Name of the County: Kitui County					
Name of WSP: Kiambere Mwingi Water & Sewerage Company Ltd					
Project Title: Tseikuru Public Sanitation Facility					
No.	**Item Description**		**Budget (KSh)**		
a	PRELIMINARY				
b	BoQ for Public Sanitation Facility (1 No.) and septic tank				
	Total Cost of Project:				
	GRAND TOTAL:				
	IN WORDS ……				
	……				
	Name ……				
	Address……				
	……				
	Signature……..				
	Date …….				
	Stamp.....				

Name of the County: Kitui County					
Name of WSP: Kiambere Mwingi Water & Sewerage Company Ltd					
Project Title: Tseikuru Public Sanitation Facility					
	PUBLIC SANITATION FACILITY (PSF) - NEW DESIGN - BILL OF QUANTITIES				
ITEM	**DESCRIPTION**	**Unit**	**Qty**	**Rate (Ksh)**	**Amount (Ksh)**
A	**SUBSTRUCTURE.**				
1	**EXCAVATIONS (All Provisional)**				
1.1	Clear area of new construction of all undergrowth, small bushes, grab up all trees	SM	90		
1.2	Excavate oversite to remove vegetable soil, load and cart away from site to contractor's dumping area as directed; Average 200 mm depth	SM	90		
1.3	Excavate for strip foundation trenches commencing from stripped level: not exceeding 1.5 m deep	CM	54		
1.4	Excavate for column bases commencing from stripped level: not exceeding 1.5 m deep	CM	10		
1.5	Extra over all excavations for excavating in rock class II and III as described in the specification	CM	25		
1.6	Return, fill and ram selected soil in foundations; well compacted in layers not	CM	34		
1.7	Remove surplus soil from site to a place approved by local authority	CM	23		
1.8	Allow for upholding and supporting sides of excavations including all plunking and strutting	item	1		
1.9	Allow for keeping excavations free of water including any necessary pumping	Item	1		
1.10	Allow for the protection of the whole work as contained in the bill of quantities by covering the site to the satisfactory of PROJECT MANAGER and remove such protection when there are no longer required.	Item	1		
	Sub Total 1 - Substructures - Excavations				**-**
	SUBSTRUCTURE CONCRETE WORKS				
2	**Mass concrete mix (1:3:6):in**				
2.1	50 mm Thick blinding under strip foundation	SM	50		
2.2	50 mm Thick blinding under column bases	SM	7		
2.3	Ramp	CM	1		
2.4	Vibrated reinforced insitu concrete class 25/20; with minimum cube crushing strength of 25N/mm² at 28 days;				
2.5	Strip foundation	CM	11		
2.6	Column bases	CM	1		
2.7	Column starters	CM	0.5		
2.8	100 mm Thick ground floor slab	SM	78		
3	**Mesh fabric reinforcement**				

3.1	Mesh reinforcement No. A142 size 200 x 200 mm weighing 2.22 kg per square	SM	78		
4	**Supply and fix steel bar in structural concrete work including cutting,**				
4.1	8 - 12 mm Bars	KG	700		
5	**Sawn formwork: to**				
5.1	Sides of Strip footing	LM	120		
5.2	Sides of column bases	SM	23		
5.3	Sides of column starters	SM	19		
5.4	Sides of sloping ramp	SM	1		
5.5	Edges: slabs 75 - 150 mm girth	LM	41		
	Sub Total 2 - Substructures concrete works				**-**
	FILLING				
6	**Natural stone walling bedded in cement and sand mortar (1:4) with minimum stone crushing strength of 10N/mm²; including 20mm wide hoop iron at every course**				
6.1	200 mm Thick walls in chisel dressed stone to approval	SM	78		
7	**Hardcore**				
7.1	300 mm tick hardcore of approved inert material: well watered and compacted in 150 mm thick (maximum) layers	SM	88		
8	**Blinding**				
8.1	50 mm Thick approved quality murram blinding to surfaces of hardcore	**SM**	**88**		
