



**Kenya Power**

**PROPOSED RENOVATIONS,  
WATER RETILULATION, ELECTRICAL  
RETROFITTING, PLUMBING AND DRAINAGE  
WORKS AT RABAI STAFF HOUSES.  
PHASE I**

**KILIFI COUNTY**

**BILLS OF QUANTITIES**

*WBS*

PART NO."1"

TRADE PREAMBLES

KENYA POWER

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

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PART NO. 1TRADE PREAMBLES1.00 GENERALLY

- .01 Unless otherwise stated the whole of the Main Contract Works shall be carried out in accordance with the Ministry of Works (M.O.W.) General Specifications for Building Works 1976 Edition together with any amendments thereto and all references in this Section are to this document.
- .02 The whole of the Works shall be carried out in accordance with the drawings listed in the Schedule of Drawings appearing in these Bills of Quantities and any further drawings issued in amplification thereof.
- .03 This Section shall be known as the Specification and shall be held to include the Special Notes on Page A1 and the General Preliminaries on B1 – 22 of the M.O.W. General Specifications.
- .04 These Trade Preambles are intended to supplement, amplify or amend the Clauses in the M.O.W. General Specification, or select therefrom specific provisions applicable to this Contract.
- .05 These Trade Preambles shall take precedence over the M.O.W. General Specifications.

2.00 SITE COPY

- .01 The Contractor is instructed to purchase two (2) copies of the above General Specification from the Ministry of Lands, Housing & Urban Development - State Department of Public Works and to retain one copy in the site office at all times.

3.00 APPLICATION

- .01 These Trade Preambles shall apply to all Bill items for Building Works contained in the following Bills of Quantities and to any works instructed by the Project Manager including all works covered by P.C. and Provisional Sums and the rates and Lump Sum tenders for all items shall include for complying in all respects with these Trade Preambles and their provision.

4.00 TERMS

- .01 Where the terms “D.R.” occurs in the M.O.W. General Specification this shall be taken to mean the “Project Manager”.
- .02 Where the term “Ministry of Works” occurs in the M.O.W. General Specification this shall be taken to mean the “Employer” or the “Project Manager” whichever is the more appropriate.

5.00 MANUFACTURER’S NAME

- .01 Manufacturer’s names and catalogue references are given solely as a guide to quality and alternative manufacturers of materials or goods of equivalent quality will be accepted at the discretion of the Project Manager.

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS



PART NO. 1 (Ctd.)TRADE PREAMBLES (Ctd.)6.00 DEMOLITIONS

- .01 The Trade Preambles given in Pages C1 – C5 shall apply where appropriate.
- .02 All such work shall where required by the Contract and authorised by the Project Manager to be carried out with maximum precautions for safety and to avoid or minimise damage or disturbances to the adjacent buildings, areas, materials and occupants.
- .03 Every effort shall be made to carry out such work carefully and in such manner and by such means as to ensure the minimum breakage or damage to the works to be so taken down or dismantled and to ensure the maximum recovery of materials arising from these operations.
- .04 All materials so recovered from taking down and dismantling shall become the property of the Employer. Unless otherwise directed by the Project Manager, the Contractor shall hand over to the Employer such items immediately they are taken down or dismantled.
- .05 Such materials may only be reused for incorporation in the works by agreement with the Project Manager.
- .06 The Contractor shall allow for erecting, maintaining and later removing all scaffolding, shoring or temporary works in connection with the demolition works, for making good all work disturbed in all trades and for removing all rubbish from the site as the works proceed.
- .07 Supply, erect and maintain during the cutting of openings, etc. all necessary protection to the existing premises against damage by weather or other causes.
- .08 Allow for laying the dust as far as possible during the demolition by watering with a hose or other means.
- .09 Tenderers are advised to visit the site to ascertain the nature of demolitions and duntakings to be carried out and to clarify with the Project Managers all matters related to the works.

7.00 EXCAVATIONS AND EARTHWORKS

- .01 The Trade Preambles given in Pages D1-D11 shall apply.
- .02 The surface strip excavation of the vegetable top soil shall be 200mm deep over the whole area of the buildings in accordance with Clause 0725 and the excavated material shall be deposited separately in spoil heaps well away from other excavated material in accordance with Clause 0784.
- .03 Excavations for wall foundations shall be taken down to firm ground to the approval of the Project Manager and the bottom well rammed and approved before concreting. The width of the foundation shall comply with Clause 0722 on Page D6.
- .04 The actual depth of the foundation trenches shall be determined on site.

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS





PART NO. 1 (Ctd.)TRADE PREAMBLES (Ctd.)7.00 EXCAVATIONS AND EARTHWORKS (Ctd.)

- .05 Insecticide treatment shall be "Termidor" or other equal and approved and shall be carried out in accordance with Clause 0827 and 0859. The bottoms of all excavations shall be treated with anti-termite insecticide treatment in accordance with the manufacturer's recommended instructions. The Contractor shall provide a Ten-year guarantee for all such treatment from an approved firm.
- .06 Backfilling around foundations is to be carried out with selected excavated or other imported materials in accordance with Clauses 0700 and 0735. The backfilling will be free from clay or vegetable soil and well rammed around foundations.
- .07 Disposal of surplus excavated material shall be in accordance with Clauses 0612 and 0782.
- .08 The vegetable soil from the surface strip is to be spread and levelled on site as directed and prepared to receive grass.
- .09 Explosives must not be used without the prior approval of the Project Manager and if authorised must be carried with Clause 0628 as specified.
- .10 Planking and strutting to excavations shall be provided in accordance with Clause 0733 and shall be deemed to be included in the Tender Price and the Tenderer's rate for excavation.
- .11 Disposal of water shall be as specified in Clauses 0770 to 0775.
- .12 Hardcore filling to make up levels under floors shall be in accordance with Clauses 0810 to 0874 and minimum 200mm thick.
- .13 The hardcore filling is to be of clean hard stone broken from 150mm gauge downwards well packed rolled and consolidated to the satisfaction of the Project Manager in accordance with Clauses 0185 and 0868 or 0869 as required.
- .14 The hardcore filling is to be blinded with approved stone quarry dust or approved quality murram well watered and rammed and finished smooth to receive concrete flooring, all in accordance with Clause 0871 and approved chemical anti-termite treatment applied to surface of hardcore to be executed by the Main Contractor as before described under a written ten year guarantee.
- .15 One layer 1000 gauge polythene sheeting is to be laid over the area of the hardcore and through the walls in accordance with Clauses 1105 and 1312. Care must be taken to ensure that the hardcore bed is perfectly smooth before laying the sheeting. Extent of laps shall be minimum 300mm. Labour forming battering faces shall be allowed for.
- .16 The Ground Floor level is to be decided on site but should be an average of 400mm above existing ground level.
- .17 The whole site and excavations in particular are to be kept free from water and mud by bailing or pumping as required.

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS



**TRADE PREAMBLES (Ctd.)**

8.00      CONCRETE WORK

- .01      The Trade Preambles given in Pages F1 – F34 shall apply.
- .02      The whole of the concrete work shall be carried out in accordance with the Structural Engineer's drawings and to his satisfaction.
- .03      The Contractor shall use "Guaranteed Strength" concrete in accordance with the Engineer's requirements.
- .04      Concrete test cube will be required and should be prepared in accordance with the procedure laid down in Clause 282 on Page F15.
- .05      Volume batching of sand and aggregate will be permitted in accordance with Clause 1165. The gauge boxes must be manufactured of steel as directed by the Project Manager and must be kept thoroughly clean at all times and in good repair. Failure to do so may result in the Project Manager directing that all measuring will be by weight batching in accordance with Clause 1167.
- .06      Extreme care must be taken in the storage of all concreting materials on site in accordance with Clauses 1132 and 1134. No materials which have become contaminated or intermixed in any way will be allowed to be used in the works. Special care is necessary to ensure that no soil become mixed with the aggregates or sand.
- .07      All construction joints shall be formed and treated strictly in accordance with Clauses 1360 to 1369 as directed by the Project Manager.
- .08      "Fair faced" concrete finish, if required, will be as defined in Clause 1415.
- .09      Concrete curing to vertical or inclined surfaces shall be carried out by methods 1 and 3 as described in Clause 1385 and as directed by the Project Manager.
- .10      Generally, wall foundations, floor beds and superstructure concrete work shall be in concrete (1:1½ :3 Class 25/20mm) mix reinforced as in the Structural Engineer's drawings.
- .11      Formwork shall be sawn timber of approved quality except where fair face finish is required in which case wrot formwork shall be used. The formwork shall be closely laid to prevent leakage of the cement and water content of the concrete.
- .12      Steps in concrete foundations where required should be of 225mm depth or its multiple and the overlap along the length must not be less than the width of the foundation. The location of any steps required will be decided on site.
- .13      Fabric reinforcement shall be as indicated on the Engineer's drawings and shall be to B.S. 4483 with minimum 300mm side and end laps. Allowance for laps under partitions shall be allowed for.
- .14      The Tenderer shall allow in his tender price for providing reinforcement to concrete works as indicated in the Structural Engineer's drawings

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS



**TRADE PREAMBLES (Ctd.)**

8.00      CONCRETE WORK (Ctd.)

- .15      Precast concrete shall be in accordance with the Pages F33 – F34 and in class 20/12mm to Project Manager's details and approval.
- .16      Mild steel reinforcement shall be to B.S. 4499 and high tensile reinforcement to B.S. 4461, all in accordance with the Engineer's Bending Schedules.
- .17      Joints in concrete work where shown on the drawings shall be 12mm thick "Flexcell" fibre-board or other approved joint with exposed surfaces sealed with "Plastic" sealant.

9.00      WALLING

- .01      The Trade Preambles given in Pages G1 – G15 shall apply.
- .02      All foundation walling shall be in natural stones.
- .03      Unless otherwise stated, all load bearing walling shall be in local natural stone. Internal walling may be in solid concrete block walling complying with the Clauses 2220-2346.
- .04      Vertical d.p.c. is to be provided to walling where shown on the drawings or to the Project Manager's and Engineer's instructions.
- .05      If required, louvred block walling shall be in decorative precast concrete louvred blocks to the approval of the Project Manager.
- .06      Substructure walling shall be bedded, jointed and pointed in cement and sand mortar (1:3).
- .07      The mortar to be used for superstructure walling shall be composed of one part cement to one part lime and six parts sand (1:1:6) measured in gauge boxes and thoroughly mixed dry preferably with an approved mechanical mixer or on a clean and approved mixing platform with water added afterwards until all parts are completely incorporated and brought to a proper consistency and used within the hour. No partially or wholly set mortar will be allowed to be re-used or re-mixed. Clauses 2110 to 2136 shall apply.
- .08      All walls 150mm thick and less shall be reinforced with 25mm hoop iron 20 s.w.g. in every alternate course.
- .09      Where walls are built up under existing lintels, beams or roof slabs, care shall be taken to ensure that the top course shall be completely filled up with cement mortar and pinning and keying to the underside of existing surfaces shall be done with approved wedging materials well driven in.
- .10      Where applicable, all new walling is to be cut, toothed and bonded into existing walls and any damages or cracked portions of adjoining walling shall be made good or replaced with new work.
- .11      Damp proof courses to walls shall be Hessian based bitumen felt or other equal and approved not less than 3.9kg per square metre in one layer and shall be laid and bedded in cement mortar as before described to all walling at ground floor level.

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS



PART NO. 1 (Ctd.)TRADE PREAMBLES (Ctd.)10.00 ASPHALT WORK AND WATERPROOFING

- .01 The Trade Preambles given on Pages J1-J4 shall apply.
- .02 All mastic asphalt work shall be carried out by an approved Sub-contractor in accordance with Clause 2881. Any tanking shall be carried out in accordance with the manufacturer's printed instructions.
- .03 A One year Guarantee for all asphaltic work shall be provided in accordance with Clause 2888.
- .04 Horizontal and vertical asphalt tanking shall be carried out in accordance with Clause 2888.
- .05 Asphalt tanking shall comply with Clause 2824 and 2941.
- .06 Isolating membranes shall comply with Clauses 2852, 2908 and 2943.
- .07 Internal angles at junctions of horizontal and vertical tankings and turning-in of vertical tanking at top edge shall be carried out in accordance with Clauses 2955 and 2956 respectively.
- .08 Preparation of surfaces to receive tankings shall be carried out in accordance with Clauses 2891, 2894, 2896, 2902 and 2912.
- .09 Internal angles at junctions of horizontal and vertical tankings and turning-in of vertical tanking at top edge shall be carried out in accordance with Clauses 2955 and 2956 respectively.
- .10 Preparation of surfaces to receive tanking shall be carried out in accordance with Clauses 2891, 2894, 2896, 2902 and 2912.
- .11 The waterproofing agent to waterproofed cement sand screeds and plasters to swimming pool shall be "Sika-1" waterproofing compound. The concrete used for the construction of the swimming pool shall be mixed with Sika-Plastocrete – N waterproofing compounds. Both "Sika-1" and "Sika Plastocrete – N" waterproofing compounds are available from, several suppliers in Nairobi or other equal and approved compound. The normal rate of application of the "Sika 1" compound is 1 part of "Sika 1" to 10 parts of clean mixing water. The mixing of the "Sika 1" compound and water, cement and sand and the application of the screeds, including the number of coats to be applied shall all be carried out in accordance with the manufacturer's instructions as set out in their latest catalogue. The waterproofing additive shall comply with Clause 7165.
- .12 Construction joints in swimming pool shall have p.v.c. water bars. The water bars shall be fixed in accordance with the manufacturer's printed instructions.

