

CONFIDENTIAL

FOREWORD

1 SITE PRELIMINARIES

2 CATCHMENT OF SOURCES

3 SUPPLY AND LAYING OF PIPES

4 CIVIL WORKS

The Contractor has to indicate in the Price Schedule, all the unit and contractual prices appearing in the bill of quantities.

All the prices are to be indicated in the currency as required in the bid document. At the time of the unit and contractual price determination, the bidder takes into account the Instructions to bidders, the descriptions contained in the Price Schedule, the General and Particular Technical specifications, as those contained in the drawing which is also an integral part of the bidding document.

The supply prices include all the costs of supplying and temporary storages up to the time of execution, any intermediate transport, the transport to a warehouse of materials not used as indicated by the Client, and their eventual placement.

If the bidder submits a Price Schedule and a Bill of Quantities according to his own criteria, he must strictly respect the format given in this bid document:

- Numbering of items
- Structure of subtotal and total
- The quantities indicated in the bill

General information:**a) Water Quality Analysis**

The water Quality should be done by the contractor at each water source to ensure that water will not have negative effect on human health as well as on pipe material, to be on safe side, it is recommended that per each sample three tests be carried out and the mean of them will be taken as the result of the sample, therefore the recommended test to be done are:

*E-coli ,faecal coliforms and total coliforms because they are the main indicators of pathogenic microorganisms that directly affect human health

*Conductivity, PH, Temperature, and TDS because they are indicators of pipe corrosion and Other parameters indicated on the Tender Documents

b) Civil works

All the civil and construction works will be carried out according to the drawings of the successful bidder, and the requirements of the General and Particular Technical specifications. These drawings require the approval of the Representative of the Client.

The prices include all the civil works, the installation of equipments, the supply and fixing of covers, step irons, anchors, and all accruals indicated on the drawings. The prices also include the supply and fixing of watertight wall fittings. The wall fittings will be in galvanized steel or in cast iron, their lengths will be given according to the thickness of the walls by ensuring a wall clearance of 15 cm on each side. The testing for tightness is also included in the prices of the hydraulic works.

c) Reinforced concrete works:

* Supply and casting of reinforced concrete, including formwork and reinforcement

* Structural stability of the works according to the General provisions of the technical clauses and drawings of reinforcement

* Supply and cast reinforced concrete conforming to the standards and the technical specifications, including transport, additives, factors of safety, etc.

* Equipments and labour necessary to make, place, vibrate and curing of concrete

* Supply, placement, adjustment, rubber seals for tightness, and dilation of dummy joints

* Any accruals for chanals of conduits, sleeves, etc, for the installation of the equipments and various machines

* Supply and fix mild steels and (or) high-strength steels meeting the standards and the technical specifications, including terms of supply and labour resulting from the fabrication of the concrete, the reinforcements, the off cuts, bindings and adjustment between prefabricated lengths and real lengths.

*Tests in accordance with the technical specifications including all accruals.

* The price for the laying of the pipes comprises of the price for the placement, the pressure tests, and all other accruals.

Dosage for concrete classes are:

Class A: dosage is 350 kg/m3

Class B: dosage is 250 kg/m3

Class C: Is a blinding concrete and the dosage is 200 kg/m3

The cement to the sand proportion of cement mortar classes are:

Class B: 1:3

Class D: 1:5

By signing the tender, the bidder acknowledges the priority of the texts of this Tender Document.

BUSE TSA DRINKING WATER SUPPLY SYSTEM IN KAGEYO SECTOR OF GATSIBO DISTRICT (23 km)**Detailed Quantity Estimate**

Item N°	DESCRIPTION	SUPPLIER PROPOSAL DESCRIPTION	UNIT	QTY	RATE DDP EURO INCLUDING ALL TAXES	AMOUNT DDP FRw INCLUDING ALL TAXES
1	SITE PRELIMINARIES					
1.1	Preparation of the site according to technical specifications; access road, mobilization of the material and its transport on the site, installation of the site, storage, guarding, including the toilet of the personnel. The installation includes the water connection on the existing network. Site preparation also includes, site clearance, removal of top soil, levelling or any shaping necessary to the installations of the site together with all the cut and fill necessary to this end. The estimated cost for this item is maintained all through to the completion of the works.		LS	1.00		G=F+E
1.2	Putting in place a site billboards according to the client's instructions, and including and all accruals		Ls	1.00		
1.3	Design review and production of work execution documents, and including all accruals, and as built plans documents (soft and hard copies)		Km	23		-
	SUBTOTAL DIVISION 1:					-

