

MHLATHUZE WATER
BIG 5 HLABISA LOCAL MUNICIPALITY- REFURBISHMENT AND AUGMENTATION OF WATER SUPPLY SCHEMES IN WARD 6, 7 AND 9
SCHEDULE OF QUANTITIES

ITEM NO	PAYMENT	LIC	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	SANS 1200AA		<u>SECTION 1 : PRELIMINARY GENERAL</u>				
	PSA 8.2.1		Fixed-Charge Items				
1.1	8.3.1		Contractual Requirements	Sum	1,00		
	8.3.2		Establish Facilities on the Site				
1.2	8.3.2.1		Facilities for Engineer (SANS 1200AB)				
1.2.1	8.3.2.1 PSAB 3.1 & 3.2		a) Two contract nameboards, furnished offices and meeting room, printer, toilet and covered parking bays.	Sum	1,00		
1.2.2	PSAB 4.1		b) Telephone	No.	2,00		
1.2.3	PSAB 4.3		c) Computer	No.	1,00		
1.2.4	PSAB 4.4		d) Vehicle	No.	1,00		
1.3	8.3.2.2		Facilities for Contractor				
1.3.1			a) Offices and storage sheds	Sum	1,00		
1.3.2			b) Workshops	Sum	1,00		
1.3.3			c) Laboratories, testing equipment and facilities	Sum	1,00		
1.3.4			d) Living accommodation	Sum	1,00		
1.3.5			e) Ablution and latrine facilities	Sum	1,00		
1.3.6			f) Tools and equipment	Sum	1,00		
1.3.7			g) Water supply, electric power communications, dealing with water and access	Sum	1,00		
1.3.8	PSA 8.4.2.2		h) Dealing with water, inclusive of stormwater management plan for construction purposes	Sum	1,00		
1.4	8.3.3		Other fixed-charge obligations	Sum	1,00		
1.5	8.3.4		Remove Engineer's and Contractors site establishment on completion of works	Sum	1,00		
1.6			Compliance with OHS Act (Act 85 of 1993) and Construction Regulations 2014 requirements:				
1.6.1			Preparation of risk assessments, safe work procedures, the project H&S File and the H&S plan	Sum	1,00		
TOTAL CARRIED FORWARD							

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BROUGHT FORWARD							
1.6.2			The provision of PPE(exclude EPWP) and protective clothing, and all other H&S matters that the contractor deems necessary	Sum	1,00		
1.6.3			Completing and checking the Project H&S File and handing over to the Client on completion of the Works	Sum	1,00		
1.6.4		PE	Contractor's responsibility in terms of Quality Assurance, Construction Records and Construction Dossier	Sum	1,00		
1.6.5			Contractors responsibility in terms of Record of Decision and Environmental Management Plan	Sum	1,00		
1.6.6			Contractors Responsibility in terms of 24 hour security	Sum	1,00		
	PSA 8.2.2 & 8.4		Time-Related Items				
1.7	8.4.1		Contractual Requirements	Sum	1,00		
1.8	8.4.2		Operate and maintain facilities on Site	Sum	1,00		
1.9	8.2.2		Facilities for Engineer for duration of construction (SANS 1200AB)				
1.9.1	PSA 8.2.2		a) Two contract nameboards, furnished offices and meeting room, printer, toilet and covered parking bays.	Sum	1,00		
1.9.2	PSAB 4.1		b) Telephone	Sum	1,00		
1.10	8.4.2.2		Facilities for Contractor, for duration of construction except where otherwise stated				
1.10.1			a) Offices and storage sheds	Sum	1,00		
1.10.2			b) Workshops	Sum	1,00		
1.10.3			c) Laboratories, materials, testing equipment and facilities	Sum	1,00		
1.10.4			d) Living accommodation	Sum	1,00		
1.10.5			e) Ablution and latrine facilities	Sum	1,00		
