

	A	B	C
2	PROJECT NO.	<b>SUMMARY SCHEDULE OF QUANTITIES</b>	
3	<b>PM03/2017</b>	MOLETJIE EAST WATER SUPPLY SCHEME - PHASE 11	
4			
5	SECTION REFERENCE	DESCRIPTION	AMOUNT
6			
7	A1	PRELIMINARY AND GENERAL - FIXED CHARGE AND VALUE RELATED OBLIGATIONS	
8	A2	PRELIMINARY AND GENERAL - TIME RELATED OBLIGATIONS	
9	A3	PRELIMINARY AND GENERAL - PROVISIONAL SUMS	
10	A4	PRELIMINARY AND GENERAL - PRIME COST SUMS	
11	A5	PRELIMINARY AND GENERAL - DAYWORKS	
12	A6	PRELIMINARY AND GENERAL - TEMPORARY WORKS	
13		<b>SCHEDULE A</b>	
14	B1	EARTHWORKS FOR PIPE TRENCHES	
15	B2	PIPE BEDDING	
16	B3	MEDIUM PRESSURE PIPELINES AND ANCILLARIES	
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18	B5	BOREHOLE PUMPS AND APPURTENANCES - MASOBOHLENG NEW BOREHOLE	
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21	B8	REFURBISH BOREHOLE H04-1586 in Semenya West	
22	B9	REFURBISH BOREHOLE H04-0017 AT RAMOANGANA VILLAGE	
23			
24			
25			
26		<b>SCHEDULE B</b>	
27	<b>TOTAL ESTIMATED VALUE OF CONSTRUCTION WORK (A+B):</b>		
28	CONTINGENCIES AMOUNT (5%):		
29	ADD CPA (N/A):		
30	<b>SUBTOTAL AMOUNT:</b>		
31	VALUE ADDED TAX [14%]:		
32	<b>TOTAL ESTIMATED CONSTRUCTION AMOUNT:</b>		

SCHEDULE OF QUANTITIES			CONTRACT No.:	SECTION No.:	
MOLETJIE EAST WATER SUPPLY SCHEME - PHASE 11			PM03/2017	A1	
ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNTS
A1	PRELIMINARY AND GENERAL - FIXED CHARGE AND VALUE RELATED OBLIGATIONS				
1.1	Contractual Requirements:				
1.1.1	Fixed charge contractual requirements.	Sum	1.00		
1.1.2	Value related contractual requirements.	Sum	1.00		
1.2	Facilities for Engineer:				
1.2.1	Furnished office - 1 No.	No	1.00		
1.2.2	Name boards	Sum	2.00		
1.2.3	Provision of survey equipment.	Sum	1.00		
1.3	Facilities for Contractor:				
1.3.1	Offices and storage sheds	Sum	1.00		
1.3.2	Workshops	Sum	1.00		
1.3.3	Laboratories	Sum	1.00		
1.3.4	Living accommodation	Sum	1.00		
1.3.5	Ablution and latrine facilities	Sum	1.00		
1.3.6	Tools and equipment	Sum	1.00		
1.3.7	Water supplies, electric power and communications	Sum	1.00		
1.3.8	Dealing with water	Sum	1.00		
1.3.9	Access	Sum	1.00		
1.3.10	Plant	Sum	1.00		
1.3.11	Materials on site storage and protection.	Sum	1.00		
1.3.12	Accommodation of traffic.	Sum	1.00		
1.4	Removal of Site Establishment:	Sum	1.00		
1.5	Occupational H&S				
1.5.1	Provision of Health and Safety	Sum	1.00		
1.5.2	Protective Clothing	Sum	1.00		
	PRELIMINARY AND GENERAL - FIXED CHARGE AND VALUE RELATED OBLIGATIONS				

SCHEDULE OF QUANTITIES			CONTRACT No.:	SECTION No.:	
MOLETJIE EAST WATER SUPPLY SCHEME - PHASE 11			PM03/2017	A2	
ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNTS
<b>A2</b>	<b>PRELIMINARY AND GENERAL - TIME RELATED OBLIGATIONS</b>				
<b>2.1</b>	<b>Contractual Requirements:</b>				
2.1.1	Time related contractual requirements.	sum	1.00		
<b>2.2</b>	<b>Facilities for Engineer:</b>				
2.2.1	Furnished office - 1 No.	Sum	1.00		
2.2.2	Survey assistants and material.	Month	6.00		
<b>2.3</b>	<b>Facilities for Contractor:</b>				
2.3.1	Offices and storage sheds.	Sum	1.00		
2.3.2	Workshops.	Sum	1.00		
2.3.3	Laboratories.	Sum	1.00		
2.3.4	Living accommodation.	Sum	1.00		
2.3.5	Ablution and latrine facilities.	Sum	1.00		
2.3.6	Tools and equipment.	Sum	1.00		
2.3.7	Water supplies, electric power and communications.	Sum	1.00		
2.3.8	Dealing with water.	Sum	1.00		
2.3.9	Access.	Sum	1.00		
2.3.10	Plant.	Sum	1.00		
<b>2.4</b>	<b>Supervision for Duration of the Contract:</b>	Month	6.00		
	<b>PRELIMINARY AND GENERAL - TIME RELATED OBLIGATIONS</b>				