2	CATCHMENT OF SOURCES				
2.1	CATCHMENT OF NYAKAGEZI SOURCE 2.5 l/s				
2.1.1	Site clearance, removal of top vegetable soil, and site leveling or any shaping necessary	m2	706.86		-
2.1.2	Earthwork , cut, fill and evacuation or overlay of the surplus soils, including all accruals	m3	1,206.37		-
2.1.3	Increase in Value for hard soil	m3	603.19		-
2.1.4	Increase in Value for rock soil	m3	263.89		-
2.1.5	Supply and fix 18m PVC strainer DE75 DN60 PN10 to 20 cm of the tablecloth and routing of water in pipe PVC DE63 DN50 PN10 of the strainer to the starting chamber at 12 m, including all accruals	lm	63.00		-
2.1.6	Supply and fix rolled filtrant river gravel, well washed up to 60 cm height, including all accruals	m3	30.00		-
2.1.7	Supply and fix plastic tight sheet with the top of the gravel folded in 3 layers, including all accruals	m2	18.00		-
2.1.8	Fill with clay for a tight layer of 30 cm	m3	45.00		-
2.1.9	Fill with fine grained soil to a layer of 15 cm on top of the clay, including all accruals	m3	27.00		-
2.1.10	Fill with soils without roots and other organic matter by compacting each time layers of 20 cm up to the level of the original ground, including all accruals	m3	141.37		-
2.1.11	Excavate a trench of protection of the source up to 80 cm depth. The bottom width 50 cm, including all accruals.	m3	37.70		-
2.1.12	Put in place a protective fence of quickset hedge in euphorbiums against animals, including all accruals	lm	188.50		-
2.1.13	Plant passparum around the zone of harnessing, including all accruals	m2	706.86		-
	SUBTOTAL DIVISION 2.1:				-
2.2	CATCHMENT OF KANINGA SOURCE 2 l/s				
2.2.1	Site clearance, removal of top vegetable soil, and site leveling or any shaping necessary	m2	1,319.47		-
2.2.2	Earthwork , cut, fill and evacuation or overlay of the surplus soils, including all accruals	m3	678.58		-
2.2.3	Increase in Value for hard soil	m3	235.62		-
2.2.4	Increase in Value for rock soil	m3	157.08		-
2.2.5	Supply and fix 18m PVC strainer DE75 DN60 PN10 to 20 cm of the tablecloth and routing of water in pipe PVC DE63 DN50 PN10 of the strainer to the starting chamber at 45 m, including all accruals	lm	30.00		-
2.2.6	Supply and fix rolled filtrant river gravel, well washed up to 60 cm height, including all accruals	m3	18.00		-
2.2.7	Supply and fix plastic tight sheet with the top of the gravel folded in 3 layers, including all accruals	m2	12.00		-
2.2.8	Fill with clay for a tight layer of 30 cm	m3	36.00		-
2.2.9	Fill with fine grained soil to a layer of 15 cm on top of the clay, including all accruals	m3	18.00		-
2.2.10	Fill with soils without roots and other organic matter by compacting each time layers of 20 cm up to the level of the original ground, including all accruals	m3	263.89		-
2.2.11	Excavate a trench of protection of the source up to 80 cm depth. The bottom width 50 cm, including all accruals.	m3	37.70		-
2.2.12	Put in place a protective fence of quickset hedge in euphorbiums against animals, including all accruals	lm	94.25		-
2.2.13	Plant passparum around the zone of harnessing, including all accruals	m2	1,319.47		-
	SUBTOTAL DIVISION 2.2:				-
2.3	CATCHMENT OF CYABUHIMBIRI SOURCE 0.8 l/s				
2.3.1	Site clearance, removal of top vegetable soil, and site leveling or any shaping necessary	m2	1,319.47		-
2.3.2	Earthwork , cut, fill and evacuation or overlay of the surplus soils, including all accruals	m3	678.58		-
2.3.3	Increase in Value for hard soil	m3	235.62		-
2.3.4	Increase in Value for rock soil	m3	157.08		-
2.3.5	Supply and fix 18m PVC strainer DE75 DN60 PN10 to 20 cm of the tablecloth and routing of water in pipe PVC DE63 DN50 PN10 of the strainer to the starting chamber at 12 m, including all accruals	lm	30.00		-
2.3.6	Supply and fix rolled filtrant river gravel, well washed up to 60 cm height, including all accruals	m3	18.00		-
2.3.7	Supply and fix plastic tight sheet with the top of the gravel folded in 3 layers, including all accruals	m2	12.00		-
2.3.8	Fill with clay for a tight layer of 30 cm	m3	36.00		-
2.3.9	Fill with fine grained soil to a layer of 15 cm on top of the clay, including all accruals	m3	18.00		-
2.3.10	Fill with soils without roots and other organic matter by compacting each time layers of 20 cm up to the level of the original ground, including all accruals	m3	263.89		-
2.3.11	Excavate a trench of protection of the source up to 80 cm depth. The bottom width 50 cm, including all accruals.	m3	37.70		-
2.3.12	Put in place a protective fence of quickset hedge in euphorbiums against animals, including all accruals	lm	94.25		-
2.3.13	Plant passparum around the zone of harnessing, including all accruals	m2	1,319.47		-
	SUBTOTAL DIVISION 2.3:				-
	TOTAL DIVISION 2:				-
3	Supply and installation of pipelines				
	The following prices include :				
	The earthwork, trenches backfilling and land remediation at natural surface ground.				
	Supply, fix, and pressure testing for watertightness of pipes PN16 including lubricants and seals.				
3.1	Earthwork by excavation and backfilling				
3.1.1	Excavation and backfilling of Trenches with 1 x0.6 m (according to Wasac standard) depth , including all accruals.	lm	23,059.00		-
3.1.2	Supply and Installation of Concrete Terminals (painted blue and numbered) on the route of the pipeline, dim.0.15 * 0.15 * 0.8m , every 100m and at each change of direction (elbow position)	Item	230.59		-
	SUBTOTAL 3.1:				-
3.2	Supply and installation of pipelines				
3.2.1	HDPE DE 125 mm PN 16	lm	834		-
3.2.2	HDPE DE 75 mm PN 16	lm	1,654		-
3.2.3	HDPE DE 63mm PN 16	lm	3,308		-
3.2.4	HDPE DE 50mm PN 16	lm	4,350		-
3.2.5	HDPE DE 40mm PN 16	lm	8,698		-
3.2.6	HDPE DE 32 mm PN 16	lm	4,215		-
3.2.7	casing with GS 1" 1/2 pipe	lm	42.00		-
3.2.8	casing with GS 2" pipe	lm	24.00		-
3.2.9	Solid mass of masonry in stones for pipes stabilization	m3	2.25		-
3.2.10	Relocation Existance Pipeline and Reconnect 3 Schools and Health Center to Busetsa Water supply System	FF	1.00		-
3.2.11	Pressure test	lm	23,059.00		-
3.2.12	Desinfection of network with chlorine	lm	23,059.00		-
	SUBTOTAL 3.2:				-

