



Federal Republic of Somalia
Ministry of Energy and Water Resources

Tender Announcement

**Request for Proposals for the Rehabilitation of Existing
Boreholes and Development**

Ministry of Energy and Water Resources - FGS

Tender Reference No: MOW/RFP/0001/4/2024

The Ministry of Water, Somalia, hereby invites qualified drilling contractors registered in Somalia to submit proposals for the rehabilitation and development of boreholes in the regions of Hiran, Lower Shabelle, Middle Shabelle and Sool.

The objective of this tender is to facilitate the provision of safe and sustainable drinking water supplies to communities in these regions.

Key Dates:

Date Issued: 4th April 2024

Closing date and time: 23 April 2024, 04:00 Pm

Bid Validity Period: 20 days

Contact Information:

E-MAIL ADDRESS: procurement@moewr.gov.so

CC: dg@moewr.gov.so

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MOEWR SPECIAL TERMS AND CONDITIONS

1. PROCEDURES AND RULES

1.1. Organizational Background

The Ministry of Energy and Water Resources was established in 2014 with overall responsibility of two sectors namely: Water Resources and Energy exploration, development, and distribution on an equitable basis to the Somali society.

1.2. Purpose of the Tender

The purpose of this tender is to invite proposals from experienced drilling contractors for the rehabilitation and development of five boreholes situated in various regions, namely Hiran, Middle Shabelle, Lower Shabelle and Sool.

The main objective is to enhance access to safe drinking water in these communities by equipping the boreholes with necessary infrastructure components.

Interested contractors are expected to equip the boreholes with a diverse array of essential infrastructure components. These include:

- ✓ Rehabilitation of boreholes, encompassing equipping and installation
- ✓ Installation of an Elevated Water Tank with a capacity of 50 cubic meters
- ✓ Establishment of a Water Kiosk
- ✓ Provision of Animal Troughs, catering to both camels and sheep/goats
- ✓ Construction of a Generator Room
- ✓ Establishment of a Caretaker Room
- ✓ Installation of a Fence and Gate

Participation in this tender is limited to drilling contractors possessing extensive experience and valid legal registration in Somalia, coupled with the requisite licenses and permissions for conducting drilling operations.

1.3. RFPS and Desirable Contract Implementation Schedule

The Ministry of Water has established a schedule for the tendering process and outlined targeted dates for the execution of this Request for Proposals (RFP). It is imperative to adhere to these dates to ensure the smooth progression of the procurement process. The schedule is as follows:

- ✓ Deadline for requesting clarifications or further information on the RFP: **Thursday, April 18, 2024**
- ✓ Closing date for proposal (RFP) submission: **Monday, April 23, 2024, at 4:00 pm.**

1.4. RFPS Clarification Policy

All inquiries or requests for clarification regarding this Request for Proposals (RFPS) must be formally submitted in writing to the Ministry of Water, located at the former Mogadishu Water Agency building in KM5, Afgoye Road, Wadajir District. Alternatively, inquiries can be sent via email to procurement@moewr.gov.so It is essential to include the RFPS reference number in

the subject line of the email. Additionally, a copy of the request for information should be forwarded to dg@moewr.gov.so

Please note that if a question is of common interest, the response will be shared with all potential RFPS institutions and contractors.

All requests for additional information or clarifications must reach the Ministry of Water no later than Thursday, April 18, 2024. Any inquiries received after this date will not be considered.

Bidders are strongly advised to thoroughly review all instructions related to the tender. Failure to do so may result in the bidder's own risk and disadvantage

1.5. RFPS Response Format

The response to this Request for Proposals (RFPS) must adhere strictly to the instructions outlined in the RFPS document. Proposals submitted in any other format will be deemed invalid. Full proposals must be received no later than **Monday, April 23, 2024, at 04:00 PM**.

Submissions that deviate from the prescribed format in the RFPS, fail to maintain required confidentiality, or are received after the specified deadline will be rejected. Any delays in mail delivery are the sole responsibility of the bidder.

All references to supporting materials should be included within the appropriate response sections, with the actual documents provided as annexes to the RFPS response. Additionally, bidders must ensure that their responses address each aspect of the Proposal Evaluation Criteria outlined in the RFPS document to facilitate fair assessment by the evaluation team.

1.6. Bidder's Response

1.6.1. Formal Submission Requirements

Bidders are required to adhere strictly to the formal submission requirements detailed in this Request for Proposal for Services. This includes compliance with specified forms and deadlines for submission, ensuring that no price information is included in the technical proposal, and other relevant guidelines.

1.6.2. Response Contents

The RFPS form, once completed, must be signed and dated. It should be submitted alongside the response in hard copy format; email submissions will not be accepted. For those bringing a hard copy at the Ministry office, Responses must be submitted in triplicate, with each copy signed and dated.

The response package should be enclosed in an outer envelope, with two inner envelopes contained within. The first inner envelope, marked "Technical Proposal," should contain all necessary documentation. The second inner envelope, marked "Financial Proposal".

Sealed proposals received before the specified closing time and date will remain unopened until the bid opening committee's designated time. No proposals received after this time will be considered.

1.6.3. Mandatory Criteria

All mandatory criteria stipulated in this Request for Proposal for Services and Terms of Reference must be thoroughly addressed and fulfilled in the bidder's response.

1.6.4. Technical Proposal

The Technical Proposal should comprehensively cover all aspects delineated in this RFPS, with meticulous attention to the scope of work, technical specifications, and evaluation criteria. The Terms of Reference encompass the following key areas:

- ✓ Project Background
- ✓ Description of the Assignment
- ✓ Deliverables
- ✓ Reporting Requirements
- ✓ Location and Duration
- ✓ Evaluation Process and Methods
- ✓ Project Management
- ✓ Payment
- ✓ Annex – Technical Specifications

Technical Proposals must be exhaustive and include all pertinent supporting documentation to enable the RFPS Evaluation Team to thoroughly assess and evaluate the proposal. It is crucial that no financial information is included in the technical proposal.

1.6.5. Financial Proposal

The Financial Proposal should encompass the costs associated with all services to be provided, while duly considering the Evaluation Criteria. The proposal's currency must be in USD, and the price is non-negotiable, remaining unaffected by price or currency fluctuations.

The Bill of Quantities (Annex A) serves as the foundation of the Financial Proposal and must be appropriately priced. Contractors are expected to adhere to the payment schedule provided in the Terms of Reference.

1.6.6. Bill of Quantities (BoQs)

The Bill of Quantities (Annex A) presents a structured format for bidders to outline the prices for various items. Bidders are urged to thoroughly review the Technical Specifications and other relevant sections of the bid documents to grasp the full scope of requirements encompassed within each item before filling in the rates and prices in the Bill of Quantities.

Rates and prices specified in the Bill of Quantities should encompass all aspects of the works, ensuring their completion in all respects. Bidders must account for all requirements and obligations, explicit or implicit in all parts of the contract, including incidental and contingent

expenses and risks associated with the proper execution of the works. No additional payment claims will be entertained due to errors or misunderstandings in this regard.

The rates and prices entered in the Bill of Quantities should be deemed to cover the entire scope of works, encompassing overheads and profit. Should bidders encounter any ambiguity or uncertainty regarding the scope of any item, they are encouraged to seek clarification before submitting their bid.

2. Terms of Reference (TOR)

The Ministry of Water is currently undertaking the Rehabilitation Boreholes intervention with support from UNICEF to address the critical need for improved water infrastructure in Somalia.

2.1. Objective

The primary objective of this assignment is to improve access to safe and adequate water supply services in Somalia by rehabilitating selected boreholes in targeted regions.

2.2. Scope of Work

Qualified contractors are expected to undertake the rehabilitation and equipping of boreholes in the specified regions. The scope of work includes but is not limited to the following:

- ✓ Rehabilitation of boreholes, including equipping and installation
- ✓ Installation of an Elevated Water Tank with a capacity of 50 cubic meters
- ✓ Establishment of a Water Kiosk
- ✓ Provision of Animal Troughs for camels and sheep/goats
- ✓ Construction of a Generator Room
- ✓ Establishment of a Caretaker Room
- ✓ Installation of a Fence and Gate
- ✓ General Instructions to Bidders

The assignment is divided into **four (4) lots**, each focusing on the rehabilitation and equipping of water boreholes in specific geographical locations. The works to be carried out in each location include:

Lot (1): Rehabilitation & Equipping of Water Borehole in Tardo-Hiran Region

Lot (2): Rehabilitation and Equipping of Water Borehole in Runirgod - Middle Shabelle Region

Lot (3): Rehabilitation and Equipping of Water Borehole in Tukaraq - Sool Region

Lot (4): Rehabilitation and Equipping of Water Borehole in Hawo Tako – Afgoye - Lower Shabelle Region

Lot	Site Name	District	Region	Longitude	Latitude
1	Tardo	Jalalaqsi	Hiran	3.565264	45.967048
2	Daarunimca	Ruunirgood	M. Shabelle	3.643941	46.487812
3	Tukaraq	Laas Anod	Sool	8.54	47.79
4	Hawa Tako	Afgoye	L. Shabelle	2.12877	45.11872

Bidders are invited to submit bids for any combination of lots. Each lot will be evaluated separately, and contracts awarded accordingly.

3. Instructions to Bidders

3.1. Marking and Returning Offers

- 3.1.1. Offers shall be submitted as indicated on the cover page of this document.
- 3.1.2. The Bid Form must be signed by the duly authorized representative of the submitting company and submitted together with the offer.
- 3.1.3. Proposers should note that offers will be invalidated if:
 - a) Submitted without the Bid number.
 - b) Sent to an incorrect address not prescribed in the Bid documents.
 - c) Presented in a different form than prescribed in the Bid documents.
 - d) Received after the stipulated closing time and date.

3.2. Sealed Offers

- 3.2.1. Sealed Offers must be securely enclosed in an appropriate envelope, clearly MARKED on the outside with the BID NUMBER, and dispatched to the MOEWR office no later than the indicated CLOSING TIME AND DATE.
- 3.2.2. Technical and Financial Offers must be sent in separate envelopes, each clearly indicating the BID NUMBER, COMPANY NAME, and either "Technical offer" or "Financial offer."
- 3.2.3. The Technical and Financial offers must be delivered in three (3) copies each, unless otherwise specified in the Specific Terms and Conditions.
- 3.2.4. The Bid Form must be signed and submitted together with the offer by the duly authorized representative of the submitting company.

3.3. Request for Information

- 3.3.1. Any requests for information regarding the specifications should be directed to the Contracting Officer indicated in this Bid document, and NOT to the Bid Section.
- 3.3.2. Inquiries received less than seven (7) calendar days prior to the Proposal closing date may not receive a response. Only written inquiries will be entertained.

3.4. Error in offers

- 3.4.1. Proposers are required to carefully examine all requirements and instructions pertaining to the work or Bid. Failure to do so will be at Proposers' own risk.

3.5. Corrections

- 3.5.1. Erasures or other corrections in the offer must be explained with the signature of the Proposer shown alongside.

3.6.Modification and Withdrawal

- 3.6.1. All changes to an offer must be received before the closing time and date. Modifications must clearly indicate that they supersede the earlier offer or state the changes from the original offer.
- 3.6.2. Offers may be withdrawn via emailed, faxed, or written request from Proposers before the closing time and date. Negligence on the part of the Proposer does not confer the right for withdrawal after the offer has been opened.

3.7.Validity of Offers

- 3.7.1. Offers should remain valid for a period of 20 days from the date of submission.

3.8.Currency

- 3.8.1. All costs should be stated in USD.

3.9.Content of Tenders

- Completed ‘Tenderers Relevant Experience Form’ & Evidence
- Certificate of incorporation
- Company registration with relevant insurance regulatory authorities
- Operation license
- Tax clearance certificate.
- Financial statement
- Details of facilities in Somalia
- Company Profile
- Copy of standard contract

3.10. Language of Offers

- 3.10.1. All bids should be submitted in English.