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SCHEDULE OF QUANTITIES			CONTRACT No.:	SECTION No.:	
MOLETJIE EAST WATER SUPPLY SCHEME - PHASE 11			PM03/2017	A5	
ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNTS
A5	PRELIMINARY AND GENERAL - DAYWORKS				
5.1	Labour - Normal Working Hours: [Provisional]				
5.1.1	Skilled Labour (Artisan).	hr	40.00		
5.1.2	Semi-skilled Labour.	hr	48.00		
5.1.3	Unskilled Labour.	hr	48.00		
5.1.4	Foreman.	hr	32.00		
5.1.5	Extra-over rate for items 5.1.1 to 5.1.4 for work during non working hours.	hr	24.00		
5.2	Materials: [Provisional]				
5.2.1	Allowance for Materials used under Dayworks.	Prov.Sum	1.00	20,000.00	20,000.00
5.2.2	Overheads, Handling and all Charges on Item 5.2.1.	%	20,000.00		
5.3	Plant - Heavy Equipment: [Provisional]				
	<i>(Plant shall not be more than 3 years old or have more than 3000 hrs logged. Operator to be qualified and competency certified.)</i>				
5.3.1	Excavator - Size Cat 225.	hr			Rate Only
5.3.2	Excavator - TLB.	hr			Rate Only
5.3.3	Grader 140G or similar.	hr			Rate Only
5.3.4	Front end loader - bucket capacity $\leq$ 1.5 m3.	hr			Rate Only
5.3.5	Front end loader - bucket capacity $\leq$ 1.5 m3.	hr			Rate Only
5.3.6	Tip truck - 5 m3 capacity.	hr			Rate Only
5.3.7	Tip truck - 10 m3 capacity.	hr			Rate Only
5.3.8	Vibratory compaction roller - 13.5 ton.	hr			Rate Only
	Transport cost per any unit of plant to deliver to site and remove from site for items 5.3.1 to 5.3.8	Sum			Rate Only
5.4	Plant - Small Equipment: [Provisional]				
5.4.1	Pedestrian roller - BW90 or similar.	hr			Rate Only
5.4.2	Vibratory plate compactor.	hr			Rate Only
5.4.3	Vibratory rammer.	hr			Rate Only
	PRELIMINARY AND GENERAL - DAYWORKS				

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SCHEDULE OF QUANTITIES				CONTRACT No.:	SECTION No.:
MOLETJIE EAST WATER SUPPLY SCHEME - PHASE 11				PM03/2017	B1
ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNTS
<b>B1</b>	<b>EARTHWORKS FOR PIPE TRENCHES</b>				
1.1	Site Clearance:				
1.1.1	Clear vegetation, 800 mm wide. (Provisional)	m	23,075.00		
1.1.2	Clear trees of girth over 1.0 m.	No.	2.00		
1.2	Excavation using Plant:				
1.2.1	Excavate in all materials for trench depths up to 1200 mm, 600 mm wide.	m	23,075.00		
1.2.2	Extra-over items 1.2.1 for excavation in intermediate material.	m	300.00		
1.2.3	Extra-over items 1.2.1 for excavation in rock. (Provisional)	m	200.00		
1.2.4	Excavate and dispose of unsuitable material from trench bottom.	m <sup>3</sup>	115.38		
1.3	Excavation using Labour Intensive Methods:				
1.3.1	Extra-over item 1.2.1 for excavation in soft material using labour intensive methods.	m	800.00		
1.3.2	Extra-over item 1.2.4 for excavation in intermediate material using labour intensive methods.	m <sup>3</sup>	120.00		
1.3.3	Extra-over item 1.2.6 for excavate and dispose of unsuitable material using labour intensive methods.	m <sup>3</sup>	120.00		
1.4	Backfill and Compaction:				
1.4.1	Backfill and compact trenches using labour intensive methods.	m <sup>3</sup>	6,922.50		
1.4.2	Backfill road crossings using a commercial type G7 material compacted to 95% Mod. AASHTO density.	m <sup>3</sup>	276.90		
1.5	Excavation Ancillaries;				
1.5.1	Make up deficiency in backfill material from borrow pits. Free-haul is 5.0 km.	m <sup>3</sup>	138.45		
1.5.2	Pipe protection installed at 300 mm below top of finished backfill level using 3 strips of danger tape.	m	290.00		
1.5.3	Opening and closing designated borrow pits.	Pov. Sum	1.00	5,000.00	5,000.00
1.5.4	Compaction within road reserve to 90 % of Modified AASHTO density clause 5.7.1.	m <sup>3</sup>	64.00		
1.5.5	Compaction within road reserve to 98 % of Modified AASHTO density, as per clause 5.7.2.	m <sup>3</sup>	64.00		
1.6	Overhaul:				
1.6.1	Overhaul in excess of the free-haul of 5.0 km.	m <sup>3</sup> -km	50.00		
1.7	Existing Services: expose and protect				
1.7.1	Services that intersect a trench.	No.	10.00		
1.8	Finishing:				
1.8.1	Gravel	m <sup>2</sup>	64.00		rate only
	<b>EARTHWORKS FOR PIPE TRENCHES</b>				