SUBTOTAL DIVISION 3:								-	
4	CONSTRUCTION OF CHAMABERS								
4.1	Air vent Chamber # (1.6x1.6x1.2m)								
4.1.1	Earthworks cut, fill and evacuation or overlay of the surplus soils, including all accruals						m3	9.45	-
4.1.2	Hardcore (stones pitching) of 30 cm with a filling of 1:10 cement sand mortar mix, saturated with water						m3	1.26	-
4.1.3	Blind concrete class C, thickness 5 cm						m3	0.21	-
4.1.4	Reinforced concrete for base slab ,class A						m3	0.51	-
4.1.5	Reinforced concrete for roof slab ,class A						m3	0.45	-
4.1.6	Walls in stones masonry jointed with a mortar of class D						m3	1.41	-
4.1.7	Coating of the internal face of wall of the inspection chamber with 3 layers of plaster of 300 kg						m2	6.05	-
4.1.8	Plaster on the upper side of roof slab with a rough mortar class B						m2	3.02	-
4.1.9	Supply and fix the damp proof course between the roof slab, the wall and the beam of support						m2	1.34	-
4.1.10	Supply and fix of the metallic cover of 60X60X0.3 cm with a ventilation shaft at the top and mosquito screen						item	1.00	-
4.1.11	Supply and fix an iron ladder for interior access embedded in the wall, painted with 3 layers of paint "rust preventive", the step=25cm						item	1.00	-
4.1.12	Supply and installation of hydraulic equipment and Fittings for connection of Air release valve						LS	1.00	-
SUBTOTAL									-
SUBTOTAL of 5 Air vent								5.00	-
4.2	Washout # (1.6x1.6x1.2m)								
4.2.1	Earthworks cut, fill and evacuation or overlay of the surplus soils, including all accruals						m3	9.45	-
4.2.2	Hardcore (stones pitching) of 30 cm with a filling of 1:10 cement sand mortar mix, saturated with water						m3	1.26	-
4.2.3	Blind concrete class C, thickness 5 cm						m3	0.21	-
4.2.4	Reinforced concrete for base slab ,class A						m3	0.51	-
4.2.5	Reinforced concrete for roof slab ,class A						m3	0.45	-
4.2.6	walls in stones masonry jointed with a mortar of class D						m3	1.41	-
4.2.7	Coating of the internal face of wall of the inspection chamber with 3 layers of plaster of 300 kg						m2	6.05	-
4.2.8	Plaster on the upper side of roof slab with a rough mortar class B						m2	3.02	-
4.2.9	Supply and fix the damp proof course between the roof slab, the wall and the beam of support						m2	1.34	-
4.2.10	Supply and fix of the metallic cover of 60X60X0.3 cm with a ventilation shaft at the top and mosquito screen						item	1.00	-
4.2.11	Supply and fix an iron ladder for interior access embedded in the wall, painted with 3 layers of paint "rust preventive", the step=25cm						item	1.00	-
4.2.12	Supply and installation of hydraulic equipment and Fittings for connection of washout						LS	1.00	-
4.2.13	Rejection works						Ls	1.00	-
SUBTOTAL									-
SUBTOTAL of 6 Washout								6.00	-
4.3	INTAKE CHAMBER # (3.1x2.4x1.2m)								
4.3.1	Earthwork by cut, fill and evacuation or overlay of the surplus soils, including all accruals						m3	13.02	-
4.3.2	Hardcore (stones pitching) of 30 cm with voids full with cement and sand mortar mix of ratio 1 to 10 respectively						m3	2.85	-
4.3.3	Blind with concrete class C, thickness 5 cm						m3	0.48	-
4.3.4	Hydraulic reinforced concrete for the base						m3	1.23	-
4.3.5	Reinforced concrete for the roof ,class A						m3	1.39	-
4.3.6	Masonry walls in hardcore, with fair face pointed at the joints						m3	4.36	-
4.3.7	Coating of the internal face of wall of the tank with 3 hydrafuges water proofing coats						m2	15.04	-
4.3.8	Coating of the internal face of wall of the inspection chamber with 3 layers of plaster of 300 kg/m ³						m2	15.04	-
4.3.9	Supply and apply 3 layers of paints "Sikalatex"						m2	15.04	-
4.3.10	Plaster on upper side of the roof slab with a rough mortar class B						m2	9.26	-
4.3.11	Supply and fix the damp proof course between the roof slab, the wall and the beam of support						m2	3.09	-
4.3.12	Supply and fix of the metallic cover of 60 X 60 X 0.3 cm with a ventilation shaft at the top and the mosquito screen						item	2.00	-
4.3.13	Supply a fixed aluminium ladder for interior access embedded in the wall, painted with 3 layers of paint "rust preventive", with 2m of height						item	1.00	-
4.3.14	Supply and installation of hydraulic equipment and Fittings for connection of intake (All valve of PN16).						LS	1.00	-
4.3.15	Rejection works						Ls	1.00	-
SUBTOTAL									-
TOTAL of 3 Intake Chambers								3.00	-
4.4	CONSTRUCTION OF SECTION VALVE BRANCHES CHAMBERS # (1.8x1.8x1.2m)								
4.4.1	Terracing, digging, cutting, excavation, backfilling, overlay of surplus soil and land remediation, including all accruals						m3	8.23	-
4.4.2	Hardcore (stones pitching) of 20 cm with a filling of 1:10 cement sand mortar mix, saturated with water						m3	1.31	-
4.4.3	Blind concrete class C, thickness 5 cm						m3	0.18	-
4.4.4	Reinforced concrete for base slab and roof slab ,class A						m3	0.53	-
4.4.5	Lateral walls in stones masonry jointed with a mortar of class D						m3	1.41	-
4.4.6	Coating of the internal side of wall of the inspection chamber with plaster of 300 kg/m ³ cement mixture						m2	6.05	-
4.4.7	Plaster on upper side of the slab with a rough mortar class B						m2	3.02	-
4.4.8	Supply and fix the damp proof course between the roof slab, the wall and the beam of support						m2	1.18	-
4.4.9	Supply and fix of the metallic cover of 60X60X0.3 cm with a ventilation shaft at the top and the mosquito screen						item	1.00	-
4.4.10	Supply and fix an iron ladder for interior access embedded in the wall, painted with 3 layers of rust preventive paint, the step=25cm						item	1.00	-
4.4.11	Supply and installation of hydraulic equipment and Fittings for connection of valve chamber (All valve of PN16).						LS	1.00	-
SUBTOTAL 4.4									-
SUBTOTAL 4.4 (For 8 Valve chamber)								8.00	-
4.5	CONSTRUCTION OF Chlorination CHAMBER # (1.6x1.5x1.2m)								
4.5.1	Terracing, digging, cutting, excavation, backfilling, overlay of surplus soil and land remediation, including all accruals						m3	6.30	-
4.5.2	Hardcore (stones pitching) of 20 cm with a filling of 1:10 cement sand mortar mix, saturated with water						m3	1.25	-
4.5.3	Blind concrete class C, thickness 5 cm						m3	0.13	-
4.5.4	Reinforced concrete for base slab and roof slab ,class A						m3	0.40	-