3.11. Bid Document Terms

- 3.11.1. The bid documents, along with any Proposal thereto, shall be considered the property of MOEWR and will not be returned to their originators. By submitting the offer, the Proposer agrees to accept the decision of MOEWR regarding whether the offer meets the minimum requirements stated in the bid documents and the evaluation. Information provided in the offer will be treated as confidential unless otherwise noted by the Proposer.

3.12. Bid Invitation

3.12.1. Qualified contractors with experience in borehole rehabilitation are invited to submit proposals for the rehabilitation of the selected boreholes. The Ministry of Water will evaluate proposals based on technical expertise, proposed methodology, budget considerations, and compliance with regulatory requirements.

Annex 1: Request for Proposal for Services Form

This form must be completed, signed and returned to MOEWR.

Proposal must be made in accordance with the instructions contained in this request for proposal for services (RFPS).

Terms and conditions of Contract

Any contract resulting from this RFPS shall contain MOEWR General terms and condition for Somali Public procurement and any other specific terms and conditions detailed in RFPS.

Information

Any request for information regarding this RFPS must be forwarded by email to the person who prepared this document, with specific reference to the RFPS number.

The undersigned, having read the terms and conditions of **RFPS No:**

Set out in the attached document, hereby offers to execute the services specified in this document.

Name: _____

Title: _____

Company Name: _____

Tel: _____

Email: _____

Validity of the Proposal: _____


Currency of the Proposal: _____

Signature: _____

Date: _____

Annex 2: Bill of Quantities (BoQs)

LOT (1): TARDO BH

BoQ FOR REHABILITATION OF BOREHOLE & WATER FACILITIES					
	Source Name:	TARDO BH		 Ministry of Energy and Water Resource	
	Settlement Distance:	Tardo			
	Borehole Depth:	110 m			
	Water Static Level:	70 m			
	Pump setting	60m			
	Status:	REHAB			
	GPS:	3.565264, 45.967048			
	Location:	HIRAN			
	HHS:	1,000			
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (usd)	AMOUNT (usd)
A	BOREHOLE EQUIPING AND INSTALLATION				
1.1	Supply and Install stainless steel of submersible pump 11 HP of Grundfos SQ series, with all necessary fittings.	PCs	1.0		
1.2	Supply and installation of rising main GI pipe 2" with all necessary fittings	PCs Bergo	24.0		
1.3	Supply and Install Control Panel and Water Meter	PCs	1.0		
1.4	4.0mm ² x 16 Duel Core For Submersible Cable	m	200.0		
1.5	supply and installation of New Generator Set 30 KVA DOS with one fuel drum	Pcs	1.0		
1.6	Supply and ininstall 2" UPVC pipe high pressure with all necessary fittings conecting from the borehole to the elevated water tank, Water kiosks and animal troughs	PCs Bergo	35.0		
	Total Cost of Borehole Equipping and Installation				
B	CONSTRUCTION OF ELEVATED WATER TANK (50 METER CUBIC)				
A	Excavation				
	<u>Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials by bailing, pumping or otherwise</u>				

I	Prepare site by stripping top 150 mm of soil to remove all debris including sand (if any) from site and carting away spoil	m ²	81		
2	Excavate trench commencing at reduced levels depth not exceeding 1.8m deep	M ³	32.4		
3	Extra-over for excavation in rock (optional)	M ³	6.48		
4	Remove surplus excavated material from site	M ³	4.86		
5	Backfill around foundation	M ³	8.64		
B	Filling				
	300 mm thick approved hardcore filling spread, well rammed and compacted in 150mm layers	M ³	24.3		
C	Concrete Work				
	<u>Mass Concrete class 15 (1:3:6) with 20mm thick maximum aggregate size in</u>				
I	50mm Thick blinding	M ³	4.05		
	<u>Vibrated Reinforced Concrete class 25 (1:1.5:3) with 20mm thick maximum aggregate size in</u>				
2	Footings(180cm*180cm*70cm height)	M ³	13.6		
4	Ground beam(40cm width, 30cm height)	m ³	6.5		
5	Columns(40cm*40cm)	m ³	10.08		
6	two tie beams(30cm width, 30cm height)	m ³	6.5		
7	final beams(30cm width, 30cm height)	m ³	3.2		
D	<u>Vibrated Reinforced Concrete class 30 (1:1:2) with 20mm thick maximum aggregate size in</u>				
I	200mm thick walls	m ²	23.472		
2	200mm thick base slab	m ³	16.2		
3	200mm thick cover slab	m ³	16.2		
E	Reinforcement				

I	Reinforcement bars				
2	slabs T10-200mmc/c Top and bottum and T8-200mmc/c distrabution bars	kg	1900		
3	Beams 2T12B at all spans 2T12T at all spans / T8-200mmc/c straps	kg	440		
4	Colums 6T16 at all columns /T8-200mmc/c straps	kg	5100		
5	footings 12T12T-150mmc/c and 12T12-150mmc/c	kg	177		
F	Swan Formwork				
1	Formwork to sides of base slab girth over 150mm but not exceeding 225mm	m	17		
2	Formwork to sides of cover slab girth over 150mm but not exceeding 225mm	m	17		
3	Formwork to sides and soffittes of beams	m ²	86		
4	Formwork to soffittes of base slab	m ²	81		
5	Formwork to soffittes of cover slab	m ²	81		
6	Formwork to sides of wall	m ²	259.2		
G	Finishes				
1	<u>Cement and sand mortar (1:3) rendering in:</u>				
2	25 mm Thick screed to base slab with waterproof cement	m ²	19		
3	15mm internal plaster to cover slab with waterproof cement	m ²	19		
4	15mm plaster to internal sides of wall with waterproof cement	m ²	46		
5	12mm plaster to external sides of wall	m ²	49		
6	12mm plaster to cover slab	m ²	22		
7	12mm plaster to soffits of base slab	m ²	19		
8	12mm plaster to beams	m ²	75		
9	25x25mm Bondex sealing compound	m	16		
H	Water Supply System				
I	<u>Galvanized Mild Steel pipes class "B" medium thickness with and including jointing, fittings and fixe as described</u>	m ³			

2	50mm diameter inlet pipe 800mm long	No	1		
3	50mm diameter draw off pipe Ditto	No	1		
4	50mm diameter overflow pipe Ditto	No	1		
5	75mm diameter scour pipe Ditto	No	1		
6	20mm diameter brass gate valve with wheel and head	No	1		
5	20mm diameter stop corks	No	1		
7	600x600x6mm heavy gauge steel primed metal manhole cover on slab with and including metal framing all around	No	1		
8	20mm Diameter bars, 'U' shaped to form steps with ends embedded into retaining wall, average length 450mm	No	18		
	Total Cost of 50 meter cubic Elevated Water Tank				
C	CONSTRUCTION OF WATER KIOSKS				
1	Excavation				
1.1	Site clearance: leveling and clear unnecessary materials	M ²	5.95		
1.2	Excavation foundation trench and level (2.22m x 2.68 x0.3)	M ²	1.78		
1.3	Mass concrete of 50mm thick blinding layer (1:2:4 mix) under the foundation wall 2.22m x 2.68 x0.05)	M ²	0.30		
1.4	250mm hardcore filling and well compacting for slab area(2.22mx2.68m)	M ²	1.49		
1.5	RC concrete (1:2:4 mix) in conc. floor slab 10 cm thick(2.22mx2.68mx0.1m)	M ²	0.59		
1.6	20cm thick masonry walling in cement & sand mortar 1:3 mix	M ²	1.06		
1.7	Cast 20cm Mass concrete 1:3:6 mix design of the area (1.58x0.2x0.1m)	M ²	0.03		
1.8	External & internal plastering ,12 mm thick, cement and sand mix 1:4, with wood float finish.	M ²	7		
1.9	Apply two coats of white wash	M ²	7		
1.1	30 mm thick 1:3 cement/sand floor screed	Bags	3		
1.11	2x3 timber wood for roofing	No	2		
1.12	32G Corrugated Iron sheet	No	3		
1.11	GI pipes for water Kiosk 1"	Pcs	1		
	Fittings on the kiosk				

1.12	GI Reducer 2" -1"	Pcs	2		
1.13	90 ⁰ GI Elbow 1"	Pcs	2		
1.14	1" GI Double Tee	Pcs	2		
1.15	1" GI Single Tee	Pcs	1		
1.16	Reducer socket 1"-3/4"	Pcs	6		
1.17	Nipple GI	Pcs	6		
1.18	Branch pipes, 3/4", galvanised (long pipe 300mm threaded on both sides)	Pcs	6		
1.19	3/4" taps	Pcs	6		
1.2	Pit excavation commencing at reduced levels depth not exceeding 1.5m deep.	LS	1		
	Soakway pit				
1.21	Excavation of soak-away pit and trenches,	m ³	2		
1.22	supply and fill 15mm filtration Stones in the pit and cement on top	m ³	2		
1.23	Construction of 150mm concrete cover	m ³	0.2		
	Gate valve chamber				
1.24	Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials by bailing, pumping or otherwise				
1.25	Remove surplus excavated material from site	m ³	0.1		
1.26	Backfill around foundation	m ³	0.1		
1.27	Mark the well with UNICEF and MoEWR Logo on wet Plaster	LS	1		
	Total Cost of Water Kiosk				
D	CONSTRUCTION OF ANIMAL TROUGH (CAMEL,4.1m*1.6m*0.75m)				
1	Site clearance: leveling and clear unnecessary materials	m ²	40		
2	Excavation foundation trench and level (11m x 0.4m x 0.2m)	m ³	0.88		
3	Mass concrete of 50mm thick blinding layer (1:2:4 mix) under the foundation wall (4.5m x 2.2m x0.05)	m ³	0.5		
4	RC foundation construction (11m x 0.5m x 0.3m) Class M20	m ³	1.65		
6	Laying of hardcore bed (4.1m x 1.6m x 0.20m)	m ³	1.31		
7	Laying 100mm RC floor reinforced with m.s D8mm mesh @ 200mm centre both ways (4.1 m x 1.6m x 0.1m)	m ³	0.66		
8	Construction of trough walls (11m x 0.4m x 0.2m)	m ²	5		

10	Render the internal walls 12mm wood float cement plaster with cement slurry finish on top true to plumb	m ²	8.8		
11	laying 40mm new cement screed on trough floor with cement slurry finish on top gently sloping towards the cleaning pipe hole	m ²	1.8		
12	render the external face of the enclosing wall 12mm wood float cement plaster true to plumb	m ²	9.4		
13	paint the external walls two coats of a mix of good lime and white glue	m ²	9.4		
14	Galvanized mild steel pipes class "B" medium thickness with and including jointing fittings and fixed as described	No	3		
15	50mm diameter inlet pipe chased through masonry wall 300 mm long with and including stop cork	No	3		
16	32mm diameter PVC draw off pipe 300mm long with and including gate valve	No	3		
	Total Cost of Animal Trough (Camel)				
E	CONSTRUCTION OF ANIMAL TROUGH (SHEEP/GOAT, 4.1m*1.6m*0.45m)				
1	Site clearance: leveling and clear unnecessary materials	m ²	40		
2	Excavation foundation trench and level (11m x 0.4m x 0.2m)	m ³	0.88		
3	Mass concrete of 50mm thick blinding layer (1:2:4 mix) under the foundation wall (4.5m x 2.2m x 0.05)	m ³	0.5		
4	RC foundation construction (11m x 0.5m x 0.3m)	m ³	1.65		
5	Construction of RC foundation ring beams (11m x 0.2m x 0.1)	m ³	0.24		
6	Laying of hardcore bed (4.1m x 1.6m x 0.20m)	m ³	1.31		

