

BILL OF QUANTITIES FOR SARAMEK WATER PAN

GRAND SUMMARY

BILL NO.	DESCRIPTION	AMOUNT (KSHS)
Bill No. 1	Preliminaries & General Requirements	
Bill No. 2	Earth Works and Offtake	
Bill No. 3	Auxiliary Structures	
Bill No. 4	Construction Water Trough	
Bill No. 5	Construction of Yard Tap	
Bill No. 6	Fencing	
Bill No. 7	Conveyance Lines	
Bill No. 8	10m ³ Masonry Sump	
Bill No. 9	Elevated Steel Tank	
Bill No. 10	Control Room	
Bill No. 11	Electro-Mechanical Works	
Bill No. 12	Green House (40m x 8m)	
Bill No. 13	Pit Latrines/ Bathrooms	
	Sub-Total	
	Contingencies	
	Provide 2.5% of works for Contingencies	
	<i>N/B: Rates include all taxes unless otherwise stated</i>	
	GRAND TOTAL TO FORM OF TENDER	

BILL OF QUANTITIES FOR DESILTING OF SARAMEK WATER PAN TO 17,000 M³

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE (KSHS)	AMOUNT (KSHS)
	BILL NO. 3- WATER PAN ANCILLARIES				
3.1	Spillway sill & Ripraps				
3.1.1	Allow for excavation and construction of spillway concrete sill 6.0m x 0.6m x 0.3m across the whole span of spillway mouth comprising of Reinforced concrete class 20/20 and including 10mm Re-Bars as per detailed drawing Nr.... And its associated formwork.	m ³	2		
3.1.2	Supply 150mm average size hard boulders, Prepare surface, compaction, build, and joining with mortar 1;3 a 150mm Thick spillway riprap to the satisfaction of the Engineer.	m ²	60		
3.1.3	Allow for placing, compaction and joining with mortar a 150mm riprap on the inlet channel as directed by the engineer and to the design standard.	m ²	100		
3.1.4	Allow for placing, compaction of 150mm riprap on the silt trap wall, base and inlet to the pan buttress wall to the design specification and under supervision of the Engineer.	m ²	60		
3.2	Draw-off system				
3.2.1	Excavate using strictly an excavator a 60m trench from the inside edge of the water pan and to the design levels about 3.5m deep and backfill required by the Engineer so as to allow least dead storage	m ³	210		
3.2.2	Provide for a standard intake tower using perforated OD 150 mm GI pipes with wire mesh screens 3m high using concrete mix of ration 1:2:4 (cement. Sand and Ballast). Provide a dead storage of 0.5m on the pipe.as described in the working drawings	Ls	1		
3.2.3	Provide, lay and connect to intake tower OD 150mm GI pipes including fittings for draw off system under the entire embankment	m	78		
3.2.4	Provide, lay and connect to cattle trough OD 50mm GI pipes including fittings from draw off system	m	30		
3.2.5	Provide and fix the following:				
3.2.6	Sluice valve of OD 150mm	No.	1		
3.2.7	150 mm dia flanged x 50 mm dia Steel Cross	No.	1		
3.2.8	Steel Socket, 150 mm Dia	No.	1		
3.2.9	End Plug, 150mm Dia	No.	1		
3.2.10	Steel Bend, 50mm Dia	No.	1		
3.2.11	Equal Steel Tee, 50mm Dia	No.	1		
3.2.12	Gate Valves (Pegler), 25 mm Dia	No.	2		
3.2.13	Allow for excavate, provide for materials and construct lockable masonry chambers with internal dimensions 1000mm x1000mm x1000 mm as indicated in the drawings and as directed by the Engineer. Rates to include formwork.	No.	1		
3.2.14	Supply and Installation of ring culverts of OD 900mm with concrete surround concrete (class 20/20)	m	24		
	TOTAL BILL NO.3 TOTAL CARRIED OVER TO GRAND SUMMARY				