1.10.6			f) Tools and equipment	Sum	1,00		
1.10.7			g) Water supply, electric power, communications dealing with water and access	Sum	1,00		
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BROUGHT FORWARD							
1.10.8	PSA 8.4.2.2		h) Dealing with water	Sum	1,00		
1.10.9			i) Dealing with water, inclusive of stormwater management plan for construction purposes	Sum	1,00		
1.10.10	PSA 8.8.2		j) Dealing with traffic	Sum	1,00		
1.11	8.4.3		Supervision	Sum	1,00		
1.12	8.4.4		Company and head office over head costs	Sum	1,00		
1.13			Compliance with OHS Act (Act 85 of 1993) and Construction Regulations 2003 requirements:				
1.13.1			Updating and amending the risk assessments, safe work procedures, the project H&S File and the H&S plan	Sum	1,00		
1.13.2			The provision of PPE and protective clothing, and any other H&S matters that the contractor deems necessary for EPWP	Sum	1,00		
1.13.3			Compliance with SANS 1921 Part 6 HIV/Aids Awareness during the contract	Sum	1,00		
1.13.4			Full compliance with all H&S matters during the construction of the works under the contract	Sum	1,00		
1.13.5			Full compliance with EMP	Sum	1,00		
1.14	8.4.5		Other time-related obligations	Sum	1,00		
1.15	C3.3.3.2		Contractors commission for the provision of mentorship and management of the subcontractors for the work to be subcontracted to the locals.	sum	1,00		
1.16			PROVISIONAL SUMS				
1.16.1	PSAB 8.2.2 (a)		Laboratory Testing (Required by the Engineer)	Prov Sum	1,00		50,000,00
1.16.2			Contractor's Commission on Item 1.16.1	%	50 000,00		
1.16.3	PSDB 8.3.10		Relocation of existing services where ordered by the Engineer	Prov Sum	1,00		20,000,00
1.16.4			Provision of tools and equipment as specified by the Employer	Prov Sum	1,00		10,000,00
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BROUGHT FORWARD							
1.16.5	PSA 8.5 (c)		Provision for Community Liaison Officer	Prov Sum	1,00		84,000,00
1.16.6			Contractor's Commission on Item 1.16.3 - 1.16.5	%	84 000,00		
1.16.7			Stationary and other consumables for the Engineer and his/her Representative	Prov Sum	1,00		20,000,00
1.16.8			Contractor's Commission on Item 1.16.7	%	20 000,00		
1.17	PA 5.1		DAYWORKS				
1.17.1			Labour				
1.17.1.1		LI	a) Foreman	Hr	20,00		
1.17.1.2		LI	b) Unskilled : labourer	Hr	30,00		
1.17.1.3		LI	c) Semi-skilled : pipelayer, section leader, survey assistant	Hr	30,00		
1.17.1.4			d) Skilled: artisan	Hr	10,00		
1.17.1.5			e) Surveyor including assistants and equipment	Hr	5,00		
1.17.2	PA 5.2		Plant				
1.17.2.1			a) Back-acting excavator	Hr	9,00		
1.17.2.2			b) Compactors	Hr	3,00		
1.17.2.3			c) Compressor with hoses, hand tools and bits (min air output 7m3/min)	Hr	10,00		
1.17.2.4			d) Tiptruck (6m3)	Hr	9,00		
1.17.2.5			e) Pedestrian roller (Bomag 60 or similar)	Hr	18,00		
1.18	PSA8.5 (d) C3.5.10		Provisional Sum for skills training and EPWP requirements	Prov Sum	1,00		20,000,00
1.18.1			E/O Item 1.18 for Contractor's overheads, charges and profit	%	20 000,00		
1.19			Provisional Sum for PSC Requirements	Sum	1,00		20,000,00
1.19.1			E/O Item 1.19 for Contractor's overheads, charges and profit	%	20 000,00		