7	Laying 100mm RC floor reinforced with m.s D8mm mesh @ 200mm centre both ways (4.1 m x 1.6m x 0.1m)	m ³	0.66		
8	Construction of trough walls (11m x 1m x 0.2m)	m ²	11		
9	Construction of 100mm R.C ring beam over the constructed walls (11m x 0.2m x 0.1m)	m ³	0.56		
10	Render the internal walls 12mm wood float cement plaster with cement slurry finish on top true to plumb	m ²	8.8		
11	laying 40mm new cement screed on trough floor with cement slurry finish on top gently sloping towards the cleaning pipe hole	m ²	1.8		
12	render the external face of the enclosing wall 12mm wood float cement plaster true to plumb	m ²	9.4		
13	paint the external walls two coats of a mix of good lime and wite glue	m ²	9.4		
14	Galvanized mild steel pipes class "B" medium thickness with and including jointing fittings and fixed as described	No	3		
15	50mm diameter inlet pipe chased through masonry wall 300 mm long with and including stop cork	No	3		
16	32mm diameter PVC draw off pipe 300mm long with and including gate valve	No	3		
	Total Cost of Animal Trough (Sheep/Goat)				
F	CONSTRUCTION OF CARETAKER ROOM (4m*4m)				
A	SUBSTRUCTURE				
I	Excavation				
2	Excavate for strip footing not exceeding 1.0 metres deep, starting	m ³	6.4		

	from stripped levels(not exceeding 400mm width)				
3	Over 50cm thick well compacted hardcore filling blinded with 50mm thick quarry dust or sand layer to receive surface bed	m ³	8		
4	Chemical anti-termite treatment executed complete by an approved specialist under a ten-year guarantee, to surface of hard-core	m ²	16		
5	1000 gauge polythene or other equal and approved damp proof membrane laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps)	m ²	16		
B	Concrete Work				
1	<u>Reinforced Concrete class 20</u>				
2	Reinforced concrete class 20 as described in (with a 28-day 150mm cube crushing strength of 30MPa), cast into formworks and vibrated around rod reinforcement bars)				
3	Plinth beam(200mm high)	m ³	0.6		
4	Selected and approved rubble stone walling bedded jointed and pointed in cement and sand (1:3) mortar.				
5	400mm thick walling(1200mm high)	m ³	7.7		
C	Walling				
1	Approved hollow concrete block walls or other equal and approved; bedded and jointed in (1:3) cement and sand mortar				
2	200mm thick walling externally(3m high)	m ²	48		
3	Reinforced concrete in class C-20 (with a 28-day 150mm cube crushing strength of 20MPa), cast into formworks and vibrated around rod reinforcement bars				
4	columns,Intermediate and final beams	m ³	0.6		

D	Finishes				
I	Plastering				
2	20mm thick cement/sand (1:5) plaster as described to:				
3	External and internal Walls	m ²	48		
4	Painting				
5	Prepare the surface and apply two coats of plastic emulsion paint of chosen type and color to :				
6	Plastered walls(external and internal walls)	m ²	48		
7	provide 600*600*8mm thick approved ceramic floor tiles to regular bedding and joining to match with adhesive	m ²	16		
F	Doors and Windows				
I	purpose made steel casement double door, manufactured from standard sections, finished with pressed steel horizontal louvers and complete with all necessary ironmongery, overall size of 2000*2100mm high	Item	1		
2	provide metal grill window with wire mesh overall size of 1500mm*1200mm high	Item	2		
G	Roofing				
I	Supply and fix complete roof structure of the ward regarding following specifications; a: providing and fixing roof framing in trusses b: providing and fixing G-28 galvanized roof sheet, the job shall include all the necessary materials to complete the roof structure	m ²	16		
2	provide ceilings 50*50mm soft wood bandering	m ²	16		
H	Provisional Items				
I	Electric works	Item	1		
	Total cost of Caretaker room				

F CONSTRUCTION OF Gerator ROOM					
A	SUBSTRUCTURE				
I	Excavation				
2	Excavate for strip footing not exceeding 1.0 metres deep, starting from stripped levels(not exceeding 400mm width)	m ³	6.4		
3	Over 50cm thick well compacted hardcore filling blinded with 50mm thick quarry dust or sand layer to receive surface bed	m ³	8		
4	Chemical anti-termite treatment executed complete by an approved specialist under a ten-year guarantee, to surface of hard-core	m ²	16		
5	1000 gauge polythene or other equal and approved damp proof membrane laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps)	m ²	16		
B	Concrete Work				
I	<u>Reinforced Concrete class 25</u>				
3	Plinth beam(200mm high)	m ³	0.64		
C	Walling				
I	Approved hollow concrete block walls or other equal and approved; bedded and jointed in (1:3) cement and sand mortar				
2	200mm thick walling externally(3m high)	m ²	48		
3	Reinforced concrete in class C-20 (with a 28-day 150mm cube crushing strength of 20MPa), cast into formworks and vibrated around rod reinforcement bars				
4	columns,Intermediate and final beams	m ³	0.64		

D	Finishes				
1	Plastering				
2	20mm thick cement/sand (1:5) plaster as described to:				
3	External and internal Walls	m ²	96		
4	Painting				
5	Prepare the surface and apply two coats of plastic emulsion paint of chosen type and color to :				
6	Plastered walls(external and internal walls)	m ²	112		
E	Doors and Windows				
1	purpose made steel casement double door, manufactured from standard sections, finished with pressed steel horizontal louvers and complete with all necessary ironmongery, overall size of 2000*2100mm high	Item	1		
2	provide metal grill window with wire mesh overall size of 1500mm*1200mm high	Item	1		
F	Roofing				
1	Supply and fix complete roof structure of the ward regarding following specifications; a: providing and fixing roof framing in trussess b: providing and fixing G-28 galvanized roof sheet, the job shall include all the necessary materials to complete the roof structure	m ²	16		
G	Provisional Items				
2	construction of Ramp in tamped to floor finish with 100mm concrete slab with entrance steps	Item	1		
	Total cost of Generator room				
G	FENCE AND GATE FOR THE BOREHOLE				
	GATE				


	The contractor will provide all material and construct a steel gate measuring approximately 4500x2100mm. Given the location and site conditions, the contractor is advised to make a physical assessment of the site before tendering.				
A	Excavate for column pads, depth not exceeding				
	1.5m and of 1.5 x 1.5 m width commencing at the original ground level, and cart away to spoil as directed	m ³	6.75		
	Reinforced Concrete using 3/4 + 1/2" mix machine crushed Ballast in:				
B	Vibrated reinforced concrete (class 25) column base, 350mm deep	m ³	0.7875		
C	Ditto in columns 600x600mm thick, average height of 2.7 m with 1.5 m being the foundation column	m ³	1.944		
D	Assorted high tensile twisted steel reinforcement bars to B.S 4446.	Kg	200		
E	Sawn formwork to vertical sides of the columns	m ²	10		
F	15mm thick cement/Sand plaster to vertical sides of the columns	m ²	10		
G	350x350x25mm thick P.C.C coping stone	No	2		
	Main and pedestrian gates				
H	Supply and fix double leaf steel gate size 4500x 2100mm high with small pedestrian door made from 3mm thick steel plate welded on both sides of the frame. Frame as follows: 75x50x3mm thick RHS external members and 25mm SHS 3mm thick secondary members, fixed onto the concrete columns using heavy duty steel pin hinges; with all fastening accessories including all cutting welding, grinding and priming with one coat of grey oxide before fixing. The gate should also have peep holes of not more than 25mm dia with a sliding door. It should also have 2 locking mechanisms, top and bottom.	No	1		
	FENCE				

	The contractor is reminded to include in his pricing, the cost of supply, cutting, waste and erection and all other necessary fittings including welding lugs or fishtailing onto the 50x50x6mm angle bars. Angle bars and the necessary fixing and anchorage to be treated as described in the specifications.				
A	Clear the perimeter of the fencing area of all bushes scrubs and obstructions	m ²	60		
B	Excavate 300x300x500 deep holes to receive mass concrete (1:3:6) bases as shown in the drawings.	m ³	1.5		
C	Supply 50x5mm CHS welded to form Y-shaped posts with ends closed as shown in the drawings, bottom end fixed with 100x100mmx3mm plate and bedded in mass concrete. The post to be 2500mm high from ground level to the Y-joint. Allow for drilling 7No holes as shown.	No	33		
D	Extra Over 50x5mm posts for bracing on either side every fourth intermediate post and all corner posts.	No	33		
	Mass Concrete Mix 1:3:6/20mm using 3/4 Local Ballast in:				
E	Supply all materials and cast 0.3m diameter x 0.6m depth mass concrete class Q (1:3:6) to concrete the 50mm dia. CHS poles while ensuring they remain plumb 600mm deep below the ground level and 2500mm (2.5m) above ground level.	m ³	1.5		
F	Supply and weld a 12mm high tensile steel rod along the bases of the posts for anchoring the chainlink to the ground along the whole length of the fence.				
G	Allow for excavating 200mm deep along the fence to fix the rod.	m	100		
H	Allow for curing of all concrete works	Item	1		
	Supply and fix 3No strands of 12G barbed wire bound onto either sides of the Y post using 3mm galvanised wire as shown in the drawings.				

I	Ditto for posts	m	14.29		
J	Supply and and fix 2500mm high HEAVY GUAGE 12 chainlink to posts using 3mm galvanised wire. Allow for securing the chainlink to a 12mm reinforcement bar welded at the base between the posts.	m	100		
K	Supply and fix razer wire secured on the chainlink, barbed wire and Y posts by binding wire and rolled approximately 600mm dia.	m	100		
L	Prepare and apply one under coat of epoxy based primer and two finishing epoxy based paints to metal surfaces n.e 250mm in alternate bands of 300mm	No.	66		
Total Cost of Fence and Gate					

GRAND SUMMARY					
A	Total Cost of Borehole Equipping and Installation				
B	Total Cost of Evelated Water Tank 50 meter cubic				
C	Total Cost of Water Kiosk				
	Total Cost of Animal Troughs (Camel)				
D	Total Cost of Animal Troughs (Sheep/Goat)				
E	Total Cost of Generator Room				
F	Total Cost of Caretaker Room				
G	Total Cost of Fence and Gate				
	Total Cost of Borehole Rehibition				
Grand Total					

LOT (2): DARUNIMCA BH

BoQ FOR REHABILITATION BOREHOLE & WATER FACILITIES					
	Source Name:	DARUNIMCA BH		 Ministry of Energy and Water Resource	
	Settlement Distance:	Runirgod			
	Borehole Depth:	290m			
	Water Static Level:	259m			
	Pump setting	156m			
	Status:	REHAB			
	GPS:	3.643941, 46.487812			
	Location:	MIDDLE SHABELLE			
	HHS:	5,000			
IT E M	DESCRIPTION	UNIT	QUANTITY	RATE (usd)	AMOUNT (usd)
A	BOREHOLE EQUIPING AND INSTALLATION				
1.1	Supply and install stainless steel of submersible pump 20HP of Grundfos SP series, with all necessary fittings.	PCs	1.0		
1.2	Supply and installation of rising main GI pipe 2" with all necessary fittings	PCs Bergo	55.0		
1.3	Supply and Install Control Panel and Water Meter	PCs	1.0		
1.4	4.0mm2 x 16 Dual Core for Submersible Cable	m	250.0		
1.5	supply and installation of New Generator Set 45 KVA DOS with one fuel drum	Pcs	1.0		
1.6	Supply and install 2" UPVC pipe high pressure with all necessary fittings connecting from the borehole to the elevated water tank, Water kiosks and animal troughs	PCs Bergo	35.0		
	Total Cost of Borehole Equipping and Installation				
B	CONSTRUCTION OF ELEVATED WATER TANK (50 METER CUBIC)				
A	Excavation				
	Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials by bailing, pumping or otherwise				