9	**Anti-termite treatment**				
9.1	Termidor 25EC anti-termite chemical treatment: applied by approved professional pest control specialist: applied strictly in accordance with the manufacturer's instructions: 10 year guarantee	SM	88		
10	**Damp Proof Membrane**				
10.1	Gauge 1000 polythene damp proof membrane	SM	76		
11	**25 mm Thick cement and sand (1:4) rendering: on**				
	concrete or stonework: to				
11.1	Plinths: externally	SM	20		
12	**Prepare surfaces and apply undercoat and two finishing**				
	coats black bitumastic or other equal approved water				
	resistant paint: on rendered surfaces: to				
12.1	Plinths: externally	SM	20		
13	**Pre-cast concrete paving slabs: as manufactured by**				
	approved manufacturer				
13.1	50 mm thick paving slabs: on and including 50 mm thick quarry dust blinding,	SM	20		
	Sub Total 3 - Filling				**-**
B	**REINFORCED CONCRETE SUPERSTRUCTURE WORKS**				
14	**Sawn formwork**				
14.1	Sides and soffits: beams and lintols	SM	40		
14.2	Sides of columns	SM	20		
14.3	Sides and soffites of Arches	SM	5		
14.4	Soffites of horizontal Suspended slab	SM	20		
15	**Supply and fix steel bar in structural concrete work including all cutting,**				
15.1	8 - 12 mm Bars	KG	1200		
16	**Vibrated reinforced insitu concrete class 25/20; with minimum cube crushing strength of 25N/mm² at 28 days; in**				
16.1	Ring beams and lintols	CM	7		
16.2	Columns	CM	0.5		
16.3	Horizontal suspended slab (150mm thick)	SM	22		
	Sub Total 4 - Reinforced Concrete				**-**
C	**WALLS**				

17	**External walls**				
	Machine dressed natural stone walling bedded in cement and sand mortar(1:3) with minimum stone crushing strength of 7N/mm²; including 20mm wide hoop iron at every course				
17.1	200 mm Thick	SM	100		
18	**Internal walls**				
	Machine dressed natural stone walling bedded in cement and sand mortar(1:3) with minimum stone crushing strength of 7N/mm²; including 20mm wide hoop iron at every course				
18.1	200 mm Thick	SM	56		
18.2	100 mm Thick	SM	40		
19	**Precast concrete vent blocks bedded and jointed in cement and sand mortar (1:3)**				
19.1	100 mm thick walling	SM	9		
20	**Damp proof course**				
	Bituminous hessian base to BS 743 type A: or other equal approved damp- proof course; in cement/ sand (1:3) mortar				
20.1	200 mm wide	L M	60		
20.2	100 mm ditto	LM	12		
21	**Gable ends covering**				
	Expanded metal, heavy gauge to gable ends and roof soffit, rate to include, supply and fit and paint with 2 coats of gloss paint to both sides				
21.1	Gaude 26	SM	75		
	Sub Total 5 - Walling				**-**
D	**ROOF**				
22	**Structural Timber**				
	Sawn cypress first grade; pressure impregnated; thoroughly seasoned				
22.1	150 x 50 mm Wall plate fixed with and including 200mm long 12mm DIA mild steel J-bolts fixed to ringbeam at 1000mm centres	LM	60		
23	**Structural steel truss**				
	The following mild steel works to K.S 02-18 welded and including black bolts to BS 4190 where necessary and apply one undercoat and two finishing coats marine based paint				
23.1	Allow a Provisional sum of Kenya shillings two hundred thousand for steel girder to structural Engineer's details	Item	1		
24	**Roofing sheets**				
24.1	MRM box profile sheets available in white and clear; 12,000mm length x 810mm width.	LM	160		
25	**Rainwater goods**				
	Supply and fix approved uPVC rain water system with solvent welded,				