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SCHEDULE OF QUANTITIES			CONTRACT No.:	SECTION No.:	
MOLETJIE EAST WATER SUPPLY SCHEME - PHASE 11			PM03/2017	B3	
ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNTS
B3	MEDIUM PRESSURE PIPELINES AND ANCILLARIES				
3.1	Supply, Lay and Bed uPVC Pipes Complete:				
3.1.1	75 mm uPVC medium pressure pipes - Class 12	m	6,200.00		
3.1.2	110 mm uPVC medium pressure pipes - Class 12	m	2,675.00		
3.1.3	160 mm uPVC medium pressure pipes - Class 9	m	170.00		
3.1.4	250 mm uPVC medium pressure pipes - Class 9	m	2,000.00		
3.1.5	250 mm uPVC medium pressure pipes - Class 12	m	100.00		
3.1.6	75 mm uPVC medium pressure pipes - Class 9	m	8,000.00		
3.1.7	315 mm uPVC medium pressure pipes - Class 9	m	100.00		Rate Only
3.1.8	400 mm uPVC medium pressure pipes - Class 9	m	2,000.00		
3.2	Fittings and Specials - uPVC Lyng Bends:				
	(Extra-over rate to Items 3.1.1 to 3.1.7)				
3.2.1	110 mm uPVC:				
3.2.1.1	uPVC bends less than 25 degree angle.	No.	3.00		
3.2.1.2	uPVC bends with 45 degree angle.	No.	1.00		
3.2.1.3	uPVC bends with 90 degree angle.	No.			Rate Only
3.2.2	160 mm uPVC:				
3.2.2.1	uPVC bends less than 22.5 degree angle.	No.	2.00		
3.2.2.2	uPVC bends with 45 degree angle.	No.	1.00		
3.2.2.3	uPVC bends with 90 degree angle.	No.	1.00		
3.2.3	250 mm uPVC:				
3.2.3.1	uPVC bends less than 25 degree angle.	No.	1.00		
3.2.3.2	uPVC bends with 45 degree angle.	No.	1.00		
3.2.3.3	uPVC bends with 90 degree angle.	No.	1.00		
	CARRIED FORWARD				

	BROUGHT DOWN				
3.3	Supply, Lay and Bed; Plain ended Steel Pipes 3 mm thick internal spun bitumen or other approved lining, and a soluble external coating of bitumen and fibre glass material which shall not show any tendency to creep or flow at a temperature of 77 degrees Celsius and one coat limewash Complete (including VJ couplings):				
3.3.1	80mm nb 4.2mm wall thickness	m	1,260.00		
3.3.2	100mm nb 4.7mm wall thickness	m	570.00		
3.3.3	125mm nb 4.7mm wall thickness	m	10.00		Rate Only
3.3.1	125mm MS, 3 mm thick internal spun bitumen or other approved lining, and a soluble external coating of bitumen and fibre glass material, 80mm diameter				
3.3.1.1	bends less than 22.5 degree angle.	No.	1.00		
3.3.1.2	bends with 45 degree angle.	No.	1.00		
3.3.1.3	bends with 90 degree angle.	No.	1.00		
3.3.2	125mm MS, 3 mm thick internal spun bitumen or other approved lining, and a soluble external coating of bitumen and fibre glass material, 100mm diameter				
3.3.2.1	bends less than 22.5 degree angle.	No.	1.00		
3.3.2.2	bends with 45 degree angle.	No.	1.00		
3.3.2.3	bends with 90 degree angle.	No.			Rate Only
3.3.3	Install new street standpipes (Hlahla 17, Mashita extension 2, Mokgohloa 3)	No.	22.00		
3.4	<b>Specials and Fittings - Cast Iron Equal Tees:</b>				
	<i>(Bitumen dipped and LYNG sockets on all sides all to SABS 546 and SABS 966.)</i>				
3.4.1	110 mm dia.	No.			Rate Only
3.4.2	125 mm dia.	No.			Rate Only
3.4.3	150 mm dia	No.			Rate Only
3.5	<b>Specials and Fittings - Hydrant Tees:</b>				
	<i>(Cast iron hydrant tees, Bitumen dipped and LYNG sockets to SABS 546 and SABS 966 with flanged branch, 80 mm dia, drilled to SABS 1123, Table 16.)</i>				
3.5.1	110 mm dia.	No.			Rate Only
3.5.2	125 mm dia.	No.			Rate Only
3.5.3	150 mm dia.	No.			Rate Only

