

**BILL OF QUANTITIES FOR AK-WASH WATER DISTRIBUTION AND LIVELIHOOD RESTORATION PROJECT**

Preamble: The rates entered shall include, third party fees, levies, input costs, labour and contractor's overheads and profits.

Item	Item Description	Unit	Quantity	Unit Rate	Amount
<b>BILL 1.0</b>	<b>PRELIMINARY AND GENERAL ITEMS</b>				
	<b>Publicity Sign Board</b>				
1.1	Fabricate erect and maintain public sign post 1200x1200x1.5mm metal sheet, 1500mm above ground level. It should be anchored 600mm deep motorised in mass concrete and well supported with 50x25mm RHS frame to detail as provided in the drawing and as instructed by the project manager.	No	1		
	<b>Total carried from Bill 1.0 to Main summary</b>				
<b>BILL 2.0</b>	<b>AK-WASH PIPELINE EXTENSION FROM KATULYE MASONRY TANKK TO SYOKILATI SHOPPING CENTRE.</b>				
	<b>CLASS D: DEMOLITION AND SITE CLEARANCE</b>				
	<i>The rate quoted is for site clearance and demolition along construction wayleave. Rate shall be deemed to include removal of the material, natural and artificial articles, objects and obstructions which are above the original surface and carting away to tips, identified by the contractor in liaison with the Local Authority</i>				
2.1	<b>General clearance</b>				
2.1.1	Site clear and excavate to pipe invert level 750 mm n.e 1m below existing ground level and backfill/ reinstate to original ground level after testing pipeline, all to the approval of the engineer	m	9,810		
2.2	<b>PIPEWORK - PIPES</b>				
	<i>The rate quoted is for supply, deliver the following items, trench, lay, fix and pressure test the pipeline</i>				
2.2.1	Supply , install and test HDPE pipes OD 90 mm HDPE PN 8 SDR 21 PE 100	m	3750		
2.2.2	Supply , install and test HDPE pipes OD 90 mm HDPE PN 10 SDR 17 PE 100	m	1650		
2.2.3	Supply , install and test HDPE pipes OD 75 mm HDPE PN 8 SDR 21 PE 100	m	1450		
2.2.4	Supply , install and test HDPE pipes OD 75 mm HDPE PN 10 SDR 17 PE 100	m	1500		
2.2.5	Supply , install and test HDPE pipes OD75 mm HDPE PN 12.5 SDR 13.6 PE 100	m	1460		
2.2.6	Provide for joints butt fusion to engineer's approval ( Inclusive of offtake fittings to tanks and water kiosks, schools and dispensaries along the pipeline-use pegler gate valves) and interconnection to ndauni elevated plastic tanks and masonry tank	ls	1		
2.3	<b>CLASS J: PIPEWORK - FITTINGS AND VALVES</b>				
	<i>The rate quoted is for provision and fixing</i>				
	<b>Washouts</b>				
2.3.1	Supply , install and install DN50 mm washout Inclusive of HDPE OD 90*63mm and OD 75* 63mm reducing Tee, GI elbow, pegler gate valve ,male adapter and any other assorted fittings.	Nr	5		
	<b>Airvalves</b>				
2.3.2	Supply, Install and test DN50mm Flanged double orifice antishock Air Valve	Nr	7		

