent contamination of drinking water	Item	1	100,000.00	100,000.00
	Total Carried to Collection below			Ksh	500,000.00
	<u>SECTION SUMMARY- ESMP</u> Total Brought Forward from Page ESMP/1 Total Brought Forward from Page ESMP/2 Total Brought Forward from Page ESMP/3 Total Brought Forward from Page above				600,000.00 700,000.00 1,100,000.00 500,000.00
	TOTAL FOR DAY WORKS CARRIED TO GRAND SUMMARY				2,900,000.00

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

Item	Description	Unit	Qty	Rate	Amount
	(All Rates are V.A.T Inclusive) BILL NO. 11; DAYWORKS				
	The dayworks rates priced below should include all overheads and profits				
11.1	<u>Provision of labour</u>				
11.1.1	Porter	Hrs	10		
11.1.2	Semi-skilled	Hrs	10		
11.1.3	Mason/	Hrs	10		
11.1.4	Steel fixer	Hrs	10		
11.1.5	Carpenter	Hrs	10		
11.1.6	Painter	Hrs	10		
11.1.7	Tile fixer	Hrs	10		
11.1.8	Welder/Electrician	Hrs	10		
11.1.9	Foreman	Hrs	10		
11.1.10	Carpenter for joinery	Hrs	10		
11.1.11	Plumber	Hrs	10		
11.1.12	Electrician	Hrs	10		
11.2	<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>				
11.2.1	Lorry (minimum 8 tonne capacity - or similar)	Hrs	5		
11.2.2	Tipper (8 tonne capacity - or similar)	Hrs	5		
11.2.3	Compressor	Hrs	5		
11.2.4	Roller	Hrs	5		
11.2.5	Plate compactor	Hrs	5		
11.2.6	Wheel loader	Hrs	5		
11.2.7	Grader	Hrs	5		
11.2.8	Crawl loader	Hrs	5		
11.2.9	Jack hammer	Hrs	5		
11.2.10	Dewatering pump	Hrs	5		
11.2.11	Concrete mixer	Hrs	5		
11.2.12	Dumper	Hrs	5		
11.2.13	Hand tools (power drills, grinders, torque wrenches, etc.)	Hrs	5		
11.2.14	Excavator	Hrs	5		
11.2.15	Bulldozer	Hrs	5		
11.2.16	Motor grade	Hrs	5		
11.2.17	Portable generator	Hrs	5		
11.2.18	3-Phase power generator	Hrs	5		
11.2.19	Vibrator	Hrs	5		
	Total Carried to Summary				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

Item	Description	Unit	Qty	Rate	Amount
11.3	<u>Provision of material</u> <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>				
11.3.1	Ordinary portland cement @ 50kg bags	Bags	10		
11.3.2	Clean river sand	m3	10		
11.3.3	12-20mm graded course aggregate	m3	10		
11.3.4	Manufactured sand / Quarry dust / 0-6mm aggregate	m3	10		
11.3.5	Graded crushed stone (crusher run - 0 to 60mm)	m3	10		
11.3.6	Murram	m3	10		
11.3.7	Hardcore	m3	10		
11.3.8	Redsoil	m3	10		
11.3.9	Reinforcement steel	Kg	100		
11.3.10	Sawn timber formwork	m2	10		
11.3.11	6mm thick clear glass	m2	10		
11.3.12	Water	lts	100		
11.3.13	Diesel fuel	lts	10		
	Total Carried to Summary Below				
	<u>DAYWORKS SUMMARY</u>				
A	Total Brought Forward from page DW/1				
B	Total Brought Forward from above				
	TOTAL FOR DAY WORKS CARRIED TO GRAND SUMMARY				

BILLS OF QUANTITIES FOR PROPOSED CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

[illegible]

12. GRAND SUMMARY

Contract Name: CONSTRUCTION OF KWALE FISHERIES CPIU OFFICE

RFBNo.: KE-MOMBE&MA-KWL-2024-005-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: BUILDING WORKS	OBW/15	
BILL No.4 Gate House Building Works	GH/8	
BILL No.5 Electrical Installations	EW/124	
BILL No.6 Mechanical Works	MW/17	
BILL No.7 Perimeter Wall	PW/6	
BILL No.8 Civil Works	CW/9	
BILL No.9 Landscaping Works	LW/2	
BILL No.10 E.S.M.P	ESMP/4	2,900,000.00
BILL No.11 DayWorks	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 Three Million Only (Kes 3,000,000.00) for fluctuationsⁱⁱ</i>	<i>(C)</i>	<i>3,000,000.00</i>
<i>Total of Bills Plus Provisional Sums (A + B + C)ⁱ</i>	<i>(D)</i>	
<i>Add Provisional Sum of Kenya Shillings Six Million Only (Kes 6,000,000.00) for Contingency Allowanceⁱⁱ</i>	<i>(E)</i>	<i>6,000,000.00</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