

IKHALA TVET COLLEGE
NONESI WATER SUPPLY
TENDER NO:

BILL OF QUANTITIES

ITEM NO	PAY REFERS	DESCRIPTION	UNIT	TOTAL QTY	RATE	AMOUNT
1	SABS 1200 A PSA	<u>SECTION 1: PRELIMINARY AND GENERAL</u>				
	8,3	<u>FIXED-CHARGE ITEMS</u>				
1,1	8.3.1	Contractual Requirements	Sum	1		
1,2	8.3.2	Establish Facilities on the Site:	Sum	1		
1,3		Facilities for the Engineer	Sum	1		
1,4		One contract name board	Sum	1		
1,5		Engineer's Office and Toilet	Sum	1		
1,6		Facilities for Contractor as well as compliance with the requirements of the Environmental Specification				
1.6.1		Office, storage, workshops, laboratories	Sum	1		
1.6.2		Living Accommodation & toilet facilities	Sum	1		
1.6.3		Water Electricity & Communication	Sum	1		
1.6.4		Tools & small equipment	Sum	1		
1.6.5		Dealing with Water	Sum	1		
1.6.6		Access	Sum	1		
1.6.7		Plant	Sum	1		
1,7	8.3.3	Other fixed-charge obligations	Sum	1		
1,8	8.3.4	Remove Contractor's Site Establishment on completion	Sum	1		
1,9		The cost of Health & Safety measures in terms of the Construction Regulations (2014) of the Occupational Health & Safety Act	Sum	1		
	8,4	<u>TIME-RELATED ITEMS</u>				
1,10	8.4.1	Contractual requirements	Sum	1		
1,11	8.4.2	Operate and maintain facilities on the Site:	Sum	1		
1,12		Operate and maintain facilities on site for Engineer	Sum	1		
1,13		Name board, Equipment, Office, Telephone & Survey	Sum	1		
1,14	8.4.2.1	Facilities for Contractor for duration of construction, except where otherwise stated:				
1.14.1		Office, storage, workshops, laboratories	Sum	1		
1.14.2		Living Accommodation toilet facilities	Sum	1		
1.14.3		Water Electricity & Communication	Sum	1		
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BROUGHT FORWARD FROM PREVIOUS PAGE							
1.14.4			Tools & small equipment	Sum	1		
1.14.5			Dealing with Crossings	Sum	1		
1.14.6			Access	Sum	1		
1.14.7			Plant	Sum	1		
1,15	8.4.3		Supervision for duration of the Contract	Sum	1		
1,16	8.4.4		Company and Head Office over-head costs	Sum	1		
1,17	8.4.5		Other time-related obligations	Sum	1		
1,18	PC 11		Community Liaison Persons (Monthly Wage is R7180)	Man Months	6	7 180,00	R 43 080,00
1,20	PE		Maintenance as well as compliance with the requirements of the Environmental Specification	Sum	1		
1,21			Accredited Training For 6months	Prov Sum	1	50 000,00	R 50 000,00
1,22			Outstanding Payment to CLP	Prov Sum	1	29 664,80	R 29 664,80
1,23			Outstanding Payment to PSC	Prov Sum	1	1 600,00	R 1 600,00
1,24			Outstanding Payment to Labour	Prov Sum	1	24 129,50	R 24 129,50
1,25			Outsanding Payment to Rentals	Prov Sum	1	3 400,00	R 3 400,00
1,26			Outstanding Payment to Subcontractor	Prov Sum	1	50 000,00	R 50 000,00
1,27			% profit and attendance of 1.22 to 1.26	%	108 794		
	8,7		<u>DAYWORKS</u>				
1,28			Labour	Prov Sum	1	10 000,00	R 10 000,00
1,29			Percentage adjustment to Labour above	%	10 000		
1,30			Materials	Prov Sum	1	10 000,00	R 10 000,00
1,31			% adjustment to Materials above	%	10 000		
1,32			Plant	Prov Sum	1	10 000,00	R 10 000,00
1,33			Percentage adjustment to Plant above	%	10 000		
TOTAL OF SCHEDULE 1 CARRIED FORWARD TO SUMMARY							

