

**TENDER DOCUMENT**

**FOR**

**LOT 2 WASH INFRASTRUCTURE WORKS  
TANA RIVER COUNTY**

**JULY 2022  
CISP/TC/WASH02/FY22**

## **BACKGROUND:**

**CISP – Comitato Internazionale per lo Sviluppo dei Popoli** (International Committee for the Development of Peoples) is a rights-based international NGO established in 1983 in Rome. CISP implements humanitarian, rehabilitation, and development projects through its cooperation with public and private local actors in over 30 countries globally. Since 1997 CISP has been working in Kenya to carry out projects in areas of development by supporting national and county authorities to provide quality, equitable, transparent, and accountable services in various sectors. Over the past 23 years CISP Kenya has expanded its activities across more than 12 Counties in both rural and urban areas in various sectors of intervention, including Agriculture and Food Security, Conservation, Livelihoods, Health and Nutrition, Protection (Children, Refugees, GBV), Education (Early Childhood, University), Governance, and Arts and Culture.

CISP is the lead agency in a consortium of partners (*GROOTS, Nature Kenya, Procasur and NDMA*) implementing a multi-year European Union (EU)-funded project (EU REBUILD) on resilience building and food security in Tana Delta and Tana River Sub-Counties of Tana River County. The project is an integrated, multi-sectoral response to food security and sustainable livelihood challenges faced by agro-pastoralist and pastoralist communities, including drought and other effects of climate change. The project aims to enhance resilience of these communities through improving food and nutrition security of vulnerable households, especially for women and children, generating sustainable livelihoods and protecting productive assets.

**CISP invites tenders from eligible bidders as described in the table below.**

<b>TENDER No.</b>	<b>LOT No.</b>	<b>DESCRIPTION</b>	<b>DEADLINE</b>
CISP/TC/WASH01/LOT2A/FY22	LOT 2A	EMMAUS WATER SUPPLY (EQUIPPING 2 BOREHOLES WITH SOLAR PUMP AND ELECTRIC PUMP, FENCING AND CONSTRUCTION OF 1NO. WATER KIOSK)	11th August 2022
CISP/TC/WASH01/LOT2B/FY22	LOT 2B	KATSANGANI WATER SUPPLY PROJECT (EQUIPPING SHALLOW WELL, LAYING PIPELINE MAIN LINE AND CONSTRUCTION OF 1NO. WATER KIOSK) IN TANA RIVER COUNTY	11th August 2022
CISP/TC/WASH01/LOT2C/FY22	LOT 2C	CONSTRUCTION OF 28,080M <sup>3</sup> DALU WATER PAN WITH DRAW OFF SYSTEM/OFFTAKE, SUMP WELL, CATTLE TROUGH AND FENCING IN TANA RIVER COUNTY	11th August 2022
CISP/TC/WASH01/LOT2D/FY22	LOT 2D	INSTALLATION OF PREPAID WATER DISPENSERS & HARDWARE ACCESSORIES TO 5NO. WATER KIOSKS (WATER DISPENSING HUB WITH 3 TAPS OF 25MM DIA; APPROXIMATE DISPENSING VOLUME PER TAP 28 LITRE/MINUTE AT 0.5 BAR, CONNECTED ON SOLAR OR WITH SHOP HUB; TO GIVE ATLEAST 5 YEARS WARRANTY	11th August 2022
CISP/TC/WASH01/LOT1B/FY22 <i>(Readvertisement )</i>	LOT 1B	CONSTRUCTION OF HARORESA FLOOD DIVERSION WORKS IN TANA RIVER COUNTY	11th August 2022

**RESPONSIBILITIES OF THE CONTRACTOR:**

1. Terms of delivery: Tana River County
2. Validity of the offer: (Minimum 3 months)

The requirements to this tender should include the following elements:

1. A written financial proposal including all the product specifications, the price per unit, quantity proposed and unit, and total price, in **Kenya Shillings (compulsory)** including all taxes in the prescribed format.
2. A certificate of origin for all items used during the construction.
3. The bidder's checklist filled in and signed.
4. The national ID copy of the company legal representative (s).
5. Attach company registration documents i.e., certificates of incorporation, NCA (**at least NCA 7 category water works**), business permit as proof of active business operation in a given location, Tax Compliance Certificate and PIN certificate.
6. Evidence of financial capacity by attaching certified company audited financial reports and bank statements within 6 months.
7. Contacts and reference letters of 3 non-Governmental organizations, Government bodies, parastatals or relevant agencies that have recently (preferably in the last 3 years) contracted your company to carry out similar works.
8. Proof of past experiences in similar works.
9. List of the vehicles/technical items and assets owned/rented by the company relevant
10. Detailed Work schedule for each LOT applied for indicating proposed duration for completion of works using acceptable Gantt Chart

**GENERAL CONDITIONS:**

1. The **closing date** of this tender is fixed on **11<sup>th</sup> August 2022** at 11:30 am EAT.
2. A complete set of tender documents may be obtained Free of Charge by interested candidates by downloading from the link provided <https://www.cisp-som.org/careers-and-tenders>
3. Tenderers will fill, sign, stamp and return the Offer form according to CISP's format.
4. Tenderers will sign and return all pages of the Product Specifications for which they apply.
5. Completed tender documents are to be submitted via email subject title marked as per the Tender Number, LOT, and description i.e., "TENDER NO. CISP/TC/WASH01/LOT2A/FY22 **LOT 2A: CONSTRUCTION OF 28,008M<sup>3</sup> DALU WATER PAN WITH DRAW OFF SYSTEM/OFFTAKE, SUMP WELL, CATTLE TROUGH AND FENCING IN TANA RIVER COUNTY.**"

**Addressed to.**

**The Country Administrator.  
Kenya Country Office International Committee for the Development of Peoples (CISP)  
No.117 Manyani East Road, Off James Gichuru, Lavington  
P.O. Box 39433 – 00623 Nairobi, Kenya.**

TEL. +254 733 441 441, 0775 149 900, 0717 149 900

Email: [kenya@cisp-ngo.org](mailto:kenya@cisp-ngo.org)

1. Please submit your complete set of tender documents to: [kenya@cisp-ngo.org](mailto:kenya@cisp-ngo.org).
2. The Applications will be opened on the **12<sup>th</sup> August 2022 at 11:00am** and thereafter a written communication will be sent out to successful Applicants.
3. For all inquiries regarding this tender, please contact us on the details provided above or visit the **CISP Field office, Hola Tana River County or CISP Country Office, Office No.117, Manyani East Road, Off James Gichuru, Lavington, Nairobi, Kenya.**
4. All inquiries and/or clarifications should preferably be submitted via email and should be received no later than 02<sup>nd</sup> August 2022
5. CISP reserves the right to award one or more LOTS to a single contractor
6. There is no limit to the number of LOTS a contractor can apply for.
7. To ensure that funds are used exclusively for humanitarian purposes and in accordance with donors' compliance requirements, all contract offers are subject to the condition that contractors do not appear on EU-Sanction lists in line with CISP's anti-terrorism policy. To this end, CISP reserves the right to carry out anti-terrorism checks on contractors, its board members, staff, volunteers, consultants, financial service providers and sub-contractees.

*NOTE: CISP Code of Conduct and PSEA policy and support a child safe organization by undertaking screening for suitability to work with children, youth, and vulnerable people.*

*CISP is strongly committed to ending child abuse, all forms of sexual exploitation and abuse, and to building a work environment that is safe and welcoming for all, where sexual harassment does not take place. The desired candidate for any position should share and support this commitment in all aspects of their personal and professional behavior. Any history implicating that the applicant has a history of child abuse, sexual exploitation and abuse, or sexual harassment, is a reason for excluding him or her from employment with CISP.*

**ANNEXE I :**

**DATA REGISTRATION OF SUPPLIERS APPLICATION FORM**

I/We..... Hereby apply for registration as suppliers  
**(Name Of Company)**

Of .....  
**(Item Description)**

Company Registration number.....(Attach Copy Reg. Certificate)

Tax/ VAT Registration Certificate (PIN).....(Attach)

Website Address:.....

Post Office Address:.....

Town.....

Street.....

Name Of Building.....

Room/Office.....Floor Number.....

Telephone Nos.....Email.....

Full name of Applicant.....

Other Branches Location.....



**Organization and Business Information**

Chief Executive /Managing Director

**Name:**.....  
**Mobile Contacts:** .....  
**Email Contacts:** .....

Marketing Manager or Alternate Directors.

**Name:**.....  
**Mobile Contacts:** .....  
**Email Contacts:** .....

Accountant

**Name:**.....  
**Mobile Contacts:** .....  
**Email Contacts:** .....

Please provide details of the goods/services your organization supplies:

.....(To attach Company profile).

Net Worth Equivalent in Kshs.....

**Bank Reference and Address to be contacted by CISP if required:**

Bank Name:.....Bank Branch.....  
Contact Name:.....  
Position:.....  
Email Address:.....  
Telephone Number.....

Have you supplied goods/services to CISP previously, if so, please provide a brief summary of previous works.