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<b>Item</b>	<b>Item Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Rate</b>	<b>Amount</b>
2.4	<b>CLASS K: PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES</b>				
	<i>The rate quoted is for chambers, culverts, crossings and reinstatements and other ancillaries as specified.</i>				
	<b>Air Valve/Washout/Gate Valve Chambers</b>				
2.4.1	Construct 1000mm by 1000mm (Internal dimensions) masonry valve chamber. Depth not exceeding 1.2m, Include for provision and fixing of cast iron step irons and heavy duty rectangular mild steel frame, a lockable steel Cover and a padlock to house all appliances with locking devices	nr	24		
2.5	<b>Marker Posts</b>				
	<i>Construct concrete marker posts and install along the water supply pipeline, all in accordance with details shown on drawings. (Reinforced concrete 1:2:4(class 20/20, bars D12), as guided by the clients representatives</i>				
2.5.1	Pipeline marker post inscribed WL @ 250m along the pipeline	nr	40		
2.5.2	Air valve marker post Inscribed WO	nr	5		
2.5.3	Air valve marker post Inscribed AV	nr	7		
2.6	<b>Class L: PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION</b>				
2.6.1	Excavate for and construct reinforced concrete anchor blocks at designated points as directed by clients representatives. Use T8	nr	6		
2.6.2	Provide sleeve and Place vibrated reinforced concrete surround class 15. Use T8	m	70		
2.6.3	Provide fifty thousand shillings for materials and on-site geometric positioning of all pipelines and fittings by the client's representative	Ls	1		
2.6.4	Flanged master meter of approved quality with all accessories fitted in the pipeline as it shall be directed by client representative , and a standard lockable chamber with a padlock ,with all assorted offtake fittings.	Nr	1		
2.6.5	Supply , Install and test assorted 3.0 and 2.5 inch PN 16 flanged pegler gate valve with all assorted fittings as directed by client representatives.	Nr	6		
2.7	<b>Break pressure tank</b>				
2.7.1	Allow for excavate for and construct a break pressure tank of capacity 5m3, Including excavation , masonry walling, reinforced floor slab and roof slab and a lockable vent cover ), Supply and installation of inlet/ outlet pipes (HDPE 75), Scour pipe and overflow pipe fixtures and a 2.5 inch PN 25 ball valve c/w installation sundries as instructed by the supervising engineer inclusive of tightness test. (use class 20 concrete and apply bonding water proof primer as undercoat and cementious water proofing membrane as the second coat at the internal surfaces )-Reconnect the pipeline	Ls	1		
	<b>Amount for Bill 2.0 carried to Summary</b>				-
<b>BILL 3.0</b>	<b>REHABILITATION OF KIMEENI AND KATOLOKA WATER KIOSKS AND BRANDING</b>				
3.1	<b>Resurfacing wall faces and branding</b>				
3.1.1	Hacking and re-rendering wall surfaces (15mm thick Cement sand plaster to walls surfaces (1:3) finished to walls to receive paint) inclusive of water tank platform.	m2	50		

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Item	Item Description	Unit	Quantity	Unit Rate	Amount
3.1.2	METAL SURFACES: Prepare and apply three coats plastic enamel paint to General metal surfaces (both sides).- (Red oxide primer glossy)	SM	9.14		
3.1.3	INTERNAL PLASTERED WALLS: Prepare and apply three coats plastic silk emulsion paint to Plastered wall surfaces internally	SM	50		
3.1.4	EXTERNAL WALLS: Prepare and apply three coats permoplast external wall paint to Rendered sides of beam and walls externally	SM	6		
3.1.5	Allow provisional sum for branding inclusive of logos as directed by client representative	Item	1		
	<i>Total amount for resurfacing and branding Kimeeni Kiosk</i>				
	<i>Add 1 more kiosk at Katoloka water kiosk</i>	nr	1		
	<b>Amount for Bill 3.0 carried to Summary (For 2 No. water kiosks rehabilitation )</b>				
<b>BILL 4.0 REHABILITATION OF KWA KYULE AND SYOKILATI WATER KIOSKS AND BRANDING</b>					
4.1	Allow for resurfacing walls surfaces (inclusive of branding and logos as directed)	LS	1		
4.2	Allow for plumbing works (Inclusive of pegler gate valves and kent meters-use class C)	LS	1		
4.3	2.1M x 1M Standard steel door complete with frame, hinges latch bolts and padlock. (Inclusive of painting as directed)	ls	1		
4.4	950MM X 1M Standard steel window complete with frame hinges and latch bolts. (Inclusive of painting as directed)	ls	1		
4.5	<b>ROOFING:</b>				
4.5.1	Wrought Cypress Timber 4x2	LM	11		
4.5.2	Wrought Cypress Timber 3" x 2"	LM	14.4		
4.5.3	Wrought Cypress Timber 2" x 2"	LM	21		
4.5.4	G30 3m box profile Sheets blue in colour	nr	4		
4.5.5	8" x 1" planed timber fascia board	LM	14		
4.5.6	Roofing Nails	Kg	2		
4.5.7	Assorted Ordinary Wire Nails	Kg	2		
4.6	<b>CONSTRUCTION OF IM HIGH TANK PLATFORM AND INSTALLATION OF 10,000L PLASTIC</b>				
	<i>Supply materials and provide personnel to construct a tank base platform 1 m high to hoist a 10 m3</i>				
4.6.01	Cut the spoil upto 200mm below G.L over tank base and remove all vegetable soil to temporary spoil heap.	CM	1.5		
4.6.02	Excavate foundation from stripped level over the tank site to depth n.e. 0.6m deep 300 mm wide and dispose soil as directed	CM	6.63		
4.6.03	Mass concrete mix 1:4:8: in 50mm thick blinding to hardcore	CM	0.47		
4.6.04	225mm thick dressed quarry stone walling	SM	24		
4.6.05	Provided handle, cut, bend and fix 8 mm deformed steel bars on all alternate course of the wall	Kgs	25		
4.6.06	Damp proof course	LM	12		
4.6.07	Provide, pack and compact hardcore in 300 mm layers to fill the tank platform	CM	9		
4.6.08	Provided handle, cut, bend and fix 8 mm deformed steel bars on top slab @ 200 spacing	Kgs	28		
4.6.09	Vibrated reinforced concrete mix 1:2:4 in 100 mm thick for slab	CM	0.7		
4.6.10	EXTERNAL PLASTER - 20mm thick 1:2 cement sand to exterior face of tank wall	SM	10		