BILL OF QUANTITIES

ITEM NO	PAY REFERS		DESCRIPTION	UNIT	TOTAL QTY	RATE	AMOUNT
2	SABS 1200 C		<u>SECTION 2: SITE CLEARANCE</u>				
			<u>CLEAR SITE</u>				
2,1	PSC 2		Clear and grub for:				
2.1.1			Clear and grub pipeline routes for rising main 3,0m wide	km	0,70		
2.1.2			Clear and grub tank and pumpstation site	m ²	176		
2,2	SABS 1200 C PSC 1		Remove and grub large trees and tree stumps of girth:				
2.2.1			a) Over 1.0m and up to 2.0m	No	1		
2.2.2			b) Over 2.0m and up to 3.0m	No	1		
TOTAL OF SCHEDULE 2 CARRIED FORWARD TO SUMMARY							

BILL OF QUANTITIES

ITEM NO	PAY REFERS	DESCRIPTION	UNIT	TOTAL QTY	RATE	AMOUNT
3	SABS 1200	<u>SECTION 3: EARTHWORKS (PIPE TRENCHES)</u>				
3,1	8.3.2	<u>EXCAVATION</u>				
		Excavate in pickable materials for trenches 450mm wide, using Labour Intensive Construction methods, backfilling measured elsewhere.				
3.1.1		Depth exceeding 0.0m but not exceeding 0.8m	m	250		
3.1.2		Depth exceeding 0.8m but not exceeding 1.2m	m	250		
		Excavate in Machine Class materials for trenches 450mm wide, backfilling measured elsewhere				
3.1.3		Depth exceeding 0.0m but not exceeding 0.8m	m	250		
3.1.4		Depth exceeding 0.8m but not exceeding 1.2m	m	259		
3.1.5		EO item 3.1.1 - 3.1.4 for excavation in Class 1 materials (hard rock)	m³	150		
3.1.6		Reinstate road surface Sub-base quality gravel compacted to 95% MOD AASHTO 200mm layer	m³	252		
3,2		<u>BACKFILLING OF TRENCHES</u>				
		Backfill by hand, compact and dispose of surplus/unsuitable material including removal of boulders of rock where applicable on 450mm wide trenches of depth: (Including testing)				
		<u>Supply of Backfilling by importation</u>				
		From commercial sources				
3.2.1	a)	b) Using imported selected material	m³	560		
TOTAL OF SCHEDULE 3 CARRIED FORWARD TO SUMMARY						

BILL OF QUANTITIES

ITEM NO	PAY REFERS	DESCRIPTION	UNIT	TOTAL QTY	RATE	AMOUNT
4	SABS 1200 L	<u>SECTION 4: MEDIUM PRESSURE PIPELINES</u>				
4.1		<u>Pipes</u>				
	8.2.1	Supply, handle, lay and bed uPVC pipes joint with flexible "Lyng" rubber ring joints, test and disinfect.				
		PVC-U Pipes with mechanical rubber ring joints				
		<u>a) COD Pipes Class 9</u>				
4.1.1		75 mm diameter	m	700		
		<u>HDPE pipes type 4 (Rates to include coupling)</u>				
4.1.2		63mm diameter class 10	m	309		
4,2	SABS 1200 L	<u>Specials & Fittings</u>				
	8.2.2	<u>Supply, lay and bed on Class C, joint including cut pipes to length where necessary, test and disinfect.</u>				
		Bends for uPVC pipes CI - Class 9 one end with mechanical joint rubber ring integrally molded, other end plain.				
		<u>a) 75 mm diameter</u>				
4.2.1		90 degree	No.	4		
4.2.2		45 degree and smaller	No.	3		
		Bends for steel pipes Maximum working pressure 1.2 MPa				
		100 - 110 mm diameter				
4.2.3		90 Degree	No.	7		
		VJ Repair coupling. Entire fitting to be Rillson coated and covered with Denso paste and wrap, for pipe diameters				
4.2.4		75mm ø pipe	No	4		
4,3	SABS 1200 L	<u>Valves</u>				
	8.2.3	Supply, install, joint including cut pipes where necessary and test gate valves with non-rising spindle, clockwise closing and cap top.				
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BILL OF QUANTITIES