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS



PART NO. 1 (Ctd.)TRADE PREAMBLES (Ctd.)11.00 ROOFING

- .01 The Trade Preambles given in Pages K1-K19 shall apply.
- .02 The roof covering to roofs of sheds, shades, and the like unless otherwise specified in the Bill of quantities shall be 26 gauge pre-painted box profile roof sheeting fixed to mild steel zed purlins using galvanised J-Bolts and plastic washers. The washers and bolts shall comply with Clauses 3223 and 3224 respectively.
- .03 Rainwater down-pipes and fittings shall generally be supplied and fixed in accordance with Clauses 6111-6239.
- .04 All metal flashings, valley gutters and linings shall be of approved gauge pre-painted iron sheet metal made up and fixed in the best approved manner in accordance with Clauses 3620-3696.
- .05 Copings shall be in precast concrete and shall comply with Clauses 1770-1868. The mortar for bedding shall be cement and sand (1:4) and comply with Clauses 210-2136.
- .06 Covering to pitched roofs of public areas and bedroom blocks in hot areas like Mombasa and the like shall be "Harvey Thatch" roof tiles. The tiles and fittings shall comply with Clause 3122. The tiles shall be laid in accordance with the manufacturers printed instructions and to the approval of the Project Manager.
- .07 All verge tile, half tiles and ridge tiles shall be "Harvey Tiles" or other equal and approved tiles to match the roof tiles and shall be laid and fitted in accordance with the manufacturer's printed instructions and to the approval of the Project Manager.
- .08 Softwood tiling battens shall comply with Clause 3102. They shall be fixed to timber rafters in accordance with Clause 3155.
- .09 The polythene underlay shall be 1000 gauge and shall comply with Clause 3115. The underlay shall be laid in accordance with Clause 3152. The nails for fixing underlay shall comply with Clause 3137.
- 10 Matching accessories (ridges, ventilators etc.) shall also be provided to match roof sheets profile.
- .11 Polystyrene or other equal and approved type of filler blocking pieces where applicable shall be provided and secured with adhesive between both flanges of the ridging and the roof sheeting in order to block up the gaps within the corrugations. The Polystyrene shall comply with Clauses 3208.
- .12 All sundry materials for the roofing shall comply with Clauses 3140-3

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

**TRADE PREAMBLES (Ctd.)**

12.00 CARPENTRY

- .01 The Trade Preambles given in Pages L1-L13 shall apply.
- .02 The timber for carpentry work generally is to be Grade H sawn or wrot cypress or podocarpus of approved moisture content in accordance with Section 3720 and shall be treated with preservative and specified in Clause 3728.
- .03 The lower ends of all structural timber members shall be coated with bitumen before building into foundations, walling etc.
- .04 All structural joints shall be to the design and approval of the Structural Engineer and cut ends shall be treated as described in the foregoing before being put together. All joints shall be bound with hoop iron.
- .05 A Certificate of Treatment shall be provided in accordance with Clause 3730.

13.00 JOINERY

- .01 The Trade Preambles given in Pages M1-M21 shall apply.
- .02 Softwood timber where required is to be Select (Prime Grade) wrot cypress of approved moisture content in accordance with Clause 4032 and treated with preservative as above.
- .03 Hardwood timber generally is to be prime grade mahogany of approved moisture content and treated with preservative as above.
- .04 All items of joinery shall have pencil rounded arises for protection against damage and for bedding frames and cills in cement and mortar.
- .05 Holes for plugs shall be formed by using masonry drills and fitting with proprietary plugs of the correct size, cutting holes with hammer and chisel will not be permitted.
- .06 The joinery fittings are to be made up in the best approved manner in accordance with Clauses 3670-4691 and shall be manufactured to the Project Manager's details.
- .07 Samples of each type of joinery fixtures have to be approved by the Project Manager before manufacturing of further items and the Project Manager shall be given Notice of the workshops where these are to be manufactured so that if required these can be inspected during manufacture and before delivery to the site.
- .08 Doors, door frames, fanlight frames, architraves and beads shall be provided in accordance with the Project Manager's Door Schedule.
- .09 Flush doors shall be solid cored faced on both sides with imported plywood and hardwood lipped on all edges and shall comply with Clause 4564 and hung in accordance with Section 4640.
- .10 Glazed panels in doors shall be in accordance with the Project Manager's drawing



**TRADE PREAMBLES (Ctd.)**13.00 **JOINERY (Ctd.)**

- .11 Frames, linings, architraves and beads to flush doors shall be in wrot mahogany and shall comply with Clauses 4512 and 4624.
- .12 All door frames shall be fixed to walls using mild steel cramps.
- .13 Ironmongery for the works shall be fitted and fixed in the best approved manner in accordance with Clauses 4850-4898.
- .14 The fixing of ironmongery will be deemed to include for fixing with matching screws including cutting, sinking, boring morticing and fitting the ironmongery, removing before and refixing after painting and labelling and safe-guarding the keys to each lock.
- .15 All ironmongery shall be tested and be fully operative before the handing over of the works.
- .16 Generally all doors shall have ironmongery as indicated in the Door Schedule.
- .17 Joinery fittings to cupboards, drawers and associated ironmongery shall be provided in accordance with the Project Manager's details.
- .18 All ironmongery, veneer and laminated plastic sheeting shall be selected by or be subject to the approval of the Project Manager.
- .19 Veneered blockboard shall comply with Clauses 4065 and 4067 and shall be fixed in accordance with Sections 4160 and 4400.
- .20 Blockboard shall comply with Clauses 4057 and 4056 and shall be fixed in accordance with Section 4400.
- .21 Laminated plastic sheeting shall be "Formica" or other equal and approved plastic sheeting of an approved colour and texture and shall comply with Clause 4079 and shall be fixed in compliance with Clause 4168 and Section 4400.
- .22 Adhesive generally shall comply with Clauses 092 to 4096, 4162 and 4414.
- .23 Shelves shall be 25mm thick blockboard lipped on exposed edges with hardwood lipping, all in accordance with Clause 467 and shall be fixed to metal bearers in accordance with the Project Manager's drawings.

14.00 **METALWORK**

- .01 The Trade Preambles given in Pages P1-P11 shall apply.
- .02 All windows shall be purpose made large-pane Z-section steel casement glazed.
- .03 All windows shall be in accordance with the Project Manager's Schedule of Windows.
- .04 All steelwork shall be mild steel to B.S. 4360 Grade 43B and B.S. 449

**PART NO. 1 (Ctd.)**

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS





**TRADE PREAMBLES (Ctd.)****14.00      METALWORK (Ctd.)**

- .05 All steelwork shall be finished with one coat of zinc chromate and two coats of red oxide paint as specified in Clause 5911 prior to erection.
- .06 Steel and aluminium sections shall conform to Section 5530.
- .07 Fasteners and stays for the steel windows shall be of imported quality brass.
- .08 Aluminium frames shall conform to Clause 5917.
- .09 All aluminium sections shall comply with Clauses 5551 and 5553.
- .10 Aluminium sheets and plates shall comply with Clause 5591.
- .11 Fastenings for aluminium sections shall conform to Clauses 5671, 5618 and 5921.
- .12 All window frames shall have permanent vent slots as described with wire mesh mosquito proofing as Clause 5576.
- .13 Welding to aluminium will conform to Clause 5701.
- .14 All welds shall be neatly executed in accordance with Section 5680.
- .15 Bolts, screws, nuts and washers shall match the material of the section being secured and shall comply with Clauses 5622 and 5625. All holes for fixing screws shall be counter-sunk.
- .16 The fixing of metal windows shall include for assembling parts, bedding and pointing in mastic, building in fixing lugs and plugging, fitting and adjusting handles and fasteners on completion.
- .17 Metal window frames shall be bedded in an approved bedding compound in conformity with Clause 935 and shall be neatly pointed all round on completion with approved pointing sealant in compliance with Clause 5937 and left clean to the approval of the Project Manager.
- .18 Plugs shall conform to Clause 5927.

**15.00      STRUCTURAL STEELWORK**

- .01 The Trade Preambles given in Pages N1-N19 shall comply.
- .02 The Project Manager may require all structural steelwork to be carried out by an approved Sub-Contractor in accordance with Clauses 5002 and 5091.
- .03 All steel sections shall be hot rolled to comply with Clauses 5030 – 5036.
- .04 Steel plates shall comply with Clause 5052.
- .05 Bolts, nuts and washers shall comply with Clauses 5064.
- .06 Rag bolts and nuts shall comply with Clauses 5068

**PART NO. 1 (Ctd.)****PROPOSED RABAI STAFF HOUSES RENOVATION WORKS**




**TRADE PREAMBLES (Ctd.)**15.00 **STRUCTURAL STEELWORK (Ctd.)**

- .07 Steel plates shall comply with Clause 5052.
- .08 Shop drawings shall be prepared and submitted in accordance with Clause 5147.
- .09 Fabrication of the structural steelwork shall conform to Clauses 5100-5147.
- .10 All welding work shall be carried out in accordance with Clauses 5150-5173.
- .11 Bolting and rivetting shall be carried out in accordance with Clauses 5190-5221.
- .12 All structural steel shall be hot dip galvanised in accordance with Clause 5236 and shop primed in accordance with Clause 5231 before delivery to site.
- .13 Erection shall be carried out in compliance with Clause 5240-5261.
- .14 Testing of all structural steelwork shall be carried out in accordance with Clause 5271.

16.00 **MECHANICAL SERVICES INSTALLATIONS**

- .01 The Trade Preambles given in Pages Q1-Q24 shall apply.
- .02 All the Mechanical Services installations shall be carried out by a nominated and /or domestic Sub-Contractor in accordance with the Drawings, Specifications and Bills of Quantities prepared by the Project Manager's Services Engineers.
- .03 The Main Contractor shall arrange and monitor a Programme for the work of the Sub-Contractor and for all other Sub-Contracts affected by them. The Main Contractor shall ensure that all work and Builder's Work in connection is carried out in a sequence which will allow under-floor drains, piping in ducts, chases and the like leading to or from all sanitary fittings, hot or cold water tanks, gulley traps, vent pipes and the nearest manholes to be installed in their correct positions in order to minimise the amount of cutting of holes, chases, floor ducts, etc. as much as possible.
- .04 The Main Contractor shall carry out the Builder's Work in connection with the Sub-Contract including cutting or forming holes and chases and later making good.
- .05 The Trade Preambles on Pages Q4-Q8 will apply to rainwater pipes and gutters.
- .06 Rainwater downpipes and gutters and fittings shall comply with Clause 6121 and shall be fixed in accordance with Sections 6160 and 6190.
- .07 Roof outlets, gutter brackets, fixing and jointing materials shall be in accordance with Section 6140.
- .08 Testing of downpipes and gutters shall be carried out in accordance with Section 6230.

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS



**TRADE PREAMBLES (Ctd.)****17.00      ELECTRICAL INSTALLATIONS**

- .01      The Trade Preambles given in Pages R1-R4 shall apply.
- .02      The Electrical Installation work shall be executed by Nominated and / or domestic Sub-Contractors in accordance with the Sub-Contract document prepared by the Project Manager's Electrical Services Engineer.
- .03      The Builder's Work in connection with Electrical Installation shall be carried out by the Main Contractor and the Trade Preambles given in Pages R1-R4 relating to this work shall apply.
- .04      The Main Contractor should particularly note the Clause 6906 on Page R1 relating to the Programme and sequence of works.
- .05      All necessary pipe ducts and the like shall be built in as directed by the Project Manager in readiness for the Electrical Sub-Contractor.
- .06      All conduits, junction boxes and other requirements shall be built into the concrete floor and roofing slabs where required and adequate notice shall be given to the Electrical Sub-Contractor and the Project Manager to enable these to be positioned before concreting.

**18.00      FLOOR, WALL AND CEILING FINISHES**

- .01      The Trade Preambles given on Pages S1-S25 shall apply.
- .02      Finishes generally shall be of the best quality and workmanship and to the approval of the Project Manager.
- .03      If required by the Project Manager a sample panel or panels of any particular finish shall be prepared for his approval and once approved shall form the standard for all similar finishes.
- .04      The joints between different finishes shall be neatly and cleanly executed to the approval of the Project Manager.
- .05      All adjoining surfaces shall be fully protected against any splashing or other damage and such protection shall be afterwards removed and all surfaces made good to the approval of the Project Manager.
- .06      Attention is drawn to Clause 7697 wherein it is specified that the Main Contractor is responsible for preparing all sub-floors, screeds and other backgrounds to the satisfaction of the Sub-Contractor and Project Manager. The Main Contractor must ensure that all such surfaces are smooth level or to required even falls and levels and any cracks or hollows shall be filled with approved levelling compound to the satisfaction of the Sub-Contractor and Project Manager.
- .07      The finishes shall be as per the schedule of finishes appended to these Bills of Quantities.
- .08      Cement and sand screed paving shall be treated with Sodium Silicate in accordance with Clauses 7177 and 7417.
- .09      The internal wall finish shall generally be cement, lime and sand (1:1:6) plaster



**TRADE PREAMBLES (Ctd.)**

18.00      **FLOOR, WALL AND CEILING FINISHES (Ctd.)**

- .10 External wall finishes shall generally be of cement and sand (1:4) render.
- .11 Plastering and rendering shall be carried out in accordance with Clauses 7180-7307.
- .12 Soffits of concrete slabs and staircases shall generally be finished in minimum 12mm thick two-coat lime plaster and three coats plastic emulsion paint.
- .13 Sides and soffits of beams shall generally be finished in steel float plaster internally.
- .14 A neat "V"-groove shall be provided to all joints between plaster or render to walls and reinforced concrete element. 25mm x 30 s.w.g. hoop iron ties shall be cast into concrete elements at 500mm centres at all such joints to serve as ties for the walling.
- .15 Where specified "making good" shall include repairing and filling in cracks, interstices, holes etc. using an approved filler, rubbing or sanding down with sand paper or emery paper, wire brushing and generally restoring the work to match any similar approved work and preparing for repainting or receiving a new finish.

19.00      **GLAZING**

- .01 The Trade Preambles given on Pages T1-T6 shall apply.
- .02 All glazing shall be carefully executed by an approved Specialist Sub-Contractor.
- .03 Unless otherwise described, glazing to windows is generally 6mm thick clear sheet glass or obscure glass in accordance with Clauses 8326 and 8335 respectively.
- .04 Glazing shall be carried out in accordance with Clauses 8400-8417.
- .05 Glazing to metal windows and doors shall be carried out in accordance with Clauses 8420-8433 using first quality metal casement putty in accordance with Clause 8371.
- .06 All Puttying shall be neatly executed and all front and back puttying shall be to the full height of the frames and cut off cleanly with a putty knife and left perfectly smooth.
- .07 Glazing to timber doors and frames shall be carried out using hardwood timber beads in accordance with Clauses 8440-8461.
- .08 All exposed edges shall be rounded and polished in accordance with Clause 8382.
- .09 Glazing strips, channels and sealant compounds shall conform to Clause 8351.
- .10 Edge clearance and edge cover shall be in accordance with Clauses 8406 and 8407 respectively.
- .11 External glazing shall be weather tight in accordance with Clause 8402.

