

MONYAKENG: DEVELOPMENT OF NEW SEWER NETWORK FOR 950 STANDS IN KHALINKOMO AND VERGENOE

Preliminaries and General

Schedule A1: Fixed Charge and Value Related Items

ITEM No.	PAY REF.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
A.1		FIXED CHARGE AND VALUE RELATED ITEMS: (As specified in SABS 1200 A, SABS 1200 AB and the Project Specifications.)				
1,1		Contractual Requirements:				
1.1.1	8.3.1	Fixed charge contractual requirements.	Sum	1,00	R	-
1.1.2	8.3.1	Value related contractual requirements.	Sum	1,00	R	-
1,2		Facilities for Engineer (SANS 1200 AB)				
1.2.1	8.3.2.1 a	One furnished office with carport including aircon and electricity as per details in project specification	Sum	1,00	R	-
1.2.2	8.3.2.1 a	Boardroom for meetings (20 people) including conference table and chairs	Sum	1,00	R	-
1.2.3	8.3.2.1 b	Telephone	Sum	1,00	R	-
1.2.4	8.3.2.1 c	Two (2) Project Name Boards (including any maintenance, repairs, replacement during contract period)	Sum	1,00	R	-
1.2.5	8.1 a	Provision of survey equipment.	Sum	1,00	R	-
1,3		Facilities for Contractor:				
1.3.1	8.3.2.2 a	Offices and storage sheds	Sum	1,00	R	-
1.3.2	8.3.2.2 b	Workshops	Sum	1,00	R	-
1.3.3	8.3.2.2 c	Laboratories	Sum	1,00	R	-
1.3.4	8.3.2.2 d	Living accommodation	Sum	1,00	R	-
1.3.5	8.3.2.2 e	Ablution and latrine facilities	Sum	1,00	R	-
1.3.6	8.3.2.2 f	Tools and equipment	Sum	1,00	R	-
1.3.7	8.3.2.2 g	Water supplies, electric power and communications	Sum	1,00	R	-
1.3.8	8.3.2.2 h	Dealing with water	Sum	1,00	R	-
1.3.9	8.3.2.2 i	Access	Sum	1,00	R	-
1.3.10	8.3.2.2 j	Plant	Sum	1,00	R	-
1.3.11	8.3.2.2	Materials on site storage and protection.	Sum	1,00	R	-
1.3.12	8.3.2.2	Accommodation of traffic.	Sum	1,00	R	-
1.3.13	PSA 8.2 c	Labour intensive activity training.	Sum	1,00	R	-
1,4	8.3.3	Other Fixed Charge Obligations:	Sum	1,00	R	-
1,5	8.3.4	Removal of Site Establishment:	Sum	1,00	R	-
1,6	PSA 8.3 a	Environmental Management:	Sum	1,00	R	-
TOTAL CARRIED FORWARD:						R -

Initials

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Preliminaries and General

Schedule A2: Time Related Items

ITEM No.	PAY REF.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
A.2		TIME RELATED ITEMS: <i>(As specified in SABS 1200 A, SABS 1200 AB and the Project Specifications.)</i>				
2,1		Contractual Requirements:				
2.1.1	8.4.1	Time related contractual requirements.	Month	8,00		R -
2,2		Facilities for Engineer for Duration of construction (SANS 1200 AB):				
2.2.1	8.4.2.1 a	One furnished office with carport including aircon and electricity as per details in project specification	Month	8,00		R -
2.2.2	8.4.2.1 a	Boardroom for meetings (20 people) including conference table and chairs	Month	8,00		R -
2.2.3	8.4.2.1 b	Telephone for engineer's representative	Month	8,00		R -
2.2.4	8.4.2.1 c	Two (2) Project Name Boards (including any maintenance, repairs, replacement during contract period)	Month	8,00		R -
2.2.5	8.4.2.1 d	Survey assistants and material.	Month	8,00		R -
2,3		Facilities for Contractor:				
2.3.1	8.4.2.2 a	Offices and storage sheds.	Month	8,00		R -
2.3.2	8.4.2.2 b	Workshops.	Month	8,00		R -
2.3.3	8.4.2.2 c	Laboratories.	Month	8,00		R -
2.3.4	8.4.2.2 d	Living accommodation.	Month	8,00		R -
2.3.5	8.4.2.2 e	Ablution and latrine facilities.	Month	8,00		R -
2.3.6	8.4.2.2 f	Tools and equipment.	Month	8,00		R -
2.3.7	8.4.2.2 g	Water supplies, electric power and communications.	Month	8,00		R -
2.3.8	8.4.2.2 h	Dealing with water.	Month	8,00		R -
2.3.9	8.4.2.2 i	Access.	Month	8,00		R -
2.3.10	8.4.2.2 j	Plant.	Month	8,00		R -
2,4	8.4.3	Supervision for Duration of the Contract:	Month	8,00		R -
2,5	8.4.4	Overhead Costs for the Duration of the Contract:	Month	8,00		R -
2,6	8.4.5	Other Time Related Obligations:	Month	8,00		R -
2,7	PSA 8.3 b	Environmental Management:	Month	8,00		R -
2,8	PSA 8.4 a	Construction Management Administration:	Month	8,00		R -
TOTAL CARRIED FORWARD:						R -

