BILL OF QUANTITIES

NARONGORWATER PAN (DE-SILTING VOLUME=4,066m^3)

ITEM	*DESCRIPTION*	*UNIT*	*QTY*	*RATE (Kshs.)*	*AMOUNT*
1	**Preliminaries**				
1.1	Allow a provisional sum to cater for Mobilization/ Demobilization and site restution.	Item	1		
1.2	Provide, install and maintain for the entire contract period a contract signboard on 0.8m x 0.45m metal sheet appropriately secured on a 19mm steel frame at least 1.5m above the ground level to the satisfaction of the Engineer or his appointed representative	No	1		
1.3	Provide for supervision and monitoring of the facility from its inception to commissioning	Ls	1		
1.4	Feasibility sign posts with donor information as specified and guided by works supervisor	Item	2		
	Sub-Total				
2	**Earthworks**				
2.1	Clear site near the silt trap of trees, tree stumps, shrubs and grass commencing from ground level n.e. 300mm deep and dispose off the construction site.	M^2	100		
2.2	Commence reservoir from the existing pan base to a depth n.e 2.0m and cart away to form the embankment or as may be directed by the water Engineer	M^3	4,066		
2.3	Commence construction of Embankment from striped level as in design plan and sections and use suitable material for building the embankment with side slopes of 2:1 upstream and 2:1 with suitable materials as directed by the water Engineer	M^3	1,355		
2.4	Excavate spillway channel to a depth of 0.5m minimum and cart away as directed.	M^3	20		
2.5	Excavate silt trap 15m X20m X1.5m minimum and cart away as directed.	M^3	375		
2.6	Provide for animal access ramp as directed by the Engineer and to the design specification.	M^3	30		

2.7	Excavate collection trenches as indicated in the drawing and as directed by the Engineer.	M^3	20		
	Total for Earth works				
3	**Spillway sill**				
3.1	Allow for excavation and construction of spillway sill 6.0m x 0.6m x 0.3m across the whole span of spillway mouth	M^3	1.1		
	Total for spillway sill				
4	**Ripraps**				
4.1	Allow for placing and compaction of 150mm spillway riprap to the satisfaction of the Engineer.	M^3	35		
4.2	Allow for placing and compaction of 150mm animal access ramp riprap to the satisfaction of the Engineer.	M^3	30		
4.3	Allow for placing and compaction of 150mm riprap on the inlet channel as directed by the engineer and to the design standard.	M^3	10		
4.4	Allow for placing and compaction of 150mm riprap on the silt trap wall, base and inlet to the pan buttress wall and to the design specification and under supervision of the Engineer.	M^3	45		
	Total for ripraps				
5	**Gabions**				
5.1	Allow for provision of gabion mattresses layers measuring 3m X1m X 1m as directed by the Engineer	M	25		
	Total for Gabions				
	Sub-Total				
	GRAND TOTAL				