3.6	<b>Specials and Fittings - Cast Iron Scour Tees:</b>				
	<i>(Cast iron scour tee, Bitumen dipped and LYNG sockets to SABS 546 and SABS 966 with flanged branch, 100 mm dia, drilled to SABS 1123, Table 16.)</i>				
3.6.1	125 mm dia.	No.	1.00		
3.6.2	150 mm dia.	No.	1.00		
3.7	<b>Specials and Fittings - Cast Iron End Caps:</b>				
3.7.1	110 mm dia.	No.			Rate Only
3.7.2	200 mm dia.	No.			Rate Only
3.8	<b>Specials and Fittings - Cast Iron Reducers:</b>				
	<i>(Bitumen dipped, spigot and socket and socketed cast iron reducers all to SABS 546 and SABS 966.)</i>				
3.8.1	160 mm x 110 mm dia. [S]	No.			Rate Only
3.8.2	150mm x 125mm dia. [S]	No.			Rate Only
	CARRIED FORWARD				

	BROUGHT DOWN				
3.9	<b>Specials and Fittings(PN16) - Flang Adaptors:</b>				
	<i>(Bitumen dipped and LYNG sockets to SABS 546 and SABS 966 with flange drilled to SABS 1123, Table 16.)</i>				
3.9.1	125mm dia.	No.			Rate Only
3.9.2	150 mm dia.	No.			Rate Only
3.9.3	160 mm dia.	No.			Rate Only
3.10	<b>Specials and Fittings - Isolating Valves:</b>				
	<i>(Flanged RSV isolating valves. Valves to be non-rising spindles with cap top.)</i>				
3.10.1	75 mm dia. Class 9	No.	4.00		
3.10.2	110mm dia. Class 12	No.	3.00		
3.10.3	160mm dia. Class 9	No.	1.00		
3.10.4	200mm dia. Class 9	No.			Rate Only
3.10.5	250mm dia. Class9	No.			Rate Only
3.10.6	315mm dia. Class16	No.			Rate Only
3.11	<b>Specials and Fittings - Socketed Valves:</b>				
	<i>(Socket ends RSV isolating valves. Valves to be non-rising spindles with cap top.)</i>				
3.11.1	110mm dia. Class 16	No.			Rate Only
3.11.2	160 mm dia. Class 16	No.			Rate Only
3.11.3	200 mm dia. Class 16	No.			Rate Only
3.12	<b>Specials and Fittings - Air Valve:</b>				
	<i>(Vent O' Mat SERIES RBX with screwed BSP male inlet, or similar. Complete with flange, barrel nipple, and 50 mm gate valve)</i>				
3.12.1	50 mm Air Valve	No.	7.00		
3.13	<b>Specials and Fittings - Bulk Water Meter:</b>				
	<i>(Kent or similar approved, flanged and drilled to SABS 1123, Table 16)</i>				
3.13.1	250 mm dia. In-Line Bulk Water Meter.	No.	1.00		Rate Only
3.13.2	315 mm dia. In-Line Bulk Water Meter.	No.	1.00		Rate Only
3.13.3	400 mm dia. In-Line Bulk Water Meter.	No.	1.00		Rate Only
	CARRIED FORWARD				

	BROUGHT DOWN				
3.14	Valve Chambers:				
3.14.1	Precast Valve chamber - 1200 mm x 1400 mm x 1000 mm depth, complete including excavation, materials, plant, labour and incidentals, as per detail drawings.	No.	15.00		
3.14.2	Extra-over Item 3.14.1 for depth increments of 250 mm.	No.	5.00		
3.15	Connection to Ramongoana Command Reservoir (inclusive of valve chambers, valves and bulk water meter)				
3.15.1	250mm	Prov Sum	1.00	100,000.00	100,000.00
	Mark-up on item 5.1	%		100,000.00	
3.16	Hydraulic Pipe Testing:				
3.16.1	Hydraulic Pipe Testing irrespective of Pipe Size	sum	1.00		
3.17	Disinfecting Pipe Works.				
3.17.1	Disinfecting Pipeworks irrespective of Pipe Size	sum	1.00		
3.18	Thrust Blocks:				
3.18.1	Excavation.	m <sup>3</sup>	15.00		
3.18.2	Formwork.	m <sup>2</sup>	20.00		
3.18.3	Concrete. [Class 20/19 MPa]	m <sup>3</sup>	5.00		