4.5.5	Lateral walls in stones masonry jointed with a mortar of class D		m3	1.27		-
4.5.6	Coating of the internal side of wall of the inspection chamber with 3 layers of plaster of 300 kg/m ³ cement mixture		m2	7.56		-
4.5.7	Plaster on upper side of the slab with a rough mortar class B		m2	3.02		-
4.5.8	Supply and fix the damp proof course between the roof slab, the wall and the beam of support		m2	1.18		-
4.5.9	Supply and fix of the metallic cover of 60X60X0.3 cm with a ventilation shaft at the top and the mosquito screen		item	1.00		-
4.5.10	Supply a fixed iron ladder for interior access embedded in the wall, painted with 3 layers of paint "rust preventive", with 2m of height		item	1.00		-
4.5.11	Supply and installation of hydraulic equipment and Fittings for connection of chlorination chamber (All valve of PN16).		LS	1.00		-
SUBTOTAL 4.5						-
SUBTOTAL 4.5 (For 1 Chlorination chamber)				1.00		-
SUBTOTAL 4						-
5 CONSTRUCTION OF PH REGULATOR AND TREATMENT ROOM (Refer to designs)						
5.1	Setting out of the building as specified o the drawings		LS	1		-
FOUNDATION WORKS						
5.2	Earth works in Excavation 7.25*5.3*2,(L=7.25m,w=5.3m,h=2m) of foundation trenches Terracing, digging, cutting, excavation, backfilling, overlay of surplus soil and land remediation, including all accruals and site clearing after construction		m ³	103.125		-
5.3	Hardcore (stones pitching) of 20 cm with a filling of 1:10 cement sand mortar mix, saturated with water		m3	10.875		-
5.4						-
5.5	Supply of aggregate for the filtration chamber		m3	4.8		-
5.6	Supply of fine sand for the filtration chamber		m3	4.8		-
5.7	Supply and Testing Calcite material (ex-limestone/travertine or dolomite)		m3	16.4		-
5.8	Supply and installation of hydraulic equipment include all pipes and all fittings		Ls	1		-
5.9	Supply and fix damp proof course between the roof slab, the wall and the beam of support		m2	7.4152		-
CONCRETE WORK						
5.10.	Blinding concrete in foundation trenches		m ³	2.4375		-
5.11	Cut walk passage on the top side of the filter to be standed up on while making the inspection works and checking the operation works.		m3	0.69375		-
5.12	200mm thick reinforced concrete underground walls		m3	24.6525		-
5.13	Stonework foundation		m ³	12.177		-
5.14	Backfilling and soil compaction around foundation walls		m ³	44.3525		-
5.15	Cement coating over foundation wall		m ³	0.468		-
5.16	Dump proof course of 2 Cm thick		Lm	1.355		-
S/Total						-
SUPPERSTRUCTURE						
Wall masonry and concrete						
5.17	Elevation of interior and exterior walls with burnt bricks bound together with cement mortar		m ³	11.508		-
5.18	Mansory for ventillation holes (claustra)		m ²	2		-
5.19	Reinforced concrete lintel		m ³	1.004		-
ROOF						
5.20	In-situ, vibrated reinforced concrete mix as C25/30 ratio described.including High yield tensile steel bar reinforcement grade 460 as described including cutting to lengths, bending, hoisting and fixing including all necessary tying wire and spacing blocks. and Sawn timber formworks to GET A SUSPENDED SLAB		m3	6		-
S/Total						-
CEILING						
5.21	Preparing the well Painting I three coat emulsion paint in soffit of under the slab		m ²	6		-
DOORS & WINDOWS						
Doors						
5.22	Supply and fixation of 180cm*210cm glazed metallic door in quality with transom, lock and all requirements		Pce	1.00		-
Windows						
5.22	Supply and fixation of 70*70 glazed metallic window and all requirements		Pce	4		-
FLOORING FINISHES						
5.23	Floor tiling and skirting		m ²	19		-
PLASTERING, RENDERING & WALL FINISHES						
5.24	Wall plastering and Rendering		m ²	63		-
PAINTING WORKS						
5.25	Wall painting with emulsion paints		m ²	63		-
PIPE WORK						
INLET-OUTLET AND WASH OUT						
5.26	Supply and fixation highest quality PVC 16PN and DN125mm of washout inlet and out let pipes .complete of good quality with accessories and all Fittings as required		LS	1		-
5.27	Water proofing works to protect side walls on back side of concrete walls		m ²	54.2		-
ELECTRICITY						
5.29	Supply & fixation of electrical appliances					-
5.30	Supply and fixation of Incandesent Light bulb with their solar pannel .complete of good quality with accessories and all requirements		pce	4		-
5.31	Supply and fixation of Switches. complete of good quality with accessories and all requirements		pce	3		-
EVACUATION						
5.32	Soak away pit (3m deep) excavation WITH 2 chambers filled with stones for the purpose of retaining the wastes by directing the gutters of the roof should be channeled in this pit from the filters and other side drainage channels during the rain season .		m3	12.0		-
5.33	Cover of the soak away pit in a reinforced concrete (d=1.10 m)		m3	0.4		-
5.34	Stone to fill in the soak away pit for the storm water, sludgers from filters and other side liquid wastes		m3	1.4		-
DRAINAGE WORKS						
5.35	Boundary wall in mesh stainless and other tubes combined together with the columns in masonry		LS	4		-
5.36	Woven wire fencing 2m height bound on metallic poles (40x40mm) 2,50 m equidistant and anchoring in a hardcore and cement mortar foundation (1,20 m height) along the outline of the plot		Lm	80		-
S/Total						-
SUBTOTAL :5						-
SUBTOTAL FOR 1 PH REGULATOR				1		-
6 RESERVOIRS						

