

**BILL OF QUANTITIES FOR THE PROPOSED OPERATIONALIZATION OF KIKOME  
IRRIGATION SCHEME PHASE 11**

All prices are inclusive of labour costs, profits & overheads and VAT

All joints must be but fused or welded

Item	Item Description	Unit	Qty	Rate	Amount
<b>Bill 1</b>	<b>General Items/ Preliminaries</b>				
1.01	Allow for mobilization of Personnel and equipment and demobilization from site	item	1	50,000.00	50,000.00
1.02	Supply and erect publicity sign board on 1.5m x 1.2m metal sheet approximately secured on a 40 mm x 3mm thick steel frame at least 2m above the ground level and leveled as directed	No	1	25,000.00	25,000.00
1.03	Allow a provisional sum of Kshs. 100,000.00 for technical supervision	l/s		100,000.00	100,000.00
	<b>Amount carried for collection</b>				<b>175,000.00</b>

**BILL 2 RISING MAIN PIPELINE**

2.01	Site clear and excavate to pipe invert level 750mm below existing ground level and backfill/ reinstate to original ground level after installation and testing pipeline, all to the approval of the supervising engineer	m	2,556		
2.02	Supply, lay, fit (butsufo) and test 110mm diameter PE pipe PN 16; ISO 4427; PE100.	m	24		
2.03	Supply, lay, fit (butsufo) and test 110mm diameter PE pipe PN 12.5; ISO 4427; PE100.	m	612		
2.04	Supply, lay, fit (butsufo) and test 110mm diameter HDPE pipe PN 10; ISO 4427; PE100.	m	1,920		
2.05	Supply, deliver, lay/ fit, test and backfill 75 mm OD pipeline GI Pipe class B with respective Flanges, bolts and nuts. Include joining with the HDPE pipes using stamp and flanges as shall be directed	m	12		
2.06	<i>Supply and fit the following into the pipeline as shall be directed through but fusion and GI welding only.</i>				
2.07	Flanged Woltmann water meter DN80mm (3") or equivalent approved, with bolts, nuts and gasket	No.	1		
2.08	Provide and fit double orifice 4" air valve complete with tee and plug in to the pipeline at specific area as directed by the engineer complete with chamber and markpost	No.	3		

2.09	Sluice valve DN80mm (3") metal/ resilient seated PN16; flanged with gaskets, bolts and nuts	No	1		
2.1	Non return valve DN80mm (3") metal/ resilient seated PN16; flanged with gasket, bolts and nuts	No	1		
2.11	Non return valve DN100mm (4") metal/ resilient seated PN16; flanged with gasket, bolts and nuts	No	1		
2.12	110x90mm (4"x3") equipped washout with accessories as per the provided drawing	No.	2		
2.13	100mm GI 90° long bends with stamp, backing and nuts	No.	2		
2.14	100x75mm HDPE reducer, PN16	No.	2		
2.15	100 mm GI Elbows with stamp, backing and nuts	No.	2		
2.16	Construct 1.2 m x 1.2 m standard masonry natural stone walling chambers as per the provided drawing	No.	2		
2.17	Construct 1.5 m x 1.2 m standard masonry natural stone walling chambers as per the provided drawing	No.	1		
2.18	Supply and install standard pre-cast reinforced concrete pipeline mark posts of 750mm height as per the provided drawing, along the pipeline at spots that shall be directed	No.	10		
	<b><u>Amount carried for collection</u></b>				

<b>BILL 3 SOLAR PUMPING SYSTEM AND ACCESSORIES</b>					
<b>Item</b>	<b>Item Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount</b>
3.01	Supply and Deliver a Submersible Multistage Pump Set of Duty Point: - 35m <sup>3</sup> /hr at a Total Head of 105 meters; DS30-17, 15KW or equivalent approved. The pump Efficiency at duty point should be atleast 75%. Must Provide Copies of Pump Characteristic/Performance Curves (Brochures) for approval before supply. Install as directed by the Supervising Engineer	Set	1		
3.02	3Ph Sunverter 15kW, DAYLIFF SV3 or equivalent approved	No	1		
3.03	Provide for the installation, testing and commissioning of the pump set and accessories				
3.04	545w Monocrystalline Solar Modules. Provided brochues for approval before supply.	W	26160		

3.05	PV DISC 40A 4ST PV Disconnect Switch, dayliff or equivalent approved	No	1		
3.06	Stainless steel pump stand	No	1		
3.07	Crane union 3"	No	1		
3.08	Barrel nipple 3"	No	1		
3.09	Crane socket 3"	No.	3		
3.1	GI Hexnipple 3"	No.	1		
3.11	110mm HDPE long bends	No.	2		
3.12	110mm HDPE elbows	No.	2		
3.13	110mm HDPE flanged Adapter with bolts and nuts	No.	2		
3.14	Enclosure 1000*500*350mm	No.	1		
3.15	Probe sensor	Set	1		
3.16	Sensor Cable, Twin, Double Insulated, 1mm <sup>2</sup>	M	30		
3.17	Submersible Cable 16mm 4core, c/w conduit	M	30		
3.18	Armoured/ Underground Cable 10mm 4core, c/w conduit	M	170		
3.19	Armored Copper Cable, 1.5mm <sup>2</sup> X 2 core	M	170		
3.2	Wiring, earthing and sundries as shall be directed	Item			
3.21	Splicing Kit, large	No.	2		
	<b>Amount carried to Summary</b>				
<b>BILL 4 DISTRIBUTION LINES FITTINGS</b>					
	<i>Supply and fit the following into the pipeline with respective fittings as shall be directed</i>				
4.08	Supply fit and test 63mmX 3/4" saddle clamp complete with 25mm ball valves at sections that shall be directed	Set	33		
4.1	Construct 450m x 450mm standard masonry natural stone walling chambers as per the provided drawing	No.	33		
	<b><u>Amount carried for collection</u></b>				
<b>GRAND SUMMARY PAGE</b>					
<b>BILL</b>	<b>BILL DESCRIPTION</b>				<b>AMOUNT</b>
BILL 1	PRELIMINARIES AND GENERAL ITEMS				175,000.00
BILL 2	RISING MAIN PIPELINE				
BILL 3	SOLAR POWERED PUMPING SYSTEM				
BILL 4	DISTRIBUTION LINES FITTINGS				

TOTAL	