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Item	Item Description	Unit	Quantity	Unit Rate	Amount
4.6.11	Supply and Install 10m <sup>3</sup> double layer UPVC tank Kentank or equivalent approved with all assorted fittings (inclusive of branding and logos as directed)	nr	1		
	<i>Sub-total for kwa kyule</i>				
	<i>Add 1 more for syokilati water kiosk</i>		1		
	<b>Amount for Bill 4 carried to Summary</b>				
<b>BILL 5.0</b>	<b>WATER CONNECTION TO ITUMBULE PRIMARY SCHOOL, KATOLOKA DISPENSARY ,NDAUNI PRIMARY AND SECONDARY SCHOOLS, SYOKILATI VTC AND PRIMARY SCHOOL</b>				
	<i>The rate quoted is for site clearance and demolition along construction wayleave. Rate shall be deemed to include removal of the material, natural and artificial articles, objects and obstructions which are above the original surface and carting away to tips, identified by the contractor in liaison with the Local Authority</i>				
	<b>General clearance</b>				
5.1	Site clear and excavate to pipe invert level 750 mm n.e 1m below existing ground level and backfill/ reinstatement to original ground level after testing pipeline, all to the approval of the engineer	m	100		
5.2	<b>PIPEWORK - PIPES</b>				
	<i>The rate quoted is for supply, deliver the following items, trench, lay, fix and pressure test the pipeline</i>				
5.2.1	Supply , install and test HDPE pipes OD 63 mm HDPE PN 10 SDR 17 PE 100	m	100		
5.2.2	Allow for assorted connectors and adaptors as shall be approved (Use pegler gate valve at offtake points and kent water meters class c)	ls	1		
5.3	<b>CLASS J: PIPEWORK - FITTINGS AND VALVES</b>				
	<i>'The rate quoted is for provision and fixing</i>				
	<b>Airvalves</b>				
5.3.1	Supply , install and install flanged DN 50mm single orifice airvalve type * Genfil* or equivalent approved by clients representative inclusive of HDPE 2.0 inch Tee, GI nipple, gasket and any other assorted fittings.	Nr	1		
5.4	<b>CLASS K: PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES</b>				
	<i>The rate quoted is for chambers, culverts, crossings and reinstatements and other ancillaries as specified.</i>				
	<b>Air Valve/Washout/Sluice Valve Chambers</b>				
5.4.1	Construct 900mm by 900mm (Internal dimensions) masonry valve chamber. Depth not exceeding 1m, Include for provision and fixing of cast iron step irons and heavy duty rectangular mild steel frame, pegler gate valves ,a lockable steel Cover and a padlock to house all appliances with locking devices	nr	6		
5.5	<b>Marker Posts</b>				