.....  
.....  
.....

## ANNEX II

### REFERENCE CHECK: PAST EXPERIENCE (NAMES OF CLIENTS IN THE LAST THREE YEARS AND VALUE OF ORDERS) *Must attach Letters from clients*

#### 1. Name of 1<sup>st</sup> Client (Organization)

- (a) Name of Client (Organization).....
- (b) Address.....
- (c) Contact Person .....
- (d) Tel Number .....
- (e) Value of Contract .....

#### 2. Name of 2<sup>nd</sup> Client (Organization)

- (a) Name of Client (Organization) .....
- (b) Address.....
- (c) Contact Person .....
- (d) Tel Number .....
- (e) Value of Contract .....

#### 3. Name of 3<sup>rd</sup> Client (Organization)

- (a) Name of Client Organization .....
- (b) Address.....



- (c) Contact Person .....
- (d) Tel Number .....
- (e) Value of Contract .....

**ANNEXE III**  
**CRITERIA EVALUATION MATRIX**

*All Bids Submitted shall be subjected to a technical Evaluation based on the requirements listed below. The evaluation will be out of 100% with a pass mark of 70%.*

	<b>Evaluation</b>	<b>Parameters</b>	<b>Maximum Score (Official Use)</b>
1.	<b>Mandatory Requirements</b>	Full Submission	
	Submission form	Mandatory ((if not present, Company will be disqualified))	
	Duly Completed Business Questionnaires	Mandatory	
	KRA PIN Certificate and Tax Compliance Certificate of Company.	Mandatory	
	<b>Certificate of Registration</b>	Mandatory	
	Business/Company Profile	Mandatory	
2	Bank Statements for last 12 months	Mandatory	
3	Business Volume and Financial soundness	Over Ksh.15m 5 marks) Over Ksh.7m 2 (marks) Below Ksh. 5m but above Kshs 2 million 1 (marks) Below Ksh. 1,000,000.00 0 (mark)	
4	Presentations of Documents	Electronic submission	

5	Evidence of Physical Address and Premises (Attach Utility Bills eg. electricity bills or Tenancy Agreement).	Mandatory	
6	Reference letters from Current Clients duly signed and stamped	<p>Previous experience with CISP (score 1-5)</p> <p>Recommendation letter(s) from Government</p> <p>Recommendation letter(s) from Donors (EU, UN, others)</p> <p>Recommendation letter</p>	

PLEASE FILL IN THE FOLLOWING TABLE CORRESPONDING TO.

**LOT 2A: EMMAUS WATER SUPPLY (EQUIPPING 2 BOREHOLES WITH SOLAR PUMP AND ELECTRIC PUMP, FENCING AND CONSTRUCTION OF 1NO. WATER KIOSK IN TANA RIVER COUNTY.**

S/No	DESCRIPTION	QTY	UNIT	RATES (KES)	AMOUNT (KES)
<b>1</b>	<b>BILL NO. 1: Preliminary and General Items</b>				
1.1	Allow a provisional sum for mobilization, transportation of machinery, erection of camps and sanitary facilities and demobilization	1	Items		
1.2	Provide, erect and maintain a standard signboard (4ft by 6ft) made of heavy gauge material and supported by two 6ft high metallic tubes gauge 16) as directed by project manager	2	Items		
1.3	Provisional sum for Project supervision and inspection of works	1	PS		
1.4	Allow for Provisional Sum for training and capacity development	1	PS		
1.5	Allow for Provisional Sum for establishing a functional Water user group	1	PS		
1.6	Allow Provisional sum to cover contractors profits, overheads and taxes for items 1.3, 1.4 and 1.5	15%	%		
	<b>Sub Total Bill No. 1 Carried to Summary Sheet</b>				

S.No	DESCRIPTION	QTY	UNITS	RATES (KES)	AMOUNT (KES)
<b>2</b>	<b>BILL NO.2: WELL DEVELOPMENT (ALL PROVISIONAL)</b>				
2.1	Well development using air compressor or water jetting as recommended by the Project Manager	2	sum		
2.2	Insertion and removal of equipment	2	Sum		
	<b>Sub Total Bill No. 2 carried to summary sheet</b>				

S.No	DESCRIPTION	QTY	UNITS	RATES (KES)	AMOUNT (KES)
3	<b>BILL NO.3a: WELL DEVELOPMENT (ALL PROVISIONAL)-SOLAR POWERED</b>				
3.1	Supply and install a solar submissible pumping system. The pump should have a discharge of about 10.6CM/hr (10.6m <sup>3</sup> /hr) at a total dynamic head of 150m. The cost should include all the required fittings, control panel, pump accessories and remote borehole water level monitoring sensor.	1	sum		
	<b>NOTE:</b>				
	Borehole Data: Borehole Diameter-8", Total Depth = 35m; Q-10.6cm/hr				
	Tank is installed on a high tower (16m) and will is located around 7.8 km away from the borehole site in Hola town. The area is averagely flat				
	The costs quoted should include costs for the submissible pump and its accessories, solar panels, control panel, anti-theft solar support structure 3m high, remore wate level borehole monitoring sensor all the required cables and testing				
	<b>Draw Pipes (Supply and Installation)</b>				
3.2	65mm diameter borehole pipes of pieces, 3m in length	10	No		
	<b>Borehole Cover</b>				
3.3	Supply, deliver to site and install borehole steel pipe cover DN200 of thickness 5.0mm with holes for smooth passage of DN 50G.I. DN 25 UPVC dipper pipes and 6.0mm <sup>2</sup> -4 core cable and DN 200 G.I water pipes class B 2m embeddedd in mass concrete to receive cover	1	Item		
	<b>Gantry</b>				
3.4	Fabricate and erect a borehole gantry for removal and lowering of pump and draw pipes during maintainance using DN 100 GI Class B fanged water pipes 9m height above ground. The gantry shall be fixed to ground by mass concrete grade 20 footing in holes measuring 1.5 MDX 1.0MLx1.0MW. The access steps to top bar shall be of 20mm class B GL. pipes firmly welded at intervals of 350mm C/C along the entire length of both columns	1	item		
	<b>Sub Total Bill No. 3 Carried to Summay Sheet</b>				

S.No	DESCRIPTION	QTY	UNITS	RATES (KES)	AMOUNT (KES)
3	<b>BILL NO.3b: WELL DEVELOPMENT (ALL PROVISIONAL)-SOLAR POWERED</b>				
3.1	Supply and install a solar submissible pumping system. The pump should have a discharge of about 9.8CM/hr (9.8m <sup>3</sup> /hr) at a total dynamic head of 150m,. The cost should include all the required fittings, cold water meter, control panel, pump accessories and remote borehole water level monitoring sensor.	1	sum		
	<b>NOTE:</b>				
	Borehole Data: Borehole Diameter-8", Total Depth = 35m; Q-9.8cm/hr				
	Tank is installed on a high tower (12m) and will be located around 7800m away from the borehole site. The area is averagely flat				
	The costs quoted should include costs for the submissible pump and its accessories, solar panels, control panel, anti-theft solar support structure 3m high, remore wate level borehole monitoring sensor all the required cables and testing				
	<b>Draw Pipes (Supply and Installation)</b>				
3.2	65mm diameter borehole pipes 3m length borehole pipes	12	No		
	<b>Borehole Cover</b>				
3.3	Supply, deliver to site and install borehole steel pipe cover DN200 of thickness 5.0mm with holes for smooth passage of DN 50G.I. DN 25 UPVC dipper pipes and 6.0mm <sup>2</sup> -4 core cable and DN 200 G.I water pipes class B 2m embeddedd in mass concrete to receive cover	1	Item		
	<b>Gantry</b>				
3.4	Fabricate and erect a borehole gantry for removal and lowering of pump and draw pipes during maintainance using DN 100 GI Class B fanged water pipes 9m height above ground. The gantry shall be fixed to ground by mass concrete grade 20 footing in holes measuring 1.5 MDX 1.0MLx1.0MW. The access steps to top bar shall be of 20mm class B GL. pipes firmly welded at intervals of 350mm C/C along the entire length of both columns	1	item		
	<b>Sub Total Bill No. 3 carried to summay sheet</b>				