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 ²	81		
2	Excavate trench commencing at reduced levels depth not exceeding 1.8m deep	M ³	32.4		
3	Extra-over for excavation in rock (optional)	M ³	6.48		
4	Remove surplus excavated material from site	M ³	4.86		
5	Backfill around foundation	M ³	8.64		
B	Filling				
	300 mm thick approved hardcore filling spread, well rammed and compacted in 150mm layers	M ³	24.3		
C	Concrete Work				
	<u>Mass Concrete class 15 (1:3:6) with 20mm thick maximum aggregate size in</u>				
1	50mm Thick blinding	M ³	4.05		
	<u>Vibrated Reinforced Concrete class 25 (1:1.5:3) with 20mm thick maximum aggregate size in</u>				
2	Footings(180cm*180cm*70cm height)	M ³	13.6		
4	Ground beam(40cm width, 30cm height)	m ³	6.5		
5	Columns(40cm*40cm)	m ³	10.08		
6	two tie beams(30cm width, 30cm height)	m ³	6.5		
7	final beams(30cm width, 30cm height)	m ³	3.2		
D	<u>Vibrated Reinforced Concrete class 30 (1:1:2) with 20mm thick maximum aggregate size in</u>				
1	200mm thick walls	m ²	23.472		
2	200mm thick base slab	m ³	16.2		
3	200mm thick cover slab	m ³	16.2		
E	Reinforcement				
1	Reinforcement Reinforcement bars				
2	slabs T10-200mmc/c Top and bottum and T8-200mmc/c distrabution bars	kg	1900		
3	Beams 2T12B at all spans 2T12T at all spans / T8-200mmc/c straps	kg	440		
4	Colums 6T16 at all columns /T8-200mmc/c straps	kg	5100		
5	footings 12T12T-150mmc/c and 12T12-150mmc/c	kg	177		
F	Swan Formwork				
1	Formwork to sides of base slab girth over 150mm but not exceeding 225mm	m	17		
2	Formwork to sides of cover slab girth over 150mm but not exceeding 225mm	m	17		
3	Formwork to sides and soffittes of beams	m ²	86		
4	Formwork to soffittes of base slab	m ²	81		
5	Formwork to soffittes of cover slab	m ²	81		
6	Formwork to sides of wall	m ²	259.2		

G	Finishes				
1	<u>Cement and sand mortar (1:3) rendering in:</u>				
2	25 mm Thick screed to base slab with waterproof cement	m ²	19		
3	15mm internal plaster to cover slab with waterproof cement	m ²	19		
4	15mm plaster to internal sides of wall with waterproof cement	m ²	46		
5	12mm plaster to external sides of wall	m ²	49		
6	12mm plaster to cover slab	m ²	22		
7	12mm plaster to soffits of base slab	m ²	19		
8	12mm plaster to beams	m ²	75		
9	25x25mm Bondex sealing compound	m	16		
H	Water Supply System				
1	<u>Galvanized Mild Steel pipes class "B" medium thickness with and including jointing, fittings and fixe as described</u>	m ³			
2	50mm diameter inlet pipe 800mm long	No	1		
3	50mm diameter draw off pipe Ditto	No	1		
4	50mm diameter overflow pipe Ditto	No	1		
5	75mm diameter scour pipe Ditto	No	1		
6	20mm diameter brass gate valve with wheel and head	No	1		
5	20mm diameter stop corks	No	1		
7	600x600x6mm heavy gauge steel primed metal manhole cover on slab with and including metal framing all around	No	1		
8	20mm Diameter bars, 'U' shaped to form steps with ends embedded into retaining wall, average length 450mm	No	18		
	Total Cost of 50 meter cubic Elevated Water Tank				\$ -
C	CONSTRUCTION OF WATER KIOKS				
1	Excavation				
1.1	Site clearance: leveling and clear unnecessary materials	M ²	5.95		
1.2	Excavation foundation trench and level (2.22m x 2.68 x0.3)	M ²	1.78		
1.3	Mass concrete of 50mm thick blinding layer (1:2:4 mix) under the foundation wall 2.22m x 2.68 x0.05)	M ²	0.30		
1.4	250mm hardcore filling and well compacting for slab area(2.22mx2.68m)	M ²	1.49		
1.5	RC concrete (1:2:4 mix) in conc. floor slab 10 cm thick(2.22mx2.68mx0.1m)	M ²	0.59		
1.6	20cm thick masonry walling in cement & sand mortar 1;3 mix	M ²	1.06		
1.7	Cast 20cm Mass concrete 1:3:6 mix design of the area (1.58x0.2x0.1m)	M ²	0.03		

1.8	External & internal plastering ,12 mm thick, cement and sand mix 1:4, with wood float finish.	M ²	7		
1.9	Apply two coats of white wash	M ²	7		
1.1	30 mm thick 1:3 cement/sand floor screed	Bags	3		
1.1 1	2x3 timber wood for roofing	No	2		
1.1 2	32G Corrugated Iron sheet	No	3		
1.1 1	GI pipes for water Kiosk 1"	Pcs	1		
	Fittings on the kiosk				
1.1 2	GI Reducer 2" -1"	Pcs	2		
1.1 3	90° GI Elbow 1"	Pcs	2		
1.1 4	1" GI Double Tee	Pcs	2		
1.1 5	1" GI Single Tee	Pcs	1		
1.1 6	Reducer socket 1"-3/4"	Pcs	6		
1.1 7	Nipple GI	Pcs	6		
1.1 8	Branch pipes, 3/4", galvanised (long pipe 300mm threaded on both sides)	Pcs	6		
1.1 9	3/4" taps	Pcs	6		
1.2	Pit excavation commencing at reduced levels depth not exceeding 1.5m deep.	LS	1		
	Soakway pit				
1.2 1	Excavation of soak-away pit and trenches,	m ³	2		
1.2 2	supply and fill 15mm filtration Stones in the pit and cement on top	m ³	2		
1.2 3	Construction of 150mm concrete cover	m ³	0.2		
	Gate valve chamber				
1.2 4	Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials by bailing, pumping or otherwise				
1.2 5	Remove surplus excavated material from site	m ³	0.1		
1.2 6	Backfill around foundation	m ³	0.1		
1.2 7	Mark the well with UNICEF and MoEWR Logo on wet Plaster	LS	1		
	Total Cost of Water Kiosk				
D	CONSTRUCTION OF ANIMAL TROUGH (CAMEL,4.1m*1.6m*0.75m)				
1	Site clearance: leveling and clear unnecessary materials	m ²	40		

2	Excavation foundation trench and level (11m x 0.4m x 0.2m)	m ³	0.88		
3	Mass concrete of 50mm thick blinding layer (1:2:4 mix) under the foundation wall (4.5m x 2.2m x0.05)	m ³	0.5		
4	RC foundation construction (11m x 0.5m x 0.3m) Class M20	m ³	1.65		
6	Laying of hardcore bed (4.1m x 1.6m x 0.20m)	m ³	1.31		
7	Laying 100mm RC floor reinforced with m.s D8mm mesh @ 200mm centre both ways (4.1 m x 1.6m x 0.1m)	m ³	0.66		
8	Construction of trough walls (11m x 0.4m x 0.2m)	m ²	5		
10	Render the internal walls 12mm wood float cement plaster with cement slurry finish on top true to plumb	m ²	8.8		
11	laying 40mm new cement screed on trough floor with cement slurry finish on top gently sloping towards the cleaning pipe hole	m ²	1.8		
12	render the external face of the enclosing wall 12mm wood float cement plaster true to plumb	m ²	9.4		
13	paint the external walls two coats of a mix of good lime and white glue	m ²	9.4		
14	Galvanized mild steel pipes class "B" medium thickness with and including jointing fittings and fixed as described	No	3		
15	50mm diameter inlet pipe chased through masonry wall 300 mm long with and including stop cork	No	3		
16	32mm diameter PVC draw off pipe 300mm long with and including gate valve	No	3		
	Total Cost of Animal Trough (Camel)				
E	CONSTRUCTION OF ANIMAL TROUGH (SHEEP/GOAT, 4.1m*1.6m*0.45m)				
1	Site clearance: leveling and clear unnecessary materials	m ²	40		
2	Excavation foundation trench and level (11m x 0.4m x 0.2m)	m ³	0.88		
3	Mass concrete of 50mm thick blinding layer (1:2:4 mix) under the foundation wall (4.5m x 2.2m x0.05)	m ³	0.5		
4	RC foundation construction (11m x 0.5m x 0.3m)	m ³	1.65		
5	Construction of RC foundation ring beams (11m x 0.2m x 0.1)	m ³	0.24		
6	Laying of hardcore bed (4.1m x 1.6m x 0.20m)	m ³	1.31		
7	Laying 100mm RC floor reinforced with m.s D8mm mesh @ 200mm centre both ways (4.1 m x 1.6m x 0.1m)	m ³	0.66		
8	Construction of trough walls (11m x 1m x 0.2m)	m ²	11		

9	Construction of 100mm R.C ring beam over the constructed walls (1.1m x 0.2m x 0.1m)	m ³	0.56		
10	Render the internal walls 12mm wood float cement plaster with cement slurry finish on top true to plumb	m ²	8.8		
11	laying 40mm new cement screed on trough floor with cement slurry finish on top gently sloping towards the cleaning pipe hole	m ²	1.8		
12	render the external face of the enclosing wall 12mm wood float cement plaster true to plumb	m ²	9.4		
13	paint the external walls two coats of a mix of good lime and white glue	m ²	9.4		
14	Galvanized mild steel pipes class "B" medium thickness with and including jointing fittings and fixed as described	No	3		
15	50mm diameter inlet pipe chased through masonry wall 300 mm long with and including stop cork	No	3		
16	32mm diameter PVC draw off pipe 300mm long with and including gate valve	No	3		
	Total Cost of Animal Trough (Sheep/Goat)				
F	CONSTRUCTION OF CARETAKER ROOM (4m*4m)				
A	SUBSTRUCTURE				
1	Excavation				
2	Excavate for strip footing not exceeding 1.0 metres deep, starting from stripped levels(not exceeding 400mm width)	m ³	6.4		
3	Over 50cm thick well compacted hardcore filling blinded with 50mm thick quarry dust or sand layer to receive surface bed	m ³	8		
4	Chemical anti-termite treatment executed complete by an approved specialist under a ten-year guarantee, to surface of hard-core	m ²	16		
5	1000 gauge polythene or other equal and approved damp proof membrane laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps)	m ²	16		
B	Concrete Work				
1	Reinforced Concrete class 20				
2	Reinforced concrete class 20 as described in (with a 28-day 150mm cube crushing strength of 30MPa), cast into formworks and vibrated around rod reinforcement bars)				
3	Plinth beam(200mm high)	m ³	0.6		
4	Selected and approved rubble stone walling bedded jointed and pointed in cement and sand (1:3) mortar.				