TOTAL CARRIED FORWARD TO SUMMARY							

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ITEM NO	PAYMENT	LIC	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2	SANS 1200C		SECTION 2: SITE CLEARANCE				
			Note: Particular Specification PI: Employer's Environmental Management Specification for Environmental Management of construction projects				
			Clearing and Grubbing & Stripping				
2.1			Clear and grub and strip topsoil:				
2.1.1	8.2.2 & PSC 8.2.10	LI	b) Clear and grub vegetation and 150 mm thick topsoil, stockpile, maintain and reinstate on completion for all pipelines (By hand)	m	7 800,00		
2.1.2		LI	b) Clear and grub vegetation and 150 mm thick topsoil, stockpile, maintain and reinstate on completion for all chambers (By hand)	m ²	150,00		
2.2	8.2.2		Remove and grub large trees and tree stumps of girth:				
2.2.1		LI	a) over 1m and up to and including 2m	No.	5,00		
2.2.2		LI	b) over 2m and up to and including 3m	No.	2,00		
2.2.3			c) over 3m	No.	1,00		
2.3	PSC 8.2.11		Dismantle existing fencing, move to storage and later reinstate as directed by the Employer's Agent:				
2.3.1			Welded mesh wire fencing with straining posts	m	600,00		
2.3.2			Wire fencing with straining posts	m	500,00		
2.3.3	PSC 8.2.12		Demarcation staking of pipeline servitude with wooden stakes	m	20,00		
2.3.4	PSC 8.2.13		Fencing pipeline servitude in populated area	m	300,00		
2.3.5	PSC 8.2.14		Removing and re-erecting of Structures	Prov Sum	1,00		20,000,00
TOTAL CARRIED FORWARD TO SUMMARY							

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ITEM NO	PAYMENT	LIC	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4	SANS 1200DB		<u>SECTION 4 :</u> <u>EARTHWORKS PIPE TRENCHES</u>				
			Pipeline Trench Excavations:				
4.1	PSDB 8.3.2(a)		Excavate, in all materials for trenches, backfill, compact and dispose of surplus unsuitable material, for DN75 - DN 110 pipes for the following depths: Rates are to include for all temporary works including trimming, shoring and dewatering where necessary:				
			Over Up to and including				
4.1.1			0 m 1,5 m	m ³	8 000,00		
4.1.2			1,5 m 2,0 m	m ³	60,00		
4.1.3			2,0 m 3,0 m	m ³	40,00		
4.2			Extra over Items in 4.1 for excavation in:				
4.2.1	PSDB 8.3.2(c)(1)		Hard rock (Prov.)	m ³	10,00		
4.2.2	PSDB 8.3.2(c)(2)		Boulder excavation Class A (Prov.)	m ³	5,00		
4.2.3	PSDB 8.3.2(c)(3)		Boulder excavation Class B (Prov.)	m ³	5,00		
4.3	PSDB 8.3.2(e)		Extra over Items for 4.2.1 to 4.2.3 for backfill stabilised with 8 % cement where directed by the Engineer as per PSDB 3.5c (Prov.)	m ³	20,00		
4.4	8.3.2 (c)	LI	Excavate and dispose of unsuitable material from trench bottom (Prov.)	m ³	100,00		
4.5			Excavation ancillaries				
4.5.1	PSDB 8.3.3.1		Make up deficiency in backfill material from designated borrowpits	m ³	200,00		
4.6	8.3.3.3		Compaction in road reserves	m ³	20,00		
4.7	8.3.4(b)		Control of underground water seepage at stream crossings	m	300,00		
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5	SANS 1200GA		<u>SECTION 5 : CONCRETE (SMALL WORKS)</u>				