S/NO	DESCRIPTION	QTY	UNITS	RATE (KES)	AMOUNT (KES)
<b>4</b>	<b>BILL No. 4: Pipeline (ALL PROVISIONAL)</b>				
<b>4.1</b>	<b>Excavation and Backfilling</b>				
	Rates for excavation and backfilling in trench shall include for trimming trench bottom and for providing selected bedding and surround materials from the excavations with the specifications. Depth of excavation not exceeding 0.8 m unless otherwise specified				
4.1.1	Excavation and backfilling in normal material for Various pipe for depth n.e 0.8 m	M <sup>3</sup>	150		
	<b>Sub- Total For Excavation</b>				
<b>4.2</b>	<b>HDPE Pipe Work</b>				
	Provide, lay, joint and test the following flexible spigot and socket pipe and fittings with rubber ring joints. Rates to include for all jointly materials, cutting wastage.				
	Note: The following have been used on the drawings to specify pipe diameters/types/classes. Pipe dimensions/working pressures shall conform to KS-06-149 Part 2:2000.				
	<b>Raising Main from Borehole to Water Kiosk</b>				
	<b>HDPE Straights</b>				
4.2.1	110 mm dia PN 12.5	M	50		
	<b>Fittings</b>				
4.2.2	110m x 90 mm Reducing TEE	No.	1		
4.2.3	110mm dia gate valve Complete with Accessories	No.	1		
	<b>Water Kiosk Line</b>				
	<b>HDPE Straights</b>				
4.2.4	50 mm dia PN 6	M	150		
	<b>Fittings</b>				
4.2.5	50 x 25 mm Reducing TEE	No.	1		
4.2.6	25mm dia gate valve Complete with Accessories	No.	1		
	<b>Gate Valve</b>				
4.2.7	50 x 25 mm Reducing TEE	No.	1		
4.2.8	25mm dia gate valve Complete with Accessories	No.	1		
	<b>Sub- Total For HDPE Pipe Work</b>				
<b>4.4</b>	<b>INSPECTION CHAMBERS</b>				
4.4.1	Excavate for, provide all materials and construct complete locable inspection/ valve chambers at the pipe junctions. Internal dimensions 750 x 750 x 1200 mm. Rates to include for all thrust blocks , pipe supports, inspection covers, etc as detailed in the drawings and directed by Project Manager	No.	2		
	<b>Sub- Total For Inspection Chambers</b>				
<b>COLLECTION</b>					
	TOTAL FOR EXCAVATIONS				
	TOTAL FOR HDPE PIPEWORKS				
	TOTAL FOR INSPECTION/VALVE CHAMBERS				
	<b>TOTAL CARRIED TO SUMMARY PAGE</b>				

S/No	DESCRIPTION	QTY	UNITS	RATE (KES)	AMOUNT (KES)
<b>5</b>	<b>BILL NO.5: Fencing Works</b>				
5.1	Dig circular holes measuring 250mm diameter and 500mm in depth spaced at 3000mm covering the perimeter circumference in dimensions of 30mx30m	48	No		
5.2	Provide and erect pre-cast concrete fencing posts in dimensions of 2.5m in length and 0.15m square in thickness made of concrete C25 (1:1.5:3) height of 2.0m using concrete class 20 (C20)[1:2:4, 20mm aggregates]	40	No		
5.3	Provide and fix anchor pre-cast concrete posts in all four corners of the field, every after 20 poles interval and all posts gate entrances, anchoring them securely using concrete class (C20) [1:2:4] at bottom and nails at joints	8	No		
5.4	Using a 2m height of laminated chain link wire gauge 14, fence the perimeter leaving only the area for prescribed gate	120	LM		
5.5	Using a barbed wire gauge 12.5, fix 5 strands of the wire, 2 lines at the top and 3 lines at the top, mid and bottom of barbed wire. Price is inclusive of cost of binding wire.	600	LM		
5.6	Provide and fix a locable metal entrance gate size 4mx2m with anchored on reinforced concrete pillars, complete with a site gate as directed/shown in the drawing	1	No		
<b>Sub Total Bill No. 5 for Fencing Emmaus 1 -With Solar Pump</b>					
<b>Sub Total Bill No. 5 for Fencing Emmaus 2 -with Electric Pump</b>					
<b>Sub Total carried to summay sheet</b>					

<b>6 BILL NO.6: WATER KIOSK AND ASSOCIATED FITTINGS (5, 000 CM Plastic Tank mounted on Top)</b>					
Item	Description	UNITS	QTY	RATE (KES)	AMOUNT (KES)
6.1	Element No.1: Excavation & Earth Works				
6.1.1	General excavation to remove topsoil to an average depth of 250mm	m <sup>2</sup>	17		
6.1.2	Excavation for wall footing depth not exceeding 1200mm deep	m <sup>3</sup>	5.5		
6.1.3	Excavation for front area depth not exceeding 250mm	m <sup>3</sup>	4.5		
6.1.4	Cart away surplus excavated material & deposit at recommended area	m <sup>3</sup>	2.5		

6.1.5	300mm thick approved hard-core, well compacted in layers not exceeding 150mm and blinded using 50mm murrum/quarry dust	m <sup>2</sup>	11		
6.1.6	Gauge 1000 polythene Damp proof on 50mm murrum blinding	m <sup>2</sup>	11		
	<b>Sub Total Carried to Collection</b>				
6.2	Element No.2: Masonry Work				
6.2.1	150 x225x 450mm natural stone to walls to superstructures walling in 1:3 sand/cement mortar finished with steel finished on one side. Rate to included mild all reinforcement at every course	m <sup>2</sup>	16		
6.2.2	150 x225 x 450 natural stone to walls to Substructures walling in 1:3 sand/cement mortar. Rate to included mild all reinforcement at every course	m <sup>2</sup>	12		
6.2.3	6" x 8" X 8" Concrete ventilation blocks	no.	20		
6.2.4	150mm wide DPM to walls	m	9.5		
	Sub Total Carried to Collection				
6.3	Element No.3: Concrete Work				
6.3.1	Concrete grade 15/20 - 400 mm thick Plinth	m <sup>3</sup>	0.30		
6.3.2	Concrete grade 15/20 - 100mm thick slanting front area	m <sup>3</sup>	0.60		
6.3.3	Reinforced concrete grade 25/20 - 125mm thick floor slab	m <sup>3</sup>	0.80		
6.3.4	Reinforced concrete grade 25/20 - 150mm thick roof slab	m <sup>3</sup>	1.00		
6.3.5	Reinforced concrete grade 25/20 - 450 X 250mm footing	m <sup>3</sup>	1.10		
6.3.6	Concrete grade 15/20 - to soak pit cover 100mm THK	m <sup>3</sup>	0.75		
6.3.7	Concrete grade 15/20 - to catch pit base slab	m <sup>3</sup>	0.05		
6.3.8	Reinforced concrete grade 25/20 - 150mm thick roof slab	m <sup>3</sup>	1.00		
6.3.9	Reinforced concrete grade 25/20 - 300 X 150Thk ring beam	m <sup>3</sup>	0.50		
6.3.10	Reinforced concrete grade 25/20 - 250 X 250mm columns	m <sup>3</sup>	1.00		
	<b>SUB TOTAL Carried to Collection</b>				
6.4	Element No. 4: Concrete Ancillaries				
	Formwork				
	Provide cut and fix in position sawn timber formwork or equivalent.				
6.4.1	a) side of foundation footing 150mm wide	m	20.00		
6.4.2	b) edges ground slab 125mm wide	m	10.00		

6.4.3	c) Side of lintel 20mm deep	m	2.00		
6.4.4	d) Edge of 400mm deep plinth	m	4.50		
6.4.5	e) Edges of roof slab	m	10.00		
6.4.6	f) Underneath roof slab, including propos	m <sup>2</sup>	6.00		
6.4.7	e) Edges of ring beam	m	20.00		
	<b>Reinforcement</b>				
	Steel reinforcement cut, bend & placed in position, unit price to include cutting, bending & placing in position with binding wire and concrete seats				
6.4.8	a) Mesh 142 mild steel reinforcement mesh (0.40kg/m <sup>2</sup> ) in foundation wall	m <sup>2</sup>	7		
6.4.9	b) 10mm diameter high tensile steel (0.62kg/m <sup>2</sup> ) in foundation wall	m	30		
6.4.10	a) 8mm diameter mild steel (0.40kg/m) in foundation wall	m	0		
6.4.11	b) 12mm diameter high tensile steel (0.89kg/m) in ring beam	m	40		
6.4.12	c) 8mm diameter mild steel (0.40kg/m) in ring beam	m	20		
6.4.13	d) 12mm diameter high tensile steel (0.89kg/m) in column footing	m	24		
6.4.14	e) 12mm diameter high tensile steel (0.89kg/m) in columns	m	44		
6.4.15	f) 8mm diameter mild steel (0.40kg/m) in columns	m	22		
6.4.16	g) 10mm diameter high tensile steel (0.62kg/m <sup>2</sup> ) in roof slab	m	70		
	<b>Sub Total Carried to Collection</b>				
6.5	<b>Element No.5: Roofing</b>				
6.5.1	Provide steel structure mounted on top of the slab to cover the tank	LS	1		
6.5.2	Roof cover in Gauge 30 CIS Nailed to 50 x 75mm purlins.	m <sup>2</sup>	15.00		
	<b>Timber Work</b>				
	All structure truss members shall be in seasoned eucalyptus wood and painted two coats of anti-termite solution and shall be tight fixed with top tie beam with 6mm diameter plain bar.				
6.5.3	a) 150 X 50mm wall plate	m	5.00		
6.5.4	b) 50X 100mm timber to rafter	m	25.00		
6.5.5	e) 50x50mm roof purlin	m	20.00		
6.5.6	e) 250x15mm fascia board	m	15.00		
	<b>Sub Total Carried to Collection</b>				