3.19	Pipe Works Ancillaries:				
3.19.1	550 mm x 550 mm Fabricated manhole cover with frame, galvanised.	No.	15.00		
3.19.2	Access ladder - 304 SS, galvanised.	No.			Rate Only
3.19.3	Concrete pipe line markers as per details.	No.	45.00		
4.1	Supply, Lay and Bed Ductile Iron Pipes (PN16) Complete:				
4.1.1	200 mm Diameter	m			Rate Only
4.1.2	300 mm Diameter	m			Rate Only
5	Elevated tanks, Connections of pipe mains to 2.5MI reservoir, inclusive of bends, valves, valve chambers and discharge unit				
5.1	315mm	Prov Sum	1.00	125,000.00	125,000.00
5.1.1	Mark-up on item 5.1	%		125,000.00	
5.2	110mm	Prov Sum	1.00	65,000.00	65,000.00
5.2.1	Mark-up on item 5.2	%		65,000.00	
5.3	400mm	Prov Sum	1.00	200,000.00	200,000.00
5.3.1	Mark-up on item 5.3	%		200,000.00	
5.4	Supply, install (inclusive of all footings reinforced concrete works and pipework), test and commission				
5.4.1	Mokgohla, 100kl tank on 12m steel supports	sum	1.00		
5.4.2	Matikiring, 100kl tank on 12m steel supports	sum	1.00		
	MEDIUM PRESSURE PIPELINES AND ANCILLARIES				

<div> <div>SCHEDULE OF QUANTITIES</div> <div>MOLETJIE EAST WATER SUPPLY SCHEME - PHASE 11</div> </div>			CONTRACT No.:	SECTION No.:	
			PM03/2017	B4	
ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNTS
B4	BOREHOLE PUMPS AND APPURTENANCES - LEGODI NEW BOREHOLE				
4.1	New borehole Installation				
4.1.1	Positive Displacement Pumps				
4.1.2	Supply material and erect concrete pump house as shown on drawings.	Sum	1.00		
4.1.3	Supply material and erect palisade fencing as shown on drawings.	Sum	1.00		
4.2	Electric Motor Control Panel				
	Supply and install control panel with all fittings required to operate pumps and motors efficiently, including 0-20 second delay timer and 0-24 hour timer according to DWA specifications				
4.2.1	Supply and install 5.5kw control panel complete with liquid level control (or no flow), pressure switch, lightning protection, auto/manual, volt and amp meter and cabling to electric motor	No	1.00		Rate Only
4.2.2	Supply and install 11kw control panel complete with liquid level control (or no flow), pressure switch, lightning protection, auto/manual, volt and amp meter and cabling to electric motor	No	1.00		
4.3	Supply and install borehole discharge pipework as shown on DWA125 813/97 ME R1 complete with flow meter, non return and pressure gauge, pressure switch (no flow switch)				
4.3.1	65mm dia pipework	sum	1.00		
	Supply and install new positive displacement pump, complete with columns (shafts, bobbins, spacers, sockets etc), discharge head (pulleys, V-belts, base plates), motor mount bracket, bolts and nuts (Q=2l/s)				
4.3.2	Supply and install new 65mm positive displacement pump head-Heavy Duty, complete drive and discharge head with pulley and top rod	No	1.00		
4.3.3	Supply and install new 65mm BP16H Element or equivalent	No	1.00		
4.3.4	Supply and install complete 65mm galvanised columns	No	48.00		
4.3.5	Supply and install spacer box	No	1.00		
4.3.6	Supply and install Vee belt 17x11625mm	No	2.00		
4.3.7	Supply and install probe pipe including cable tyre flex	sum	1.00		
4.4	3 Phase Electric Motors				
	Supply and install 380/220 V, 4 pole electrical motor with heavy duty cast iron frame, to run @ 1445 RPM				
4.4.1	Supply and install 7.5kw, 3phase	No	1.00		Rate Only
4.4.2	Supply and install 11kw, 3phase	No	1.00		
4.5	Pump house security				
4.5.1	Install motion sensor security system with remote sms sending facility to upto 8 designated persons	sum	1.00		



4.6	TESTING AND COMMISSIONING				
4.6.1	Testing and commission borehole installation including pumps, motors, control system, pressure gauges, water meters, valves	sum	1.00		
4.7	Electricity Supply				
4.7.1	Supply material and erect a three phase electricity power line, complete with a 25kVa transformer and eskom meter box and power cable to control panel, to the new borehole	Prov Sum	1	200,000.00	200,000.00
4.7.2	Mark-up on item 4.7.1	%		200,000.00	
	BOREHOLE PUMPS AND APPURTENANCES - LEGODI NEW BOREHOLE				