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ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE (KSH)	AMOUNT (KSH)
	BILL NO. 6- FENCING	m	480		
6.1	Fence				
6.1.1	Provide and install 100mm by 125mm by 2.70m long Concrete posts so as to rise 2.1m above the grounds spaced at 3m centre to centre	No	200		
6.1.2	Excavation of holes to anchor posts concrete posts	No	200		
6.1.3	Concrete class 1:3:6 for anchoring the posts	m ³	16		
6.1.4	Provide and install 100mm by 125mm by 2.0m long strainer Concrete posts (double struts) spaced at 30m and at all corners and gate	No	10		
6.1.5	Excavation of holes to anchor strainer concrete posts	No	10		
6.1.6	Concrete class 1:3:6 for anchoring the strainer posts	m ³	2		
6.1.7	Supply and fix 6 strands of Barbed wire (barbed wire 16G x 25kg)	m	480		
6.1.8	Supply and fix 16-gauge Chain link (8ft height, Mesh sizes are 50mmx50mm) and provide for anchoring to the ground as shall be directed by supervising Engineer.	m ²	1,200		
6.2	Gate				
6.2.1	Supply and install 4000x2000mm double leave steel grill gate to 300x300mm concrete columns complete with iron mongery (use 50mmx25mmx6mm SHS with 38mmx25mmx6mm vertical members). Provide for epoxy primer paint with 2 coats of final gloss paint	Nr	1		
6.2.2	Provide, cut and place 10mm square twisted steel rebars in gate columns and 600mmx600mm footing	Kg	20		
6.2.3	Ditto 8mm twisted steel rebars as stirrups in column @150mm	Kg	14		
6.3	Mass concrete class C20/25 in:				
6.3.1	Concrete to poles	m ³	4		
6.3.2	300mmx300mm Gate columns	m ³	0.5		
6.4	Formwork to;				
6.4.1	Column edges over 150mm but not exceeding 300 mm girth	m ²	7		
6.5	Finishes				
6.5.1	25mm thick cement: sand (1:4) screed to surfaces with 12mm thick lime steel trowelled smooth finish on columns	m ²	7		
6.5.2	Gloss painting to columns- code provided by Engineer	m ²	6		
	BILL NO. 6 TOTAL CARRIED OVER TO GRAND SUMMARY				

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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE Kshs	AMOUNT Kshs
	Sub-Total Brought Overfrom the previous Page				
7.4	CLASS J: PIPE WORK - FITTINGS AND VALVES				
	<i>Supply, Transport to site and store in secure place. Include supply of jointing materials, bolts, nuts, gaskets etc. as applicable as required by specifications and details on drawings. Transport from Site Store, Install, Test and Commission Ferrous pipe Fittings - Epoxy coated externally and cement mortar lined internally or Approved equivalent</i>				
7.4.1	Bends, OD 63 mm-PN 16				
7.4.1.1	90° bend	Nr	1		
7.4.1.2	45° bend	Nr	1		
7.4.2	PE BUTT FUSION FITTINGS				
	Bends to HDPE PE 100 PN16, OD 50 mm				
7.4.2.1	90° bend (Provisional)	Nr	2		
7.4.2.2	45° bend	Nr	2		
7.5	CLASS K: PIPE WORK - CHAMBERS AND PIPE WORK ANCILLARIES				
	Note:- Items for work in this class shall include:- - Excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation, backfilling and removal of redundant services. - Concrete, reinforcement, formwork, joints and finishes. - Tips for disposal of excavated material or debris to be identified by the Contractor in liaison with the Local Authority.				
7.5.1	WASHOUTS				
7.5.1.1	Excavate for, provide all materials and construct complete Lockable inspection valve chambers of internal dimensions 750 x 750 x 1000 mm. Rates to including thrust blocks, step irons, pipe supports and covers as shown in the drawings.	Nr	1		
	<i>Provide, handle, install and test the following steel and HDPE pipes and fittings, valves and specials. Special rates shall include for completing all pipe joints as specified in the drawings</i>				
	Sub-Total Carried Over to the Next Page				