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS



**TRADE PREAMBLES (Ctd.)**

19.00 GLAZING (Ctd.)

- .12 Mirrors shall be supplied and fixed in accordance with Clause 8347 and 8418.
- .13 All broken or damaged glass or mirrors shall be replaced before practical completion and the surrounds redecorated to the Project Manager's approval.

20.00 PAINTING AND DECORATING

- .01 The Trade Preambles given in Pages U1-U8 shall apply.
- .02 The whole of the work shall be carried out by an approved painter whose name must be submitted for approval by the Project Manager in accordance with Clauses 8501.
- .03 The paint treatment and colour will be selected by the Project Manager and shall be carried out to the full satisfaction of the Project Manager.
- .04 Samples of primers, paints, varnishes and all other treatments to be used in the works shall be submitted to the Project Manager for approval before commencement.
- .05 All backs of timber frames to doors or other joinery surfaces adjoining masonry, concrete block or clay block walling shall be primed as described in Clauses 8512, 8755 and 8756.
- .06 The metal casement putty to all windows shall be primed with one coat approved aluminium primer as soon as the putty is dry, in preparation for finishes.
- .07 Plastered external wall surfaces generally shall be painted with three coats permaplast paint.
- .08 Internal walls are to be painted with three coats of plastic emulsion paint.
- .09 Ceilings are to be painted with three coats of plastic emulsion paint.
- .10 Surfaces of mahogany veneered flush doors and associated frames shall be primed and finished with three coats of two-pack polyurethane.
- .11 All hardwood timber work is to be varnished with three coats of two pack polyurethane varnish.
- .12 All paint shall be from an approved manufacturer.
- .13 All softwood and blockboard timber surfaces generally are to be painted with two undercoats and one finishing coat gloss oil paint.
- .14 All exposed steelwork shall generally be primed with a plumbatic primer and finished in two undercoats and one finishing coats of gloss oil paint.
- .15 All manhole covers shall be finished in one coat of black bituminous paint

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS



**TRADE PREAMBLES (Ctd.)**

20.00      PAINTING AND DECORATING (Ctd.)

- .16      All external wall plinths shall be finished in two coats of black bituminous paint.
- .17      Where cracks etc. in walling or plaster are repaired, the whole of the panel or “area affected shall be” repainted to the Project Manager’s satisfaction.

21.00      EXTERNAL WORKS

- .01      The external works generally shall be carried out in accordance with the Foregoing Trade Preambles where applicable and the Trade Preambles given on Pages V1-V16 and Access Road 1 - Access Road 13.

22.00      DRAINAGE

- .01      The Trade Preambles on Pages V1-V11 shall apply.
- .02      Attention is drawn to items .01. to .03 of the foregoing Trade Preambles for Plumbing and Engineering Installations.
- .03      All excavations and backfilling in black cotton soil shall be carried out in accordance with Clause 9011, 9140 to 9155 and 9280 to 9298.
- .04      Excavations and backfilling in black cotton soil shall be carried out in accordance with Clause 9149. Selected fill shall be in accordance with Clauses 9103 No. 9195.
- .05      The topsoil shall be excavated, kept separate in spoil heaps, re-excavated and spread and levelled as described in Clauses 0691 and 0784.
- .06      Surplus material after backfilling shall be spread and levelled or otherwise disposed off as described in Clauses 0622 and 0782. Surplus rock shall be used as filling materials where directed or shall be removed from site if so directed.
- .07      Pipes are be bedded and laid in trenches in accordance with Clause 9162 and 9164.
- .08      Pipes and fittings shall generally be Golden Brown unplasticised polyvinly chloride (U.P.V.C.) pipes Class 41 to comply with B.S. 4660 (1973/78) and B.S. 3481 (1977). The joints shall be chamfered spigot and ring seal socket with elastomeric sealing ring in accordance with B.S. 2494 and Clauses 9032 and 9221.
- .09      Pipes under buildings, roads and parking areas where specified shall be cast iron spigot and socket pipes to comply with B.S. 4472 and in accordance with Clause 9051.
- .10      Beds and surround to pipes shall be in accordance with Clauses 9160-9199.
- .11      Drain pipes shall generally be bedded and surrounded in granular material in accordance with Clauses 9101, 9173 and 9174. P.V.C. pipes must not be surrounded with concrete.

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS



## PART NO. 1 (Ctd.)

**TRADE PREAMBLES (Ctd.)**22.00 DRAINAGE (Ctd.)

- .12 Where directed pipes shall be bedded and surrounded in Type 'C' concrete bed and surround in accordance with Clauses 9132, 9178 and 9183. The concrete bed and surround shall comply with Clauses 9105 and 9167. Where the ground is of low bearing capacity, the concrete bed is to be reinforced in accordance with Clause 9197. The backfilling around pipes having a concrete bed and surround shall be in accordance with Clauses 9285 and 9281.
- .13 Gulley traps shall be bedded and surrounded in accordance with Clause 9199.
- .14 Manholes shall be constructed in accordance with Clauses 9240 to 9261. Cast iron manholes covers and frames shall comply with Clause 9081 and steps irons shall comply with Clauses 9087.
- .15 Concrete blocks for manholes and culvert headwalls shall be built in Group I cement/lime putty/sand mortar (1:1:3 mix) as in Clause 2114. Cement for mortar and internal render to manholes shall be sulphate resisting Portland Cement as Clause 1082. All exposed blockwork shall be rendered with cement and sand (1:5) mortar as Clause 7047.
- .16 Invert block drains and side slabs shall conform to Clause 9072 and shall be laid as specified on the drawings and directed by the Project Manager.
- .17 The banks to both sides of stormwater drains shall be cleared, trimmed and grassed in accordance with Clause 9155.
- .18 Culvert pipes shall be spun concrete pipes of the specified diameter having 'ogee' joints and shall comply with Clauses 9034 and 9072.
- .19 The testing of the drainage shall be carried out in accordance with Clauses 9270-9279.

23.00 ROADS AND PARKING AREA

- .01 The Trade Preambles given in Pages "Access Roads 1" to "Access Roads 13" shall apply to the service yard and road.
- .02 Materials generally shall be in accordance with Clauses 9630 to 9655 and 9730 to 9779.
- .03 Workmanship generally shall be in accordance with Clauses 9670 to 9716 and 9800 to 9895.

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS



		Shs.
<b><u>PRELIMINARIES</u></b>		
<b>BILL NO. 1</b>		
<b><u>PRELIMINARY PARTICULARS</u></b>		
<b>A</b>	<b><u>NAME OF PARTIES</u></b>	
<p>The "Employer" is : Kenya Power &amp; Lighting Co. Ltd P.O. Box 30099 - 00100 <u>NAIROBI</u></p> <p>The term "Employer" and "Kenya Power" and "Kenya Power &amp; Lighting Co. Ltd" wherever used in the contract document shall be synonymous</p> <p>The "Project Manager" is : The Manager, Administration &amp; Property, HR&amp; Administration Kenya Power &amp; Lighting Co. Ltd P.O. Box 30099 - 00101 <u>NAIROBI</u></p> <p>The "Project Officer" is : The Kenya Power Principal Projects Officer Administration &amp; Property, HR&amp; Administration Kenya Power &amp; Lighting Co. Ltd P.O. Box 30099 - 00101 <u>NAIROBI</u></p> <p>The "Project Quantity Surveyor" is : The Kenya Power Quantity Surveyor, Administration &amp; Property, HR&amp; Administration Kenya Power &amp; Lighting Co. Ltd P.O. Box 30099 - 00101 <u>NAIROBI</u></p>		
<b>B</b>	<b><u>DESCRIPTION OF SITE</u></b>	
<p>The site is located at KPLC Rabai Control off Mazeras Kaloleni Road, Kilifi County</p> <p>The Contractor shall obtain the Project Manager's approval for the siting of all temporary buildings, spoil heaps, temporary paths and storage areas for materials.</p> <p>The Contractor shall visit the Site to acquaint himself with its nature and position, the nature of the ground, substrata and other local conditions, position of power and water supplies, access roads or any other limitations, and no claims for extras will be considered on account of lack of knowledge in this respect.</p> <p>The Contractor must obtain the Project Manager's approval and directions regarding the use of any materials found on the site.</p>		
<b>C</b>	<b><u>ACCESS TO SITE</u></b>	
<p>Access to site shall be as directed by the Project Manager. The Contractor shall strictly observe police &amp; NTSA regulations regarding traffic movement.</p>		
Preliminaries		Carried to collection KShs.

			Shs.
A	<b><u>WORKING AND STORAGE SPACE</u></b>		
	Working and storage space will be confined to the area designated by the Project Manager within the plot boundary.		
B	<b><u>WORKING HOURS</u></b>		
	The Work must be carried out to cause the minimum inconvenience to the occupants of the adjoining premises. In particular, no hammering, mechanical drilling or other unduly noisy work may be commenced before 8.00 a.m. or continued after 6.00 p.m. without prior approval of the Project Manager.		
C	<b><u>DESCRIPTION OF THE WORKS</u></b>		
	The Works comprise of the following:-		
	i) Removal, handling and disposal of asbestos.		
	ii) Renovation to staff Houses.		
	iii) Water reticulation works		



			Shs.
<b><u>GENERAL MATTERS</u></b>			
<b><u>SUFFICIENCY OF TENDER</u></b>			
A	The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his Tender for the Works and of the rates and prices stated in the Priced Bills of Quantities, which rates and prices shall cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the Works.		
B	<b><u>STAMP CHARGES</u></b>		
	The Contractor shall allow for the payment of all Stamp Charges in connection with the Surety and Contract Agreement.		
C	<b><u>DEFINITIONS AND ABBREVIATIONS</u></b>		
	Terms used in these Bills of Quantities shall be interpreted as follows:		
	"Approved"	Shall mean approved by the Project Manager.	
	"as directed"	Shall mean as directed by the Project Manager.	
	"B.S."	Shall mean the current British Standard specifications published by the British Standards Institution, 2 Park Street, London W.I., England.	
	"CM."	Shall mean Cubic Metres.	
	"SM."	Shall mean Square Metres.	
	"LM."	Shall mean Linear Metres.	
	"MM"	Shall mean Millimetres.	
	"KG."	Shall mean Kilogramme.	
	"NO."	Shall mean Number.	
	"M.S"	Shall mean Measured Separately	
	PRS or Prs	Shall mean Pairs	
	a.b.d	Shall mean as before described	
	Ditto or Do	Shall mean the whole of the preceding description except as qualified in the description in which it occurs.	
	NTSA	Shall mean National Transport & Safety Authority of Kenya	
	E.o	Shall mean Extra Over	
	bsm	Shall mean both sides measured	
Preliminaries			Carried to collection KShs.

*WBF*

	Shs.
<p>A <b><u>PROGRESS SCHEDULE</u></b></p> <p>The Contractor shall, upon receiving instructions to proceed with the Work, draw up a time and progress Schedule setting out the order in which the Works are to be carried out with the appropriate dates thereof. This Time and Progress schedule is to be agreed with the Project Manager and no deviation from the order set out in this Schedule will be permitted without the written consent of the Project Manager. The Main Contractor will be responsible for arranging the above programme with all Sub-Contractors including the Nominated Sub-Contractors and Nominated Suppliers.</p>	
<p>B <b><u>FIGURED DIMENSIONS</u></b></p> <p>Figured dimensions are to be followed in preference to dimensions scaled from the Drawings; but wherever possible dimensions are to be taken on the Site or from the Buildings. Before any Work is commenced by Sub-Contractors or Specialist Firms, dimensions must be checked on the Site and/or buildings and agreed with the Contractor, irrespective of the comparable dimensions shown on the Drawings. The Contractor shall be responsible for the accuracy of such dimensions.</p>	
<p>C <b><u>PROVISIONAL WORK</u></b></p> <p>All "Provisional" and other work liable to adjustment under this Contract shall be left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the Quantity Surveyor. Immediately the work is ready for measurement, the Contractor shall give notice to the Quantity Surveyor.</p> <p>If the Contractor makes default in these respects he shall, if the Project Manager so directs, uncover the work at his own expense to enable the measurements to be taken.</p>	
<p>D <b><u>EXISTING SERVICES</u></b></p> <p>Prior to commencement of any work the Contractor is to ascertain from the relevant Authorities the exact position, depth and level of all existing electric cables, water pipes or other services in the area and he shall make whatever provisions may be required by the Authorities concerned for the support and protection of such services. Any damage or disturbance caused to any services shall be reported immediately to the Project Manager and the relevant Authority and shall be made good to their satisfaction at the Contractor's expense.</p>	
<p>E <b><u>TRANSPORT TO AND FROM THE SITE</u></b></p> <p>The Contractor shall include in his prices for the transport of materials workmen, etc., to and from the Site of the Proposed Works, at such hours and by such routes and vehicles as are permitted by the Authorities and in particular by the Transport Licensing Board and / or the National Transport &amp; Safety Authority ,</p>	
<p>Preliminaries                      Carried to collection                      KShs.</p>	

