



**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 KILIFI CENTRAL FISH LANDING  
SITE**

**Employer:** State Department for Blue Economy & Fisheries  
**Project:** Kenya Marine Fisheries Socio-Economic  
Development Project (KEMFSED)  
**Contract Title:** **CONSTRUCTION OF KILIFI CENTRAL FISH  
LANDING SITE**  
**Country:** Republic of Kenya  
**Loan No./Credit No./Grant No.:** 6540-KE  
**RFBNo.:** KE-MOMBE&MA-KLF-2024-009-CW  
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**VOLUME 2 OF 4**

**BILLS OF QUANTITIES**

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## **A. PREAMBLE**

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

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

## **B. WORK ITEMS**

1. The Bill of Quantities contains the following part Bills, which have been grouped according to the nature or timing of the work:
  1. **BILL NO. 1: PARTICULAR PRELIMINARIES**
  2. **BILL NO. 2 : GENERAL PRELIMINARIES**
  3. **BILL NO. 3: ENVIRONMENTAL SOCIAL MANAGEMENT PLAN**
  4. **BILL NO. 4 : FISH BANDA/DEPOT**
  5. **BILL NO. 5 : OPEN AIR MARKET BUILDING**
  6. **BILL NO. 6: FISH GEAR STORE AND ABLUTION BLOCK**
  7. **BILL NO. 7: FISH GEAR MENDING SHED**
  8. **BILL NO. 8: PUMP ROOM**
  9. **BILL NO. 9: POWER HOUSE**
  10. **BILL NO. 10: FOUL DRAINAGE**
  11. **BILL NO. 11: DRIVEWAY AND PARKING**
  12. **BILL NO. 12: FLOATING JETTY**
  13. **BILL NO. 13: MECHANICAL WORKS**
  14. **BILL NO. 14: ELECTRICAL WORKS**
  15. **BILL NO. 15: DAYWORKS**
  16. **BILL NO. 16: PROVISIONAL SUMS**
2. Bidders shall price the Bill of Quantities in local currency only and shall indicate in the Appendix to Bid the percentage expected for payment in foreign currency or currencies.

## **DAYWORK SCHEDULE**

### **General**

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

### **Daywork Labour**

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

## **Daywork Materials**

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

## **Daywork Contractor's Equipment**

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

## **VOLUME 2: BILLS OF QUANTITIES**

**PARTICULAR PRELIMINARIES**

**BILL NO.1**



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
	<b><u>PARTICULAR PRELIMINARIES</u></b>	
1.1.1	<b>PRICING ITEMS OF PRELIMINARIES</b> Prices <b><i>SHALL BE INSERTED</i></b> against items of “preliminaries” in the tenderer’s priced Bills of Quantities. The contractor is advised to read and understand all preliminary items.	
1.1.2	<b>DESCRIPTION OF THE WORKS</b> The works to be carried out under this contract involves; The works to be carried out under this contract involves; Works of a Landing Site which involve ; Fish banda,Ablution block and fish gear store, fish gear mending area,floating Jetty involving; substructures, concrete structure, coral stone walling, roof structure and roofing, external and internal finishes,associated mechanical and electrical services and Civil works (Foul Drainage,Driveway and Parking)and equipping with storage facilities, iceflake machines.	
1.1.3	<b>FLOOR AREAS</b> The total gross floor areas are approximately 1900 square metres. The total gross floor area is given without warranty but for guidance only.	
1.1.4	<b>MEASUREMENTS</b> In the event of any discrepancies arising between the Bills of Quantities and the actual works, the site measurements shall generally take precedence. However, such discrepancies between any contract documents shall immediately be referred to the PROJECT MANAGER in accordance with Clause 22 of the Conditions of Contract. The discrepancies shall then be treated as a variation and be dealt with in accordance with Clause 22 of the said Conditions.	
1.1.5	<b>LOCATION OF SITE</b> The site of the proposed works is located at <b>Kilifi Central Landing Site in Kilifi North Sub-county - Kilifi County</b> . 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. The Contractor shall be deemed to have verified for themselves following:- (a) The nature of the site (b) The amount of clearing and cutting and fillings and therefore ready with the right equipment. (c) The nature of existing communication by road or otherwise. (d) The availability of land for the erection and positioning of all temporary structures, plant and materials necessary for the execution of the works.	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
1.1.6	<p><b>SIGNING OF THE TENDER DOCUMENTS</b></p> <p>The bidder shall append his / her signature and / or company 's rubberstamp on each and every page of tender document.</p>	
1.1.7	<p><b>DEMOLITIONS AND ALTERATIONS</b></p> <p>The Contractor is to allow for all temporary protection required during the works including ordinary and special dust screens, hoardings, barriers, warning signs, etc as directed by the Project Manager and</p> <p>as necessary for the adequate propping and protection of existing property, finishes, workmen employed on the site, employer's agents and the public. Any damage or loss incurred due to the insufficiency of such protection must be made good by the Contractor. All protective devices are to be removed on completion of the works and any necessary making good consequent upon this is to be executed to the satisfaction of the Project Manager</p> <p>The works shall be propped, strutted and supported as necessary before any alteration or demolition work commences. Prices shall include for all cleaning and preparatory work to structure and finishes and for making good to all finishes on completion whether or not specifically described.</p> <p>Unless described as set aside for re-use all arising debris and surplus materials shall be carefully removed from building and carted away from site.</p> <p>The Contractor shall be entirely responsible for any breakage or damage which may occur to materials required for re-use during their removal unless it is certified by the Project Manager that such damage or breakage was inevitable as a result of the condition of the item concerned</p>	
1.1.8	<p><b>CLEARING AWAY</b></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>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
1.1.9	<p><b>CLAIMS</b></p> <p>It shall be a condition of this contract that upon it becoming reasonably apparent to the Contractor that he has incurred losses and / or expenses due to any of the contract conditions, or by any other reason whatsoever, he shall present such a claim or intent to claim notice to the PROJECT MANAGER within the contract period. No claim shall be entertained upon the expiry of the said contract period.</p>	
1.1.10	<p><b>PAYMENTS</b></p> <p>The tenderer's attention is drawn to the fact that the GOVERNMENT DOES NOT MAKE ADVANCE PAYMENTS but pays for work done and materials delivered to sit: all in accordance with Clause 23 of 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</p>	
1.1.11	<p><b>PREVENTION OF ACCIDENT, DAMAGE OR LOSS</b></p> <p>The Contractor is notified that these works are to be carried out on a restricted site where the client is going on with other normal activities. The Contractor is thus instructed to take reasonable care in the execution of the works as to prevent accidents, damage or loss and disruption of activities being carried out by the Client. The Contractor shall allow in his rates any expense he deemed necessary by taking such care within the site.</p>	
1.1.12	<p><b>WORKING CONDITIONS</b></p> <p>The Contractor shall allow in his rates for any interference that he may encounter in the course of the works for the Client may in some cases ask the Contractor not to proceed with the works until some activities within the site are completed, as the facility will be operating as usual during the course of the contract.</p>	
1.1.13	<p><b>SIGNBOARD</b></p> <p>Allow for providing, erecting, maintaining throughout the course of the Contract and afterwards clearing away a signboard as designed, specified and approved by the Project Manager.</p>	
1.1.14	<p><b>LABOUR CAMPS</b></p> <p>The Contractor shall not be allowed to house labour on site. Allow for transporting workers to and from the site during the tenure of the contract.</p>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
1.1.15	<b>MATERIALS FROM DEMOLITIONS</b> Any materials arising from demolitions and not re-used shall become the property of the client The Contractor shall allow in his rates the cost of transporting the demolished materials as directed.	
1.1.16	<b>PRICING RATES</b> The tenderer shall include for all costs in executing the whole of the works, including transport, replacing damaged items, fixing, all to comply with the said Conditions of Contract.	
1.1.17	<b>SECURITY</b> The Contractor shall allow for providing adequate security for the works and the workers in the course of execution of this contract. No claim will be entertained from the Contractor for not maintaining adequate security for both the works and workers.	
1.1.18	<b>URGENCY OF THE WORKS</b> The Contractor is notified that these “ works are urgent” and should be completed within the period stated in these Particular Preliminaries. 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.	
1.1.19	<b>PAYMENT FOR MATERIALS ON SITE</b> All materials for incorporation in the works must be stored on site before payment is effected, unless specifically exempted by the Project Manager. This is to include materials of the Contractor, nominated sub-Contractors and nominated suppliers.	
1.1.20	<b>EXISTING SERVICES</b> 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.	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
1.1.21	<p><b>CONTRACT COMPLETION PERIOD</b></p> <p>The contract completion period in accordance with condition 31 of the Conditions of contract must be adhered to.</p> <p>The 'PROJECT MANAGER' shall strictly monitor the Contractors progress in relation to the progress chart and should it be found necessary the 'PROJECT MANAGER' 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>	
1.1.21	<p><b>PERFORMANCE BOND</b></p> <p>A bond of 10% of the contract sum will be required in accordance with clause 6.00 (as amended) on award of contract of the Instructions to Tenderer's. No payment on account for the works executed will be made to the contractor until he has submitted the Performance Bond to the Project Manager duly signed, sealed and stamped from an approved Bank.</p>	
1.1.22	<p><b>TENDER DOCUMENTS</b></p> <p>Tender documents are as listed in Clause 2.1 of the Instruction to Tenderer's Page STD/8</p>	
1.1.23	<p><b>DELIVERY OF TENDER</b></p> <p>Tenders and all documents in connection therewith, as specified above must be delivered in the addressed envelope which should be properly sealed and deposited at the offices as specified in the letter accompanying these documents or as indicated in the advertisement.</p> <p>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>	
1.1.24	<p><b>VALUE ADDED TAX</b></p> <p>The Contractor's attention is drawn to the Legal Notice in the Finance Act part 3 Section 21(b) operative from 1<sup>st</sup> September, 1993 which requires payment of VAT on all contracts. The Contractor should therefore include allowance in his rates and prices for prices for VAT and any other Government taxes currently in force.</p>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
1.1.25	<p><b><u>PARTICULARS OF INSERTIONS TO BE MADE IN APPENDIX TO CONTRACT AGREEMENT</u></b></p> <p>The following are the insertions to be made in the appendix to the Contract Agreement: -</p> <p><b>Period of Final Measurement</b>                      <b>3 Months From Practical completion</b></p> <p><b>Defects Liability Period</b>                              <b>6 Months from Practical completion</b></p> <p><b>Date for Possession</b>                              To be agreed with the Project Manager</p> <p><b>Date for Completion</b>                              <b>...52..</b> Weeks from date of Possession</p> <p><b>Liquidated and Ascertained</b>                      0.04 % of the Accepted Contract Amount, less provisional sum</p> <p><b>Period of Interim Certificates</b>                              Monthly</p> <p><b>Period of Honouring Certificates</b>                              56 days</p> <p><b>Percentage of Certified Value Retained</b>                              10%</p> <p><b>Limit of Retention Fund</b>                              5%</p>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

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

**GENERAL PRELIMINARIES**

**BILL NO.2**



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
	<b>GENERAL PRELIMINARIES</b>	
2.1.1	<p><b>PRICING ITEMS OF PRELIMINARIES AND PREAMBLES</b></p> <p>Prices will be inserted against items of Preliminaries in the Contractor's priced Bills of Quantities and Specification.</p> <p>The Contractor shall be deemed to have included in his prices or rates for the various items in the Bills of Quantities or Specification for all costs involved in complying with all the requirements for the proper execution of the whole of the works in the Contract.</p>	
2.1.2	<p><b>ABBREVIATIONS</b></p> <p>Throughout these Bills, units of measurement and terms are abbreviated and shall be all the requirements for the proper execution of the whole of the works in the Contract.</p> <p><i>C.M.</i>                      Shall mean cubic metre</p> <p><i>S.M.</i>                      Shall mean square metre</p> <p><i>L.M.</i>                      Shall mean linear metre</p> <p><i>MM</i>                        Shall mean Millimetre</p> <p><i>Kg.</i>                        Shall mean Kilogramme</p> <p><i>No.</i>                        Shall mean Number</p> <p><i>Prs.</i>                        Shall mean Pairs</p> <p><i>B.S.</i> - Shall mean the British Standard Specification Published by the British Standards Institution, 2 Park Street, London W.1., England.</p> <p><i>Ditto</i> - Shall mean the whole of the preceding description except as qualified in the description in which it occurs.</p> <p><i>m.s.</i>                        Shall mean measured separately.</p> <p><i>a.b.d</i>                        Shall mean as before described.</p>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
2.1.1	<p><b>EXCEPTION TO THE STANDARD METHOD OF MEASUREMENT</b></p> <p><i>Attendance ;</i> 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><i>Fix Only:-</i></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>	
2.1.2	<p><b>EMPLOYER</b></p> <p>The "Employer" is <b>Ministry of Mining, Blue Economy and Maritime Affairs P.O Box 30009-00100 Nairobi, Kenya</b></p>	
2.1.3	<p><b>PROJECT MANAGER</b></p> <p>The term "P.M." wherever used in these Bills of Quantities shall be deemed to imply the Project Manager as defined in Condition 1 of the Conditions of Contract or such person or persons as may be duly authorised to represent him on behalf of the Government.</p>	
2.1.4	<p><b>ARCHITECT</b></p> <p>The term "Architect" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Project Engineer</p>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
2.1.5	<p><b>QUANTITY SURVEYOR</b></p> <p>The term "Quantity Surveyor" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Project Engineer</p>	
2.1.6	<p><b>ELECTRICAL ENGINEER</b></p> <p>The term "Electrical Engineer" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Project Engineer</p>	
2.1.7	<p><b>MECHANICAL ENGINEER</b></p> <p>The term "Mechanical Engineer" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Project Engineer</p>	
2.1.8	<p><b>STRUCTURAL ENGINEER</b></p> <p>The term "Structural Engineer" shall be deemed to mean "The P.M " as defined above whose address unless otherwise notified is Project Engineer</p>	
2.1.9	<p><b><u>PROJECT ENGINEER (PE) (Member of NPCU, State Department of Fisheries)</u></b></p> <p><u>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</u></p>	
2.1.10	<p><b>FORM OF CONTRACT</b></p> <p>The Form of Contract shall be as stipulated in the World Bank's Standard Procurement Document for Small Works(March 2021 Edition) included herein</p> <p>The Conditions of Contract are also included herein</p> <p>Particulars of insertions to be made in the Appendix to the Contract Agreement will be found in the Particular Preliminaries part of these Bills of Quantities</p>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>AMOUNT</b>
2.1.11	<p><b>BOND.</b></p> <p>The Contractor shall find and submit on the Form of Tender an approved bank who will be willing to be bound to the Government in an amount equal to ten per cent (10) of the Contract amount for the due performances of the Contract up to the date of completion as certified by the PROJECT MANAGER 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>	
2.1.12	<p><b>PLANT, TOOLS AND VEHICLES</b></p> <p>Allow for providing all scaffolding, plant, tools and vehicles required for the works except in so far as may be stated otherwise herein and except for such items specifically and only required for the use of nominated Sub-Contractors as described herein. No timber used for scaffolding, formwork or temporary works of any kind shall be used afterwards in the permanent work.</p>	
2.1.13	<p><b>TRANSPORT.</b></p> <p>Allow for transport of workmen, materials, etc., to and from the site at such hours and by such routes as may be permitted by the competent authorities.</p>	
2.1.14	<p><b>MATERIALS AND WORKMANSHIP.</b></p> <p>All materials and workmanship used in the execution of the work shall be of the best quality and description unless otherwise stated. The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also ensure 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>	
2.1.15	<p><b>SIGN FOR MATERIALS SUPPLIED.</b></p> <p>The Contractor will be required to sign a receipt for all articles and materials supplied by the PROJECT 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>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
2.1.16	<p><b>STORAGE OF MATERIALS</b></p> <p>The Contractor shall provide at his own risk and cost where directed on the site weather proof lock-up sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the PROJECT MANAGER Nominated Sub-Contractors are to be made liable for the cost of any storage accommodation provided especially for their use.</p>	
2.1.17	<p><b>SAMPLES</b></p> <p>The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes 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 Roads, Housing and 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>	
2.1.18	<p><b>GOVERNMENT ACTS REGARDING WORKPEOPLE ETC.</b></p> <p>Allow for complying with all Government Acts, Orders and Regulations in connection with the employment of Labour and other matters related to the execution of the works. In particular the Contractor's attention is drawn to the provisions of the Factory Act 1950 and his tender must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to Insurances, pensions and holidays for workpeople or so the safety, health and welfare of the workpeople.</p> <p>The Contractor must make himself fully acquainted with current Acts and Regulations, including Police Regulations regarding the movement, housing, security and control of labour, labour camps , passes for transport, etc. It is most important that the Contractor, before tendering, shall obtain from the relevant Authority the fullest information regarding all such regulations and/or restrictions which may affect the organisation of the works, supply and control of labour, etc., and allow accordingly in his tender. No claim in respect of want of knowledge in this connection will be entertained.</p>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
2.1.19	<p><b>SECURITY OF WORKS ETC.</b></p> <p>The Contractor shall be entirely responsible for the security of all the works stores, materials, plant, personnel, etc., both his own and sub-contractors' and must provide all necessary watching, lighting and other precautions as necessary to ensure security against theft, loss or damage and the protection of the public.</p>	
2.1.20	<p><b>PUBLIC AND PRIVATE ROADS.</b></p> <p>Maintain as required throughout the execution of the works and make good any damage to public or private roads arising from or consequent upon the execution of the works to the satisfaction of the local and other competent authority and the PROJECT MANAGER</p>	
2.1.21	<p><b>EXISTING PROPERTY.</b></p> <p>The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains and other services and he will be held responsible for and shall make good all such damage arising from the execution of this contract at his own expense to the satisfaction of the PROJECT MANAGER</p>	
2.1.22	<p><b>VISIT SITE AND EXAMINE DRAWINGS.</b></p> <p>The Contractor is recommended to examine the drawings and visit the site the location of which is described in the Particular Preliminaries hereof. He shall be deemed to have acquainted himself therewith as to its nature, position, means of access or any other matter which, may affect his tender. No claim arising from his failure to comply with this recommendation will be considered.</p>	
2.1.23	<p><b>ACCESS TO SITE AND TEMPORARY ROADS.</b></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 The Contractor should also allow for an access road of approximately 300 metres.</p>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
2.1.24	<p><b>AREA TO BE OCCUPIED BY THE CONTRACTOR</b></p> <p>The area of the site which may be occupied by the Contractor for use of storage and for the purpose of erecting workshops, etc., shall be defined on site by the PROJECT MANAGER</p>	
2.1.25	<p><b>OFFICE ETC. FOR THE PROJECT MANAGER</b></p> <p>The Contractor shall provide, erect and maintain where directed on site and afterwards dismantle the site office of the standard type, complete with furniture. 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>	
2.1.26	<p><b>WATER AND ELECTRICITY SUPPLY FOR THE WORKS</b></p> <p>The Contractor shall provide at his own risk and cost all necessary water, electric light 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>	
2.1.27	<p><b>SANITATION OF THE WORKS</b></p> <p>The Sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Government and/or Local Authorities, Labour Department and the PROJECT MANAGER</p>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
2.1.28	<p><b>SUPERVISION AND WORKING HOURS</b></p> <p>The works shall be executed under the direction and to the entire satisfaction in all respects of the PROJECT 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>	
2.1.29	<p><b>PROVISIONAL SUMS.</b></p> <p>The term "Provisional Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7(i) of the Standard Method of Measurement. Such sums are net and no addition shall be made to them for profit.</p>	
2.1.30	<p><b>PRIME COST (OR P.C.) SUMS.</b></p> <p>The term "Prime Cost Sum" or "P.C. Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A item A7 (ii) of the Standard Method of Measurement. Persons or firms nominated by the PROJECT 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>	
2.1.31	<p><b>PROGRESS CHART.</b></p> <p>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.</p>	
2.1.32	<p><b>ADJUSTMENT OF P.C. SUMS.</b></p> <p>In the final account all P.C. Sums shall be deducted and the amount properly expended upon the PROJECT 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"</p>	
	<i>Carried to collection</i>	



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
2.1.33	<p><b>ADJUSTMENT OF P.C. SUMS. Ctd.....</b></p> <p>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>	
2.1.34	<p><b>ADJUSTMENT OF PROVISIONAL SUMS.</b></p> <p>In the final account all Provisional Sums shall be deducted and the value of the work properly executed in respect of them upon the PROJECT MANAGER's order added to the Contract Sum. Such work shall be valued as described for Variations, 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>	
2.1.35	<p><b>NOMINATED SUB-CONTRACTORS</b></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>	
2.1.36	<p><b>DIRECT CONTRACTS</b></p> <p>Notwithstanding the foregoing conditions, the Government 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>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>AMOUNT</b>
2.1.37	<p><b>ATTENDANCE UPON OTHER TRADESMEN, ETC.</b></p> <p>The Contractor shall allow for the attendance of trade upon trade and shall afford any tradesmen or other persons employed for the execution of any work not included in this Contract every facility for carrying out their work and also for use of his ordinary scaffolding. The Contractor, however, shall not be required to erect any special scaffolding for them. The Contractor shall perform such cutting away for and making good after the work of such tradesmen or persons as may be ordered by the PROJECT MANAGER and the work will be measured and paid for to the extent executed at rates provided in these Bills.</p>	
2.1.38	<p><b>INSURANCE</b></p> <p>The Contractor shall insure as required in Clause 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.</p>	
2.1.39	<p><b>PROVISIONAL WORK</b></p> <p>All work described as "Provisional" in these Bills of Quantities is subject to remeasurement in order to ascertain the actual quantity executed for which payment will be made. All "Provisional" and other work liable to adjustment under this Contract shall left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the PROJECT 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>	
2.1.40	<p><b>ALTERATIONS TO BILLS, PRICING, ETC.</b></p> <p>Any unauthorised alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored. The Contractor shall be deemed to have made allowance in his prices generally to cover any items against which no price has been inserted in the priced Bills of Quantities. All items of measured work shall be priced in detail and the Tenders containing Lump Sums to cover trades or groups of work must be broken down to show the price of each item before they will be accepted.</p>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
2.1.41	<p><b>BLASTING OPERATIONS</b></p> <p>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.</p>	
2.1.42	<p><b>MATERIALS ARISING FROM EXCAVATIONS</b></p> <p>Materials of any kind obtained from the excavations shall be the property of the Government. 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.</p>	
2.1.43	<p><b>PROTECTION OF THE WORKS.</b></p> <p>Provide protection of the whole of the works contained in the Bills of Quantities, 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 Government.</p>	
2.1.44	<p><b>REMOVAL OF RUBBISH ETC.</b></p> <p>Removal of rubbish and debris from the Buildings and site as it accumulates and at the completion of the works and remove all plant, scaffolding and unused materials at completion.</p>	
2.1.45	<p><b>WORKS TO BE DELIVERED UP CLEAN</b></p> <p>Clean and flush all gutters, rainwater and waste pipes, manholes and drains, wash (except where such treatment might cause damage) and clean all floors, sanitary fittings, glass inside and outside and any other parts of the works and remove all marks, blemishes, stains and defects from joinery, fittings and decorated surfaces generally, polish door furniture and bright parts of metalwork and leave the whole of the buildings watertight, clean, perfect and fit for occupation to the approval of the PROJECT MANAGER</p>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	AMOUNT
2.1.46	<p><b>GENERAL SPECIFICATION.</b></p> <p>For the full description of materials and workmanship, method of execution of the work and notes for pricing, the Contractor is referred to the Ministry of Roads, Public Works and Housing General Specification dated 1976 or any subsequent revision thereof which is issued as a separate document, and which shall be allowed in all respects unless it conflicts with the General Preliminaries, Trade Preambles or other items in these Bills of Quantities.</p>	
2.1.47	<p><b>TRAINING LEVY</b></p> <p>The Contractor's attention is drawn to legal notice No. 237 of October, 1971, which requires payment by the Contractor of a Training Levy at the rate of 1/4 % of the Contract sum on all contracts of more than Kshs. 50,000.00 in value.</p>	
2.1.48	<p><b>MATERIALS ON SITE</b></p> <p>All materials for incorporation in the works must be stored on or adjacent to the site before payment is effected unless specifically exempted by the PROJECT MANAGER. This includes the materials of the Main Contractor, Nominated Sub-Contractors and Nominated Suppliers.</p>	
2.1.49	<p><b>HOARDING</b></p> <p>The Contractor shall <b>where necessary</b> enclose all the site under construction with a hoarding 2400 mm high consisting of iron sheets gauge 30 on 100 x 50 mm 2nd grade treated sawn cypress timber posts firmly secured at 1800 mm centres with two 75 x 50 mm 2nd grade treated sawn cypress timber rails . The Contractor is in addition required to take all precautions necessary for the safe custody of the works, materials, plant, public and Employer's property on the site.</p>	
2.1.50	<p><b>CONTRACTOR'S SUPERINTENDENCE/SITE AGENT</b></p> <p>The Contractor shall constantly keep on the works a literate English speaking Agent or Representative, competent and experienced in the kind of work involved who shall give his whole experience in the kind of work involved and shall give his whole time to the superintendence of the works. Such Agent or Representative shall receive on behalf of the Contractor all directions and instructions from the Project Manager and such directions shall be deemed to have been given to the Contractor in accordance with the Conditions of Contract.</p>	
	<i>Carried to collection</i>	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

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

**ESMP**  
**BILL NO.3**

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p><b>ELEMENT NO.1</b></p> <p><b><u>PRELIMINARIES FOR HEALTH AND SAFETY, AIR AND NOISE MONITORING &amp; CONTROL, WASTE MANAGEMENT</u></b></p> <p><u>The Tenderer's attention is drawn to the fact that the Employer reserves the right to hold back the amount priced against below items either in full or in part due to any non-performance on the Contractor's part of his obligations.</u></p> <p><u>The Contractor will be required to monitor, keep records and report on the following environmental and social issues for the project in manner acceptable to the World Bank and Government of Kenya:</u></p> <p><b><u>SAFETY, HEALTH AND WELFARE OF WORKERS</u></b></p> <p>The Contractor shall allow for providing for the safety, health and welfare of work people and for complying with any relevant Ordinances, Regulations or Union Agreement</p> <p>In addition to complying with the requirements of the Occupational Safety &amp; Health Act 2007 and the Factories Act, the Contractor and Sub-Contractors shall be required to comply in all respects with the Factories (Building Operations and Work of Engineering Construction) rules together with the Construction Safety Plan in compliance with International Labour Organizations (ILO) Regulations.</p>				
3.1.1					
	<b>Total Carried to Collection</b>			Ksh	

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p>The Contractor will further be required to identify a Site <b>Environment Health and Safety Officer</b> in accordance with the above Rules who will be responsible for the health and safety of workers on the site. This includes awareness and sensitization <b>on environmental protection, occupational and community health and safety, code of conduct for contractors personnel, risk of spread of communicable diseases including sexually transmitted diseases such as HIV/AIDS, Gender Equity, Sexual Harassment and abuse amongst workers in the workplace, Spread of COVID-19 amongst community members during the consultation processes and Grievance redress mechanism.</b></p> <p>The Contractor will also be required to provide approved <b>personal protective equipment such as</b> good quality hard hats, gumboots, safety boots and other necessary protective gear for all workers on site including Sub-Contractors' workers and also for the exclusive use by the Clerk of Works and representatives of the Employer and Consultants.</p> <p>The tenderer's attention is further drawn to the fact that he is required to submit with his tender a detailed write-up on how he intends to implement the above Construction Safety Plan. It should be noted that this write-up will form a heavily weighted criteria in the evaluation of the tenders.</p>	Item	1	1,200,000	1,200,000
	<b>Total Carried to Collection</b>			<b>Ksh</b>	<b>1,200,000</b>



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3.2.1	<p>The contractor will be required to provide adequate temporary Notices and Signs shall be posted to indicate e.g. that “construction is in progress” and “entry is at ones own risk” or “trespassers are liable to be prosecuted” or such other Notices and Signs as the Architect may consider necessary from time to time. The design and location of such signs will be to the approval of the Architect.</p> <p>The Contractor is expected to also come up with an Emergency Response plan</p> <p><b><u>SANITATION OF THE WORKS</u></b></p> <p>The sanitation of the works shall be provided, maintained and removed on completion of works by the Contractor to the satisfaction of the Architects, health department and local Authorities.</p> <p>The sanitation facilities should be gender sensitive (separate for male and female )shall be for the use by Contractors and sub-Contractors workmen etc without charge.</p> <p>The Latrine/toilet shall be enclosed plastered and painted masonry wall, corrugated sheets roofs ,with concrete tiled floors to facilitate washing. Their location shall be agreed with the Architects and the works shall not be commenced before the sanitary accommodation has been approved by the above mentioned authorities.</p>	Item	1	500,000	500,000
	<b>Total Carried to Collection</b>			<b>Ksh</b>	<b>500,000</b>

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3.3.1	<p>The Contractor will be required to pay all conservancy charges and shall ensure clean daily maintenance and disinfecting of the latrines/toilet, and not less than once per week, the whole area shall be sprayed with disinfectant and insecticides and any temporary drains shall be removed and all works and surfaces disturbed made good and then the whole area disinfected and left clean and free from pollution to the satisfaction of the Architect and local authorities.</p> <p><b><u>PREVENTION OF DISTURBANCE AND NUISANCE</u></b></p> <p>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>	Item	1	500,000	500,000
	<b>Total Carried to Collection</b>			<b>Ksh</b>	<b>500,000</b>

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<p>The works and such sections of the site necessary shall be under the entire care and control of the contractor during the whole period of the contract and shall take all possible precautions to prevent any nuisance, inconvenience or injury to the holder or occupiers of the existing or surrounding properties and to the public generally, and shall at all times keep all paths and roads affected by the works in a safe and clear state, and shall use proper precautions to ensure the safety of all wheeled traffic and pedestrians.</p> <p><b><u>GRIEVANCE REDRESS MECHANISM (GRM) WORKER</u></b></p> <p>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> <p><b><u>CLEANING, REMOVAL OF PLANT AND RUBBISH ETC</u></b></p> <p>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>				
3.3.2		Item	1	1,020,000	1,020,000
3.4.1					
	<b>Total Carried to Collection</b>			Ksh	1,020,000