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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	BILL 8: 10m³ SUMP				
8.1	CLASS D: DEMOLITION AND SITE CLEARANCE				
	All materials arising from Demolition and site clearance unless otherwise stated shall remain the property of the employer and re-usable items to be stored at the employer's depot. Rates to include disposal to tip as directed				
8.1.1	General clearance; removal of all bushes, grass and shrubs etc. haul distance n.e. 1km	m ²	16.0		
8.2	CLASS E: EARTHWORKS				
	<i>Excavation shall include for strutting, shuttering, stabilising excavated surfaces and keeping excavations free of water by bailing out, pumping or other means and preparation of the excavated surfaces Excavation for foundations</i>				
8.2.1	Topsoil; maximum depth n.e. 0.3m	m ³	5		
8.2.2	Materials other than topsoil, rock or artificial hard material maximum depth 0.3m - 1m	m ³	10		
8.2.3	Materials other than topsoil, rock or artificial hard material maximum depth 1m - 2.5m	m ³	15		
8.2.4	Rock material, maximum depth 2-2.5m (Provisional)	m ³	10		
	Excavation ancillaries Preparation of excavated surfaces				
8.2.5	Materials other than topsoil or rock surface				
8.2.6	Rock surface	m ²	16		
	Disposal of excavated material				
8.2.7	Approved material shall be retained for backfilling and unsuitable material shall be disposed to tip as directed by the Engineer Topsoil distance of haul n.e. 1km	m ²	20		
8.2.8	Material other than topsoil or rock distance of haul n.e 1km	m ³	4		
8.3	CLASS F: IN SITU CONCRETE				
	Provision of concrete: Provide materials and mix concrete to the specified class, place, vibrate and cure; cement to BS 12 or BS 146				
8.3.1	Design mix; Grade C15; 20mm aggregate	m ²	8		
8.3.2	Design mix; Grade C25; 20mm aggregate	m ³	6		
	Sub-Total Carried Over to the Next Page				

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ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	Sub-Total Brought Overfrom the previous Page				
8.4	CLASS G: CONCRETE ANCILLARIES				
	Dimensions as per details on Drawings of specific structural Formwork: Rough finish; Plane vertical				
8.4.1	External sides of ground slab width > 0.4 < 1.22	m ²	10		
8.4.2	External sides of roof slab width > 0.2 < 0.4m	m ²	4		
	Formwork: Rough finish; Plane horizontal				
8.4.3	Soffit of suspended slab; width exceeding 1.22m	m ²	12		
	Reinforcement; plain round steel bars to BS4449				
	Rate to include for cutting, bending, supporting, tying and securing reinforcement				
8.4.4	Nominal size 6 mm	Kgs.	110		
8.4.5	Nominal size 8 mm	Kgs.	200		
	Reinforcement; High yield steel bars to BS 4449				
	Rate to include for cutting, bending, supporting tying and securing reinforcement				
8.4.6	Nominal size 10 mm	Kgs.	200		
	Miscellaneous work (including provision and laying)				
8.4.6	1:3 cement sand mortar screed placed on reservoir walls and floor as shown on drawings to facilitate reservoir drainage				
8.4.7	1:3 cement sand mortar screed placed on reservoir floor and walls	m ³	1		
8.5	CLASS J: PIPEWORK - FITTINGS AND VALVES				
	STEEL PIPEWORK Supply, lay and joint pipe fittings & valves. Include for excavation & backfilling of pipe trenches				
	INLET PIPE WORK BENDS				
8.5.1	100 mm dia GI 90 ^o elbow	No.	1		
	OUTLET PIPE WORK				
	BENDS				
8.5.2	80 mm dia .90 ^o elbow	No.	2		
	Sub-Total Carried Over to the Next Page				

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ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AMOUNT (Kshs)
	BILL No. 9 - 48 cu.m steel Tank			
9.1	Works comprises of design and fabrication of a 48 Cubic metre tank on a 12 meters tower. The bidder is to supply with tank and foundation designs for approval before works commences on the ground. The steel plates, strut and tie members of the frame as well must be assessed at the fabrication site and approved before transportation to site. Material specifications: <ul style="list-style-type: none"> Hot rolled sections to BS 4360 Grade 43A or equivalent. Cold formed sections to BS 5950 Part 5: 1997 or equivalent. Bolt and nuts to BS 3692 and BS 4190 or equivalent. Welding specifications to BS 5135 or equivalent. Welding electrodes to BS 635 or equivalent. Wind load to CP3 chapter V part 2 	Ls	1	
9.2	<u>Site investigations:</u> Provision for geotechnical investigation for the tank foundation and tank design for the proposed site. Provide for report to guide foundation design.	Ls	1	
9.3	<u>Supply and install on the foundation RC beams 48 m3 pressed steel tank:</u> Viking metric cold pressed mild steel panels 6 mm thick. Sectional water tank to BS 1564 part 2 complete with 3mm thick pitched roof cover, internal and external ladders, bracings, vent cleats, stays, manhole with lockable cover, glasschord joining compound, galvanized nuts, bolts, washers, sealants and standard 100NB threaded nozzles (All these Galvanized). To include 3 coats of non-toxic bituminous paint finish to interior surfaces of tank	Ls	1	
9.4	<u>Supply design materials and install 12m Mild Steel tank tower:</u> Tower to BS499 complete with complete with access ladders ladder to the deck, 1m wide 2.1mm thick suspended chequered steel plate walkway round the tank with 1.5m high guard railing, Internal access ladder into the tank, standard finish of 1 u/c zinc chromate and 2 f/c aluminium paint on external surfaces of tank, steel deck, walkway, sealants and standard 100NB threaded nozzles glasschord joining compound, galvanized nuts, bolt, washers, and access ladder	Ls	1	
9.5	<u>Plumbing works to the tank and connection to the existing reticulation system at 10m distance and test for leaks and strength:</u> Plumbing works OD 65mm GI class B for inlet, outlet, overflow and wash out. Provide for Functional Float and pointer type water level indicator. All pipes till ground level complete with sockets, unions, tees, Valve chambers with lockable lids, Pegler gate valves and any other necessary monger as will be directed by the site engineer. The inlet pipe should however be free of gate valves.	Ls	1	
9.6	<u>Civil Foundation works-to CESWI 5 and BS 8004:</u> Civil works for the concrete foundation columns anchored on a raft foundation/ strip foundation as will be directed by the Engineer upon approval of the foundation details and design proposed by the contractor.	Ls	1	
9.7	<u>Testing and Commissioning:</u> Allow for disinfection testing and commissioning of the elevated tanks	Ls	1	
	Total Bill No. 9 Carried to SUMMARY			