6.6	Element No.6: Fittings and Fixtures				
	Doors				
6.6.1	2000 X 1000 steel door including locks and hinges to details	No	1.00		
6.6.2	1000 X 1000 steel swing window including locks and hinges to details	No	1.00		
6.6.3	Build in table with two lockable drawers as shall be directed by supervising Engineer.	No	1.00		
6.6.4	Provide and fix 3 rows of wooden shelves on the internal walls as shall be directed by supervising Engineer.	No	1.00		
	<b>Sub Total Carried to Collection</b>				
6.7	Element No.7: Pipes and Fittings				
	All pipes to be Galvanized Iron with Screw				
6.7.1	1" inlet pipe	m	10		
6.7.2	1" dia. Elbows	No.	4		
6.7.3	1" dia. Valve sockets	No.	2		
6.7.4	1" dia. Gate Valve as Peglar	No.	3		
6.7.5	1" /3/4" Reducing Tee	No.	2		
6.7.6	1" end plug	No.	1		
6.7.7	1" union	No.	4		
6.7.8	1" short nipple	No.	2		
6.7.9	3/4" union	No.	4		
6.7.10	3/4" short nipple	No.	8		
6.7.11	3/4" elbow	No.	4		
	<b>Sub Total Carried to Collection</b>				
6.8	Element No.8: Finishes				
6.8.1	Pointing to all External wall surfaces with cement sand mortar 1:2	m <sup>2</sup>	16.00		
6.8.2	Apply plastering to lintel surfaces	m <sup>2</sup>	0.40		
6.8.3	Apply plastering to all wall faces	m <sup>2</sup>	16.00		
6.8.4	Provide three coats of gloss paint to all plastered wall faces	m <sup>2</sup>	16.00		
6.8.5	Provide 3 coats of bituminous paint to all exposed concreted faces	m <sup>2</sup>	0.40		
	Sub Total Carried to Collection				
6.9	Element No.9: Drainage and Water Supply				
6.9.1	Excavate for 400mm square X 900mm catch pit to detail	No.	1		
6.9.2	4" X 8 X 18" lining block to the site of the catch pit	m	2.4		
6.9.3	100mm thick mass concrete for catch pit base slab	m <sup>2</sup>	0.4		

6.9.4	Catch pit grating made from welded to form 25mm square mesh on 50mm steel frame	No.	1		
6.9.5	Graded approved free draining hard-core/rubble stone filling the soak pit	m <sup>3</sup>	2		
6.9.6	225mm Dia. Precast Concrete drainage pipes	m	6		
6.9.10	Provide and install 5,000 Litres approved plastic tank on top of the kiosk roof complete with all fitting (its nipples, back nuts and float/ball valve)	No.	1		
	<b>Sub Total Carried to Collection SUMMARY</b>				
	COLLECTION				
	TOTAL FOR EXCAVATION AND EARTHWORKS				
	TOTAL FOR MASONRY WORK				
	TOTAL FOR CONCRETE WORK				
	TOTAL FOR CONCRETE ANCILLARIES				
	TOTAL FOR ROOFING				
	TOTAL FOR FITTINGS AND FIXTURES				
	TOTAL FOR PIPES AND FITTINGS				
	TOTAL FOR FINISHES				
	TOTAL FOR DRAINAGE AND WATER SUPPLY				
	COST FOR 1NO. WATER KIOSK CARRIED TO SUMMARY				

S/No	DESCRIPTION	TOTAL (KES)
	<b>SUMMARY OF BILLS</b>	
1	BILL 1: Preliminary and General	
2	BILL 2: Well Development	
3	BILL 3a: Borehole Equipping-SOLAR	
	BILL 3b: Borehole Equipping-Electric	
4	BILL 4: Pipeline	
5	BILL 5: Fencing works	
6	BILL 6: Water Kiosk with 5,000 CM Tank (1No)	
	<b>GRAND TOTAL</b>	

**LOT 2B: KATSANGANI WATER SUPPLY PROJECT (EQUIPPING SHALLOW WELL, LAYING PIPELINE MAIN LINE AND CONSTRUCTION OF WATER KIOSK) IN TANA RIVER COUNTY**

S/N	DESCRIPTION	QTY	UNIT	RATES (KES)	AMOUNT
<b>1</b>	<b>BILL NO. 1: Preliminary and General Items</b>				
1.1	Allow a provisional sum for mobilization, transportation of machinery, erection of camps and sanitary facilities and demobilization	1	PS		
1.2	Provide, erect, and maintain a standard signboard (4ft by 6ft) made of heavy gauge material and supported by two 6ft high metallic tubes gauge 16) as directed by project manager	2	Items		
1.3	Provisional sum for Project supervision and inspection of works	1	PS		
1.4	Allow for Provisional Sum for training and capacity development	1	L.S		
1.5	Allow Provisional sum to cover contractors' profits, overheads and taxes for items 1.3 and 1.4	15%	%		
	<b>Sub Total Bill No. 1 carried to Summary sheet</b>				

<b>SOLAR PUMPING SYSTEM</b>					
S/N	DESCRIPTION	QTY	UNITS	RATES (KES)	AMOUNT (KES)
<b>2</b>	<b>BILL NO.2: SOLAR PUMPING SYSTEM FOR TOTAL HEAD OF OVER 180m</b>				
2.1	Supply and install a solar submissile pumping system. The pump should have a discharge of about 4.8CM/hr at a total head of 180m. The cost should include all the required fittings, control panel, pump accessories, smart remote borehole monitoring system and test pumping.	1	sum		
	<b>NOTE:</b>				
	Shallow well Data: Shallow well Diameter-6", Total Depth = 6.4m; Q=4.8CM/hr; pumping to an existing elevated steel tank 25CM mounted 15m from the base some 10,100m away. Ground elevation at the borehole is lower than ground elevation at the Tank by 4m				
	The costs quoted should include costs for the submissile pump and its accessories, solar panels, control panel, anti-theft solar support structure 2.5m high, all the required cables and testing				
	<b>Gantry</b>				

2.2	Fabricate and erect a borehole gantry for removal and lowering of pump and draw pipes during maintenance using DN 100 GI Class B fanged water pipes 9m height above ground. The gantry shall be fixed to ground by mass concrete grade 20 footing in holes measuring 1.5 MDX 1.0MLx1.0MW. The access steps to top bar shall be of 20mm class B GL. pipes firmly welded at intervals of 350mm C/C along the entire length of both columns	1	item		
<b>SUB TOTAL</b>					

S/NO	DESCRIPTION	QTY	UNITS	RATE (KES)	AMOUNT (KES)
3	<b>BILL No. 3: Pipeline</b>				
3.1	<b>Excavation and Backfilling (ALL PROVISIONAL)</b>				
	Rates for excavation and backfilling in trench shall include for trimming trench bottom and for providing selected bedding and surround materials from the excavations with the specifications. Depth of excavation not exceeding 0.8 m unless otherwise specified				
3.1.1	Excavation and backfilling in normal material for various pipe for depth n.e 0.8 m	M <sup>3</sup>	2842		
3.1.2	E.O for excavation in soft rock (Provisional)	M <sup>3</sup>	142.1		
3.1.3	E.O for excavation in hard rock (Provisional)	M <sup>3</sup>	71.05		
<b>Sub- Total for Borehole to Main Tank Pipework</b>					-
3.2	<b>HDPE Pipe Work</b>				
	Provide, lay, joint, and test the following flexible spigot and socket pipe and fittings with rubber ring joints. Rates to include for all jointly materials, cutting wastage.				
	Note: The following have been used on the drawings to specify pipe diameters/types/classes. Pipe dimensions/working pressures shall conform to KS-06-149 Part 2:2000.				
	<b>Raising Main from Borehole to Main Tanks (10.10Kms)</b>				
	<b>HDPE Straights (Internal Diameter)</b>				
3.2.1	55 mm dia PN 20	M	10,100		
	<b>Fittings</b>				
3.2.2	75mm x 50 mm Reducing TEE	No.	1		

3.2.3	50mm dia gate valve Complete with Accessories	No.	1		
3.2.4	Non-Return Valve 50mm (Pegler) with fittings (Provisional)	No.	1		
	<b>Sub- Total for Borehole to Main Tank Pipework</b>				
	<b>Main Tank to Water Kiosk 50m away (Provisional)</b>				
	<b>HDPE Straights</b>				
3.2.5	50 mm dia PN 6	M	50		
	<b>Fittings</b>				
3.2.6	50 x 25 mm Reducing TEE	No.	2		
3.2.7	50mm dia gate valve Complete with Accessories	No.	2		
3.2.8	50mm dia gate valve Complete with Accessories	No.	1		
3.2.9	Non-Return Valve 50mm (Pegler) with fittings (Provisional)	No.	1		
3.2.10	50mm Air valve complete with fittings (Provisional)	No.	1		
	<b>Sub- Total for Main Tank to Water Kiosk Pipework</b>				
<b>3.3</b>	<b>MARKER POSTS</b>				
3.3.1	Supply and install standard marker post for pipeline at interval of 200m along the pipeline	No.	30		
	<b>Sub- Total for Marker Posts</b>				
<b>3.4</b>	<b>INSPECTION/VALVE CHAMBERS</b>				
3.4.1	Excavate for, provide all materials, and construct complete lockable inspection/ valve chambers at the pipe junctions. Internal dimensions 750 x 750 x 1200 mm. Rates to include for all thrust blocks, pipe supports, inspection covers, etc as detailed in the drawings and directed by Project Manager	No.	2		
	<b>Sub- Total for Inspection/Valve Chambers</b>				
<b>3.5</b>	<b>WASHOUTS (W/O) (ALL PROVISIONAL)-4 No</b>				
3.5.1	Excavate for, provide all materials and construct complete w/o chambers of internal dimensions 1200 x 1200 x 1200 mm. Rates to including thrust blocks, pipe supports as shown in the drawings	No.	4		
	Provide, handle, install and test the following steel and HDPE pipes and fittings, valves and specials. Special rates shall include for completing all pipe joints as specified in the specification				