5	400mm thick walling(1200mm high)	m ³	7.7		
C	Walling				
1	Approved hollow concrete block walls or other equal and approved; bedded and jointed in (1:3) cement and sand mortar				
2	200mm thick walling externally(3m high)	m ²	48		
3	Reinforced concrete in class C-20 (with a 28-day 150mm cube crushing strength of 20MPa), cast into formworks and vibrated around rod reinforcement bars				
4	columns,Intermediate and final beams	m ³	0.6		
D	Finishes				
1	Plastering				
2	20mm thick cement/sand (1:5) plaster as described to:				
3	External and internal Walls	m ²	48		
4	Painting				
5	Prepare the surface and apply two coats of plastic emulsion paint of chosen type and color to :				
6	Plastered walls(external and internal walls)	m ²	48		
7	provide 600*600*8mm thick approved ceramic floor tiles to regular bedding and joining to match with adhesive	m ²	16		
F	Doors and Windows				
1	purpose made steel casement double door, manufactured from standard sections, finished with pressed steel horizontal louvers and complete with all necessary ironmongery, overall size of 2000*2100mm high	Item	1		
2	provide metal grill window with wire mesh overall size of 1500mm*1200mm high	Item	2		
G	Roofing				
1	Supply and fix complete roof structure of the ward regarding following specifications; a: providing and fixing roof framing in trusses b: providing and fixing G-28 galvanized roof sheet, the job shall include all the necessary materials to complete the roof structure	m ²	16		
2	provide ceilings 50*50mm soft wood brandering	m ²	16		
H	Provisional Items				
1	Electric works	Item	1		
	Total cost of Caretaker room				
F	CONSTRUCTION OF Gerator ROOM				
A	SUBSTRUCTURE				
1	Excavation				

2	Excavate for strip footing not exceeding 1.0 metres deep, starting from stripped levels(not exceeding 400mm width)	m ³	6.4		
3	Over 50cm thick well compacted hardcore filling blinded with 50mm thick quarry dust or sand layer to receive surface bed	m ³	8		
4	Chemical anti-termite treatment executed complete by an approved specialist under a ten-year guarantee, to surface of hard-core	m ²	16		
5	1000 gauge polythene or other equal and approved damp proof membrane laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps)	m ²	16		
B	Concrete Work				
1	Reinforced Concrete class 25				
3	Plinth beam(200mm high)	m ³	0.64		
C	Walling				
1	Approved hollow concrete block walls or other equal and approved; bedded and jointed in (1:3) cement and sand mortar				
2	200mm thick walling externally(3m high)	m ²	48		
3	Reinforced concrete in class C-20 (with a 28-day 150mm cube crushing strength of 20MPa), cast into formworks and vibrated around rod reinforcement bars				
4	columns,Intermediate and final beams	m ³	0.64		
D	Finishes				
1	Plastering				
2	20mm thick cement/sand (1:5) plaster as described to:				
3	External and internal Walls	m ²	96		
4	Painting				
5	Prepare the surface and apply two coats of plastic emulsion paint of chosen type and color to :				
6	Plastered walls(external and internal walls)	m ²	112		
E	Doors and Windows				
1	purpose made steel casement double door, manufactured from standard sections, finished with pressed steel horizontal louvers and complete with all necessary ironmongery, overall size of 2000*2100mm high	Item	1		
2	provide metal grill window with wire mesh overall size of 1500mm*1200mm high	Item	1		
F	Roofing				


I	Supply and fix complete roof structure of the ward regarding following specifications; a: providing and fixing roof framing in trusses b: providing and fixing G-28 galvanized roof sheet, the job shall include all the necessary materials to complete the roof structure	m ²	16		
G	Provisional Items				
2	construction of Ramp in tamped to floor finish with 100mm concrete slab with entrance steps	Item	1		
	Total cost of Generator room				
G	FENCE AND GATE FOR THE BOREHOLE				
	GATE				
	The contractor will provide all material and construct a steel gate measuring approximately 4500x2100mm. Given the location and site conditions, the contractor is advised to make a physical assessment of the site before tendering.				
A	Excavate for column pads, depth not exceeding				
	1.5m and of 1.5 x 1.5 mm width commencing at the original ground level, and cart away to spoil as directed	m ³	6.75		
	Reinforced Concrete using 3/4 + 1/2" mix machine crushed Ballast in:				
B	Vibrated reinforced concrete (class 25) column base, 350mm deep	m ³	0.7875		
C	Ditto in columns 600x600mm thick, average height of 2.7 m with 1.5 m being the foundation column	m ³	1.944		
D	Assorted high tensile twisted steel reinforcement bars to B.S 4446.	Kg	200		
E	Sawn formwork to vertical sides of the columns	m ²	10		
F	15mm thick cement/Sand plaster to vertical sides of the columns	m ²	10		
G	350x350x25mm thick P.C.C coping stone	No	2		
	Main and pedestrian gates				
H	Supply and fix double leaf steel gate size 4500x 2100mm high with small pedestrian door made from 3mm thick steel plate welded on both sides of the frame. Frame as follows: 75x50x3mm thick RHS external members and 25mm SHS 3mm thick secondary members, fixed onto the concrete columns using heavy duty steel pin hinges; with all fastening accessories including all cutting welding, grinding and priming with one coat of grey oxide before fixing. The gate should also have peep holes of not more than 25mm dia with a sliding door. It should	No	1		

	also have 2 locking mechanisms, top and bottom.				
	FENCE				
	The contractor is reminded to include in his pricing, the cost of supply, cutting, waste and erection and all other necessary fittings including welding lugs or fishtailing onto the 50x50x6mm angle bars. Angle bars and the necessary fixing and anchorage to be treated as described in the specifications.				
A	Clear the perimeter of the fencing area of all bushes scrubs and obstructions	m ²	60		
B	Excavate 300x300x500 deep holes to receive mass concrete (1:3:6) bases as shown in the drawings.	m ³	1.5		
C	Supply 50x5mm CHS welded to form Y-shaped posts with ends closed as shown in the drawings, bottom end fixed with 100x100mmx3mm plate and bedded in mass concrete. The post to be 2500mm high from ground level to the Y-joint. Allow for drilling 7No holes as shown.	No	33		
D	Extra Over 50x5mm posts for bracing on either side every fourth intermediate post and all corner posts.	No	33		
	Mass Concrete Mix 1:3:6/20mm using 3/4 Local Ballast in:				
E	Supply all materials and cast 0.3m diameter x 0.6m depth mass concrete class Q (1:3:6) to concrete the 50mm dia. CHS poles while ensuring they remain plumb 600mm deep below the ground level and 2500mm (2.5m) above ground level.	m ³	1.5		
F	Supply and weld a 12mm high tensile steel rod along the bases of the posts for anchoring the chainlink to the ground along the whole length of the fence.				
G	Allow for excavating 200mm deep along the fence to fix the rod.	m	100		
H	Allow for curing of all concrete works	Item	1		
	Supply and fix 3No strands of 12G barbed wire bound onto either sides of the Y post using 3mm galvanised wire as shown in the drawings.				
I	Ditto for posts	m	14.29		
J	Supply and fix 2500mm high HEAVY GAUGE 12 chainlink to posts using 3mm galvanised wire. Allow for securing the chainlink to a 12mm reinforcement bar welded at the base between the posts.	m	100		

K	Supply and fix razer wire secured on the chainlink, barbed wire and Y posts by binding wire and rolled approximately 600mm dia.	m	100		
L	Prepare and apply one under coat of epoxy based primer and two finishing epoxy based paints to metal surfaces n.e 250mm in alternate bands of 300mm	No.	66		
Total Cost of Fence and Gate					

GRAND SUMMARY					
A	Total Cost of Borehole Equipping and Installation				
B	Total Cost of Evelated Water Tank 50 meter cubic				
C	Total Cost of Water Kiosk				
	Total Cost of Animal Troughs (Camel)				
D	Total Cost of Animal Troughs (Sheep/Goat)				
E	Total Cost of Generator Room				
F	Total Cost of Caretaker Room				
G	Total Cost of Fence and Gate				
	Total Cost of Borehole Rehilitation				\$0.00

LOT (3): TUKARAQ BH I

BoQ FOR REHABILITATION OF BOREHOLE & WATER FACILITIES					
	Source Name:	TUKARAQ BH I		 Ministry of Energy and Water Resource	
	Settlement Distance:	LAASCANOD			
	Borehole Depth:	90 m			
	Water Static Level:	60 m			
	Pump setting	75m			
	Status:	REHAB			
	GPS:	8.54, 47.79			
	Location:	SOOL			
	HHS:	1,000			
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (usd)	AMOUNT (usd)
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (usd)	AMOUNT (usd)
A	BOREHOLE EQUIPING AND INSTALLATION				
1.1	Supply and Install stainless steel of submersible pump 1HP of Grundfos SQ series, with all necessary fittings.	PCs	1.0		
1.2	Supply and installation of rising main GI pipe 2" with all necessary fittings	PCs Bergo	28.0		
1.3	Supply and Install Control Panel and Water Meter	PCs	1.0		
1.4	4.0mm ² x 16 Duel Core For Submersible Cable	m	250.0		
1.5	supply and installation of New Generator Set 30 KVA DOS with one fuel drum	Pcs	1.0		
1.6	Supply and ininstall 2" UPVC pipe high pressure with all necessary fittings connecting from the borehole to the	PCs Bergo	35.0		

	elevated water tank, Water kiosks and animal troughs				
	Total Cost of Borehole Equipping and Installation				
B	CONSTRUCTION OF ELEVATED WATER TANK (50 METER CUBIC)				
A	Excavation				
	<u>Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials by bailing, pumping or otherwise</u>				
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 ²	81		
2	Excavate trench commencing at reduced levels depth not exceeding 1.8m deep	M ³	32.4		
3	Extra-over for excavation in rock (optional)	M ³	6.48		
4	Remove surplus excavated material from site	M ³	4.86		
5	Backfill around foundation	M ³	8.64		
B	Filling				
	300 mm thick approved hardcore filling spread, well rammed and compacted in 150mm layers	M ³	24.3		
C	Concrete Work				
	<u>Mass Concrete class 15 (1:3:6) with 20 mm thick maximum aggregate size in</u>				
1	50mm Thick blinding	M ³	4.05		
	<u>Vibrated Reinforced Concrete class 25 (1:1.5:3) with 20mm thick maximum aggregate size in</u>				
2	Footings(180cm*180cm*70cm height)	M ³	13.6		
4	Ground beam(40cm width, 30cm height)	m ³	6.5		
5	Columns(40cm*40cm)	m ³	10.08		
6	two tie beams(30cm width, 30cm height)	m ³	6.5		
7	final beams(30cm width, 30cm height)	m ³	3.2		
D	<u>Vibrated Reinforced Concrete class 30 (1:1:2) with 20mm thick maximum aggregate size in</u>				
1	200mm thick walls	m ²	23.472		

2	200mm thick base slab	m ³	16.2		
3	200mm thick cover slab	m ³	16.2		
E	Reinforcement				
I	Reinforcement Reinforcement bars				
2	slabs T10-200mmc/c Top and bottum and T8-200mmc/c distrabution bars	kg	1900		
3	Beams 2T12B at all spans 2T12T at all spans / T8-200mmc/c straps	kg	440		
4	Colums 6T16 at all columns /T8-200mmc/c straps	kg	5100		
5	footings 12T12T-150mmc/c and 12T12-150mmc/c	kg	177		
F	Swan Formwork				
1	Formwork to sides of base slab girth over 150mm but not exceeding 225mm	m	17		
2	Formwork to sides of cover slab girth over 150mm but not exceeding 225mm	m	17		
3	Formwork to sides and soffittes of beams	m ²	86		
4	Formwork to soffittes of base slab	m ²	81		
5	Formwork to soffittes of cover slab	m ²	81		
6	Formwork to sides of wall	m ²	259.2		
G	Finishes				
1	<u>Cement and sand mortar (1:3) renderin g in:</u>				
2	25 mm Thick screed to base slab with waterproof cement	m ²	19		
3	15mm internal plaster to cover slab with waterproof cement	m ²	19		
4	15mm plaster to internal sides of wall with waterproof cement	m ²	46		
5	12mm plaster to external sides of wall	m ²	49		
6	12mm plaster to cover slab	m ²	22		
7	12mm plaster to soffits of base slab	m ²	19		
8	12mm plaster to beams	m ²	75		
9	25x25mm Bondex sealing compound	m	16		
H	Water Supply System				
1	<u>Galvanized Mild Steel pipes class "B" me dium thickness with and including jointing, fittings and fixe as described</u>	m ³			
2	50mm diameter inlet pipe 800mm long	No	1		
3	50mm diameter draw off pipe Ditto	No	1		
4	50mm diameter overflow pipe Ditto	No	1		