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	BILL No. 11 - ELECTRO - MECHANICAL WORKS				
11.1	Requirement				
11.1.1	Solar Pumping System to power a 2.2Kw (3HP) Submersible Pump.				
11.2	Site Conditions:				
11.2.1	Desired Yield- 15-20m ³ /Hr				
11.2.2	Distance to Pumphouse- 10m				
11.2.3	Total Dynamic Head- 25m				
11.3	Equipment Required:				
11.3.1	Pump Premium quality GRUNDFOS SP14-8 or DAYLIFF DS14-7 or PEDROLLO 4SR12/14 pumps being constructed of stainless steel and fitted with 2.2Kw 3Ph motor				
11.3.2	Control Unit The controller Sunverters 3.7kWp for controlling of the pump system, monitoring of the operating states and incorporates the following alarm functions: over current, under voltage, over speed, over temperature, reverse polarity, low water. It should have an integrated MPPT (Maximum Power Point Tracking) which maximizes power use from PV modules.				
11.3.3	Solar Panels 17No. 200W, 24V, crystalline PV solar modules to provide a maximum of 3,400W output and a reserve capacity over the rated power requirement of the pump. 20 pieces will be wired in series, 1 string to provide the voltage requirement of the pump.				
11.3.4	Accessories These will include underground cables and inter-panel wiring among others.				
11.3.5	Ground Mount Solar Support Structure for the Solar Panels 3.5m high galvanized steel support structure for mounting the solar panels.				
11.3.6	Installation To include: i. Transport of equipment to the site, ii. Electrical connections between pump and controller, iii. Cable Connections between pump, controller and the solar modules, iv. Commissioning and testing with water delivered to the surface.				

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Item	Description	Unit	Qty	Rate Kshs	Amount Kshs
	<u>BILL NO.13: PROPOSED PIT LATRINE/BATHROOM</u>				
	<u>BILL NO.13.1</u>				
	<u>SUBSTRUCTURE WORKS ALL PROVISIONAL</u>				
A	Clear site of bushes, shrubs and the like, grub up their roots and burn the arisings	SM	30		
B	Excavate vegetable top soil average 150mm deep set aside in spoil heaps and later spread around the site as directed.	SM	30		
C	Excavate oversite commencing from stripped level average depth 300mm but not exceeding 1.5m deep	SM	25		
D	Excavate foundation trench not exceeding 1.50m deep commencing from stripped level and backfill av depth 600mm.	CM	20		
F	Allow for plunking and strutting sides of excavation trenches	ITEM	1		
	<u>Disposal</u>				
G	Load, wheel and cart away surplus soil.	CM	20		
	<u>Hardcore filling</u>				
H	Imported hardcore ; water and well compacted in thickness of 150mm but maximum depth of 300mm to sides of the excavated pit.	SM	16		
J	50mm thick murrum blinding to surfaces of hardcore surfaces.	SM	16		
	<u>PIT EXCAVATION (4X1.5M)</u>				
K	Excavate for pit commencing from stripped level but not exceeding 1.5m deep	CM	12		
L	Ditto but over 1.5m n.e 3.0m deep.	CM	12		
M	Ditto but over 3.0m n.e 4.5m deep.	CM	12		
N	Ditto but over 4.5m deep but not exceeding 9.0m deep.	CM	34		
M	Extra over excavation in soft rocks	CM	35		
	Carried to collection				