6.1	Construction of 25 m³ capacity reservoir				
6.1.1	Clear site of grass, bushes, shrubs and hedges grub up roots and remove from site all excavated materials	m2	47.52		-
6.1.2	Stripping of top vegetative soil 200 mm deep and remove from site all excavated materials.	m3	9.50		-
6.1.3	Earthworks, cut, fill and evacuation or overlay of the surplus soils, including all accruals	m3	47.52		-
6.1.4	Termidor 25EC. Chemical anti-termite treatment executed by an approved specialist under 10years guarantee to surfaces of hardcore.	m2	47.52		-
6.1.5	Hardcore (stones pitching) of 30 cm thick with a filling of 1:10 cement sand mortar mix saturated with water	m3	5.78		-
6.1.6	Blinding concrete C15/20, thickness 10 cm	m3	0.87		-
6.1.7	Hydraulic reinforced concrete C25/30 for base slab	m3	4.39		-
6.1.8	Reinforced concrete C25/30 for cover slab and beams	m3	2.27		-
6.1.9	Supply and installation of water stoper	m3	15.60		-
6.1.10	Hydraulic reinforced concrete C25/30 for elevation walls	m3	9.98		-
6.1.11	Supply and application of 3 layers of water proofing paints	m2	65.04		-
6.1.12	Supply and application of 3 layers of antibacteria paints on the internal walls	m2	65.04		-
6.1.13	Supply and application of 3 layers of tyrolean finish on the external walls	m2	65.04		-
6.1.14	Plaster on upper side of the cover slab with a rough mortar class B with hard finish	m2	15.12		-
6.1.15	Protection of the cover slab with bitumen	m2	15.12		-
6.1.16	Protection of the cover slab with gravels above bitumen	m2	15.12		-
6.1.17	Realization of 6m Ø110mm pipes for the evacuation of rainwater from the top slab of reservoir	m	6.00		-
6.1.18	Aeration of reservoir with galvanized steel pipe DN100	Item	2.00		-
6.1.19	Supply and fix of stainless steel ladder embedded in the wall for access inside the reservoir	Item	1.00		-
6.1.20	Supply and placement of fiberglass cover 800 mm x 800 mm for inspection	Lps	1.00		-
6.1.21	Supply and fix of a solid galvanised steel ladder embedded in the wall for access to the top of the reservoir	Item	1.00		-
	Total 1:				-
	Valve chamber:				-
6.1.22	Earthworks cut, fill and evacuation or overlay of the surplus soils, including all accruals	m3	9.86		-
6.1.23	Hardcore (stones pitching) of 30 cm with a filling of 1:10 cement sand mortar mix saturated with water	m3	2.56		-
6.1.24	Blinding concrete C15/20, thickness 5 cm	m3	0.43		-
6.1.25	Reinforced concrete C25/30 for base slab and cover slab	m3	2.27		-
6.1.26	Brick masonry for walls mortar jointing	m3	8.54		-
6.1.27	Three layers of Plaster on internal and external sides of the wall with a rough mortar class B with hard finish	m2	42.68		-
6.1.28	Supply and installation of PVC leak drain pipe DN50 PN16	m	0.50		-
6.1.29	Supply and fix of a solid galvanised steel ladder embedded in the wall for access into the chamber	Item	1.00		-
6.1.30	Supply and installation of fittings supports, including all accruals.	Lps	1.00		-
6.1.31	Supply and installation of a metallic simple door with specifications indicated on the drawings	Item	1.00		-
	Total 2:				-
6.1.32	Supply and installation of DI flanged hydraulic equipment and Fittings for connection of 25m ³ reservoir	LS	1.00		-
	Civil works washout :				-
6.1.33	Terracing, digging, cutting, excavation, backfilling, overlay of surplus soil and land remediation, including all accruals	m3	5.67		-
6.1.34	Hardcore (stones pitching) of 30 cm thick with a filling of 1:10 cement sand mortar mix saturated with water	m3	0.66		-
6.1.35	Blinding concrete C15/20 thickness 5 cm	m3	0.17		-
6.1.36	Reinforced concrete C25/30 for base slab	m3	0.35		-
6.1.37	Masonry walls in burnt bricks with fair face pointed at the joints with cement mortar Class D.	m3	0.13		-
	Total 3:				-
	Compound drainage system:				-
	Manholes and drainage pipes:				-
6.1.38	Excavation and evacuation of all excavated materials	m3	23.98		-
6.1.39	Blinding concrete C15/20, thickness 5 cm	m3	1.36		-
6.1.40	Hardcore (stones pitching) of 20 cm as per drawing	m3	2.01		-
6.1.41	Elevation walls in stone masonry with cement mortar class C	m3	7.66		-
6.1.42	Copping concrete C15/20, thickness 5 cm	m3	1.34		-
6.1.43	Screeding on the bottom and sides of the channel.	m3	27.19		-
6.1.44	PVC DN 110 PN10 drainage pipe as per drawings.	m	1.50		-
	Sub-total 1:				-
	Soakpit:				-
6.1.45	Clear site of grass, bushes, shrubs and hedges grub up roots and remove from site all excavated materials	m2	3.14		-
6.1.46	Stripping of top vegetative soil 200 mm deep and remove from site all excavated materials.	m3	0.63		-
6.1.47	Excavation of soak pit and evacuation of all excavated materials	m3	33.94		-
6.1.48	Protection of soak pit walls with stone masonry	m3	1.70		-
6.1.49	Concrete cover: 100mm reinforced concrete C20/25 with rebars of 10mm dia spaced at 200 mm	m3	0.25		-
6.1.50	Supply and installation of vent pipe PVC DN110 PN10	m	1.50		-
6.1.51	Masonry in burnt bricks to support the vent pipe	m3	0.05		-
	Sub-total 2:				-
	Total 4:				-
	Landscaping:				-
6.1.52	Supply and placement of white gravel to a minimum thickness of 5 cm	m2	55.00		-
6.1.53	Supply and planting of passparum grass	m2	290.00		-
	Total 5:				-
	SUBTOTAL 4.2.1:				-
	SUBTOTAL OF 2 Res. 25m³		2.00		-
6.2	CONSTRUCTION OF REINFORCED CONCRETE RESERVOIR OF 100 m3				
6.2.1	Site excavation	m3	120.28398		-
6.2.2	Riprap for dry stones. thickness 30 cm	m3	27.15786		-
6.2.3	Blinding concrete. thickness 5 cm dosage 150 kg/m3	m3	3.17925		-
6.2.4	Reinforce concrete rafter. dosage 350 kg/m3	m3	15.5875095		-
6.2.5	Reinforced concrete elevation. Mixing ratio 350 kg / m3	m3	17.41287		-
6.2.6	reinforced concrete Column and beam	m3	0.78		-
6.2.7	Reinforced concrete Cover slab. dosage 350 kg/m3	m3	8.9124975		-
6.2.8	Internal roughcasting with a cement mortar mixed at 400kg / m3 and sikalatex in three successive layers of thickness of 2cm each	m2	186.045		-
6.2.9	Smooth pointing of external masonry with a cement mortar mixed at 400kg / m3	m2	66.725		-
6.2.10	Supply and installation of a steel manhole cover 80x80 cm of 3mm thick with aeration	pce	2		-
6.2.11	Supply and Installation of Aluminium ladder (Inox ladder) for access	pce	1		-
6.2.12	Protection of the cover slab with roofing and gravel	Ls	1		-