3.5.2	50/50mm dia flanged adaptor	No.	8		
3.5.3	50 mm dia double flanged GI pipe (500 mm)	No.	2		
3.5.4	50mm x 50mm level invert scour GI tee with flanged branch	No.	2		
3.5.5	50 mm dia sluice valve	No.	2		
3.5.6	50 mm dia x 500 mm long single flanged GI pipe	No.	2		
3.5.7	50 / 50 mm dia HDPE / GI adaptor	No.	2		
3.5.8	50mm GI threaded pipe 500 mm long with a flap valve	No.	2		
<b>Sub Total Provisional for Wash Outs (W/O)</b>					
<b>3.6</b>	<b>AIR VALVES (8 No)</b>				
3.6.1	Excavate for, provide all materials and construct complete air valve chambers of internal dimensions 1200 x 1200 x 1200 mm. Rates to including thrust blocks, pipe supports as shown in the drawings	No.	8		
	Provide, handle, install and test the following steel and HDPE pipes and fittings, valves and specials. Special rates shall include for completing all pipe joints as specified in the specification				
3.6.2	50mm air valve	No.	8		
<b>Sub Total Provisional for Air Valves</b>					
<b>3.7</b>	<b>Water Bowsing Point</b>				
3.7.1	Provide materials and erect a water bowsing point 20m from the tank tower base using 2" GI pipe, Inclusive of all required fittings.	1	Item		
<b>Sub Total Provisional for Water Bowsing Point</b>					
<b>COLLECTION</b>					
3.1	SUB TOTAL FOR EXCAVATIONS				
3.2	SUB TOTAL FOR PIPEWORKS				
3.3	SUB TOTAL FOR MARKER POSTS				
3.4	SUB TOTAL FOR INSPECTION/VALVE CHAMBERS				
3.5	SUB TOTAL WASHOUTS (W/O)				
3.6	SUB TOTAL FOR WASHOUTS AIR VALVES				
3.7	SUB TOTAL FOR WATER BOWSER POINT				
<b>TOTAL CARRIED TO SUMMARY PAGE</b>					

S/No	DESCRIPTION	QTY	UNITS	RATE (KES)	AMOUNT (KES)
4	<b>BILL NO.4: Fencing Works</b>				

4.1	Dig circular holes measuring 250mm diameter and 500mm in depth spaced at 3000mm covering the perimeter circumference in dimensions of 30mx30m	48	No		
4.2	Provide and erect pre-cast concrete fencing posts in dimensions of 2.5m in length and 0.15m square in thickness made of concrete C25 (1:1.5:3) height of 2.0m using concrete class 20 (C20) [1:2:4, 20mm aggregates]	40	No		
4.3	Provide and fix anchor pre-cast concrete posts in all four corners of the field, every after 20 poles interval and all posts gate entrances, anchoring them securely using concrete class (C20) [1:2:4] at bottom and nails at joints	8	No		
4.4	Using a 2m height of laminated chain link wire gauge 14, fence the perimeter leaving only the area for prescribed gate	120	LM		
4.5	Using a barbed wire gauge 12.5, fix 5 strands of the wire, 2 lines at the top and 3 lines at the top, mid and bottom of barbed wire. Price is inclusive of cost of binding wire.	600	LM		
4.6	Provide and fix a lockable metal entrance gate size 4mx2m with anchored on reinforced concrete pillars, complete with a site gate as directed/shown in the drawing	1	No		
<b>Sub Total</b>					

<b>5 BILL NO.5: WATER KIOSK AND ASSOCIATED FITTINGS (5, 000 CM Plastic Tank mounted on Top)</b>					
<b>Item</b>	<b>Description</b>	<b>UNITS</b>	<b>QTY</b>	<b>RATE (KES)</b>	<b>AMOUNT (KES)</b>
5.1	Element No.1: Excavation & Earth Works				
5.1.1	General excavation to remove topsoil to an average depth of 250mm	m <sup>2</sup>	17		
5.1.2	Excavation for wall footing depth not exceeding 1200mm deep	m <sup>3</sup>	5.5		
5.1.3	Excavation for front area depth not exceeding 250mm	m <sup>3</sup>	4.5		
5.1.4	Cart away surplus excavated material & deposit at recommended area	m <sup>3</sup>	2.5		
5.1.5	300mm thick approved hard-core, well compacted in layers not exceeding 150mm and blinded using 50mm murrum/quarry dust	m <sup>2</sup>	11		
5.1.6	Gauge 1000 polythene Damp proof on 50mm murrum blinding	m <sup>2</sup>	11		
	<b>Sub Total Carried to Collection</b>				
5.2	Element No.2: Masonry Work				
5.2.1	150 x225x 450mm natural stone to walls to superstructures walling in 1:3 sand/cement mortar finished with steel finished on one side. Rate to included mild all reinforcement at every course	m <sup>2</sup>	16		
5.2.2	150 x225 x 450 natural stone to walls to Substructures walling in 1:3 sand/cement mortar. Rate to included mild all reinforcement at every course	m <sup>2</sup>	12		
5.2.3	6" x 8" X 8" Concrete ventilation blocks	no.	20		
5.2.4	150mm wide DPM to walls	m	9.5		
	<b>Sub Total Carried to Collection</b>				
5.3	Element No.3: Concrete Work				
5.3.1	Concrete grade 15/20 - 400 mm thick Plinth	m <sup>3</sup>	0.30		
5.3.2	Concrete grade 15/20 - 100mm thick slanting front area	m <sup>3</sup>	0.60		
5.3.3	Reinforced concrete grade 25/20 -	m <sup>3</sup>	0.80		



	125mm thick floor slab				
5.3.4	Reinforced concrete grade 25/20 - 150mm thick roof slab	m <sup>3</sup>	1.00		
5.3.5	Reinforced concrete grade 25/20 - 450 X 250mm footing	m <sup>3</sup>	1.10		
5.3.6	Concrete grade 15/20 - to soak pit cover 100mm THK	m <sup>3</sup>	0.75		
5.3.7	Concrete grade 15/20 - to catch pit base slab	m <sup>3</sup>	0.05		
5.3.8	Reinforced concrete grade 25/20 - 150mm thick roof slab	m <sup>3</sup>	1.00		
5.3.9	Reinforced concrete grade 25/20 - 300 X 150Thk ring beam	m <sup>3</sup>	0.50		
5.3.10	Reinforced concrete grade 25/20 - 250 X 250mm columns	m <sup>3</sup>	1.00		
	<b>SUB TOTAL Carried to Collection</b>				
5.4	Element No. 4: Concrete Ancillaries				
	Formwork				
	Provide cut and fix in position sawn timber formwork or equivalent.				
5.4.1	a) side of foundation footing 150mm wide	m	20.00		
5.4.2	b) edges ground slab 125mm wide	m	10.00		
5.4.3	c) Side of lintel 20mm deep	m	2.00		
5.4.4	d) Edge of 400mm deep plinth	m	4.50		
5.4.5	e) Edges of roof slab	m	10.00		
5.4.6	f) Underneath roof slab, including propos	m <sup>2</sup>	6.00		
5.4.7	e) Edges of ring beam	m	20.00		
	Reinforcement				
	Steel reinforcement cut, bend & placed in position, unit price to include cutting, bending & placing in position with binding wire and concrete seats				
5.4.8	a) Mesh 142 mild steel reinforcement mesh (0.40kg/m <sup>2</sup> ) in foundation wall	m <sup>2</sup>	7		
5.4.9	b) 10mm diameter high tensile steel (0.62kg/m <sup>2</sup> ) in foundation wall	m	30		
5.4.10	a) 8mm diameter mild steel (0.40kg/m) in foundation wall	m	0		
5.4.11	b) 12mm diameter high tensile steel (0.89kg/m) in ring beam	m	40		
5.4.12	c) 8mm diameter mild steel (0.40kg/m)	m	20		