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<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> <p><b><u>AMBIENT AIR QUALITY AND NOISE MONITORING</u></b></p> <p>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	300,000
3.4.2	<p><b><u>TRAFFIC CONTROL AND MANAGEMENT</u></b></p> <p>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.</p>	Item	1	200,000	200,000
3.4.3	<p>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</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	200,000	200,000
	<b>Total Carried to Collection</b>			<b>Ksh</b>	<b>700,000</b>

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3.5.1	<p><b><u>MOVEMENT OF TRUCKS OR MACHINERY</u></b></p> <p>The Contractor moving solid or liquid construction materials and waste shall take strict measures to minimize littering of roads by ensuring that vehicles are licensed and loaded in such a manner as to prevent falling off or spilling of construction materials and by sheeting the sides and tops of all vehicles carrying mud, sand, other materials and debris. Construction materials should be brought from registered/approved sources in the city or from the city and debris should be transferred to assigned places in the landfill with documented confirmation.</p>	Item	1	200,000	200,000
3.5.2	<p><b><u>PROTECTION OF EXISTING INSTALLATION</u></b></p> <p>The Contractor shall take all necessary measures required for the support and protect structures, pipes, cables, sewers and other apparatus during the construction period, and to repair any damage occurs in coordination with local resident association, Government and any concerned authorities.</p>	Item	1	100,000	100,000
3.5.3	<p><b><u>PHYSICAL CULTURAL RESOURCES</u></b></p> <p>The contractor will train construction crews and supervisors to spot potential archaeological finds. In the event of a potential find, the contractor will inform the implementing partner who will in turn liaise with the archaeological department at the Ministry of Culture, and Social Services or a local university for quick assessment and action. Clear record keeping and expert verification procedures, criteria for temporary work stoppages that may be required to allow for rapid resolution of issues in the field and the chain of custody must be clear from the onset.</p>	Item	1	100,000	100,000
	<b>Total Carried to Collection</b>			<b>Ksh</b>	<b>400,000</b>

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	The Contractor will come up with a Water Resource Protection Plan to prevent contamination of drinking water				
	<b>Total Carried to Collection below</b>			<b>Ksh</b>	<b>-</b>
	<u><b>SECTION SUMMARY- ESMP</b></u>				
	Total Brought Forward from Page ESMP/1				-
	Total Brought Forward from Page ESMP/2				1,200,000
	Total Brought Forward from Page ESMP/3				500,000
	Total Brought Forward from Page ESMP/4				500,000
	Total Brought Forward from Page ESMP/5				1,020,000
	Total Brought Forward from Page ESMP/6				700,000
	Total Brought Forward from Page ESMP/7				400,000
	Total Brought Forward from Page 8 above				
	<b>TOTAL FOR DAY WORKS CARRIED TO GRAND SUMMARY</b>				<b>4,320,000</b>

FISH BANDA / DEPOT

BILL NO.4

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b><u>ELEMENT NO. 1</u></b></p> <p><b>SUBSTRUCTURES (All provisional)</b></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><b>NOTE: Classes of Rock</b></p> <p><b><u>(1) Class 1 :</u></b> 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/mm<sup>2</sup>. 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><b><u>(2) Class 2 :</u></b> Class 2 Rock shall be with compressive strength exceeding 15N/mm<sup>2</sup>. This type of rock contains stones and boulders of unweathered or incompletely weathered Tuff, trachyte, black trap or lava with compressive strength exceeding 15N/mm<sup>2</sup> 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. 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>				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>SUBSTRUCTURES (All provisional)</u></b>				
	<b><u>Site Preparation</u></b>				
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 by the Project Manager	380	SM		
	<b><u>Excavation</u></b> Note that all excavations are measured nett and no allowance for working space provided				
4.1.2	Excavate oversite average 250mm deep and cart away	380	SM		
4.1.3	Excavation for foundation trenches from reduced level: not exceeding 1.50 metres deep	234	CM		
4.1.4	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	172	CM		
4.1.5	Ditto for column bases from reduced level not exceeding 1.50 metres deep	110	CM		
4.1.6	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	97	CM		
4.1.7	Extra over all descriptions of excavations and removal from site for breaking up rocks: irrespective of class	300	CM		
	<b><u>Disposal of excavated material</u></b>				
4.1.8	Fillings around sub- walls: backfill and compact in 150 mm layers: selected excavated materials	809	CM		
4.1.9	Remove surplus spoil from site and deposit in spoil heaps and later spread on site as directed	184	CM		
	<b><u>Planking and strutting</u></b>				
4.1.10	Planking and strutting to sides of all excavations: keep excavations free from all fallen materials		ITEM		
	<b><u>Disposal of Water</u></b>				
4.1.11	Keep excavations free from all water including spring or running water.		ITEM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>Hardcore Filling</u></b>				
4.1.12	300mm thick (minimum) approved hardcore handpacked in layers not exceeding 150mm	300	SM		
4.1.13	Imported filling to make-up levels; compacted in layers not exceeding 150 mm thick; To atleast 95% MDD (AASHTO T99) compaction	150	CM		
	<b><u>Murram</u></b>				
4.1.14	50mm Thick Quarry dust blinding to the surface of hardcore rolled smooth to receive polythene sheeting	300	SM		
	<b><u>Insecticide treatment</u></b>				
	<b>Treat hardcore surface with approved antitermite applied in accordance with the manufacturer's instructions and subject to a TEN YEAR guarantee</b>				
4.1.14	To Quarry dust surface	300	SM		
	<b><u>CONCRETE WORK</u></b>				
	<b>Insitu concrete class 15/20: in</b>				
4.1.15	50 mm thick blinding to strips	156	SM		
4.1.16	50 mm thick blinding to column bases	74	SM		
	<b>Insitu concrete Class 25 (20mm aggregate) : vibrated: reinforced</b>				
4.1.17	Strip foundation	32	CM		
4.1.18	Column bases	31	CM		
4.1.19	Columns	5	CM		
4.1.20	Thicknessing at staircase base	1	CM		
4.1.21	Steps	1	CM		
4.1.22	150mm Thick ground floor slab	340	SM		
4.1.23	Ditto ramps	12	SM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
4.1.24	Extra over in slab to forming or leaving 300mm wide shallow drainage channels;average 300mm deep 'U' channel in hardcore and floor slab; including hand packing to sides of channel;150mm thick concrete class 25/20 to sides and bed of channel including 50mm blinding class 15/20 and all necessary formwork and reinforcement, all to detail and approval	70	LM		
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b>				
	<b>Ribbed bars to KS ISO 6935-2:2007</b>				
4.1.25	8mm diameter	200	KG		
4.1.26	10mm diameter	1300	KG		
4.1.27	12mm diameter	1800	KG		
4.1.28	16mm diameter	500	KG		
	<b>Mesh Fabric Reinforcement</b>				
4.1.29	BRC Fabric mesh reinforcement Ref. A142; weighing 2.22kg per square metre(measured net no allowances made for laps) including bends tying wire and spacer blocks.	352	SM		
	<b><u>Marineply formwork as Described. Allow for setting to special steel propping, strutting, fillets, nails, etc to:</u></b>				
4.1.30	Vertical: sides of foundations in trenches	104	SM		
4.1.31	Vertical: sides of column bases	74	SM		
4.1.32	Vertical: sides of columns	70	SM		
4.1.33	Edges: slab over 75 but not exceeding 150 mm wide	83	LM		
4.1.34	Edges of steps 75mm - 150 mm high	26	LM		
4.1.35	Edges of ramp slab over 75 but not exceeding 150 mm wide	12	LM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>WALLING</u></b>  Approved natural stone or coral stone ; load bearing 7.0 N/mm <sup>2</sup> : reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar				
4.1.36	200 mm thick walls reinforced with hoop iron at every alternate course	521	SM		
	<b><u>DAMP PROOFING</u></b>  1000 Gauge polythene; 150mm laps; no allowances made for laps				
4.1.37	Horizontal; over 300mm wide	352	SM		
	<b><u>Plinth Finishes</u></b>  15mm Thick cement sand (1:3) rendering to plinth; wood float finish (PLEASE NOTE: The render shall be at least 450 mm below natural ground level)	43	SM		
4.1.39	Prepare and apply three coats of premium quality marine grade bituminous paint to rendered walls; externally	43	SM		
	<b>Carried to collection</b>				
	<b><u>COLLECTION</u></b>  <b><u>SUBSTRUCTURE</u></b>  Brought forward from page FB/2  Brought forward from page FB/3  Brought forward from page FB/4  Brought forward from page FB/5				
	<b>TOTAL FOR SUBSTRUCTURE CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI  
COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 2</u></b>				
	<b><u>RC SUPERSTRUCTURE</u></b>				
	<b>Insitu concrete Class 25 (20mm aggregate) : vibrated: reinforced</b>				
4.2.1	Beams	13	CM		
4.2.2	Gutter beams	14	CM		
4.2.3	Columns	7	CM		
4.2.4	Staircase	4	CM		
4.2.5	175 mm thick suspended floor slab	247	SM		
4.2.6	175 mm thick suspended roof slab	22	SM		
4.2.7	175mm thick suspended staircase landings	2	SM		
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b>				
	<b>Ribbed bars to KS ISO 6935-2:2007</b>				
4.2.8	Assorted sizes	12514	KG		
	<b><u>Marineply formwork as Described. Allow for setting to special steel proping, strutting, fillets, nails, etc to:</u></b>				
4.2.9	Sides of Columns	109	SM		
4.2.10	Sides and soffits of beams	166	SM		
4.2.11	Sides and soffits of gutter beams	113	SM		
4.2.12	Soffites of suspended floor slab	269	SM		
4.2.13	Edges of suspended floor slab 150-225mm high	89	LM		
4.2.14	Ditto edges of suspended staircase landings	6	LM		
4.2.15	Soffites of staircase landings	2	SM		
4.2.16	Sloping soffites of staircase	11	SM		
4.2.17	Extreme edges of staircase average 300mm wide with profile to treads and risers	7	LM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
4.2.18	Risers 150mm high	24	LM		
4.2.19	Box out formwork to opening size 1100x1300mm	1	NO		
4.2.19	<u>Creation of Arches</u> Construction and formation of decorative arches around windows and the main door externally and main arches at terrace finished same as external walls;1000 - 3000 mm diameter;including all necessary formworks and reinforcements; all to Architect's details	2	No		
	<b>Carried to collection</b>				
	<u>COLLECTION</u>  <u>RC SUPERSTRUCTURE</u>  Brought forward from page FB/6  Brought Down from page FB/7 above				
	<b>TOTAL FOR RC SUPERSTRUCTURE CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u><b>ELEMENT NO. 3</b></u>  <u><b>EXTERNAL WALLS</b></u>  <u><b>NATURAL STONE WALLING</b></u>  <u>Machine cut natural stone or machine cut coral stone or hollow concrete block walling ; load bearing 7.0 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</u>				
4.3.1	200mm. Thick walling externally	255	SM		
4.3.2	200mm thick at parapet wall; including allowing for crenellation to architect's detail	80	SM		
	<b>Pre-cast concrete class 20/20 precast ventilation blocks</b>				
4.3.3	600x600x200mm thick vents block with floral motifs; bedded and jointed in cement and sand (1:3) mortar and reinforced every alternate course with hoop iron.;To architect's details	15	SM		
	<b>Pre-cast concrete class 20/20 concrete coping</b>				
4.3.4	250 x 50 mm high precast concrete coping weathered and throated on both sides and jointed to wall in cement sand mortar 1:3 all to approval	121	LM		
	<b>Bituminous or other equal approved damp-proof course; 3 ply membrane</b>				
4.3.5	Horizontal; 200mm wide under walls	64	LM		
	<b>TOTAL EXTERNAL WALLING CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO. 4</u>  <u>INTERNAL WALLS</u>  <u>NATURAL STONE WALLING</u>  <u>Machine cut natural stone or machine cut coral stone or hollow concrete block walling ; load bearing 7.0 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</u>				
4.4.1	200mm. Thick walling internally	158	SM		
	<u>Bituminous or other equal approved damp-proof course; 3 ply membrane</u>				
4.4.2	Horizontal; 200mm wide under walls	55	LM		
	TOTAL FOR INTERNAL WALLING CARRIED TO SUMMARY				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 5</u></b>				
	<b><u>FLAT ROOF FINISHES AND RAIN WATER HARVESTING</u></b>				
	<b><u>Flat roof finishes</u></b>				
4.5.1	50mm thick (average) water proof screed consisting of cement and sand (1:3)	368	SM		
4.5.2	Ditto to sides of wall;300mm high	20	SM		
4.5.3	50 x 50mm internal angle fillet	66	LM		
	<b>Supply and apply 4mm thick bituminous felt membrane heat welded in 200mm overlaps and all necessary surface preparations; applied strictly in accordance with printed manufacturer's instructions; provide a 10 year guarantee</b>				
4.5.4	To roof slabs and gutters	368	SM		
4.5.5	To sides of walls	20	SM		
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
4.5.6	32 mm thick to receive concrete interlocking tiles (m.s)	269	SM		
	<b>Concrete interlocking tiles</b>				
4.5.7	200 x 200 x 25mm thick concrete interlocking tiles at roof slab; bedding and jointing in cement mortar mix 1:4(m/s)	269	SM		
4.5.8	100mm high matching skirting	66	LM		
	<b>Unplasticized PVC downpipes and fittings: solvent welded joints</b>				
4.5.9	160mm downpipes in concrete columns to approval	16	LM		
4.5.10	Extra over suspended concrete slab for forming 160mm diameter hole for down pipe	3	NO		
4.5.11	Extra over downpipe for bends	4	NO		
4.5.12	Extra over downpipe for 160mm diameter anti splash shoe	3	NO		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI  
COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<i><b>Rainwater Harvesting Cont'd</b></i>				
4.5.13	Extra over 150mm fulbora outlets including galvanised expanded metal mesh	3	NO		
4.5.14	450 mm girth flashing one end built in mortar in groove in wall/concrete gutter	66	LM		
	<b>Carried to collection</b>				
	<u><b>COLLECTION</b></u>  <u><b>FLAT ROOF FINISHES AND RAIN WATER HARVESTING</b></u>  Brought forward from page FB/10  Brought Down from page FB/11 above				
	<b>TOTAL FOR FLAT ROOF FINISHES AND RAIN WATER HARVESTING CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 6</u></b>				
	<b><u>DOORS</u></b>				
	<b><u>Louvred Doors</u></b>				
	50mm thick mvule louvred door comprising of 50x3mm louvres set at 45 degrees at 50mm centres;solid blocking for iron mongery (m/s) to door : all in accordance with Architect's details				
4.6.1	Double leaf door overall size 900 x 2400; complete with louvred fanlight size 900x475mm high as D003	7	NO		
	<b><u>Panel Doors</u></b>				
	<b><u>50mm thick mvule panelled door: comprised of 200 x 50mm thick stiles, top and middle rail: 200 x 50mm thick bottom rail ; complete with moulded grooves to door leaf on both sides ;solid blocking to iron mongery (m/s) to door</u></b>				
4.6.2	Single leaf door hardwood panel door overall size 1100 x 2400mm high; with timber louvred fanlight size 1100x475mm high as D002	4	No		
4.6.3	Double leaf door hardwood panel door overall size 1500 x 2400mm high; with louvred fanlight size 1500x475mm high as D001	3	No		
	<b><u>Fire rated door</u></b>				
	<b><u>Supply and fix 50mm thick one hour fire rated(1 HR) ; complete with fireproof frames and leaf made of 2mm thick G.I Steel in filled with rockwool and gypsum powder and finished in polyester powder coating and 475mm high fanlight glazed with 10mm thick georgian wire glass; complete with fire rated iron mongery (mortise lock,levers,hinges,door closer,panic bars and contact alarm ; solid blocking for iron mongery</u></b>				
4.6.4	Double leaf door overall size 1100 x 2400mm high	1	No		
	<b><u>The following in wrot mvule</u></b>				
4.6.5	150 x 50mm frame with two labours	84	LM		
4.6.6	150 x 50 mm Transome	17	LM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
4.6.7	150 x 50 mm Mullion	5	LM		
4.6.8	50 x 25mm. Splayed architrave.	84	LM		
4.6.9	25 x 25mm. Quadrant.	84	LM		
	<b><u>Ironmongery</u></b> <b><u>Supply and fix the following ironmongery from an approved manufacturer including all necessary matching screws;all ironmongery to be stainless steel grade 3.1.6 marine grade</u></b>				
4.6.10	3 - Lever mortice lock; complete with lockcase and handle	11	NO		
4.6.11	2 - Lever mortice lock; ditto complete with indicator	4	NO		
4.6.12	100mm. Pressed butt hinges	19.5	PRS		
4.6.13	150mm heavy duty double action spring hinges	6.0	PRS		
4.6.14	38mm. Diameter door stop on floor / wall to approval	21	NO		
4.6.15	Stainless steel overhead door closer	13	NO		
4.6.16	Ditto double action door closer	4	NO		
4.6.17	800 x 200mm high stainless steel kick plate onto both sides to approval	8	NO		
4.6.18	150 x 150mm sex indicator plate	4	NO		
4.6.19	Coat and hat hook	4	NO		
	<b>Metal fixing cramps</b>				
4.6.20	30 x 3mm. Approved door cramps 250mm. Long once bent one end drilled and screwed to wood	60	NO		
	<b>Painting and Decoration</b> <b>Prepare and apply three coats of premium quality marine grade clear varnish; Matt quality to:-</b>				
4.6.21	General surfaces of wood exceeding 200mm but not exceeding 300mm girth	106	LM		
4.6.22	Ditto; girth not exceeding 100mm	168	LM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI  
COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
4.6.23	Doors both internally and externally  <b>Prepare and apply one coat aluminium primer before fixing: to backing of wood</b>	74	SM		
4.6.2	Surfaces over 200 but not exceeding 300mm	106	LM		
4.6.25	Surfaces not exceeding 100mm	168	LM		
	<b>Carried to collection</b>				
	<u><b>COLLECTION</b></u>  <u><b>DOORS</b></u>  Brought forward from page FB/12  Brought Down from page FB/13  Brought Down from page FB/14 above				
	<b>TOTAL FOR DOORS CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 7</u></b>				
	<b><u>WINDOWS</u></b>				
	Heavy Duty powder coated Aluminium windows to B.S. 4813 to be executed by an approved sub contractor				
	The following in Heavy Duty Powder Coated Aluminium windows from approved manufacturer(s) complete with 80x55x3 mm frames mullions trasomes railing and necessary intermediate reinforcement elements including all weather strips, rubber glazing strips, couplings, ironmongery including hinges, fasteners and stays, sliding rails( where necessary) bars; all ironmongery to be of stainless steel grade 316 marine grade; panes left open for glazing to Architects detail				
	Please note that the sliding panels and fixed lights should not be spaced more than 700 mm wide				
4.7.1	Window size 2400x675mm high as W-01	9	NO		
4.7.2	Window size 2400x1075mm high as W-02	1	NO		
4.7.3	Window size 1200x675mm high as W-03	1	NO		
	<b><u>Burglar proofing grilles</u></b>				
4.7.4	Mild steel grille framed with 50 x 25 x 3mm thick RHS sections, 25x3mm MS bars welded to frame at 150 mm centres both sides; including assembly and fixing to opening cutting and pinning lugs to concrete and bedding frame in cement and sand mortar (1:3)	17	SM		
	<b><u>Glazing</u></b>				
	<b>laminated oneway glass fixed with and including beadings.</b>				
4.7.5	6mm thick glass in panes (0.50-1.00m <sup>2</sup> )	17	SM		
	<b>Window cills</b>				
4.7.6	200x50mm pre-cast concrete window sill bedded and pointed in cement sand(1:3) mortar, weathred and throated all to Architects detail and approval	28	LM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI  
COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
4.7.7	<p>Prepare surface by sand blasting, apply one coat of 2 pack epoxy zinc phosphate primer; apply three coats of Marine grade gloss paint</p> <p>To burglar-proofing grilles; internally/externally</p>	34	SM		
	Carried to collection				
	<p><u>COLLECTION</u></p> <p><u>WINDOWS</u></p> <p>Brought forward from page FB/15</p> <p>Brought Down from page FB/16 above</p>				
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 8</u></b>				
	<b><u>FIXTURES AND FITTINGS:</u></b>				
	<b><u>"All Provisional"</u></b>				
	<b>FIXTURES AND FITTINGS:-(PROVISIONAL)</b>				
	<b>Worktop</b>				
4.8.1	100mm thick plain concrete class 15/20 in plinth	13	SM		
4.8.2	Reinforced concrete class 25/20 in 150mm worktops	13	SM		
	<b>Formwork to:-</b>				
4.8.3	Soffites of worktops	13	SM		
4.8.4	Edges of worktops and plinths 75-150mm high	48	LM		
4.8.5	10mm diameter high yield reinforcement bars	200	KG		
4.8.6	100mm thick coral block walling in cement/sand 1:3 mortar	34	SM		
4.8.7	15mm thick cement sand (1:3) plaster of worktop	13	SM		
4.8.8	Ditto walls	68	SM		
	<b>Polished Terrazzo paving</b>				
4.8.9	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	81	SM		
	<b>Plastic dividing strips</b>				
4.8.10	32 x 3mm thick plastic dividing strips	122	LM		
	<b>Supply and fix the following in high grade brass plate treated with sealer and chemical etching ; graphics and lettering finished in 3M vinyl cut outs as per architect's details</b>				
4.8.11	500 x 100 mm door signage	11	No		
	<b>Carried to collection</b>				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>Stainless steel grating</b>				
4.8.12	300mm wide stainless steel channel grating grade 3.1:6 marine grade: comprising 40 x 40 x 6mm edge frame : infilled with 40 x 6mm flats at 50mm centres : 40 x 40 x 6mm frame set in concrete with 150mm long stainless stel end split lugs : smooth weld joints	70	LM		
	<b>Footbath</b>				
4.8.13	2100 x 1000 x 550mm deep foot bath comprising of 30x30x3mm thick aluminium frame anchored in reinforced concrete slab; 22mm thick entrance matting with 5mm spacing between profiles. Colour: black; All to Architect's detail and approval	2	NO		
4.8.14	Ditto 1800 x 900 x 550mm deep	1	NO		
4.8.15	Ditto 1000 x 1000 x 550mm deep	1	NO		
	<b>Handrail -Stainless Steel</b>				
4.8.16	Supply, assemble and fix 1000mm high purpose made stainless steel (grade 3.1.6) comprising of 50mm diameter x 3mm thick stainless steel tube handrail welded to 50mm diameter x 3mm thick stainless steel balusters at fixed to concrete floor at 1000mm centres; balusters fixed to and including 200mm x 150mm x 15mm thick stainless steel base plate fixed to concrete; complete with 4no. 25mm diameter x 3mm thick horizontal middle rails ; including all necessary cleats, brackets,lugs stiffeners and the like; all to Architect's instructions and approval	8	LM		
4.8.17	Ditto at steps and ramps	12	LM		
	<b>Carried to collection</b>				
	<u><b>COLLECTION</b></u>				
	<u><b>FIXTURES AND FITTINGS</b></u>				
	Brought forward from page FB/17				
	Brought Down from page FB/18				
	<b>TOTAL OF FIXTURES AND FITTINGS, CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.9</u></b>				
	<b><u>INTERNAL FINISHES</u></b>				
	<b><u>Floor Finishes</u></b>				
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
4.9.1	32 mm thick to receive terrazzo (m.s)	136	SM		
4.9.2	Ditto to staircase landing	2	SM		
4.9.3	Ditto at treads; 300mm wide	24	LM		
4.9.4	Ditto to risers; 150mm high	24	LM		
4.9.5	32 mm Thick to receive ceramic floor tiles(m.s)	36	SM		
	<b>Polished Terrazzo paving</b>				
4.9.6	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	136	SM		
4.9.7	Ditto to staircase landing	2	SM		
4.9.8	Ditto to treads; 300mm wide	24	LM		
4.9.9	Ditto to 150mm high risers	24	LM		
4.9.10	20 x 100mm ditto skirting	132	LM		
4.9.11	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	124	LM		
	<b>Plastic dividing strips</b>				
4.9.12	32 x 3mm thick plastic dividing strips	207	LM		
	<b>Ceramic tiles</b>				
4.9.13	330x330x10mm Thick non-slip Ceramic tiles to architects approval fixed with waterproof tile adhesive to approval; including spacers and edge protectors where required	36	SM		
	<b>Skirting</b>				
4.9.14	100x10mm thick ceramic tile skirting with colour to match floor finish	56	LM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>Wall Finishes</u>				
	15mm thick two coat gauged cement lime and sand (1:2:9) plaster steel trowelled smooth to:-				
4.9.15	To surface of wall,columns and beams	483	SM		
4.9.16	Door and Window reveals 100-200mm	216	LM		
	Backing; cement and sand 1:3 with approved integral dust proofing additive wood floated.				
4.9.17	15 mm thick to receive ceramic tiles	165	SM		
	Glazed wall tiles, local approved colour; glazed; to regular pattern bedding and jointing in cement mortar (1:3). Including matching grouting,spacers,waterproof adhesive and edge protectors where required				
4.9.18	330 x 330 x 10mm thick glazed ceramic tiles to wall surfaces	165	SM		
4.9.19	12mm girth PVC Edgings	73	LM		
	<u>Ceiling Finishes</u>				
	15 mm Thick Internal cement sand (1:3) gauged plaster as described to:				
4.9.20	Soffits of concrete slab	172	SM		
	<u>Painting and Decorating</u>				
	Prepare and apply undercoat and three coats PVA based premium quality marine grade silk vinyl sheen emulsion paint as approved to:				
4.9.21	To plastered surface of wall,columns and beams	483	SM		
4.9.22	Precast concrete Louvre Blocks	15	SM		
4.9.23	Door and Window reveals 100-200mm	216	LM		
4.9.24	Plastered concrete slab soffits	172	SM		
	Carried to collection				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>COLLECTION</u>  <u>INTERNAL FINISHES</u>  Brought forward from page FB/20  Brought Down from page FB/21				
	TOTAL FOR INTERNAL FINISHES CARRIED TO SUMMARY				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.10</u></b>				
	<b><u>EXTERNAL FINISHES</u></b>				
	<b><u>Floor Finishes</u></b>				
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
4.10.1	32 mm thick to receive terrazzo (m.s)	157	SM		
4.10.2	Ditto to 450mm wide treads	26	LM		
4.10.3	Ditto to 150mm high risers	26	LM		
	<b><u>Polished Terrazzo paving</u></b>				
4.10.4	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	157	SM		
4.10.5	Ditto to 450mm wide treads	26	LM		
4.10.6	Ditto to 150mm high risers	26	LM		
4.10.7	20 x 100mm ditto skirting	58	LM		
4.10.8	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	146	LM		
	<b><u>Plastic dividing strips</u></b>				
4.10.9	32 x 3mm thick plastic dividing strips	236	LM		
	<b><u>Wall Finishes</u></b>				
4.10.10	15mm Thick cement sand (1:3) rendering to wall,columns and beams	431	SM		
4.10.11	Ditto gutter beams	83	SM		
4.10.12	Ditto: Door and Windows reveals 100-200mm	153	LM		
	<b>Prepare and apply one undercoat and two finishing coats marine grade weatherguard(silicone based) exterior paint as approved to:</b>				
4.10.13	Rendered surfaces of walls,columns and beams	423	SM		
4.10.14	Precast concrete Louvre Blocks	15	SM		
4.10.15	To gutter beams	83	SM		
4.10.16	Door and Window reveals 100-200mm	153	LM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI  
COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>Ceiling Finishes</u> 15 mm Thick Internal cement sand (1:3) gauged plaster as described to:				
4.10.17	Soffits of concrete slab	51	SM		
	<u>Painting and Decoration</u> Prepare surface, apply undercoat and apply three coats of premium quality marine grade emulsion paint to:-				
4.10.18	Plastered ceiling surfaces	51	SM		
	Carried to collection				
	<u>COLLECTION</u>  <u>EXTERNAL FINISHES</u>  Brought forward from page FB/23  Brought Down from page FB/24				
	TOTAL FOR EXTERNAL FINISHES CARRIED TO SUMMARY				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><u>ELEMENT NO.11</u></p> <p><b>BUILDERS WORK IN CONNECTION WITH SERVICES(BWICS)</b></p> <p>Builder's Work incidental to sanitary fittings, ventilation, plumbing, drainage, reticulation, fire fighting, electrical installations, concealed fixings</p>				
4.11.1	Allow for making holes, chasing walls, floors, inclusion of sleeves and other items necessary for the proper carrying out of the installation;including making good all surfaces	1	ITEM		
	TOTAL FOR BWICS CARRIED TO SUMMARY				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>FISH BANDA DEPOT</u>				
	<u>SUMMARY</u>				
1	SUBSTRUCTURES				
2	R.C SUPERSTRUCTURE				
3	EXTERNAL WALLS				
4	INTERNAL WALLS				
5	FLAT ROOF FINISHES AND RAIN WATER HARVESTING				
6	DOORS				
7	WINDOWS				
8	FIXTURES AND FITTINGS				
9	INTERNAL FINISHES				
10	EXTERNAL FINISHES				
11	BWICS				
	TOTAL FOR FISH BANDA DEPOT CARRIED TO SUMMARY OF BUILDERS' WORKS				