SCHEDULE OF QUANTITIES			CONTRACT No.:	SECTION No.:	
MOLETJIE EAST WATER SUPPLY SCHEME - PHASE 11			PM03/2017	B5	
ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNTS
B5	BOREHOLE PUMPS AND APPURTENANCES - MASOBOHLENG NEW BOREHOLE				
5.1	New borehole Installation				
5.1.1	Positive Displacement Pumps				
5.1.2	Supply material and erect concrete pump house as shown on drawings.	Sum	1.00		
5.1.3	Supply material and erect palisade fencing as shown on drawings.	Sum	1.00		
5.2	Electric Motor Control Panel				
	Supply and install control panel with all fittings required to operate pumps and motors efficiently, including 0-20 second delay timer and 0-24 hour timer according to DWA specifications				
5.2.1	Supply and install 5.5kw control panel complete with liquid level control (or no flow), pressure switch, lightning protection, auto/manual, volt and amp meter and cabling to electric motor	No	1.00		Rate Only
5.2.2	Supply and install 7.5kw control panel complete with liquid level control (or no flow), pressure switch, lightning protection, auto/manual, volt and amp meter and cabling to electric motor	No	1.00		
5.3	Supply and install borehole discharge pipework as shown on DWA125 813/97 ME R1 complete with flow meter, non return and pressure gauge, pressure switch (no flow switch)				
5.3.1	65mm dia pipework	sum	1.00		
5.3.2	Supply and install new positive displacement pump, complete with columns (shafts, bobbins, spacers, sockets etc), discharge head (pulleys, V-belts, base plates), motor mount bracket, bolts and nuts (Q=2l/s)	No	1.00		
5.3.3	Supply and install new 65mm BP12H Element or equivalent	No	1.00		
5.3.4	Supply and install complete 65mm galvanised columns	No	39.00		
5.3.5	Supply and install spacer box	No	1.00		
5.3.6	Supply and install Vee belt 17x11625mm	No	2.00		
5.3.7	Supply and install probe pipe including cable tyre flex	sum	1.00		
5.4	3 Phase Electric Motors				
	Supply and install 380/220 V, 4 pole electrical motor with heavy duty cast iron frame, to run @ 1445 RPM				
5.4.1	Supply and install 5.5kw, 3phase	No	1.00		Rate Only
5.4.2	Supply and install 7.5kw, 3phase	No	1.00		

5.5	Pump house security				
5.5.1	Install motion sensor security system with remote sms sending facility to upto 8 designated persons	sum	1.00		
5.6	TESTING AND COMMISSIONING				
5.6.1	Testing and commission borehole installation including pumps, motors, control system, pressure gauges, water meters, valves	sum	1.00		
5.7	Electricity Supply				
5.7.1	Supply material and erect a three phase electricity power line, complete with a 25kVa transformer and eskom meter box and power cable to control panel, to the new borehole	Prov Sum	1	200,000.00	200,000.00
5.7.2	Mark-up on item 5.7.1	%		200,000.00	
	BOREHOLE PUMPS AND APPURTENANCES - MASOBOHLENG NEW BOREHOLE				

<b>SCHEDULE OF QUANTITIES</b>		CONTRACT No.:	SECTION No.:
MOLETJIE EAST WATER SUPPLY SCHEME - PHASE 11		PM03/2017	B6

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNTS
<b>B6</b>	<b>REFURBISH BOREHOLE H04-0735 in Semenza</b>				
6.1	Existing borehole Installation				
	Positive Displacement Pumps				
6.1.1	Electric Motor Control Panel				
	Supply and install control panel with all fittings required to operate pumps and motors efficiently, including 0-20 second delay timer and 0-24 hour timer according to DWA specifications				
6.1.1.1	Supply and install 5.5kw control panel complete with liquid level control (or no flow), pressure switch, lightning protection, auto/manual, volt and amp meter and cabling to electric motor	No	1.00		Rate Only
6.1.2	Supply and install borehole discharge pipework as shown on DWA125 813/97 ME R1 complete with flow meter, non return and pressure gauge, pressure switch (no flow switch)				
6.1.2.1	50mm dia pipework	sum	1.00		Rate Only
	Supply and install new positive displacement pump, complete with columns (shafts, bobbins, spacers, sockets etc), discharge head (pulleys, V-belts, base plates), motor mount bracket, bolts and nuts (Q=2l/s)				
6.1.2.2	Supply and install new 50mm positive displacement pump head-Heavy Duty, complete drive and discharge head with pulley and top rod	No	1.00		Rate Only
6.1.3	Supply and install new 50mm BP12H Element or equivalent	No	1.00		Rate Only
6.1.4	Supply and install complete 50mm galvanised columns	No	6.00		Rate Only
6.1.5	Supply and install spacer box	No	1.00		Rate Only
6.1.6	Supply and install Vee belt 17x116x25mm	No	2.00		Rate Only
6.1.7	Supply and install probe pipe including cable tyre flex	sum	1.00		Rate Only
6.1.8	3 Phase Electric Motors				
	Supply and install 380/220 V, 4 pole electrical motor with heavy duty cast iron frame, to run @ 1445 RPM				
6.1.8.1	Supply and install 5.5kw, 3phase	No	1.00		Rate Only
6.1.8.2	Supply and install 7.5kw, 3phase	No			Rate Only
6.1.9	Pump house security				
6.1.9.1	Install motion sensor security system with remote sms sending facility to upto 8 designated persons	sum	1.00		
6.1.9.2	Supply material and erect palisade fencing as shown on drawings.	Sum	1.00		
6.1.10	TESTING AND COMMISSIONING				
6.1.10.1	Testing and commission borehole installation including pumps, motors, control system, pressure gauges, water meters, valves	sum	1.00		
6.1.11	Electricity Supply				
6.1.11.1	Supply material and erect a 25kVa transformer and eskom meter box and power cable to control panel, to the existing borehole	Prov Sum	1	100,000.00	100,000.00
6.7.2	Mark-up on item 6.1.11.1	%		100,000.00	
	<b>REFURBISH BOREHOLE H04-0735 in Semenza</b>				