Initials

MONYAKENG: DEVELOPMENT OF NEW SEWER NETWORK FOR 950 STANDS IN KHALINKOMO AND VERGENOE
Preliminaries and General

Schedule A3: Provisional Sums

ITEM No.	PAY REF.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
A.3		PROVISIONAL SUMS: <i>(As specified in SABS 1200 A and the Project Specifications.)</i>				
3,1		Community Liaison Officer:				
3.1.1	PSA 8.5 a	Provision for the employment of CLO.	Prov. Sum	8,00	R 7 500,00	R 60 000,00
3.1.2	PSA 8.5 a	Overheads, charges and profit on item 3.1.1.	%	60 000,00		R -
3,2		PSC Attendance at Site Meeting:				
3.2.1	PSA 8.5 a	Provision for the attendance of PSC members.	Prov. Sum	1,00	R 15 000,00	R 15 000,00
3.2.2	PSA 8.5 a	Overheads, charges and profit on item 3.2.1.	%	15 000,00		R -
3,3		Basic Skills and Construction Training:				
3.3.1	PSA 8.5 b	Provision for basic skills and construction site safety training.	Prov. Sum	1,00	R 220 000,00	R 220 000,00
3.3.2	PSA 8.5 b	Overheads, charges and profit on item 3.3.1.	%	220 000,00		R -
3,4		Relocation/Protection of Existing Services:				
3.4.1	PSA 8.5 c	Provision for relocation/protection of existing services.	Prov. Sum	1,00	R 55 000,00	R 55 000,00
3.4.2	PSA 8.5 c	Overheads, charges and profit on item 3.4.1.	%	55 000,00		R -
3,5		Additional Tests required by Engineer:				
3.5.1	PSA 8.5 c	Provision for additional tests.	Prov. Sum	1,00	R 150 000,00	R 150 000,00
3.5.2	PSA 8.5 c	Overheads, charges and profit on item 3.5.1.	%	150 000,00		R -
3.5.3	PSA 8.5 c	Payment to the Surveyor for the setting out PI's and additional benchmarks	Prov Sum	1,00	R 100 000,00	R 100 000,00
3.5.4	PSA 8.5 c	Overheads, charges and profit on item 3.5.3	%	100 000,00		R -
3,6		Occupational Health and Safety Audits:				
3.6.1	8.3.5.1	Provision for Occupational Health and Safety audits on site.	Prov. Sum	1,00	R 120 000,00	R 120 000,00
3.6.2	8.3.5.2	Overheads, charges and profit on item 3.6.1.	%	120 000,00		R -
3.6.3	8.3.5.1	Health and Safety Medicals (Entry Medicals) for all employees	Prov Sum	1,00	R 20 000,00	R 20 000,00
3.6.4	8.3.5.2	Overheads, charges and profit on item 3.6.3	%	20 000,00		R -
3.6.5	8.3.5.1	Health and Safety Medicals (Exit Medicals) for all employees	Prov Sum	1,00	R 20 000,00	R 20 000,00
3.6.6	8.3.5.2	Overheads, charges and profit on item 3.6.5	%	20 000,00		R -
3.6.7	8.3.5.1	Training of SHE representatives and induction of labourers	Prov Sum	1,00	R 40 000,00	R 40 000,00
3.6.8	8.3.5.2	Overheads, charges and profit on item 3.6.7	%	40 000,00		R -
3,6		Socail Facilitation				
3.6.1	PSC 8.5 c	Provision for Social Facilitation by a Client Appointed Service Provider .	Prov. Sum	1,00	R -	Rate Only
3.6.2	PSC 8.5 c 2	Overheads, charges and profit on item 3.6.1.	%	Rate Only		Rate Only
Total Carried Forward to Summary						

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Preliminaries and General

Schedule A4: Prime Cost Items

ITEM No.	PAY REF.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
A.4		PRIME COST ITEMS: <i>(As specified in SABS 1200 A and the Project Specifications.)</i>				
4.1		Pipe Specials:				
4.1.1	PSC 5.4	Provision of pipe specials, valves and fittings for Connection Points.	PC Sum	1,00		rate only
4.1.2	PSC 5.4	Overheads, charges and profit on item 4.1.1.	%	rate only		R -
4.2		Unblocking and Cleaning Sewer Pipes				
4.2.1	PSC 5.4	a) Unblocking of Pipes and Manhole utilizing rods and chemicals.	m	50,00		R -
4.2.2	PSC 5.4	b) Unblocking of Pipes and Manhole utilizing pressure jet and chemicals.	m	55,00		R -
4.2.3	PSC 5.4	c) Cleaning and disposal of waste materials to the nearest site.	m ³	36,75		R -
Total Carried Forward to Summary						R -