**OPEN AIR MARKET BUILDING**

**BILL NO.5**

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b><u>ELEMENT NO. 1</u></b></p> <p><b>SUBSTRUCTURES (All provisional)</b></p> <p><b><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></b></p> <p><b>NOTE: Classes of Rock</b></p> <p><b><u>(1) Class 1 :</u></b> 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/mm<sup>2</sup>. 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><b><u>(2) Class 2 :</u></b> Class 2 Rock shall be with compressive strength exceeding 15N/mm<sup>2</sup>. This type of rock contains stones and boulders of unweathered or incompletely weathered Tuff, trachyte, black trap or lava with compressive strength exceeding 15N/mm<sup>2</sup> 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>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>Site clearance and preparation</u></b>				
5.1.1.	Allow for moving a 40 feet high cube container approximately 40 meters on site and placed on concrete stub columns as instructed by the project Manager		ITEM		
5.1.2.	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	260	SM		
	<b><u>Excavation (Note that all excavations are measured nett and no allowance for working space provided)</u></b>				
5.1.3.	Excavate oversite average 250mm deep and cart away	260	SM		
5.1.4.	Excavate for foundation trenches from reduced level: not exceeding 1.50 metres deep	148	CM		
5.1.5.	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	108	CM		
5.1.6.	Ditto for column bases from reduced level not exceeding 1.50 metres deep	73	CM		
5.1.7.	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	63	CM		
5.1.8.	Extra over all descriptions of excavations and removal from site for breaking up rocks: irrespective of class	150	CM		
	<b><u>Disposal of excavated material</u></b>				
5.1.9.	Fillings around sub- walls: backfill and compact in 150 mm layers: selected excavated materials	536	CM		
5.1.10.	Remove surplus spoil from site and deposit in spoil heaps and later spread on site as directed	116	CM		
	<b><u>Planking and strutting</u></b>				
5.1.11.	Planking and strutting to sides of all excavations: keep excavations free from all fallen materials		ITEM		
	<b><u>Disposal of Water</u></b>				
5.1.12.	Keep excavations free from all water including spring or running water.		ITEM		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
5.1.13.	<b><u>Hardcore Filling</u></b> 300mm thick (minimum) approved hardcore handpacked in layers not exceeding 150mm	198	SM		
5.1.14.	Imported filling to make-up levels; compacted in layers not exceeding 150 mm thick; To atleast 95% MDD (AASHTO T99) compaction	100	CM		
5.1.15.	<b><u>Murram</u></b> 50mm Thick Quarry dust blinding to the surface of hardcore rolled smooth to receive polythene sheeting	198	SM		
	<b><u>Insecticide treatment</u></b> Treat hardcore surface with approved antitermite applied in accordance with the manufacturer's instructions and subject to a TEN YEAR guarantee				
5.1.16.	To Quarry dust surface	198	SM		
	<b><u>CONCRETE WORK</u></b> <b>Insitu concrete class 15/20: in</b>				
5.1.17.	50 mm thick blinding to strips	99	SM		
5.1.18.	50 mm thick blinding to column bases	49	SM		
	<b>Insitu concrete Class 25 (20mm aggregate) : vibrated: reinforced</b>				
5.1.19.	Column bases	20	CM		
5.1.20.	Stub columns	3	CM		
5.1.21.	Steps	1	CM		
5.1.22.	Foundation strip	20	CM		
5.1.23.	150mm Thick ground floor slab	225	SM		
5.1.24.	Ditto ramps	6	SM		
5.1.25	Extra over in slab to forming or leaving 300mm wide shallow drainage channels;average 300mm deep 'U' channel in hardcore and floor slab; including hand packing to sides of channel;150mm thick concrete class 25/20 to sides and bed of channel including 50mm blinding class 15/20 and all necessary formwork and reinforcement, all to detail and approval	15	LM		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b> <b>Ribbed bars to KS ISO 6935-2:2007</b>				
5.1.26.	8mm diameter	100	KG		
5.1.27.	10mm diameter	900	KG		
5.1.28.	12mm diameter	700	KG		
5.1.29.	20mm diameter	600	KG		
	<b>Mesh Fabric Reinforcement</b>				
5.1.30.	BRC Fabric mesh reinforcement Ref. A142; weighing 2.22kg per square metre(measured net no allowances made for laps) including bends tying wire and spacer blocks.	231	SM		
	<b><u>Marineply formwork as Described. Allow for setting to special steel proping, strutting, fillets, nails, etc to:</u></b>				
5.1.31.	Vertical: sides of foundations in trenches	66	SM		
5.1.32.	Vertical: sides of column bases	36	SM		
5.1.33.	Vertical: sides of columns	33	SM		
5.1.34.	Edges: slab over 75 but not exceeding 150 mm wide	64	LM		
5.1.35.	Edges of steps 75mm - 150 mm high	31	LM		
5.1.36.	Edges of ramp slab over 75 but not exceeding 150mm wide	7	LM		
	<b><u>WALLING</u></b> <b>Approved natural stone or coral stone ; load bearing 7.0 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</b>				
5.1.37.	200mm thick walling	328	SM		
	<b><u>DAMP PROOFING</u></b> <b>1000 Gauge polythene; 150mm laps; no allowances made for laps</b>				
5.1.38.	Horizontal; over 300mm wide	231	SM		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>Plinth Finishes</b>				
5.1.39.	15mm Thick cement sand (1:3) rendering to plinth; wood float finish (PLEASE NOTE: The render shall be at least 450 mm below natural ground level)	32	SM		
5.1.40.	Prepare and apply three coats of premium quality marine grade bituminous paint to rendered walls; externally	32	SM		
	<b>Carried to collection</b>				
	<b><u>COLLECTION</u></b>  <b><u>SUBSTRUCTURE</u></b>  Brought forward from page OM/2  Brought forward from page OM/3  Brought forward from page OM/4  Brought forward from page OM/5				
	<b>TOTAL FOR SUBSTRUCTURE CARRIED TO SUMMARY</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 2</u></b>				
	<b><u>RC SUPERSTRUCTURE</u></b>				
	<b>In situ concrete mix Class 25 (20mm aggregate) : vibrated: reinforced</b>				
5.2.1.	Beams	13	CM		
5.2.2.	Gutter beams	9	CM		
5.2.3.	Lintels beams	2	CM		
5.2.4.	Columns	4	CM		
5.2.5.	150 mm thick suspended floor slab	190	SM		
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :- Ribbed bars to KS ISO 6935-2:2007</u></b>				
5.2.6.	Assorted sizes	9,065	KG		
	<b><u>Marineply formwork as Described. Allow for setting to special steel proping, strutting, fillets, nails, etc to:</u></b>				
5.2.7.	Sides of Columns	51	SM		
5.2.8.	Sides and soffits of beams and lintels	165	SM		
5.2.9.	Sides and soffits of gutter beams	74	SM		
5.2.10.	Soffits of suspended floor slab requiring strutting exceeding 3.5m high but not exceeding 5.0m high	190	SM		
5.2.11.	Edges of suspended floor slab 75-150mm high	57	LM		
	<b><u>Creation of Arches</u></b>				
5.2.12.	Construction and formation of decorative arches around windows and the main door externally and main arches at terrace finished same as external walls;1000 - 3000 mm diameter;including all necessary formworks and reinforcements; all to Architect's details	8	No		
	<b>TOTAL FOR RC SUPERSTRUCTURE CARRIED TO SUMMARY</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 3</u></b>  <b><u>WALLING</u></b>  <b><u>NATURAL STONE WALLING</u></b>  <b><u>Machine cut natural stone or machine cut coral stone or hollow concrete block walling ; load bearing 7.0 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</u></b>				
5.3.1.	200mm. Thick walling externally	168	SM		
5.3.2.	200mm thick at parapet wall; including allowing for crenellation to architect's detail	54	SM		
	<b>Pre-cast concrete class 20/20 precast ventilation blocks</b>				
5.3.3.	600x600x200mm thick vents block with floral motifs; bedded and jointed in cement and sand (1:3) mortar and reinforced every alternate course with hoop iron.;To architect's details	24	SM		
	<b>Pre-cast concrete class 20/20 concrete coping</b>				
5.3.4.	250 x 50 mm high precast concrete coping weathered and throated on both sides and jointed to wall in cement sand mortar 1:3 all to approval	81	LM		
	<b>Bituminous or other equal approved damp-proof course; 3 ply membrane</b>				
5.3.5.	Horizontal; 200mm wide under walls	44	LM		
	<b>TOTAL EXTERNAL WALLING CARRIED TO SUMMARY</b>				



PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 4</u></b>				
	<b><u>FLAT ROOF FINISHES</u></b>				
	<b><u>Flat roof finishes</u></b>				
5.4.1.	50mm thick (average) water proof screed consisting of cement and sand (1:3)	255	SM		
5.4.2.	Ditto to sides of wall; 300mm high	14	SM		
5.4.3.	50 x 50mm internal angle fillet	45	LM		
	<b>Supply and apply 4mm thick bituminous felt membrane heat welded in 200mm overlaps and all necessary surface preparations; applied strictly in accordance with printed manufacturer's instructions; provide a 10 year guarantee</b>				
5.4.4.	To roof slabs and gutters	255	SM		
5.4.5.	To sides of walls	14	SM		
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
5.4.6.	32 mm thick to receive concrete interlocking tiles (m.s)	190	SM		
	<b>Concrete interlocking tiles</b>				
5.4.7.	200 x 200 x 25mm thick concrete interlocking tiles at roof slab; bedding and jointing in cement mortar mix 1:4(m/s)	190	SM		
5.4.8.	100mm high matching skirting	45	LM		
	<b>Unplasticized PVC downpipes and fittings: solvent welded joints</b>				
5.4.9.	160mm dia downpipes in concrete columns to approval	17	LM		
5.4.10.	Extra over for forming 160mm diameter hole for down pipe	4	NO		
5.4.11.	Extra over downpipe for bends	2	NO		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
5.4.12.	Extra over downpipe for 160mm diameter anti splash shoe	4	NO		
5.4.13.	Extra over 150mm fulbora outlets including galvanised expanded metal mesh	4	NO		
5.4.14.	450 mm girth flashing one end built in mortar in groove in wall/concrete gutter	45	LM		
	<b>Carried to collection</b>				
	<b><u>COLLECTION</u></b>  <b><u>FLAT ROOF FINISHES</u></b>  Brought forward from page OM/8  Brought forward from page OM/9				
	<b>TOTAL FOR FLAT ROOF FINISHES CARRIED TO SUMMARY</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 6</u></b>				
	<b><u>WINDOWS</u></b>				
	Heavy Duty powder coated Aluminium windows to B.S. 4813 to be executed by an approved sub contractor				
	The following in Heavy Duty Powder Coated Aluminium windows from approved manufacturer(s) complete with 80x55x3 mm frames mullions trasomes railing and necessary intermediate reinforcement elements including all weather strips, rubber glazing strips, couplings, ironmongery including hinges, fasteners and stays, sliding rails( where necessary) bars; all ironmongery to be of stainless steel grade 316 marine grade; panes left open for glazing to Architects detail				
	Please note that the sliding panels and fixed lights should not be spaced more than 700 mm wide				
5.6.1.	Window size 2400x675mm high as W02	4	NO		
	<b><u>Burglar proofing grilles</u></b>				
5.6.2.	Mild steel grille framed with 50 x 25 x 3mm thick RHS sections, 25x3mm MS bars welded to frame at 150 mm centres both sides; including assembly and fixing to opening cutting and pinning lugs to concrete and bedding frame in cement and sand mortar (1:3)	7	SM		
	<b><u>Window cills</u></b>				
5.6.3.	200x50mm pre-cast concrete window sill bedded and pointed in cement sand(1:3) mortar, weathred and throated all to Architects detail and approval	11	LM		
	<b><u>Glazing</u></b>				
	<b>laminated oneway glass fixed with and including beadings.</b>				
5.6.4.	6mm thick glass in panes (0.50-1.00m <sup>2</sup> )	7	SM		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>Painting</u>  Prepare surface by sand blasting, apply one coat of 2 pack epoxy zinc phosphate primer; apply three coats of Marine grade gloss paint				
5.6.5.	To burglar-proofing grilles; internally/externally	14	SM		
	Carried to collection				
	<u>COLLECTION</u>  <u>WINDOWS</u>  Brought forward from page FB/10  Brought Down from page FB/11 above				
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 6</u></b>				
	<b><u>INTERNAL FINISHES</u></b>				
	<b><u>Floor Finishes</u></b>				
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
5.6.1.	32 mm thick to receive terrazzo (m.s)	110	SM		
	<b>Polished Terrazzo paving</b>				
5.6.2.	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	110	SM		
5.6.3.	20 x 100mm ditto skirting	38	LM		
5.6.4.	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	100	LM		
	<b>Plastic dividing strips</b>				
5.6.5.	32 x 3mm thick plastic dividing strips	165	LM		
	<b><u>Wall Finishes</u></b>				
	<b>15mm thick two coat gauged cement lime and sand (1:2:9) plaster steel trowelled smooth to:-</b>				
5.6.6.	To surfaces of walls,columns and beams	191	SM		
5.6.7.	Door and Window reveals 100-200mm	104	LM		
	<b>Backing; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
5.6.8.	15 mm thick to receive ceramic tiles	75	SM		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Glazed wall tiles, local approved colour; glazed; to regular pattern bedding and jointing in cement mortar (1:3). Including matching grouting, spacers, waterproof adhesive and edge protectors where required				
5.6.9.	330 x 330 x 10mm thick glazed ceramic tiles to wall surfaces	75	SM		
5.6.10.	12mm girth PVC Edgings	30	LM		
	<b><u>Ceiling Finishes</u></b> 15 mm Thick Internal cement sand (1:3) gauged plaster as described to:				
5.6.11.	Soffits of concrete slab	110	SM		
	<b><u>Painting and Decoration</u></b> Prepare and apply undercoat and three coats PVA based premium quality marine grade silk vinyl sheen emulsion paint as approved to:				
5.6.12.	To plastered surface of walls, columns and beams	191	SM		
5.6.13.	Precast concrete Louvre Blocks	24	SM		
5.6.14.	Door and Window reveals 100-200mm	104	LM		
5.6.15.	Plastered concrete soffits	110	SM		
	<b>Carried to collection</b>				
	<b><u>COLLECTION</u></b>  <b><u>INTERNAL FINISHES</u></b>  Brought forward from page OM/12  Brought Down from page OM/13				
	<b>TOTAL FOR INTERNAL FINISHES CARRIED TO SUMMARY</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 7</u></b>				
	<b><u>EXTERNAL FINISHES</u></b>				
	<b><u>Floor Finishes</u></b>				
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
5.7.1.	32 mm thick to receive terrazzo (m.s)	96	SM		
5.7.2.	Ditto to 450mm wide treads	31	LM		
5.7.3.	Ditto to 150mm high risers	31	LM		
	<b>Polished Terrazzo paving</b>				
5.7.4.	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	96	SM		
5.7.5.	Ditto to 450mm wide treads	31	LM		
5.7.6.	Ditto to 150mm high risers	31	LM		
5.7.7.	20 x 100mm ditto skirting	40	LM		
5.7.8.	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	55	LM		
	<b>Plastic dividing strips</b>				
5.7.9.	32 x 3mm thick plastic dividing strips	93	LM		
	<b>Wall Finishes</b>				
5.7.10.	15mm Thick cement sand (1:3) rendering to wall,columns and beams	315	SM		
5.7.11.	To gutter beams	54	SM		
5.7.12.	Ditto: Door and Windows reveals 100-200mm	104	LM		
	<b>Prepare and apply one undercoat and two finishing coats marine grade weatherguard(silicone based) exterior paint as approved to:</b>				
5.7.13.	Rendered surfaces of walls,columns and beams	315	SM		
5.7.14.	Precast concrete Louvre Blocks	24	SM		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
5.7.15.	To gutter beams	54	SM		
5.7.16.	Ditto: Door and Windows reveals 100-200mm	104	LM		
	<b><u>Ceiling Finishes</u></b> 15 mm Thick Internal cement sand (1:3) gauged plaster as described to:				
5.7.17.	Soffits of concrete slab	60	SM		
	<b><u>Painting and Decoration</u></b> Prepare surface, apply undercoat and apply three coats of premium quality marine grade emulsion paint to:-				
5.7.18.	Plastered ceiling surfaces	60	SM		
	<b>Carried to collection</b>				
	<b><u>COLLECTION</u></b>  <b><u>EXTERNAL FINISHES</u></b>  Brought forward from page OM/14  Brought Down from page OM/15				
	<b>TOTAL FOR EXTERNAL FINISHES CARRIED TO SUMMARY</b>				



PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>ELEMENT NO. 8</b>				
	<b>FIXTURES AND FITTINGS:-(PROVISIONAL)</b>				
	<b>Worktop</b>				
5.8.1.	100mm thick plain concrete class 15/20 in plinth	27	SM		
5.8.2.	Reinforced concrete class 25/20 in 150mm worktops	27	SM		
	<b>Formwork to:-</b>				
5.8.3.	Soffites of worktops	27	SM		
5.8.4.	Edges of worktops and plinths 75-150mm high	130	LM		
5.8.5.	10mm diameter high yield reinforcement bars	500	KG		
5.8.6.	100mm thick coral block walling in cement/sand 1:3 mortar	40	SM		
5.8.7.	15mm thick cement sand (1:3) plaster of worktop	27	SM		
5.8.8.	Ditto walls	80	SM		
	<b>Polished Terrazzo paving</b>				
5.8.9.	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	107	SM		
	<b>Plastic dividing strips</b>				
5.8.10.	32 x 3mm thick plastic dividing strips	161	LM		
	<b>Stainless steel grating</b>				
5.8.11	300mm wide stainless steel channel grating grade 3.1:6 marine grade: comprising 40 x 40 x 6mm edge frame : infilled with 40 x 6mm flats at 50mm centres : 40 x 40 x 6mm frame set in concrete with 150mm long stainless stel end split lugs : smooth weld joints	15	LM		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
5.8.12	<p><b>Handrail -Stainless Steel to steps and ramp</b></p> <p>Supply, assemble and fix 1000mm high purpose made stainless steel (grade 3.1.6) comprising of 50mm diameter x 3mm thick stainless steel tube handrail welded to 50mm diameter x 3mm thick stainless steel balusters at fixed to concrete floor at 1000mm centres; balusters fixed to and including 200mm x 150mm x 15mm thick stainless steel base plate fixed to concrete; complete with 4no. 25mm diameter x 3mm thick horizontal middle rails ; including all necessary cleats, brackets,lugs stiffeners and the like; all to Architect's instructions and approval</p>	8	LM		
	<b>Carried to collection</b>				
	<p><b><u>COLLECTION</u></b></p> <p><b><u>FIXTURES AND FITTINGS</u></b></p> <p>Brought forward from page OM/16</p> <p>Brought Down from page OM/17 above</p>				
	<b>TOTAL FOR FIXTURES AND FITTINGS CARRIED TO SUMMARY</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b><u>ELEMENT NO.9</u></b></p> <p><b>BUILDERS WORK IN CONNECTION WITH SERVICES(BWICS)</b></p> <p><b>Builder's Work incidental to sanitary fittings, ventilation, plumbing, drainage, reticulation, fire fighting, electrical installations, concealed fixings</b></p>				
5.9.1	<p>Allow for making holes, chasing walls, floors, inclusion of sleeves and other items necessary for the proper carrying out of the installation;including making good all surfaces</p>	1	ITEM		
	<b>TOTAL FOR BWICS CARRIED TO SUMMARY</b>				

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>OPEN AIR MARKET</u>				
	<u>SUMMARY</u>				
1	SUBSTRUCTURES				
2	R.C SUPERSTRUCTURE				
3	EXTERNAL WALLS				
4	FLAT ROOF FINISHES				
5	WINDOWS				
6	INTERNAL FINISHES				
7	EXTERNAL FINISHES				
8.	FIXTURES AND FITTINGS				
9	BWICS				
	TOTAL FOR OPEN AIR MARKET WORKS CARRIED TO SUMMARY OF BUILDERS' WORKS				

**FISH GEAR STORE AND ABLUTION BLOCK**

**BILL NO.6**

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b><u>ELEMENT NO. 1</u></b></p> <p><b>SUBSTRUCTURES (All provisional)</b></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><b>NOTE: Classes of Rock</b></p> <p><b><u>(1) Class 1 :</u></b></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/mm<sup>2</sup>. 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><b><u>(2) Class 2 :</u></b></p> <p>Class 2 Rock shall be with compressive strength exceeding 15N/mm<sup>2</sup>. This type of rock contains stones and boulders of unweathered or incompletely weathered Tuff, trachyte, black trap or lava with compressive strength exceeding 15N/mm<sup>2</sup> 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>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>SUBSTRUCTURES (All provisional)</u></b>				
	<b><u>Site Preparation</u></b>				
6.1.1	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	200	SM		
	<b><u>Excavation</u></b> <b>Note that all excavations are measured nett and no allowance for working space provided</b>				
6.1.1	Excavate oversite average 250mm deep and cart away	200	SM		
6.1.2	Excavation for foundation trenches from reduced level: not exceeding 1.50 metres deep	115	CM		
6.1.3	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	84	CM		
6.1.4	Ditto for column bases from reduced level not exceeding 1.50 metres deep	34	CM		
6.1.5	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	30	CM		
6.1.6	Extra over all descriptions of excavations and removal from site for breaking up rocks: irrespective of class	130	CM		
	<b><u>Disposal of excavated material</u></b>				
6.1.7	Fillings around sub- walls: backfill and compact in 150 mm layers: selected excavated materials	382	CM		
6.1.8	Remove surplus spoil from site and deposit in spoil heaps and later spread on site as directed	81	CM		
	<b><u>Planking and strutting</u></b>				
6.1.9	Planking and strutting to sides of all excavations: keep excavations free from all fallen materials		ITEM		
	<b><u>Disposal of Water</u></b>				
6.1.9	Keep excavations free from all water including spring or running water.		ITEM		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>Hardcore Filling</u></b>				
6.1.10	300mm thick (minimum) approved hardcore handpacked in layers not exceeding 150mm	155	SM		
6.1.11	Imported filling to make-up levels; compacted in layers not exceeding 150 mm thick; To atleast 95% MDD (AASHTO T99) compaction	78	CM		
	<b><u>Murram</u></b>				
6.1.12	50mm Thick Quarry dust blinding to the surface of hardcore rolled smooth to receive polythene sheeting	155	SM		
	<b><u>Insecticide treatment</u></b>				
	Treat hardcore surface with approved antitermite applied in accordance with the manufacturer's instructions and subject to a TEN YEAR guarantee				
6.1.13	To Quarry dust surface	155	SM		
	<b><u>CONCRETE WORK</u></b>				
	<b>Insitu concrete class 15/20: in</b>				
6.1.14	50 mm thick blinding to strips	76	SM		
6.1.15	50 mm thick blinding to column bases	23	SM		
	<b>Insitu concrete Class 25 (20mm aggregate) : vibrated: reinforced</b>				
6.1.16	Strip foundation	16	CM		
6.1.17	Column bases	9	CM		
6.1.18	Columns	2	CM		
6.1.19	Steps	1	CM		
6.1.20	150mm Thick ground floor slab	174	SM		
6.1.21	Ditto ramps	6	SM		
	<b>Carried to collection</b>				



PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b>				
	<b>Ribbed bars to KS ISO 6935-2:2007</b>				
6.1.22	8mm diameter	100	KG		
6.1.23	10mm diameter	700	KG		
6.1.24	12mm diameter	500	KG		
6.1.25	16mm diameter	200	KG		
	<b>Mesh Fabric Reinforcement</b>				
6.1.26	BRC Fabric mesh reinforcement Ref. A142; weighing 2.22kg per square metre(measured net no allowances made for laps) including bends tying wire and spacer blocks.	180	SM		
	<b><u>Marineply formwork as Described. Allow for setting to special steel proping, strutting, fillets, nails, etc to:</u></b>				
6.1.27	Vertical: sides of foundations in trenches	51	SM		
6.1.28	Vertical: sides of column bases	24	SM		
6.1.29	Vertical: sides of columns	25	SM		
6.1.30	Edges: slab over 75 but not exceeding 150 mm wide	56	LM		
6.1.31	Edges of steps 75mm - 150 mm high	19	LM		
6.1.32	Edges of ramp slab over 75 but not exceeding 150mm wide	7	LM		
	<b><u>WALLING</u></b>				
	<b>Approved natural stone or coral stone ; load bearing 7.0 N/mm<sup>2</sup>: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</b>				
6.1.33	200 mm thick walls reinforced with hoop iron at every alternate course	245	254		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>DAMP PROOFING</u></b>				
	<b>1000 Gauge polythene; 150mm laps; no allowances made for laps</b>				
6.1.34	Horizontal; over 300mm wide	180	SM		
	<b><u>Plinth Finishes</u></b>				
6.1.35	15mm Thick cement sand (1:3) rendering to plinth; wood float finish (PLEASE NOTE: The render shall be at least 450 mm below natural ground level)	33	SM		
6.1.36	Prepare and apply three coats of premium quality marine grade bituminous paint to rendered walls; externally	33	SM		
	<b>Carried to collection</b>				
	<b><u>COLLECTION</u></b>				
	<b><u>SUBSTRUCTURE</u></b>				
	Brought forward from page FG/2				
	Brought forward from page FG/3				
	Brought forward from page FG/4				
	Brought forward from page FG/5 above				
	<b>TOTAL FOR SUBSTRUCTURE CARRIED TO SUMMARY</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 2</u></b>				
	<b><u>RC SUPERSTRUCTURE</u></b>				
	<b>Insitu concrete Class 25 (20mm aggregate) : vibrated: reinforced</b>				
6.2.1	Beams	4	CM		
6.2.2	Gutter beams	8	CM		
6.2.3	Columns	2	CM		
6.2.4	150 mm thick suspended roof slab	110	SM		
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b>				
	<b><u>Ribbed bars to KS ISO 6935-2:2007</u></b>				
6.2.5	Assorted sizes	4755	KG		
	<b><u>Marineply formwork as Described. Allow for setting to special steel propping, strutting, fillets, nails, etc to:</u></b>				
6.2.6	Sides of Columns	33	SM		
6.2.7	Sides and soffits of beams	51	SM		
6.2.8	Sides of gutter beams	64	SM		
6.2.9	Soffits of suspended floor slab	110	SM		
6.2.10	Edges of suspended floor slab 75-150mm high	43	LM		
	<b>TOTAL FOR RC SUPERSTRUCTURE CARRIED TO SUMMARY</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 3</u></b>				
	<b><u>EXTERNAL WALLS</u></b>				
	<b><u>NATURAL STONE WALLING</u></b>				
	<b><u>Machine cut natural stone or machine cut coral stone or hollow concrete block walling ; load bearing 7.0 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</u></b>				
6.3.1	200mm. Thick walling externally	67	SM		
6.3.2	200mm thick at parapet wall; including allowing for crenellation to architect's detail	42	SM		
	<b>Pre-cast concrete class 20/20 precast ventilation blocks</b>				
6.3.3	600x1600x200mm thick vents block with floral motifs; bedded and jointed in cement and sand (1:3) mortar and reinforced every alternate course with hoop iron.;To architect's details	24	SM		
	<b>Pre-cast concrete class 20/20 concrete coping</b>				
6.3.4	250 x 50 mm high precast concrete coping weathered and throated on both sides and jointed to wall in cement sand mortar 1:3 all to approval	66	LM		
	<b>Bituminous or other equal approved damp-proof course; 3 ply membrane</b>				
6.3.5	Horizontal; 200mm wide under walls	35	LM		
	<b>TOTAL EXTERNAL WALLING CARRIED TO SUMMARY</b>				

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO. 4</u>  <u>INTERNAL WALLS</u>  <u>NATURAL STONE WALLING</u>  <u>Machine cut natural stone or machine cut coral stone or hollow concrete block walling ; load bearing 7.0 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</u>				
6.4.1	200mm. Thick walling internally  <u>Bituminous or other equal approved damp-proof course; 3 ply membrane</u>	86	SM		
6.4.2	Horizontal; 200mm wide under walls	32	LM		
	TOTAL FOR INTERNAL WALLING CARRIED TO SUMMARY				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 5</u></b>				
	<b><u>FLAT ROOF FINISHES AND RAIN WATER HARVESTING</u></b>				
	<b><u>Flat roof finishes</u></b>				
6.5.1	50mm thick (average) water proof screed consisting of cement and sand (1:3)	166	SM		
6.5.2	Ditto to sides of wall;300mm high	11	SM		
6.5.3	50 x 50mm internal angle fillet	35	LM		
	<b>Supply and apply 4mm thick bituminous felt membrane heat welded in 200mm overlaps and all necessary surface preparations; applied strictly in accordance with printed manufacturer's instructions; provide a 10 year guarantee</b>				
6.5.4	To roof slabs and gutters	166	SM		
6.5.5	To sides of walls	11	SM		
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
6.5.6	32 mm thick to receive concrete interlocking tiles (m.s)	110	SM		
	<b>Concrete interlocking tiles</b>				
6.5.7	200 x 200 x 25mm thick concrete interlocking tiles at roof slab; bedding and jointing in cement mortar mix 1:4(m/s)	110	SM		
6.5.8	100mm high matching skirting	35	LM		
	<b>Unplasticized PVC downpipes and fittings: solvent welded joints</b>				
6.5.9	160mm downpipes in concrete columns to approval	6	LM		
6.5.10	Extra over suspended concrete slab for forming 160mm diameter hole for down pipe	2	NO		
6.5.11	Extra over downpipe for bends	2	NO		
6.5.12	Extra over downpipe for 160mm diameter anti splash shoe	2	NO		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<i><b>Rainwater Harvesting Cont'd</b></i>				
6.5.13	Extra over 150mm fulbora outlets including galvanised expanded metal mesh	2	NO		
6.5.14	450 mm girth flashing one end built in mortar in groove in wall/concrete gutter	35	LM		
	<b>Carried to collection</b>				
	<u><b>COLLECTION</b></u>  <u><b>FLAT ROOF FINISHES AND RAIN WATER HARVESTING</b></u>  Brought forward from page FG/10  Brought Down from page FG/11 above				
	<b>TOTAL FOR FLAT ROOF FINISHES AND RAIN WATER HARVESTING CARRIED TO SUMMARY</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 6</u></b>				
	<b><u>DOORS</u></b>				
	<b><u>Louvred Doors</u></b>				
	50mm thick mvule louvred door comprising of 50x3mm louvres set at 45 degrees at 50mm centres;solid blocking for iron mongery (m/s) to door : all in accordance with Architect's details				
6.6.1	Single leaf door overall size 900 x 2400; complete with timber louvred fanlight size 900x475mm high as D003	4	NO		
6.6.2	Double leaf door overall size 1800 x 2400; complete with timber louvred fanlight size 1800x475mm high as D001	2	NO		
	<b><u>Panel Doors</u></b>				
	<b><u>50mm thick mvule panelled door: comprised of 200 x 50mm thick stiles, top and middle rail: 200 x 50mm thick bottom rail ; complete with moulded grooves to door leaf on both sides ;solid blocking to iron mongery (m/s) to door</u></b>				
6.6.3	Double leaf door hardwood panel door overall size 1100 x 2400mm high; with louvred fanlight size 1100x475mm high as D002	4	No		
	<b><u>The following in wrot mvule</u></b>				
6.6.4	150 x 50mm frame with two labours	60	LM		
6.6.5	150 x 50 mm Transome	12	LM		
6.6.6	150 x 50 mm Mullion	5	LM		
6.6.7	50 x 25mm. Splayed architrave.	60	LM		
6.6.8	25 x 25mm. Quadrant.	60	LM		
	<b><u>Ironmongery</u></b>				
	<b><u>Supply and fix the following ironmongery from an approved manufacturer including all necessary matching screws;all ironmongery to be stainless steel grade 3.1.6 marine grade</u></b>				
6.6.9	3 - Lever mortice lock; complete with lockcase and handle	4	NO		
6.6.10	2 - Lever mortice lock; ditto complete with indicator	6	NO		
	<b>Carried to collection</b>				



PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
6.6.11	100mm. Pressed butt hinges	12.0	PRS		
6.6.12	150mm heavy duty double action spring hinges	6.0	PRS		
6.6.13	38mm. Diameter door stop on floor / wall to approval	16	NO		
6.6.14	Stainless steel overhead door closer	8	NO		
6.6.15	Ditto double action door closer	4	NO		
6.6.16	800 x 200mm high stainless steel kick plate onto both sides to approval	8	NO		
6.6.17	150 x 150mm sex indicator plate	2	NO		
6.6.18	Coat and hat hook	6	NO		
	<b>Metal fixing cramps</b>				
6.6.19	30 x 3mm. Approved door cramps 250mm. Long once bent one end drilled and screwed to wood	40	NO		
	<b>Painting and Decoration</b> <b>Prepare and apply three coats of premium quality marine grade clear varnish; Matt quality to:-</b>				
6.6.20	General surfaces of wood exceeding 200mm but not exceeding 300mm girth	77	LM		
6.6.21	Ditto; girth not exceeding 100mm	120	LM		
6.6.22	Doors both internally and externally	57	SM		
	<b>Prepare and apply one coat aluminium primer before fixing: to backing of wood</b>				
6.6.23	Surfaces over 200 but not exceeding 300mm	77	LM		
6.6.24	Surfaces not exceeding 100mm	120	LM		
	<b>Carried to collection</b>				
	<b><u>COLLECTION</u></b>				
	<b><u>DOORS</u></b>				
	Brought forward from page FG/11				
	Brought Down from page FG/12 above				
	<b>TOTAL FOR DOORS CARRIED TO SUMMARY</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 7</u></b>				
	<b><u>WINDOWS</u></b>				
	Heavy Duty powder coated Aluminium windows to B.S. 4813 to be executed by an approved sub contractor				
	The following in Heavy Duty Powder Coated Aluminium windows from approved manufacturer(s) complete with 80x55x3 mm frames mullions trasomes railing and necessary intermediate reinforcement elements including all weather strips, rubber glazing strips, couplings, ironmongery including hinges, fasteners and stays, sliding rails( where necessary) bars; all ironmongery to be of stainless steel grade 316 marine grade; panes left open for glazing to Architects detail				
	Please note that the sliding panels and fixed lights should not be spaced more than 700 mm wide				
6.7.1.	Window size 2400x675mm high Ref: W01	2	NO		
6.7.2.	Window size 4050x675mm high Ref: W02	2	NO		
	<b><u>Burglar proofing grilles</u></b>				
6.7.3.	Mild steel grille framed with 50 x 25 x 3mm thick RHS sections, 25x3mm MS bars welded to frame at 150 mm centres both sides; including assembly and fixing to opening cutting and pinning lugs to concrete and bedding frame in cement and sand mortar (1:3)	14	SM		
	<b><u>Glazing</u></b>				
	laminated oneway glass fixed with and including beadings.				
6.7.4.	6mm thick glass in panes (0.50-1.00m² )	14	SM		
	<b><u>Window cills</u></b>				
6.7.5.	200x50mm pre-cast concrete window sill bedded and pointed in cement sand(1:3) mortar, weathred and throated all to Architects detail and approval	22	LM		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
6.7.6.	Prepare surface by sand blasting, apply one coat of 2 pack epoxy zinc phosphate primer; apply three coats of Marine grade gloss paint  To burglar-proofing grilles; internally/externally	28	SM		
	Carried to collection				
	<p><u>COLLECTION</u></p> <p><u>WINDOWS</u></p> <p>Brought forward from page FG/13</p> <p>Brought Down from page FG/14 above</p>				
	TOTAL FOR WINDOWS CARRIED TO SUMMARY				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>ELEMENT NO. 8</b>				
	<b><u>FIXTURES AND FITTINGS:</u></b> <b><u>"All Provisional"</u></b>				
	<b>FIXTURES AND FITTINGS:-(PROVISIONAL)</b>				
	<b>Worktop</b>				
6.8.1	100mm thick plain concrete class 15/20 in plinth	2	SM		
6.8.2	Reinforced concrete class 25/20 in 150mm worktops	2	SM		
	<b>Formwork to:-</b>				
6.8.3	Soffites of worktops	2	SM		
6.8.4	Edges of worktops and plinths 75-150mm high	8	LM		
6.8.5	10mm diameter high yield reinforcement bars	50	KG		
6.8.6	100mm thick coral block walling in cement/sand 1:3 mortar	3	SM		
6.8.7	15mm thick cement sand (1:3) plaster of worktop	2	SM		
6.8.8	Ditto walls	6	SM		
	<b>Polished Terrazzo paving</b>				
6.8.9	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	8	SM		
	<b>Plastic dividing strips</b>				
6.8.10	32 x 3mm thick plastic dividing strips	12	LM		
	<b>Supply and fix the following in high grade stainless steel grade 3.1.6 marine grade plate treated with sealer and chemical etching ; graphics and lettering finished in 3M vinyl cut outs as per architect's details</b>				
6.8.11	500 x 100 mm door signage	2	No		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
6.8.12	<b>Handrail -Stainless Steel to steps and ramp</b>  Supply, assemble and fix 1000mm high purpose made stainless steel (grade 3.1.6) comprising of 50mm diameter x 3mm thick stainless steel tube handrail welded to 50mm diameter x 3mm thick stainless steel balusters at fixed to concrete floor at 1000mm centres; balusters fixed to and including 200mm x 150mm x 15mm thick stainless steel base plate fixed to concrete; complete with 4no. 25mm diameter x 3mm thick horizontal middle rails ; including all necessary cleats, brackets,lugs stiffeners and the like; all to Architect's instructions and approval	8	LM		
	<b>Carried to collection</b>				
	<u><b>COLLECTION</b></u>  <u><b>FIXTURES AND FITTINGS</b></u>  Brought forward from page FG/15  Brought Down from page FG/16 above				
	<b>TOTAL OF FIXTURES AND FITTINGS, CARRIED TO SUMMARY</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.9</u></b>				
	<b><u>INTERNAL FINISHES</u></b>				
	<b><u>Floor Finishes</u></b>				
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
6.9.1	32 mm thick to receive terrazzo (m.s)	33	SM		
6.9.2	32 mm Thick to receive ceramic floor tiles(m.s)	32	SM		
	<b>Polished Terrazzo paving</b>				
6.9.3	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	33	SM		
6.9.4	20 x 100mm ditto skirting	22	LM		
6.9.5	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	42	LM		
	<b>Plastic dividing strips</b>				
6.9.6	32 x 3mm thick plastic dividing strips	50	LM		
	<b>Ceramic tiles</b>				
6.9.7	330x330x10mm Thick non-slip Ceramic tiles to architects approval fixed with waterproof tile adhesive to approval; including spacers and edge protectors where required	32	SM		
	<b>Skirting</b>				
6.9.8	100x10mm thick ceramic tile skirting with colour to match floor finish	55	LM		
	<b><u>Wall Finishes</u></b>				
	<b>15mm thick two coat gauged cement lime and sand (1:2:9) plaster steel trowelled smooth to:-</b>				
6.9.9	To surfaces of walls,columns and beams	150	SM		
6.9.10	Door and Window reveals 100-200mm	188	LM		
	<b>Carried to collection</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>Backing; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
6.9.11	15 mm thick to receive ceramic tiles	130	SM		
	<b>Glazed wall tiles, local approved colour; glazed; to regular pattern bedding and jointing in cement mortar (1:3). Including matching grouting, spacers, waterproof adhesive and edge protectors where required</b>				
6.9.12	330 x 330 x 10mm thick glazed ceramic tiles to wall surfaces	130	SM		
6.9.13	12mm girth PVC Edgings	56	LM		
	<b><u>Ceiling Finishes</u></b>				
	<b>15 mm Thick Internal cement sand (1:3) gauged plaster as described to:</b>				
6.9.14	Soffits of concrete slab	65	SM		
	<b><u>Painting and Decorating</u></b>				
	<b>Prepare and apply undercoat and three coats PVA based premium quality marine grade silk vinyl sheen emulsion paint as approved to:</b>				
6.9.15	To plastered surface of walls, columns and beams	150	SM		
6.9.16	Precast concrete Louvre Blocks	24	SM		
6.9.17	Door and Window reveals 100-200mm	188	LM		
6.9.18	Plastered concrete slab soffits	65	SM		
	<b>Carried to collection</b>				
	<b><u>COLLECTION</u></b>				
	<b><u>INTERNAL FINISHES</u></b>				
	Brought forward from page FG/17				
	Brought Down from page FG/18 above				
	<b>TOTAL FOR INTERNAL FINISHES CARRIED TO SUMMARY</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.10</u></b>				
	<b><u>EXTERNAL FINISHES</u></b>				
	<b><u>Floor Finishes</u></b> Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.				
6.10.1	32 mm thick to receive terrazzo (m.s)	95	SM		
6.10.2	Ditto to 450mm wide treads	19	LM		
6.10.3	Ditto to 150mm high risers	19	LM		
	<b><u>Polished Terrazzo paving</u></b>				
6.10.4	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	95	SM		
6.10.5	Ditto to 450mm wide treads	19	LM		
6.10.6	Ditto to 150mm high risers	19	LM		
6.10.7	20 x 100mm ditto skirting	52	LM		
6.10.8	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	119	LM		
	<b><u>Plastic dividing strips</u></b>				
6.10.9	32 x 3mm thick plastic dividing strips	143	LM		
	<b><u>Wall Finishes</u></b>				
6.10.10	15mm Thick cement sand (1:3) rendering to wall,columns and beams	161	SM		
6.10.11	To gutter beams	47	SM		
6.10.12	Ditto: Door and Windows reveals 100-200mm	154	LM		
	<b><u>Prepare and apply one undercoat and two finishing coats marine grade weatherguard(silicone based) exterior paint as approved to:</u></b>				
6.10.13	Rendered surfaces of walls,columns and beams	169	SM		
6.10.14	Precast concrete Louvre Blocks	24	SM		
6.10.15	To gutter beams	47	SM		
	<b>Carried to collection</b>				



PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
6.10.16	Ditto: Door and Windows reveals 100-200mm  <u>Ceiling Finishes</u> 15 mm Thick Internal cement sand (1:3) gauged plaster as described to:	154	LM		
6.10.17	Soffits of concrete slab  <u>Painting and Decoration</u> Prepare surface, apply undercoat and apply three coats of premium quality marine grade emulsion paint to:-	30	SM		
6.10.18	Plastered ceiling surfaces	30	SM		
	Carried to collection				
	<u>COLLECTION</u>  <u>INTERNAL FINISHES</u>  Brought forward from page FG/19  Brought Down from page FG/20 above				
	TOTAL FOR EXTERNAL FINISHES CARRIED TO SUMMARY				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b><u>ELEMENT NO.11</u></b></p> <p><b>BUILDERS WORK IN CONNECTION WITH SERVICES(BWICS)</b></p> <p>Builder's Work incidental to sanitary fittings, ventilation, plumbing, drainage, reticulation, fire fighting, electrical installations, concealed fixings</p>				
6.11.1	<p>Allow for making holes, chasing walls, floors, inclusion of sleeves and other items necessary for the proper carrying out of the installation;including making good all surfaces</p>	1	ITEM		
	<b>TOTAL FOR BWICS CARRIED TO SUMMARY</b>				

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUMMARY				
1	SUBSTRUCTURES				
2	R.C SUPERSTRUCTURE				
3	EXTERNAL WALLS				
4	INTERNAL WALLS				
5	FLAT ROOF FINISHES AND RAIN WATER HARVESTING				
6	DOORS				
7	WINDOWS				
8	FIXTURES AND FITTINGS				
9	INTERNAL FINISHES				
10	EXTERNAL FINISHES				
11	BWICS				
	TOTAL FOR ABLUTION BLOCK AND FISH GEAR STORE CARRIED TO SUMMARY OF BUILDERS' WORKS				

**FISH GEAR MENDING SHED**

**BILL NO.7**

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b><u>ELEMENT NO. 1</u></b></p> <p><b>SUBSTRUCTURES (All provisional)</b></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><b>NOTE: Classes of Rock</b></p> <p><b><u>(1) Class 1 :</u></b> 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/mm<sup>2</sup>. 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><b><u>(2) Class 2 :</u></b> Class 2 Rock shall be with compressive strength exceeding 15N/mm<sup>2</sup>. This type of rock contains stones and boulders of unweathered or incompletely weathered Tuff, trachyte, black trap or lava with compressive strength exceeding 15N/mm<sup>2</sup> 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>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>SUBSTRUCTURES (All provisional)</u></b>				
	<b><u>Site Preparation</u></b>				
7.1.1	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	200	SM		
	<b><u>Excavation</u></b> <b>Note that all excavations are measured nett and no allowance for working space provided</b>				
7.1.2	Excavate oversite average 250mm deep and cart away	200	SM		
7.1.3	Excavation for foundation trenches from reduced level: not exceeding 1.50 metres deep	134	CM		
7.1.4	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	98	CM		
7.1.5	Ditto for column bases from reduced level not exceeding 1.50 metres deep	48	CM		
7.1.6	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	42	CM		
7.1.7	Extra over all descriptions of excavations and removal from site for breaking up rocks: irrespective of class	150	CM		
	<b><u>Disposal of excavated material</u></b>				
7.1.8	Fillings around sub- walls: backfill and compact in 150 mm layers: selected excavated materials	424	CM		
7.1.9	Remove surplus spoil from site and deposit in spoil heaps and later spread on site as directed	98	CM		
	<b><u>Planking and strutting</u></b>				
7.1.10	Planking and strutting to sides of all excavations: keep excavations free from all fallen materials		ITEM		
	<b><u>Disposal of Water</u></b>				
7.1.11	Keep excavations free from all water including spring or running water.		ITEM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>Hardcore Filling</u></b>				
7.1.12	300mm thick (minimum) approved hardcore handpacked in layers not exceeding 150mm	142	SM		
7.1.13	Imported filling to make-up levels; compacted in layers not exceeding 150 mm thick; To atleast 95% MDD (AASHTO T99) compaction	71	CM		
	<b><u>Murram</u></b>				
7.1.14	50mm Thick Quarry dust blinding to the surface of hardcore rolled smooth to receive polythene sheeting	142	SM		
	<b><u>Insecticide treatment</u></b>				
	Treat hardcore surface with approved antitermite applied in accordance with the manufacturer's instructions and subject to a TEN YEAR guarantee				
7.1.15	To Quarry dust surface	142	SM		
	<b><u>CONCRETE WORK</u></b>				
	<b>Insitu concrete class 15/20: in</b>				
7.1.16	50 mm thick blinding to strips	89	SM		
7.1.17	50 mm thick blinding to column bases	32	SM		
	<b>Insitu concrete Class 25 (20mm aggregate) : vibrated: reinforced</b>				
7.1.18	Strip foundation	18	CM		
7.1.19	Column bases	13	CM		
7.1.21	Columns	2	CM		
7.1.22	Steps	1	CM		
7.1.23	150mm Thick ground floor slab	165	SM		
7.1.24	Ditto ramps	6	SM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
7.1.25	Extra over in slab to forming or leaving 300mm wide shallow drainage channels;average 300mm deep 'U' channel in hardcore and floor slab; including hand packing to sides of channel;150mm thick concrete class 25/20 to sides and bed of channel including 50mm blinding class 15/20 and all necessary formwork and reinforcement, all to detail and approval	27	LM		
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b>				
	<b>Ribbed bars to KS ISO 6935-2:2007</b>				
7.1.26	8mm diameter	100	KG		
7.1.27	10mm diameter	800	KG		
7.1.28	12mm diameter	500	KG		
7.1.29	20mm diameter	520	KG		
	<b>Mesh Fabric Reinforcement</b>				
7.1.30	BRC Fabric mesh reinforcement Ref. A142; weighing 2.22kg per square metre(measured net no allowances made for laps) including bends tying wire and spacer blocks.	171	SM		
	<b><u>Marineply formwork as Described. Allow for setting to special steel propping, strutting, fillets, nails, etc to:</u></b>				
7.1.31	Vertical: sides of foundations in trenches	60	SM		
7.1.32	Vertical: sides of column bases	26	SM		
7.1.33	Vertical: sides of columns	24	SM		
7.1.34	Edges: slab over 75 but not exceeding 150 mm wide	58	LM		
7.1.35	Edges of steps 75mm - 150 mm high	29	LM		
7.1.36	Edges of ramp slab over 75 but not exceeding 150mm wide	7	LM		
	<b><u>WALLING</u></b>				
	<b>Approved natural stone or coral stone ; load bearing 7.0 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</b>				
7.1.37	200 mm thick walls reinforced with hoop iron at every alternate course	296	SM		
	<b>Carried to collection</b>				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>DAMP PROOFING</u></b>				
	<b>1000 Gauge polythene; 150mm laps; no allowances made for laps</b>				
7.1.38	Horizontal; over 300mm wide	171	SM		
	<b><u>Plinth Finishes</u></b>				
7.1.39	15mm Thick cement sand (1:3) rendering to plinth; wood float finish (PLEASE NOTE: The render shall be at least 450 mm below natural ground level)	30	SM		
7.1.40	Prepare and apply three coats of premium quality marine grade bituminous paint to rendered walls; externally	30	SM		
	<b>Carried to collection</b>				
	<b><u>COLLECTION</u></b>				
	<b><u>SUBSTRUCTURE</u></b>				
	Brought forward from page FMG/2				
	Brought forward from page FMG/3				
	Brought forward from page FMG/4				
	Brought forward from page FMG/5 above				
	<b>TOTAL FOR SUBSTRUCTURE CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 2</u></b>				
	<b><u>RC SUPERSTRUCTURE</u></b>				
	<b>In situ concrete Class 25 (20mm aggregate) : vibrated: reinforced</b>				
7.2.1	Beams	7	CM		
7.2.2	Gutter beams	9	CM		
7.2.3	Columns	3	CM		
7.2.4	150 mm thick suspended roof slab	140	SM		
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b>				
	<b>Ribbed bars to KS ISO 6935-2:2007</b>				
7.2.5	Assorted sizes	6360	KG		
	<b><u>Marineply formwork as Described. Allow for setting to special steel proping, strutting, fillets, nails, etc to:</u></b>				
7.2.6	Sides of Columns	32	SM		
7.2.7	Sides and soffits of beams	86	SM		
7.2.8	Sides and soffits of gutter beams	72	SM		
7.2.9	Soffits of suspended floor slab	140	SM		
7.2.10	Edges of suspended floor slab 75-150mm high	51	LM		
	<b><u>Creation of Arches</u></b>				
7.2.11	Construction and formation of decorative arches around windows and the main door externally and main arches at terrace finished same as external walls;1000 - 3000 mm diameter;including all necessary formworks and reinforcements; all to	12	No		
	<b>TOTAL FOR RC SUPERSTRUCTURE CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 3</u></b>				
	<b><u>EXTERNAL WALLS</u></b>				
	<b><u>NATURAL STONE WALLING</u></b>				
	<b><u>Machine cut natural stone or machine cut coral stone or hollow concrete block walling ; load bearing 7.0 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</u></b>				
7.3.1	200mm. Thick walling externally	115	SM		
7.3.2	200mm thick at parapet wall; including allowing for crenellation to architect's detail	50	SM		
	<b>Pre-cast concrete class 20/20 precast ventilation blocks</b>				
7.3.3	600x600x200mm thick vents block with floral motifs; bedded and jointed in cement and sand (1:3) mortar and reinforced every alternate course with hoop iron.;To architect's details	12	SM		
	<b>Pre-cast concrete class 20/20 concrete coping</b>				
7.3.4	250 x 50 mm high precast concrete coping weathered and throated on both sides and jointed to wall in cement sand mortar 1:3 all to approval	76	LM		
	<b>Bituminous or other equal approved damp-proof course; 3 ply membrane</b>				
7.3.5	Horizontal; 200mm wide under walls	41	LM		
	<b>TOTAL EXTERNAL WALLING CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><u>ELEMENT NO. 4</u></p> <p><u>INTERNAL WALLS</u></p> <p><u>NATURAL STONE WALLING</u></p> <p><u>Machine cut natural stone or machine cut coral stone or hollow concrete block walling ; load bearing 7.0 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</u></p>				
7.4.1	200mm. Thick walling internally	17	SM		
	<p><u>Bituminous or other equal approved damp-proof course; 3 ply membrane</u></p>				
7.4.2	Horizontal; 200mm wide under walls	6	LM		
	TOTAL FOR INTERNAL WALLING CARRIED TO SUMMARY				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 5</u></b>				
	<b><u>FLAT ROOF FINISHES AND RAIN WATER HARVESTING</u></b>				
	<b><u>Flat roof finishes</u></b>				
7.5.1	50mm thick (average) water proof screed consisting of cement and sand (1:3)	203	SM		
7.5.2	Ditto to sides of wall;300mm high	13	SM		
7.5.3	50 x 50mm internal angle fillet	41	LM		
	<b>Supply and apply 4mm thick bituminous felt membrane heat welded in 200mm overlaps and all necessary surface preparations; applied strictly in accordance with printed manufacturer's instructions; provide a 10 year guarantee</b>				
7.5.4	To roof slabs and gutters	203	SM		
7.5.5	To sides of walls	13	SM		
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
7.5.6	32 mm thick to receive concrete interlocking tiles (m.s)	141	SM		
	<b>Concrete interlocking tiles</b>				
7.5.7	200 x 200 x 25mm thick concrete interlocking tiles at roof slab; bedding and jointing in cement mortar mix 1:4(m/s)	141	SM		
7.5.8	100mm high matching skirting	41	LM		
	<b>Unplasticized PVC downpipes and fittings: solvent welded joints</b>				
7.5.9	160mm downpipes in concrete columns to approval	6	LM		
7.5.10	Extra over suspended concrete slab for forming 160mm diameter hole for down pipe	2	NO		
7.5.11	Extra over downpipe for bends	2	NO		
7.5.12	Extra over downpipe for 160mm diameter anti splash shoe	2	NO		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI  
COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<i>Rainwater Harvesting Cont'd</i>				
7.5.13	Extra over 150mm fulbora outlets including galvanised expanded metal mesh	2	NO		
7.5.14	450 mm girth flashing one end built in mortar in groove in wall/concrete gutter	41	LM		
	<b>Carried to collection</b>				
	<b><u>COLLECTION</u></b>  <b><u>FLAT ROOF FINISHES AND RAIN WATER HARVESTING</u></b>  Brought forward from page FMG/9  Brought Down from page FMG/10 above				
	<b>TOTAL FOR FLAT ROOF FINISHES AND RAIN WATER HARVESTING CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 6</u></b>				
	<b><u>DOORS</u></b>				
	<b><u>IOUVRED Doors</u></b>				
	50mm thick mvule louvred door comprising of 50x3mm louvres set at 45 degrees at 50mm centres;solid blocking for iron mongery (m/s) to door : all in accordance with Architect's details				
7.6.1	Single leaf door overall size 900 x 2400; complete with timber louvred fanlight size 900x475mm high as D001	1	No		
	<b><u>The following in wrot mvule</u></b>				
7.6.2	150 x 50mm frame with two labours	6	LM		
7.6.3	150 x 50 mm Transome	1	LM		
7.6.4	150 x 50 mm Mullion	1	LM		
7.6.5	50 x 25mm. Splayed architrave.	6	LM		
7.6.6	25 x 25mm. Quadrant.	6	LM		
	<b><u>Ironmongery</u></b>				
	<b><u>Supply and fix the following ironmongery from an approved manufacturer including all necessary matching screws;all ironmongery to be stainless steel grade 3.1.6 marine grade</u></b>				
7.6.7	3 - Lever mortice lock; complete with lockcase and handle	1	NO		
7.6.8	100mm. Pressed butt hinges	1.5	PRS		
7.6.9	38mm. Diameter door stop on floor / wall to approval	1	NO		
7.6.10	Stainless steel overhead door closer	1	NO		
	<b><u>Metal fixing cramps</u></b>				
7.6.11	30 x 3mm. Approved door cramps 250mm. Long once bent one end drilled and screwed to wood	4	NO		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>Painting and Decoration</b>				
	<b>Prepare and apply three coats of premium quality marine grade clear varnish; Matt quality to:-</b>				
7.6.12	General surfaces of wood exceeding 200mm but not exceeding 300mm girth	8	LM		
7.6.13	Ditto; girth not exceeding 100mm	12	LM		
7.6.14	Doors both internally and externally	5	SM		
	<b>Prepare and apply one coat aluminium primer before fixing: to backing of wood</b>				
7.6.15	Surfaces over 200 but not exceeding 300mm	8	LM		
7.6.16	Surfaces not exceeding 100mm	12	LM		
	<b>Carried to collection</b>				
	<b><u>COLLECTION</u></b>				
	<b><u>DOORS</u></b>				
	Brought forward from page FMG/11				
	Brought Down from page FMG/12 above				
	<b>TOTAL FOR DOORS CARRIED TO SUMMARY</b>				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 7</u></b>				
	<b><u>FIXTURES AND FITTINGS:</u></b> <b><u>"All Provisional"</u></b>				
	<b>FIXTURES AND FITTINGS:-(PROVISIONAL)</b>				
	<b>Stainless steel grating</b>				
7.7.1	300mm wide stainless steel channel grating grade 3.1:6 marine grade: comprising 40 x 40 x 6mm edge frame : infilled with 40 x 6mm flats at 50mm centres : 40 x 40 x 6mm frame set in concrete with 150mm long stainless stel end split lugs : smooth weld joints	27	LM		
	<b>Supply and fix the following in high grade stainless steel grade 3.1.6 marine grade plate treated with sealer and chemical etching ; graphics and lettering finished in 3M vinyl cut outs as per architect's details</b>				
7.7.2	500 x 100 mm door signage	1	No		
	<b>Handrail -Stainless Steel to steps and ramp</b>				
7.7.3	Supply, assemble and fix 1000mm high purpose made stainless steel (grade 3.1.6) comprising of 50mm diameter x 3mm thick stainless steel tube handrail welded to 50mm diameter x 3mm thick stainless steel balusters at fixed to concrete floor at 1000mm centres; balusters fixed to and including 200mm x 150mm x 15mm thick stainless steel base plate fixed to concrete; complete with 4no. 25mm diameter x 3mm thick horizontal middle rails ; including all necessary cleats, brackets,lugs stiffeners and the like; all to Architect's instructions and approval	8	LM		
	<b>TOTAL OF FIXTURES AND FITTINGS, CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.8</u></b>				
	<b><u>INTERNAL FINISHES</u></b>				
	<b><u>Floor Finishes</u></b>				
	Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.				
7.8.1	32 mm thick to receive terrazzo (m.s)	79	SM		
	<b><u>Polished Terrazzo paving</u></b>				
7.8.2	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	79	SM		
7.8.3	20 x 100mm ditto skirting	46	LM		
7.8.4	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	50	LM		
	<b><u>Plastic dividing strips</u></b>				
7.8.5	32 x 3mm thick plastic dividing strips	119	LM		
	<b><u>Wall Finishes</u></b>				
	15mm thick two coat gauged cement lime and sand (1:2:9) plaster steel trowelled smooth to:-				
7.8.6	To surfaces of walls,columns and beams	208	SM		
7.8.7	Door and Window reveals 100-200mm	36	LM		
	<b><u>Ceiling Finishes</u></b>				
	15 mm Thick Internal cement sand (1:3) gauged plaster as described to:				
7.8.8	Soffits of concrete slab	79	SM		
	<b><u>Painting and Decorating</u></b>				
	Prepare and apply undercoat and three coats PVA based premium quality marine grade silk vinyl sheen emulsion paint as approved to:				
7.8.9	To plastered surface of walls,columns and beams	208	SM		
7.8.10	Precast concrete Louvre Blocks	12	SM		
7.8.11	Door and Window reveals 100-200mm	36	LM		
7.8.12	Plastered concrete slab soffits	79	SM		
	<b>TOTAL FOR INTERNAL FINISHES CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.9</u></b>				
	<b><u>EXTERNAL FINISHES</u></b>				
	<b><u>Floor Finishes</u></b>				
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
7.9.1	32 mm thick to receive terrazzo (m.s)	68	SM		
7.9.2	Ditto to 450mm wide treads	29	LM		
7.9.3	Ditto to 150mm high risers	29	LM		
	<b>Polished Terrazzo paving</b>				
7.9.4	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	68	SM		
7.9.5	Ditto to 450mm wide treads	29	LM		
7.9.6	Ditto to 150mm high risers	29	LM		
7.9.7	20 x 100mm ditto skirting	37	LM		
7.9.8	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	100	LM		
	<b>Plastic dividing strips</b>				
7.9.9	32 x 3mm thick plastic dividing strips	102	LM		
	<b>Wall Finishes</b>				
7.9.10	15mm Thick cement sand (1:3) rendering to wall,columns and beams	236	SM		
7.9.11	To gutter beams	53	SM		
7.9.12	Ditto: Door and Windows reveals 100-200mm	32	LM		
	<b>Prepare and apply one undercoat and two finishing coats marine grade weatherguard(silicone based) exterior paint as approved to:</b>				
7.9.13	Rendered surfaces of walls,columns and beams	236	SM		
7.9.14	Precast concrete Louvre Blocks	12	SM		
7.9.15	To gutter beams	53	SM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
7.9.16	Ditto: Door and Windows reveals 100-200mm  <u>Ceiling Finishes</u> 15 mm Thick Internal cement sand (1:3) gauged plaster as described to:	32	LM		
7.9.17	Soffits of concrete slab  <u>Painting and Decoration</u> Prepare surface, apply undercoat and apply three coats of premium quality marine grade emulsion paint to:-	60	SM		
7.9.18	Plastered ceiling surfaces	60	SM		
	<b>Carried to collection</b>				
	<u><b>COLLECTION</b></u>  <u><b>EXTERNAL FINISHES</b></u>  Brought forward from page FMG/15  Brought Down from page FMG/16 above				
	<b>TOTAL FOR EXTERNAL FINISHES CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b>ELEMENT NO.10</b></p> <p><b>BUILDERS WORK IN CONNECTION WITH SERVICES(BWICS)</b></p> <p><b>Builder's Work incidental to ventilation,electrical installations, concealed fixings</b></p>				
7.10.1	Allow for making holes, chasing walls, floors, inclusion of sleeves and other items necessary for the proper carrying out of the installation;including making good all surfaces	1	ITEM		
	TOTAL FOR BWICS CARRIED TO SUMMARY				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUMMARY				
1	SUBSTRUCTURES				
2	R.C SUPERSTRUCTURE				
3	EXTERNAL WALLS				
4	INTERNAL WALLS				
5	FLAT ROOF FINISHES AND RAIN WATER HARVESTING				
6	DOORS				
7	FIXTURES AND FITTINGS				
8	INTERNAL FINISHES				
9	EXTERNAL FINISHES				
10	BWICS				
	TOTAL FOR FISH GEAR MENDING SHED CARRIED TO SUMMARY OF BUILDERS' WORKS				