25.1	uPVC water gutter	LM	22		
25.2	uPVC rain water system; heavy gauge; 100 mm diameter grey rainwater down	LM	12		
	Sub Total 6 - Roofing				**-**
E	**WINDOWS**				
26	**Approved precast concrete cill: bedded and jointed in cement (sand (1:3)mortar: pointed in matching coloured cement**				
26.1	200 x 50 mm Thick cill	LM	18		
27	**Steel casement windows with 5mm Thick glass and glazing to casements with linseed putty; to**				
27.1	Window size 1700X1500mm	No	1		
27.2	Window size 1500X1200mm	No	1		
27.3	Window size 1400X400mm	No	1		
27.4	Window size 1100X800mm	No	2		
27.5	Window size 1200X450mm	No	8		

28	**Prepare surfaces and apply three coats of approved gloss oil paint to**				
28.1	Windows: both sides measured	SM	45		
	Sub Total 7 - Windows				-
F	**DOORS**				
	Timber doors - Wrot hardwood: prime grade				
29	**50 mm thick timber louvred door lower portion covered with galvanised**				
29.1	Overall size 800 x 2100 mm high	No	8		
29.2	Overall size 1050 x 2100 mm high	No	1		
29.3	Door frames	LM	52		
30	**25 mm thick solid steel door: to Architect's details**				
30.1	overall size 900 x 2100 mm high	No.	2		
31	**Prepare and apply one coat of aluminium wood primer on timber surfaces in contact with concrete or masonry**				
31.1	Surfaces over 100mm but not exceeding 200mm girth	LM	45		
32	**Prepare surfaces: apply three coats polyurethane clear lacquer or other equal approved: on timber surfaces: to**				
32.1	Surfaces over 100mm but not exceeding 200mm girth	LM	40		
32.2	General timber surfaces: doors	SM	15		
33	**Supply and fix approved ironmongery: matching screws: locks to include a set of 3 keys; brass finish to architects approval**				
33.1	100 mm brass butt hinges	Prs	14		
33.2	Three lever mortice lock with handles	No	1		
33.3	38 mm Diameter rubber door stop	No	10		
	Sub Total 8 - Doors				-
G	**FINISHES**				
	FLOOR FINISHES				
34	**Screed: cement and sand (1:4) on concrete: wood floated finished**				
34.1	25 mm Thick to receive terrazoo(m.s)	SM	78		
35	**Non-slip Terrazzo finish**				
35.1	25mm thick terrazzo floor finsh	SM	78		
35.2	3 x 25mm plastic dividing strip	LM	154		
35.3	25 x 100mm high skirting with rounded top edge and coved ta junction to paving	LM	120		
	WALL FINISHES: Internal wall finishes				
36	**Plaster: 12 mm cement/lime putty/sand: steel trowelled: on masonry or concrete: to**				
36.1	Walls and concrete surfaces	SM	140		
37	**concrete: wood float finished: to**				
37.1	Walls to receive ceramic tiles (m.s.)	SM	140		
38	**Supply and fix approved polished coloured ceramic wall tiles; to regular pattern; bedding and jointing in cement mortar (1:4) grouting joints withproprietory grouting laid**				
38.1	300 x 200 x 8 mm Thick tiles	SM	140		
39	**Prepare surfaces: apply three coats of approved vinyl emulsion paint: on steel trowelled plaster: to**				
39.1	Walls and concrete surfaces internally	SM	140		
40	**External wall finishes**				
	External cement and sand(1:3) render: steel trowelled: on masonry or concrete: to				
40.2	Walls and concrete surfaces at varanda and beam	SM	25		
40.3	Keys to external wall	SM	68		
	Sub Total 9 - FINISHES				-
H	**EXTRA- WORKS**				
41	**Veranda**				

41.1	75mm thick reinforced concrete top class 25/20	SM	3		
41.2	Build-in end of worktop into wall including chasing 50mm deep and making good disturbed surfaces	LM	6		
43	**Formwork**				
43.1	Sawn formwork to soffits of seat top	SM	3		