5	75mm diameter scour pipe Ditto	No	1		
6	20mm diameter brass gate valve with wheel and head	No	1		
5	20mm diameter stop corks	No	1		
7	600x600x6mm heavy gauge steel primed metal manhole cover on slab with and including metal framing all around	No	1		
8	20mm Diameter bars, 'U' shaped to form steps with ends embedded into retaining wall, average length 450mm	No	18		
	Total Cost of 50 meter cubic Elevated Water Tank				
C	CONSTRUCTION OF WATER KIOKS				
I	Excavation				
1.1	Site clearance: leveling and clear unnecessary materials	M ²	5.95		
1.2	Excavation foundation trench and level (2.22m x 2.68 x0.3)	M ²	1.78		
1.3	Mass concrete of 50mm thick blinding layer (1:2:4 mix) under the foundation wall 2.22m x 2.68 x0.05)	M ²	0.30		
1.4	250mm hardcore filling and well compacting for slab area(2.22mx2.68m)	M ²	1.49		
1.5	RC concrete (1:2:4 mix) in conc. floor slab 10 cm thick(2.22mx2.68mx0.1 m)	M ²	0.59		
1.6	20cm thick masonry walling in cement & sand mortar 1;3 mix	M ²	1.06		
1.7	Cast 20cm Mass concrete 1:3:6 mix design of the area (1.58x0.2x0.1 m)	M ²	0.03		
1.8	External & internal plastering ,12 mm thick, cement and sand mix 1:4, with wood float finish.	M ²	7		
1.9	Apply two coats of white wash	M ²	7		
1.1	30 mm thick 1:3 cement/sand floor screed	Bags	3		
1.11	2x3 timber wood for roofing	No	2		
1.12	32G Corrugated Iron sheet	No	3		
1.11	GI pipes for water Kiosk 1"	Pcs	1		
	Fittings on the kiosk				
1.12	GI Reducer 2" -1"	Pcs	2		
1.13	90° GI Elbow 1"	Pcs	2		
1.14	1" GI Double Tee	Pcs	2		
1.15	1" GI Single Tee	Pcs	1		
1.16	Reducer socket 1"-3/4"	Pcs	6		

1.17	Nipple GI	Pcs	6		
1.18	Branch pipes, 3/4", galvanised (long pipe 300mm threaded on both sides)	Pcs	6		
1.19	3/4" taps	Pcs	6		
1.2	Pit excavation commencing at reduced levels depth not exceeding 1.5m deep.	LS	1		
	Soakway pit				
1.21	Excavation of soak-away pit and trenches,	m ³	2		
1.22	supply and fill 15mm filtration Stones in the pit and cement on top	m ³	2		
1.23	Construction of 150mm concrete cover	m ³	0.2		
	Gate valve chamber				
1.24	Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials by bailing, pumping or otherwise				
1.25	Remove surplus excavated material from site	m ³	0.1		
1.26	Backfill around foundation	m ³	0.1		
1.27	Mark the well with UNICEF and MoEWR Logo on wet Plaster	LS	1		
	Total Cost of Water Kiosk				
D	CONSTRUCTION OF ANIMAL TROUGH (CAMEL,4.1m*1.6m*0.75m)				
1	Site clearance: leveling and clear unnecessary materials	m ²	40		
2	Excavation foundation trench and level (11m x 0.4m x 0.2m)	m ³	0.88		
3	Mass concrete of 50mm thick blinding layer (1:2:4 mix) under the foundation wall (4.5m x 2.2m x0.05)	m ³	0.5		
4	RC foundation construction (11m x 0.5m x 0.3m) Class M20	m ³	1.65		
6	Laying of hardcore bed (4.1m x 1.6m x 0.20m)	m ³	1.31		
7	Laying 100mm RC floor reinforced with m.s D8mm mesh @ 200mm centre both ways (4.1 m x 1.6m x 0.1m)	m ³	0.66		
8	Construction of trough walls (11m x 0.4m x 0.2m)	m ²	5		
10	Render the internal walls 12mm wood float cement plaster with cment slurry finish on top true to plumb	m ²	8.8		
11	laying 40mm new cement screed on trough floor with cement slurry finish	m ²	1.8		

	on top gently sloping towards the cleaning pipe hole				
12	render the external face of the enclosing wall 12mm wood float cement plaster true to plumb	m2	9.4		
13	paint the external walls two coats of a mix of good lime and wite glue	m2	9.4		
14	Galvanized mild steel pipes class "B" medium thickness with and including jointing fittings and fixed as described	No	3		
15	50mm diameter inlet pipe chased through masonry wall 300 mm long with and including stop cork	No	3		
16	32mm diameter PVC draw off pipe 300mm long with and including gate valve	No	3		
	Total Cost of Animal Trough (Camel)				
E	CONSTRUCTION OF ANIMAL TROUGH (SHEAP/GOAT, 4.1m*1.6m*0.45m)				
1	Site clearance: leveling and clear unnecessary materials	m2	40		
2	Excavation foundation trench and level (11m x 0.4m x 0.2m)	m3	0.88		
3	Mass concrete of 50mm thick blinding layer (1:2:4 mix) under the foundation wall (4.5m x 2.2m x0.05)	m3	0.5		
4	RC foundation construction (11m x 0.5m x 0.3m)	m3	1.65		
5	Construction of RC foundation ring beams (11m x 0.2m x 0.1)	m3	0.24		
6	Laying of hardcore bed (4.1m x 1.6m x 0.20m)	m3	1.31		
7	Laying 100mm RC floor reinforced with m.s D8mm mesh @ 200mm centre both ways (4.1 m x 1.6m x 0.1m)	m3	0.66		
8	Construction of trough walls (11m x 1m x 0.2m)	m2	11		
9	Construction of 100mm R.C ring beam over the constructed walls (11m x 0.2m x 0.1m)	m3	0.56		
10	Render the internal walls 12mm wood float cement plaster with cment slurry finish on top true to plumb	m2	8.8		
11	laying 40mm new cement screed on trouggh floor with cement slurry finish on top gently sloping towards the cleaning pipe hole	m2	1.8		

12	render the external face of the enclosing wall 12mm wood float cement plaster true to plumb	m ²	9.4		
13	paint the external walls two coats of a mix of good lime and wite glue	m ²	9.4		
14	Galvanized mild steel pipes class "B" medium thickness with and including jointing fittings and fixed as described	No	3		
15	50mm diameter inlet pipe chased through masonry wall 300 mm long with and including stop cork	No	3		
16	32mm diameter PVC draw off pipe 300mm long with and including gate valve	No	3		
	Total Cost of Animal Trough (Sheep/Goat)				
F	CONSTRUCTION OF CARETAKER ROOM (4m*4m)				
A	SUBSTRUCTURE				
1	Excavation				
2	Excavate for strip footing not exceeding 1.0 metres deep, starting from stripped levels(not exceeding 400mm width)	m ³	6.4		
3	Over 50cm thick well compacted hardcore filling blinded with 50mm thick quarry dust or sand layer to receive surface bed	m ³	8		
4	Chemical anti-termite treatment executed complete by an approved specialist under a ten-year guarantee, to surface of hard-core	m ²	16		
5	1000 gauge polythene or other equal and approved damp proof membrane laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps)	m ²	16		
B	Concrete Work				
1	Reinforced Concrete class 20				
2	Reinforced concrete class 20 as described in (with a 28-day 150mm cube crushing strength of 30MPa), cast into formworks and vibrated around rod reinforcement bars)				
3	Plinth beam(200mm high)	m ³	0.6		
4	Selected and approved rubble stone walling bedded jointed and pointed in cement and sand (1:3) mortar.				

5	400mm thick walling(1200mm high)	m ³	7.7		
C	Walling				
1	Approved hollow concrete block walls or other equal and approved; bedded and jointed in (1:3) cement and sand mortar				
2	200mm thick walling externally(3m high)	m ²	48		
3	Reinforced concrete in class C-20 (with a 28-day 150mm cube crushing strength of 20MPa), cast into formworks and vibrated around rod reinforcement bars				
4	columns,Intermediate and final beams	m ³	0.6		
D	Finishes				
1	Plastering				
2	20mm thick cement/sand (1:5) plaster as described to:				
3	External and internal Walls	m ²	48		
4	Painting				
5	Prepare the surface and apply two coats of plastic emulsion paint of chosen type and color to :				
6	Plastered walls(external and internal walls)	m ²	48		
7	provide 600*600*8mm thick approved ceramic floor tiles to regular bedding and joining to match with adhesive	m ²	16		
F	Doors and Windows				
1	purpose made steel casement double door, manufactured from standard sections, finished with pressed steel horizontal louvers and complete with all necessary ironmongery, overall size of 2000*2100mm high	Item	1		
2	provide metal gril window with wire mesh overall size of 1500mm*1200mm high	Item	2		
G	Roofing				
1	Supply and fix complete roof structure of the ward regarding following specifications; a: providing and fixing roof framing in trusses b: providing and fixing G-28 galvanized roof sheet, the job shall	m ²	16		

	include all the necessary materials to complete the roof structure				
2	provide ceilings 50*50mm soft wood brandering	m ²	16		
H	Provisional Items				
I	Electric works	Item	1		
	Total cost of Caretaker room				
F	CONSTRUCTION OF Gerator ROOM				
A	SUBSTRUCTURE				
I	Excavation				
2	Excavate for strip footing not exceeding 1.0 metres deep, starting from stripped levels(not exceeding 400mm width)	m ³	6.4		
3	Over 50cm thick well compacted hardcore filling blinded with 50mm thick quarry dust or sand layer to receive surface bed	m ³	8		
4	Chemical anti-termite treatment executed complete by an approved specialist under a ten-year guarantee, to surface of hard-core	m ²	16		
5	1000 gauge polythene or other equal and approved damp proof membrane laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps)	m ²	16		
B	Concrete Work				
I	Reinforced Concrete class 25				
3	Plinth beam(200mm high)	m ³	0.64		
C	Walling				
I	Approved hollow concrete block walls or other equal and approved; bedded and jointed in (1:3) cement and sand mortar				
2	200mm thick walling externally(3m high)	m ²	48		
3	Reinforced concrete in class C-20 (with a 28-day 150mm cube crushing strength of 20MPa), cast into formworks and vibrated around rod reinforcement bars				
4	columns,Intermdiate and final beams	m ³	0.64		

D	Finishes				
I	Plastering				
2	20mm thick cement/sand (1:5) plaster as described to:				
3	External and internal Walls	m ²	96		
4	Painting				
5	Prepare the surface and apply two coats of plastic emulsion paint of chosen type and color to :				
6	Plastered walls(external and internal walls)	m ²	112		
E	Doors and Windows				
I	purpose made steel casement double door, manufactured from standard sections, finished with pressed steel horizontal louvers and complete with all necessary ironmongery, overall size of 2000*2100mm high	Item	1		
2	provide metal grill window with wire mesh overall size of 1500mm*1200mm high	Item	1		
F	Roofing				
I	Supply and fix complete roof structure of the ward regarding following specifications; a: providing and fixing roof framing in trusses b: providing and fixing G-28 galvanized roof sheet, the job shall include all the necessary materials to complete the roof structure	m ²	16		
G	Provisional Items				
2	construction of Ramp in tamped to floor finish with 100mm concrete slab with entrance steps	Item	1		
	Total cost of Generator room				
G	FENCE AND GATE FOR THE BOREHOLE				
	GATE				
	The contractor will provide all material and construct a steel gate measuring approximately 4500x2100mm. Given the location and site conditions, the contractor is advised to make a physical assessment of the site before tendering.				
A	Excavate for column pads, depth not exceeding				


