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## **PROPOSED BLOCK OF 2NO. ABLUTION BLOCKS**

**AT**

**OLOOLUA PRIMARY SCHOOL, NGONG**

## **BILLS OF QUANTITIES**

*Prepared By:*

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**October 2022**

PROPOSED 2NO. ABLUTION BLOCKS  
 AT OLOOLUA PRIMARY SCHOOL

Item	Description	Qty	Unit	Rate	Amount
	<p><b><u>ELEMENT NO. 1:</u></b></p> <p><b><u>PRELIMINARIES</u></b></p> <p>A Allow for preliminaries to cover for documentation, transport, security, hoarding, Insurance, water, electricity, PPE's etc</p>			ITEM	200,000.00
	<i>Carried to collection</i>			Shs	200,000.00

Item	Description	Qty	Unit	Rate	Amount
	<p><b><u>ELEMENT NO. 2:</u></b></p> <p><b><u>SUBSTRUCTURE:</u></b></p> <p>(All Provisional)</p> <p><b>Note:</b></p> <p><b>(1) Excavations for column bases and strip footing measured net: no working space allowed as per SMM: tenderers to allow for working space within their rates.</b></p> <p><b>(2) With reference to note (1) above, tenderers to note that oversite excavations to get working space will not be compensated.</b></p> <p><b><u>NOTE: Classes of Rock</u></b></p> <p><b>(1) Class 1 :</b></p> <p>Soft rock of the type known locally as "tuff" or "magadi" which in the opinion of the Engineer cannot be considered as hard rock shall be known as Class 1 rock. Soft Rock shall be rock with compressive strength not exceeding 15N/mm<sup>2</sup> Murram and Kunker is specifically excluded and will be reckoned as normal/common excavation. Extremely weathered and weak Tuff shall also be considered as normal excavation.</p> <p><b>(2) Class 2 :</b></p> <p>Class 2 Rock shall be with compressive strength exceeding 15N/mm<sup>2</sup>. This type of rock contains stones and boulders of unweathered or incompletely weathered Tuff, trachyte, black trap or lava with compressive strength exceeding 15N/mm<sup>2</sup> in a formation which is massive and geologically homogeneous. A boulder or outcrop with such compressive strength will be deemed to be Class 2 rock or Hard Rock</p> <p>The opinion of the Engineer in classifying rock shall be final and binding.</p> <p>Explosives must not be used without the prior approval of the Engineer. Blasting operations are carried out at the Contractor's sole risk, and all blasting must be carried out in accordance with government regulations and approval</p>				
	<i>Carried to collection</i>			Shs	
	<b>Excavations and Earthworks;</b>				

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Item	Description	Qty	Unit	Rate	Amount
A	Mass excavate black cotton soil not exceeding 1.5m deep for pit commencing from existing ground level	123	CM	500.00	61,500.00
B	Ditto, ditto exceeding 1.5m but not exceeding 3m deep	92	CM	650.00	59,800.00
	<b>Disposal of excavated material:</b>				
C	Load surplus excavated material and cart away	215	CM	600.00	129,000.00
	<b>Filling:</b>				
D	Approved Imported Murram, spread, levelled, well watered, rammed and consolidated in 100mm thick layers to 100% MDD	65	CM	1,400.00	91,000.00
E	300mm thick approved Hand-packed hardcore filling, spread, levelled, well rammed and consolidated in 100mm thick layers to receive concrete surface bed (m.s)	41	SM	450.00	18,450.00
F	Level and blind hardcore surfaces with 12-19mm quarry dust to receive concrete surface bed (m.s).	41	SM	250.00	10,250.00
	<b>Anti-Termite Treatment:</b>				
G	'Termidor SC' chemical anti-termite treatment to top surfaces of hardcore blinding executed by Insecta Limited or other equal and approved under a ten-year guarantee and provide guarantee certificate	41	SM	150.00	6,150.00
	<b>Damp-proof Membrane;</b>				
H	1000 Gauge polythene sheeting laid over blinded hardcore bed (measured nett - allow for laps)	11	SM	100.00	1,100.00
	<b>Concrete Work:</b>				
	<u>Mass concrete class 15/20 as described in:-</u>				
J	50mm thick blinding under strip foundation	21	SM	550.00	11,550.00
	<u>Vibrated reinforced concrete class 25 as described in: -</u>				
K	Strip footing	4	CM	14,000.00	56,000.00
L	Steps	6	CM	14,000.00	84,000.00
L	Ground beams	3	CM	14,000.00	42,000.00
M	150mm thick ground floor slab	11	SM	2,100.00	23,100.00
	<i>Carried to collection</i>			Shs	593,900.00
	<u>Vibrated reinforced concrete class 25 as described in: -</u>				