SCHEDULE OF QUANTITIES			CONTRACT No.:	SECTION No.:
MOLETJIE EAST WATER SUPPLY SCHEME - PHASE 11			PM03/2017	B7

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNTS
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<b>B7</b>	<b>REFURBISH BOREHOLE H04-0733 in Semanya West</b>				
7.1	Existing borehole installation				
	Positive Displacement Pumps				
7.1.1	Electric Motor Control Panel				
	Supply and install control panel with all fittings required to operate pumps and motors efficiently, including 0-20 second delay timer and 0-24 hour timer according to DWA specifications				
7.1.1.1	Supply and install 5.5kw control panel complete with liquid level control (or no flow), pressure switch, lightning protection, auto/manual, volt and amp meter and cabling to electric motor	No	1.00		Rate Only
7.1.2	Supply and install borehole discharge pipework as shown on DWA125 813/97 ME R1 complete with flow meter, non return and pressure gauge, pressure switch (no flow switch)				
7.1.2.1	50mm dia pipework	sum	1.00		Rate Only
	Supply and install new positive displacement pump, complete with columns (shafts, bobbins, spacers, sockets etc), discharge head (pulleys, V-belts, base plates), motor mount bracket, bolts and nuts (Q=2l/s)				
7.1.2.2	Supply and install new 50mm positive displacement pump head-Heavy Duty, complete drive and discharge head with pulley and top rod	No	1.00		Rate Only
7.1.3	Supply and install new 50mm BP12H Element or equivalent	No	1.00		Rate Only
7.1.4	Supply and install complete 50mm galvanised columns	No	6.00		Rate Only
7.1.5	Supply and install spacer box	No	1.00		Rate Only
7.1.6	Supply and install Vee belt 17x11625mm	No	2.00		Rate Only
7.1.7	Supply and install probe pipe including cable tyre flex	sum	1.00		Rate Only
7.1.8	3 Phase Electric Motors				
	Supply and install 380/220 V, 4 pole electrical motor with heavy duty cast iron frame, to run @ 1445 RPM				
7.1.8.1	Supply and install 5.5kw, 3phase	No	1.00		Rate Only
7.1.8.2	Supply and install 7.5kw, 3phase	No			Rate Only
7.1.9	Pump house security				
7.1.9.1	Install motion sensor security system with remote sms sending facility to upto 8 designated persons	sum	1.00		
	Supply material and erect palisade fencing as shown on drawings.	Sum	1.00		
7.1.10	TESTING AND COMMISSIONING				
7.1.10.1	Testing and commission borehole installation including pumps, motors, control system, pressure gauges, water meters, valves	sum	1.00		
7.1.11	Electricity Supply				
7.1.11.1	Supply material and erect a 25kVa transformer and eskom meter box and power cable to control panel, to the existing borehole	Prov Sum	1	100,000.00	100,000.00
7.1.2	Mark-up on item 7.1.11.1	%		100,000.00	
	<b>REFURBISH BOREHOLE H04-0733 in Semanya West</b>				