PUMP ROOM

BILL NO.8

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b><u>ELEMENT NO. 1</u></b></p> <p><b>SUBSTRUCTURES (All provisional)</b></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><b>NOTE: Classes of Rock</b></p> <p><b><u>(1) Class 1 :</u></b> 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><b><u>(2) Class 2 :</u></b> 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>				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI  
COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>SUBSTRUCTURES (All provisional)</u></b>				
	<b><u>Site Preparation</u></b>				
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	25	SM		
	<b><u>Excavation</u></b> <b>Note that all excavations are measured nett and no allowance for working space provided</b>				
8.1.2	Excavate oversite average 250mm deep and cart away	25	SM		
8.1.3	Excavation for foundation trenches from reduced level: not exceeding 1.50 metres deep	27	CM		
8.1.4	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	20	CM		
8.1.5	Ditto for column bases from reduced level not exceeding 1.50 metres deep	9	CM		
8.1.6	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	8	CM		
8.1.7	Extra over all descriptions of excavations and removal from site for breaking up rocks: irrespective of class	30	CM		
	<b><u>Disposal of excavated material</u></b>				
8.1.8	Fillings around sub- walls: backfill and compact in 150 mm layers: selected excavated materials	68	CM		
8.1.9	Remove surplus spoil from site and deposit in spoil heaps and later spread on site as directed	21	CM		
	<b><u>Planking and strutting</u></b>				
8.1.10	Planking and strutting to sides of all excavations: keep excavations free from all fallen materials		ITEM		
	<b><u>Disposal of Water</u></b>				
8.1.11	Keep excavations free from all water including spring or running water.		ITEM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>Hardcore Filling</u></b>				
8.1.12	300mm thick (minimum) approved hardcore handpacked in layers not exceeding 150mm	14	SM		
8.1.13	Imported filling to make-up levels; compacted in layers not exceeding 150 mm thick; To atleast 95% MDD (AASHTO T99) compaction	7	CM		
	<b><u>Murram</u></b>				
8.1.14	50mm Thick Quarry dust blinding to the surface of hardcore rolled smooth to receive polythene sheeting	14	SM		
	<b><u>Insecticide treatment</u></b>				
	Treat hardcore surface with approved antitermite applied in accordance with the manufacturer's instructions and subject to a TEN YEAR guarantee				
8.1.15	To Quarry dust surface	14	SM		
	<b><u>CONCRETE WORK</u></b>				
	<b>Insitu concrete class 15/20: in</b>				
8.1.16	50 mm thick blinding to strips	18	SM		
8.1.17	50 mm thick blinding to column bases	6	SM		
	<b>Insitu concrete Class 25 (20mm aggregate) : vibrated: reinforced</b>				
8.1.18	Strip foundation	4	CM		
8.1.19	Column bases	3	CM		
8.1.20	Columns	1	CM		
8.1.21	150mm Thick ground floor slab	19	SM		
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b>				
	<b>Ribbed bars to KS ISO 6935-2:2007</b>				
8.1.22	8mm diameter	50	KG		
8.1.23	10mm diameter	200	KG		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
8.1.24	12mm diameter	220	KG		
8.1.25	16mm diameter	100	KG		
8.1.26	<b>Mesh Fabric Reinforcement</b> BRC Fabric mesh reinforcement Ref. A142; weighing 2.22kg per square metre(measured net no allowances made for laps) including bends tying wire and spacer blocks.  <u>Marineply formwork as Described. Allow for setting to special steel propping, strutting, fillets, nails, etc to:</u>	19	SM		
8.1.27	Vertical: sides of foundations in trenches	12	SM		
8.1.28	Vertical: sides of column bases	8	SM		
8.1.29	Vertical: sides of columns	8	SM		
8.1.30	Edges: slab over 75 but not exceeding 150 mm wide	18	LM		
	<b><u>WALLING</u></b> Approved natural stone or coral stone ; load bearing 7.0 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar				
8.1.3	200 mm thick walls reinforced with hoop iron at every alternate course	60	SM		
	<b><u>DAMP PROOFING</u></b> 1000 Gauge polythene; 150mm laps; no allowances made for laps				
8.1.32	Horizontal; over 300mm wide	19	SM		
8.1.33	<b><u>Plinth Finishes</u></b> 15mm Thick cement sand (1:3) rendering to plinth; wood float finish (PLEASE NOTE: The render shall be at least 450 mm below natural ground level)	8	SM		
8.1.34	Prepare and apply three coats of premium quality marine grade bituminous paint to rendered walls; externally	8	SM		
	<b>Carried to collection</b>				
	<b><u>COLLECTION SUBSTRUCTURE</u></b> Brought forward from page PR/2 Brought forward from page PR/3 Brought forward from page PR/4 above				
	<b>TOTAL FOR SUBSTRUCTURE CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 2</u></b>				
	<b><u>RC SUPERSTRUCTURE</u></b>				
	<b>In situ concrete Class 25 (20mm aggregate) : vibrated: reinforced</b>				
8.2.1	Beams	1	CM		
8.2.2	Gutter beams	4	CM		
8.2.3	Columns	1	CM		
8.2.4	150 mm thick suspended roof slab	14	SM		
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b> <b>Ribbed bars to KS ISO 6935-2:2007</b>				
8.2.5	Assorted sizes	1275	KG		
	<b><u>Marineply formwork to:</u></b>				
8.2.6	Sides of Columns	11	SM		
8.2.7	Sides and soffits of beams	10	SM		
8.2.8	Sides and soffits of gutter beams	33	SM		
8.2.9	Soffits of suspended floor slab	14	SM		
8.2.10	Edges of suspended floor slab 75-150mm high	15	LM		
	<b><u>Creation of Arches</u></b>				
8.2.11	Construction and formation of decorative arches around windows and the main door externally and main arches at terrace finished same as external walls;1000 - 3000 mm diameter;including all necessary formworks and reinforcements; all to Architect's details	3	No		
	<b>TOTAL FOR RC SUPERSTRUCTURE CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 3</u></b>				
	<b><u>EXTERNAL WALLS</u></b>				
	<b><u>NATURAL STONE WALLING</u></b>				
	<b><u>Machine cut natural stone or machine cut coral stone or hollow concrete block walling ; load bearing 7.0 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</u></b>				
8.3.1	200mm. Thick walling externally	29	SM		
8.3.2	200mm thick at parapet wall; including allowing for crenellation to architect's detail	27	SM		
	<b>Pre-cast concrete class 20/20 precast ventilation blocks</b>				
8.3.3	600x600x200mm thick vents block with floral motifs; bedded and jointed in cement and sand (1:3) mortar and reinforced every alternate course with hoop iron.;To architect's details	11	SM		
	<b>Pre-cast concrete class 20/20 concrete coping</b>				
8.3.4	300 x 75 mm high precast concrete coping weathered and throated on both sides and jointed to wall in cement sand mortar 1:3 all to approval	22	LM		
	<b>Bituminous or other equal approved damp-proof course; 3 ply membrane</b>				
8.3.5	Horizontal; 200mm wide under walls	16	LM		
	<b>TOTAL EXTERNAL WALLING CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 4</u></b>				
	<b><u>FLAT ROOF FINISHES AND RAIN WATER HARVESTING</u></b>				
	<b><u>Flat roof finishes</u></b>				
8.4.1	50mm thick (average) water proof screed consisting of cement and sand (1:3)	43	SM		
8.4.2	Ditto to sides of wall;300mm high	7	SM		
8.4.3	50 x 50mm internal angle fillet	22	LM		
	<b>Supply and apply 4mm thick bituminous felt membrane heat welded in 200mm overlaps and all necessary surface preparations; applied strictly in accordance with printed manufacturer's instructions; provide a 10 year guarantee</b>				
8.4.4	To roof slab and gutters	43	SM		
8.4.5	To sides of walls	7	SM		
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
8.4.6	32 mm thick to receive concrete interlocking tiles (m.s)	14	SM		
	<b>Concrete interlocking tiles</b>				
8.4.7	200 x 200 x 25mm thick concrete interlocking tiles at roof slab; bedding and jointing in cement mortar mix 1:4(m/s)	14	SM		
8.4.8	100mm high matching skirting	22	LM		
	<b>Unplasticized PVC downpipes and fittings: solvent welded joints</b>				
8.4.9	160mm downpipes in concrete columns to approval	6	LM		
8.4.10	Extra over suspended concrete slab for forming 160mm diameter hole for down pipe	2	NO		
8.4.11	Extra over downpipe for bends	2	NO		
8.4.12	Extra over downpipe for 160mm diameter anti splash shoe	2	NO		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<i><b>Rainwater Harvesting Cont'd</b></i>				
8.4.13	Extra over 150mm fulbora outlets including galvanised expanded metal mesh	2	NO		
8.4.14	450 mm girth flashing one end built in mortar in groove in wall/concrete gutter	22	LM		
	<b>Carried to collection</b>				
	<u><b>COLLECTION</b></u>  <u><b>FLAT ROOF FINISHES AND RAIN WATER HARVESTING</b></u>  Brought forward from page PR/7  Brought Down from page PR/8 above				
	<b>TOTAL FOR FLAT ROOF FINISHES AND RAIN WATER HARVESTING CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 5</u></b>  <b><u>DOORS</u></b>  <u>Supply, assemble and fix the following Galvanized Steel double door comprising of 75x50x3mm frame with louvre vents and all necessary furniture; The door should be assembled and fixed to opening including cutting and pinning lugs to concrete or blockwork surround and bedding frame in cement and sand mortar (1:4); prepare surface by Sand blasting; apply one coat of 2 pack epoxy zinc PRosPRate primer; apply three coats of marine grade gloss paint (Ref Architects Detailing)</u>				
8.5.1	Double leaf door Overall size 1800mm x 2400mm high as D-001	1	NO		
	<b>TOTAL FOR DOORS CARRIED TO SUMMARY</b>				
	<b><u>ELEMENT NO. 6</u></b>  <b><u>FIXTURES AND FITTINGS:</u></b> <b><u>"All Provisional"</u></b>  <b>FIXTURES AND FITTINGS:-(PROVISIONAL)</b>  <b>Plinth</b>				
8.6.1	200mm thick Plain concrete class 15/20 in plinth	2	SM		
	<b>Formwork to:-</b>				
8.6.2	Edges of plinths 150-225mm high	5	LM		
8.6.3	15mm thick cement sand (1:3) plaster of plinths	5	SM		
	<b>TOTAL OF FIXTURES AND FITTINGS, CARRIED TO SUMMARY</b>				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.7</u></b>				
	<b><u>INTERNAL FINISHES</u></b>				
	<b><u>Floor Finishes</u></b>				
	Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.				
8.7.1	32 mm thick to receive terrazzo (m.s)	12	SM		
	<b>Polished Terrazzo paving</b>				
8.7.2	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	12	SM		
8.7.3	20 x 100mm ditto skirting	13	LM		
8.7.4	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	8	LM		
	<b>Plastic dividing strips</b>				
8.7.5	32 x 3mm thick plastic dividing strips	18	LM		
	<b><u>Wall Finishes</u></b>				
	15mm thick two coat gauged cement lime and sand (1:2:9) plaster steel trowelled smooth to:-				
8.7.6	To surfaces of walls,columns and beams	38	SM		
8.7.7	Door and Window reveals 100-200mm	17	LM		
	<b><u>Ceiling Finishes</u></b>				
	15 mm Thick Internal cement sand (1:3) gauged plaster as described to:				
8.7.8	Soffits of concrete slab	12	SM		
	<b><u>Painting and Decorating</u></b>				
	Prepare and apply undercoat and three coats PVA based premium quality marine grade silk vinyl sheen emulsion paint as approved to:				
8.7.9	To plastered surface of walls,columns and beams	38	SM		
8.7.10	Precast concrete Louvre Blocks	11	SM		
8.7.11	Door and Window reveals 100-200mm	17	LM		
8.7.12	Plastered concrete slab soffits	12	SM		
	<b>TOTAL FOR INTERNAL FINISHES CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.8</u></b>				
	<b><u>EXTERNAL FINISHES</u></b>				
	<b><u>Floor Finishes</u></b>				
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
8.8.1	32 mm thick to receive terrazzo (m.s)	7	SM		
	<b>Polished Terrazzo paving</b>				
8.8.2	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	7	SM		
8.8.3	20 x 100mm ditto skirting	13	LM		
8.8.4	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	7	LM		
	<b>Plastic dividing strips</b>				
8.8.5	32 x 3mm thick plastic dividing strips	11	LM		
	<b>Wall Finishes</b>				
8.8.6	15mm Thick cement sand (1:3) rendering to wall,columns and beams	87	SM		
8.8.7	To gutter beams	24	SM		
8.8.8	Ditto: Door and Windows reveals 100-200mm	17	LM		
	<b>Prepare and apply one undercoat and two finishing coats marine grade weatherguard(silicone based) exterior paint as approved to:</b>				
8.8.9	Rendered surfaces of walls,columns and beams	87	SM		
8.8.10	Precast concrete Louvre Blocks	11	SM		
8.8.11	To gutter beams	24	SM		
8.8.12	Ditto: Door and Windows reveals 100-200mm	17	LM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
8.8.13	<u>Ceiling Finishes</u> 15 mm Thick Internal cement sand (1:3) gauged plaster as described to:  Soffits of concrete slab	9	SM		
8.8.14	<u>Painting and Decoration</u> Prepare surface, apply undercoat and apply three coats of premium quality marine grade emulsion paint to:-  Plastered ceiling surfaces	9	SM		
	<b>Carried to collection</b>				
	<u>COLLECTION</u>  <u>EXTERNAL FINISHES</u>  Brought forward from page PR/11  Brought Down from page PR/12 above				
	<b>TOTAL FOR EXTERNAL FINISHES CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b>ELEMENT NO.9</b></p> <p><b>BUILDERS WORK IN CONNECTION WITH SERVICES(BWICS)</b></p> <p><b>Builder's Work incidental to ventilation,electrical installations, concealed fixings</b></p>				
8.9.1	Allow for making holes, chasing walls, floors, inclusion of sleeves and other items necessary for the proper carrying out of the installation;including making good all surfaces	1	ITEM		
	TOTAL FOR BWICS CARRIED TO SUMMARY				

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUMMARY				
1	SUBSTRUCTURES				
2	R.C SUPERSTRUCTURE				
3	EXTERNAL WALLS				
4	FLAT ROOF FINISHES AND RAIN WATER HARVESTING				
5	DOORS				
6	FIXTURES AND FITTINGS				
7	INTERNAL FINISHES				
8	EXTERNAL FINISHES				
9	BWICS				
	TOTAL FOR PUMP ROOM CARRIED TO SUMMARY OF BUILDERS' WORKS				

POWER HOUSE

BILL NO.9

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b><u>ELEMENT NO. 1</u></b></p> <p><b>SUBSTRUCTURES (All provisional)</b></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><b>NOTE: Classes of Rock</b></p> <p><b><u>(1) Class 1 :</u></b> 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><b><u>(2) Class 2 :</u></b> 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>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI  
COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>SUBSTRUCTURES (All provisional)</u></b>				
	<b><u>Site Preparation</u></b>				
9.1.1	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	140	SM		
	<b><u>Excavation</u></b> <b>Note that all excavations are measured nett and no allowance for working space provided</b>				
9.1.2	Excavate oversite average 250mm deep and cart away	140	SM		
9.1.3	Excavation for foundation trenches from reduced level: not exceeding 1.50 metres deep	81	CM		
9.1.4	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	59	CM		
9.1.5	Ditto for column bases from reduced level not exceeding 1.50 metres deep	73	CM		
9.1.6	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	63	CM		
9.1.7	Extra over all descriptions of excavations and removal from site for breaking up rocks: irrespective of class	50	CM		
	<b><u>Disposal of excavated material</u></b>				
9.1.8	Fillings around sub- walls: backfill and compact in 150 mm layers: selected excavated materials	342	CM		
9.1.9	Remove surplus spoil from site and deposit in spoil heaps and later spread on site as directed	74	CM		
	<b><u>Planking and strutting</u></b>				
9.1.10	Planking and strutting to sides of all excavations: keep excavations free from all fallen materials		ITEM		
	<b><u>Disposal of Water</u></b>				
9.1.11	Keep excavations free from all water including spring or running water.		ITEM		
	<b>Carried to collection</b>				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
9.1.12	<b><u>Hardcore Filling</u></b> 300mm thick (minimum) approved hardcore handpacked in layers not exceeding 150mm	108	SM		
9.1.13	Imported filling to make-up levels; compacted in layers not exceeding 150 mm thick; To atleast 95% MDD (AASHTO T99) compaction	54	CM		
9.1.14	<b><u>Murram</u></b> 50mm Thick Quarry dust blinding to the surface of hardcore rolled smooth to receive polythene sheeting	108	SM		
9.1.15	<b><u>Insecticide treatment</u></b> Treat hardcore surface with approved antitermite applied in accordance with the manufacturer's instructions and subject to a TEN YEAR guarantee  To Quarry dust surface	108	SM		
	<b><u>CONCRETE WORK</u></b>  Insitu concrete class 15/20: in				
9.1.16	50 mm thick blinding to strips	54	SM		
9.1.17	50 mm thick blinding to column bases	49	SM		
	Insitu concrete Class 25 (20mm aggregate) : vibrated: reinforced				
9.1.18	Strip foundation	11	CM		
9.1.19	Column bases	20	CM		
9.1.20	Columns	2	CM		
9.1.21	150mm Thick ground floor slab	126	SM		
9.1.22	Extra over in slab to forming or leaving 300mm wide shallow drainage channels;average 300mm deep 'U' channel in hardcore and floor slab; including hand packing to sides of channel;150mm thick concrete class 25/20 to sides and bed of channel including 50mm blinding class 15/20 and all necessary formwork and reinforcement, all to detail and approval	29	LM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b>				
	<b>Ribbed bars to KS ISO 6935-2:2007</b>				
9.1.23	8mm diameter	100	KG		
9.1.24	10mm diameter	500	KG		
9.1.25	12mm diameter	700	KG		
9.1.26	16mm diameter	400	KG		
	<b>Mesh Fabric Reinforcement</b>				
9.1.27	BRC Fabric mesh reinforcement Ref. A142; weighing 2.22kg per square metre(measured net no allowances made for laps) including bends tying wire and spacer blocks.	126	SM		
	<b>Marineply formwork as before described to:</b>				
9.1.28	Vertical: sides of foundations in trenches	36	SM		
9.1.29	Vertical: sides of column bases	35	SM		
9.1.30	Vertical: sides of columns	30	SM		
9.1.31	Edges: slab over 75 but not exceeding 150 mm wide	47	LM		
	<b><u>WALLING</u></b>				
	<b>Approved natural stone or coral stone ; load bearing 7.0 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</b>				
9.1.32	200 mm thick walls reinforced with hoop iron at every alternate course	179	SM		
	<b><u>DAMP PROOFING</u></b>				
	<b>1000 Gauge polythene; 150mm laps; no allowances made for laps</b>				
9.1.33	Horizontal; over 300mm wide	126	SM		
	<b>Plinth Finishes</b>				
9.1.34	15mm Thick cement sand (1:3) rendering to plinth; wood float finish (PLEASE NOTE: The render shall be at least 450 mm below natural ground level)	25	SM		
9.1.35	Prepare and apply three coats of premium quality marine grade bituminous paint to rendered walls; externally	25	SM		
	<b>Carried to collection</b>				

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>COLLECTION</u>  <u>SUBSTRUCTURE</u>  Brought forward from page PH/2  Brought forward from page PH/3  Brought forward from page PH/4				
	TOTAL FOR SUBSTRUCTURE CARRIED TO SUMMARY				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 2</u></b>				
	<b><u>RC SUPERSTRUCTURE</u></b>				
	<b>Insitu concrete Class 25 (20mm aggregate) : vibrated: reinforced</b>				
9.2.1	Beams	1	CM		
9.2.2	Gutter beams	10	CM		
9.2.3	Columns	3	CM		
9.2.4	150 mm thick suspended roof slab	76	SM		
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b>				
	<b>Ribbed bars to KS ISO 6935-2:2007</b>				
9.2.5	Assorted sizes	3930	KG		
	<b><u>Marineply formwork as Described. Allow for setting to special steel proping, strutting, fillets, nails, etc to:</u></b>				
9.2.6	Sides of Columns	36	SM		
9.2.7	Sides and soffits of beams	10	SM		
9.2.8	Sides and soffits of gutter beams	82	SM		
9.2.9	Soffites of suspended floor slab	76	SM		
9.2.10	Edges of suspended floor slab 75-150mm high	37	LM		
	<b><u>Creation of Arches</u></b>				
9.2.11	Construction and formation of decorative arches around windows and the main door externally and main arches at terrace finished same as external walls;1000 - 3000 mm diameter;including all necessary formworks and reinforcements; all to	4	No		
	<b>TOTAL FOR RC SUPERSTRUCTURE CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 3</u></b>				
	<b><u>EXTERNAL WALLS</u></b>				
	<b><u>NATURAL STONE WALLING</u></b>				
	<b><u>Machine cut natural stone or machine cut coral stone or hollow concrete block walling ; load bearing 7.0 N/mm2: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</u></b>				
9.3.1	200mm. Thick walling externally	81	SM		
9.3.2	200mm thick at parapet wall; including allowing for crenellation to architect's detail	45	SM		
	<b>Pre-cast concrete class 20/20 precast ventilation blocks</b>				
9.3.3	600x600x200mm thick vents block with floral motifs; bedded and jointed in cement and sand (1:3) mortar and reinforced every alternate course with hoop iron.;To architect's details	14	SM		
	<b>Pre-cast concrete class 20/20 concrete coping</b>				
9.3.4	250 x 50 mm high precast concrete coping weathered and throated on both sides and jointed to wall in cement sand mortar 1:3 all to approval	77	LM		
	<b>Bituminous or other equal approved damp-proof course; 3 ply membrane</b>				
9.3.5	Horizontal; 200mm wide under walls	37	LM		
	<b>TOTAL EXTERNAL WALLING CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><u>ELEMENT NO. 4</u></p> <p><u>INTERNAL WALLS</u></p> <p><u>NATURAL STONE WALLING</u></p> <p><u>Machine cut natural stone or machine cut coral stone or hollow concrete block walling ; load bearing 7.0 N/mm<sup>2</sup>: reinforced with 20 gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar</u></p>				
9.4.1	200mm. Thick walling internally	54	SM		
	<p><u>Bituminous or other equal approved damp-proof course; 3 ply membrane</u></p>				
9.4.2	Horizontal; 200mm wide under walls	18	LM		
	TOTAL FOR INTERNAL WALLING CARRIED TO SUMMARY				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 5</u></b>				
	<b><u>FLAT ROOF FINISHES AND RAIN WATER HARVESTING</u></b>				
	<b><u>Flat roof finishes</u></b>				
9.5.1	50mm thick (average) water proof screed consisting of cement and sand (1:3)	148	SM		
9.5.2	Ditto to sides of wall;300mm high	12	SM		
9.5.3	50 x 50mm internal angle fillet	37	LM		
	<b>Supply and apply 4mm thick bituminous felt membrane heat welded in 200mm overlaps and all necessary surface preparations; applied strictly in accordance with printed manufacturer's instructions; provide a 10 year guarantee</b>				
9.5.4	To roof slabs and gutters	148	SM		
9.5.5	To sides of walls	12	SM		
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
9.5.6	32 mm thick to receive concrete interlocking tiles (m.s)	76	SM		
	<b>Concrete interlocking tiles</b>				
9.5.7	200 x 200 x 25mm thick concrete interlocking tiles at roof slab; bedding and jointing in cement mortar mix 1:4(m/s)	76	SM		
9.5.8	100mm high matching skirting	37	LM		
	<b>Unplasticized PVC downpipes and fittings: solvent welded joints</b>				
9.5.9	160mm downpipes in concrete columns to approval	6	LM		
9.5.10	Extra over suspended concrete slab for forming 160mm diameter hole for down pipe	2	NO		
9.5.11	Extra over downpipe for bends	2	NO		
9.5.12	Extra over downpipe for 160mm diameter anti splash shoe	2	NO		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<i>Rainwater Harvesting Cont'd</i>				
9.5.13	Extra over 150mm fulbora outlets including galvanised expanded metal mesh	2	NO		
9.5.14	450 mm girth flashing one end built in mortar in groove in wall/concrete gutter	37	LM		
	<b>Carried to collection</b>				
	<p><b><u>COLLECTION</u></b></p> <p><b><u>FLAT ROOF FINISHES AND RAIN WATER HARVESTING</u></b></p> <p>Brought forward from page PH/9</p> <p>Brought Down from page PH/10 above</p>				
	<b>TOTAL FOR FLAT ROOF FINISHES AND RAIN WATER HARVESTING CARRIED TO SUMMARY</b>				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 5</u></b>  <b><u>DOORS</u></b>  <u>Supply, assemble and fix the following Galvanized Steel double door comprising of 75x50x3mm frame with louvre vents and all necessary furniture; The door should be assembled and fixed to opening including cutting and pinning lugs to concrete or blockwork surround and bedding frame in cement and sand mortar (1:4); prepare surface by Sand blasting; apply one coat of 2 pack epoxy zinc phosphate primer; apply three coats of marine grade gloss paint (Ref Architects Detailing)</u>				
9.5.1	Double leaf door Overall size 1800mm x 2400mm high as D-001	4	NO		
	<b>TOTAL FOR DOORS CARRIED TO SUMMARY</b>				
	<b><u>ELEMENT NO. 6</u></b>  <b><u>FIXTURES AND FITTINGS:</u></b> <b><u>"All Provisional"</u></b>  <b>FIXTURES AND FITTINGS:-(PROVISIONAL)</b>  <b>Stainless steel grating</b>				
9.6.1	300mm wide stainless steel channel grating grade 3.1:6 marine grade: comprising 40 x 40 x 6mm edge frame : infilled with 40 x 6mm flats at 50mm centres : 40 x 40 x 6mm frame set in concrete with 150mm long stainless stel end split lugs : smooth weld joints	29	LM		
	<b>TOTAL OF FIXTURES AND FITTINGS, CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.8</u></b>				
	<b><u>INTERNAL FINISHES</u></b>				
	<b><u>Floor Finishes</u></b>				
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
9.8.1	32 mm thick to receive terrazzo (m.s)	69	SM		
	<b>Polished Terrazzo paving</b>				
9.8.2	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	69	SM		
9.8.3	20 x 100mm ditto skirting	56	LM		
9.8.4	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	40	LM		
	<b>Plastic dividing strips</b>				
9.8.5	32 x 3mm thick plastic dividing strips	104	LM		
	<b><u>Wall Finishes</u></b>				
	<b>15mm thick two coat gauged cement lime and sand (1:2:9) plaster steel trowelled smooth to:-</b>				
9.8.6	To surfaces of walls,columns and beams	224	SM		
9.8.7	Door and Window reveals 100-200mm	40	LM		
	<b><u>Ceiling Finishes</u></b>				
	<b>15 mm Thick Internal cement sand (1:3) gauged plaster as described to:</b>				
9.8.8	Soffits of concrete slab	79	SM		
	<b><u>Painting and Decorating</u></b>				
	<b>Prepare and apply undercoat and three coats PVA based premium quality marine grade silk vinyl sheen emulsion paint as approved to:</b>				
9.8.9	To plastered surface of walls,columns and beams	224	SM		
9.8.10	Precast concrete Louvre Blocks	14	SM		
9.8.11	Door and Window reveals 100-200mm	40	LM		
9.8.12	Plastered concrete slab soffits	79	SM		
	<b>TOTAL FOR INTERNAL FINISHES CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.9</u></b>				
	<b><u>EXTERNAL FINISHES</u></b>				
	<b><u>Floor Finishes</u></b>				
	<b>Screed; cement and sand 1:3 with approved integral dust proofing additive wood floated.</b>				
9.9.1	32 mm thick to receive terrazzo (m.s)	50	SM		
	<b>Polished Terrazzo paving</b>				
9.9.2	25mm thick insitu polished terrazzo laid on concrete in approved coloured aggregate finished smooth including sanding and polishing	50	SM		
9.9.3	20 x 100mm ditto skirting	30	LM		
9.9.4	25 mm wide Slip-resistant Carborandum inserts on Terrazzo treads bonded with an approved adhesive	26	LM		
	<b>Plastic dividing strips</b>				
9.9.5	32 x 3mm thick plastic dividing strips	75	LM		
	<b>Wall Finishes</b>				
9.9.6	15mm Thick cement sand (1:3) rendering to wall,columns and beams	186	SM		
9.9.7	To gutter beams	60	SM		
9.9.8	Ditto: Door and Windows reveals 100-200mm	40	LM		
	<b>Prepare and apply one undercoat and two finishing coats marine grade weatherguard exterior paint as approved to:</b>				
9.9.9	Rendered surfaces of walls,columns and beams	186	SM		
9.9.10	Precast concrete Louvre Blocks	14	SM		
9.9.11	To gutter beams	60	SM		
9.9.12	Ditto: Door and Windows reveals 100-200mm	40	LM		
	<b><u>Ceiling Finishes</u></b>				
	<b>15 mm Thick Internal cement sand (1:3) gauged plaster as described to:</b>				
9.9.13	Soffits of concrete slab	17	SM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>Painting and Decoration</u> Prepare surface, apply undercoat and apply three coats of premium quality marine grade emulsion paint to:-				
9.9.14	Plastered ceiling surfaces	17	SM		
	<b>Carried to collection</b>				
	<u>COLLECTION</u>  <u>EXTERNAL FINISHES</u>  Brought forward from page PH/13  Brought Down from page PH/14 above				
	<b>TOTAL FOR EXTERNAL FINISHES CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>ELEMENT NO.10</b>  <b>BUILDERS WORK IN CONNECTION WITH SERVICES(BWICS)</b>  <b>Builder's Work incidental to ventilation,electrical installations, concealed fixings</b>				
9.10.1	Allow for making holes, chasing walls, floors, inclusion of sleeves and other items necessary for the proper carrying out of the installation;including making good all surfaces	1	ITEM		
	TOTAL FOR BWICS CARRIED TO SUMMARY				

