	DESCRIPTION	UNIT	QUANTITY	RATE (KSH)	AMOUNT (KSH)
BILL NO. 1: PRELIMINARIES & GENERAL					
1.1	Erect a standard bill board and maintain it throughout the construction period and beyond	Lump Sum	2	50,000.00	100,000.00
1.2	Allow for provisional sum for material testing for concrete strength at public works yard at critical stages of civil works.	No.	2	25,000.00	50,000.00
1.3	Allow for Site office construction using Timber and Galvanized iron sheets and any other locally available material	No.	1	150,000.00	150,000.00
1.4	Allow for provisional sum for Hired Survey works to determine levels during construction, & Supervision works for the Resident Engineer	Ls	1	450,000.00	450,000.00
Total Preliminaries & General					**750,000.00**
	Bill No 2:Incubation Unit				
	Supply, assemble/install and test run a fully equipped recirculating aquaculture system (RAS) Incubation Unit as directed.The RAS unit shall consist of the following rate to include those of joining materials and cutting wastage				
2.1	Water resistant, non-toxic aluminium coated mild steel stand capable of accommodating 10 Mcdonald jars and trays	No.	1		
2.2	Mcdonald jars – 6 litres	No.	10		

2.3	Hatching trays-30cm*20cm*10cm plastic	No.	11		
2.4	UV Purifiers – UV440LCD 3600litres/hr fitted with control unit	No.	1		
2.5	Provide material for plumb works (PVC pipes and fittings) rate to include those of joining and cutting wastage	LS	1		
	Sub total for Incubation Unit				
	Bill No 3: Nursery				
	Supply, assemble/install and test run a fully equipped recirculating aquaculture system Nursery Unit litres as directed				
3.1	3000 litres white transparent cylindrical Header tanks	No.	1		
3.2	500 litres flat bottomed Nestable tanks	No.	20		
3.3	Provide and place mass concrete class 15/20 for the 500litres nestable tanks as directed	CM	1.5		
3.4	Provide and lay 25mm thick plain board as directed	SM	20		
3.5	UV purifier – UV80/2LCD 12000litres/hr fitted with control unit	No.	1		
3.6	Pump –single 1.5Kw centrifugal pump with flow rate of 36m3/hr fitted with float switch	No.	1		
3.7	Drum filter unit– capacity 30m3/hr coupled with matching backwash pump	No.	1		

3.8	Regenerative Blower-single phase oil free flow rate160litres/hr	No.	2		
3.9	Provide for Sump area 4.3mx3.1mx1m (to accommodate drum filter and sump	No.	1		
3.10	Supply and insatll 2mx1.6mx1m sump (material)	No.	1		
3.11	Pipe works and fittings. Rate to incude joining materials and cutting wastes				
3.12	2’ PVC Male socket	No.	2		
3.13	2’’ PVC Female backnuts	No.	2		
3.14	Ball cork 2’’	No.	6		
3.15	Elbow 2"	No.	12		
3.16	2’’ PVC tee	No.	2		
3.17	Union 2’’ PVC	No.	2		
3.18	2’’ UPVC pipe class PN6	LM	54		
3.19	1’’ PVC tee	No.	24		
3.20	Reducer 2’’x1’’	No.	24		
3.21	1’’ UPVC pipe class PN6	No.	8		
3.22	1’’ Ball corks	No.	24		
3.23	1’’ Elbows	No.	48		
3.24	1’’ Union	No.	24		
3.25	1’’ Endcap	No.	24		
3.26	1½" PVC flange	No.	24		
3.27	1½" PVC Pipe	LM	66		
3.28	1½" Ball cork	No.	24		
3.29	1½" Elbows	No.	48		
3.30	Reducer 1½" x 3’’	No.	24		
3.31	3’’ waste pipe	LM	24		
3.32	3’’ tee waste pipe	No.	24		
3.33	Air stone disc dia 200mm	No.	6		
3.34	Cylidrical air stone dia 50mm	No.	30		
3.35	8mm diameter clear tubings	LM	72		
3.36	½ inch clear braided/reinforced hose pipe	LM	108		