	1.5m and of 1.5 x 1.5 mm width commencing at the original ground level, and cart away to spoil as directed	m ³	6.75		
	Reinforced Concrete using 3/4 + 1/2" mix machine crushed Ballast in:				
B	Vibrated reinforced concrete (class 25) column base, 350mm deep	m ³	0.7875		
C	Ditto in columns 600x600mm thick, average height of 2.7 m with 1.5 m being the foundation column	m ³	1.944		
D	Assorted high tensile twisted steel reinforcement bars to B.S 4446.	Kg	200		
E	Sawn formwork to vertical sides of the columns	m ²	10		
F	15mm thick cement/Sand plaster to vertical sides of the columns	m ²	10		
G	350x350x25mm thick P.C.C coping stone	No	2		
	Main and pedestrian gates				
H	Supply and fix double leaf steel gate size 4500x 2100mm high with small pedestrian door made from 3mm thick steel plate welded on both sides of the frame. Frame as follows: 75x50x3mm thick RHS external members and 25mm SHS 3mm thick secondary members, fixed onto the concrete columns using heavy duty steel pin hinges; with all fastening accessories including all cutting welding, grinding and priming with one coat of grey oxide before fixing. The gate should also have peep holes of not more than 25mm dia with a sliding door. It should also have 2 locking mechanisms, top and bottom.	No	1		
	FENCE				
	The contractor is reminded to include in his pricing, the cost of supply, cutting, waste and erection and all other necessary fittings including welding lugs or fishtailing onto the 50x50x6mm angle bars. Angle bars and the necessary fixing and anchorage to be treated as described in the specifications.				
A	Clear the perimeter of the fencing area of all bushes scrubs and obstructions	m ²	60		

B	Excavate 300x300x500 deep holes to receive mass concrete (1:3:6) bases as shown in the drawings.	m ³	1.5		
C	Supply 50x5mm CHS welded to form Y-shaped posts with ends closed as shown in the drawings, bottom end fixed with 100x100mmx3mm plate and bedded in mass concrete. The post to be 2500mm high from ground level to the Y-joint. Allow for drilling 7No holes as shown.	No	33		
D	Extra Over 50x5mm posts for bracing on either side every fourth intermediate post and all corner posts.	No	33		
	Mass Concrete Mix 1:3:6/20mm using 3/4 Local Ballast in:				
E	Supply all materials and cast 0.3m diameter x 0.6m depth mass concrete class Q (1:3:6) to concrete the 50mm dia. CHS poles while ensuring they remain plumb 600mm deep below the ground level and 2500mm (2.5m) above ground level.	m ³	1.5		
F	Supply and weld a 12mm high tensile steel rod along the bases of the posts for anchoring the chainlink to the ground along the whole length of the fence.				
G	Allow for excavating 200mm deep along the fence to fix the rod.	m	100		
H	Allow for curing of all concrete works	Item	1		
	Supply and fix 3No strands of 12G barbed wire bound onto either sides of the Y post using 3mm galvanised wire as shown in the drawings.				
I	Ditto for posts	m	14.29		
J	Supply and and fix 2500mm high HEAVY GUAGE 12 chainlink to posts using 3mm galvanised wire. Allow for securing the chainlink to a 12mm reinforcement bar welded at the base between the posts.	m	100		
K	Supply and fix razer wire secured on the chainlink, barbed wire and Y posts by binding wire and rolled approximately 600mm dia.	m	100		
L	Prepare and apply one under coat of epoxy based primer and two finishing epoxy based paints to metal surfaces	No.	66		

	n.e 250mm in alternate bands of 300mm				
	Total Cost of Fence and Gate				

GRAND SUMMARY					
A	Total Cost of Borehole Equipping and Installation				
B	Total Cost of Elevated Water Tank 50 meter cubic				
C	Total Cost of Water Kiosk				
	Total Cost of Animal Troughs (Camel)				
D	Total Cost of Animal Troughs (Sheep/Goat)				
E	Total Cost of Generator Room				
F	Total Cost of Caretaker Room				
G	Total Cost of Fence and Gate				
	Total Cost of Borehole Rehabilitation				

LOT (4): ALFARUQ BH

BoQ FOR REHABILITATION OF BOREHOLE & WATER FACILITIES					
	Source Name:	ALFARUQ BH		 Ministry of Energy and Water Resource	
	Settlement Distance:	AFGOI			
	Borehole Depth:	130 m			
	Water Static Level:	78 m			
	Pump setting	110m			
	Status:	REHAB			
	GPS:	2.12877,45.11872			
	Location:	Lower Shabelle			
	HHS:	1,500			
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (usd)	AMOUNT (usd)
A	BOREHOLE EQUIPING AND INSTALLATION				
1.1	Supply and Install stainless steel of submersible pump 1 IHP of Grundfos SQ series , with all necessary fittings.	PCs	1.0		
1.2	Supply and installation of rising main GI pipe 2” with all necessary fittings	PCs Bergo	39.0		
1.3	Supply and Install Control Panel and Water Meter	PCs	1.0		
1.4	4.0mm2 x 16 Dual Core For Submersible Cable	m	200.0		
1.5	supply and installation of New Generator Set 30 KVA DOS with one fuel drum	Pcs	1.0		
1.6	Supply and ininstall 2" UPVC pipe high pressure with all necessary fittings conecting from the borehole to the	PCs Bergo	35.0		

	elevated water tank, Water kiosks and animal troughs				
	Total Cost of Borehole Equipping and Installation				
B	CONSTRUCTION OF ELEVATED WATER TANK (50 METER CUBIC)				
A	Excavation				
	<u>Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials by bailing, pumping or otherwise</u>				
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 ²	81		
2	Excavate trench commencing at reduced levels depth not exceeding 1.8m deep	M ³	32.4		
3	Extra-over for excavation in rock (optional)	M ³	6.48		
4	Remove surplus excavated material from site	M ³	4.86		
5	Backfill around foundation	M ³	8.64		
B	Filling				
	300 mm thick approved hardcore filling spread, well rammed and compacted in 150mm layers	M ³	24.3		
C	Concrete Work				
	<u>Mass Concrete class 15 (1:3:6) with 20 mm thick maximum aggregate size in</u>				
1	50mm Thick blinding	M ³	4.05		
	<u>Vibrated Reinforced Concrete class 25 (1:1.5:3) with 20mm thick maximum aggregate size in</u>				
2	Footings(180cm*180cm*70cm height)	M ³	13.6		
4	Ground beam(40cm width, 30cm height)	m ³	6.5		
5	Columns(40cm*40cm)	m ³	10.08		
6	two tie beams(30cm width, 30cm height)	m ³	6.5		
7	final beams(30cm width, 30cm height)	m ³	3.2		
D	<u>Vibrated Reinforced Concrete class 30 (1:1:2) with 20mm thick maximum aggregate size in</u>				
1	200mm thick walls	m ²	23.472		

2	200mm thick base slab	m ³	16.2		
3	200mm thick cover slab	m ³	16.2		
E	Reinforcement				
I	Reinforcement Reinforcement bars				
2	slabs T10-200mmc/c Top and bottum and T8-200mmc/c distrabution bars	kg	1900		
3	Beams 2T12B at all spans 2T12T at all spans / T8-200mmc/c straps	kg	440		
4	Colums 6T16 at all columns /T8-200mmc/c straps	kg	5100		
5	footings 12T12T-150mmc/c and 12T12-150mmc/c	kg	177		
F	Swan Formwork				
1	Formwork to sides of base slab girth over 150mm but not exceeding 225mm	m	17		
2	Formwork to sides of cover slab girth over 150mm but not exceeding 225mm	m	17		
3	Formwork to sides and soffittes of beams	m ²	86		
4	Formwork to soffittes of base slab	m ²	81		
5	Formwork to soffittes of cover slab	m ²	81		
6	Formwork to sides of wall	m ²	259.2		
G	Finishes				
1	<u>Cement and sand mortar (1:3) renderin g in:</u>				
2	25 mm Thick screed to base slab with waterproof cement	m ²	19		
3	15mm internal plaster to cover slab with waterproof cement	m ²	19		
4	15mm plaster to internal sides of wall with waterproof cement	m ²	46		
5	12mm plaster to external sides of wall	m ²	49		
6	12mm plaster to cover slab	m ²	22		
7	12mm plaster to soffits of base slab	m ²	19		
8	12mm plaster to beams	m ²	75		
9	25x25mm Bondex sealing compound	m	16		
H	Water Supply System				
1	<u>Galvanized Mild Steel pipes class "B" m edium thickness with and including jointing, fittings and fixe as described</u>	m ³			
2	50mm diameter inlet pipe 800mm long	No	1		
3	50mm diameter draw off pipe Ditto	No	1		
4	50mm diameter overflow pipe Ditto	No	1		

5	75mm diameter scour pipe Ditto	No	1		
6	20mm diameter brass gate valve with wheel and head	No	1		
5	20mm diameter stop corks	No	1		
7	600x600x6mm heavy gauge steel primed metal manhole cover on slab with and including metal framing all around	No	1		
8	20mm Diameter bars, 'U' shaped to form steps with ends embedded into retaining wall, average length 450mm	No	18		
	Total Cost of 50 meter cubic Elevated Water Tank				
C	CONSTRUCTION OF WATER KIOKS				
1	Excavation				
1.1	Site clearance: leveling and clear unnecessary materials	M ²	5.95		
1.2	Excavation foundation trench and level (2.22m x 2.68 x0.3)	M ²	1.78		
1.3	Mass concrete of 50mm thick blinding layer (1:2:4 mix) under the foundation wall 2.22m x 2.68 x0.05)	M ²	0.30		
1.4	250mm hardcore filling and well compacting for slab area(2.22mx2.68m)	M ²	1.49		
1.5	RC concrete (1:2:4 mix) in conc. floor slab 10 cm thick(2.22mx2.68mx0.1m)	M ²	0.59		
1.6	20cm thick masonry walling in cement & sand mortar 1;3 mix	M ²	1.06		
1.7	Cast 20cm Mass concrete 1:3:6 mix design of the area (1.58x0.2x0.1m)	M ²	0.03		
1.8	External & internal plastering ,12 mm thick, cement and sand mix 1:4, with wood float finish.	M ²	7		
1.9	Apply two coats of white wash	M ²	7		
1.1	30 mm thick 1:3 cement/sand floor screed	Bags	3		
1.11	2x3 timber wood for roofing	No	2		
1.12	32G Corrugated Iron sheet	No	3		
1.11	Gl pipes for water Kiosk 1"	Pcs	1		
	Fittings on the kiosk				
1.12	Gl Reducer 2" -1"	Pcs	2		
1.13	90° Gl Elbow 1"	Pcs	2		
1.14	1" Gl Double Tee	Pcs	2		
1.15	1" Gl Single Tee	Pcs	1		
1.16	Reducer socket 1"-3/4"	Pcs	6		

1.17	Nipple GI	Pcs	6		
1.18	Branch pipes, 3/4", galvanised (long pipe 300mm threaded on both sides)	Pcs	6		
1.19	3/4" taps	Pcs	6		
1.2	Pit excavation commencing at reduced levels depth not exceeding 1.5m deep.	LS	1		
	Soakway pit				
1.21	Excavation of soak-away pit and trenches,	m ³	2		
1.22	supply and fill 15mm filtration Stones in the pit and cement on top	m ³	2		
1.23	Construction of 150mm concrete cover	m ³	0.2		
	Gate valve chamber				
1.24	Excavation including maintaining and supporting sides and keeping free from water, mud and fallen materials by bailing, pumping or otherwise				
1.25	Remove surplus excavated material from site	m ³	0.1		
1.26	Backfill around foundation	m ³	0.1		
1.27	Mark the well with UNICEF and MoEWR Logo on wet Plaster	LS	1		
	Total Cost of Water Kiosk				
D	CONSTRUCTION OF ANIMAL TROUGH (CAMEL,4.1m*1.6m*0.75m)				
1	Site clearance: leveling and clear unnecessary materials	m ²	40		
2	Excavation foundation trench and level (1.1m x 0.4m x 0.2m)	m ³	0.88		
3	Mass concrete of 50mm thick blinding layer (1:2:4 mix) under the foundation wall (4.5m x 2.2m x0.05)	m ³	0.5		
4	RC foundation construction (1.1m x 0.5m x 0.3m) Class M20	m ³	1.65		
6	Laying of hardcore bed (4.1m x 1.6m x 0.20m)	m ³	1.31		
7	Laying 100mm RC floor reinforced with m.s D8mm mesh @ 200mm centre both ways (4.1 m x 1.6m x 0.1m)	m ³	0.66		
8	Construction of trough walls (1.1m x 0.4m x 0.2m)	m ²	5		
10	Render the internal walls 12mm wood float cement plaster with cement slurry finish on top true to plumb	m ²	8.8		
11	laying 40mm new cement screed on trough floor with cement slurry finish	m ²	1.8		

