**Date: 11th OCTOBER 2024**

 **BOQ FOR BOREHOLE COMPOUND 80M PERIMETER FENCING AND FOUR DOOR LATRINE CONSTRUCTION IN KANDUTURA**

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| **TENDER REF NO** | **ITEM DESCRIPTION** | **DELIVERY LOCATION** |
| HFHK/ADH/07/2024 | **BOREHOLE COMPOUND 80M PERIMETER FENCING AND FOUR DOOR LATRINE CONSTRUCTION IN KANDUTURA** | Project name: rugutu namuki-naibor water source protection Project location: naibor village, laikipia north sub-county, laikipia county (approximately 20km from nanyuki town)"  |

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| **TENTATIVE BILLS OF QUANTITIES FOR THE DEVELOPMENT OF RUGUTU NAMUKI-NAIBOR WATER SOURCE PROTECTION** |
| **ITEM** | **DESCRIPTION** | **UNIT** | **QTY** | **RATE (Ksh)** | **AMOUNT(Ksh)** |
| **WATER SOURCE PROTECTION: Borehole compound Fencing and Latrine construction for borehole sites** |
| 1 | Allow 60m perimeter fencing using precast concrete posts spaced at 3m apart, barbed wire and chicken wire mesh(1") - include a Fabricated mild steel gate size 4000mm wide x 2100mm high | m | 60 |   |  -  |
|   | **TOTAL COST FOR WATER SOURCE PROTECTION** |  |  |  |  **-**  |
|   | **4 DOOR LATRINE BLOCK (2 doors ladies, 2 doors gents with urinal)** |  |  |  |  **-**  |
|   |  |   |   |   |   |
|   | **SUBSTRUCTURE WORKS (ALL PROVISIONAL)** |   |   |   |   |
|   | Excavations |   |   |   |   |
| A | Clearing site of all bushes, shrubs, undergrowth and the like; small trees not exceeding 600mm girth; disposing arisings | 26 | SM |   |   |
| B | Excavation to reduced level commencing from ground level 300mm deep and not exceeding 1500mm | 20 | SM |   |   |
| C | Latrine pit excavation measuring 4.9m\*2.6m\*4m deep commencing from reduced level | 51 | CM |   |   |
| D | Excavate for strip foundations not exceeding 1500 mm deep commencing from reduced level | 6 | CM |   |   |
| E | Extra over all excavations and earthworks for breaking up rock where encountered | 1 | CM |   |   |
| F | Plank and strut to uphold sides of excavations: keep excavations free from all fallen material | 1 | Item |   |   |
| G | Keep excavations free from ground and surface water | 1 | Item |   |   |
| H | Load and cart away surplus excavated material from site | 60 | CM |   |   |
| I | Return, fill and ram excavated material around | 8 | CM |   |   |
|   |   |   |   |   |   |
|   | **TOTAL CARRIED TO COLLECTION** |  |  |  |  |
|   |   |   |   |   |   |
|   | Insitu reinforced concrete class 20/20: vibrated: in |   |   |   |   |
| A | Strip foundation | 3 | CM |   |   |
|   | Approved Natural Stonework; roughly squared; bedded in cement and sand mortar (1:4); 25mm wide x 20 Gauge  hoop iron strapping every alternate courses |   |   |   |   |
| B | 200mm thick walls around the latrine pit | 68 | SM |   |   |
|   | 200mmx300mm ring beam with 4Y12 reinforcement bars at mid-height on pit wall. Insitu reinforced concrete class 20/20 vibrated as described in: |   |   |   |   |
| C | 200mm\*300mm RC beams (mid-wall) | 1 | CM |   |   |
| D | 150mm thick floor slab | 17 | SM |   |   |
| E | 200mm\*400mm RC beams (at ground slab) | 1 | CM |   |   |
|   | Sawn formwork to:- |   |   |   |   |
| F | Sides: strip foundation | 8 | SM |   |   |
| G | Sides and soffittes of beams | 12 | SM |   |   |
| H | Soffittes of slab | 12 | SM |   |   |
| I | Edges: slabs over 75 but not exceeding 150 mm girth | 17 | LM |   |   |
|   | High tensile square twisted steel bars to B.S. 4441 |   |   |   |   |
| J | 8mm dia bars | 99 | Kgs |   |   |
| K | 10mm dia bars | 179 | Kgs |   |   |
| L | 12mm dia bars | 131 | Kgs |   |   |
| M | 16mm dia bars | 80 | Kgs |   |   |
| N | Mesh fabric reinforcement to B.S 4483 and setting in  concrete with 300mm side and end laps (measured nett- allow for laps. Fabric ref. A142 weighing 2.22kg/sq. metre in surface bed | 17 | SM |   |   |
|   | Approved Natural Stonework; roughly squared; bedded in cement and sand mortar (1:4); 25mm wide x 20 Gauge  hoop iron strapping every alternate courses |   |   |   |   |
| O | 100mm thick walls (superstructure) | 36 | SM |   |   |
|  | **TOTAL CARRIED TO COLLECTION** |  |  |  |  |
|   |   |   |   |   |   |
| A | Render to plinth Finishes12mm thick cement/ sand render  | 5 | SM |   |   |