5.1	8.2		FORMWORK				
5.1.1		LI	a) Rough horizontal	m ²	50,00		
5.1.2		LI	b) Rough vertical	m ²	50,00		
5.1.3		LI	c) Smooth horizontal	m ²	30,00		
5.1.4		LI	d) Smooth vertical	m ²	60,00		
5.2	8.3		REINFORCEMENT				
5.2.1	8.3.1	LI	a) High tensile	kg	300,00		
5.2.2	8.3.1	LI	b) Mild steel	kg	300,00		
5.2.3	8.3.2	LI	c) Weldmesh Ref 245	m ²	180,00		
5.3	8.4		CONCRETE				
5.3.1	8.4.2	LI	Blinding concrete Class 15/19 50 mm thick	m ²	30,00		
5.3.2			Concrete Class 25/19 for tank bases				
5.3.2.1			Chambers	m ³	15,00		
5.3.3			Concrete Class 25/19 to concrete pedestals, plinths and other minor concrete work, including all formwork.				
5.3.3.1			Concrete pedestals, plinths, etc	m ³	25,00		
5.4			UNFORMED SURFACE FINISHING				
5.4.1	8.4.4	LI	a) Wood-floated finish	m ²	200,00		
5.4.2	8.4.4	LI	b) Steel-floated finish	m ²	10,00		
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ITEM NO	PAYMENT	LIC	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6	SANS 1200L		<u>SECTION 6 :</u> <u>MEDIUM PRESSURE PIPELINES</u>				
			Note: Particular Specification PB: Pipelines Valves has reference. Particular Specification PC: HDPE Pipes and Fittings has reference. Particular Specification PD: Disinfection of Pipelines and Fittings has reference.				
6.1			Supply, handle, lay, test, disinfect, join PVC pipes on bedding for flexible pipe				
6.1.1		LI	DN75 Class 16 uPVC	m	500,00		
6.2.1			DN90 Class 16 Upvc	m	500,00		
6.1.2		LI	DN110 Class 16 uPVC	m	500,00		
6.2			Supply, handle, lay, test, disinfect, join HDPE pipes on bedding for flexible pipe HDPE Pipe PE80 (PN12) SDR 11				
6.2.1			DN75	m	3 300,00		
6.2.1			DN90	m	1 000,00		
6.2.1			DN110	m	1 500,00		
6.3			HDPE Compression Fittings and Specials PE100 (PN16) SDR 11				
	PSL 8.2.1		Supply, handle, lay, bed, test and disinfect pipe fittings and specials (including specified bolts, nuts and gaskets)				
6.3.1			Flange adaptors				
6.3.1.1			DN75	No.	15,00		
6.3.1.2			DN110	No.	15,00		
6.3.2			90 degree bend				
6.3.2.1			DN75	No.	10,00		
6.3.2.2			DN110	No.	12,00		
TOTAL CARRIED FORWARD							

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ITEM NO	PAYMENT	LIC	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD							
6.3.3			Equal tees				
6.3.3.1			DN75	No.	1,00		
6.3.3.2			DN110	No.	2,00		
6.3.4			Reducing tees				
6.3.4.1			DN75	No.	1,00		
6.3.4.2			DN110	No.	2,00		
6.4			Steel Pipes And Fittings				
			NOTE: In accordance with SABS 62: Part 1, 3,3 mm thick steel pipes up to and including DN80 and 4,5mm thick Grade B steel plate for manufacture of DN80 hot dipped galvanised.				