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Preliminaries and General

Schedule A5: Dayworks

ITEM No.	PAY REF.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
A.5		DAYWORK: <i>(As specified in SABS 1200 A and the Project Specifications.)</i>				
5,1	8,7	Labour - Normal Working Hours: [Provisional]				
5.1.1		Skilled Labour (Artisan).	hr			Rate Only
5.1.2		Semi-skilled Labour.	hr			Rate Only
5.1.3		Unskilled Labour.	hr			Rate Only
5.1.4		Foreman.	hr			Rate Only
5.1.5		Extra-over rate for items 5.1.1 to 5.1.4 for work during non working hours.	%			Rate Only
5,2	8,7	Materials: [Provisional]				
5.2.1		Allowance for Materials used under Dayworks.	Sum	1,00		Rate Only
5.2.2		Overheads, Handling and all Charges on Item 5.2	%	Rate Only		Rate Only
5,3	8,7	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 ≤ 1.5 m ³ .	hr			Rate Only
5.3.5		Front end loader - bucket capacity >1.5 m ³ .	hr			Rate Only
5.3.6		Tip truck - 5 m ³ capacity.	hr			Rate Only
5.3.7		Tip truck - 10 m ³ capacity.	hr			Rate Only
5.3.8		Vibratory compaction roller - 13.5 ton.	hr			Rate Only
5.3.9		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	8,7	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
5.4.4		Transport cost per any unit of plant to deliver to site and remove from site for items 5.4.1 to 5.4.3.	Sum			Rate Only
Total Carried Forward to Summary						R -

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Preliminaries and General

Schedule A6: Temporary Works

ITEM No.	PAY REF.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
A.6		TEMPORARY WORKS: <i>(As specified in SABS 1200 A and the Project Specifications.)</i>				
6,1		Access Roads to the Works.				
6.1.1	8.3.2.2.i	Provision and maintenance of construction access to sites, camp or pipeline routes as required by the contractor.	Sum	1,00		R -
6,2		Safety Measures at Excavations:				
6.2.1	8.3.5.1	Provision of all safety measures required to fully protect all excavations against public access, injury or any other possible accident.	Sum	1,00		R -
Total Carried Forward to Summary						R -

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MONYAKENG: DEVELOPMENT OF NEW SEWER NETWORK FOR 950 STANDS IN KHALINKOMO AND VERGENOEG
Khalinkomo Earthworks
Schedule B1: Sewer Earthworks

ITEM No.	LI	PAY REF.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
B1		SANS 1200 C	Clear Site				
1,1			Site Clearance:				
1.1.1	8.3.1 a		Clear and grub Site (3m wide strips)	m	3 604,57	R	-
	8.3.1 b		Clear trees of girth over 1.0 m.				
1.1.2			a) 1 m 2 m	No.	68,00	R	-
1.1.3			b) 2 m 3 m	No.	1,00	R	-
1.1.4			c) 3 m upwards in 1 m steps	No.	1,00	R	-
1.1.5	8.3.1 c		Remove topsoil to a nominal depth of 150mm and stockpile, 800 mm wide.	m ²	432,55	R	-
1.1.6			Demolish existing concrete. (Provisional)	m ³	6,40	R	-
1,2		PSC 8.2.5	Take down existing fence irrespective of height				
1.2.1			Mesh and barbed wire fences	m	150	R	-
1.2.2			Pallisade, brick or concrete panel type	m	100	R	-
1,3			Reinstate road surface complete with all courses using manual techniques				
1.3.1			Gravel surface	m ²	250	R	-
1.3.2			Tarred/paved surface (Prov)	m ²	10	R	-
1,4		SANS 1200DB	Excavation				
	8.3.1(a)		Excavate in all materials for trenches, backfill, compact and dispose of surplus material for pipes over 0 and up to 500 mm dia.				
1.4.1			for trench depths 0.0m to 1.0m	m	175,55	R	-
1.4.2			for trench depths 1.0m to 2.0m	m	442,91	R	-
1.4.3			for trench depths 2.0m to 3.0m	m	511,43	R	-
1.4.4			for trench depths 3.0m to 4,0m	m	1187,37	R	-
1.4.5			for trench depths >4,0m	m	1462,86	R	-
1.4.6			Excavate in all material for Pump House Sump including Allowances	m ³	225,7	R	-
1,5	8.3.2(b)		Extra-over item C.1.1 for excavation in:				
1.5.1			Intermediate material	m ³	302,8	R	-
1.5.2			Hard rock Excavation (chemical blasting)	m ³	216,3	R	-
1,6	8.3.3		Excavation Ancillaries				
1.6.1	8.3.3.3		Compaction to ground level for trenches and around sump (95% Mod AASHTO)	m ³	150,0	R	-
1.6.2	8.3.3.4		Overhaul of select material for backfilling in C.3.1	m ³ .km	750,0	R	-
1.6.3			Make up deficiency in backfill material by importing from commercial source	m ³	150,0	R	-
Balance Carried Forward							R -