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Item	Item Description	Unit	Quantity	Unit Rate	Amount
	<i>Construct concrete marker posts and install along the water supply pipeline, all in accordance with details shown on drawings. (Reinforced concrete 1:2:4(class 20/20, bars D12), as guided by the clients representatives</i>				
5.5.1	Pipeline marker post inscribed WL	nr	2		
	<b>Total amount for Itumbule primary school</b>				
	Add 5 more for ndauni primary& dispensary and secondary,Katoloka dispensary, Syokilati VTC, Syokilati primary a	nr	5		
	<b>Amount for Bill 5.0 carried to Summary</b>				
<b>BILL 6.0</b>	<b>PIPELINE REHABILITATION FROM MUKUKU MASONRY TANK TO SYONGUNGI JUNCTION.</b>				
6.1	Allow for assorted connectors,adaptors , pipe network as shall be approved not exceeding OD 90mm( The rate is inclusive of excavation and fittings for the water Kiosk up to Syongungi junction )-Inclusive of 3no. 3 inch pegler gate valves	ls	1		
6.2	Allow for excavate for and construct a break pressure tank of capacity 5m3, Including excavation , masonry walling, reinforced floor slab and roof slab and a lockable vent cover ), Supply and installation of inlet/ outlet pipes (HDPE 90), Scour pipe and overflow pipe fixtures and and a 2.5 inch PN 25 ball valve c/w installation sundriesas instructed by the supervising engineer inclusive of tightness test. ( use class 20 concrete and and apply bonding water proof primer as undercoat and cementious water proofing membrane as the second coat at the internal surfaces) -Reconnect to the existing svotuvali line	Ls	1		
	<b>Amount for Bill 6.0 carried to Summary</b>				
<b>BIL 7.0</b>	<b>CONICAL BAGS ESTABLISHMENT</b>				
Item	Description	Unit	Qty	Rate (Ksh)	Amount (Kshs)
7.1 CSA	Supply and Deliver Large Conical bags (120 seedlings capacity) of 6 polythene layers sheets of gauge 1mm, Bottom one with 4.71M diameter and the last apex layer/sheet of 30cm, All Sheets of 20cm Width/height pinned and screwed with 2inch long screws as shall be instructed by the agriculture officer	No.	114		
7.2	Purchase and deliver of spinach and kale seeds (25 grams each)	No.	2		
	<b>Amount for Bill 7.0 carried to Summary</b>				
<b>BILL 8.0</b>	<b>JUNCAO FODDER ESTABLISHMENT AND LANGSTROTH HIVES APIARY</b>				
8.10	<b>WATER COMPONENT FOR JUNCAO FODDER ESTABLISHMENT</b>				
Item	Description	Unit	Qty	Rate (Ksh)	Amount (Kshs)
8.1.1	Drip irrigation System ( inclusive of tank interconnectio	LS	1.00		
8.1.2	10,000 L Water tank	nr	1.00		
8.1.3	Tank Elevation Stand	LS	1.00		
	<b>Sub-Total</b>				
<b>Bill 8.1.2</b>	<b>Establishment of Pasture (Cenhrus Ciliaris- African Foxtail grass and Eragrostis Superba)</b>				
Item	Description	Unit	Qty	Rate (Ksh)	Amount (Kshs)
8.1.3	Pasture seeds (half of the prescribed quantity each)	Kgs	739		

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<b>Item</b>	<b>Item Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Unit Rate</b>	<b>Amount</b>
<b>Subtotal</b>	<i>Amount of Bill 8.1.0 carried to Summary</i>				

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Item	Item Description	Unit	Quantity	Unit Rate	Amount
8.2	<b>APICULTURE COMPONENT</b>				
8.2.1	<b>Bee House Construction</b>				
8.2.111	Excavation for post holes (600mm deep)	No	12		
8.2.1A2	Concrete for post footings (1:3:6)	m3	0.6		
8.2.1B1	Treated timber posts 100x100mm	No	12		
8.2.1B2	Treated timber beams 75x100mm	m	30		
8.2.1B3	Treated timber rafters 50x75mm	m	40		
8.2.1B4	Timber wall rails and bracing	m	25		
8.2.1C1	Mabati roofing sheets (Gauge 28, 3m)	No	10		
8.2.1C2	Ridge cap	No	2		
8.2.1C3	Roofing nails & accessories	Sum	1		
8.2.1D1	Timber hive stands (5 hives per stand)	No	4		
8.2.1D2	Ant-proof metal / grease cups	No	16		
8.2.1E1	Chicken wire / welded mesh	m2	20		
8.2.1E2	Timber framed door	No	1		
8.2.1E3	Hinges & padlock	Set	1		
8.2.1F1	Wood preservative / paint	Ltr	10		
8.2.1F2	Termite control treatment	Sum	1		
8.2.1G1	Skilled labour (carpenter)	Day	5		
8.2.1G2	Unskilled labour	Day	6		
<b>Sub Total</b>					
8.3	<b>Bee Equipment and Installation Budget (Apiary installation)</b>				
8.3.1	Supply and delivery of Material: Kiln-dried softwood or hardwood (e.g. cypress, pine, or traditional trees).	nr	15		
	<b>Hive body dimensions (approx.):</b>				
8.3.1a	Brood chamber: 50 cm (L) × 43 cm (W) × 24 cm (H)				
8.3.1b	Super chamber: 50 cm (L) × 43 cm (W) × 17 cm (H)				
8.3.1c	Frame size: 48.3 cm (top bar) × 44.8 cm (side bar) × 23.2 cm (height for brood)				
8.3.1d	Frame type: Movable, wired, with foundation wax support.				
8.3.1e	Top cover: Weatherproof, galvanized iron sheet cover.				
8.3.1f	Bottom board: Ventilated, detachable for cleaning.				
8.3.1g	Entrance size: 1.2 cm (H) × 22 cm (W), adjustable.				
8.3.1h	Coating: Non-toxic paint or varnish (exterior only).				
8.4	Supply and delivery of complete Protective wear with gloves(Soft leather) and gumboots (Rubber or PVC).The suit should be made from heavy cotton, poly-cotton, or ventilated mesh fabric, in light colors (white, beige, or khaki) to reduce bee aggression. Designed as a loose-fitting, one-piece suit with a front zipper, elastic cuffs at wrists and ankles, and a detachable round or fencing-style veil with fine mesh for clear visibility. Reinforced with double stitching at stress points for durability and sting prevention.	Pcs	2		
8.5	Supply and delivery of wide, flat bee brush made with a wooden or high-impact plastic handle, fitted with soft natural (horsehair) or nylon bristles. It measures 35–45 cm in overall length, with 5–7 cm bristles designed for gentle sweeping of bees.	Pcs	2	1000	2000
8.6	Supply and delivery of a bee smoker made of stainless steel or galvanized iron, 25–28 cm high and 10–12 cm in diameter. It has a leather or synthetic bellows with metal hinges, a conical heat-resistant nozzle, and a protective heat shield. The removable fuel chamber, with air holes, uses fuels like dried grass, sawdust, corn cobs, or cardboard.	Pcs	2	1000	2000