6.2.13	Valve Chamber #2x2x1.2 int#					
6.2.14	Site excavation		m3	23.104		-
6.2.15	Riprap for dry stones. thickness 0.2 cm		m3	2.352		-
6.2.16	Blinding concrete. thickness 5 cm dosage 150 kg/m ³		m3	0.392		-
6.2.17	Reinforce concrete rafter. dosage 350 kg/m ³		m3	0.676		-
6.2.18	Stone masonry for elevation		m3	3.744		-
6.2.19	Reinforced concrete Cover slab. dosage 350 kg/m ³		m3	0.784		-
6.2.20	Application of a finishing layer inside the structure		m2	9.6		-
6.2.21	Pointing of exterior masonry		m2	12.48		-
6.2.22	Supply and installation of a steel manhole cover 60x60cm of 3mm thick		pce	1		-
6.2.23	Supply and installation of Flanged hydraulic equipment & Fittings and DI pipes for connection of chamber according to the client instruction		Lump Sum	1		-
	REJECTION WORK					
6.2.24	Terracing, digging, cutting, excavation, backfilling, overlay of surplus soil and land remediation, including all accruals		m3	2.376		-
6.2.25	Hardcore (Stones pitching) of 20 cm with a filling of 1:10 cement sand mortar mix, saturated with water		m3	0.192		-
6.2.26	Blind concrete class C, thickness 5 cm		m3	0.048		-
6.2.27	Reinforced concrete class A, for base slab		m3	0.1008		-
6.2.28	stone Masonry walls		m3	0.504		-
6.2.29	Coating of walls with plaster of 300 kg/m ³ cement mixture		m2	1.68		-
6.2.30	Soakaway pit 1 m ³ , full of gravel and hardcore (stones pitching)		LS	1		-
	Landscaping:					
6.2.31	Supply and placement of white gravel to a minimum thickness of 5 cm		m2	110.2		-
6.2.32	Supply and planting of passparum grass		m2	450.3		-
	SUBTOTAL 4.2.2:					-
	SUBTOTAL OF 2 R100m³			2.00		-
	Sub total Divison 6					-
7	Water point with taps					
7.1	Construction of Water point with double taps for community					
7.1.1	Earthworks cut, fill and evacuation or overlay of the surplus soils, including all accruals		m3	22.51		-
7.1.2	Hardcore (stones pitching) of 30 cm with a filling of 1:10 cement sand mortar mix, saturated with water		m3	2.18		-
7.1.3	Blind concrete class C, thickness 5 cm		m3	0.38		-
7.1.4	Reinforced concrete for base slab ,class A		m3	1.10		-
7.1.5	Reinforced concrete for roof slab ,class A		m3	0.07		-
7.1.6	walls in stones masonry jointed with a mortar of class D		m3	0.98		-
7.1.7	Coating of walls with plaster of 300 kg/m ³		m2	13.92		-
7.1.8	Plaster on the upper side of roof slab with a rough mortar class B		m2	0.11		-
7.1.9	Supply and fix the damp proof course between the roof slab and the wall		m2	0.59		-
7.1.10	Supply and fix of the metallic cover of 50X50X0.3 cm		item	1.00		-
7.1.11	Supply and installation of all hydraulic equipment and Fittings including volumetric water meter with at least nominal flow rate of 1.5m ³ /h and max admissible pressure of 16 bar		LS	1.00		-
7.1.12	Soakaway pit 1 m ³ , full of gravel and hardcore (stones pitching)		LS	1.00		-
	Sub total 7.1:					-
	Total for 19 Water taps			19.00		-
	SUBTOTAL Division 7 of WATER POINTS:					-
8	PUMPING STATION					
8.1	SELECTED AND APPROVED SUBMERSIBLE SOLAR PUMP AND ASSOCIATED WORKS					
	SUPPLY AND INSTALL of submissble pump and solar panel					
8.1.1.1	Submersible pump complete with 15kW ,3Phases motor (H=104m and Q=176m ³ /day)		No.	1		-
8.1.1.2	Supply and Install 19.2kWp Photo Voltaic Array		LS	1		-
8.1.1.3	Floating Switch		No.	1		-
8.1.1.4	Pressure Switch		No.	1		-
8.1.1.5	Electrical Cabinet 40cmx30cmx20cm		No.	1		-
8.1.1.6	Electric Cable - switch to controller		No.	10		-
8.1.1.7	I/O 50 Switch (For SQF)		No.	1		-
8.1.1.8	Pump Controller(15kW Solar/Grid Hy brid Pump Controller)		No.	1		-
8.1.1.9	Inverter		No.	1		-
8.1.1.10	Sine wave filter		No.	1		-
8.1.1.11	2 Pole Circuit Breaker		No.	1		-
8.1.1.12	Fuses		No.	2		-
8.1.1.13	Surge Protector		No.	1		-
8.1.1.14	Electric Cable - safety Lights		No.	10		-
8.1.1.15	Lightning arrestor		No.	1		-
8.1.1.16	MC4 connector		No.	10		-
8.1.1.17	Nylon rope to pump		m	1		-
8.1.1.18	Armored electrical cable		m	10		-
8.1.1.19	Submersible electrical cable		m	95		-
8.1.1.20	Submersible pump pipe		m	150		-
8.1.1.21	Auxiliary 40W solar panel		No.	1		-
8.1.1.22	All Dos DDE 6-10B Dosing Pump		no.	1		-
8.1.1.23	Taw chlorine tank 200l		no.	1		-
8.1.1.24	Service Lights		No.	1		-
8.1.1.25	Security Lights		No.	1		-
	SUBTOTAL					-
	TOTAL FOR PUMP AND SOLAR SYSTEM 8.1:					-
8.2	CONTROL ROOM HOUSE and GUARD HOUSE					
	Site Clearance					
8.2.1	Clear site of all bushes, tree plants, shrubs and dispose of in an appropriate area		m2	166		-
8.2.2	Anti-Termite Treatment					
8.2.3	Chemical anti-termite treatment to subsoil or filling : Dagnet 38% E.C. or equal and approved : provide a ten year guarantee		m2	92		-
	Earth Works					
8.2.4	Excavate to reduce levels commencing at stripped levels not exceeding 1.5m deep		m3	228		-
8.2.5	Excavate for foundation trench commencing at reduced level but not exceeding 1.5m deep.		m3	10		-
8.2.6	Excavate for column pits commencing at reduced level but not exceeding 1.5m deep.		m3	9		-
8.2.7	Extra over excavations for excavating in rock.		m3	2		-
	Backfill					