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Balance Brought Forward							R	-
1,7			<u>Provision of Bedding</u>					
		8.2.1	Available from trench excavation within freehaul					
1.7.1			a. Selected Granular material	m ³	496,1		R	-
1.7.2			b. Selected backfill material	m ³	182,3		R	-
		8.2.2.1	Provision of bedding material by importation from other necessary excavations (freehaul)					
1.7.3			a. Selected granular material	m ³	148,8		R	-
1.7.3			b. Selected fill material	m ³	54,7		R	-
		8.2.2.2	Provision of bedding material by importation from designated borrow pits					
1.7.4			a. Selected granular material	m ³	173,6		R	-
1.7.5			b. Selected fill material	m ³	63,8		R	-
1,8			<u>Hand Excavation</u>					
1.8.1			In confined areas	m ³	180,0		R	-
1.8.2			To expose pipes and other services	m ³	180,0		R	-
1.8.3		8.2.4	shoring of trenches where instructed by the engineer	m	5465		R	-
1.8.4		8.3.3	compaction in road reserves (where ordered by engineer)	m ³	400		R	-
1,9			<u>MANHOLE EXCAVATION</u>					
1.9.1		8.3.2	Extra over trench excavation for excavating and backfilling in all material for manhole rings including working space to pipe invert					
1.9.2			For manhole rings including working space to pipe invert	m ³	155		R	-
1.9.3			Base excavation below pipe invert	m ³	36,0457		R	-
Total Carried Forward to Summary							R	-

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MONYAKENG: DEVELOPMENT OF NEW SEWER NETWORK FOR 950 STANDS IN KHALINKOMO AND VERGENOEG

Khalinkomo Pipes and Manholes

Schedule B2: Pipes & Manholes

ITEM No.	LI	PAY REF.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
B2		SABS 1200 L	PIPELINES				
2,1			<u>Lay, Joint, Bed and test pipeline for</u>				
		8.2.1	<u>Supply, Lay, Joint, Bed and test pipeline for sewer pipes</u>				
2.1.1			110mm nb uPVC Sewer Pipes	m	29,0	R	-
2.1.2			160mm nb uPVC Sewer Pipes	m	2 141,00	R	-
2.1.3			200mm nb uPVC Sewer Pipes	m	485,15	R	-
2.1.4			250mm nb uPVC Sewer Pipes	m	514,85	R	-
2.1.5			315mm nb uPVC Sewer Pipes	m	465,86	R	-
2,2		8.2.2	<u>Extra Over item D.2.1.1 for Supply, Lay, Joint, Bed and test uPVC class 16 bends complete with fittings</u>				
2.2.1			11.25 degree bends	No.	2,0	R	-
2.2.2			22.5 degree bends	No.	2,0	R	-
2.2.3			45 degree bends	No.	3,0	R	-
2.2.4			90 degree bends	No.	2,0	R	-
2,3		SANS 1200LD 3.2	Manholes				
			Construct Precast Concrete Manholes (1.0m ND) complete with cover slab and concrete lid				
			Over and up to				
2.3.1			0,0m - 1,5m	No	3	R	-
2.3.2			1,5m - 2,5m	No	7	R	-
2.3.3			2,5m - 3,5m	No	6	R	-
2.3.4			3,5m - 4,5m	No	2	R	-
2,4			<u>Precast Manholes</u>				
2.4.1			Supply, lay, install 1 500mm dia precast manhole rings complete with cover and lid to all depths.	m	40		Rate Only
Balance Carried Forward							R -

Initials

Balance Brought Forward							R	-
2,5		8.2.1.1	<u>Concrete Bases and Benching</u>					
2.5.1			Class 25/19 concrete base cast on levelled surface minimum 100mm thick	m ³	12		R	-
2.5.2			Class 25/19 concrete benching including channelling with steel float finish	m ³	10		R	-
2.5.3			Class 25/19 concrete in mass concrete where instructed	m ³	5		R	-
2,6		8.2.1.1	<u>Miscellaneous Manhole Works</u>					
2.6.1			Extra over D5.4 for forming ramps and back drops	No	3		R	-
2.6.2			Breaking into live sewer and building new manhole (Prov)	No	4		R	-
2.6.3			Lowering or raising existing manholes (Prov)	No	1		R	-
2,7		8.2.11 b)	<u>Anchor/thrust blocks, pipe piers and sundry items</u>					
2.7.1			Concrete: Strength Grade 25 MPa/19 mm to thrust blocks, bases & columns	m ³	2,0		R	-
2.7.2			Formwork: rough, vertical plane	m ²	20,0		R	-
2.7.3			Reinforcement: High-Tensile steel bars where instructed	t	1,0		R	-
2,8		8.2.13	<u>Brick Valve chambers, etc</u>					
2.8.1			Construction of one brick wall thick type valve chamber complete as detailed on Drawings :	No.	2,0		R	-
2.8.2			Pipeline marker posts for route and valve chambers	No.	5,0		R	-
2,9			<u>Miscellaneous</u>					
2.9.1			Allow for works involved in crossing existing underground services	No	10,0		R	-
2.9.2			Allow a provisional sum for items related to pipeline not covered elsewhere	Prov Sum	1,0		R	-
3,0			<u>House Connections</u>					
3,1			<u>Lay, Joint, Bed and test pipeline for</u>					
		8.2.1	<u>Supply, Lay, Joint, Bed and test pipeline for sewer pipes</u>					
3.1.1			110mm nb uPVC Sewer Pipes	m	14 150		R	-
3,2			<u>Specials and Fittings complete with rubber rings and sockets Supply, Handle, Bed, Lay, Joint, Test uPVC Fittings to SANS 791</u>					
			<u>uPVC pipe fittings to SABS 967 (exposed)</u>					
3.2.1			a) 110 mm Ø, pan connector	No	566,00		R	-
3.2.2			b) 110 mm Ø x 87.5, AH junction	No	1 132,00		R	-
3.2.3			c) 110 mm Ø, soil and vent pipe (min 1.0m)	No	566,00		R	-
3.2.4			d) 110 mm Ø, 2 way vent valve	No	566,00		R	-
3.2.5			e) Precast Concrete Gully Complete with P Trap and ancillaries	No.	566,00		R	-
Balance Carried Forward							R	-