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Item	Item Description	Unit	Quantity	Unit Rate	Amount
8.7	Supply and delivery of a hive tool made of tempered stainless or carbon steel, measuring 20–25 cm long and 3–4 mm thick. It features a flat beveled end for prying frames, a curved or hooked end for lifting frames, and a scraper edge for removing propolis and wax. The tool has a polished, corrosion-resistant finish, with an optional plastic or rubber handle for improved comfort.	Pcs	2		
8.8	Supply, delivery and install durable hive stands made of metal (preferably galvanized steel), 60 cm high, and sized to fit the hive—typically 40–50 cm wide and 50–60 cm long for a standard Langstroth hive.	Nos	20		
8.9	Supply and delivery of manual metallic honey extractor made of stainless or food-grade galvanized steel, holding 2–4 frames. It features a hand-crank gear mechanism, removable frame basket for standard frames, a honey tap for controlled flow, a polished corrosion-resistant finish, and a stable base with a protective cover.	Unit	1		

**Sub Total**

**TOTAL FOR APICULTURE I & II**

**Amount for Bill 8.0 carried to Summary**

Bill 9.0 **PROVISIONAL SUM**

Allow a provisional sum of hundrend and sixty thousand kenya shillings for Contingency to be expended on exclusive direction of the project manager upon evident project need.

LS

1

**Amount for Bill 9.0 carried to Summary**

**GRAND SUMMARY PAGE**

BILL	BILL DESCRIPTION	AMOUNT
BILL 1	PRELIMINARY AND GENERAL ITEMS	
BILL 2	AK-WASH PIPELINE EXTENSION FROM KATULYE MASONRY TANKK TO SYOKILATI SHOPPING	
BILL 3	REHABILITATION OF KIMEENI AND KATOLOKA WATER KIOSKS AND BRANDING	
BILL 4	REHABILITATION OF KWA KYULE AND SYOKILATI WATER KIOSKS AND BRANDING	
BILL5	WATER CONNECTION TO ITUMBULE PRIMARY SCHOOL, KATOLOKA DISPENSARY ,NDAUNI PRIMARY AND SECONDARY SCHOOLS, SYOKILATI VTC AND PRIMARY SCHOOL	
BILL 6	PIPELINE REHABILITATION FROM MUKUKU MASONRY TANK TO SYONGUNGI JUNCTION.	
BILL 7	CONICAL BAGS ESTABLISHMENT	
BILL 8	JUNCAO FODDER ESTABLISHMENT AND LANGSTROTH HIVES APIARY	
	<b>SUB TOTAL</b>	

**Contingencies**

Allow a provisional sum of Kshs. 160,000 for contingencies

**TOTAL**

**ADD**

Public Procurement Capacity Building Levy (0.03%)

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	<b>TOTAL III</b>				
	ADD VAT (16%)				
	<b>GRAND TOTAL FOR BUILDER'S WORK</b>				
	<b>TOTAL TAKEN TO TENDER FORM</b>				