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUMMARY				
1	SUBSTRUCTURES				
2	R.C SUPERSTRUCTURE				
3	EXTERNAL WALLS				
4	INTERNAL WALLS				
5	FLAT ROOF FINISHES AND RAIN WATER HARVESTING				
6	DOORS				
7	FIXTURES AND FITTINGS				
8	INTERNAL FINISHES				
9	EXTERNAL FINISHES				
10	BWICS				
	TOTAL FOR POWER HOUSE CARRIED TO SUMMARY OF BUILDERS' WORKS				

## SUMMARY BUILDERS WORK

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

BILL	DESCRIPTION	AMOUNT
	<u>SUMMARY OF BUILDERS WORKS</u>	KSHS
4	FISH BANDA	
5	OPEN AIR MARKET	
6	ABLUTION BLOCK AND FISH GEAR STORE	
7	FISH GEAR MENDING SHED	
8	PUMP ROOM	
9	POWER HOUSE	
	TOTAL FOR BUILDERS WORKS CARRIED TO GRAND SUMMARY	



**FOUL DRAINAGE**

**BILL NO.10**

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>EXTERNAL WORKS</u></b>				
	<b><u>ELEMENT NO. 1</u></b>				
	<b><u>EXTERNAL SOIL WATER DRAINAGE</u></b>				
10.1.1	Excavate trench for drain pipe average 1500 mm deep, part return fill and ram and remainder cart away	100	LM		
10.1.2	150 mm diameter "Golden Brown" UPVC pipe laid in trench and jointed	100	LM		
	<b>Plain in situ concrete : class 15/20: as per Engineer's detail</b>				
10.1.3	150mm bed and surround to 150mm diameter pipe : including all necessary formwork	100	LM		
	<b>Manholes</b>				
	The following manholes of various sizes to be executed in accordance with the Engineer's drawings, average depths as stated complete and including filling, 150mm thick masonry walling abd, 150mm thick concrete floor slab Class 25/20, concrete blinding and benching Class 15/20, 20mm diameter cast iron steping irons where necessary; waterproof plaster to internal and external surfaces; complete with and including heavy duty double air seal cast iron cover and frame, all to Engineer's details. (Rate to include cost of all excavations, concrete, formwork, reinforcement, lifting key hole and associated works); prepare surface of steel by Sand blasting; prime with 2 pack epoxy zinc phosphate primer ; apply three coats of marine grade gloss oil paint				
10.1.4	Internal dimensions: 600x 450x 1000mm deep	10	NO		
10.1.5	Ditto 850x1200x1500mm deep	5	NO		
	<b>Carried to Forward</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

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

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 2</u></b>				
	<b><u>BIOREACTORS/BIODIGESTERS</u></b>				
10.2.1	Clear site of shrubs,grass and carting away the arisings	102	SM		
10.2.2	Excavate pit for biodigester not exceeding 1.5m deep	153	CM		
10.2.3	Ditto 1.5 - 3.0M deep	153	CM		
10.2.4	Ditto 3 - 4.5M deep	26	CM		
10.2.5	Extra over excavation in rock of any class	100	CM		
10.2.6	Return fill and ram selected excavated soil around walling	50	CM		
10.2.7	Cart away surplus excavated material	282	CM		
10.2.8	50mm thick blinding class 15/20	102	SM		
10.2.9	200mm thick reinforced concrete class 25/20 slab in surface bed	102	SM		
10.2.10	200mm thick ditto to external walls	114	SM		
10.2.11	Ditto in baffle wall	106	SM		
10.2.12	200mm thick reinforced concrete class 25/20 in cover slab	102	SM		
	<b>Marineply formwork as before described to:</b>				
10.2.13	Sides of Rc external walling	228	SM		
10.2.14	Soffits of suspended slap	102	SM		
10.2.15	Sides of scum baffle wall	212	SM		
10.2.16	Edges of base slab 150-225mm girth	41	LM		
10.2.17	Edges of suspended slab 150-225mm girth	41	LM		
	<b>Carried to Forward</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
10.2.18	Box out formwork to opening size 600x450mm <u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u>  <b>Ribbed bars to KS ISO 6935-2:2007</b>	10	NO		
10.2.19	Assorted sizes	12720	KG		
10.2.20	Form or leave hole in 200mm concrete walling for 100mm pipe including making good disturbed surfaces	8	NO		
10.2.21	15mm thick cement/sand (1:3) waterproof plaster to walls and soffit of cover slab	404	SM		
10.2.22	30mm thick cement/sand (1:3) waterproof screed to surface bed of internal floor	84	SM		
10.2.23	600x450mm heavy duty double air seal cast iron cover and frame	10	NO		
10.2.24	<b>Soak Pit</b> Provide materials and erect soak pit 1.2m internal diameter with 150mm thick perforated stone walling and 100mm thick concrete base class 25/20 and 150mm thick RC slab class 25/20 ; including 600 x 450mm heavy duty manhole cover and frame and 200mm dia crushed stone chips filling; allow for inlet; and all necessary excavations, reinforcement and formwork; to Eng details	1	NO		
	<b>Carried to collection</b>				
	<b><u>BIOREACTOR</u></b> Brought forward from page FD/4 Brought down from page FD/5 above				
	<b>SUB-TOTAL</b>				
	NO ( TWO BIOREACTORS AND ONE BIODIGESTER)				
	<b>TOTAL OF BIODIGESTER/BIODIGESTER CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO. 3</u></b>				
	<b><u>PETROL INTERCEPTOR</u></b>				
10.3.1	Clear site of shrubs,grass and carting away the arisings	8	SM		
10.3.2	Excavate pit for petrol interceptor not exceeding 1.5m deep	12	CM		
10.3.3	Ditto 1.5 - 3.0M deep	8	CM		
10.3.4	Extra over excavation in rock of any class	10	CM		
10.3.5	Return fill and ram selected excavated soil around walling	20	CM		
10.3.6	Cart away surplus excavated material	10	CM		
10.3.7	50mm thick blinding class 15/20	8	SM		
10.3.8	200mm thick reinforced concrete class 25/20 slab in surface bed	7	SM		
10.3.9	150mm thick ditto	1	SM		
10.3.10	200mm thick ditto to external walls	24	SM		
10.3.11	150mm thick ditto	2	SM		
10.3.12	200mm thick Rc walls in baffle wall	7	SM		
10.3.13	200mm thick reinforced concrete class 25/20 in cover slab	8	SM		
	<b>Marineply formwork as before described to:</b>				
10.3.14	Sides of Rc external walling	52	SM		
10.3.15	Soffits of suspended slap	8	SM		
10.3.16	Sides of scum baffle wall	14	SM		
	<b>Carried to Forward</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
10.3.17	Edges of base slab 150-225mm girth	12	LM		
10.3.18	Ditto 75-150mm girth	2	LM		
10.3.19	Edges of suspended slab 150-225mm girth	13	LM		
10.3.20	Box out formwork to opening size 600x450mm	4	NO		
10.3.21	Box out formwork to opening size 800x800mm	1	NO		
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b>				
	<b>Ribbed bars to KS ISO 6935-2:2007</b>				
10.3.22	Assorted sizes	1448	KG		
10.3.23	Form or leave hole in 200mm concrete walling for 100mm pipe including making good disturbed surfaces	7	NO		
10.3.24	15mm thick cement/sand (1:3) waterproof plaster to walls and soffit of cover slab	37	SM		
10.3.25	30mm thick cement/sand (1:3) waterproof screed to surface bed of internal floor	6	SM		
10.3.26	600x450mm heavy duty double air seal cast iron cover and frame	4	NO		
10.3.27	Ditto 800x800mm	1	NO		
	<b>Carried to collection</b>				
	<b><u>BIOREACTOR</u></b> Brought forward from page FD/5  Brought down from page FD/6 above				
	<b>TOTAL OF PETROL INTERCEPTOR CARRIED TO SUMMARY</b>				

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUMMARY				
	ELEMENT				
1	External soil water drainage				
2	Bioreactor/Biodigester				
3	Petrol Interceptor				
	TOTAL FOR EXTERNAL FOUL WATER DRAINAGE CARRIED TO MAIN SUMMARY				



**DRIVEWAY AND PARKING**

**BILL NO.11**

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.1</u></b>				
	<b><u>DRIVEWAY AND PARKING</u></b>				
	<b><u>Excavation and Earthworks</u></b>				
11.1.1	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	900	SM		
11.1.2	Excavate oversite average 500mm deep and cart away or stock pile for re-use as directed by the project manager	450	CM		
	<b><u>Disposal of excavated material</u></b>				
11.1.3	Load and cart away surplus material from the site as directed by the project manager.	450	CM		
	<b><u>Road formation and subbase</u></b>				
11.1.4	Trim and compact formation to correct levels, cross-falls and longitudinal falls	900	SM		
11.1.5	Imported filling to make-up levels; compacted in layers not exceeding 150 mm thick; To atleast 95% MDD (AASHTO T99) compaction	450	CM		
11.1.6	Provide, lay and compact 300mm thick approved handpacked stone base blinded to Engineer's specifications or as directed by the Engineer.	900	SM		
11.1.7	50mm thick quarry dust or any other equal and approved material in blinding surface of hardcore	900	SM		
	<b><u>Herbicide Treatment</u></b>				
11.1.8	Herbicides to approval applied to the manufacturer's written instructions and subject to a TEN YEAR guarantee	900	SM		
	<b>CARRIED TO COLLECTION</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>DRIVEWAY AND PARKING WORKS CONTINUED...</b>				
11.1.9	<b><u>Concrete Paving blocks</u></b> Provide, lay and compact 60mm thick medium duty paving blocks min strength 45N/mm2	900	SM		
11.1.10	<b><u>Precast Concrete Channels Class 20/20</u></b>  Provide, lay and joint 200x100mm channel in and including concrete Class 20/20 bed and haunch. Include for all necessary excavation and formwork to Eng details	284	LM		
11.1.11	Ditto curved to plan	46	LM		
11.1.12	<b><u>Precast Concrete Kerbs Class 20/20</u></b>  Provide, lay and joint 250x125mm precast concrete half battered kerb and 200x100mm channel on and including Class 20/20 bed and haunch. Include for all necessary excavation and formwork to	284	LM		
11.1.13	Ditto curved to plan	46	LM		
11.1.14	<b><u>ROAD AND PARKING MARKING</u></b>  <b><u>Prepare and apply three coats of approved road marking thermoplastic paint on asphalt to surfaces not exceeding 100mm girth</u></b>  Yellow in colour	55	SM		
	<b>CARRIED TO COLLECTION</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>DRIVEWAY AND PARKING WORKS CONTINUED...</b>				
	<b><u>WALKWAYS</u></b>				
	<b><u>Excavation and Earthworks</u></b>				
11.1.15	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	200	SM		
11.1.16	Excavate oversite average 500mm deep and cart away or stock pile for re-use as directed by the project manager	100	CM		
	<b><u>Disposal of excavated material</u></b>				
11.1.17	Load and cart away surplus material from the site as directed by the project manager.	100	CM		
	<b><u>Road formation and subbase</u></b>				
11.1.18	Trim and compact formation to correct levels, cross-falls and longitudinal falls	200	SM		
11.1.19	Imported filling to make-up levels; compacted in layers not exceeding 150 mm thick; To atleast 95% MDD (AASHTO T99) compaction	100	CM		
11.1.20	Provide, lay and compact 300mm thick approved handpacked stone base blinded to Engineer's specifications or as directed by the Engineer.	200	SM		
11.1.21	50mm thick quarry dust or any other equal and approved material in blinding surface of hardcore	200	SM		
	<b><u>Herbicide Treatment</u></b>				
11.1.22	Herbicides to approval applied to the manufacturer's written instructions and subject to a TEN YEAR guarantee	200	SM		
	<b>CARRIED TO COLLECTION</b>				

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	DRIVEWAY AND PARKING WORKS CONTINUED...				
	<u>Concrete Paving blocks</u>				
11.1.23	Provide, lay and compact 60mm thick medium duty paving blocks min strength 45N/mm <sup>2</sup>	200	SM		
	<b>Precast Concrete Channels Class 20/20</b>				
11.1.24	Provide, lay and joint 200x100mm channel in and including concrete Class 20/20 bed and haunch. Include for all necessary excavation and formwork to Eng details	242	LM		
11.1.25	Ditto curved to plan	10	LM		
	<b>Precast Concrete Kerbs Class 20/20</b>				
11.1.26	Provide, lay and joint 250x125mm precast concrete half battered kerb and 200x100mm channel on and including Class 20/20 bed and haunch. Include for all necessary excavation and formwork to Eng details	242	LM		
11.1.27	Ditto curved to plan	10	LM		
	CARRIED TO COLLECTION				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>DRIVEWAY AND PARKING WORKS CONTINUED...</b>				
	<b><u>STORM WATER DRAINAGE</u></b>				
	<b>Precast Concrete Invert Block Drains Class 20/20</b>				
11.1.28	300mm diameter round precast concrete invert blocks drain manufactured in accordance with BS 340 laid to slope and including 100mm murram bed;including 600 x 225 x 75mm thick side slabs both sides : jointed and pointed in cement and sand 1:3 mortar : on compacted murram : as per Engineer's details jointing in cement and sand mortar;including all necessary excavations,strutting, formwork, reinforcements; all as per Eng details.	107	LM		
	<b>Box Culvert</b>				
11.1.29	2000 x 2000 x 400mm thick insitu vibrated reinforced concrete class 25/20 box culvert ;including 600mm high x 200 mm thick; laid on and including 50mm concrete class 15/20 blinding on 150mm hardcore filling; including all necessary excavations,strutting, formwork, reinforcements; all as per Eng details.	21	LM		
	<b>Headwalls</b>				
11.1.30	Headwall comprising of 5000mm long x 2000mm high x 350mm thick insitu vibrated reinforced concrete class 25/20 on and including concrete class 25/20 base size 3700 x 950 x 400mm thick on 50mm concrete class 15/20 blinding;with 100mm thick quarry dust blinding on 150mm hardcore filling; including all necessary excavations,strutting, formwork, reinforcements; all as per Eng details.	6	NO		
	<b>TOTAL OF DRIVE WAY AND PARKING CARRIED TO ELEMENT SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>DRIVEWAY AND PARKING WORKS</u></b>  Brought forward from page DW/1 Brought forward from page DW/2 Brought forward from page DW/3 Brought forward from page DW/4 Brought down from above page DW/5				
	<b>TOTAL OF DRIVEWAY AND PARKING CARRIED TO SUMMARY</b>				
	<b><u>ELEMENT NO.2</u></b>  <b>RETAINING WALL EMBARKMENT</b>  <b><u>Excavation and Earthworks</u></b>  11.2.1 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	75	SM		
11.2.2	Excavate oversite average 250mm deep and cart away	75	SM		
11.2.3	Excavation for retaining wall foundation from reduced level: not exceeding 1.50 metres deep	113	CM		
11.2.4	Ditto but exceeding 1.50 m deep but not exceeding 3.0 m deep	68	CM		
11.2.5	Extra over all descriptions of excavations and removal from site for breaking up rocks: irrespective of class	50	CM		
	<b><u>Disposal of excavated material</u></b>  11.2.6 Fillings around sub- walls: backfill and compact in 150 mm layers: selected excavated materials	132	CM		
	<b>CARRIED TO COLLECTION</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>RETAINING WALL EMBANKMENT CONTINUED...</b>				
11.2.7	Remove surplus spoil from site and deposit in spoil heaps and later spread on site as directed	49	CM		
	<b><u>Planking and strutting</u></b>				
11.2.8	Planking and strutting to sides of all excavations: keep excavations free from all fallen materials	1	ITEM		
	<b><u>Disposal of Water</u></b>				
11.2.9	Keep excavations free from all water including spring or running water.	1	ITEM		
	<b><u>CONCRETE WORK</u></b>				
	<b>Insitu concrete class 15/20: in</b>				
11.2.10	50 mm thick blinding to retaining wall foundation	75	SM		
	<b>Insitu concrete Class 25 (20mm aggregate) : vibrated: reinforced</b>				
11.2.11	To retaining wall foundation	27	CM		
11.2.12	To retaining walls	18	CM		
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b>				
	<b>Ribbed bars to KS ISO 6935-2:2007</b>				
11.2.13	Assorted sizes	8100	KG		
	<b>CARRIED TO COLLECTION</b>				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>RETAINING WALL EMBANKMENT CONTINUED...</b>				
11.2.14	Marineply formwork as before described to: Vertical: sides of retaining wall foundation	11	SM		
11.2.15	Vertical: sides and edges of retaining wall	102	SM		
	<b>Water bars</b>				
11.2.16	200 x1.5mm upvc water bar, set vertically in concrete wall	25	LM		
11.2.17	Imported filling to make-up levels; compacted in layers not exceeding 150 mm thick; To atleast 95% MDD (AASHTO T99) compaction	150	CM		
	<b>TOTAL OF RETAINING WALL EMBANKMENT CARRIED TO ELEMENT SUMMARY</b>				
	<b><u>RETAINING WALL EMBANKMENT WORKS</u></b>				
	Brought forward from page DW/6				
	Brought forward from page DW/7				
	Brought down from above page DW/8				
	<b>TOTAL OF RETAINING WALL EMBANKMENT CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.3</u></b>				
	<b>RAMP/SLIPWAY</b>				
11.3.1	Clear the site off grass, small trees not exceeding 600mm girth and cart away for burn arising.	29	SM		
	<b><u>Excavations</u></b>				
11.3.2	Excavate oversite average 250mm deep and cart away	29	SM		
11.3.3	Bulk excavation starting from stripped level not exceeding 1.50 Metres deep.	29	CM		
11.3.4	Extra over all descriptions of excavations and removal from site for breaking up rocks: irrespective of class	29	CM		
	<b><u>Disposal of excavated material</u></b>				
11.3.5	Return fill in and ram in excavations	29	CM		
11.3.6	Remove surplus soil and cart away from site.	33	CM		
	<b><u>Disposal of Water</u></b>				
11.3.7	Allow for keeping the whole of the excavation free from mud, water and fallen materials	1	Item		
	<b><u>Planking and strutting</u></b>				
11.3.8	Allow for planking and strutting sides of excavation	1	Item		
	<b><u>Filling</u></b>				
11.3.9	Provide and lay Imported and approved murrum backfill or other approved 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	22	CM		
	<b>TOTAL CARRIED FORWARD</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>RAMP/SLIPWAY CONTINUED</u></b>				
11.3.10	300mm thick hardcore filling; levelled and compacted in 150mm layers; hand packed.	22	SM		
11.3.11	50mm thick murram dust or any other equal and approved material in blinding surface of hardcore	22	SM		
	<b><u>CONCRETE WORKS</u></b>				
11.3.12	50mm thick concrete blinding to retaining wall footing class 15/20	20	SM		
	<b><u>Vibrated reinforced concrete class 25/20</u></b>				
11.3.12	Retaining Wall footing	4	CM		
11.3.13	450mm thick ramp; tamped to approved pattern	10	CM		
11.3.14	200mm thick retaining walls	28	SM		
	<b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b>				
	<b><u>Ribbed bars to KS ISO 6935-2:2007</u></b>				
11.3.15	Assorted bars	3,248	KG		
	<b><u>Marineply formwork as before described to:</u></b>				
11.3.16	Edges of retaining Wall footing	11	SM		
11.3.17	Ditto but to retaining wall	56	SM		
11.3.18	Ditto but to sides of ramp	3	SM		
	<b><u>RAMP WALL FINISHES</u></b>				
	<b><u>25mm thick cement and sand (1:3) render to:-</u></b>				
11.3.19	25mm thick cement and sand Rendering to ramp walls	35	SM		
	<b>TOTAL CARRIED FORWARD</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
11.3.20	<b><u>RAMP/SLIPWAY CONTINUED</u></b>  <b>Handrail -Stainless Steel to ramp</b>  Supply, assemble and fix 1000mm high purpose made stainless steel (grade 3.1.6) comprising of 50mm diameter x 3mm thick stainless steel tube handrail welded to 50mm diameter x 3mm thick stainless steel balusters at fixed to concrete floor at 1000mm centres; balusters fixed to and including 200mm x 150mm x 15mm thick stainless steel base plate fixed to concrete; complete with 4no. 25mm diameter x 3mm thick horizontal middle rails ; including all necessary cleats, brackets,lugs stiffeners and the like; all to Architect's instructions and approval	14	LM		
	<b>TOTAL CARRIED FORWARD</b>				
	<b><u>RAMP/SLIPWAY WORKS</u></b>  Brought forward from page DW/9  Brought forward from page DW/10  Brought down from above page DW/11				
	<b>TOTAL OF RAMP/SLIPWAY CARRIED TO SUMMARY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	SUMMARY ELEMENT				
1	Parking and Driveway				
2	Retaining Wall Embarkment				
3	Ramp/Slipway				
	TOTAL FOR DRIVEWAY AND PARKING WORKS CARRIED FORWARD TO GRAND SUMMARY				

**FLOATING JETTY**

**BILL NO.12**

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM.	DESCRIPTION	QTY	UNIT	RATE	KSHS
	<p><u>ELEMENT NO. 1</u></p> <p><u>FLOATING JETTY BUILDERS WORK</u></p> <p><u>ALL PROVISIONAL</u></p> <p>SUBSTRUCTURES (All provisional)</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><b>NOTE: Classes of Rock</b></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/mm<sup>2</sup>. 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/mm<sup>2</sup>. This type of rock contains stones and boulders of unweathered or incompletely weathered Tuff, trachyte, black trap or lava with compressive strength exceeding 15N/mm<sup>2</sup> 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>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM.	DESCRIPTION	QTY	UNIT	RATE	KSHS
	<b>Builders Work in Land</b>				
	<u><b>Site Preparation</b></u>				
12.1.1.	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	158	SM		
	<u><b>Excavation</b></u> <b>Note that all excavations are measured nett and no allowance for working space provided</b>				
	<u><b>Excavations in land</b></u>				
12.1.2.	Bulk excavate in land to reduce levels exceeding 1500 mm deep; average depth of 500mm	79	CM		
12.1.3.	Extra over all descriptions of excavations and removal from site for breaking up rocks: irrespective of class	20	CM		
12.1.4.	Remove surplus spoil from site and deposit in spoil heaps and later spread on site as directed	79	CM		
12.1.5.	Imported filling to make-up levels; compacted in layers not exceeding 150 mm thick; To at least 95% MDD (AASHTO T99) compaction	79	CM		
	<u><b>Planking and strutting</b></u>				
12.1.6.	Planking and strutting to sides of all excavations: keep excavations free from all fallen materials	1	ITEM		
	<u><b>Disposal of Water</b></u>				
12.1.7.	Keep excavations free from all water including spring or running water.	1	ITEM		
	<u><b>Hardcore Filling</b></u>				
12.1.8.	300mm thick (minimum) approved hardcore handpacked in layers not exceeding 150mm	158	SM		
	<b>Carried to collection</b>				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM.	DESCRIPTION	QTY	UNIT	RATE	KSHS
12.1.9.	<b><u>Murram</u></b> 50mm Thick Quarry dust blinding to the surface of hardcore rolled smooth to receive polythene sheeting  <b><u>Herbicide treatment</u></b> Herbicides to approval applied to the manufacturer's written instructions and subject to a TEN YEAR guarantee	158	SM		
12.1.10.	To Quarry dust surface  <b><u>DAMP PROOFING</u></b> 1000 Gauge polythene; 150mm laps; no allowances made for laps	158	SM		
12.1.11.	Horizontal; over 300mm wide  <b><u>CONCRETE WORK</u></b> Insitu concrete Class 25 (20mm aggregate) : vibrated: reinforced	158	SM		
12.1.12.	200mm thick slab;tamped to approved pattern  <b><u>High Tensile Reinforcement Bars to B. S. 4449 including cutting, bending and all necessary spacer blocks : (Provisional) :-</u></b> Ribbed bars to KS ISO 6935-2:2007	158	SM		
12.1.13.	10mm diameter  <b>Marineply formwork to:</b>	3500	KG		
12.1.14.	Edges: slab over 150 but not exceeding 225 mm wide  <b>Plinth Finishes</b>	86	LM		
12.1.15.	15mm Thick cement sand (1:3) rendering to plinth; wood float finish (PLEASE NOTE: The render shall be at least 200 mm below natural ground level)	18	SM		
12.1.16.	Prepare and apply three coats of premium quality marine grade bituminous paint to rendered plinths; externally	18	SM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM.	DESCRIPTION	QTY	UNIT	RATE	KSHS
	<b>Builders Work in Water</b>				
	<u><b>Site Preparation</b></u>				
12.1.17.	Confirmation of the sea bed depths/land profile (in-survey levels) before the commencement of works as directed by the engineer; set out in accordance with the drawings	624	SM		
12.1.18.	Clear site of all obstacles, mangrove bushes, debris in water and dispose as directed by the Engineer on site.	624	SM		
	<u><b>Excavations in water</b></u>				
12.1.19.	Excavate top soil to remove sea vegetation to a depth not exceeding 500mm, and dispose as directed by the Engineer.	624	CM		
12.1.20.	Excavate in water-logged loosed sand to a depth not exceeding 1.5m deep; average depth 500mm	624	CM		
12.1.21.	Extra over all descriptions of excavations and removal from site for breaking up rocks: irrespective of class	624	CM		
12.1.22.	Allow for keeping the whole of working area free from water	1	Item		
12.1.23.	Allow for maintaining and upholding sides of working area clear of all fallen material, rubbish e.t.c	1	Item		
12.1.24.	Set out works over land and water to the approval of the Engineer.	1	Item		
12.1.25.	Remove surplus spoil from site and deposit in spoil heaps and later spread on site as directed	624	CM		
12.1.26.	Provide and consolidate in layers not exceeding 300mm sand fill from and approved source as directed by the Engineer. Rate to include furnishing material, transport, placing, leveling and others required.	624	CM		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM.	DESCRIPTION	QTY	UNIT	RATE	KSHS
12.1.27.	Provide and place approved geotextile filter cloth . (Rate to include cost of stitching the consecutive pieces of filter cloth together – overlaps to be 300mm).	624	SM		
12.1.28.	Provide and consolidate in layers not exceeding 300mm quarry run as directed by the Engineer.Rate to include furnishing material, transport,placing, leveling and others required.	624	CM		
12.1.29.	Provide and place Armour Rock (100-200kg). Rate to include furnishing material, transport,placing, leveling and others required.	700	CM		
	<b>Carried to collection</b>				
	<b><u>FLOATING JETTY BUILDERS WORK</u></b>  Brought forward from page FJ/2  Brought forward from page FJ/3  Brought forward from page FJ/4  Brought down from page FJ/5 above				
	<b>TOTAL FOR FLOATING JETTY BUILDERS WORK CARRIED TO SUMAMRY</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM.	DESCRIPTION	QTY	UNIT	RATE	KSHS
	<b>ELEMENT NO. 2</b> <i>These works are to be done by an experienced specialist; Rates to include crane and diving services</i> All as per specifications and Eng. Drawings Stainless steel to be marine grade 316  <b>FLOATING JETTY</b>				
12.2.1.	Supply, deliver, assemble and fix floating pontoons as per specifications and Eng drawings. Complete with and including stainless steel frame, floats, plastic rubber fender strips, anti-corrosive wood, rubberkerb, elastic joints with neoprene pads anchored in place via 24mm bolts and WPC decking fixed to floats. overall high.	1	Item		
12.2.2.	Supply, deliver, assemble and fix galvanised mooring chain as per specifications and Eng drawings, including stainless steel shackles and approved shock absorbing spring system. 15,000mm long	60	No		
12.2.3.	Supply, deliver, assemble and fix stainless steel mooring rings fixed to anti-corrosive wood with M10X70 bolts; as per specification and Eng. drawings.	60	No		
12.2.4.	Supply, deliver, assemble and fix galvanised 30mm diameter anchor pins as per specifications and Eng drawings, 2000 mm long; fixed to rock bottom	60	No		
12.2.5.	Supply, deliver, assemble and fix emergency exit stainless steel ladders. As per specification and Eng. drawings. Overall size 3000x1000mm	2	No		
12.2.6.	Supply, deliver, assemble and fix lifebuoy pedestal, lifebuoy, rope and cabinet as per specification and Eng. drawings.	1	No		
12.2.7.	Supply, deliver, assemble and fix solar-powered beacon as per specification and Eng. drawings.	1	No		
12.2.8.	Supply, deliver, assemble and fix gangway in lightweight aluminium as per specification and Eng. Drawings; Overall size 18000x2200x1160mm high	1	No		
	<b>Carried to collection</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM.	DESCRIPTION	QTY	UNIT	RATE	KSHS
12.2.9.	Drill 50mm boreholes, 2 metre or deeper as required into the sea bed by hand-held hydraulic drill, insert anchor pins and grout in place with non-shrink concrete.	60	No		
12.2.10.	Level the sea bed (remove high spots or fill-in depressions) along the axis of the jetty and place used rubber tire pads from chainage 0 to chainage 50 metres.	1	Item		
	<b>Handrail -Stainless Steel</b>				
12.2.11.	Supply, assemble and fix 1050mm high purpose made stainless steel (grade 3.1.6) comprising of 65mm diameter x 3mm thick stainless steel tube handrail welded to 65mm diameter x 3mm thick stainless steel balusters at fixed to concrete floor at 1000mm centres; balusters fixed to and including 200mm x 150mm x 15mm thick stainless steel base plate fixed to concrete; complete with 4no. 25mm diameter x 3mm thick horizontal middle rails ; including all necessary cleats, brackets,lugs stiffeners and the like; all to Architect's instructions and approval; at centre of jetty at approved intervals	48	LM		
12.2.12.	Ditto to edges of jetty at approved intervals	83	LM		
12.2.13.	Allow for provision for a detailed shop drawing	1	Item		
12.2.14.	Test and commissioning of the floating jetty	1	Item		
12.2.15.	Allow for Maintenance 1 year after defects liability period	1	Item		
	<b>Carried to collection</b>				
	<b><u>FLOATING JETTY</u></b>  Brought forward from page FJ/6  Brought forward from page FJ/7 above				
	<b>TOTAL FOR FLOATING JETTY CARRIED TO SUMAMRY</b>				