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Balance Brought Forward							R	-
			uPVC pipe fittings to SABS 791 (buried)					
3.2.6			a) 110 mm Ø x 90deg , plain ended bend	No	1 132,00		R	-
3.2.7			b) 110 mm Ø x 45deg , plain junction	No	0,00		R	-
3.2.8			c) 110 mm Ø x 45deg , plain ended bend	No	0,00		R	-
3.2.9			d) 110 mm Ø x 45deg , rodding eye	No	566,00		R	-
3.2.10			e) 110 mm Ø x 45deg , access right junction (Prov)	No	0,00		R	-
3,3			Top Structures					
3.3.1			Brick Top Structure Complete With IBR Roof and Slab					
3.3.1.1			Construction of Brick Top Structure Complete with Foundation, Floor Slab, Walls, IBR Roofing and all Fittings as per Issued drawing	No.	566,00		R	-
3.3.1.2			Level and grade area to take top structure (2.5m x 2.5m), Including Foundation Excavation	Sum	566,00		R	-
3.3.2			Fittings and Plumbing					
3.3.2.1			Allow for all work required to connect water from the stand connection to the cistern including all material required and trenching. (15mm pipes and fittings or similar approved)	Sum	566,00		R	-
3.3.2.2			Extra Over Item 3.3.1.1 for Sloping of Floor and Installation of Drain Hole for Water to Drain into the Concrete Gully drain Outside the Top Structure	Sum	566,00		R	-
Total Carried Forward to Summary							R	-

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MONYAKENG: DEVELOPMENT OF NEW SEWER NETWORK FOR 950 STANDS IN KHALINKOMO AND VERGENOE
Khalinkomo Sewer Ancillaries

Schedule B3: Sewer Ancillaries

ITEM No.	LI	PAY REF.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
B3		SANS 1200	Sewer Ancillaries				
3,1			Supply and install:				
3.1.1			Route marker posts as per Dwg	No	24,00		R -
3.1.2			Marking of all pipeline structures	No	24,00		R -
3.1.3			Hydrostatic testing of complete pipeline	m	3 604,57		R -
3.1.4			Allow for sewer pump station complete with pipework for a 2km pumping main all inclusive.	Sum	1	R 5 500 000,00	R 5 500 000,00
3.1.5			Mechanical and Electricals for Pump Station	Sum	1	R 1 650 000,00	R 1 650 000,00
3,2			Sewer House Connection				
3.2.1			Construction of house connections complete as detailed in Construction DRAWINGS	No.	566,00		R -
3.2.2			Allow for all works required prior to the construction of a manhole for the sewer pipe diameters up to and not exceeding 300mm diameter size.	No.	0,00		Rate Only
3.2.3			Extra over the above items for the construction of the house connections in the following combinations;				
3.2.3			One-House Connection	No.	566,00		R -
3.2.4			Two-House Connection	No.			Rate Only
3,3			Provision of backfill and its placing thereof with material from;				
3.3.1			excavations within site	m³	4 754,40		R -
3.3.2			imported material	m³	475,44		rate only
3,4			Testing of the Sewer reticulation				
			Sewer testing of manholes as per the project SANS Specification for manholes of depths;				
3.4.1			For excavations below 2.5m deep	No.	10,00		R -
3.4.2			Over 2,5 m and up to 4,0 m deep	No.	12,00		R -
3.4.3			Over 4,0 m and up to 5 m deep	No.	0,00		R -
3.4.4			Over 5,0 m and up to 10,0 m deep	No.	2,00		R -
3,5			Sewer Pipeline Testing				
			Allow for complete Sewer Air Testing for the following pipe diameters;				
3.5.1			110mm diameter pipes	m	29,00		R -
3.5.2			160mm diameter pipes	m	2 141,00		R -
3.5.3			200mm Diameter pipes	m	485,15		R -
3.5.4			250mm diameter pipes	m	514,85		R -
3.5.5			300mm diameter pipes	m	462,86		R -
Total Carried Forward to Summary							