3.37	Provide material and fabricate hapa nets of size 2mx2mx1m as shall be directed – either blue /white in colour.	No.	25		
	Sub total Nursery				
	Bill No 4: Broodstock				
4.1	2000 litres flat bottomed nestable tanks	No.	5		
4.2	Provide for concrete base for the tanks (12mx2.2mx0.3m) as directed	CM	7.92		
4.3	Provide material for plumb works (PVC pipes and fittings) rate to include those of joining and cutting wastage	LS	1		
4.4	Provide material and fabricate hapa nets of size 3mx2mx1m as shall be directed – either blue /white in colour.	No.	6		
	Sub total for Brood stock				
	Bill No 5: Liner Ponds				
5.1	Excavate oversite to remove vegetation soil average 150mm deep and wheel away as directed	SM	300		
5.2	Excavate pond area to average depth of 1.4 top area being 30.6mx10.6m and bottom dimension 27.85mx8.1m	CM	400		
5.3	Compact the soil in layers of 150mm thick and shape the sides or embankment as shall be directed	CM	40		
5.4	Supply, lay and join 0.5 UV treated	SM	500		

	geomembrane/ dam liner (500m2)				
5.5	Provide material for plumb works (4 inch PVC pipes and fittings) rate to include those of joining and cutting wastage	LS	1		
5.6	Supply predator nets	SM	450		
	Sub total for Liner pond				
	Subtotal Liner ponds (5No.)				
	Bill No 6:Raised Wooden Ponds				
6.1	Construct a 8mx2.5x1m raised wooden using pressure treated post and 6''x1'' well-seasoned timber. Apply appropriate termiticide at the base of the structure as shall be directed	LS	1		
6.2					
6.3	Supply, lay and join 0.5 UV treated geomembrane/ dam liner	SM	60		
6.4	Provide material for plumb works (4 inch PVC pipes and fittings) rate to include those of joining and cutting wastage	LS	1		
	Sub total				
	Sub Total for wooden ponds (2no.)				
	Bill No 7:Raised Concrete Ponds				
7.1	Provide and place the following concrete using ordinary cement mixed with water proof additive in the ratio of 1:50	CM	6.5		

7.2	Reinforced concrete 20/20 in BRC A193 on bed and side wall with columns uprooted using D8 as shall be directed	SM	43.5		
7.3	Provide fair faced sawn timber formwork timber to side walls as directed	SM	42		
7.4	Provide material for plumb works (4 inch PVC pipes and fittings) rate to include those of joining and cutting wastage		1		
	Sub total				
	Sub Total for concrete ponds (2no.)				
	Bill No 8: Concrete Tower Platform				
8.1	Curst the following concrete using 42.5mps (high strength) cement & mixed with water proof additives for stability and including all formwork				
8.2	Concrete grade 15/20 for blinding and reinforced foundation footing and base grade 20/20 to receive concrete columns.	M3	6		
8.3	Reinforced concrete 20/20 in Y16 vertical bars for concrete columns 5m high to receive concrete platform in 42.5 mps cement concentration	M3	6		
8.4	Reinforced concrete 20/20 in Y12 for all ground and suspended	M3	6		

	beams to receive concrete platform.				
8.5	Reinforced concrete 20/20 in Y12 for Suspended slab that holds PVC tanks and allow 50mm dia. holes to receive guardrails.	M3	8		
8.6	Install 50mm round galvanized water pipes as guardrails spaced 200mm apart within the holes provided for in the suspended slab.	Lump Sum	1		
8.7	Supply and install four No. PVC tanks 10,000 litres each as directed	No.	4		
	Sub-Total Concrete Tower Platform				
9.0	**Bill No 9: Solar Power And Accessories (Pc Sum)**				
9.1	Supply and install solar power system complete with accessories	Ls	1		
	Sub Total for solar power & accessories				
	TOTAL				

SUMMARY

ITEM	DESCRIPTIONS	AMOUNT (KSH)
Bill No 1: 1.1 –1.4	Preliminaries & General	750,000.00
Bill No 2: 2.1 – 2.5	Incubation Unit	
Bill No 3: 3.1 – 3.37	Nursery	
Bill No 4: 4.1 - 4.4	Broodstock	
Bill No 5: 5.1 – 5.6	Liner Ponds	
Bill No 6: 6.1 – 6.4	Raised Wooden Ponds	
Bill No 7: 7.1 – 7.4	Raised Concrete Ponds	
Bill No 8: 8.1 – 8.7	Concrete Tower Platform	
Bill No 9: 9.1	Solar Power And Accessories (Pc Sum)	
Sub Total		
Contingency 3%		
Grand Total		