	Shs.
<p><b>A <u>PUBLIC AND PRIVATE ROADS, PAVEMENTS, ETC</u></b></p> <p>The Contractor will be required to make good, at his own expense any damage he may cause to the present road surfaces and pavements within or beyond the boundary of the Site, during the period of the Works. In particular, all existing trees, shrubs, plants, etc., which may be destroyed or damaged during the progress of the Works are to be made good by the Contractor to the approval of the Project Manager.</p> <p><b>B <u>POLICE REGULATIONS</u></b></p> <p>The Contractor is to allow for complying with all instructions and regulations of the police Authorities.</p> <p><b>C <u>ENVIRONMENTAL REGULATIONS</u></b></p> <p>The Contractor shall observe all the requirements of the National Environment Management Authority (NEMA) and especially those conditions given in the Project's Environmental Impact Assessment Report Approved by NEMA. The Contractor shall collaborate with the Environmental Impact Assessment (EIA) expert to ensure that proposed mitigation measures are adhered to during construction phase and where necessary appropriate mending up activities undertaken and the same reported back to NEMA as required.</p> <p>In particular the Contractor shall give special emphasis to control dust. The Contractor shall provide all necessary dust screens to prevent dust from the construction works affecting neighbouring property. The dust screens shall be approved by the Project Manager and be acceptable to NEMA officials. The Contractor shall also control dust on site by appropriate watering of the sources of dust.</p> <p>The Contractor shall put emphasis on controlling noise, vibrations and occupational hazards. The provisions of the Occupational Safety and Health Act No. 15 of 2007 must be strictly observed.</p> <p><b>D <u>CONTRACTORS' SUPERINTENDENCE</u></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 time to the superintendence of the Works. Such Agent or Representative shall receive on behalf of the Contractor, directions and instructions from the Project Manager and such directions and instructions shall be deemed given to the Contractor in accordance with the conditions of the Contract. The Agent shall not be replaced without the specific approval of the Project Manager.</p> <p>It is to be a specific condition of this Contract that the successful Tenderer shall provide on Site throughout the period of construction until the Date for Practical completion a suitably qualified, experienced and competent person to ensure that the works are carried out to the standard required by the specification and detailed on the Drawings; and shall ensure that upon any termination of employment a suitable replacement is found.</p> <p>Preliminaries                      Carried to collection                      KShs.</p>	

<p><b><u>CONTRACTORS' SUPERINTENDENCE -(CONTINUED)</u></b></p> <p>Before the Tenderer's offer is accepted the Project Manager may personally interview the Contractor's proposed Representative.</p> <p>A curriculum vitae of past experience and qualifications must be provided for the Project Manager's scrutiny.</p> <p>The Project Manager's decision will be final regarding the suitability of the proposed Representative.</p> <p><b>A <u>WATER</u></b></p> <p>All water shall be fresh, clean and pure, free from earthy, vegetable or organic mater, acid or alkaline substances in solution or suspension</p> <p>The Contractor shall provide at his own risk and cost all water for use in connection with the Works (including the work of Sub-Contractors). The Contractor shall provide at his own expense all temporary distribution pipes, storage tanks, metres, etc., and he shall clear away same upon completion of the Works.</p> <p><b>B <u>LIGHTING AND POWER</u></b></p> <p>The Contractor shall provide at his own risk and cost all artificial lighting and power for use on the Works, including all Sub-Contractors' and Specialists' requirements and including all temporary connections, wiring, fittings, etc., and clearing away on completion. The Contractor shall pay all fees and obtain all permits in connection therewith.</p> <p><b>C <u>SAFETY</u></b></p> <p>The Contractor shall comply at all times with the requirements of the Factory Act (Cap 514), Building Construction Rules, Supplement 18, Legal Notice No.40 dated April, 1984 and ensure that the safety of his workpeople and authorised visitors to the Site is protected at all times. In particular there shall be proper provision of planked footways and guard-rails to scaffolding, etc., protection against falling materials and tools and the Site shall be tidy and clear of dangerous rubbish.</p> <p>The Contractor shall appoint a safety officer as required by the Factory Act and notify the Factory Inspector of his name. the safety Officer shall be on Site at all times and all directions given by the Project Manager to the Safety Officer shall be deemed to be Project Manager's Instructions, and shall be complied with promptly without additional cost to the contract.</p> <p>Occupational Safety and Health Act no. 15 of 2007 must also be complied with</p> <p>The Project Manager shall be empowered to suspend work on the Site should he consider these conditions are not being observed, and no claim arising from such suspension will be allowed.</p>	<p>Shs.</p>
<p>Preliminaries</p>	<p>Carried to collection</p> <p>KShs.</p>

	Shs.
<p><b>A <u>PROTECTIVE CLOTHING</u></b>  The Contractor shall provide all protective or any other special clothing or equipment for his employees that may be necessary.</p> <p>This shall include, inter-alia, safety helmets, gloves, goggles, earmuffs, gumboots, overalls, etc., according to the type of work. The Contractor shall ensure that safety helmets are worn by all staff at all times.</p> <p><b>B <u>PROVISIONAL SUMS</u></b>  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 measurements  Such sums are net and no addition shall be made to them for profit.</p> <p><b>C <u>ADJUSTMENT OF PROVISIONAL SUMS</u></b>  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 in variation clause of the conditions of contract, but should any articles for the work be executed by a Nominated Sub-Contractor, or any articles for the work be supplied by a Nominated Supplier, the Value of such work or articles shall be treated as a P.C. sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.</p> <p><b>D <u>PRIME COST (OR P.C.) SUMS</u></b>  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 Measurements  Persons or firms Nominated to execute the work or to provide and fix materials or goods as stated in the Conditions of Contract are described herein as Nominated Sub-Contractors. Persons or firms so nominated to supply goods or materials are described as Nominated suppliers.</p> <p><b>E <u>ADJUSTMENT OF P.C. SUMS</u></b>  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 quotation, 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 prorata to the amount paid.  Items of Attendance following P.C. Sums shall be adjusted prorata to the physical extent of the work executed (not prorata to the amount paid) and this shall apply though the Contractor's Bills shows a percentage in the rate column in respect of them.  Should the Contractor be permitted to tender and his tender be accepted for any work which a P.C. sum is included in these Bills of Quantities, profit and attendance will be allowed at the same rate as it would if the work were executed by a Nominated Sub-Contractor.</p> <p>Preliminaries                      Carried to collection.                      KShs.</p>	

	Shs.
<p><b>A <u>MATERIALS AND WORKMANSHIP</u></b></p> <p><b><u>GENERALLY</u></b></p> <p>All materials shall be new unless otherwise directed or permitted by the Project Manager and in all cases where the quality of goods or materials is not described or otherwise specified, is to be the best quality obtainable in the ordinary meaning of the word "best" and not merely a trade signification of that word.</p> <p>All materials and workmanship shall, unless otherwise specified or described, conform to the appropriate British Standard Institution specification and/or Kenya Standards current at the date of tender.</p> <p>The Contractor shall order all materials to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that such materials are on Site when required for use in the Works.</p> <p>The Contractor shall be responsible for and shall replace or make good at his own expense any materials lost or damaged.</p> <p>The Works throughout shall be executed by skilled workmen well versed in their respective trades.</p> <p><b>B <u>REJECTED WORKMANSHIP OR MATERIALS</u></b></p> <p>Any workmanship or materials not complying with the specific requirements or approved samples or which have been damaged, contaminated or have deteriorated, must immediately be removed from the Site and replaced at the Contractor's expense, as required.</p> <p><b>C <u>PROPRIETARY MATERIALS</u></b></p> <p>Where proprietary materials are specified herein-after the contractor may propose the use of materials of other manufacturer but equal quality for approval by the Project Manager.</p> <p>All materials and goods, where specified to be obtained from a particular manufacturer or supplier are to be used or fixed strictly in accordance with their instructions.</p> <p><b>D <u>SAMPLES</u></b></p> <p>The Contractor shall furnish within the first two weeks of site take over and before work commences and at his own cost, any samples of materials or workmanship that may be called for by the Project Manager for his approval or rejection, and any further samples in case of rejection until such samples are approved by the Project Manager and such samples, when approved, shall be the minimum standard for the work to which they apply. Such approved samples shall be mounted on a sample board erected on site. The sample board shall be of minimum size 2400x1200mm high fabricated in RHS supports &amp; framings minimum size 75x50x3mm secure from tampering with and including all necessary sample mounting bases &amp; roof cover where required and available for quick reference during the entire period of the contract. The approved samples shall be mounted / applied using the correct methodology, edging and finish as per the bill of quantities; all to reflect the high quality workmanship that will be replicated on the permanent works.</p> <p>Preliminaries                      Carried to collection                      KShs.</p>	

	Shs.
<p><b>A <u>CONCRETE TESTS</u></b></p> <p>Concrete test cubes, will not be required under these works; any concrete works Must be done in the presence of the Project Manager or his/her representative</p>	
<p><b>B <u>OTHER MATERIAL TESTS</u></b></p> <p>The Contractor shall allow for providing samples of all other materials such as reinforcement bars, building sand, cement, building stone, concrete blocks, hardcore, etc, that may be requested by the Project Manager or Engineer for testing. He shall allow for the delivery of the same to the testing Laboratory(ies)), pay the testing fees and any other costs that may be required and arrange for test certificates to be sent directly to the Project Manager or Engineer by the testing Laboratory. Under no circumstances will the Contractor be paid for such tests if he does not allow for that here</p>	
<p><b>C <u>PROGRAM OF WORKS</u></b></p> <p>The Contractor shall allow in his programme for the following 11 public holidays per calendar year in Kenya.</p> <ol style="list-style-type: none"> <li>1. New Year's Day (1st January)</li> <li>2. Good Friday</li> <li>3. Easter Monday</li> <li>4. Labour Day (1st May)</li> <li>5. Madaraka Day (1st June)</li> <li>6. Idd Ul Fitr</li> <li>7. "Utamaduni" Day (10th October)</li> <li>8. Mashujaa Day (20th October)</li> <li>9. Jamhuri day (12th December)</li> <li>10. Christmas Day (25th December)</li> <li>11. Boxing Day (26th December)</li> </ol> <p>The Contractor should also allow per calendar year for a further 2 unspecified public holidays which may be</p>	
<p><b>D <u>MINISTRY OF HEALTH REGULATIONS</u></b></p> <p>The Contractor shall adhere to the interim guidelines and protocols for SARS-CoV 2 and COVID 19 which were</p>	
<p>Preliminaries                      Carried to collection                      KShs.</p>	



			Shs.
<b><u>TEMPORARY WORKS</u></b>			
A	<b><u>OFFICE AND SHEDS</u></b> The Contractor shall erect and maintain temporary office accommodation for his own use, and ample temporary watertight sheds for the proper storage and protection of materials and for the use of artisans and remove when ordered. Floors of sheds shall be at least 150mm above ground level.		
B	<b><u>SANITATION</u></b>  The Contractor shall provide the necessary sanitation for his staff and workmen to the requirements and satisfaction of the Health Authorities and maintain the same in a thoroughly clean and sanitary condition and pay all conservancy fees during the period of the Works and remove when no longer required.		
C	<b><u>SECURITY</u></b>  The Contractor shall be responsible for the security of the works in every respect and in particular it shall be the Contractor's responsibility to ensure that each of his workers security is guaranteed while working on the site and in such manner as is acceptable by KPLC The Contractor shall also accept liability for and bear the cost of failure to provide security for the works and workers as per the conditions of this contract once entered into		
D	<b><u>WORKING DRAWINGS</u></b>  Provide for preparation and approval of final set of working drawings in A1 size; using the attached drawings;		
E	<b><u>ALTERATIONS TO BILLS, PRICING, ETC.</u></b>  Any unauthorised alteration or qualification made to the text of the Bills of Quantities		
Preliminaries			
Carried to collection			
KShs.			



		Shs.
A	<p><b><u>PLANT, TOOLS AND SCAFFOLDING</u></b></p> <p>The Contractor shall provide all necessary hoists, tackle, plant, vehicles, tools and appliances of every description for the due and satisfactory completion of the Works and shall remove same on completion.</p> <p>The Contractor shall provide, erect and maintain all temporary scaffolding, sufficiently strong and efficient for the due performance of the Works, including Sub-Contract works, provide special scaffolding as and when required during the Works and remove on completion and make good.</p> <p>Such scaffolding shall be constructed of tubular steel or timber of sufficient scantlings and be provided with planked footways and guard-rails to approval.</p> <p>All such plant, tools and scaffolding shall comply with all regulations whether general or local, in force throughout the period of the contract and shall be altered or adapted during the Contract as may be necessary to comply with any amendments in or additions to such regulations.</p> <p>Scaffolding is not measured hereinafter, and the Contractor must allow here</p>	
B	<p><b><u>EXISTING AND ADJACENT PROPERTY</u></b></p> <p>The Contractor must take all steps necessary to safeguard existing and adjacent property, make good at his own expense any damage to persons or property caused thereon, and hold the Employer indemnified against any such claim arising.</p> <p>The Contractor will be held fully responsible for the safety of the existing and adjacent buildings and for any damage caused in consequence of these Works. He must reinstate all damage at his own expense and indemnify the Employer against any loss.</p> <p>The Contractor must take such steps and exercise such care and diligence as to minimise nuisance from dust, noise or any other cause to the occupiers of the existing and adjacent property.</p>	
C	<p><b><u>INSURANCE</u></b></p> <p>The Contractor shall insure as required in the Conditions of Contract. No payment on account of the work</p>	
D	<p><b><u>LABOUR CAMPS</u></b></p> <p>No labour, with the exception of watchmen may be housed on the site and the Contractor shall allow for all transport and other charges in moving labour to and from site at such hours and by such routes as are permitted by the Authorities. The Contractor shall provide, erect and maintain satisfactory housing for the watchmen and shall remove same on completion of the works.</p> <p>Preliminaries                      Carried to collection                      KShs.</p>	

		Shs.
A	<p><b><u>HOARDING</u></b></p> <p>The Contractor shall enclose the Site with a hoarding 2.40 metres high, with openings and gates as required, constructed of substantial timbers to approval and covered with new Galvanised iron corrugated sheeting painted to approval.</p>	
B	<p><b><u>TEMPORARY ROADS</u></b></p> <p>The Contractor shall provide where directed all temporary access roads, tracks and paths necessary for the execution of the Works, including making good when no longer in use.</p>	
C	<p><b><u>SIGNBOARD</u></b></p> <p>The Signboard and lettering on same for the display of the General and Sub-Contractor's names shall be of an approved size with the Employer's name painted thereon. The Project Manager's name shall be printed in letters not exceeding 100mm in height all to the Project Manager's design. No other signboard or advertising will be permitted.</p>	
	<p><b><u>NOMINATED SUB-CONTRACTORS AND SUPPLIERS</u></b></p>	
D	<p><b><u>NOMINATED SUB-CONTRACTORS</u></b></p> <p>The Contractor shall be responsible for Nominated Sub-Contractors in every respect and in particular it shall be the Contractor's responsibility to ensure that each Sub-Contractor commences and completes the work in such manner and is ready on the Site with his materials, labour and special plant at such times so as to conform with the progress Schedule, as specified previously, and so ensure satisfactory progress.</p> <p>The Contractor shall also accept liability for and bear the cost of General Attendance on Nominated Sub-Contractors which shall be deemed to include for:</p>	
	<p>Preliminaries                      Carried to collection                      KShs.</p>	