PROPOSED 2NO. ABLUTION BLOCKS  
AT OLOOLUA PRIMARY SCHOOL

Item	Description	Qty	Unit	Rate	Amount
A	150mm thick suspended ground slab	30	SM	2,100.00	63,000.00
	<b>Steel Reinforcement:</b>				
	<u>B.R.C. Mesh</u>				
B	Mesh fabric reinforcement complying with B. S 4483 Ref A98 embedded in floor slab (measured net with no allowance for minimum of 225mm. laps) including tying wire and supporting as required	11	SM	650.00	7,150.00
	<u>Supply and fix bar reinforcement including bending, hooks, tying wires, cutting spacers and supporting all in position as described:</u>				
	<u>High Tensile Deformed bars: B.S. 4449 to:</u>				
C	12mm diameter bars	186	KG	180.00	33,480.00
D	10mm ditto;	878	KG	180.00	158,040.00
E	8mm diameter bars	107	KG	180.00	19,260.00
	<b>Formwork:</b>				
	<u>Fair-faced formwork as described to: -</u>				
F	Soffites of suspended slab	30	SM	1,500.00	45,000.00
G	Sides of strip foundation	14	SM	650.00	9,100.00
H	Edges of slab 75-150mm wide	30	LM	150.00	4,500.00
J	Edges of steps, Ditto	68	LM	150.00	10,200.00
	<b>Foundation Walling;</b>				
	<u>Natural Quarry Stone Walling in mortar (1:3) including 25mm wide x 20 gauge hoop iron reinforcement in alternate courses as described in:-</u>				
K	200mm thick walling	74	SM	1,750.00	129,500.00
	<b>Damp-proof course;</b>				
L	Bituminous felt damp-proof course bedded and pointed in cement mortar (1:4) 200mm wide under walls	0	LM	120.00	
M	Ditto 100mm wide under walls	0	LM	100.00	
	<i>Carried to collection</i>			Shs	479,230.00
	<b>Plinth Finishes:</b>				

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Item	Description	Qty	Unit	Rate	Amount
A	12mm thick cement and sand (1:4) render to plinth surfaces	18	SM	300.00	5,400.00
B	Prepare and apply three coats of black bituminous paint to rendered surfaces of plinths	18	SM	250.00	4,500.00
	<i>Carried to Collection</i>			Shs	9,900.00
 <u>COLLECTION</u>					
	From Page 2			Shs	
	From Page 3			Shs	593,900.00
	From Page 4			Shs	479,230.00
	From Above			Shs	9,900.00
<i>Total Amount Carried to Section Summary</i>				Shs	1,083,030.00
 <u>ELEMENT NO. 3:</u>					
<u>REINFORCED CONCRETE WORK:</u>					

PROPOSED 2NO. ABLUTION BLOCKS  
AT OLOOLUA PRIMARY SCHOOL

Item	Description	Qty	Unit	Rate	Amount
	<b>Concrete Work:</b>				
	<u>Vibrated reinforced concrete class 25 as described in: -</u>				
A	Ring beam	3	CM	14,000.00	42,000.00
	<b>Steel Reinforcement (Provisional)</b>				
	<u>Supply and fix bar reinforcement including bending, hooks, tying wires, cutting spacers and supporting all in position as described:</u>				
	<u>High Tensile Deformed bars: B.S. 4449 to:</u>				
B	12mm diameter bars	145	KG	180.00	26,100.00
C	8mm ditto	84	KG	180.00	15,120.00
	<b>Formwork:</b>				
	<u>Fair-faced formwork as described to:</u>				
D	Sides and soffites of ring beam	39	SM	650.00	25,350.00
<i>Total Amount Carried to Section Summary</i>				Shs	108,570.00
	<b><u>ELEMENT NO. 4:</u></b>				
	<b><u>WALLING</u></b>				

