COUNTY GOVERNMENT OF KWALE

Department of Water Services

Proposed Desilting of Dzeruni Water Pan in Puma Ward

Bills of Quantities

Bill No.3 Earthworks

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (Kes)	AMOUNT (Kes)
	EARTHWORKS				
	i. All earthworks shall be carried out as per the drawings which will be provided after survey				
	ii. It is required that a survey equipment be available through out the time these works will be executed for the supervision team to confirm excavated levels and giving further directions.				
	RESERVOIR				
	DESILTING				
3.02	Excavation in wet silt formation to desilt the existing pan to an average depth not exceeding 2m, load and cart away to spoil all unsuitable material at a location downstream of pan as directed by the Project manager.	cm	5,940		-
	EXPANSION				
3.03	Excavation in soft soil formation to expand the reservoir, stockpile suitable material for reuse in embankment construction and cart away to spoil all unsuitable material at a location downstream of pan as directed by the Project manager.	cm	5,550		-
	EMBANKMENT				
3.04	Haul, lay and spread selected approved material and compact in 300mm layers to rehabilitate the embankment and attain a uniform fill of 2m height, crest width of 3m, 165 m long, with embankment slope of 2.5:1 upstream and 2:1 downstream as shall be as directed by the Project Manager	cm	2,475		-
	RIVER TRAINING				
3.05	Undertake river training in soft material as directed by the Supervising Engineer.	m^3	1,710		-
	SILT TRAP				
3.06	Excavation in soft for Silt-Trap to an average depth not exceeding 2m with side slopes of 2:1, load and stockpile suitable fill material for re-use in embankment construction, cart away to spoil any excess or unsuitable material as directed by the Project manager.	m^3	300		-
	SPILLWAY				
3.07	Excavation in normal soil for spillway and stockpile for reuse or cart away to spoil as directed by the Project manager. Rates to include trimming of the spillway bank slopes and spillway channel slopes to required grades 2:1 as shall be directed.	m^3	500		-
	Concrete Sill				
3.08	Spillway sill; Mass concrete Class 20/20 to sill as directed on site by the Project manager	m^3	10		-
	Rip-Rap				
3.09	Handpacked Hardcore before and after the stilling basin of average diameter 300mm as directed by the Project manager	m^3	22.5		-
3.10	Stone pitching to the sides of spillway slopes 1V:1H using suitable material, bonded by 1:3 mortar as shall be directed by the Project Manager	m^2	30		-
Sub-total for Bill 3 carried to Summary Page					-