43.2	Edges of seat not exceeding 75mm wide	LM	6		
44	**Walling**				
	Machine dressed natural stone walling bedded in cement and sand mortar (1:3) with minimum stone crushing strength of 7N/mm²; including 20mm wide hoop iron at every course				
44.1	200 mm Thick dwarf walls	SM	2		
	Reinforcements				
44.2	Assorted high yield tensile steel bars cold worked B.S 4461 and mild steel bars hot rolled to B.S 4449	KG	20		
45	**Finishes**				
45.1	20mm thick cement and sand screed finish	SM	3		
45.2	Plaster to edges of seat 75mm wide	LM	6		
46	**Plaster: 12 mm cement/lime putty/sand: steel trowelled: on masonry or concrete: to**				
46.1	Walls surfaces	SM	4		
47	**The following in 1 No. 5500mm wide x 600mm deep worktop**				
47.1	75mm thick reinforced concrete top class 25/20	SM	3		
47.2	Build-in end of worktop into wall including chasing 50mm deep and making good disturbed surfaces	LM	6		
48	**Formwork**				
48.1	Sawn formwork to soffits of work top	SM	3		
48.2	Edges of seat not exceeding 75mm wide	LM	6		
49	**Reinforcements**				
49.1	Assorted high yield tensile steel bars cold worked B.S 4461 and mild steel bars hot rolled to B.S 4449	KG	25		
50	**Finishes**				
50.1	20mm thick cement and sand screed finish	SM	4		
50.3	Plaster to edges of seat 75mm wide	LM	4		
50.4	Timber shelves to the walls as per the architectural drawings and details	Item	1		
51	**Washroom Worktops**				
	The following in 1 No. 5500mm wide x 600mm deep worktop				
51.1	75mm thick reinforced concrete top class 25/20	SM	3		
51.2	Build-in end of worktop into wall including chasing 50mm deep and making	LM	5		
51.3	Boxed formwork to form opening for 2No. Wash Hand Basins	Item			
52	**Formwork**				
52.1	Sawn formwork to soffits of work top	SM	3		
52.2	Edges of seat not exceeding 75mm wide	LM	18		
53	**Reinforcements**				
53.1	Assorted high yield tensile steel bars cold worked B.S 4461 and mild steel bars hot rolled to B.S 4449	KG	20		
54	**Finishes**				
54.1	20mm thick cement and sand screed finish	SM	8		
54.2	Plaster to edges of seat 75mm wide	LM	8		
	Sub Total 10 - Extra Works				**-**
I	**FIXTURES**				
55	**Supply and fix approved pless taps instant shower head and ceramic wares as per the Architect's drawings and details**				
55.1	Overhead instant shower heater with all the necessary fittings	Item	2		
55.2	Heavy duty water press taps, 1/2" size	Item	4		
55.3	W.C suit for disabled toilet, complete with flush valve, seat cover, and all necessary accessories and as per the manufacturer's specifications	Item	1		
55.4	Ceramic squatting pans, complete with inbuilt flush valves and all necessary accessories as per the Architect's specifications	Item	5		

55.5	Ceramic wash hand basin to the disambled toilet	Item	1		
55.6	Ceramic wash hand basin	Item	8		
	Sub Total 11 - Fixtures				**-**
J	**EXTERNAL WORKS**				
56	**Foul drainage**				
	Excavation of trenches including maintaining sides and keeping bottoms free from water, mud and fallen materials, grading bottoms, backfilling and carting away surplus excavated material				
56.1	150 mm Upvc drain pipe average depth 900 mm	LM	30		
57	**Plain insitu concrete mix 1:3:6 (25 mm aggregate):**				
	vibrated				
57.1	150 mm Bed and surround to 150 mm UPVC diameter pipe with its formwork	LM	30		
58	**Terrain UPVC class D buried drains:golden brown,**				
	mediuim duty: solvent cement welded joints:				