Item	Description	Unit	Qty	Rate Kshs	Amount Kshs
	<u>Mesh fabric reinforcement to B.S 4483 and setting in concrete with 300mm side and end laps (measured nett-allow for laps)</u>				
A	Fabric mesh ref:A142weighing 2.22kg per square metre in floor bed	SM	25		
	<u>DAMP PROOF MEMBRANE</u>				
B	500 gauge polythene damp proof memmbrane laid under surface bed with 300mm side and end laps (measured net -allow for laps)	SM	25		
	<u>CONCRETE</u>				
C	50mm thick concrete (1:4:8 mix) blinding under footings	SM	9		
	<u>Insitu concrete class 20/20, vibrated and reinforced as described, in:-</u>				
D	strip footing and groundbeam	CM	4		
E	150mm thick surface bed	SM	25		
	<u>Reinforcement works all in accordance with the Engineer's details and approval including all cutting,bending,laying and binding wire to:</u>				
F	strip footing and ground Beam	Kg	200		
	<u>SAWN FORMWORK TO:</u>				
G	Vertical sides of strip footing size175-225mm high.	LM	55		
H	Edges of ground floor slab over 75mm but not exceeding 150mm high	LM	18		
J	200mm thick natural stone foundation walling to a stable base of the pit bedded and jointed in c.s morta 1;4	SM	10		
	<u>DPC</u>				
	Three -ply bituminous felt damp proof course bedded in cement and sand morta(1:3)				
K	200mm Wide horizontal layer	LM	15		
	<u>PLINTH FINISH</u>				
	<u>Cement and Sand 1:4 render</u>				
L	12 mm thick render wood float	SM	7		
	<u>Prepare and apply two coats bituminous paint to:</u>				
M	Render surfaces externally	SM	7		
	Carried to collection				

Item	Description	Unit	Qty	Rate Kshs	Amount Kshs
	<u>COLLECTION</u>				
1	Total Brought Forward From Page No.1				
2	Total Brought Forward From Page No. 2				
	TOTAL CARRIED TO SUMMARY				

Item	Description	Unit	Qty	Rate Kshs	Amount Kshs
	REINFORCED CONCRETE WORKS SUPERSTRUCTURE				
	BILL NO. 13.2				
	Vibrated reinforced concrete (1;2;4) class 20 in;				
A	Ring Beams and lintols	CM	2		
	REINFORCEMENT				
	Reinforcement in different sizes in structural concrete work all in accordance with the Engineer's details and approval including all cutting,bending,laying and binding wire to;				
B	Ring Beams and lintols	kg	120		
	SAWN FORMWORK TO;				
C	Sides and soffits of ring beams average heights 125-175mm.	LM	58		
	Carried to summary				

Item	Description	Unit	Qty	Rate Kshs	Amount Kshs
	BILL NO.13.3				
	LOAD BEARING WALLINGS				
	<u>EXTERNAL WALLING</u>				
	Load bearing chisel cut natural stone walling, jointed in cement and sand(1:3) mortar and including hoop iron reinforcement at alternate courses including all necessary working around all door and windows openings formed accurately as per Architects schedule				
A	150mm thick walling	SM	46		
B	Ditto but to dwarf wall at the entrance and cable wall	SM	13		
	<u>INTERNAL WALLING</u>				
	Load bearing chisel cut natural stone walling, jointed in cement and sand(1:3) mortar and including hoop-iron reinforcement at alternate courses, including all necessary working around all door and window openings formed accurately				
C	150mm thick	SM	17		
	Carried to summary				