	on top gently sloping towards the cleaning pipe hole				
12	render the external face of the enclosing wall 12mm wood float cement plaster true to plumb	m2	9.4		
13	paint the external walls two coats of a mix of good lime and wite glue	m2	9.4		
14	Galvanized mild steel pipes class "B" medium thickness with and including jointing fittings and fixed as described	No	3		
15	50mm diameter inlet pipe chased through masonry wall 300 mm long with and including stop cork	No	3		
16	32mm diameter PVC draw off pipe 300mm long with and including gate valve	No	3		
	Total Cost of Animal Trough (Camel)				
E	CONSTRUCTION OF ANIMAL TROUGH (SHEAP/GOAT, 4.1m*1.6m*0.45m)				
1	Site clearance: leveling and clear unnecessary materials	m2	40		
2	Excavation foundation trench and level (11m x 0.4m x 0.2m)	m3	0.88		
3	Mass concrete of 50mm thick blinding layer (1:2:4 mix) under the foundation wall (4.5m x 2.2m x0.05)	m3	0.5		
4	RC foundation construction (11m x 0.5m x 0.3m)	m3	1.65		
5	Construction of RC foundation ring beams (11m x 0.2m x 0.1)	m3	0.24		
6	Laying of hardcore bed (4.1m x 1.6m x 0.20m)	m3	1.31		
7	Laying 100mm RC floor reinforced with m.s D8mm mesh @ 200mm centre both ways (4.1 m x 1.6m x 0.1m)	m3	0.66		
8	Construction of trough walls (11m x 1m x 0.2m)	m2	11		
9	Construction of 100mm R.C ring beam over the constructed walls (11m x 0.2m x 0.1m)	m3	0.56		
10	Render the internal walls 12mm wood float cement plaster with cement slurry finish on top true to plumb	m2	8.8		
11	laying 40mm new cement screed on trough floor with cement slurry finish	m2	1.8		

	on top gently sloping towards the cleaning pipe hole				
12	render the external face of the enclosing wall 12mm wood float cement plaster true to plumb	m ²	9.4		
13	paint the external walls two coats of a mix of good lime and wite glue	m ²	9.4		
14	Galvanized mild steel pipes class "B" medium thickness with and including jointing fittings and fixed as described	No	3		
15	50mm diameter inlet pipe chased through masonry wall 300 mm long with and including stop cork	No	3		
16	32mm diameter PVC draw off pipe 300mm long with and including gate valve	No	3		
	Total Cost of Animal Trough (Sheep/Goat)				
F	CONSTRUCTION OF CARETAKER ROOM (4m*4m)				
A	SUBSTRUCTURE				
I	Excavation				
2	Excavate for strip footing not exceeding 1.0 metres deep, starting from stripped levels(not exceeding 400mm width)	m ³	6.4		
3	Over 50cm thick well compacted hardcore filling blinded with 50mm thick quarry dust or sand layer to receive surface bed	m ³	8		
4	Chemical anti-termite treatment executed complete by an approved specialist under a ten-year guarantee, to surface of hard-core	m ²	16		
5	1000 gauge polythene or other equal and approved damp proof membrane laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps)	m ²	16		
B	Concrete Work				
I	Reinforced Concrete class 20				
2	Reinforced concrete class 20 as described in (with a 28-day 150mm cube crushing strength of 30MPa), cast into formworks and vibrated around rod reinforcement bars)				

3	Plinth beam(200mm high)	m ³	0.6		
4	Selected and approved rubble stone walling bedded jointed and pointed in cement and sand (1:3) mortar.				
5	400mm thick walling(1200mm high)	m ³	7.7		
C	Walling				
1	Approved hollow concrete block walls or other equal and approved; bedded and jointed in (1:3) cement and sand mortar				
2	200mm thick walling externally(3m high)	m ²	48		
3	Reinforced concrete in class C-20 (with a 28-day 150mm cube crushing strength of 20MPa), cast into formworks and vibrated around rod reinforcement bars				
4	columns,Intermediate and final beams	m ³	0.6		
D	Finishes				
1	Plastering				
2	20mm thick cement/sand (1:5) plaster as described to:				
3	External and internal Walls	m ²	48		
4	Painting				
5	Prepare the surface and apply two coats of plastic emulsion paint of chosen type and color to :				
6	Plastered walls(external and internal walls)	m ²	48		
7	provide 600*600*8mm thick approved ceramic floor tiles to regular bedding and joining to match with adhesive	m ²	16		
F	Doors and Windows				
1	purpose made steel casement double door, manufactured from standard sections, finished with pressed steel horizontal louvers and complete with all necessary ironmongery, overall size of 2000*2100mm high	Item	1		
2	provide metal gril window with wire mesh overall size of 1500mm*1200mm high	Item	2		
G	Roofing				

I	Supply and fix complete roof structure of the ward regarding following specifications; a: providing and fixing roof framing in trusses b: providing and fixing G-28 galvanized roof sheet, the job shall include all the necessary materials to complete the roof structure	m ²	16		
2	provide ceilings 50*50mm soft wood bandering	m ²	16		
H	Provisional Items				
I	Electric works	Item	1		
	Total cost of Caretaker room				
F	CONSTRUCTION OF Gerator ROOM				
A	SUBSTRUCTURE				
I	Excavation				
2	Excavate for strip footing not exceeding 1.0 metres deep, starting from stripped levels(not exceeding 400mm width)	m ³	6.4		
3	Over 50cm thick well compacted hardcore filling blinded with 50mm thick quarry dust or sand layer to receive surface bed	m ³	8		
4	Chemical anti-termite treatment executed complete by an approved specialist under a ten-year guarantee, to surface of hard-core	m ²	16		
5	1000 gauge polythene or other equal and approved damp proof membrane laid over blinded hardcore (measured separately) with 300mm side and end laps (measured nett-allow for laps)	m ²	16		
B	Concrete Work				
I	Reinforced Concrete class 25				
3	Plinth beam(200mm hight)	m ³	0.64		
C	Walling				
I	Approved hollow concrete block walls or other equal and approved; bedded and jointed in (1:3) cement and sand mortar				
2	200mm thick walling externally(3m high)	m ²	48		

3	Reinforced concrete in class C-20 (with a 28-day 150mm cube crushing strength of 20MPa), cast into formworks and vibrated around rod reinforcement bars				
4	columns, Intermediate and final beams	m ³	0.64		
D	Finishes				
1	Plastering				
2	20mm thick cement/sand (1:5) plaster as described to:				
3	External and internal Walls	m ²	96		
4	Painting				
5	Prepare the surface and apply two coats of plastic emulsion paint of chosen type and color to :				
6	Plastered walls(external and internal walls)	m ²	112		
E	Doors and Windows				
1	purpose made steel casement double door, manufactured from standard sections, finished with pressed steel horizontal louvers and complete with all necessary ironmongery, overall size of 2000*2100mm high	Item	1		
2	provide metal grill window with wire mesh overall size of 1500mm*1200mm high	Item	1		
F	Roofing				
1	Supply and fix complete roof structure of the ward regarding following specifications; a: providing and fixing roof framing in trusses b: providing and fixing G-28 galvanized roof sheet, the job shall include all the necessary materials to complete the roof structure	m ²	16		
G	Provisional Items				
2	construction of Ramp in tamped to floor finish with 100mm concrete slab with entrance steps	Item	1		
	Total cost of Generator room				
G	FENCE AND GATE FOR THE BOREHOLE				
	GATE				

	The contractor will provide all material and construct a steel gate measuring approximately 4500x2100mm. Given the location and site conditions, the contractor is advised to make a physical assessment of the site before tendering.				
A	Excavate for column pads, depth not exceeding				
	1.5m and of 1.5 x 1.5 m width commencing at the original ground level, and cart away to spoil as directed	m ³	6.75		
	Reinforced Concrete using 3/4 + 1/2" mix machine crushed Ballast in:				
B	Vibrated reinforced concrete (class 25) column base, 350mm deep	m ³	0.7875		
C	Ditto in columns 600x600mm thick, average height of 2.7 m with 1.5 m being the foundation column	m ³	1.944		
D	Assorted high tensile twisted steel reinforcement bars to B.S 4446.	Kg	200		
E	Sawn formwork to vertical sides of the columns	m ²	10		
F	15mm thick cement/Sand plaster to vertical sides of the columns	m ²	10		
G	350x350x25mm thick P.C.C coping stone	No	2		
	Main and pedestrian gates				
H	Supply and fix double leaf steel gate size 4500x 2100mm high with small pedestrian door made from 3mm thick steel plate welded on both sides of the frame. Frame as follows: 75x50x3mm thick RHS external members and 25mm SHS 3mm thick secondary members, fixed onto the concrete columns using heavy duty steel pin hinges; with all fastening accessories including all cutting welding, grinding and priming with one coat of grey oxide before fixing. The gate should also have peep holes of not more than 25mm dia with a sliding door. It should also have 2 locking mechanisms, top and bottom.	No	1		
	FENCE				
	The contractor is reminded to include in his pricing, the cost of supply, cutting, waste and erection and all other necessary fittings including				

	welding lugs or fishtailing onto the 50x50x6mm angle bars. Angle bars and the necessary fixing and anchorage to be treated as described in the specifications.				
A	Clear the perimeter of the fencing area of all bushes scrubs and obstructions	m ²	60		
B	Excavate 300x300x500 deep holes to receive mass concrete (1:3:6) bases as shown in the drawings.	m ³	1.5		
C	Supply 50x5mm CHS welded to form Y-shaped posts with ends closed as shown in the drawings, bottom end fixed with 100x100mmx3mm plate and bedded in mass concrete. The post to be 2500mm high from ground level to the Y-joint. Allow for drilling 7No holes as shown.	No	33		
D	Extra Over 50x5mm posts for bracing on either side every fourth intermediate post and all corner posts.	No	33		
	Mass Concrete Mix 1:3:6/20mm using 3/4 Local Ballast in:				
E	Supply all materials and cast 0.3m diameter x 0.6m depth mass concrete class Q (1:3:6) to concrete the 50mm dia. CHS poles while ensuring they remain plumb 600mm deep below the ground level and 2500mm (2.5m) above ground level.	m ³	1.5		
F	Supply and weld a 12mm high tensile steel rod along the bases of the posts for anchoring the chainlink to the ground along the whole length of the fence.				
G	Allow for excavating 200mm deep along the fence to fix the rod.	m	100		
H	Allow for curing of all concrete works	Item	1		
	Supply and fix 3No strands of 12G barbed wire bound onto either sides of the Y post using 3mm galvanised wire as shown in the drawings.				
I	Ditto for posts	m	14.29		
J	Supply and and fix 2500mm high HEAVY GUAGE 12 chainlink to posts using 3mm galvanised wire. Allow for securing the chainlink to a 12mm reinforcement bar welded at the base between the posts.	m	100		

K	Supply and fix razer wire secured on the chainlink, barbed wire and Y posts by binding wire and rolled approximately 600mm dia.	m	100		
L	Prepare and apply one under coat of epoxy based primer and two finishing epoxy based paints to metal surfaces n.e 250mm in alternate bands of 300mm	No.	66		
Total Cost of Fence and Gate					

GRAND SUMMARY					
A	Total Cost of Borehole Equipping and Installation				
B	Total Cost of Elevelated Water Tank 50 meter cubic				
C	Total Cost of Water Kiosk				
	Total Cost of Animal Troughs (Camel)				
D	Total Cost of Animal Troughs (Sheep/Goat)				
E	Total Cost of Generator Room				
F	Total Cost of Caretaker Room				
G	Total Cost of Fence and Gate				
	Total Cost of Borehole Rehibition				
	Grand Total				

BOQS IN EXCEL SHEET