Initials

MONYAKENG: DEVELOPMENT OF NEW SEWER NETWORK FOR 950 STANDS IN KHALINKOMO AND VERGENOE
Vergenoeg Earthworks

Schedule C1: Sewer Earthworks

ITEM No.	LI	PAY REF.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
C1		SANS 1200 C	Clear Site				
1,1			Site Clearance:				
1.1.1		8.3.1 a	Clear and grub Site (3m wide strips)	m	3 161,80		R -
		8.3.1 b	Clear trees of girth over 1.0 m.				
1.1.2			a) 1 m 2 m	No.	62,00		R -
1.1.3			b) 2 m 3 m	No.	1,00		R -
1.1.4			c) 3 m upwards in 1 m steps	No.	1,00		R -
1.1.5		8.3.1 c	Remove topsoil to a nominal depth of 150mm and stockpile, 800 mm wide.	m ²	379,42		R -
1.1.6			Demolish existing concrete. (Provisional)	m ³	6,40		R -
1,2		PSC 8.2.5	Take down existing fence irrespective of height				
1.2.1			Mesh and barbed wire fences	m	150		R -
1.2.2			Pallisade, brick or concrete panel type	m	100		R -
1,3			Reinstate road surface complete with all courses using manual techniques				
1.3.1			Gravel surface	m ²	250		R -
1.3.2			Tarred/paved surface (Prov)	m ²	10		R -
1,4		SANS 1200DB	Excavation				
		8.3.1(a)	Excavate in all materials for trenches, backfill, compact and dispose of surplus material for pipes over 0 and up to 500 mm dia.				
1.4.1			for trench depths 0.0m to 1.0m	m	122,55		R -
1.4.2			for trench depths 1.0m to 2.0m	m	1415,2		R -
1.4.3			for trench depths 2.0m to 3.0m	m	1155,7		R -
1.4.4			for trench depths >3.0m	m	641,7		R -
1.4.5			Excavate in all material for Pump House Sump including Allowances	m ³	225,7		R -
1,5		8.3.2(b)	Extra-over item C.1.1 for excavation in:				
1.5.1			Intermediate material	m ³	265,6		R -
1.5.2			Hard rock Excavation (chemical blasting)	m ³	189,7		R -
1,6		8.3.3	Excavation Ancillaries				
1.6.1		8.3.3.3	Compaction to ground level for trenches and around sump (95% Mod AASHTO)	m ³	150,0		R -
1.6.2		8.3.3.4	Overhaul of select material for backfilling in C.3.1	m ³ .km	750,0		R -
1.6.3			Make up deficiency in backfill material by importing from commercial source	m ³	150,0		R -
Balance Carried Forward							R -

Initials

Balance Brought Forward							R	-
1,7			<u>Provision of Bedding</u>					
		8.2.1	Available from trench excavation within freehaul					
1.7.1			a. Selected Granular material	m ³	427,4		R	-
1.7.2			b. Selected backfill material	m ³	157,1		R	-
		8.2.2.1	Provision of bedding material by importation from other necessary excavations (freehaul)					
1.7.3			a. Selected granular material	m ³	128,2		R	-
1.7.3			b. Selected fill material	m ³	47,1		R	-
		8.2.2.2	Provision of bedding material by importation from designated borrow pits					
1.7.4			a. Selected granular material	m ³	149,6		R	-
1.7.5			b. Selected fill material	m ³	55,0		R	-
1,8			<u>Hand Excavation</u>					
1.8.1			In confined areas	m ³	180,0		R	-
1.8.2			To expose pipes and other services	m ³	180,0		R	-
1.8.3		8.2.4	shoring of trenches where instructed by the engineer	m	4490		R	-
1.8.4		8.3.3	compaction in road reserves (where ordered by engineer)	m ³	400		R	-
1,9			<u>MANHOLE EXCAVATION</u>					
1.9.1		8.3.2	Extra over trench excavation for excavating and backfilling in all material for manhole rings including working space to pipe invert					
1.9.2			For manhole rings including working space to pipe invert	m ³	155		R	-
1.9.3			Base excavation below pipe invert	m ³	31,62		R	-
Total Carried Forward to Summary							R	-

Initials	
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MONYAKENG: DEVELOPMENT OF NEW SEWER NETWORK FOR 950 STANDS IN KHALINKOMO AND VERGENOEG