| B | PaintworkPrepare and apply threee coats of black bituminous paint to plinth render | 5 | SM |   |   |
|   | **REINFORCED CONCRETE (R.C) WORKS** |   |   |   |   |
|   | Insitu reinforced concrete class 20/20: vibrated: in |   |   |   |   |
| C | Ring beams | 1 | CM |   |   |
|   | High tensile, square twisted bar reinforcement to BS 4461 |   |   |   |   |
| D | 8mm dia bars | 25 | Kgs |   |   |
| E | 12mm dia bars | 72 | Kgs |   |   |
|   | Sawn formwork as described  to:- |   |   |   |   |
| F | Sides of ring beam | 12 | SM |   |   |
|   | Damp proof course |   |   |   |   |
| G | 150mm wide "Pluvex" or other equal and approved dumproof course laid and bedded in and including cement and sand mortar (1:4) | 10 | LM |   |   |
|   | **ROOF STRUCTURE** |   |   |   |   |
|   | All in sawn cypress:  second grade: clean:  treated with approved wood preservative: including jointing and connections as necessary |   |   |   |   |
|   | **The following in Roof Support** |   |   |   |   |
| H | 100 x 50mm rafters | 18 | LM |   |   |
| I | 150 x 25mm fascia board | 14 | LM |   |   |
| J | 75 x 50mm Ditto; Wall plate: fixed to concrete or masonry with approved bolts at 1000 mm centres | 10 | LM |   |   |
| K | G28 IT5 roofing sheets fixed to timber purlins with approved nails | 12 | SM |   |   |
|  | **TOTAL CARRIED TO COLLECTION** |  |  |  |  |
|   | **WINDOWS** |   |   |   |   |
|   | **Casements** |   |   |   |   |
|   | Steel casement windows purpose made primed steel complete in opening and fixed lights complete with fasteners and stays; steel lugs built into stone work to client's approval |   |   |   |   |
| N | Window size 600 x 600 mm high | 4 | No. |   |   |
|   | Glazing |   |   |   |   |
| O | 4 mm thick clear sheet glass and glazing to metal with metallic putty in different panes | 2 | SM |   |   |
|  | **TOTAL CARRIED TO COLLECTION** |  |  |  |  |
|   | Painting |   |   |   |   |
| A | Prepare and apply three coats of gloss oil paint to metal surfaces of windows; internally | 2 | SM |   |   |
| B | Ditto; externally | 2 | SM |   |   |
|   | **DOORS** |   |   |   |   |
|   | Metal Door: Supply and fix mild steel door complete with frames, stiles,  rails and hinges; Locking accessories; one coat of red  oxide  primer before fixing:- |   |   |   |   |
| C | 50mm thick single leaf door size 800 x 2100 mm high | 4 | No. |   |   |
|   | Ironmongery |   |   |   |   |
| D | 38mm rubber door stops as described | 4 | No. |   |   |
|   | Painting |   |   |   |   |
| E | Prepare and apply three coats of gloss oil to metal surfaces | 13 | SM |   |   |
|   | **WALL FINISHES** |   |   |   |   |
|   | *EXTERNAL* |   |   |   |   |
|   | Key pointing |   |   |   |   |
| F | Extra over walling for horizontal recessed and flush vertical key pointed joints in cement and sand (1:4) mortar. | 26 | SM |   |   |
|   | 19mm thick render as described to: |   |   |   |   |
| G | Ring beam masonry work | 4 | SM |   |   |
|   | Paintwork |   |   |   |   |
| H | Prepare and apply three coats external plastic emulsion paint to ring beam | 4 | SM |   |   |
|   | *INTERNAL* |   |   |   |   |
|   | Gauged plaster 1:1:9 as described to: |   |   |   |   |
| I | Walls and concrete surfaces internally (walls and ring beam) | 55 | SM |   |   |
|   | Paintwork |   |   |   |   |
| J | Prepare and apply three coats plastic emulsion paint to plastered surfaces. | 55 | SM |   |   |
|   |   |   |   |   |   |
| K | Supply and fix 100mm diam vent pipe  | 3 | M |   |   |
|  | **TOTAL CARRIED TO COLLECTION** |  |  |  |  |
|   |   |   |   |   |   |
|   | **FLOOR FINISHES: Internal Finishes** |   |   |   |   |
|   | Steel trowelled cement and sand screed (1:4) in: |   |   |   |   |
| A | 32mm thick Coloured screed smooth finish | 13 | SM |   |   |
| B | Connection of urinal unit including complete drainage  | 1 | Unit |   |   |
|  | **TOTAL CARRIED TO COLLECTION** |  |  |  |  |
|   | **TOTAL COST ESTIMATE FOR ONE LATRINE BLOCK** |  |  |  |  |
| **COLLECTION SUMMARY** |
| SN | **COMPONENT** | **Unit**  | **Qty** |  | **Corrected Amount** |
| 1 | TOTAL COST FOR WATER SOURCE PROTECTION | No | 1 |   |   |
| 2 | TOTAL COST ESTIMATE FOR ONE LATRINE BLOCK | No | 1 |   |   |
| 3 | 16% VAT  |   |   |   |  -  |
|   | **GRAND TOTAL RUGUTU NAMUKI WATER SOURCE PROTECTION** |  |  |  |  **-**  |