			Shs.
<b><u>NOMINATED SUB-CONTRACTORS - CONTINUED</u></b>			
<p>Allowing the use of standing scaffolding, maintenance and alteration of all scaffolding, retention of all scaffolding until such time as all relevant Sub-Contractors' works are complete and removal of all scaffolding on completion. Providing space for office accommodation, and for storage of plant and materials; allowing use of sanitary accommodation; the supply of all necessary water, and lighting; and clearing away all rubbish.</p> <p>The items for "General Attendance" given herein-after following P.C. Sums in respect of Sub-Contractors' work shall be deemed to include all the above.</p> <p>The Contractor shall also accept liability for and bear the cost of Special Attendance on Nominated Sub-Contractors which shall include for one or more of the following:</p> <p>Unloading, storing, hoisting, placing in position, providing power, provision of special scaffolding.</p> <p>The items of "Special Attendance" given herein-after following P.C. Sums shall include any one or more of the above items as set out in the particular reference.</p> <p>Cutting away for and making good after the work of Sub-Contractors as may be required will be measured and valued separately by the Surveyor.</p>			
<b>A <u>NOMINATED SUPPLIERS</u></b>			
<p>The cost of "Fix only" materials to be obtained from Nominated Suppliers which are covered by prime Cost or Provisional Sums shall include for taking delivery where directed, checking with invoices or indents, reporting and claiming damages for shortages and damaged goods, defraying demurrage signing for as having been received in good order, transporting, unloading, storing, covering and protecting until the time of fixing, unpacking, replacing anything lost or damaged, sorting, assembling, hoisting to required levels and fixing as described.</p> <p>Before placing any orders with Nominated Sub-Contractors or Nominated Suppliers the Contractors must ascertain that the terms and conditions of the quotations and the dates of delivery of materials or execution of works comply with the terms of Contract and the Progress Schedule.</p>			
<b>B <u>PRIME COST RATES</u></b>			
<p>Where description of items include a P.C. rate per unit this rate is to cover the nett supply of the unit only. The Contractor's price must include for the cost of the unit at the rate stated, plus waste, taking delivery, storage, fixing in position, profit and overheads.</p> <p>The actual nett cost per unit will be adjusted within the Final Account against the P.C. rate stated.</p>			
Preliminaries	Carried to collection	KShs.	

	Shs.
<p><b>A <u>PROTECTION</u></b></p> <p>The Contractor shall cover up and protect from damage, including damage from inclement weather, all finished work and unfixed materials, including that of Sub-Contractors, etc., to the satisfaction of the Project Manager until the completion of the Contract, and carefully preserve all trees or bushes on or near the Site.</p>	
<p><b>B <u>CLEANING</u></b></p> <p>The Contractor shall, upon completing of the Works, at his own expense, remove and clear away all surplus excavated materials, plant, rubbish and unused materials and shall leave the whole of the Site and Works in a clean and tidy state to the satisfaction of the Project Manager, including clearing away and making good all traces of temporary access roads, offices, sheds camps, etc. Particular care shall be taken to leave clean all floors and windows and to remove all rubbish and dirt as it accumulates. The Contractor is to find his own dump and shall pay all charges in connection therewith.</p>	
<p><b>C <u>TRAINING LEVY</u></b></p> <p>The Contractor's attention is drawn to legal Notice No. 237 of October, 1971, which requires payment by the Contractor of Training Levy on all Contracts of more than 50,000/- in value and his Tender must include for all costs arising therefrom.</p>	
<p><b>D <u>STANDARD LEVY (STANDARDS ACT- CAP 496)</u></b></p> <p>The Contractor's attention is drawn to legal Notice No. 267 of 2<sup>nd</sup> June, 1990 which requires payment by the Contractor of the Standards Levy at a rate of 0.2% of the contract sum less allocation for prime cost sums and provisional sums, subject to a ceiling of KShs. 400,000.00 per annum. The Contractor must therefore include for all costs (if any) arising or resulting therefrom.</p>	
<p><b>E <u>NATIONAL CONSTRUCTION AUTHORITY LEVY (NCA)</u></b></p> <p>The contractor shall comply with any required NCA approvals including any costs associated with execution of</p>	
<p><b>E <u>DEVELOPMENT APPROVALS</u></b></p> <p>The contractor shall allow for all necessary county government permits &amp; approvals with regard to these works. No claim for failure to comply with county governments requirements shall be allowed for all necessary permits/approvals by the County Government of Nairobi</p>	
<p><b>F <u>VALUE ADDED TAX</u></b></p> <p>The Contractor's attention is drawn to the Finance Act 1993 and subsequent amendments thereof which requires payment by the Contractor of Value Added Tax (VAT) on construction services rendered. Whether VAT is added at the grand summary page or inclusive</p>	
<p>Preliminaries                      Carried to collection                      KShs.</p>	

**COLLECTION**

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**PRELIMINARIES**

**TO GRAND SUMMARY**  
**AT END OF BILLS**

**KSHS.**

*WBS*

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BILL NO. 2 - RABAI STAFF HOUSES RENOVATIONS</b> <b>(6 NO. UNITS)</b> <b>ELEMENT NO 1</b> <b>REMOVAL AND DISPOSAL OF ASBESTOS ROOFING SHEETS (CONTRACTOR TO ENGAGE NEMA LICENSED ASBESTOS HANDLER TO UNDERTAKE THIS PART OF THE WORKS)</b> <b>(ALL PROVISIONAL)</b>  <i>The asbestos removal and disposal shall include encapsulation, loading and CAREFULLY carting away the arising to an approved disposal site as per NEMA regulations. Provide documentary evidence of work tracking.</i>				
A	Treat the asbestos sheets to ensure no dust/dirt are release to the environment during removal/handling	1,526	Sm		
B	Carefully remove existing asbestos roofing sheets and seal them as per NEMA regulations; Transport in a sealed container and approved transportation vehicle and dispose as per NEMA regulations.	1,526	Sm		
C	Allow for clearing from site all abestos arising from the removal and delivering works clean	1	ITEM		
D	Allow for EIA and risk assesment reports together with all associated approval costs	1	ITEM		
	<i>Total Carried to Summary Page</i>				

WBS

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p>ELEMENT NO 2</p> <p><u>DEMOLITIONS, DOWNTAKINGS &amp; ALTERATIONS</u></p> <p><u>(ALL PROVISIONAL)</u></p> <p><u>All items of demolitions and downtakings shall be deemed to include shoring, propping and all other applicable and acceptable methods of protection, handing over all salvaged materials to the client; carting away all arising debris and making good all disturbed surfaces; all to the project manager's approval.</u></p>				
A	Allow for careful removal of existing damaged chipboard ceiling and cart away; prepare roof timber members to receive new chipboard ceiling	1129	Sm		
B	Ditto fascia boards; prepare to receive new fascia boards.	291	Lm		
C	Allow for removal of all damaged timber doors including frames and hand over to client	63	No		
D	Allow for removal of all windows including its frames and cart away.	103	No		
E	Allow for removal of all WC's complete with Cistans and cut away; Prepare surfaces to receive new sanitary fittings and fixtures.	6	No		
F	Allow for removal of all Wash hand basin complete with all the accessories including all connections to the services, waste, jointing to water supply, supports and all plugging and screwing to walls and floors and cut away.	6	No		
G	Carefully remove all existing soap dish	6	No		
H	Hack and prepare floor currently in pvc ready to receive new 32mm floor finish (m/s) and cart away arising debris.	677	Sm		
J	Allow for removal of all electricals wiring including conduit for all 10no. 2 bed room units pipes and cut away.	1	Item		
	Total Carried To Collection				

WBS

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	Carefully remove all the Curtain boxes and cut away; Prepare surface to receive new curtain rods.	131	Lm		
B	Carefully remove all the Precast concrete paving slabs around the buildings and set aside for re-use; prepare surface to receive 50mm sand blinding and new paving slabs	325	Sm		
C	Carefully dismantle existing kitchen cabinets and wardrobes as directed and cart away arising debris	1	Item		
D	Allow for removal of existing box gutters and welding of steel gutter brackets on to the sloping side of the roof and prepare to be able to firmly hold 140mm UPVC gutter	1	Item		
E	Carefully hack existing floor finish and screed; prepare surface to receive new 32mm thick screed	865.2	Sm		
<i>Total Carried To Collection</i>					
<u>COLLECTION FOR DEMOLITIONS, DOWNTAKINGS &amp; ALTERATIONS</u>					
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<i>Total Carried to Summary Page</i>					





PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO 3</u>				
	<u>ROOF WORKS (PROVISIONAL)</u>				
A	Allow for Minor repair and replacement of any rotten structural timber roof members as shall be directed on site and cart away	1	ITEM		
B	Ditto to 50 x 50 mm ceiling brandering	1	ITEM		
	<u>Fascia Board</u>				
C	225 x 25 mm thick wrot cypress fascia board fixed to existing roof structure	242	Lm		
	<u>Roof Covering</u>				
D	Gauge 28 VERSATILE roofing sheets fixed to existing timber purlins	1452	Sm		
E	Ditto 380 mm matching ridge cap	184	Lm		
	<u>Sheet metal flashing; 18 gauge galvanised mild steel</u>				
F	Valley gutter lining 475mm girth; six labours fixed to timber battens	184	lm		
G	380 mm gauge 24 aluzing flashing to chimney areas	24	Lm		
	<u>Rain water goods</u>				
H	140mm diameter half round UPVC gutters including support brackets, joint unions and other accessories	242	Lm		
J	Extra over UPVC gutters for 100 mm diameter outlets	6	No.		
K	Ditto stopped ends	6	No.		
L	110mm UPVC rainwater downpipe fixed to walls with holder bolts at 800mm c/c	18	Lm		
M	Extra over ditto for swaneck	4	No.		
N	Ditto shoe	4	No.		
	<i>Total Carried to Summary Page</i>				
ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT

WBS

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO 4</u>				
	<u>DOORS AND WINDOWS</u>				
	<u>Wrot hardwood purpose made frames and framings</u>				
A	150 x 50 mm; 4 No. labours; plugged door frame	274	Lm		
B	50 x 25mm architraves with 4 No. labours	274	Lm		
C	20 x 20mm quadrants with 3 No. labours	274	Lm		
	<u>External doors</u>				
D	45mm thick size 800 x 2040mm high hardwood paneled doors; Mahogany or equivalent	12	No.		
E	5mm clear sheet glass vent light above doors including hardwood beadings to PMs approval	18	Sm		
	<u>Internal Doors</u>				
	<u>45mm Thick semi-solid core flush doors to B.S 459: part 2 mahogany veneered both sides and lipped on all edges in approved hardwood</u>				
F	45mm Thick solid core; panel doors size 800mm x 2020mm high to B.S 459: part 2; mahogany veneer faced both sides; all to approval	24	No		
G	Ditto; size 670 x 2020mm high; ditto	24	No		
	<u>Ironmongery</u>				
	<u>Supply and fix the following to UNION catalogue or other equal and approved to soft wood, hardwood or the like fixing with screws</u>				
H	Three lever mortice lock complete with set lever brass handle furniture	60	No.		
J	Two lever ditto	60	No.		
K	100mm brass butt hinges	180	PRS		
	<u>Alumunium powder coated sliding windows in 75 x 25 x 1.5 mm frames, 5mm glazing : glazing beads; ironmongery; plugged and screwed to walls; all necessary antivibration rubber gaskets; allow for fixing of mosquito gauze wire complete with framing to the external</u>				
L	Aluminium window sizes 870mm wide x 1360mm height,	66	No		
M	Ditto; size 470 x 1170mm high; ditto	12	No		
N	Ditto; size 1240 x 1070mm high; ditto	6	No		
P	Ditto; size 590 x 800mm high; ditto	6	No		
	<u>Total Carried to Summary Page</u>				



## PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	ELEMENT NO 5 JOINERY FITTINGS <u>Built in bedroom wardrobes</u> <u>25mm thick blockboard joinery fitting complete with all necessary accessories, ironmongery and chrome pipes</u> 1970mm x 2600mm x 600mm depth , double and triple opening; varnished or painted to match existing; to be used for making good built in bedroom wardrobes in all the units	1	No		
B	Supply materials and repair 2600mm length x 2600mm wide x 600mm depth wardrobes; quadripally opening; with all the nescessary iron mongery, handles, chrome pipe e.t.c; varnished or painted to match existing; to be used for making good built in bedroom wardrobes in all the units	18	No		
C	<u>Curtain Rods</u> 35 dia. Chrome pipe double curtain rods including decorative balls; double curtain rods brackets; fixed with screws; all to approval	13	Lm		
	Total Carried to Summary Page				

WBF

## PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	ELEMENT NO 6 <u>MASONRY REPAIRS &amp; EXTERNAL PAVING</u> Allow for masonry repairs, making good and preaparation of openings to receive aluminium windows	1	ITEM		
B	Allow for masnary repairs and making good associated with doors frames installations	1	ITEM		
C	Allow for all other assorted masonry repairs and making good that need to be done before painting works	1	ITEM		
D	<u>Paving Slabs</u> Supply and lay 600 x 600 x 50mm thick concrete paving slabs to client's approval and satisfaction and including 50mm sand bed around the building as directed; include keying and haunching as directed by PM	484	Sm		
<i>Total Carried to Summary Page</i>					