	in ring beam				
5.4.13	d) 12mm diameter high tensile steel (0.89kg/m) in column footing	m	24		
5.4.14	e) 12mm diameter high tensile steel (0.89kg/m) in columns	m	44		
5.4.15	f) 8mm diameter mild steel (0.40kg/m) in columns	m	22		
5.4.16	g) 10mm diameter high tensile steel (0.62kg/m <sup>2</sup> ) in roof slab	m	70		
	<b>Sub Total Carried to Collection</b>				
<b>5.5</b>	<b>Element No.5: Roofing</b>				
5.5.1	Provide steel structure mounted on top of the slab to cover the tank	LS	1		
5.5.2	Roof cover in Gauge 30 CIS Nailed to 50 x 75mm purlins.	m <sup>2</sup>	15.00		
	<b>Timber Work</b>				
	All structure truss members shall be in seasoned eucalyptus wood and painted two coats of anti-termite solution and shall be tight fixed with top tie beam with 6mm diameter plain bar.				
5.5.3	a) 150 x 50mm wall plate	m	5.00		
5.5.4	b) 50X 100mm timber to rafter	m	25.00		
5.5.5	e) 50x50mm roof purlin	m	20.00		
5.5.6	e) 250x15mm fascia board	m	15.00		
	Sub Total Carried to Collection				
<b>5.6</b>	<b>Element No.6: Fittings and Fixtures</b>				
	Doors				
5.6.1	2000 X 1000 steel door including locks and hinges to details	No	1.00		
5.6.2	1000 X 1000 steel swing window including locks and hinges to details	No	1.00		
5.6.3	Build in table with two lockable drawers as shall be directed by supervising Engineer.	No	1.00		
5.6.4	Provide and fix 3 rows of wooden shelves on the internal walls as shall be directed by supervising Engineer.	No	1.00		
	Sub Total Carried to Collection				
<b>5.7</b>	<b>Element No.7: Pipes and Fittings</b>				

	All pipes to be Galvanized Iron with Screw				
5.7.1	1" inlet pipe	m	10		
5.7.2	1" dia. Elbows	No.	4		
5.7.3	1" dia. Valve sockets	No.	2		
5.7.4	1" dia. Gate Valve as Peglar	No.	3		
5.7.5	1" /3/4" Reducing Tee	No.	2		
5.7.6	1" end plug	No.	1		
5.7.7	1" union	No.	4		
5.7.8	1" short nipple	No.	2		
5.7.9	3/4" union	No.	4		
5.7.10	3/4" short nipple	No.	8		
5.7.11	3/4" elbow	No.	4		
	Sub Total Carried to Collection				
5.8	Element No.8: Finishes				
5.8.1	Pointing to all External wall surfaces with cement sand mortar 1:2	m <sup>2</sup>	16.00		
5.8.2	Apply plastering to lintel surfaces	m <sup>2</sup>	0.40		
5.8.3	Apply plastering to all wall faces	m <sup>2</sup>	16.00		
5.8.4	Provide three coats of gloss paint to all plastered wall faces	m <sup>2</sup>	16.00		
5.8.5	Provide 3 coats of bituminous paint to all exposed concreted faces	m <sup>2</sup>	0.40		
	Sub Total Carried to Collection				
5.9	Element No.9: Drainage and Water Supply				
5.9.1	Excavate for 400mm square X 900mm catch pit to detail	No.	1		
5.9.2	4" x 8" x 18" lining block to the site of the catch pit	m	2.4		
5.9.3	100mm thick mass concrete for catch pit base slab	m <sup>2</sup>	0.4		
5.9.4	Catch pit grating made from welded to form 25mm square mesh on 50mm steel frame	No.	1		
5.9.5	Graded approved free draining hard-core/rubble stone filling the soak pit	m <sup>3</sup>	2		
5.9.6	225mm Dia. Precast Concrete drainage pipes	m	6		

5.9.7	Provide and install 5,000 Litres approved plastic tank on top of the kiosk roof complete with all fitting (its nipples, back nuts and float/ball valve)	No.	1		
	<b>Sub Total Carried to Collection SUMMARY</b>				
	<b>COLLECTION</b>				
	TOTAL FOR EXCAVATION AND EARTHWORKS				
	TOTAL FOR MASONRY WORK				
	TOTAL FOR CONCRETE WORK				
	TOTAL FOR CONCRETE ANCILLARIES				
	TOTAL FOR ROOFING				
	TOTAL FOR FITTINGS AND FIXTURES				
	TOTAL FOR PIPES AND FITTINGS				
	TOTAL FOR FINISHES				
	TOTAL FOR DRAINAGE AND WATER SUPPLY				
	<b>COST FOR 1NO. WATER KIOSK CARRIED TO SUMMARY</b>				

S/No	DESCRIPTION	TOTAL (KES)		
<b>SUMMARY OF BILLS</b>				
1	BILL 1: Preliminary and General			
2	BILL 2: Solar Pumping System			
3	BILL 3: Pipeline			
4	BILL 4: Fencing works			
5	BILL5: Construction of Water Kiosk			
	<b>GRAND TOTAL</b>			

**LOT 2C: CONSTRUCTION OF 28,080M<sup>3</sup> DALU WATER PAN WITH DRAW OFF SYSTEM/OFFTAKE, SUMP WELL, CATTLE TROUGH AND FENCING IN TANA RIVER COUNTY**

<b>Bill No.1: Preliminaries &amp; General Requirements</b>					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (KES)	AMOUNT (KES)
<b>Contractual Requirements</b>					
1.1	Mobilize and demobilize Plant and equipment including personnel to the site including setting up camp (Provisional).	PS	1		
1.2	Provide provisional sum for access road to site as directed by the project Engineer	PS	1.0		
1.3	Prepare Health and Safety Plan and any costs associated with the implementation of the plan (Provisional)	PS	1		
1.4	Prepare and implement Environmental Monitoring and Management Plan complete with EIA (Provisional)	PS	1		
1.5	Provisional sum for Project supervision and inspection of works	PS	1		
1.6	Allow for Provisional Sum for training and capacity development	PS	1		
1.7	Allow Provisional sum to cover contractors profits, overheads and taxes for items 1.5 and 16	0.15	%		
<b>Project Sign board</b>					
1.8	Provide, fix and maintain project sign board per drawing (including any payments to local authorities) through to end of defects liability period of contract	nr	1		
<b>PAGE TOTAL CARRIED OVER TO GRAND SUMMARY</b>					

<b>BILL OF QUANTITIES FOR CONSTRUCTION OF DALU WATER PAN (28,080m<sup>3</sup>)</b>					
<b>BILL NO.2 - EARTH WORKS</b>					
S/NO.	Description	Unit	Qty	Rate (KES)	Amount (KES)
2.1	<b>Reservoir excavation</b>				
2.1.1	Clear site off all trees (less than 500 mm diameter) 110m by 90m, bushes, shrubs including stubs removal, girth and carting away	M <sup>2</sup>	10,925		

2.1.2	Excavate oversite (110m by 90m) average 200mm deep to remove vegetable soil, load, wheel, and cart away.	M <sup>3</sup>	1,980		
2.1.3	Excavate for draw off/scour pipe trench not exceeding 4.0m from the stripped level and cart away as directed by the Project Engineer (Provisional).	m <sup>3</sup>	240		
2.1.4	Excavate and cart to spoil for reservoir formation measuring 110m by 90m (top) from the stripped area to a depth not exceeding 3.0 m deep (bottom 98m by 78m) as directed by the engineer (maintaining a berm of 4-10m away from the upstream embankment)	M <sup>3</sup>	25,288		
2.1.5	Ditto but in hard materials	M <sup>3</sup>	500		
<b>2.2</b>	<b>Silt trap (Provisional)</b>				
2.2.1	Excavate for silt trap measuring 30m by 20m with side slope 2:1 to a depth of 2.0m from ground surface and dispose / reuse excavated materials as directed by the Engineer	M <sup>3</sup>	1,019		
2.2.2	Provide all materials, place and compact a layer for stone pitching on the silt trap areas as shown in the drawings or as directed by the Engineer	M <sup>2</sup>	83		
<b>2.3</b>	<b>Inlet construction and protection (Provisional)</b>				-
2.3.1	Supply, fix and fill with hard core not more than 200mm nominal size. 2mx1mx1m gabions wire gauge 4mm thick and protection of, inlet channel to the pan minimum 8m as directed by the project engineer	No.	10		
2.3.2	Excavate for the concrete sill 300mm thick, 1000mm deep across the inlet channel not exceeding 4m across inlet channel to the pan.	M <sup>3</sup>	2		
2.3.3	Provide all materials, mix, place and Construct insitu concrete sill class 20/25 concrete 300mm wide, 1000mm deep across the inlet channel as shown in the drawings. Provide all materials, mix, place and use concrete to finish surface of the sill not exceeding 200mm	M	3		

	either side of the sill firmly fixed between the gabions as directed by project Engineer				
2.3.4	Excavate for the inlet channels at the inlet to the pan. Average of 1.0m deep by 1.5m wide and 80.0m long. Construction of sills across the inlet channel as shown in the drawings. Provide all materials, mix, place and stone pitching and as directed by project Engineer	M <sup>3</sup>	120		
2.4	<b>Outlet channel Construction (Provisional)</b>				
2.4.1	Excavation of spillway measuring 40m long, 10m wide, 1.0m deep from ground surface as directed by the Engineer	M <sup>3</sup>	90		
2.4.2	Provide for a concrete class 25/20 spillway sill 300mm thick (instu cast) across the channel 1000mm deep and 10m across the spill way/cattle ramp.	M <sup>3</sup>	1.8		
2.4.3	Supply, fix and fill with hard core not more than 200mm nominal size. 2mx1mx1m gabions wire gauge 4mm thick and protection of, inlet channel to the pan minimum 10m as directed by the project engineer	No.	35		
2.4.5	Provide for stone pitching protection to cattle ramp and outflow channel with hard core stone materials of an area measuring 12mx 20m	M <sup>2</sup>	240		
2.5	<b>Cattle Ramp measuring 15m Wide (Provisional)</b>				
2.5.1	Provide for stone pitching protection to cattle ramp 15m wide with hard core stone materials and 15m wide for 300mm thick as shall be directed by engineer.	M <sup>3</sup>	135		
<b>TOTAL BILL NO.2 CARRIED OVER TO GRAND SUMMARY</b>					

