

### Artificial lake Establishment cost Estimates

Component	Item Description	Unit	Qty	Unit Cost (UGX)	Total Cost (UGX)	Remarks
1. Feasibility & Design	Feasibility Study & Environmental Impact Assessment (EIA)	Lump Sum	1	5,000,000	5,000,000	Includes site surveys, EIA, consultations
	Topographic & Hydrogeological Survey	Acre	2	1,500,000	3,000,000	Drone/GPS + soil & water table tests
	Engineering Design & Drawings	Lump Sum	1	4,000,000	4,000,000	Detailed designs with CAD output
2. Site Preparation & Earthworks	Site clearing and bush removal	Acre	2	1,000,000	2,000,000	Manual/mechanical clearing
	Excavation and basin shaping	m <sup>3</sup>	2,000	12,000	24,000,000	Depth and contour-based costing
	Embankment construction	m <sup>3</sup>	800	15,000	12,000,000	Using excavated or imported soil
	Compaction of lake bed and embankments	m <sup>2</sup>	5,000	3,000	15,000,000	Compacted with rollers
3. Lining & Sealing	Clay lining (imported/local)	m <sup>3</sup>	1,000	20,000	20,000,000	If soil is not clay-rich
4. Water Supply & Inlets	Intake structures (gravity-fed)	Lump Sum	1	5,000,000	5,000,000	Canals or pipes
	Water pumping system (solar powered)	Set	1	15,000,000	15,000,000	Optional backup system
5. Drainage & Control Structures	Spillway (stone masonry)	m	20	100,000	2,000,000	Overflow control
	Outlet pipes and culverts	m	30	80,000	2,400,000	Controlled water release
	Silt traps & sediment basins	No.	2	1,500,000	3,000,000	Protect lake lifespan
<b>Sub Total</b>					<b>112,400,000</b>	