PROPOSED 2NO. ABLUTION BLOCKS  
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Item	Description	Qty	Unit	Rate	Amount
	<b><u>External Walling</u></b>				
	<u>Approved load bearing machine dressed masonry stone bedded and jointed in cement and sand mortar (1:3) reinforced with 25mm wide x 20 gauge hoop iron in alternate courses as described in:</u>				
A	150mm thick walling	40	SM	1,600.00	64,000.00
	<b><u>Precast Concrete</u></b>				
B	150mm louvre wall to approved detail and pattern finished fair on all exposed surfaces, bedded, jointed and pointed in cement sand mortar (1:3) including timber framed coffee tray wire to the inside all to detail and painted	2	SM	4,000.00	8,000.00
	<b><u>Internal Walling:</u></b>				
C	150mm thick walling	39	SM	1,600.00	62,400.00
D	100mm thick ditto	37	SM	1,500.00	55,500.00
<i>Total Amount Carried to Section Summary</i>				Shs	189,900.00
	<b><u>ELEMENT NO. 5:</u></b>				
	<b><u>ROOF CONSTRUCTION</u></b>				



PROPOSED 2NO. ABLUTION BLOCKS  
AT OLOOLUA PRIMARY SCHOOL

Item	Description	Qty	Unit	Rate	Amount
	<i>All roof timber to be cypress of G.S grade, preservative treated and well seasoned to below 18% moisture</i>				
	<u>The following in timber trusses of clear span 3900mm including hoisting and fixing in position 2700mm above ground floor</u>				
A	50x100mm thick rafters	44	LM	350.00	15,400.00
B	50x100mm thick tie beam	30	LM	350.00	10,500.00
C	50x75mm thick struts and ties	75	LM	285.00	21,375.00
D	100x50mm thick wall plate bolted to beam with 12mm diameter x 300mm long mild steel J - bolts at 1200mm centres	43	LM	400.00	17,200.00
E	50x100mm thick common rafters	66	LM	350.00	23,100.00
F	Ditto; valley rafters	12	LM	350.00	4,200.00
G	Ditto; hip rafters	17	LM	285.00	4,845.00
H	50x75mm thick purlins	85	LM	285.00	24,225.00
J	25x250mm ridge board	14	LM	600.00	8,400.00
K	25x250mm wrot cypress fascia/ barge board	36	LM	600.00	21,600.00
	<b>Roof Covering</b>				
L	Gauge 28 pre-painted corrugated iron sheets roof cover fixed to purlins as appropriate	78	SM	1,400.00	109,200.00
M	Ridge capping to match roof cover	14	LM	375.00	5,250.00
<i>Total Amount Carried to Section Summary</i>				Shs	265,295.00
	<b><u>ELEMENT NO. 6:</u></b>				
	<b><u>DOORS:</u></b>				
	<b><u>Wrot Cypress as described in: -</u></b>				