8.2.8	Return fill and ram selected excavated material around foundations.	m3	3		-
8.2.9	Disposal of Excavated Materials				
8.2.10	Load and cart away surplus excavated material from site.	m3	243		-
8.2.11	Keeping Site Free from Water				
8.2.12	Allow for keeping the whole of the excavation free from general water	LS	1		-
	Planking and Strutting				
8.2.13	Allow for maintaining and upholding sides of excavation: clear off all fallen material, rubbish	LS	1		-
8.2.14	Insitu concrete : mix 1:4:8 (40mm aggregate)				
8.2.15	50mm Blinding : under footings	m2	9		-
8.2.16	50mm Blinding : Ground Slab	m2	32		-
	Insitu concrete : class 25/20mm aggregate: vibrated : reinforced including all reinforcement and necessary formwork				
8.2.17	Column bases	m3	1		-
8.2.18	Sub-Columns	m3	0		-
8.2.19	Ground Beams	m3	1		-
8.2.20	Basement Wall base	m3	3		-
8.2.21	Basement Wall	m3	22		-
	Hardcore and Fillings				
8.2.22	150mm Thick Bed of handpacked stone base, well rolled and compacted	m2	32		-
8.2.23	50mm thick sand blinding over surfaces of hardcore	m2	32		-
	Damp proof membrane				
8.2.24	1000 Gauge polythene damp proof membrane : measured net : allow for laps	m2	32		-
	Floor Finish				
8.2.25	Smooth cement screed for slab surface, Sprash aproan and skirting	m2	45		-
8.2.26	Damp Proof Course				
8.2.27	Damp Proof Course of Bituminous Felt to B.S 743 Type A with 150mm laps including cement and sand (1:3) levelling bed200mm Wide	lm	20		-
	Walling				
8.2.28	200mm walls Burnt briks laid in Rat Trap Bond Walling: bedded and jointed in cement and sand (1:4) mortar and pointing	m2	57		-
8.2.29	100mm walls Burnt briks laid in Rat Trap Bond Walling: bedded and jointed in cement and sand (1:4) mortar and pointing	m2	5		-
	Wall Finishes				
8.2.30	Apply plaster on internal walls, lintels and columns	m2	160		-
8.2.31	Prepare and apply three coats first grade "sadin" silk emulsion paint: on plastered walls	m2	131		-
8.2.32	Prepare and apply three coats first grade "Weather guard" paint: to columns and lintels	m2	29		-
	Openings				
	Steel doors				
	Vision panelled mild steel plate door overall including fixed glass transom part and paintings				
8.2.33	size 2000x2400mm	Pes	1		-
8.2.34	size 900x2400mm	Pes	1		-
	Plywood doors				
8.2.35	size 800x2100mm	Pes	1		-
	Steel windows				
	Vision panelled mild steel plate window overall including fixed glass transom part and paintings				
8.2.36	size 1500x1800mm	Pes	1		-
8.2.37	size 1200x600mm	Pes	1		-
8.2.38	size 600x400mm	Pes	1		-
	Ceiling Finish				
8.2.39	Gypsumboard drop ceiling: soffit 1.40 x 40 mm steel angle section; 40 x 40 mm wood framing and 2.5 mm dia galvanised wire; 2. Principal plane gypsumboard; 3. Brush white emulsion (C3)	m2	48		-
	Roof covering				
8.2.40	Installation of 28G pre-painted roof covering 0.4mm thick type l14 or Maxcover with 2crest lap fixed with Fixtite with EDPM washer on 40x40x2mm RHS purlins spaced at every 1m including all trusses and necessary accessories Note that truss system will be 40 x 40 x 2mm RHS top chord ; bottom chord and all internal members	m2	56		-
	Shower Tray				
8.2.41	Supply and fix metallic shower trays 90x90cm complete with flexible tap 1/2 " and white PVC support	Pes	1		-
	Rain Water Harvesting				
8.2.42	150mm diameter half round eaves gutter: including all fixing accessories	lm	9		-
8.2.43	110mm diameter rainwater downpipe to M&E specifications	lm	3		-
8.2.44	Allow for testing roofing system and rain water installation	lm	1		-
	Office Installations				
8.2.45	Allow provisional amount for office installation as per End-user requirements	PS	1		-
	SUBTOTAL 8.2:				-
	8.3 Ventilated pit latrine for the Sentinel				
8.3.1	Site clearance and removal of top vegetable soil	m3	8.53		-
8.3.2	Terracing of the site	m3	19.89		-
8.3.3	Digging of the pit	m3	25.08		-
8.3.4	Excavation for foundation; h = 0,7m	m3	1.12		-
8.3.5	Blind concrete	m3	0.08		-
8.3.6	Foundation in stone masonry	m3	1.44		-
8.3.7	Slabs in reinforced concrete	m3	1.00		-
8.3.8	Walling in burnt brickwork	m3	13.52		-
8.3.9	Lintel in reinforced concrete	m3	0.41		-
8.3.10	Ventilator in bore hole concrete blocks	item	6.00		-
8.3.11	Wooden struts and purlins	lm	21.30		-
8.3.12	Supply and fix of cover of embossed sheet iron	m2	11.96		-
8.3.13	Wooden frieze board	lm	14.20		-
8.3.14	Plywood doors :- 80x200	item	2.00		-
8.3.15	PVC pipe 110 for ventilation + Lattice	lm	8.00		-
8.3.16	Plinthe en ciment lissée intér. et extérieur	m2	3.30		-
8.3.17	Plinth of the interior and exterior wall faces	m2	28.00		-
8.3.18	Pointing of joints on external faces of walls	m2	30.22		-
8.3.19	Paving with burnt bricks	m2	1.40		-
8.3.20	Floor covering with hard rough finish	m2	4.16		-
8.3.21	Splash apron	m2	6.08		-
8.3.22	Latex paints on walls and lintel	m2	28.41		-