Vergenoeg Pipes and Manholes

Schedule C2: Pipes & Manholes

ITEM No.	LI	PAY REF.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
C2		SABS 1200 L	PIPELINES				
2,1			<u>Lay, Joint, Bed and test pipeline for</u>				
		8.2.1	<u>Supply, Lay, Joint, Bed and test pipeline for sewer pipes</u>				
2.1.1			110mm nb uPVC Sewer Pipes	m	30,0	R	-
2.1.2			160mm nb uPVC Sewer Pipes	m	2535,85	R	-
2.1.3			200mm nb uPVC Sewer Pipes	m	626,0	R	-
2,2		8.2.2	<u>Extra Over item D.2.1.1 for Supply, Lay, Joint, Bed and test uPVC class 16 bends complete with fittings</u>				
2.2.1			11.25 degree bends	No.	2,0	R	-
2.2.2			22.5 degree bends	No.	2,0	R	-
2.2.3			45 degree bends	No.	3,0	R	-
2.2.4			90 degree bends	No.	2,0	R	-
2,3		SANS 1200LD 3.2	Manholes				
			Construct Precast Concrete Manholes (1.0m ND) complete with cover slab and concrete lid				
			Over and up to				
2.3.1			0,0m - 1,5m	No	11	R	-
2.3.2			1,5m - 2,5m	No	8	R	-
2.3.3			2,5m - 3,5m	No	4	R	-
2.3.4			3,5m - 4,5m	No	0	R	-
2,4			<u>Precast Manholes</u>				
2.4.1			Supply, lay, install 1 500mm dia precast manhole rings complete with cover and lid to all depths.	m	40		Rate Only
Balance Carried Forward							R -

Initials

Balance Brought Forward							R	-
2,5		8.2.1.1	<u>Concrete Bases and Benching</u>					
2.5.1			Class 25/19 concrete base cast on levelled surface minimum 100mm thick	m ³	12		R	-
2.5.2			Class 25/19 concrete benching including channelling with steel float finish	m ³	10		R	-
2.5.3			Class 25/19 concrete in mass concrete where instructed	m ³	5		R	-
2,6		8.2.1.1	<u>Miscellaneous Manhole Works</u>					
2.6.1			Extra over D5.4 for forming ramps and back drops	No	3		R	-
2.6.2			Breaking into live sewer and building new manhole (Prov)	No	4		R	-
2.6.3			Lowering or raising existing manholes (Prov)	No	1		R	-
2,7		8.2.11 b)	<u>Anchor/thrust blocks, pipe piers and sundry items</u>					
2.7.1			Concrete: Strength Grade 25 MPa/19 mm to thrust blocks, bases & columns	m ³	2,0		R	-
2.7.2			Formwork: rough, vertical plane	m ²	20,0		R	-
2.7.3			Reinforcement: High-Tensile steel bars where instructed	t	1,0		R	-
2,8		8.2.13	<u>Brick Valve chambers, etc</u>					
2.8.1			Construction of one brick wall thick type valve chamber complete as detailed on Drawings :	No.	2,0		R	-
2.8.2			Pipeline marker posts for route and valve chambers	No.	5,0		R	-
2,9			<u>Miscellaneous</u>					
2.9.1			Allow for works involved in crossing existing underground services	No	10,0		R	-
2.9.2			Allow a provisional sum for items related to pipeline not covered elsewhere	Prov Sum	1,0		R	-
3,0			<u>House Connections</u>					
3,1		8.2.1	<u>Lay, Joint, Bed and test pipeline for Supply, Lay, Joint, Bed and test pipeline for sewer pipes</u>					
3.1.1			110mm nb uPVC Sewer Pipes	m	11 125		R	-
3,2			Specials and Fittings complete with rubber rings and sockets Supply, Handle, Bed, Lay, Joint, Test uPVC Fittings to SANS 791					
			uPVC pipe fittings to SABS 967 (exposed)					
3.2.1			a) 110 mm Ø, pan connector	No	445,00		R	-
3.2.2			b) 110 mm Ø x 87.5, AH junction	No	890,00		R	-
3.2.3			c) 110 mm Ø, soil and vent pipe (min 1.0m)	No	445,00		R	-
3.2.4			d) 110 mm Ø, 2 way vent valve	No	445,00		R	-
3.2.5			e) Precast Concrete Gully Complete with P Trap and ancillaries	No.	445,00		R	-
Balance Carried Forward							R	-

Initials	
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Balance Brought Forward							R	-
			uPVC pipe fittings to SABS 791 (buried)					
3.2.6			a) 110 mm Ø x 90deg , plain ended bend	No	890,00		R	-
3.2.7			b) 110 mm Ø x 45deg , plain junction	No	0,00		R	-
3.2.8			c) 110 mm Ø x 45deg , plain ended bend	No	0,00		R	-
3.2.9			d) 110 mm Ø x 45deg , rodding eye complete	No	445,00		R	-
3.2.10			e) 110 mm Ø x 45deg , access right junction (Prov)	No	0,00		R	-
3,3			Top Structures					
3.3.1			Brick Top Structure Complete With IBR Roof and Slab					
3.3.1.1			Construction of Brick Top Structure Complete with Foundation, Floor Slab, Walls, IBR Roofing and all Fittings as per Issued drawing	No.	445,00		R	-
3.3.1.2			Level and grade area to take top structure (2.5m x 2.5m), Including Foundation Excavation	Sum	445,00		R	-
3.3.2			Fittings and Plumbing					
3.3.2.1			Allow for all work required to connect water from the stand connection to the cistern including all material required. (15mm pipes and fittings or similar approved)	Sum	445,00		R	-
3.3.2.2			Extra Over Item 3.3.1.1 for Sloping of Floor and Installation of Drain Hole for Water to Drain into the Concrete Gully drain Outside the Top Structure	Sum	445,00		R	-
Total Carried Forward to Summary							R	-