ITEM NO	PAY REFERS	DESCRIPTION	UNIT	TOTAL QTY	RATE	AMOUNT
BROUGHT FORWARD FROM PREVIOUS PAGE						
4.3.1		<u>Inline valves</u> Supply, install, joint, complete with full gaskets, bolts, nuts & closing washers, including cut pipes where necessary and test. Gate valves non-rising spindle, clockwise closing with cap top. Flanged both ends. 80 mm diameter	No.	2		
4.3.2		<u>Air valves</u> Supply and install 25 mm diameter complete with T-Piece, galvanized riser pipe, gate valve, double acting air valve (VENT-O-MAT Series RBX or similar approved) and other fittings and wrapping as per Drawing 34245-DET-2 (Chamber measured elsewhere) 25 mm inlet Scour Valves Supply and install scour assembly complete with Scour Tee, Wedge gate valve and pipework as per 34245-DET-13. (Chamber and headwall measured elsewhere)	No.	3		
4.3.3		On a 75mm dia PVC-U pipeline x 80mm Scour Branch	No	2		
4,4		<u>Scour Headwalls</u>				
4.4.1		Construct scour headwalls as per drawing 34245-DET-8	No	2		
4,5	SABS 1200	<u>Valve Chambers and Manholes</u>				
		Construct valve chambers as per Drawing 34245-DET-1 , with one manhole cover inclusive of locking device and lock that opens with Client master key				
4.5.1	8.2.13	for 50 - 200mm Dia Pipes	No.	2		
		Construct air valve chambers as per Drawing 34245-DET-2 , with manhole cover inclusive of locking device and lock to Client master key.				
4.5.2	8.2.13	25mm Inlet	No	3		
4.5.3	8.2.14	Extra-over Item 4.5.2 for depths in 0,25 m increments all manholes	No.	1		
4,6		<u>Thrust Blocks</u>				
		(As per Drawing no. 34245-DET-7)				
4.6.1		25 Mpa mass concrete on thrust blocks	m³	2		
4.6.2	PSL8.2.15	(AS per Drawing no. 34245-DET-11), Pipeline markers painted with 2 x coats of yellow road marking paint	No	6		
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ITEM NO	PAY REFERS	DESCRIPTION	UNIT	TOTAL QTY	RATE	AMOUNT
BROUGHT FORWARD FROM PREVIOUS PAGE						R -
4,7		<u>Borehole Pumpstation</u>				
4.7.1		Equipping of boreholes complete including all piping, pumps, cabling and everything else necessary for a complete and operational installation. (As per drawing no.34245-DET-5)	Prov Sum	1	180 000,00	R 180 000,00
4.7.2		% profit and attendance	%	180 000		
4.7.3		Electricity supply to boreholes complete	No	0,2	50 000,00	R 10 000,00
4.7.4		% profit and attendance	%	10 000		
4.7.5		Power connection to new boreholes complete (Power line)	Prov Sum	1	200 000,00	R 200 000,00
4.7.6		% profit and attendance	%	200 000		
4.7.7	PS 3.7	Geophysical surveys, drilling & testing nominated subcontractor work, project management & coordination inputs. As per quote attached - see Site Information	Prov Sum	1	187 706,50	R 187 706,50
4.7.8		% profit and attendance	%	187 707		
4,8		<u>217 m³ Pressed Steel Tank</u>				
4.8.1		Supply and erect 217 m³ only. As per Drawing No. 34245-DET-4	Prov Sum	1	1 368 008,00	R 1 368 008,00
4.8.2		Allow for concrete bases, excavation for steel tank	m³	45		
4,9		<u>Elevated tank Inlet Systems</u>				
		Supply and install complete elevated tank galvanised steel inlet system . The rate to include valve chamber and cover, reducers, bends, necessary adaptors, fixing brackets, couplings and the like. Pipeworks (as per drawing no.34245-DET-4), Equilibrium float control valve, valve and meter measured elsewhere:				
4.9.1		100mm ø inlet	No	1		
4,10		<u>Elevated Tank Outlet Systems</u>				
		Supply and install elevated tank galvanised steel outlet system complete with manhole, reducers, flanged adaptors, valve, strainer, pipework and fittings to suit. Pipework, (as per drawing no.34245-DET-4), Valve and meter measured elsewhere.				
4.10.1		100mm ø outlet	No	1		
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ITEM NO	PAY REFERS	DESCRIPTION	UNIT	TOTAL QTY	RATE	AMOUNT
BROUGHT FORWARD FROM PREVIOUS PAGE						
4,11		<u>Elevated Tank Scour</u> Install Scour to elevated tank complete (as per drawing no.34245-DET-4). Pipework and Valve measured elsewhere				
4.11.1		100mm outlet	No	1		
4,12		<u>Float Valves</u> Vosa series 7354				
4.12.1		80mm	No	1		
4,13		<u>Road Crossings (As per drawing no.34245-DET-9 & DET 10</u> Bed in granular material and lay 100D concrete stormwater pipe including waterproof taping-off joints in the following diameters				
4.13.1		450mm ø	m	10		
4.13.2		Backfill G5 quality material in layers and compacted to 95% MOD AASHTO density	m³	9		
4.13.3		Extra for provision of HDG "spiders" including neoprene rollers	No	10		
4,14		<u>Building Works</u>				
4.14.1		Pumpstation as per Drawing No 34245-DET-5 complete. Mechanical/Electrical installation measured elsewhere	No	4		
4.14.2		<u>Water Draw-off Arrangements</u> Supply and install standard tapstand as per Dwg 34245-DET-17 including 10m 32mm ø class 10 HDPE supply line, stop valves, HDG pipe, valves, flow control valve, brick work, concrete and 3m of concrete channel.	No	1		
TOTAL OF SCHEDULE 4 CARRIED FORWARD TO SUMMARY						