WBF

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO 7</u>				
	<u>FINISHES</u>				
A	<u>Floor Tiling</u> 32mm thick cement and sand (1:4) screed to receive tiles  <u>Approved tiles; non slip ceramic floor tiles to regular or other approved pattern; bedding and jointing in mixture of cement sand (1:4) mortar and tile adhesive ; grouting with matching cement</u>	865	Sm		
B	8 mm thick; butt joints both ways to floor level; internal	865	Sm		
C	100 mm high skirting; straight junction with wall and floor finish.  <u>Wall Tiling</u> <u>Approved ceramic tiles to B.S. 1281; local; color glazed wall tiles to regular or approved other pattern; bedding and jointing in cement sand (1:4) mortar, grouting with approved cement.</u>	362	Lm		
D	6 mm thick or equal and approved tiles; butt joints straight both ways; to cement and sand base (m/s) to walls internal	113	Sm		
E	Plastic edging strips (Provisional)	66	Lm		
F	Sand and acid clean terrazzo floor	62	Sm		
G	<u>Ceiling</u> New 12 mm thick soft board ceiling fixed to existing 50x50 mm wooden brandering; allow for repair and or replacement damaged or missing brandering internally	1129	Sm		
H	Extra over ceiling board for trap door size 600 x 600 mm  <u>Wrot cypress : knot free: suitable for clear varnish finish : selected and kept clean</u>	6	No.		
J	100 x 25mm Moulded cornice	300	Lm		
	<i>Total Carried to Collection</i>				

WBS

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>Painting and Decorations</b>				
	<i>Prepare and apply one undercoat and two finishing coats of first quality permapast exterior quality marine emulsion paint to:-</i>				
A	Wall surfaces; externally including surface preparation	720	Sm		
	<i>Prepare and apply three coats bituminous paint to:-</i>				
B	Existing plinth; allow for surface preparation	186	Sm		
	<i>Prepare and apply one undercoat and three finishing coats of polyurethane clear varnish paint to:-</i>				
C	General surfaces; Timber doors	227	Sm		
D	Door frames; 250mm girth	165	Lm		
	<i>Prepare and apply one undercoat and three finishing coats of polyurethane clear varnish paint to:-</i>				
E	Architraves; 100mm ditto	165	SM		
F	Quadrants; 60mm ditto	165	SM		
	<i>Prepare and apply one undercoat and three finishing coats of silk vinyl paint to:</i>				
G	Masonry walls internally; allow for surface preparation and minor repairs	1,574	Sm		
	<i>Prepare and apply one undercoat and three finishing coats of brilliant white emulsion paint to:</i>				
H	Celotex ceiling; allow for surface preparation	678	Sm		
J	Cornice; 150mm girth	300	Lm		
	<i>Total Carried to Collection</i>				
	<b>COLLECTION FOR FINISHES</b>				
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	From page above	SH/9			
	<i>Total Carried to Summary Page</i>				

WBS

PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>ELEMENT NO 8</b> <b>INTERNAL PLUMBING AND DRAINAGE</b> <b>Sanitary Fittings</b> <u>Supply, deliver, install, test and commission the following</u> <u>Sanitary appliances complete with all the accessories</u> <u>including all connections to the services, waste, jointing to</u> <u>water supply overflows, supports and all plugging and</u> <u>screwing to walls and floors.</u> <b>Note:</b> <u>(i) All Sanitary Fittings shall be in approved colour.</u> <u>(ii) The Model and Ref No. indicated is only a guide to the</u> <u>type and quality of fittings.</u> <u>(iii) Equivalent and Approved models may be acceptable.</u> <u>(iv) Catalogs of the Tendered fitting must be attached</u>				
A	<b>Water closet (wc) suite</b> Close coupled wash down water closet in approved colour complete with horizontal outlet to BS 3402 with valveless cistern fittings including syphon, 15mm bottom inlet valve, 20mm bottom overflow, bolts and connecting fitments from cistern bowl, chrome-plated lever, heavy duty seat and cover and p-trap outlet connector all as Twyford's Galerie ref. No.GR1148 CH or approved equivalent.	6	No		
B	<b>Wash hand basin</b> Pedestal or equival and approved Wash hand basin as Twyford "Advent 565 Countertop" size 565 x 425mm with one central tap hole Cat. No. AD4531 WH complete with 32mm diameter lift-up waste (No.WF9365CP) and 32mm plastic bottle trap (No.WF8482XX)	6	No		
C	Supply and fix Ultra instant shower complete with easily replaceable heating elements	6	No		
D	<b>Self-closing pillar tap</b> , 15mm C.P.,non concussive type pegler-Prestex Cat. No.877	6	No		
E	<b>Toilet bip tap</b> as Cobra No. 206-CP, heavy duty with star handle.	12	No		
	<i>Total Carried to Collection</i>				



## PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	<b>Toilet Roll Holder</b> Semi recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as Twyford's 9806WH or equal and approved.	6	No		
B	<b>Mirrors</b> 6mm thick polished plate glass silver backed mirror with bevelled edges, size 500 x 600mm, plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	6	No		
C	<b>Sink pillar tap</b> as Cobra No. 115/041 chrome plated with overarm swivel outlet, carina head.	2	No		
<i>Total Carried to Collection</i>					

WBC



PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>PPR Piping</b> <u>Supply, deliver and install Polypropylene Random (PP-R) 20 pipework to DIN 8077 with joints, couplings, reducers, tees, adaptors, pipe fixing clips etc all to DIN 16962 and DIN 16928 .Pipe jointing shall be by polyfusion or use of electric coupling. Where pipework is not chased proper anchoring using approved fixtures shall be done. No pipework shall be left exposed to the sun. 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, crossovers, couplings, clippings, connectors, joints etc. 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; allow for all builder's works in connection</u>				
A	20mm dia pipe	72	Lm		
B	25mm dia -ditto-	48	Lm		
C	32mm -ditto-	144	Lm		
	<u>Extra-over PPR pipework for the following:-</u>				
	<b>Bends</b>				
D	20mm dia bend	65	No		
E	25mm -ditto-	18	No		
F	32mm -ditto-	24	No		
	<b>Threaded bend</b>				
G	25mm x 20mm threaded bend	24	No		
	<b>Tees</b>				
H	20x20x20mm dia equal tee	30	No		
J	25x25x20mm dia tee	24	No		
K	25mm dia equal tee	6	No		
L	32x25x25mm dia tee	6	No		
	<b>Unions</b>				
M	20mm	15	No		
N	25mm	10	No		
P	32mm	18	No		
	<i>Total Carried to Collection</i>				



## PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>Nipples</u></b>				
A	32mm diameter sockets	9	No		
B	25mm -ditto-	12	No		
C	20 mm -ditto-	12	No		
	<b><u>Sockets</u></b>				
D	32mm diameter sockets	12	No		
E	25mm -ditto-	18	No		
F	20 mm -ditto-	18	No		
	<b><u>Reducers</u></b>				
G	25x20mm reducer	18	No		
H	32x25mm - ditto-	11	No		
	<b><u>Gate valves</u></b>				
J	32mm 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 head joints to steel tubing and complete with round male threaded transition fittings. The gate valve to be as PEGLER or approved equivalent.	18	No.		
K	25mm -ditto-	11	No		
L	20mm -ditto-	11	No		
	<i>Total Carried to Collection</i>				



PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>Internal Drainage</u> <u>Supply, deliver and install the following uPVC and muPVC soil and waste pipework. Bidders must allow in their prices for all the various sizes of connectors, adaptors etc required for the satisfactory functioning of the drainage system</u> <b>uPVC and muPVC pipes</b>				
A	100mm diameter heavy gauge golden brown mUPVC pipe	128	Lm		
B	100mm diameter heavy gauge grey mUPVC pipe	41	Lm		
C	50mm-ditto-	15	Lm		
D	40mm-ditto-	91	Lm		
E	32mm -ditto-	6	Lm		
	<b><u>Extra-over uPVC and muPVC pipework for the following:-</u></b>				
	<b>Traps</b>				
F	100x50mm dia floor trap	6	No		
G	Standard 300 x 300 x 450mm masonry gully trap complete with 125mm thick reinforced concrete cover.	3	No.		
	<b>Weathering Slates and Vent Cows</b>				
H	100mm dia vent cowl and weathering slate.	6	No		
J	Ditto weathering slate.	6	No		
K	Ditto weathering apron.	6	No		
	<b>Access cap</b>				
L	100mm dia access cap with screw cap and washer	30	No		
M	40mm dia ditto	24	No		
	<b>Bends</b>				
N	100mm diameter long radius bend	36	No		
P	50mm -ditto- short radius ditto	9	No		
Q	40mm -ditto- bend	48	No		
	<b>Sweep tees</b>				
R	100mm dia sweep tee	6	No		
S	50mm ditto	6	No		
T	40mm ditto	24	No		
	<i>Total Carried to Collection</i>				



PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	<b>Single branches</b> 100mm dia	15	No		
B	50mm ditto	0	No		
C	40mm ditto	12	No		
D	<b>Boss connectors</b> 100x40mm dia boss connector	18	No		
E	<b>Wc connectors</b> 100mm dia WC connector	18	No		
F	Testing and Commissioning Allow for pressure testing and commissioning of the entire installations under this bill item (Sanitary fittings, plumbing and drainage) to the satisfaction of the PM.	1	ITEM		
<i>Total Carried to Collection</i>					
<u>COLLECTION FOR INTERNAL PLUMBING AND DRAINAGE</u>					
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PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO 2</u> <u>ELECTRICAL WIRING &amp; FITTINGS</u>  <u>Supply, Deliver to site, install, set to work and commission the following</u>				
A	3x1.5 mm single cable drawn in 20mm diameter heavy gauge conduit for two way switching couplers, sandale clips, circular boxes and switch boxes but excluding the fittings.	1770	lm		
B	3x2.5mm single core pvc insulated copper cables drawn in 20mm diameter heavy gauge pvc conduits including couplers and twin boxes excluding the socket outlets.(for SP sockets)	780	lm		
C	3x2.5mm single core pvc insulated copper cables drawn in 20mm diameter heavy gauge pvc conduits including couplers and twin boxes excluding the socket outlets.(for handryers)	180	lm		
D	3x4.0mm single core pvc insulated copper cables drawn in 20mm diameter heavy gauge pvc conduits including couplers and twin boxes excluding the socket outlets.(for TP sockets)	216	lm		
E	45A DP cooker control point, completely wired in 3x4mm single core pvc insulated copper cables drawn in 20mm diameter heavy gauge pvc but excluding the cooker- unit.	6	lm		
F	8 waysTPN distribution board complete with 125A integral isolator as MEM or equivalent excluding the MCBs and blanking plates.	6	No		
G	Duel tariff meter board 24X24 constructed with 16 SWG powder coated mild steel and complete with mounting back blacket and vew glass.	6	No		
H	100A Single phase MCCB as MEM or equiverent	6	No		
J	50mm heavy pvc conduits runing from meter board to Distribution board.	60	lm		
K	Protective multiple earthing comprising of 6.0mm pvc insulated cable drawn in 20mm heavy gauge conduits, 15mm by 1200mmlong copper eletrode with clamp and ' earthing manhole with inspection cover to KPLC Ltd by laws and statutory requirements.	6	No		
L	Lighting fittings-1200mm 36W HPF single batten fluorescent luminaire complete with 18 watt LED tubes(frosted) as approved	24	No		
	<i>Total Carried to Collection</i>				



PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	Lighting fittings- 100 wts floodlight fitting with the following parameters power-(w) 80-140 frequency 50 HZ-60HZ, operating voltage: AC 85- 265 DC 12/24v LED efficiency(lm/w:80, power supply efficiency>90%,power factor >0.9 color reding index of : >70, color temperature (k)2700-6500,ambient temperature (;c) 40-50, life span 50000 hrs, IP rating : IP65,weight -12kg and should be made of high purity alluminium reflector and heat sink ,high intencity tempered glass cover,single powerful LED light source and a high efficiency LED driver and mounting to existing masonry/ concrete/metal surface	4	No		
B	Switches-10A one gang one way switch as MK or equivalent	27	No		
C	Switches- 10A two gang two way switch as MK or equivalent.	24	No		
D	Three phase industrial sockets with intergrated isolator as maximus or equivalent.	6	No		
E	45A DP Cooker cooker control unit complete with13A SP switched socket outlet, neon indicators and marked 'Cooker' as MK or equivalent.	6	No		
F	Cooker connector unit as MK. Or equivalent.	6	No		
G	15 A single socket outlet as MK. Or equivalent	27	No		
H	13A SP twin switched socket outlets as MK or equivalent.	24	No		
J	Consumer blanking covers	18	No		
K	45A DP Water heater switch complete with neon indicators and marked water Heater as MK or equivalent.	12	No		
L	SP MCBs as MEM or equivalent	6	No		
M	TP MCB as MEM or equivalent.	12	No		
	<u>50 mm and bend heavy gauge conduit for KPLC supply</u>	2	No		
N	Spherical screwneck ball fitting complete with 18W CFL	6	No		
P	Supply and fix on appropriately fixed elongated metallic supports double bearing 5 blade ceiling fan; sweep size 1420mm; double safety mechanism; as directed on site	18	No		
	<i>Total Carried to Collection</i>				



## PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

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## PROPOSED RABAI STAFF HOUSES RENOVATION WORKS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>STAFF HOUSES RENOVATIONS SUMMARY PAGE</u>				
1	Removal and disposal of asbestos	SH/1			
2	Demolitions, Downtakings and Alterations	SH/3			
3	Roof Works	SH/4			
4	Doors and Windows	SH/5			
5	Joinery Fittings	SH/6			
6	Masonry Repairs & External Paving	SH/7			
7	Finishes	SH/9			
8	Internal Plumbing & Drainage	SH/15			
9	Electrical Wiring & Fittings	SH/18			
	TOTAL FOR STAFF HOUSES RENOVATIONS CARRIED TO GRAND SUMMARY				





ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>BILL NO. 3 - CONVERSION OF 3 BEDROOM UNIT TO SOCIAL HALL</u></b>  <b><u>ELEMENT NO 1</u></b> <b><u>REMOVAL AND DISPOSAL OF ASBESTOS ROOFING SHEETS (CONTRACTOR TO ENGAGE NEMA LICENSED ASBESTOS HANDLER TO UNDERTAKE THIS PART OF THE WORKS)</u></b> <b><u>(ALL PROVISIONAL)</u></b>  <i><u>The asbestos removal and disposal shall include encapsulation, loading and CAREFULLY carting away the arising to an approved disposal site as per NEMA regulations. Provide documentary evidence of work tracking.</u></i>				
A	Treat the asbestos sheets to ensure no dust/dirt are release to the environment during removal/handling	268	Sm		
B	Carefully remove existing asbestos roofing sheets and seal them as per NEMA regulations; Transport in a sealed container and approved transportation vehicle and dispose as per NEMA regulations.	268	Sm		
C	Allow for clearing from site all abestos arising from the removal and delivering works clean	1	ITEM		
D	Allow for EIA and risk assesment reports together with all associated approval costs	1	ITEM		
	<i>Total Carried to Summary Page</i>				