Initials	
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MONYAKENG: DEVELOPMENT OF NEW SEWER NETWORK FOR 950 STANDS IN KHALINKOMO AND VERGENOEG
Vergenoeg Sewer Ancillaries

Schedule C3: Sewer Ancillaries

ITEM No.	LI	PAY REF.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT
C3		SANS 1200	Sewer Ancillaries				
3,1			Supply and install:				
3.1.1			Route marker posts as per Dwg	No	24,00	R	-
3.1.2			Marking of all pipeline structures	No	24,00	R	-
3.1.3			Hydrostatic testing of complete pipeline	m	3 161,8	R	-
3.1.4			Allow for sewer pump station complete with pipework for a 2km pumping main all inclusive.	Sum	1		Rate Only
3.1.5			Mechanical and Electricals for Pump Station	Sum	1,0		Rate Only
3,2			Sewer House Connection				
3.2.1			Construction of house connections complete as detailed in Construction DRAWINGS	No.	445,00	R	-
3.2.2			Allow for all works required prior to the construction of a manhole for the sewer pipe diameters up to and not exceeding 300mm diameter size.	No.	0,00		Rate Only
3.2.3			Extra over the above items for the construction of the house connections in the following combinations;	No.	445,00	R	-
3.2.4			One-House Connection	No.			Rate Only
			Two-House Connection	No.			
3,3			Provision of backfill and its placing thereof with material from;				
3.3.1			excavations within site	m³	3 738,00	R	-
3.3.2			imported material	m³	373,80		rate only
3,4			Testing of the Sewer reticulation				
			Sewer testing of manholes as per the project SANS Specification for manholes of depths;				
3.4.1			For excavations below 2.5m deep	No.	10,00	R	-
3.4.2			Over 2,5 m and up to 4,0 m deep	No.	12,00	R	-
3.4.3			Over 4,0 m and up to 5 m deep	No.	0,00	R	-
3.4.4			Over 5,0 m and up to 10,0 m deep	No.	2,00	R	-
3,5			Sewer Pipeline Testing				
			Allow for complete Sewer Air Testing for the following pipe diameters;				
3.5.1			110mm diameter pipes	m	29,00	R	-
3.5.2			160mm diameter pipes	m	3 161,80	R	-
3.5.3			200mm Diameter pipes	m	485,15	R	-
3.5.4			250mm diameter pipes	m	0,00		Rate Only
3.5.5			300mm diameter pipes	m	0,00		Rate Only
Total Carried Forward to Summary							R -

Initials

MONYAKENG: DEVELOPMENT OF NEW SEWER NETWORK FOR 950 STANDS IN KHALINKOMO AND VERGENOEG
SUMMARY SCHEDULE OF QUANTITIES

CALCULATION OF TENDER SUM: SEWER

SCHEDULE	SECTION	SECTION DESCRIPTION	TENDERED AMOUNT
A	PRELIMINARY AND GENERAL:		
A	1	FIXED CHARGE AND VALUE RELATED OBLIGATIONS	R -
A	2	TIME RELATED OBLIGATIONS	R -
A	3	PROVISIONAL SUMS	R -
A	4	PRIME COST SUMS	R -
A	5	DAYWORKS	R -
A	6	TEMPORARY WORKS	R -
TOTAL SCHEDULE A: PRELIMINARIES & GENERAL			R -
B	KHALINKOMO SEWER NETWORKS		
B	R 1,00	EARTHWORKS FOR PIPE TRENCHES	R -
B	R 2,00	PIPES AND MANHOLES	R -
B	R 3,00	ANCILLARIES	R -
TOTAL SCHEDULE B: SEWER NETWORK KHALINKOMO			R -
C	VERGENOEG SEWER NETWORKS		
C	1	EARTHWORKS FOR PIPE TRENCHES	R -
C	2	PIPES AND MANHOLES	R -
C	3	ANCILLARIES	R -
TOTAL SCHEDULE C: SEWER NETWORK VERGENOEG			R -
TOTAL AMOUNT - SCHEDULE A:			R -
TOTAL AMOUNT – SCHEDULE B:			R -
TOTAL AMOUNT - SCHEDULE C:			R -
TENDER SUM:			R -
CONTINGENCIES [10.00%]:			R -
SUB-TOTAL:			R -
VAT [15.00%]:			R -
TENDER PRICE:			R -

Initials