SCHEDULE OF QUANTITIES	CONTRACT No.:	SECTION No.:
	PM03/2017	B8

MOLETJIE EAST WATER SUPPLY SCHEME - PHASE 11

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNTS
<b>B8</b>	<b>REFURBISH BOREHOLE H04-1586 in Semanya West</b>				
<b>8.1</b>	<b>Existing borehole Installation</b>				
	<b>Positive Displacement Pumps</b>				
<b>8.1.1</b>	<b>Electric Motor Control Panel</b>				
	Supply and install control panel with all fittings required to operate pumps and motors efficiently, including 0-20 second delay timer and 0-24 hour timer according to DWA specifications				
<b>8.1.1.1</b>	Supply and install 5.5kw control panel complete with liquid level control (or no flow), pressure switch, lightning protection, auto/manual, volt and amp meter and cabling to electric motor	No	1.00		Rate Only
<b>8.1.2</b>	Supply and install borehole discharge pipework as shown on DWA125 813/97 ME R1 complete with flow meter, non return and pressure gauge, pressure switch (no flow switch)				
<b>8.1.2.1</b>	50mm dia pipework	sum	1.00		Rate Only
	Supply and install new positive displacement pump, complete with columns (shafts, bobbins, spacers, sockets etc), discharge head (pulleys, V-belts, base plates), motor mount bracket, bolts and nuts (Q=2l/s)				
<b>8.1.2.2</b>	Supply and install new 50mm positive displacement pump head-Heavy Duty, complete drive and discharge head with pulley and top rod	No	1.00		Rate Only
<b>8.1.3</b>	Supply and install new 50mm BP12H Element or equivalent	No	1.00		Rate Only
<b>8.1.4</b>	Supply and install complete 50mm galvanised columns	No	6.00		Rate Only
<b>8.1.5</b>	Supply and install spacer box	No	1.00		Rate Only
<b>8.1.6</b>	Supply and install Vee belt 17x11625mm	No	2.00		Rate Only
<b>8.1.7</b>	Supply and install probe pipe including cable tyre flex	sum	1.00		Rate Only
<b>8.1.8</b>	<b>3 Phase Electric Motors</b>				
	Supply and install 380/220 V, 4 pole electrical motor with heavy duty cast iron frame, to run @ 1445 RPM				
<b>8.1.8.1</b>	Supply and install 5.5kw, 3phase	No	1.00		Rate Only
<b>8.1.8.2</b>	Supply and install 7.5kw, 3phase	No			Rate Only
<b>8.1.9</b>	<b>Pump house security</b>				
<b>8.1.9.1</b>	Install motion sensor security system with remote sms sending facility to upto 8 designated persons	sum	1.00		
	Supply material and erect palisade fencing as shown on drawings.	Sum	1.00		
<b>8.1.10</b>	<b>TESTING AND COMMISSIONING</b>				
<b>8.1.10.1</b>	Testing and commission borehole installation including pumps, motors, control system, pressure gauges, water meters, valves	sum	1.00		
<b>8.1.11</b>	<b>Electricity Supply</b>				
<b>8.1.11.1</b>	Supply material and erect a 25kVa transformer and eskom meter box and power cable to control panel, to the existing borehole	Prov Sum			Rate Only
<b>8.1.11.2</b>	Mark-up on item 8.1.11.1	%			Rate Only
	<b>REFURBISH BOREHOLE H04-1586 in Semanya West</b>				

SCHEDULE OF QUANTITIES				CONTRACT No.:	SECTION No.:
				PM03/2017	B9
ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNTS
B9	REFURBISH BOREHOLE H04-0017 AT RAMOANGANA VILLAGE				
	BOREHOLE PUMPS AND APPURTENANCES				
9.1	New borehole Installation				
9.1.1	Positive Displacement Pumps				
9.1.2	Supply material and erect concrete pump house as shown on drawings.	Sum	1.00		
9.2	Electric Motor Control Panel				
	Supply and install control panel with all fittings required to operate pumps and motors efficiently, including 0-20 second delay timer and 0-24 hour timer according to DWA specifications				
9.2.1	Supply and install 5.5kw control panel complete with liquid level control (or no flow), pressure switch, lightning protection, auto/manual, volt and amp meter and cabling to electric motor	No	1.00		Rate Only
9.2.1.1	Supply and install 7.5kw control panel complete with liquid level control (or no flow), pressure switch, lightning protection, auto/manual, volt and amp meter and cabling to electric motor	No	1.00		
9.3	Supply and install borehole discharge pipework as shown on DWA125 813/97 ME R1 or similar approved drawing complete with flow meter, non return and pressure gauge, pressure switch (no flow switch)				
9.3.1	65mm dia pipework	sum	1.00		
	Supply and install new positive displacement pump, complete with columns (shafts, bobbins, spacers, sockets etc), discharge head (pulleys, V-belts, base plates), motor mount bracket, bolts and nuts (Q=2l/s)				
9.3.2	Supply and install new 65mm positive displacement pump head-Heavy Duty, complete drive and discharge head with pulley and top rod	No	1.00		
9.3.3	Supply and install new 65mm BP12H Element or equivalent	No	1.00		
9.3.3.1	Supply and install new 65mm BP16H Element or equivalent	No	1.00		Rate Only
9.3.4	Supply and install complete 65mm galvanised columns	No	22.00		
9.3.5	Supply and install spacer box	No	1.00		
9.3.6	Supply and install Vee belt 17x11625mm	No	2.00		
9.3.7	Supply and install probe pipe including cable tyre flex	sum	1.00		
9.4	3 Phase Electric Motors				
	Supply and install 380/220 V, 4 pole electrical motor with heavy duty cast iron frame, to run @ 1445 RPM				
9.4.1	Supply and install 5.5kw, 3phase	No	1.00		Rate Only
9.4.2	Supply and install 7.5kw, 3phase	No	1.00		
9.5	Pump house security				
9.5.1	Install motion sensor security system with remote sms sending facility to upto 8 designated persons	sum	1.00		

9.6	TESTING AND COMMISSIONING				
9.6.1	Testing and commission borehole installation including pumps, motors, control system, pressure gauges, water meters, valves	sum	1.00		
9.6.2	Borehole yield testing ,, 4 steps & 24hr constant discharge	sum	1.00		
9.7	Electricity Supply				
9.7.1	Supply material and erect a three phase electricity power line, complete with a 25kVa transformer and eskom meter box and power cable to control	Prov Sum	1	200,000	200,000.00
9.7.2	Mark-up on item 9.7.1	%		200,000.00	
	BOREHOLE PUMPS AND APPURTENANCES				