<b>BILL NO. 2 CONSTRUCTION OF AUXILLARY STRUCTURES</b>					
<b>2.5</b>	<b>Draw-off system</b>				
2.5.1	Provide all the required materials and construct a standard communal water point as per the drawing, off set at a tangent to T- junction with cattle trough minimum 30m distance (Provisional)	Lumpsun	1		
2.5.2	Provide for a standard intake tower using perforated 4” GI pipes with wire mesh screens 3m high using concrete mix of ration 1:2:4 (cement. Sand and Ballast). Provide a dead storage of 0.5m on the pipe as described in the working drawings	Lump sum	1		
2.5.3	Provide, lay and connect to intake tower 110mm HDPE (PN10) pipes including fittings for draw off system under the entire embankment upto the Shallow well	M	100		
2.5.3	Allow for Plumbing works for the pumped system from the well to the storage tank	Item	1		
2.5.4	Gate Valve 100mm Dia.	No.	1		
2.5.5	Allow for excavate, provide for materials and construct lockable masonry chambers with internal dimensions 1000mm x1000mm x1000 mm as indicated in the drawings and as directed by the Engineer. Rates to include formwork.	No.	1		
2.5.6	Supply, install and commision test a complete hand pumping unit (AFRIDEV or Equivalent) as per the following specifications (Provisional)	PS	1		
2.5.7	Supply all the materials and construct 1.2m Diameter by 4 m deep shallow well complete with cover, access hooks as shown in the drawings (Provisional)	PS	1		
<b>Sub-Total</b>					
<b>TOTAL BILL NO.2 CARRIED OVER TO GRAND SUMMARY</b>					

<b>Bill No.3: Construction Of 10m Long Cattle Trough (2No)</b>					
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QTY</b>	<b>RATE (KES)</b>	<b>AMOUNT (KES)</b>
<b>3.1</b>	<b>MASONRY CATTLE TROUGH</b>				
	Excavation (Provisional)	Lumpsu m			
	Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials by bailing, pumping or otherwise				
3.1.1	Prepare site by stripping top 150 mm of soil to remove all debris including sand (if any) from site and carting away spoil	m <sup>2</sup>	52		
3.1.2	Excavate for foundation strip commencing at stripped levels depth not exceeding 1.50m deep	m <sup>3</sup>	25		



3.1.3	Extra-over for excavation in soft rock (Provisional)	m <sup>3</sup>	1		
3.1.4	Extra-over for excavation in hard rock (Provisional)	m <sup>3</sup>	1		
3.1.5	Remove surplus excavated material from site	m <sup>3</sup>	15		
3.1.6	Backfill around foundation	m <sup>3</sup>	10		
	<b>Filing</b>				
3.2	200 mm thick approved hardcore filling spread, well rammed and compacted in 150mm layers to receive concrete surface bed	m <sup>3</sup>	8		
	<b>Concrete work</b>				
	Mass Concrete class 15 (1:3:6) with 20mm thick maximum aggregate size in				
3.3.1	50mm blinding layer under foundations	m <sup>2</sup>	9		
3.3.2	50mm blinding layer on hardcore surfaces	m <sup>2</sup>	38		
	Vibrated reinforced concrete class 25 (1:1.5:3) with 20mm maximum aggregate as described in:				
3.4	Strip foundation	m <sup>3</sup>	2		
3.5	75mm thick concrete benching laid to falls and with surface steel trowelled rough (Optional)	m <sup>3</sup>	2.7		
3.6	100 mm thick floor slab	m <sup>3</sup>	0.5		
3.7	Vibrated reinforced concrete class 25 (1:1.5:3) with 20mm maximum aggregate as described in:				
3.8	150mm thick walls	m <sup>3</sup>	4		
	<b>Reinforcement</b>				
3.9.1	Mesh fabric reinforcement ref. No. A142 laid in floor slab with minimum 150 mm side allowance	m <sup>2</sup>	38		
3.9.2	provide Mesh fabric reinforcement ref. No. A142 for walling with a nominal pitch of 200mm	m <sup>2</sup>	21		
	<b>Sawn formwork</b>				
3.10.1	Formwork to sides of foundation strip girth 150-225mm	M	29		
3.10.2	Formwork to edges of floor slab girth not exceeding 75mm	m	31		
3.11	<b>Formwork to sides of walls</b>	m <sup>2</sup>	41		
	<b>Walling</b>				
3.12.	150 Thick solid concrete block walling	m <sup>2</sup>	3		

1					
	Finishes				
	Cement and sand mortar (1:3) in:				
3.12. 2	12 mm thick paving to floor with water proof cement (Optional)	m <sup>2</sup>	4		
3.12. 3	15mm thick plaster to internal side of wall with water proof cement	m <sup>2</sup>	14		
3.12. 4	12mm thick plaster to external side of wall	m <sup>2</sup>	6		
3.12. 5	25 mm thick screed with approved hardener to floor steel trowelled rough on benching (Optional)	m <sup>2</sup>	40		
	<b>Galvanized mild steel pipes class "B" medium thickness with and including jointing fittings and fixed as described</b>				
3.13. 1	25mm diameter inlet pipe chased through masonry wall 300 mm long with and including stop cork	No	4		
3.13. 2	25mm diameter inlet pipe	No	2		
3.14	32mm diameter PVC draw off pipe 300mm long with and including gate valve	No	1		
	<b>TOTALS FOR ONE TROUGH</b>	<b>No.</b>	<b>1</b>		
	<b>TOTALS FOR TWO TROUGH CARRIER TO SUMMARY</b>	<b>No.</b>	<b>2</b>		

<b>BILL NO. 4 &amp; 5-FENCING AND GATE</b>					
	<b>DESCRIPTION</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate (KES)</b>	<b>Amount (KES)</b>
4.1	Provide and install 100mm by 125mm by 2.70m long Concrete posts so as to rise 2.1m above the grounds spaced at 3m centre to centre	No	182.00		
4.2	Excavation of holes to anchor posts concere posts	No	182.00		
4.3	Concetre class 1:3:6 for anchoring the posts	M <sup>3</sup>	2.00		
4.4	Provide and install 100 by 125 by 2.0m long strainer Concrete posts (double struts) spaced at 30m and at all corners and gate	No	38		
4.5	Excavation of holes to anchor straner concrete posts	No	38		
4.6	Concetre class 1:3:6 for anchoring the strainer posts	M <sup>3</sup>	2.0		
4.7	Supply and fix Berbed wire (barbed wire 16g, 25kg)-6 strand	M	3,300		
4.8	G12.5 chainlink 2m high	SM	1,100		
<b>Bill No 5: Gate</b>					
5.1	Supply and install 4000x2000mm double leave steel grill gate to 300x300mm concrete columns complete with iron mongery (use 50mmx25mmx6mm SHS with 38mmx25mmx6mm vertical members). Provide for epoxy primer paint with 2 coats of final gloss paint	Nr	1		
5.2	Provide, cut and place 10mm square twisted steel rebars in gate columns and 600mmx600mm footing	Kg	20		
5.3	Ditto 8mm twisted steel rebars as stirrups in column @150mm	Kg	14		
5.4	<b>Mass concrete class C20/25 in:</b>				
5.5	Concrete to poles	CM	4		
5.6	300mmx300mm Gate columns	CM	0.5		
5.7	<b>Formwork to;</b>				
5.8	Column edges over 150mm but not exceeding 300 mm girth	SM	7		
5.9	<b>Finishes</b>				
5.10	25mm thick cement: sand (1:4) screed to surfaces with 12mm thick lime steel trowelled smooth finish on columns	SM	7		
5.11	Gloss painting to columns- code provided by Engineer	SM	6		
5.12	<b>PIT latrine</b>				
5.13	Supply all the materials and construct 2.4m x2m by 3 m deep pit latrine	No.	1		
<b>TOTAL FOR FENCE TO GRAND SUMMARY</b>					