WBG

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO 2</u> <u>DEMOLITIONS, DOWNTAKINGS &amp; ALTERATIONS</u> <u>(ALL PROVISIONAL)</u> <i>All items of demolitions and downtakings shall be deemed to include shoring, propping and all other applicable and acceptable methods of protection, handing over all salvaged materials to the client; carting away all arising debris and making good all disturbed surfaces; all to the project manager's approval.</i>				
A	Carefully demolish existing 200mm internal masonry partition walls and cart away the debris	68	Sm		
B	Carefully demolish existing structural roof timber members including wall plates and cart away	210	Sm		
C	Allow for careful removal of existing damaged chipboard ceiling and cart away; prepare roof timber members to receive new chipboard ceiling	151	Sm		
D	Ditto fascia boards; prepare to receive new fascia boards.	66	Lm		
E	Allow for removal of all damaged timber doors including frames and hand over to client	7	No		
F	Allow for removal of all windows including its frames and cart away.	21	No		
G	Allow for removal of all WC's complete with Cistans and cut away; Prepare surfaces to receive new sanitary fittings and fixtures.	2	No		
H	Allow for removal of all Wash hand basin complete with all the accessories including all connections to the services, waste, jointing to water supply, supports and all plugging and screwing to walls and floors and cut away.	2	No		
J	Carefully remove all existing soap dish	1	No		
K	Hack and prepare floor currently in pvc ready to receive new 32mm floor finish (m/s) and cart away arising debris.	151	Sm		
L	Allow for removal of all electricals wiring including conduit for all 10no. 2 bed room units pipes and cut away.	1	Item		
	<i>Total Carried To Collection</i>				





ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO 3</u>				
	<u>ROOF WORKS (PROVISIONAL)</u>				
	<u>The Following in assorted sawn celcured timber trusses and common rafters, tie beams, struts and ties : hoisting and fixing at 2700 mm above ground level; with and including all nails, bolts, plates, welds, etc and all connections as detailed to (provisional)</u>				
A	Trusses to roof	1	Item		
B	100 x 50 mm ridge members	45	Lm		
C	100 x 50mm hip members	38	Lm		
D	100 x 50 mm valley members	12	Lm		
	<u>Wall Plate</u>				
E	100 x 50 mm Wall plate : fixed with and including 12mm diameter mild steel ragbolt 150mm long at 900mm centres cast in ring beams	70	Lm		
	<u>Wrot cypress ; 1st grade selected and kept clean</u>				
F	15mm Thick x 100mm wide tongued and grooved eaves boarding	43	Sm		
G	250 x 25 mm Fascia board	71	Lm		
	<u>Roof Covering</u>				
H	Gauge 28 VERSATILE roofing sheets fixed to 22.5 degrees pitched roof timber purlins	210	Sm		
J	Ditto 380 mm matching ridge cap	45	Lm		
K	380 mm gauge 24 aluzing flashing to chimney areas	45	Lm		
	<u>Flashing</u>				
	<u>Sheet metal flashing; 18 gauge galvanised mild steel</u>				
L	valley gutter lining 475mm girth; six labours fixed to timber battens	12	Lm		
	<u>Rain water goods</u>				
M	140mm diameter half round UPVC gutters including support brackets, joint unions and other accessories	66	Lm		
N	Extra over UPVC gutters for 100 mmm diameter outlets	6	No.		
P	Ditto stopped ends	8	No.		
Q	110mm UPVC rainwater downpipe fixed to walls with holder bolts at 800mm c/c	6	Lm		
R	Extra over ditto for swaneck	8	No.		
S	Ditto shoe	8	No.		
	<i>Total Carried to Summary Page</i>				

WBS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO 4</u>				
	<u>DOORS AND WINDOWS</u>				
	<u>Wrot hardwood purpose made frames and framings</u>				
A	150 x 50 mm; 4 No. labours; plugged door frame	36	Lm		
B	50 x 25mm architraves with 4 No. labours	36	Lm		
C	20 x 20mm quadrants with 3 No. labours	36	Lm		
	<u>External doors</u>				
D	45mm thick size 800 x 2040mm high hardwood paneled doors; Mahogany or equivalent	2	No.		
E	5mm clear sheet glass vent light above doors including hardwood beadings to PMs approval	15	Sm		
	<u>Internal Doors</u>				
	<u>45mm Thick semi-solid core flush doors to B.S 459: part 2 mahogany veneered both sides and lipped on all edges in approved hardwood</u>				
F	45mm Thick solid core; panel doors size 800mm x 2020mm high to B.S 459: part 2; mahogany veneer faced both sides; all to approval	3	No		
G	Ditto; size 670 x 2020mm high; ditto	2	No		
	<u>Ironmongery</u>				
	<u>Supply and fix the following to UNION catalogue or other equal and approved to soft wood, hardwood or the like fixing with screws</u>				
H	Three lever mortice lock complete with set lever brass handle furniture	7	No.		
J	Two lever ditto	3	No.		
K	100mm brass butt hinges	27	PRS		
	<u>Alumunium powder coated sliding windows in 75 x 25 x 1.5 mm frames, 5mm glazing ; glazing beads; ironmongery; plugged and screwed to walls; all necessary antivibration rubber gaskets; allow for fixing of mosquito gauze wire complete with framing to the external</u>				
L	Aluminium window sizes 870mm wide x 1360mm height,	17	No		
M	Ditto; size 470 x 1170mm high; ditto	1	No		
N	Ditto; size 1240 x 1070mm high; ditto	1	No		
P	Ditto; size 590 x 800mm high; ditto	2	No		
	<u>Total Carried to Summary Page</u>				

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO 5</u> <u>JOINERY FITTINGS</u> <u>Built in bedroom wardrobes</u> <u>25mm thick blockboard joinery fitting complete complete</u> <u>with all necessary accessories, ironmongery and chrome</u> <u>pipes</u>				
A	1970mm x 2600mm x 600mm depth , double and triple opening; varnished or painted to match existing; to be used for making good built in bedroom wardrobes in all the units	1	No		
B	Supply materials and repair 2600mm length x 2600mm wide x 600mm depth wardrobes; quadripally opening; with all the nescessary iron mongery, handles, chrome pipe e.t.c; varnished or painted to match existing; to be used for making good built in bedroom wardrobes in all the units	0	No		
C	<u>Curtain Rods</u> 35 dia. Chrome pipe double curtain rods; double curtain rods brackets; fixed with screws; all to approval	22	Lm		
Total Carried to Summary Page					





ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELEMENT NO 7</u> <u>FINISHES</u> <u>Floor Tiling</u> 32mm thick cement and sand (1:4) screed to receive tiles  <u>Approved tiles; non slip ceramic floor tiles to regular or other approved pattern; bedding and jointing in mixture of cement sand (1:4) mortar and tile adhesive ; grouting with matching cement</u>	151	Sm		
A	8 mm thick; butt joints both ways to floor level; internal	151	Sm		
B	100 mm high skirting; straight junction with wall and floor finish.  <u>Wall Tiling</u> <u>Approved ceramic tiles to B.S. 1281; local; color glazed wall tiles to regular or approved other pattern; bedding and jointing in cement sand (1:4) mortar, grouting with approved cement.</u>	84	Lm		
C	6 mm thick or equal and approved tiles; butt joints straight both ways; to cement and sand base (m/s) to walls internal	20	Sm		
D	Plastic edging strips (Provisional)	18	Lm		
E	Sand and acid clean terrazzo floor  <u>Ceiling</u> <u>Sawn cypress ; pressure impregnated</u>	21	Sm		
F	50 x 50 mm brandering at 600 mm c/c	150	Lm		
G	Ditto; plugged	100	LM		
H	New 12 mm thick soft board ceiling fixed to existing 50x50 mm wooden brandering; allow for repair and or replacement damaged or missing brandering internally	151	Sm		
J	Extra over ceiling board for trap door size 600 x 600 mm  <u>Wrot cypress : knot free: suitable for clear varnish finish : selected and kept clean</u>	1	No.		
K	100 x 25mm Moulded cornice	79	Lm		
	<i>Total Carried to Collection</i>				





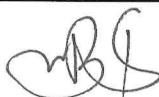
ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>Painting and Decorations</u></b>				
	<i><u>Prepare and apply one undercoat and two finishing coats of first quality permapast exterior quality marine emulsion paint to:-</u></i>				
A	Wall surfaces; externally including surface preparation	218	Sm		
	<i><u>Prepare and apply three coats bituminous paint to:-</u></i>				
B	Existing plinth; allow for surface preparation	46	Sm		
	<i><u>Prepare and apply one undercoat and three finishing coats of polyurethane clear vanish paint to:-</u></i>				
C	General surfaces; Timber doors	27	Sm		
D	Door frames; 250mm girth	36	Lm		
	<i><u>Prepare and apply one undercoat and three finishing coats of polyurethane clear vanish paint to:-</u></i>				
E	Architraves; 100mm ditto	36	SM		
F	Quadrants; 60mm ditto	36	SM		
	<i><u>Prepare and apply one undercoat and three finishing coats of silk vinyl paint to:-</u></i>				
G	Masonry walls internally; allow for surface preparation and minor repairs	527	Sm		
	<i><u>Prepare and apply one undercoat and three finishing coats of brilliant white emulsion paint to:-</u></i>				
H	Celotex ceiling; allow for surface preparation	151	Sm		
J	Cornice; 150mm girth	79	Lm		
	<i>Total Carried to Collection</i>				
	<b><u>COLLECTION FOR FINISHES</u></b>				
	From page	SH/8			
	From page above	SH/9			
	<i>Total Carried to Summary Page</i>				

WBS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b>ELEMENT NO 8</b></p> <p><b>INTERNAL PLUMBING AND DRAINAGE</b></p> <p><u>Sanitary Fittings</u></p> <p><u>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.</u></p> <p><u>Note:</u></p> <p><u>(i) All Sanitary Fittings shall be in approved colour.</u></p> <p><u>(ii) The Model and Ref No. indicated is only a guide to the type and quality of fittings.</u></p> <p><u>(iii) Equivalent and Approved models may be acceptable.</u></p> <p><u>(iv) Catalogs of the Tendered fitting must be attached</u></p>				
A	<p><b>Water closet (wc) suite</b></p> <p>Close coupled wash down water closet in approved colour complete with horizontal outlet to BS 3402 with valveless cistern fittings including syphon, 15mm bottom inlet valve, 20mm bottom overflow, bolts and connecting fitments from cistern bowl, chrome-plated lever, heavy duty seat and cover and p-trap outlet connector all as Twyford's Galerie ref. No.GR1148 CH or approved equivalent.</p>	2	No		
B	<p><b>Wash hand basin</b></p> <p>Pedestal or equival and approved Wash hand basin as Twyford "Advent 565 Countertop" size 565 x 425mm with one central tap hole Cat. No. AD4531 WH complete with 32mm diameter lift-up waste (No.WF9365CP) and 32mm plastic bottle trap (No.WF8482XX)</p>	2	No		
C	<p>Supply and fix Ultra instant shower complete with easily replacable heating elements</p>	2	No		
D	<p><b>Self-closing pillar tap</b>, 15mm C.P.,non concussive type pegler-Prestex Cat. No.877</p>	2	No		
E	<p><b>Toilet bip tap</b> as Cobra No. 206-CP, heavey duty with star handle.</p>	4	No		
	<i>Total Carried to Collection</i>				



ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	<b>Toilet Roll Holder</b> Semi recessed toilet roll holder in Vitreous China of size 165 x 165mm in approved colour as Twyford's 9806WH or equal and approved.	2	No		
B	<b>Mirrors</b> 6mm thick polished plate glass silver backed mirror with bevelled edges, size 500 x 600mm, plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	2	No		
C	<b>Sink pillar tap</b> as Cobra No. 115/041 chrome plated with overarm swivel outlet, carina head.	2	No		
<i>Total Carried to Collection</i>					



ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p>PPR Piping</p> <p>Supply, deliver and install Polypropylene Random (PP-R) 20 pipework to DIN 8077 with joints, couplings, reducers, tees, adaptors, pipe fixing clips etc all to DIN 16962 and DIN 16928 .Pipe jointing shall be by polyfusion or use of electric coupling. Where pipework is not chased proper anchoring using approved fixtures shall be done. No pipework shall be left exposed to the sun. 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, crossovers, couplings, clippings, connectors, joints etc. 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; allow for all builder's works in connection</p>				
A	20mm dia pipe	45	Lm		
B	25mm dia -ditto-	56	Lm		
C	32mm -ditto-	140	Lm		
	<u>Extra-over PPR pipework for the following:-</u>				
	<b>Bends</b>				
D	20mm dia bend	60	No		
E	25mm -ditto-	24	No		
F	32mm -ditto-	20	No		
	<b>Threaded bend</b>				
G	25mm x 20mm threaded bend	20	No		
	<b>Tees</b>				
H	20x20x20mm dia equal tee	30	No		
J	25x25x20mm dia tee	25	No		
K	25mm dia equal tee	8	No		
L	32x25x25mm dia tee	6	No		
	<b>Unions</b>				
M	20mm	12	No		
N	25mm	8	No		
P	32mm	15	No		
	<i>Total Carried to Collection</i>				