58.1	100 mm Diameter pipe: laid in trench	LM	25		
59	**600 x 600 mm internal dimensions masonry manholes all in accordance with the contract drawings; include for class 20 concrete bases and covers**				
59.1	Depth n.e. 1.5 metres	No.	6		
60	**Gulley traps**				
60.1	Allow for concrete gulley trap size 300 x 300 x 450mm deep with cast iron p-trap, drain pipe and medium duty metal grating cover	No.	5		
	Sub Total 12- External Works				**-**
K	**SEWERAGE**				
61	**Septic Tank**				
61.1	Single tank capacity 45m3: internal size 7000mm long x2300mm wide x2800mm deep: with inlet chambers internal size 600 x 600 x 800mm deep and outlet chamber internal size 800 x 600 x1000mm deep : comprising of150mm vibrated reinforced concrete (Class 20/20mm) cover slab : 150mm thick vibrated reinforced concrete (Class 20/20mm) base laid to slope : 225mm thick stone wall baffle built into walls : 200mm thick stone walling to septic tanks and 150mm stone wall to manholes in cement and sand (1: 4) mortar : 150mm vibrated reinforced concrete (Class 20/20mm) to manhole base: manhole and tank base : 50mm concrete blinding (Class 10/25mm) under manhole and tank base : 2No. 600 x 450mm medium duty manhole cover including frame and greasing for tank and manholes : 15mm thick cement and sand (1:4) waterproofed external rendering and internal plaster trowelled smooth to tank and chambers : 20mm thick waterproofing cement sand (1:4) floor screed to tank and manholes all necessary pipework and fittings : formwork, reinforcement, excavation and disposal.	No	1		
62	**Soakpit**				
62.1	Soakpit internal size 1800mm diameter x 15,000 mm deep (average) to water level : filled with boulders as per engineers instructions : 1000 gauge polythene sheet on top end of boulders covered with 300mm layer of murram : 200mm thick coral block linning: 150mm vibrated reinforced concrete (Class20/20mm) cover slab 1 No. 600 x 450mm medium duty manhole cover including frame and greasing	No	1		
	Sub Total 13 - Sewerage				**-**
L	**PRIME COSTS**				
63	**Provisional Sums**				
63.1	Allow sum for for installation and fitting of Electrical Works	SUM	1		
63.2	Allow sum for installation and fitting of Mechanical Works. Inclunding 4no. 2500 liter water storage tanks	SUM	1		
63.3	Allow sum for installation and fitting of Solar System. Inclunding 4no. 250wSolar Panel, Battery bank	SUM	1		
	Rain water tank and masonary platform				

	Supply and install a 10,000 litre UPVC tanks with a masonary platform about 1m above the ground level	Sum	1		
	Fence				
	Provide a fence all around the PSF 100m using PCC post at 2.5m Centre with braces at every 10th Pole well secured using concrete class 1:3:6 and a chainlink 2m high seured on 6 strands on fencing wire . To include a steel casement gate 4m wide on 300mm x300mm column	sum	1		
	Sub Total 14 - Prime Costs				-
	SUMMARY BREAKDOWN OF COSTS				
1	**Sub Total 1: SUBSTRUCTURES**				-
2	**Sub Total 2: SUB STRUCTURE CONCRETE**				-
3	**Sub Total 3: FILLINGS**				-
4	**Sub Total 4: RC SUPERSTRUCURE**				-
5	**Sub Total 5 - WALLING**				-
6	**Sub Total 6 - ROOF**				-
7	**Sub Total 7 - WINDOWS**				-
8	**Sub Total 8 - DOORS**				-
9	**Sub Total 9 - FINISHES**				-
10	**Sub Total 10 - EXTRA WORKS**				-
11	**Sub Total 11 - FIXTURES**				-
12	**Sub Total 12 -EXTERNAL WORKS**				-
13	**Sub Total 13 - SEWERAGE**				-
14	**Sub Total 14 - PRIME COSTS**				-
	GRAND TOTAL				-