**LOT 2C: SUMMARY DALU WATERPAN WITH A VOLUME OF 28,080 m<sup>3</sup>**

<b>Bill Description</b>	<b>Bill No</b>	<b>BILL TOTAL BROUGHT FORWARD (KES)</b>
PRELIMINARIES & GENERAL REQUIREMENTS	Bill No. 1	
EARTH WORKS AND TAKE OFF	Bill No. 2	
WATER TROUGH	Bill No. 3	
FENCING & GATE	Bill No. 4 & 5	
<b>GRAND TOTAL</b>		

**LOT 2D: INSTALLATION OF PREPAID WATER DISPENSERS & HARDWARE ACCESSORIES TO 5NO. WATER KIOSKS (WATER DISPENSING HUB WITH 3 TAPS OF 25MM DIA; APPROXIMATE DISPENSING VOLUME PER TAP 28 LITRE/MINUTE AT 0.5 BAR, CONNECTED ON SOLAR OR WITH SHOP HUB; TO GIVE ATLEAST 5 YEARS WARRANTYIN TANA RIVER COUNTY**

<b>WATER DISPENSING UNITS 5No.</b>					
<b>S/No</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATES (KES)</b>	<b>AMOUNT (KES)</b>
1	<b>BILL NO. 1: Preliminary and General Items</b>				
1.2	Provide, erect and maintain a standard signboard (4ft by 6ft) made of heavy gauge material and supported by two 6ft high metallic tubes gauge 16 at Kelokelo-3No, Emmaus-1No, Vibao viwili-1No as directed by project manager	9	Items		
1.3	Provisional sum for Project supervision and inspection of works	1	PS		
1.4	Allow for Provisional Sum for training and capacity development	3	PS		
1.6	Allow Provisional sum to cover contractors' profits, overheads, and taxes for items 1.3 and 1.4	15%	%		
<b>Sub Total Bill No. 1 carried to summary sheet</b>					

S/No	DESCRIPTION	QTY	UNITS	RATES (KES)	AMOUNT (KES)
1	<b>BILL NO.1: Prepaid Water Dispensers (ALL PROVISIONAL)</b>				
1.1	Water dispensing Hub with 3 taps, 1 inch. Minimum dispensing volume: 1 liter. Max dispenses per minute per tap at 0.5 bar: 28 litre/minute	5	sum		
1.2	Solar panel + charge controller + battery for water meter	5	Sum		
1.3	External puck antenna, 6-meter cable	5	Sum		
1.4	Vendor tokens	5			
1.5	Metal casing for battery and charge controller only	5			
1.6	Transport, accommodation, materials, installation, training (2 hours management, 4 hours technical staff).	2	LS		
1.7	Mobile payment package registration	1	LS		
1.8	Susteq dashboard package registration	1	LS		
1.9	Susteq dashboard professional, for 5 years	5	No		
2	Mobile payment, for 5 years	5	No		
2.1	Tops up data on sim cards on behalf of client - for 5 years	5	No		
	<b>Sub Total Bill No. 2 carried to summary sheet</b>				
	16% VAT	16%	%		
	<b>GRAND TOTAL carried to summary sheet</b>				

S/No	DESCRIPTION	TOTAL (KES)
<b>SUMMARY OF BILLS LOT 2D</b>		
1	BILL 1: Preliminary and General	
2	BILL 2: ATM Installation	
	<b>GRAND TOTAL</b>	

**LOT 1B: CONSTRUCTION OF HARORESA FLOOD DIVERSION WORKS IN TANA RIVER COUNTY (RE-ADVERTISED)**

**PROJECT 1B: BILL OF QUANTITIES FOR CONSTRUCTION OF HARORESA FLOOD DIVERSION WORKS**

<b>Bill No.1 - Preliminaries &amp; General Requirements-Haroresa Flood Diversion</b>					
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE (KES)</b>	<b>AMOUNT (KES)</b>
	<b>Contractual Requirements</b>				
1.1	Mobilize and demobilize Plant and equipment including personnel to the site including setting up camp.	LS	1		
1.2	Provisional sum for Project supervision and inspection of works	PS	1		
1.3	Allow for Provisional Sum for training and capacity development	PS	1		
1.4	Allow for Provisional Sum for establishing a functional Water user group	PS	1		
1.5	Allow for a provisional sum for Environmental Impact Assessment	PS	1		
1.6	Allow Provisional sum to cover contractors' profits, overheads and taxes for items 1.3 ,1.4, 1.5 and 1.6	0.15	%		
1.6	<b>Project Sign board</b>				
1.7	Provide, fix and maintain project sign board per drawing (including any payments to local authorities) through to end of defects liability period of contract	nr	2		
<b>PAGE TOTAL CARRIED OVER TO GRAND SUMMARY</b>					

<b>BILL NO 2: CROSS CULVERT</b>					
<b>S/No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate (KES)</b>	<b>Amount (KES)</b>
2.1	Excavate in soft material for Ditch/Mitre drain /catch water drain	M <sup>3</sup>	100		
2.2	Provide approved compacted backfill material for culvert as directed by engineer	M <sup>3</sup>	90.0		
2.3	Provide and place 200mm thick approved Stone Pitching/Side protection material as directed by engineer	M <sup>2</sup>	100.0		
2.4	Excavation in soft material for pipe culverts, headwalls, wingwalls, apron, toe walls and drop inlets and compact as specified or as directed by the Engineer	M <sup>3</sup>	8.5		
2.5	Excavation in hard material for pipe culverts, headwalls, wingwalls, apron, toe walls and drop inlets and compact as specified or as directed by the Engineer	M <sup>3</sup>	4.0		
2.6	Provide and place class 15/20 concrete to beds	M <sup>3</sup>	4.3		
2.7	Provide and place class 25/20 concrete to headwalls, wing walls, aprons, surrounds to walls, inlets and outlets to pipe culverts including formwork	M <sup>3</sup>	1.6		
2.8	Provide, lay and joint 600mm dia. concrete pipes (TWIN) (precast to BS 5911 Parts 1 & 3) as directed by engineer	M	14		
2.10	Provide A193 Fabric Mesh Reinforcement to B.S. 4483 to be placed as shown in the drawing	M <sup>2</sup>	19.82		
	<b>Carried to summary</b>				

<b>BILL OF QUANTITIES FOR CONSTRUCTION OF HARORESA STORM WATER CHANNEL</b>					
<b>BILL NO.3 –Storm water Side drain</b>					
<b>S/NO.</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate (KES)</b>	<b>Amount (KES)</b>
3.1	<b>Inlet Channel</b>				
3.2	Clear site off all trees (less than 500 mm diameter), bushes, shrubs including stubs removal, girth, and carting away	M <sup>2</sup>	1,200.00		
3.3	Excavate oversite (300m by 2.5m) average 200mm deep to remove vegetable soil, load, wheel, and cart away.	M <sup>3</sup>	180.00		
3.4	Excavate, stockpile, haul and spread the selected suitable material for embankment/inlet channel formation from the stripped area to a depth not exceeding 1.5m deep to form an embankment/inlet channel as directed by the engineer (maintaining a berm of 0.5-1m away from the upstream embankment)	M <sup>3</sup>	850.00		
3.5	Ditto but in hard materials	M <sup>3</sup>	50.00		
3.6	<b>Inlet channel protection</b>				
3.7	Provide all materials, mix, place and stone pitching and as directed by project Engineer on the surface of inlet channel max 100m from the road cross culvert	M <sup>3</sup>	500.00		
3.8	<b>Roadside drains and inlet channel protection</b>				
3.9	Excavation of side drain measuring 50 m long not exceeding 1.5 m wide, and not exceeding 1.0m deep from road surface as directed by the Engineer	M <sup>3</sup>	75.00		
3.10	Provide all materials, mix, place and stone pitching and as directed by project Engineer on the surface of inlet channel max 100m from the road cross culvert	M <sup>3</sup>	75.00		
<b>TOTAL BILL NO.3 CARRIED OVER TO GRAND SUMMARY</b>					

<b>Bill Description</b>	<b>Bill No</b>	<b>BILL TOTAL BROUGHT FORWARD (KES)</b>
PRELIMINARIES & GENERAL REQUIREMENTS	Bill No. 1	
Cross Culvert	Bill No. 2	
Storm water Road Side drain	Bill No. 3	
<b>GRAND TOTAL</b>		



**BIDDER'S COMMENTS/REMARKS:**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

**BIDDER'S TERMS AND CONDITIONS:**

1. Valid of the offer: \_\_\_\_\_ (recommended: 3 months or more)
2. Terms of delivery: \_\_\_\_\_ (Tana River County)
3. Terms of payment: \_\_\_\_\_

**DELIVERY CONDITIONS GUARANTEED BY THE BIDDER:**

..... Days for 100% of the items

\_\_\_\_\_  
**Name of Bidder's Authorized Representative:**

\_\_\_\_\_  
**Authorized signature and stamp:**

\_\_\_\_\_  
**Date:**