8.3.23	Enamel paint on doors and wooden frieze board		m2	9.56		-
8.3.24	Electrification of the latrine (2 sockets, 2 fluorescent lamps and cabling)		LS	1.00		-
SUBTOTAL 8.3						-
SUBTOTAL DIVISION 8:						-
9	Water quality testing					
9.1	Physical parameters: Colour, Turbidity, Temperature, pH, Conductivity, Total Hardness (CaCO3), Total Alkalinity (CaCO3), Total Suspended Solids (TSS), Total Dissolved Solids (TDS)					
9.2	Chemical parameters: Calcium (Ca2+), Magnesium (Mg2+), Sodium (Na+), Potassium (K+), Iron (Fe2+), Bicarbonates (HCO3-) Sulfates (SO42-), Chlorides (Cl-), Nitrate (NO3), Nitrites (NO2-) Phosphates (PO4 3-), Ammonium (NH4+), Fluorides (F-)		Number	6.00		-
9.3	Trace elements: Aluminium (Al), Antimony (Sb), Arsenic (As), Barium (Ba), Beryllium (Be), Boron (B), Cadmium (Cd), Chromium (Cr), Copper (Cu), Cyanide (HCN – CN), Fluoride (F), Iron (Fe), Lead (Pb), Manganese (Mn), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Silver (Ag), Uranium (U), and Zinc (Zn)					
9.4	Bacteriological elements: Total Coliforms, E. Coli and Faecal Coliform					
Sub total 9						-
GRAND TOTAL ALL TAX Exclusive EURO						-