PROPOSED 2NO. ABLUTION BLOCKS  
AT OLOOLUA PRIMARY SCHOOL

Item	Description	Qty	Unit	Rate	Amount
A	100mm x 50mm frame one labour, plugged to walls	85	LM	1,000.00	85,000.00
B	25mm diameter quadrant beading	170	LM	110.00	18,700.00
C	Allow for "USPRO - 45L cans" or other equal and approved Construction foam as sealant for fixing door frames	26	NO	1,200.00	31,200.00
	<b><u>Flush Doors:</u></b>  <u>45mm (finished) semi-solid core panel flush door to BS 459 faced on both sides with mahogany veneered plywood and with hardwood beadings on both sides; hardwood lipped on all edges:</u>				
D	Door size 860mm x 2060mm high	17	NO	7,000.00	119,000.00
	<b><u>Ironmongery:</u></b>  <u>Supply and fix the following ironmongery to 'Union' catalogue or</u>				
E	100mm long brass butt hinges screwed to timber	25.5	PRS	520.00	13,260.00
F	100mm long zinc plated pad bolt	17	NO	1,000.00	17,000.00
G	75mm long barrel bolt	17	NO	650.00	11,050.00
	<b><u>Painting and Decoration:</u></b>  <u>Prime backs of wood before fixing with an approved primer on: -</u>				
H	Surfaces not exceeding 100mm girth	255	LM	15.00	3,825.00
	<u>varnish or other approved stain on:-</u>				
J	General wood surfaces	57	SM	450.00	25,650.00
K	Wood surfaces exceeding 100mm but not exceeding 200mm girth	85	LM	150.00	12,750.00
L	Ditto not exceeding 100mm girth	170	LM	50.00	8,500.00
<i>Total Amount Carried to Section Summary</i>				Shs	345,935.00
	<b><u>ELEMENT NO. 7:</u></b>  <b><u>FINISHES:</u></b>  <b><u>INTERNAL FINISHES:</u></b>				

PROPOSED 2NO. ABLUTION BLOCKS  
AT OLOOLUA PRIMARY SCHOOL

Item	Description	Qty	Unit	Rate	Amount
	<b>Wall finishes:</b>				
	<u>12mm (minimum) two-coat plaster; 9mm first coat of cement and sand (1:6), 3mm second coat of cement and lime putty (1:10); steel trowelled smooth to: -</u>				
A	Masonry and concrete surfaces	223	SM	500.00	111,500.00
B	Door reveals	14	SM	500.00	7,000.00
	<b>Painting and Decoration:</b>				
	<u>Prepare and apply three coats of first quality silk vinyl emulsion paint on:</u>				
C	Plastered Masonry, concrete surfaces, vent block surfaces and door reveals	237	SM	250.00	59,250.00
	<b>Floor Finishes:</b>				
D	40mm thick screed finish incorporating red, lead oxide	183	SM	500.00	91,500.00
E	100mm high skirting with rounded and polished top edge and square junction with floor finish as ditto	38	LM	50.00	1,900.00
F	Terrazzo finish to urinal wall and floor surfaces	18	SM	2,600.00	46,800.00
	<b>EXTERNAL FINISHES:</b>				
	<b>Wall finishes:</b>				
	<u>15mm thick Cement and sand (1:3) render to:</u>				
G	Concrete and masonry surfaces	52	SM	300.00	15,600.00
	<u>Prepare and apply three coats of first quality plastic weatheguard emulsion paint on:</u>				
H	Rendered surfaces	52	SM	500.00	26,000.00
	<b>Step Finishes:</b>				
J	40mm thick screed finish incorporating red, lead oxide	40	SM	650.00	26,000.00
	<i>Total Amount Carried to Section Summary</i>			Shs	385,550.00
	<b><u>PROPOSED 2NO. ABLUTION BLOCKS</u></b>				
	<b><u>SECTION SUMMARY:</u></b>				
	<u>Element No:</u>				

PROPOSED 2NO. ABLUTION BLOCKS  
 AT OLOOLUA PRIMARY SCHOOL

Item	Description	Qty	Unit	Rate	Amount
	1. Preliminaries			Shs	200,000.00
	2. Substructures			Shs	1,083,030.00
	3. Reinforced Concrete Works			Shs	108,570.00
	4. Walling			Shs	189,900.00
	5. Roof Construction			Shs	265,295.00
	6. Doors			Shs	345,935.00
	7. Finishes			Shs	385,550.00
	8. Water Cistern, Piping and Water tank to supply urinal			Shs	60,000.00
	Total Cost of 1No. Ablution Block				2,638,280.00
					x2
	<b>Total Construction Cost of 2No. Ablution Blocks</b>			<b>Shs</b>	<b>5,276,560.00</b>