WBS



ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>Internal Drainage</u> Supply, deliver and install the following uPVC and muPVC soil and waste pipework. Bidders must allow in their prices for all the various sizes of connectors, adaptors etc required for the satisfactory functioning of the drainage system <b>uPVC and muPVC pipes</b>				
A	100mm diameter heavy gauge golden brown mUPVC pipe	103	Lm		
B	100mm diameter heavy gauge grey mUPVC pipe	68	Lm		
C	50mm-ditto-	25	Lm		
D	40mm-ditto-	65	Lm		
E	32mm -ditto-	8	Lm		
	<b><u>Extra-over uPVC and muPVC pipework for the following:-</u></b>				
	<b>Traps</b>				
F	100x50mm dia floor trap	6	No		
G	Standard 300 x 300 x 450mm masonry gully trap complete with 125mm thick reinforced concrete cover.	1	No.		
	<b>Weathering Slates and Vent Cows</b>				
H	100mm dia vent cowl and weathering slate.	2	No		
J	Ditto weathering slate.	2	No		
K	Ditto weathering apron.	2	No		
	<b>Access cap</b>				
L	100mm dia access cap with screw cap and washer	20	No		
M	40mm dia ditto	10	No		
	<b>Bends</b>				
N	100mm diameter long radius bend	30	No		
P	50mm -ditto- short radius ditto	7	No		
Q	40mm -ditto- bend	15	No		
	<b>Sweep tees</b>				
R	100mm dia sweep tee	8	No		
S	50mm ditto	5	No		
T	40mm ditto	24	No		
	<i>Total Carried to Collection</i>				

*MBS*

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	<b>Single branches</b> 100mm dia	10	No		
B	50mm ditto	0	No		
C	40mm ditto	15	No		
D	<b>Boss connectors</b> 100x40mm dia bosss connector	2	No		
E	<b>Wc connectors</b> 100mm dia WC connector	2	No		
F	Testing and Commissioning Allow for pressure testing and commissioning of the entire installations under this bill item (Sanitary fittings, plumbing and drainage) to the satisfaction of the PM.	1.00	ITEM		
<i>Total Carried to Collection</i>					
<u>COLLECTION FOR INTERNAL PLUMBING AND DRAINAGE</u>					
	From page	SH/10			
	From page	SH/11			
	From page	SH/12			
	From page	SH/13			
	From page	SH/14			
	From page above	SH/15			
<i>Total Carried to Summary Page</i>					

WBS

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>ELECTRICAL WIRING &amp; FITTINGS</u>				
	<u>Supply, Deliver to site, install, set to work and commission the following</u>				
A	3x1.5 mm single cable drawn in 20mm diameter heavy gauge conduit for two way switching couplers, saddle clips, circular boxes and switch boxes but excluding the fittings.	1895	lm		
B	3x2.5mm single core pvc insulated copper cables drawn in 20mm diameter heavy gauge pvc conduits including couplers and twin boxes excluding the socket outlets.(for SP sockets)	785	lm		
C	3x2.5mm single core pvc insulated copper cables drawn in 20mm diameter heavy gauge pvc conduits including couplers and twin boxes excluding the socket outlets.(for handryers)	150	lm		
D	3x4.0mm single core pvc insulated copper cables drawn in 20mm diameter heavy gauge pvc conduits including couplers and twin boxes excluding the socket outlets.(for TP sockets)	165	lm		
E	45A DP cooker control point, completely wired in 3x4mm single core pvc insulated copper cables drawn in 20mm diameter heavy gauge pvc but excluding the cooker- unit.	2	lm		
F	8 waysTPN distribution board complete with 125A integral isolator as MEM or equivalent excluding the MCBs and blanking plates.	1	No		
G	Dual tariff meter board 24X24 constructed with 16 SWG powder coated mild steel and complete with mounting back blacket and view glass.	2	No		
H	100A Single phase MCCB as MEM or equivalent	1	No		
J	50mm heavy pvc conduits running from meter board to Distribution board.	60	lm		
K	Protective multiple earthing comprising of 6.0mm pvc insulated cable drawn in 20mm heavy gauge conduits, 15mm by 1200mm long copper electrode with clamp and earthing manhole with inspection cover to KPLC Ltd by laws and statutory requirements.	1	No		
L	Lighting fittings-1200mm 36W HPF single batten fluorescent luminaire complete with 18 watt LED tubes(frosted) as approved	12	No		
	<i>Total Carried to Collection</i>				





ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	Lighting fittings- 100 wts floodlight fitting with the following parameters power-(w) 80-140 frequency 50 HZ-60HZ, operating voltage: AC 85- 265 DC 12/24v LED efficiency(lm/w:80, power supply efficiency>90%,power factor >0.9 color reding index of :>70, color temperature (k)2700-6500,ambient temperature (;c) 40-50, life span 50000 hrs, IP rating : IP65,weight -12kg and should be made of high purity alluminium reflector and heat sink ,high intencity tempered glass cover,single powerful LED light source and a high efficiency LED driver and mounting to existing masonry/ concrete/metal surface	2	No		
B	Switches-10A one gang one way switch as MK or equivalent	12	No		
C	Switches- 10A two gang two way switch as MK or equivalent.	16	No		
D	Three phase industrial sockets with intergrated isolator as maximus or equivalent.	1	No		
E	45A DP Cooker cooker control unit complete with13A SP switched socket outlet, neon indicators and marked 'Cooker' as MK or equivalent.	2	No		
F	Cooker connector unit as MK. Or equivalent.	2	No		
G	15 A single socket outlet as MK. Or equivalent	12	No		
H	13A SP twin switched socket outlets as MK or equivalent.	16	No		
J	Consumer blanking covers	5	No		
K	45A DP Water heater switch complete with neon indicators and marked water Heater as MK or equivalent.	2	No		
L	SP MCBs as MEM or equivalent	1	No		
M	TP MCB as MEM or equivalent.	2	No		
	<u>50 mm and bend heavy gauge conduit for KPLC supply</u>	1	No		
N	Spherical screwneck ball fitting complete with 18W CFL	1	No		
P	Supply and fix on appropriately fixed elongated metallic supports double bearing 5 blade ceiling fan; sweep size 1420mm; double safety mechanism; as directed on site	3	No		
	<i>Total Carried to Collection</i>				

WBG





WATER RETICULATION WORKS AT RABAI STAFF HOUSES					
ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<b>BILL NO. 4</b>				
	<b><u>WATER TANK</u></b>				
	<b>Ground level water storage tank</b>				
A	Supply, deliver and install vertical close end plastic moulded tank of capacity 5000 litres (1321 gallons) and diameter 1670x 2060mm high. The tank to be assembled complete with cover and having screwed connections for inlet, outlet, overflow, 50mm medium pressure ball valve, drain pipes and any other necessary item for its proper functioning. The tank shall be mounted on concrete slab.	11	No.		
	<b>Elevated Water Storage Tank</b>				
B	Supply, deliver and install vertical close end plastic moulded tank of capacity 2500 litre. The tank to be assembled complete with cover and having screwed connections for inlet, outlet, overflow, 50mm medium pressure ball valve with float, drain pipes and any other necessary item for its proper functioning. The tank shall be mounted on an elevated platform.	11	No		
	<b>Water booster pumpset</b> <u>(Brochure/catalogue must be attached)</u>				
C	Supply and instal water booster pumpset of two pumps, one duty and one stand-by. The pump to be capable of pumping at 0.6l/s against a total head of 20m. The pump to be complete with automatic change over, water level sensor and controls, anti-vibration hose, float switch and all necessary accessories; or equal and approved	13	Set		
D	Allow for standard pump house	1	Item		
E	Allow for excavation and backfilling of 100m trench	1	Item		
	<i>Carried to Collection</i>				

WBS

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<b><u>EARTHWORKS</u></b>				
A	Excavate pit for concrete columns bases size 800 x 800mm starting from ground level to a depth n.e 1.50 m deep	29	Cm		
B	Load and cart away surplus soil from site	14	Cm		
C	Return, fill and ram selected excavated material around foundations	15	Cm		
D	50mm quarry chips or murrum dust blinding	11	Sm		
	<b><u>CONCRETE WORK</u></b>				
E	50 mm thick concrete blinding class 15/20; to column bases	29	Sm		
F	Vibrated reinforced concrete class 25/20; to column bases	8	Cm		
G	Ditto; to columns	8	Cm		
	<b><u>FORMWORK</u></b>				
H	Sawn cypress formwork; to column bases	36	Sm		
J	Ditto; to columns	71	Sm		
	<b><u>REINFORCEMENT</u></b>				
	<u>Mild steel bar reinforcement to BS 4449 (Provisional)</u>				
K	8mm Diameter bars; to columns	178	Kg		
	<u>High yield square twisted bar reinforcement to BS 4461 (Provisional)</u>				
L	10mm Ditto; to column bases and columns	402	Kg		
M	Prepare and apply 3 coats black bituminous paint to stub column	184	Sm		
	<i>Carried to Collection</i>				

WBS

ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<b>TANK HOIST</b>				
A	<b>Anchor supports for water tank(as sample provided)</b> Supply and fix steel I-Beams size 200 x 150 x 29.9kg/m; including anchoring to concrete column base by angle plates, bolting and welding where necessary; to the PM's satisfaction	10525	Kg		
B	50 x 50 x 3mm thick angle sections; appropriately bolted by cleats and steel plates or including welding; to I-Beams; as per sample provided	3431	Kg		
C	50 x 50 x 2mm thick Rectangular Hollow Section metal tubes; appropriately bolted by cleats and including welding; to be used as guardrails and ladder	1469	Kg		
D	4.5mm thick mild steel plates; size 8'x4'; welded appropriately to each other and to lateral I-beam sections; to form bed for water tank	176	Sm		
E	Allow for provision of piping and piping accessories to be used for supply of water from the tank to the washrooms	1	Item		
	<i>Carried to Collection</i>				
ITEM	DESCRIPTION	QTY	UNIT	RATE	K.SHS
	<u><b>Collection</b></u>				
	Brought forward from 4/1				
	Brought forward from 4/2				
	Brought forward from 4/3				
	<b>Subtotal carried to Grand Summary</b>				

WBS

# ESTIMATES FOR THE PROPOSED RENOVATION WORKS RABAI STAFF HOUSES

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>BILL NO. 5</b>				
	<u>100PAX CAPACITY BIO DIGESTER</u>				
	<u>SUBSTRUCTURES (ALL PROVISIONAL)</u>				
	<u>Construct, install, test and commision biodigester waste treatment system complete with the following itemsto the satisfaction of the Engineer. The system is expected to treat approximately 13,300 gallons per day(50 cubic metres per day) or 100 persons whichever is higher.</u>				
	<u>Excavation</u>				
A	Excavate pit exceeding 1.50m deep starting from ground level	14	Cm		
B	Excavate pit exceeding 1.50m deep but not exceeding 3.0m deep starting from reduced level	14	Cm		
C	Ditto 3.0 to 4.5 m deep	9	Cm		
D	Extra over excavations for excavating in hardrock	10	Cm		
E	Return fill and ram approved excavated material around foundations	10	Cm		
F	Load and cart away surplus excavated material	36	Cm		
G	Allow for keeping the whole excavation free from all water including spring and running water	1	Item		
H	Allow for plunking and strutting the whole excavation	1	Item		
	<b><u>Mass concrete class 'P' in:</u></b>				
J	50mm thick blinding under foundations	15	Sm		
	<i>Carried to Collection</i>				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b><u>Reinforced insitu concrete class 25/(20mm aggregates)</u></b>				
A	200mm thick floor bed	15	Sm		
B	200mm thick wall	42	Sm		
C	200mm thick suspended slab	11	Sm		
D	Strip foundation	1	Cm		
	<b><u>Reinforcement</u></b>				
	<u>Supply and fix bars reinforcement including bending, hooks, tying wire, cutting, spacers and supporting all in position as described</u>				
E	In assorted reinforcement of various sizes	1,000	Kg		
F	A142 weighing 2.22kg/metre sq.(measured net no allowance made for laps)	88	Sm		
	<b><u>Sawn formwork to:</u></b>				
G	Soffites of suspended slab, Sides walls and	88	Sm		
H	Edge of bed between 150 - 225mm wide	32	Lm		
	<b><u>Water proof cement/sand (1:3) in:</u></b>				
J	20mm thick screed to sloping floor bed cross falls	6	Sm		
K	20mm thick screed trowelled hard and smooth	40	Sm		
L	20mm thick render to walls	62	Sm		
M	20mm thick render to soffites	11	Sm		
	<b><u>Sundries</u></b>				
N	Form or leave 100mm diameter hole in 200mm thick reinforced concrete wall and slab	10	No		
P	Form or leave 600 x 600mm hole in 200mm thick reinforced concrete suspended slab	2	No		
Q	600 x 600mm heavy duty double seal manhole cover and frame including setting cover in concrete opening and forming rebate	2	No		
	<i>Carried to Collection</i>				

*mBS*



ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	<u>Approved filling</u> Rock and gravel backfill	10	Cm		
B	Insecticide treatment on blinded surfaces with "Termidor" termicide or other equal and approved at the rate of fipromil (250gm/ litre) after dilution with water (1:100) at the rate of 5litres per square metre all in accordance with Manufacturer's Specifications	25	Sm		
C	Single layer 1000 gauge polythene sheeting with minimum 300mm side and end laps	4	Sm		
D	<u>Natural stone block walling jointed in cement/sand (1:3) mortar in</u> 200mm thick wall	14	Sm		
	Carried to Collection				
	<b>COLLECTION</b>				
	From page BD/1  From page BD/2  From above				
	<b>Total for Bio-Digester Carried to Grand Summary Page GS 1</b>				



**PROPOSED RENOVATIONS, WATER RETICULATION, ELECTRICAL  
RETROFITTING, PLUMBING AND FOUL DRAINAGE WORKS TO HOUSING -  
RABAI STAFF HOUSES (PHASE I)**

**GRAND SUMMARY**

BILL NO.	DESCRIPTION	Page No.	AMOUNT
			<b>K.SHS</b>
1	Preliminaries	P/15	
2	Staff Houses Renovations	SH/19	
3	Social Hall	SCH/19	
4	Water Reticulation	WR/3	
5	Biodigester	BD/3	
6	PC & Provisional Sums	PC/1	
	Sub Total		
	Add 16% VAT		
	<b>TOTAL TENDER SUM (Vat Incl.) K.SHS</b>		

Amount in words (Kenya Shillings).....  
 .....  
 .....  
 .....

Contractor's Name and Address.....  
 .....

Contractor's Stamp, Signature and Date.....  
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