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ITEM NO	PAY REFERS		DESCRIPTION	UNIT	TOTAL QTY	RATE	AMOUNT
5	SABS 1200 LB		<u>SECTION 5: BEDDING (PIPES)</u>				
5.1	PSLB 8.2.1		<u>PROVISION OF BEDDING FROM TRENCH EXCAVATION</u>				
5.1.1			Selected fill and bedding material within a distance of 5m and 2km	m³	53		
5.1.2			Extra over for processing of bedding from trench excavation or minor local borrow as instructed by Engineer.	m³	53		
	8.2.2		<u>Supply only of Bedding by importation</u>				
	8.2.2.3		From commercial sources				
5.1.3	a)		Selected fill blanket material	m³	142		
TOTAL OF SCHEDULE 5 CARRIED FORWARD TO SUMMARY							

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ITEM NO	PAY REFERS	DESCRIPTION	UNIT	TOTAL QTY	RATE	AMOUNT
6		<u>SECTION 6 : SECURITY FENCING</u>				
6.1		<u>Security Fencing - Pumpstation</u> Staining Posts, Stays and Standard Intermediate posts. Refer to drawing no. 34245-DET-6				
6.1.1		Straining posts with stays including concrete bases	No	8		
6.1.2		Gate posts with stays including concrete bases	No	6		
6.1.3		Standard intermediate posts including concrete bases	No	25		
6.2		<u>Gates</u>				
6.2.1		Vehicles - double leaf gate	No	1		
6.2.2		Pedestrians	No	1		
6.2.3		Plain wire	m	50		
6.2.4		Barbed wire	m	50		
6.2.5		Netting	m	50		
6.3		<u>"Flap Rap"</u>				
6.3.1		500mm diameter	m	100		
TOTAL OF SCHEDULE 6 CARRIED FORWARD TO SUMMARY						