Item	Description	Unit	Qty	Rate Kshs	Amount Kshs
	BILL NO.13.4				
	<u>ROOF CONSTRUCTION AND COVERING</u>				
	MAIN ROOF -TIMBER TRUSSES				
	Structural timber trusses in pressure impregnated treated sawn cypress including fabrication, jointing with necessary timber plates ,bolts and connecting plates, hoisting and fixing in position all in accordance with Engineers details and drawings				
	100X50mm wall plate secured with and including 12mm diameter mild steel 'J'bolt				
A	100x50mm thick at 1500mm centres cast in concrete ring beam principle rafters.	LM	30		
B	100x50mm principle members	LM	80		
B	100x50mm but common rafters, struts and ties and kingpost	LM	50		
C	75x50mm purlins	LM	60		
	<u>ROOF FINISHES AND COVERING</u>				
D	Supply and fix 30 gauge prepainted box profile Roof covering at 15.0 degrees from horizontal including all necessary timber battens and fixtures m/s.	SM	31		
E	Wrot timber selected and kept clean 225x25mm Fascia or barge board	LM	24		
F	Prepare and apply Three coats gloss paint to :- knot prime and stop and apply three coats of gloss oil paints to General surfaces of timber 100 to 200mm girth externally	LM	24		
	Carried to collection				

Item	Description	Unit	Qty	Rate Kshs	Amount Kshs
RAIN WATER DISPOSAL					
A	100mm diameter UPVC gutters fixed to fascia with including appropriate brackets hangers bends, and gutter spout or out lets for connection to down pipes by outs all in accordance with architect drawings.	LM	11		
B	Down Pipes with solvent welded joints, fixed to walls with holderbolts size 100 x 100 mm or any other approved	LM	4		
C	Extraover for swan kneck in pipe , size' - 100 x 100 mm	No.	1		
D	Extraover for shoe in pipe , size' - 100 x 100 mm	No.	1		
Carried to collection					
COLLECTION					
1	Total Brought Forward From above			Page No	
2	Total Brought Forward From Page No.				
Carried Forward to summary of Section					

Item	Description	Unit	Qty	Rate Kshs	Amount Kshs
	<u>BILL NO.13.5 WINDOWS AND DOORS</u>				
	<u>Supply and fix Steel casement windowssecti including mullions,4mm thick glass clear glass to schedule and approval Steel casement windowssecti including mullions,5mm window stays,fasteners all to architect's schedule and approvalthick obscured glass</u>				
A	window size 800x600mm high	NO	4		
B	louvered window with clay bricks jointed with c/s morta 1:3 to approval size 1000x600mm	NO	0		
	<u>window cill</u>				
C	75mm cast in situ concrete cill in class 20 concrete	LM	4		
	PAINTING AND DECORATION				
D	Prepare and apply three coats of gloss oil paints to metal surface of window externally	SM	3		
E	ditto internally	SM	3		
	DOORS & IRON MONGERY-(Supply and fix items)				
	Timber doors				
	<i><u>45 mm Semi-Solid core flush doors faced both sides with 6 mm plywood zen veneered for polishing , moulded and lipped all round, size :</u></i>				
F	900x2100mm	No.	4		
	Doors, frames and finishings in wrought hardwood				
G	100 x 50 mm thick door frame with 3 labours	LM	28		
	Ironmongery				
H	100 mm steel butt hinges	Pairs	6		
J	Two lever mortice lock complete with fittings as per Union catalogue 2237	NO	4		
	Carried Forward to summary of Section				

Item	Description	Unit	Qty	Rate Kshs	Amount Kshs
	BILL NO.7 FINISHES				
	EXTERNAL WALL FINISHES				
A	Horizontal key pointing and verticle flash joint to external surface of walls.	SM	59		
B	Ditto but to verticle sides of ringbeams externaly and internaly.	SM	9		
	Prepare and apply one undercoat and two finishing coats acrylic paint or other approved by the architect				
C	Rendered walls	SM	9		
	INTERNAL WALL FINISHES				
	16mm thick (minimum) cement sand (1:3) screed to receive ceramic tiles and 2 coats of paint m/s to approval.				
D	Steel trowelled smooth plasters to surfaces of wall to receive paint (m/s)	SM	93		
	PAINTING AND DECORATING				
	Prepare and apply three coats silk vinyl emulsion paint or other approved by Architect				
F	To plastered surfaces of walls	SM	93		
	INTERNAL FLOOR FINISHES				
	<u>cement and sand (1:3) backing</u>				
H	32mm thick cement and sand screed steel float finish/ smooth finish to floor with redoxide paints.	SM	25		
	Total carried to collection				

Item	Description	Unit	Qty	Rate Kshs	Amount Kshs
	<u>SECTION SUMMARY</u>				
1	Substructures works				
2	Reinforced concrete works				
3	External and internal walling				
4	Roof construction and covering				
5	Windows, Doors and iron mongery				
6	External, internal wall finishes				
TOTAL BILL 13 CARRIED OVER TO GRAND SUMMARY					