	PSL 8.2.1		Supply, handle, lay, bed, test and disinfect pipe fittings and specials (including specified bolts, nuts and gaskets)				
6.4.1			Pipes				
6.4.1.1		LI	DN80 x 3700mm long d/fl pipe	No.	1,00		
6.4.2			Tees				
6.4.2		LI	DN80 FL Equal Tee	No.	1,00		
6.4.		LI	DN100 x DN80 FL Reducing Tee	No.	1,00		
6.6.4			Flange Adaptors				
6.6.4.1		LI	DN100	No.	1,00		
6.5	PSL 3.10 & 8.2.3		Supply, handle, install and test SABS approved waterworks pattern, flanged valves (SABS 1123, Table 1600 unless otherwise specified):				
6.5.1			Valves				
6.5.1.1		LI	DN80 d/fl wedge gate valve with square cap	No.	5,00		
TOTAL CARRIED FORWARD TO SUMMARY							

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7	SABS 1200LB		<u>SECTION 7 :</u> <u>BEDDING (PIPES)</u>				
			PROVISION OF BEDDING				
	PSLB 8.2.1(1)		Provision of bedding from trench excavation				
7.1			Without the need for screening:				
7.1.1	PSLB 8.2.1(1)(a)	LI	Selected granular material	m³	2 100,00		
7.1.2	PSLB 8.2.1(1)(b)	LI	Selected fill material	m³	540,00		
7.2	PSLB 8.2.1(2)	LI	Including for screening				
7.2.1	PSLB 8.2.1(2)(a)	LI	Selected granular material	m³	70,00		
7.2.2	PSLB 8.2.1(2)(b)	LI	Selected fill material	m³	20,00		
7.3	8.2.2.2 & 8.2.2.3		Provision of bedding by importation from commercial or off-site sources, including for screening and/or other treatment:				
7.3.1	PSLB 8.2.1(2)(b)	LI	Selected granular material	m³	70,00		
7.3.2	PSLB 8.2.1(2)(b)	LI	Selected fill material	m³	20,00		
7.4	PSLB 8.2.6	LI	13 mm Drianage layer	m³	10,00		
TOTAL CARRIED FORWARD TO SUMMARY							

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9			<u>SECTION 9:</u> <u>SUNDRIES</u>				
9.1	8,4		CONCRETE				
9.1.1	PSL 8.2.11	LI	Anchor/Thrust blocks, inclusive of formwork and additional excavation Class 25/19	m³	2,00		
9.1.2	PSL 8.2.12	LI	Concrete Encasing at Stream Crossings, including formwork and additional excavation Class 25/19	m	10,00		
9.1.3	PSL 8.2.18	LI	Concrete marker posts. Rates are to include for base concrete, installation & painting	No.	30,00		
9.2	PSL 8.2.15		Denso wrapping bolted fittings located underground				
9.2.1		LI	DN150	No.	5,00		
9.2.2		LI	DN100	No.	10,00		
9.2.3		LI	DN80 to DN50	No.	20,00		
9.3		LI	Supply and install 50mm Discus 0370 keyed alike padlocks with 3 keys as supplied by Multi Locking	No.	25,00		
9.4			VALVE CHAMBERS				
9.4.1			Supply and construct isolating valve chamber complete as per drawing P0023/SD/02 (pipework measured elsewhere)	No.	5,00		
9.5			CONNECT TO EXISTING PIPELINES				
	PSL 8.2.17	LI	Connect to existing pipelines in the following areas (Rate to include exposing of existing pipe, supervision, liaison with Operator, preparation of method statements, dealing with water from the existing pipelines and any other operation to successfully complete the tie in):				
9.5.1			Connect to DN50 pipe	No.	2,00		
9.5.2		LI	Connect to DN63 pipe	No.	2,00		
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9.5.3			Connect to DN90 pipe	No.	2,00		
9.5.4		LI	Connect to DN110 pipe	No.	2,00		
9.5.5		LI	Connect to DN160 pipe	No.	1,00		
9.6			EXISTING PUMPING STATIONS				
9.6.1			Allow a Provisional Sum for rehabilitation of existing Pumping Station Facilities.	Prov Sum	1,00		2,050,000,00
9.7			EXISTING RESERVOIR				
9.7.1			Allow a Provisional Sum for repair and re-commissioning of existing Reservoirs and chambers (including resealing, watertightness test).	Prov Sum	1,00		800,000,00
9.8			PIPE JACKING				
9.8.1			Allow a Provisional Sum for pipejacking specialist.	Prov Sum	1,00		850,000,00
9.10			Contractors commission o item 9.6 to 9.8	%	3700 000,00		
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