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

[illegible]

**MECHANICAL WORKS**

**BILL NO.13**

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>BILL NO. 13: MECHANICAL WORKS:</u></b>				
	<b><u>ELEMENT NO. 1 (INTERNAL PLUMBING):</u></b>				
	<i>Supply, deliver and install pipes, tubing and fittings as described and shown on the drawings. The pipes shall be PN 25PPR pipes where exposed to adverse weather conditions and all conforming to the current European standards for PPR installations and to the Engineers Approval. Pipe jointing shall be by polyfusion or use electric coupling, Rates must allow for all metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints support raceways, isolating sheaths, elastic materials, expansion arms and bends cross overs, couplings, clippings, connectors, joints etc. as required in the running lengths of pipe work and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system. The pipes will be pressure tested before the plastering of wall commences and as per the manufactures recommended testing pressures</i>				
	<b><u>PPR Pipes</u></b>				
13.1.1	25mm diameter pipe	80	LM		
13.1.2	32mm Ditto	80	LM		
13.1.3	40mm Ditto	70	LM		
13.1.4	50mm Ditto	90	LM		
13.1.5	63mm Ditto	110	LM		
	<b><u>Sockets;</u></b>				
13.1.6	25mm diameter socket	40	No.		
13.1.7	32mm ditto	30	No.		
13.1.8	40mm Ditto	25	No.		
13.1.9	50mm Ditto	35	No.		
13.1.10	63mm Ditto	40	No.		
	<b><u>Tees;</u></b>				
13.1.11	25mm diameter PPR equal tee	50	No.		
13.1.12	32mm diameter PPR equal tee	40	No.		
13.1.13	40mm diameter PPR equal tee	64	No.		
13.1.14	50mm diameter PPR equal tee	55	No.		
13.1.15	63mm diameter PPR equal tee	35	No.		
	<b><u>Bends</u></b>				
13.1.16	25mm diameter bends	30	No.		
13.1.17	32mm ditto	25	No.		
13.1.18	40mm Ditto	15	No.		
13.1.19	50mm Ditto	20	No.		
13.1.20	63mm Ditto	12	No.		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
	<u><b>Tees</b></u> <b>Extra over GI tubing for the following:</b>				
13.1.21	25mm diameter PPR 90° elbow	50	No.		
13.1.22	32mm diameter PPR 90° elbow	35	No.		
13.1.23	40mm diameter PPR 90° elbow	40	No.		
13.1.24	50mm diameter PPR 90° elbow	32	No.		
13.1.25	63mm diameter PPR 90° elbow	50	No.		
	<u><b>Reducers</b></u>				
13.1.26	50x32mm diameter PPR reducer tees	20	No.		
13.1.27	50x40mm diameter PPR reducer tees	22	No.		
13.1.28	63x50mm diameter PPR reducer tees	23	No.		
13.1.29	80x50mm diameter PPR reducer tees	25	No.		
	<u><b>Threaded Fittings</b></u>				
13.1.30	50 x 1"ø ditto Male threaded adaptors	15	No.		
13.1.31	25 x 3/4"ø dia Male threaded adaptors (Brass threads).	27	No.		
13.1.32	32 x 1"ø ditto	54	No.		
13.1.33	50 x 1 1/2"ø dia Male threaded adaptors	30	No.		
13.1.34	63 x 1 1/2"ø dia Male threaded adaptors (Brass threads).	10	No.		
	<u><b>Nipples</b></u>				
13.1.35	25mm diameter G.I. nipple	40	No.		
13.1.36	32mm ditto	40	No.		
	<u><b>Valves</b></u>				
13.1.37	25mm diameter approved medium pressure screw down full way non-rising stem wedge gate valve to BS 5154 PN 20 for series B rating, with wheel and hand jopints to steel tubing and complete with round male threaded transion fittings. The gate valve to be as approved.	14	No.		
13.1.38	32mm ditto	10	No.		
13.1.39	40mm ditto	8	No.		
13.1.40	50mm ditto	8	No.		
	<b>TOTAL INTERNAL PLUMBING CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b><u>ELEMENT NO. 2:</u></b></p> <p><b><u>SANITARY FITTINGS:</u></b> Supply,deliver,install,test and commission the following sanitary appliances complete with all the accessories including all connections to the services,waste,jointing to water supply,overflows,supports and all plugging and screwing to walls and floors.</p> <p><b><u>Note.</u></b></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><b><u>Squatting Water Closet</u></b> Squatting Water Closet Suite in white Vitreous China comprising of WC bowl with S-Trap,Connector and Integral foot threads,9 Litre Ceramic Cistern and fittings,including siphon and pull chain,15mm diameter side inlet ball valve,20mm side overflow,first quality plastic 32mm flush pipe,Inlet connector and cistern supports,all to approval.The water closet suite to be as approved.</p> <p><b><u>Pedestal wash hand basin</u></b> Wash Hand Basin with pedestal size 510x420mm with one tap hole and chain stay hole,32 mm diameter chrome-plated pop up chain waste and fittings,approved first quality plastic bottle trap(32mm bottle trap) with 75mm seal.The wash hand basin to be as approved.The basin to be supplied and installed complete with 15mm diameter heavy duty Brass Pillar Tap as approved</p> <p><b><u>Toilet Roll Holder</u></b> Semi recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as approved.</p> <p><b><u>Soap Dispenser</u></b> Wall mounted soap dispenser with a capacity of about 1.5 Litre and having a press action soap release mechanism complete with fixing screws.including allowing for initial soap supply as approved.The soap dispenser shall be size125x100x290mm high and shall be as approved.</p>				
13.2.1		2	No.		
13.2.2		6	No		
13.2.3		10	No.		
13.2.4		4	No		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
13.2.5	<b><u>Mirrors</u></b> 610 X 610 X 6mm thick polished plate silver backed with beveled edges mirror fixed with clear silicon to 100 x 25mm thick wrot mahogany molded framing in 4 labors plugged to wall using 4No. Wall plugs with 75mm long stainless steel screws, painted in three coats polyurethane varnish all to approval	6	No		
13.2.6	<b><u>Bib Tap</u></b> 15mm diameter heavy duty chrome plated bib tap to an approved catalogue	6	No		
13.2.7	<b><u>Flexible Tubing</u></b> 15mm diameter x 300mm longg flexible connectors complete with Integral brass angle valve for connecting the Sanitary fitting to water supply, to be as approved.	16	No.		
13.2.8	<b><u>Robe Hook</u></b> Robe hook in vitreous china mounted to concealed screw to wall wedges as approved	10	No.		
13.2.9	<b><u>Shower Fittings</u></b> Concealed shower fitting consisting of 25mm diameter x 2500mm long PPR riser pipe for showers,25mm diameter Stainless Steel cold water swivel/adjustable shower rose, Carina handle and 'Cobra' Stop Cock	5	No.		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
	<b>Disabled persons Water Closet and Wash Hand Basin Facility</b>				
	Wheel chair accessible W.C facility Comprising of the following:-				
13.2.10	<p>(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 vitreous china 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</p> <p>(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 vitreous china 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.</p> <p>(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 as approved.</p>	4	SET		
13.2.11	<p><b><u>Urinal System</u></b></p> <p>Floor standing urinal comprising of grade 304 stainless steel trough(Dimensions 3000mm long x 265mm wide x 1100mm high) with a raised integral waste channel and removable access panel, 50mm chrome plated hinged domed waste outlet on the right side including approved 1No. Ceramic approved cistern, drip valve, sparge and spreader( all stainless steel) and any other accessories for proper functioning of the set.The trough shall screwed on wall using stainless steel bolts all to approval</p>	2	SET		
13.2.12	<p><b><u>Soap dish</u></b></p> <p>Semi recessed built in soap dish in vitreous china of size 150x150mm in approved colour as approved .</p>	6	No.		
13.2.13	<p><b><u>Towel Rail</u></b></p> <p>Stainless Steel 20mm diameter x 800mm long approved towel rail and brackets as one piece, plugged and screwed (stainless steel screws) into the wall. The fitting ball shall be as approved.</p>	2	No		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
13.2.14	<p><b><u>Double Bowl Drop-in Sink</u></b></p> <p>Heavy Duty 16SWG Stainless Steel (Grade 304) Double Bowl sink,Size 800x400x225mm deep suitable for mounting on counter as manufactured by an approvedmanufacturer, complete with heavy duty swivel high/long neck brass pillar tap as approved.It shall also comprise of 40mm diameter stainless steel sink waste fitting,chain and plug and 40mm diameter x 75mm deep seal first quality <b>chrome plated</b> Bottle Trap,all to approved catalogue.</p>	9	No.		
13.2.15	<p><b><u>Four Wheel Waste Bin</u></b></p> <p>660 litres Heavy Duty Polyethene four wheel waste bin with snap fit lid, locking handle and 4No. Wheels. All to approval</p>	4	No		
	<b>TOTAL SANITARY FITTINGS CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b><u>ELEMENT NO.3:</u></b> <b><u>FOUL DRAINAGE:</u></b></p> <p>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</p> <p><b><u>Internal:</u></b></p> <p>13.3.1 40mm diameter Grey UPVC waste pipe in wall chase. 50 LM</p> <p>13.3.2 50mm ditto but boxed in concrete floor slab 60 LM</p> <p>13.3.3 100mm ditto 40 LM</p> <p><b><u>Extra Ovetubing For:-</u></b></p> <p>13.3.4 100x50mm diameter UPVC floor trap,grating and cover 25 No</p> <p>13.3.5 100mm diameter WC connector 10 No</p> <p><b><u>External:</u></b></p> <p>13.3.6 100mm diameter Grey UPVC soil vent pipe with expansion coupling and fixing to wall with holder bats ducts 16 LM</p> <p>13.3.7 100mm diameter Golden Brown UPVC waste pipe in soil 55 LM</p> <p>13.3.8 200mm by 200mm u-shaped steel drainage channel 120 LM</p> <p><b><u>Extra Overtubing For:-</u></b></p> <p>13.3.9 40mm diameter access tee and cap 15 No</p> <p>13.3.10 50mm ditto 12 No</p> <p>13.3.11 100mm diameter Inspection bend and Access cap. 10 No</p> <p>13.3.12 100mm diameter vent cowl 16 No</p> <p>13.3.13 100mm diameter weathering Slate and Apron 10 No</p> <p>13.3.14 100mm diameter medium duty UPVC gulley trap, grating cover and waste 24 No</p>				
	<b>TOTAL FOUL DRAINAGE CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

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PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>ELEMENT NO. 5:</b>				
	<b><u>ICE FLAKE MACHINE, ROOM INSULATION AND ACCESSORIES:</u></b>				
	Supply, deliver, install, test and commission the following Ice Flake Machine, Equipment and accessories as herebelow described and to position indicated on mechanical drawings and as instructed by the Engineer:- The works under this category should be done by an approved sub-contractor				
	<b><u>Ice Flake Machine</u></b>				
13.5.1	Modular Ice Flake Machine (Production Capacity 3T/24h, Refrigerating capacity 18Kw, Evaporating temperature -22°C, Power consumption 17.5kW, Approx dimensions 2000 X 1600 X 1490mm) comprising of an air cooled condenser, gear motor, water pump, salt mix pump control box and control panel with PLC, Low water sensor protection, Ice level thermostat, Ice knife and construction made from stainless steel, base frame made from galvanized steel, ice drum/cylinder with stainless steel inner and outer wall fitted with semi-hermetic compressors, stainless steel ball bearings including all other accessories for proper functioning of the unit. The unit shall be as approved and to approved catalogue	1	No		
	<b><u>Refrigeration Pipework</u></b>				
13.5.2	A set of Refrigeration Pipework complete with flared connections and fittings in approved copper tubing approx.10metres long,including flexible condensate drip line approx.6.0metres long,properly fixed and encased in 20mm diameter black PVC Conduit in conformity with 'APPROVED REFRIGERATION MANUAL'.The suction line shall be insulated with at least 25mm thickness of Armaflex or other equal and approved material	1	ITEM		
	<b><u>Testing</u></b>				
13.5.3	Allow for testing of the above Ice Flake Machine both during progress of installation and at completion to the Engineers satisfaction,including initial charging of the system with Refrigerant gas R.410A or other equal and approved and to leave the system in good and sound working condition	1	ITEM		
13.5.4	Allow for the instruction and training to the client staff (2 no.) on the operation and maintenance of the ice flake production plant for a period of not less than Two (2) weeks. The contractor to allow for structured training on all equipment on content to be agreed upon with the Engineer or his representative.	1	ITEM		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
13.5.5	Allow for initial service and maintenance including spare parts for the ice flake production plants during the six months' defects liability period	1	ITEM		
13.5.6	Allow for the preparation of record (as installed) drawings and preparation of 2 No. sets of Maintenance and operation manuals	1	ITEM		
	<b><u>Ice flakes collection room</u></b>				
13.5.7	Double rebate type cold room door size 900mm wide x 2100mm high constructed from stainless steel tubes mullions transoms with interior lining to match the walls.	1	No		
13.5.8	Supply and install 100mm thick polystyrene insulation fixed to floor between 100 x 50 x 3mm kitchen grade stainless steel RHS bearers plugged to floor slab to receive 5mm thick Non-slip checkered stainless steel plate on the floor spaced at 1000mm center all to approval	11	sm		
13.5.9	Ditto but on the walls	47	sm		
13.5.10	Ditto but on the roof	10	sm		
13.5.11	Supply and install 0.5mm thick 304 Stainless Steel (grade 304) Sheet fixed firmly on the cold room walls and the ceiling complete with the corner panels. The cost to include any other accessory necessary for the installation.	57	sm		
13.5.12	Supply and install 5mm thick Non-slip checkered stainless steel flooring for the cold room, to be firmly fixed on the floor all to approval. The cost to include any other accessory necessary for the installation.	11	sm		
13.5.13	Allow for application of an approved vapour barrier on the walls and water proofing of the floor to the satisfaction of the Engineer.	1	ITEM		
13.5.14	Supply and install a vapour-sealed bulkhead incandescent lighting fitting with suitably sized door operated switch complete with the associated wiring.	1	No		
13.5.15	Allow for the connection to electrical power supply from a local isolator.	1	ITEM		
13.5.16	Allow for testing, commissioning and leaving it in good working condition.	1	ITEM		
	<b><u>Chilly Bin</u></b>				
13.5.17	120L Heavy Duty Ice box chilly bin, Roto moulded, filled with polyurethane foam, freezer style sealing gasket, recessed leak proof drain plug. All to approval	4	No		
	<b>TOTAL ICE FLAKE MACHINE, ROOM INSULATION AND ACCESSORIES CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.6:</u></b>				
	<b><u>BUILDER'S WORK IN CONNECTION WITH PLUMBING AND DRAINAGE</u></b>				
	<b><u>Masonry Gulley Trap</u></b> Construct masonry gulley trap size 200x200mm, approx depth 300mm, complete with seal and Fibre Reinforced Plastics cover, including all disposal and form work	24	No.		
	<b><u>Manholes and Covers</u></b> Construct Manholes size 600 x 450mm and averaging 750mm deep constructed in 100mm thick concrete base class 15/20, approved 150mm block sides rendered all around in cement and sand (1:4). It shall have an approved Fibre Reinforced Plastics cover to approval, including all necessary excavations, disposal and form work.	16	No.		
	<b><u>Excavations</u></b> Excavate trench not exceeding 1.5m deep, average depth 600mm for laying of drain pipes as earlier described, part back fill, part load and cart away remainder	48	LM		
	<b><u>Chasing</u></b> Form chase in both 100mm and 200mm thick coral block wall to receive necessary pipe work and make good disturbed areas	36	LM		
	<b><u>Holes</u></b> Make a hole through 100mm thick coral block wall for small pipe and make good disturbed areas	6	No.		
	13.6.6 Ditto but 200mm thick and for large	7	No.		
	<b>TOTAL BUILDERS WORK CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.7:</u></b>				
	<b><u>WATER RETICULATION - ALL PROVISIONAL</u></b>				
	<b><u>Water Tanks</u></b>				
13.7.1	Supply, deliver and install vertical close end plastic moulded tank of capacity <b>10,000 litres</b> and ( <b>size 2400mm diameterx 2260mm high</b> ). 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 as approved	1	ITEM		
13.7.2	Supply, deliver and install vertical close end plastic moulded tank of capacity <b>4,000 litres</b> and ( <b>size 1660mm diameterx 1980mm high</b> ). 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 as approved	12	ITEM		
	<b><u>Excavations</u></b>				
13.7.3	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	150	LM		
	<b><u>Pipe Work</u></b>				
13.7.4	50mm diameter PPR (PN-20) pump suction lines	40	LM		
13.7.5	50mm ditto but delivery lines	20	LM		
13.7.6	40mm diameter (PN-20) PPR Riser in wall duct and on roof terrace	20	LM		
13.7.7	50mm distribution pipework laid and jointed on roof terrace and pipe drop	40	LM		
13.7.8	40mm diameter (PN-20) PPR distribution Pipe laid and jointed in trench	40	LM		
13.7.9	50mm ditto	60	LM		
13.7.10	32mm diameter (PN-20) PPR Pipe laid and jointed in trench from water mains	48	LM		
13.7.11	40mm ditto	52	LM		
	<b><u>Extra Overtubing for:</u></b>				
	<b><u>Sockets:</u></b>				
13.7.12	32mm diameter PPR Sockets	13	No.		
13.7.13	40mm ditto	34	No.		
13.7.14	50mm ditto	30	No.		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
	<b><u>Bends</u></b>				
13.7.15	32mm diameter bend/Elbow	3	No.		
13.7.16	40mm ditto	5	No.		
13.7.17	50mm ditto	4	No.		
	<b><u>Tees</u></b>				
13.7.16	40mm diameter (PN-20) PPR equal tee	1	No.		
13.7.17	50mm ditto	2	No.		
	<b><u>Valves</u></b>				
13.7.18	40mm diameter supply mains full way gate valve as approved	1	No.		
13.7.19	50mm ditto	3	No.		
	<b><u>Water Connection to Supply mains &amp; Testing</u></b>				
13.7.20	50mm diameter G.I. equal tee	1	No		
13.7.21	50x40mm diameter G.I. reducer	1	No		
13.7.22	40mm diameter G.I. nipple	2	No		
13.7.23	50mm diameter PPR Adaptor	1	No		
13.7.24	40mm diameter full Way gate valve as approved	1	No		
	<b><u>Stand Pipe</u></b>				
13.7.25	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 as approved	1	ITEM		
	<b><u>Mains Valve Chamber</u></b>				
13.7.26	Construct Mains Valve Chamber size 600x600x500mm deep with 100mm thick concrete block rendered all round in cement and and sand mortar (1:4) including hinged iron cover amd frame in grease	1	ITEM		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
13.7.27	<p><b><u>Booster Pump Sets</u></b>  Booster Pump Sets (2No) for ROOF TOP water Tanks (M/S) mounted on a common Mild Steel base Frame and to approval,each set comprising of, One pump duty, One pump stand by, and each of capacity <b>4m3/hr</b> against a Maximum Head of <b>40(metres)</b> as approved. 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 <b>60Litres</b> as approved 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>	1	ITEM		
13.7.28	<p><b><u>Testing</u></b>  Allow for connecting the above earlier described Booster pumps to the pump delivery and suction lines, including Test Pumping and testing the whole of the water Reticulation system both during progress and at commissioning to the Engineer's satisfaction and to leave the system in and good sound working condition</p>	1	ITEM		
13.7.30	<p><b><u>Hose Reel Booster Pump Set</u></b>  Booster Pump Set for Hose Reels consisting of 2No. parallel duty pumps mounted on a common Mild Steel base Frame to approval,each of capacity <b>12m3/hr</b> against a Maximum Head of <b>40(metres)</b>. The pump set shall be complete with control panel, MCBS, Pressure and Float switches, Overload protection, ON/OFF Buttons, Indicator Lights, Non -Return and Gate valves and a Pressure Vessel of Approx Capacity <b>300Litres</b> including all other accessories for proper fuctioning. The pumps shall be connected in that when the Running Duty pump fails the Standby Pump starts up automatically.</p>	ITEM	1		
13.7.24	<p><b><u>Testing</u></b>  Allow for connecting the above earlier described Booster pumps to the pump delivery and suction lines, including Test Pumping and testing the whole of the water Reticulation system both during progress and at commissioning to the Engineer's satisfaction and to leave the system in good and sound working condition</p>	ITEM	1		
13.7.25	<p><b><u>Surface Mounted Water Storage Tanks</u></b>  Supply, deliver and install vertical close end plastic moulded water storage tank of capacity <b>24,000 litres</b> and (size <b>3220mm diameterx3400mm high</b>). 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) and shall be as approved</p>	2	ITEM		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
13.7.26	<p><b><u>Tank Base</u></b>  Allow for the construction of the above mentioned tank base Approx.size 3500mm diameter x 900mm high consisting of 200mm thick coral block wall,100mm thick well compacted hardcore filling,50mm thick blinding class 15/20,Approved Damp proof membrane,A142 BRC Mesh,100mm thick vibrated grade 20 concrete floor slab, 15mm thick screed on the general faces of the tank base in (1:3) cement/sand mortar, 600mm widex1500mm deep strip foundation,including all,reinforcement, Excavations and disposal</p>	3	ITEM		
13.7.27	<p><b><u>Testing</u></b>  Allow for testing the general water supply and reticulation systems to level in sound working condition and to the Engineer's satisfaction</p>	1	ITEM		
	<b>TOTAL WATER RETICULATION CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>ELEMENT NO.08 (FIRE FIGHTING AND PROTECTION SERVICES):</u></b> <b><u>Supply,deliver and install the following Air Conditioners to positions indicated on the contract drawings and as instructed by the Engineer:-</u></b> <b><u>HOSEREELS</u></b> Supply , deliver and install galvanised mild steel tubing to BS 1387 Class C, socketed joints to BS21 and galvanised malleable iron fittings including fixing and jointing. Tenderers must allow in their pipework prices for all the couplings, connectors, joints etc.required in the running length of pipework and also where necessary, for pipe fixing clips, holderbats plugged and screwed, brackets and pipe sleeves through structural members.				
13.8.1	25mm diameter GMS tubing Surface Mounted	30	LM		
13.8.2	50mm diameter GMS tubing Surface Mounted	60	LM		
	<b><u>Extra over GMS tubing for the following:</u></b>				
13.8.3	25mm diameter galvanised malleable iron elbow	20	No.		
	<b><u>Tees</u></b>				
13.8.4	25mm galvanised malleable iron equal tee	14	No		
13.8.5	50mm ditto	14	No		
	<b><u>Reducing Bushes</u></b>				
13.8.6	25 x 20mm galvanised malleable iron reducing bush	14	No		
13.8.7	50 x 25 mm ditto	14	No		
	<b><u>Unions</u></b>				
13.8.8	50mm diameter galvanised malleable iron union	21	No		
	<b><u>Gate Valves</u></b>				
13.8.9	25mm dia approved high pressure screw- down full way non-rising stem solid wedge disc gate valve to BS 5154 PN 16 for Series B Rating with wheel head and joints to steel tubing. As "Crane Model 156 " or equal and approved	8	No		
13.8.10	50 mm Ditto	4	No		
13.8.11	Reducing Tee	14	No		
	<b><u>Hosereels</u></b>				
13.8.12	Non recessed swinging type hosereel complete with 30 metres of 20mm internal diameter rubber fire hose with nylon spray/jet shut off nozzle , conforming to BS 5274	5	No		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
13.8.13	Wire brush , clean, and paint complete installation with one coat of red oxide primer, undercoat, and gloss coat to Architects colour including banding and colour coding to British Standards	1	Sum		
	<b><u>Portable Fire Extinguisher</u></b>				
13.8.14	9Kg cartridge type general purpose portable dry powder fire extinguisher fully charged or equal and approved.	14	No.		
	<b><u>Carbon dioxide Gas Fire Extinguisher</u></b>				
13.8.15	5kg carbon dioxide gas portale fire extinguisher complete with pressure gauge,initial charge and mounting brackets	14	No.		
	<b><u>Water Carbon Dioxide</u></b>				
13.8.16	9.0Litre Water carbon dioxide (WCo2) portable fire extinguisher complete wth pressure gauge,initial charge and mounting brackets.	14	No.		
	<b><u>Signage</u></b>				
13.8.17	Allow for the Signage for fire exits and fire instructions all as described in the particular specifications and to the Project Enginneer's Approval.	1	ITEM		
	<b><u>Testing</u></b>				
13.8.18	Allow for testing the whole fire fighting equipments to leave in sound working condition and to the Engineer's satisfaction	1	ITEM		
	<b><u>Breaching Inlet /Booster inlets</u></b>				
13.8.19	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	No.	1		
	<b><u>Breeching Inlet Cabinet</u></b>				
13.8.20	Supply and install breaching inlet cabinet, recessed type to accommodate 6" x 4 way breaching inlet manufactured to comply to BS5041-5	No.	1		
	<b><u>Valve Chamber</u></b>				
13.8.21	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	No.	2		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				



PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
	<b><u>External Fire Hydrant</u></b>				
13.8.22	Supply 2 way pillar type fire hydrant with dia 63 outlet to LCPB/EN 12845 standard	No.	2		
	<b><u>100 mm hydrant isolation valve</u></b>				
13.8.23	UL Listed/ FM Approved, Connection: Flanged as BS EN 1092-2/ Flanged as ASME B16.1, PN 16	No.	2		
	<b><u>Underground Piping</u></b>				
	<i>Supply, install below HDPE PN 20 to BS EN 12201, ISO 4427 ground pipe providing, fixing, jointing, testing in position &amp; commissioning, including excavation &amp; backfilling as required.</i>	LM	130		
	<i>Pipe connection, tees must be electrofusion/butt fusion fittings</i>				
13.8.24	100Ø HDPE				
	<b>TOTAL FIRE FIGHTING CARRIED FORWARD TO MECHANICAL WORKS SUMMARY PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>ELEMENT NO.13.9:</b> <b><u>ON-SITE WASTEWATER TREATMENT PLANT</u></b> <b><u>Preliminaries, Drawings, Manuals, Handovers,</u></b> <b><u>Training, Regulatory Matters, Operation &amp;</u></b> <b><u>Maintenance</u></b>				
13.9.1	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. Personnel to be full capable of regular and routine maintenance tasks and reporting.	SUM	1		
13.9.2	Allow for Monthly Maintenance visits for period of Twelve (12) Months	SUM	1		
13.9.3	Allow to liaise with the NEMA authorities, assist client with submitting application and obtaining discharge licence for the Waste Water treatment Plant	SUM	1		
13.9.4	On completion of the Waste water treatment plant, take water samples as necessary to Certified Laboratory for testing. Submit tests and results to NEMA along with all necessary application forms and obtain NEMA approval and licence to operate the Waste Water treatment Plant	SUM	1		
13.9.5	Allow for any other item not necessarily mentioned here to provide a complete working system to the Satisfaction of the engineer	SUM	1		
13.9.6	<b><u>Waste Water Treatment Plant</u></b> Supply, Install, Test and Commission the Moving Bed Biofilm Reactor (MBBR) Waste Water Treatment System, With a capacity of treating <b>100PE</b> with an average flow rate of <b>15,000 lts per day</b> . With a <b>BOD load of 6Kgs per day, Ammonia Nitrogen load of 4Kgs per day</b> . With minimum treated discharge requirement of <b>BOD &lt;30mg/lit, TSS &lt;30mg/lit, Ammonia Nitrogen &lt;20mg/lit</b> . Complete with all Media, Screens, Pumps, Aeration Blowers, Aeration Diffusers, Manifolds, Level sensors, Valves, Piping, Fittings and Accessories to fully conform to the specified discharge requirements.	Item	1		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
13.9.7	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.	NO	1		
13.9.8	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.	SUM	1		
13.9.9	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 <sup>3</sup> . Required Surface Area specification shall be 675m <sup>2</sup> /m <sup>3</sup> .	SUM	1		
13.9.10	Process Aeration Blowers 1.6 kW / 3 HP positive displacement (PD), one (1) duty, one (1) standby.	NO	2		
13.9.11	Fine bubble aeration system, in-basin pipes and connections to the top of the wall of the basin.	SUM	1		
13.9.12	9" Fine Bubble Disc diffusers. Specification is PTFE coated EPDM membranes. PTFE protective layer is to ensure extended useful lifespan of diffusers over standard EPDM diffuser products.	NO	35		
13.9.13	Allow for Coarse inlet Screen 2" slots for capture of large rags and solids. Fabricated with 50mm polypropylene structure & Stainless Steel.	NO	1		
13.9.14	Allow for PolyLok PL-625 Effluent Filter with 1/32" linear feet filter slot size for capture of smaller fine solids. Effluent Filter shall come with automatic shutoff ball for closing outlet to avoid solids wash through during servicing, as acting as a gas deflector.	NO	3		
13.9.15	1 HP submersible RAS/WAS pumps	NO	1		
13.9.16	Influent pumps, one (1) duty and one (1) standby	NO	2		
	<b>TOTAL CARRIED TO NEXT PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
13.9.17	Chemical dosing pumps and controls for sodium hypochlorite, plus chemical makeup tank. System for Chlorine Disinfection of Treated Waste Water.	SUM	1		
13.9.18	All pipe & fittings as required to complete the interconnecting system and all necessary fittings, valves and accessories.	SUM	1		
13.9.19	All Electrical wiring as required to complete the interconnecting system and all necessary conduits, fittings and accessories.	SUM	1		
13.9.20	Allow for Installation of Wastewater Treatment Plant Equipment, include all Labour, Transport & Sundries Costs	SUM	1		
	<b><u>Bio- Reactor</u></b>				
	<b><u>Supply, install, test and commission the following</u></b>				
13.9.21	5000lts/ hr Bio- Reactor DAF- Dissolved Air Floatation-system with a bubble size of less than 10um, Dissolved gas efficiency is over 95%, the solid suspended matter content in effluent to be less than 20 mg/L	ITEM	1		
	<b><u>TOTAL FOR ON-SITE WASTEWATER TREATMENT PLANT CARRIED TO MECHANICAL WORKS SUMMARY</u></b>				

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

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## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>MECHANICAL WORKS SUMMARY PAGE:-</u>				
13.1	INTERNAL PLUMBING				
13.2	SANITARY FITTINGS				
13.3	FOUL DRAINAGE				
13.4	TESTING				
13.5	ICE FLAKE MACHINE, ROOM INSULATION AND ACCESSORIES				
13.6	BUILDERS WORK				
13.7	WATER RETICULATION 8				
13.8	FIRE FIGHTING				
13.9	WASTE WATER TREATMENT				
13.10	GENERAL ITEMS				
	TOTAL FOR MECHANICAL WORKS CARRIED FORWARD TO GRAND SUMMARY PAGE				

**ELECTRICAL WORKS**

**BILL NO.14**

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<i>(All Rates are V.A.T Inclusive)</i> <b>BILL NO. 14; ELECTRICAL WORKS</b>				
	<b><u>SCHEDULE 1:</u></b> <b><u>PUMP HOUSE, POWER HOUSE, OPEN AIR MARKET, FISH BANDA, FISH MENDING SHED &amp; FISH GEAR STORE</u></b> <u>Supply Install, Test and Commission Following:-</u> <b><u>LIGHTING POINTS</u></b>				
14.1.1	Lighting points wired in 3x4.5mm <sup>2</sup> PVC/SC copper cables drawn in concealed 20mm diameter heavy gauge PVC conduit including all boxes, saddles and accessories for				
	i)One way switching	No.	73		
	ii)Two Way switching	No.	24		
14.1.2	<b><u>10A plastic switch plates as follows</u></b>				
	i)One gang one way	No.	18		
	ii)One gang two way	No.	10		
	iii)Three gang two way	No.	2		
	iv)Intermediate switch	No.	1		
	v)Two gang one way	No.	1		
	<b><u>LIGHTING FITTINGS</u></b>				
14.1.3	Light fittings complete with all the necessary fixing accessories and rated energy lamps as follows:-				
	i) Exit Light	No.	9		
	ii) Type 600X600	No.	1		
	iii)Type 2	No.	21		
	iv) Type 2D	No.	6		
	v) Type 4	No.	19		
	vi) Type N	No.	7		
	viii) Type 4C	No.	15		
	ix) Type M	No.	19		
14.1.4	Motion Sensors for lighting in washrooms	No.	8		
	<b><u>POWER OUTLETS</u></b>				
14.1.5	Socket outlet point in Ring wiring of 3x2.5 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	36		
14.1.6	13A Twin switched moduled socket outlet plate	No.	36		
14.1.7	20A Double Pole outlet point comprising of wiring in 3x4.0 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	12		
14.1.8	20A Double pole switch complete with neon light	No.	12		
	<b><u>ELECTRICAL SWEEP FANS</u></b>				
14.1.9	Ceiling fan points wired in 3x2.5mm <sup>2</sup> PVC/SC copper cables drawn in concealed 20mm diameter heavy gauge PVC conduit including all boxes, saddles and all accessories	No.	8		
14.1.10	<b><u>CEILING FANS</u></b>				
	i) 49W 1400mm 3-arm 5- speed, Ceiling fan complete with the regulator	No.	8		
14.1.11	Ceiling fan hook (M-10) complete with rawl bolt.	No.	8		
	<b>TOTAL C/F TO NEXT PAGE</b>				



**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b>BALANCE B/F/ FROM PREVIOUS PAGE</b>				
	<b><u>FIRE DETECTION AND ALARM SYSTEM</u></b>				
14.1.12	Fire alarm panel/Fire alarm bell/Break glass Unit Points/Smoke detector points comprising iring in 3x1.5mm <sup>2</sup> fire risistant cables concealed in PVC conduits concealed in ceiling space but excluding bell and break glass unit	No.	33		
14.1.13	Addressable Call point	No.	9		
14.1.14	Addressable Sounder complete with beacon	No.	9		
14.1.15	Addressable Smoke detectors complete with base	No.	11		
14.1.16	Heat detectors complete with base	No.	6		
14.1.17	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		
	<b><u>TELEVISION, CCTV AND DATA WORKS</u></b>				
14.1.18	16 SWG, (450 x 300 x 100)mm <sup>3</sup> flush mounted galvanised powder coated draw box for telephone & data works	4	No		
14.1.19	Telephone/Data outlet point comprising of concealed 20mm diameter HG PVC conduits plus draw wire	30	No		
14.1.20	RJ45, Single Data outlet plate a) Single	1	No		
	<b><u>DISTRIBUTION BOARDS</u></b>				
14.1.21	8-Way TP/N distribution board flush mounted complete 1No. 125A TPN integral isolator.	No.	1		
14.1.22	8-Way TP/N distribution board flush mounted complete 1No. 100A TPN integral isolator.	No.	1		
14.1.23	4-Way TP/N distribution board flush mounted complete 1No. 100A TPN integral isolator.	No.	4		
14.1.24	6- way SP/N Consumer Unit flush mounted complete 1No. SP/N intergral isolator	No	1		
14.1.25	<b>MCBs for the above boards</b> i)16A SP ii)20ASP iii)32ASP iv)32ATP vi) Blanking Plates	No. No. No. No. No.	14 12 12 11 29		
	<b><u>SUB-MAINS CABLES</u></b>				
14.1.26	4 core 25mm <sup>2</sup> PVCC/SWA/PVC (armoured) + 1X16mm <sup>2</sup> single Core copper cables drawn inside HG conduits	LM	150		
14.1.27	4 core 16mm <sup>2</sup> PVCC/SWA/PVC (armoured) + 1X16mm <sup>2</sup> single Core copper cables drawn inside HG conduits	LM	200		
14.1.28	3 core 10mm <sup>2</sup> PVC/SWA/PVC (armoured) copper cables drawn inside 50mm diameter HG conduits	Lm	30		
	<b>TOTAL C/F TO NEXT PAGE</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b>BALANCE B/F/ FROM PREVIOUS PAGE</b>				
<b>14.1.29</b>	Cable glands for the above cable	No.	12		
<b>14.1.30</b>	Cable lugs for the above cable complete with hydraulic crimping	No.	24		
<b>14.1.31</b>	Single phase isolator point comprising of wiring in 3x6.0 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No	2		
<b>14.1.32</b>	32A Single phase Isolator complete with 3 pin industrial socket and plug	No	2		
<b>14.1.33</b>	Three phase isolator point comprising of wiring in 5x6.0 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	3		
<b>14.1.34</b>	32A Three phase Isolator complete with 5 pin industrial socket and plug	No.	3		
<b>14.1.35</b>	Powder Coated Electrical Pedestal Socket Box with provision for 4No. Standard Twin sockets and 4 No. Standard double data outlet	No.	1		
	<b>TOTAL PUMP HOUSE, POWER HOUSE, OPEN AIR MARKET, FISH BANDA, FISH MENDING SHED &amp; FISH GEAR STORE SUMMARY PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
14.2.1	<p><b><u>SCHEDULE 2 MAIN POWER DISTRIBUTION</u></b></p> <p>Free-standing purpose made front access sub main switchboard, modular, metal clad, manufactured in 12 SWG galvanised mild steel sheet and finished in cream (or appropriate colour) powder coating as shown on the schematic. The switchboard should consist of a PLC section. The switchboard to be complete with the following:-</p> <p>i) Digital multimeter with CTs and fuse protection capable of measuring voltage in the range 0 – 1000V, 3-phase, current in the range 0-400A, 3-phase, and all power system parameters (KW, KVA, KW/Hr, 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) 6 No. 100A 3 P TPN MCCBs</p> <p>vi) 1 No. 63A SPN MCBs</p> <p>vii) 2 No. 32A TPN MCBs</p> <p>viii) Sufficient spare capacity for future development all fitted with 2 No. 63A SP MCBs &amp; 2 No. 100A TP MCCB</p> <p>x) Sealable studs for all cover plate screws and all necessary accessories</p> <p>xi) 6mm perspex viewing window</p> <p>xii) Heavy duty rubber lining for all the perspex viewing windows</p> <p>xiii) 415V three-phase surge diverter, wired as shown, complete with enclosure with viewing window.</p> <p>xiv) 20 KVAR's automatic Power Factor Correction Capacitor Bank comprising the following:-</p> <p>a) 4 No 5 KVAR's 415 V, 50Hz, 3-Phase</p> <p>b) 4 No Special contactors for capacitor switching</p> <p>c) 4 No Fuse bases and fuses for each capacitor protection</p> <p>e) 4 No Step indicator lamps</p> <p>f) 4 No Control circuit protection fuse/fuse holder</p> <p>g) 1 No. 4-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><b><i>The bank to be made from low-loss bio-degradable capacitive units, complete with earthed enclosure. All the contactors, controls and indicator lamps, including a digital read-out screen, to be included.</i></b></p>	Item	1		
	<b>TOTAL C/F TO NEXT PAGE</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
	xvi) Comprehensive protective multiple earthing of the board in 1500mm long 12mm diameter pure electrolytic copper earth rod deep driven to permanent moisture level, copper clamp. 120mm <sup>2</sup> green earth lead complete with all accessories. (Note: Use parallel rods if effective earthing cannot be achieved with 1 No. rod).				
14.2.2	4C50mm <sup>2</sup> PVC/SWA/PVC armoured copper cable + 1X16mm <sup>2</sup> single Core copper cables laid in ducts in trench from KPLC Meter to main low voltage board complete with glands and lugs	LM	50		
	<b>UNDERGROUND CABLE DUCTING</b>				
14.2.3	Allow for 300mm deep trenching and back filling for the cable mentioned before, Telecommunication and street lighting.	Lm	200		
14.2.4	Ducting for the above in 150mm HGPVC Pipes complete with haunching	Lm	200		
14.2.5	Allow for cable markers in concrete tiles marked "HATARI" for the item above	No.	20		
	<b><u>WATER PUMPS PROVISIONS</u></b>				
14.2.6	3 core 6mm <sup>2</sup> PVC/SWA/PVC (armoured) copper cables drawn inside 32mm diameter HG conduits	Lm	90		
14.2.7	32A Single phase Isolator complete with 3 pin industrial socket and plug	No.	4		
	<b><u>BIO- DIGESTER PROVISIONS</u></b>				
14.2.8	4 core 25mm <sup>2</sup> PVC/SWA/PVC (armoured) copper cables drawn inside 32mm diameter HG conduits	Lm	150		
14.2.9	Cable glands for the above cable	No.	4		
14.2.10	Cable lugs for the above cable complete with hydraulic crimping	No.	20		
14.2.11	8-Way TP/N distribution board flush mounted complete 1No. 100A TPN integral isolator.	No.	2		
14.2.12	<b>MCBs for the boards above</b>				
	i)16A SP	No.	2		
	ii)20ASP	No.	6		
	iii)32ASP	No.	10		
	iv)32A TP	No.	8		
	v)Blanking Plates	No.	6		
			32		
14.2.13	Single phase isolator point comprising of wiring in 3x6.0 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	10		
14.2.14	Three phase isolator point comprising of wiring in 5x6.0 mm <sup>2</sup> PVC-SC-Cu cables drawn inside 20mm diameter HG conduits	No.	6		
14.2.15	32A Single phase Isolator complete with 3 pin industrial socket and plug	No.	10		
14.2.16					
14.2.17	32A Three phase Isolator complete with 3 pin industrial socket and plug	No.	6		
	<b>TOTAL FOR POWER DISTRIBUTION C/F TO SUMMARY PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b><u>SCHEDULE 3</u></b> <b><u>40KW SOLAR SYSTEM</u></b>				
14.3.1	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.	70		
14.3.2	25KWh Lithium Battery Pack Smart Stirng Energy Storage System (ESS) including a smart Rack Controller. Max Charging & Discharge power: 25kW, IP65, Class A EMC Protection Rating, Type II DC Lightning Protection. Smart Rack efficiency: +98.5%,	No.	1		
14.3.3	Smart Power Control System, 40kW DC/AC hybrid Power inverter full protection function:over-voltage, over-frequency, over-current, over-temperature, AC short-circuit automatic protection, Rated Output power 100KW MPPT efficiency of upto 99.5% Pure Sinewave output	No.	1		
14.3.4	Solar MPPT charge controller with the following characteristics; PV open circuit voltage 500V, Max PV power 40KW, 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		
14.3.5	40 kW DC Isolators as ABB or schneider or an approved equivalent	No.	1		
14.3.6	63A TPN AC isolator as ABB or schneider or an approved equivalent	No.	1		
14.3.7	Irradiance sensor (Pyranometer) with Modbus RTU output as Huawei FusionSolar or an approved equivalent	No.	1		
14.3.8	Aluminium mounting frames, brackets and all accessories required to mount the P.V modules as per the specifications	No.	75		
14.3.9	Solar surge protection device rated for 300VDC or to the Engineers approval	No.	1		
14.3.10	List any other item necessary to complete the installation of the 40KW grid- tied solar system  <i>Contractor to note that the inverter and batteries together with their associate works should be housed in a container. Rates included should include the container housing</i>	Lot	1		
	<b>TOTAL FOR HYBRID SOLAR POWER C/F TO SUMMARY PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b><u>SCHEDULE 4</u></b>				
	<b><u>STANDBY POWER SUPPLY SYSTEM (GENERATOR SET)</u></b>				
	<b>GENERATING SET</b>				
14.4.1	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		
14.4.2	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		
14.4.3	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		
14.4.4	Complete earthing of generating set to electrical engineer's approval	Item	1		
	<b><u>AMF CONTROL PANEL</u></b>				
	<b>Supply, deliver to site, install, test and commission the following:</b>				
14.4.5	An electrical control panel complete with 150A incoming MCCBs and contactors for automatic change over operation and complete with all other control accessories	No	1		
14.4.6	Suitable rated manual by-pass switch with clearly labeled <b>NORMAL-OFF-BYPASS</b> positions, <b>and shall such be wired that when the switch is on either OFF or BYPASS position, the generator shall receive no signal to start</b>	No.	1		
14.4.7	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 <b>IDLE mode</b> , otherwise when the set is <b>RUNNING</b> , the battery shall be charged by the <b>generator charger</b> .	No.	1		
14.4.8	12 volts battery as directed by the Engineer's specifications	No.	1		
	<b><u>RECOMMENDED SPARE PARTS AND LUBRICATORS</u></b>				
	<b>For the supply to the site of the following spare parts and lubricators:</b>				
14.4.9	Oil Filters	No.	2		
14.4.10	Air Filters	No.	2		
14.4.11	Fuel filters to suit the set	No.	2		
14.4.12	Set of Fan belts to suit the set	No.	1		
14.4.13	10 litres container of sump oil of grade.....*	No.	1		
	<b>TOTAL C/F TO NEXT PAGE</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
<b>14.4.14</b>	2 kilogram grease in a tin of grade .....*	No.	1		
<b>14.4.15</b>	10 litre plastic container of distilled water	No.	1		
<b>14.4.16</b>	20 litre of engine oil in a tin of grade .....*	No.	1		
<b>14.4.17</b>	Any other spare parts recommended by Tenderer **	Sum	1		
	<b>*The tenderer to fill in the Grade quality to be supplied</b>				
	<b>**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</b>				
	<b><u>TOOLS TO BE SUPPLIED WITH THE SET</u></b>				
	<b>For the supply to site of the following tools:</b>				
<b>14.4.18</b>	Metal tool box with lock and two keys	No.	1		
<b>14.4.19</b>	Set of 8 No. Chrome vanadium ring spanners in sizes to suit the set	No.	1		
<b>14.4.20</b>	Set of 3 screwdrivers, 75mm, 200mm and 300mm plus one 200mm Philips type	No.	1		
<b>14.4.21</b>	- ditto -but open ended spanners	No.	1		
<b>14.4.22</b>	Set of feeler gauges	No.	1		
<b>14.4.23</b>	Set of 8 No. Ratchets in sizes to suit the set	No.	1		
<b>14.4.24</b>	Grease gun to suit greasing points complete with compressor	No.	1		
<b>14.4.25</b>	Oil can, trigger type	No.	1		
<b>14.4.26</b>	Any other special tools which the tenderer recommends should be purchased as an optional:*	Item	1		
	<b><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.</b>				
	<b>TOTAL FOR 100KVA GENERATOR C/F TO SUMMARY PAGE</b>				

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b>SCHEDULE 5 SOLAR STREET LIGHTING</b>				
<b>14.5.1</b>	Type M	No.	36		
<b>14.5.2</b>	7 meter Long Class B Galvanized Iron Solar Street Lighting pole as per detail for Type M lighting	No.	9		
<b>14.5.3</b>	Excavate holes to take the poles above, average depth 1000mm, install pole back-fill with concrete class 15/20, and compact to natural ground level.	No.	9		
	TOTAL FOR SOLAR STREET LIGHTING C/F TO SUMMARY PAGE				



PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b><u>ELEMENT 6 CCTV</u></b> <b><u>Supply, install, test, commission and set to work (To the full satisfaction of all parties to the contract) the following: -</u></b>				
14.6.1	Dome Camera 4MP resolution, Excellent low light performance, Efficient H.265+ compression technology, IP67, 24/7 colourful imaging	No.	17		
14.6.2	Ditto but Bullet Cameras	No.	9		
14.6.3	Network Video Recording System base to be mounted in a 42U data Cabinet with the following features:-  <ul style="list-style-type: none"> <li>• Up to 32 channel IP cameras can be connected</li> <li>• Up to 576 Mbps high incoming bandwidth ensures IP cameras can be connected</li> <li>• 2 HDMI (different source) and 1 VGA interfaces</li> <li>• 16 HDD can be used for continuous video recording</li> <li>• 16 HDD can be used for continuous video recording</li> <li>• Supports some specialist cameras, including people counting camera/ANPR (automatic number plate recognition) camera/fisheye camera</li> <li>• Advanced streaming technology enables smooth live view in poor network conditions</li> <li>• Supports RAID 0, 1, 5, 6, 10 and N+1 hot spare for even more reliable data storage, effectively avoids data loss risks</li> </ul>	No.	1		
14.6.4	24 Port layer 2 100Mbps POE SFP Switch with Min 30W Power availability per port	No.	2		
14.6.5	GBIC transceiver modules (LC to LC) multimode for the switches above	No.	2		
14.6.6	Fibre Patch Panels for Data cable termination	No.	2		
14.6.7	9 U 600X600 wall mounted data cabinet complete with all accessories including power supply points	No.	2		
14.6.8	10TB Surveillance Hard Disk Drive	No.	12		
14.6.9	STP Cat 6 structured cables	Rolls	12		
14.6.10	STP Cat. 6 patch cord, 3M for the Cameras.	No.	26		
14.6.11	UPT Cat. 6A patch cord, 1M	No.	26		
14.6.12	8 core Loose tube multimode fibre optic cable linking floor edge switches to core switch in the Server room	Lm.	150		
14.6.13	24 Port ST Multimode, sliding Fibre Optic patch panel complete with LC type connectors for Multimode fibre	No.	1		
14.6.14	1M Factory Terminated Fibre optic patch cords complete with LC-LC TYPE connectors to be used inside cabinet	No.	26		
14.6.15	24 port Core network switch	No.	1		
14.6.16	2U Cable managers/organisers	No.	2		
	<b>TOTAL FOR CCTV CARRIED FORWARD TO SUMMARY PAGE</b>				

PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
	<b><u>SCHEDULE 7</u></b>				
	<b><u>GENERAL ITEMS</u></b>				
14.7.1	Carry out comprehensive 24-hour power analysis, after installing main switchboard, but before switching on load with a digital power meter (with printer) to: i) Record and print all the power system parameters. ii) Submit 3 copies of the print-outs. <i>(Note: Parameters must be satisfactory before building is switched on).</i>	Item			
14.7.2	Allow for presentation of all the required samples as per specifications, Bills of Quantities and Drawings.	Item			
14.7.3	<b>Working/ Shop Drawings</b> Prepare and submit three sets of record (shop) plan and isometric layout drawings to easily readable scale, A1 or A0 paper size format 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 (CAD) and hard copy to the client, the architect and the engineer. The soft copies to be stored in SSD drive. Allow for preparation and submitting draft and three final copies of operation, instruction and maintenance manuals to Engineers approvals.	Item			
14.7.4	<b>As Installed Drawings</b> As above but for as built/ installed drawings	Item			
14.7.5	Prepare and submit Maintenance Manuals for all items installed.				
14.7.6	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			
	<b>TOTAL C/F TO NEXT PAGE</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMT
<b>14.7.7</b>	<b>BALANCE B/F FROM PREVIOUS PAGE</b>				
	<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>				
	<b>TOTAL FOR GENERAL ITEMS C/F TO SUMMARY PAGE</b>				

## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

[illegible]

**DAY WORKS**

**BILL NO.15**

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

Item	Description	Unit	Qty	Rate	Amount
	(All Rates are V.A.T Inclusive)				
	<u>The dayworks rates priced below should include all overheads and profits</u>				
<b>15.1</b>	<b><u>Provision of labour</u></b>				
15.1.1	Porter	Hrs	3		
15.1.2	Semi-skilled	Hrs	3		
15.1.3	Mason/	Hrs	3		
15.1.4	Steel fixer	Hrs	3		
15.1.5	Carpenter	Hrs	3		
15.1.6	Painter	Hrs	3		
15.1.7	Tile fixer	Hrs	3		
15.1.8	Welder/Electrician	Hrs	3		
15.1.9	Foreman	Hrs	3		
15.1.10	Carpenter for joinery	Hrs	3		
15.1.11	Plumber	Hrs	3		
15.1.12	Electrician	Hrs	3		
<b>15.2</b>	<b><u>Provision of plant</u></b>				
	<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>				
15.2.1	Lorry (minimum 8 tonne capacity - or similar)	Hrs	3		
15.2.2	Tipper (8 tonne capacity - or similar)	Hrs	3		
15.2.3	Compressor	Hrs	3		
15.2.4	Roller	Hrs	3		
15.2.5	Plate compactor	Hrs	3		
15.2.6	Wheel loader	Hrs	3		
15.2.7	Grader	Hrs	3		
15.2.8	Crawl loader	Hrs	3		
15.2.9	Jack hammer	Hrs	3		
15.2.10	Dewatering pump	Hrs	3		
15.2.11	Concrete mixer	Hrs	3		
15.2.12	Dumper	Hrs	3		
15.2.13	Hand tools (power drills, grinders, torque wrenches, etc.)	Hrs	3		
15.2.14	Excavator	Hrs	3		
15.2.15	Bulldozer	Hrs	3		
15.2.16	Motor grade	Hrs	3		
15.2.17	Portable generator	Hrs	3		
15.2.18	3-Phase power generator	Hrs	3		
15.2.19	Vibrator	Hrs	3		
	<b>Total Carried to Summary</b>				

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY -  
KILIFI COUNTY**

Item	Description	Unit	Qty	Rate	Amount
15.3	<b><u>Provision of material</u></b> <b><u>Any materials to be provided must be of good quality and upto standard for use in permanent works. The rate provided must be inclusive of all delivery costs and overheads</u></b>				
15.3.1	Ordinary portland cement @ 50kg bags	Bags	4		
15.3.2	Clean river sand	m3	4		
15.3.3	12-20mm graded course aggregate	m3	4		
15.3.4	Manufactured sand / Quarry dust / 0-6mm aggregate	m3	4		
15.3.5	Graded crushed stone (crusher run - 0 to 60mm)	m3	4		
15.3.6	Murram	m3	4		
15.3.7	Hardcore	m3	4		
15.3.8	Redsoil	m3	4		
15.3.9	Reinforcement steel	Kg	100		
15.3.10	Sawn timber formwork	m2	4		
15.3.11	6mm thick clear glass	m2	4		
15.3.12	Water	lts	100		
15.3.13	Diesel fuel	lts	4		
	<b>Total Carried to Summary Below</b>				
	<b><u>DAYWORKS SUMMARY</u></b>				
A	Total Brought Forward from page DW/1				
B	Total Brought Forward from DW/2 above				
	<b>TOTAL FOR DAY WORKS CARRIED TO GRAND SUMMARY</b>				

**PROVISIONAL SUMS**

**BILL NO.16**



## PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI COUNTY

[illegible]

# GRAND SUMMARY

**PROPOSED WORKS AT KILIFI CENTRAL LANDING SITE IN KILIFI NORTH SUB-COUNTY - KILIFI  
COUNTY**

**GRAND SUMMARY**

ITEM	DESCRIPTION	FOR TENDERER'S USE ONLY	FOR OFFICIAL USE ONLY
		K.SHS.	K.SHS.
A	Particular Preliminaries		
B	General Preliminaries		
C	Environmental and Social Management Plan	4,320,000.00	
D	Builder's Works		
E	Foul Water Drainage		
F	Driveway and Parking		
G	Floating Jetty		
H	Mechanical Works		
I	Electrical Works		
J	Day Works		
k	Provisional Sums	15,500,000.00	
	<b>TOTAL CARRIED TO FORM OF TENDER</b>		

Amount in words. Kenya shillings .....

.....Cents .....

Tenderer's Signature and stamp.....

Address .....

.....

Date .....

Witness Signature .....

Address .....

.....

Date .....

## 17. GRAND SUMMARY

Contract Name: CONSTRUCTION OF KILIFI CENTRAL FISH LANDING SITE”

RFBNo.: KE-MOMBE&MA-KLF-2024-009-CW

<i>General Summary</i>	<i>Page</i>	<i>Amount</i>
Bill NO. 1: PARTICULAR PRELIMINARIES	PP/7	
Bill NO. 2: GENERAL PRELIMINARIES	GP/13	
BILL NO.3 ESMP	ESMP/8	
BUILDER'S WORK SUMMARY PAGE	SBW/1	
BILL NO. 10: FOUL DRAINAGE	FD/7	
BILL NO. 11: DRIVEWAY AND PARKING	DW/12	
BILL NO. 12 : FLOATING JETTY	FJ/8	
BILL NO.13: MECHANICAL WORKS	MECH/23	
BILL NO.14: ELECTRICAL WORKS	ELEC/13	
BILL NO. 15: DAY WORKS	DW/2	
<i>Subtotal of Bills</i>	<i>(A)</i>	
<i>Total for Daywork (Provisional Sum)*</i>	<i>(B)</i>	
<i>Provisional Sum of Kenya Shillings Four Million, Five Hundred Thousand Only (Kes 4,500,000.00) for fluctuations<sup>ii</sup></i>	<i>(C)</i>	<i>4,500,000.00</i>
<i>Total of Bills Plus Provisional Sums (A + B + C)<sup>i</sup></i>	<i>(D)</i>	
<i>Add Provisional Sum of Kenya Shillings Eleven Million Only (Kes 11,000,000.00) for Contingency Allowance<sup>ii</sup></i>	<i>(E)</i>	<i>11,000,000.00</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