

UPGRADING OF THE INTABAZWE RISING MAIN

SCHEDULE OF QUANTITIES

SCHEDULE 1: PRELIMINARY AND GENERAL

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SCHEDULE 2: PROVISIONAL SUMS AND PRIME COST ITEMS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
	SANS 1200 A	SCHEDULE 2: PROVISIONAL SUMS AND PRIME COST ITEMS					
2.1	PSA.11 8.6	PRIME COST ITEMS					
2.1.1		Materials used in the execution of dayworks	Prov sum	1.0	25 000.00	25 000	00
2.1.2		Overheads, charges and profit on the above	%	25 000.00			
2.2	PSA.10 8.5	SUMS STATED PROVISIONALLY BY THE ENGINEER					
		Engineers requirements					
2.2.1		Acceptance control testing of Pipework Coatings and Linings (Independent Quality Inspector)	Prov sum	1.0	30 000.00	30 000	00
2.2.2		Overheads, charges and profit on the above item	%	30 000.00			
2.2.3		CLO/LDO remuneration	Prov sum	1.0	20 000.00	20 000	00
2.2.4		Overheads, charges and profit on the above item	%	20 000.00			
		Professional or specialist services					
2.2.5		Occupational Health and Safety specialist services for the Engineer	PC sum	6.0	25 000.00	150 000	00
2.2.6		Environmental specialists services for the Engineer	PC sum	6.0	12 000.00	72 000	00
2.3	SANS 1200A	SUMS STATED PROVISIONALLY BY THE ENGINEER					
2.3.1		Unforeseen circumstances for pressure testing of installed pipelines	Prov sum	1.0	650 000.00	650 000	00
2.3.2		Mechanical and electrical works required to intergrate to existing system with the upgraded equipment	Prov sum	1.0	450 000.00	450 000	00
2.3.3		Overheads, charges and profit on the above item	%	450 000			
2.3.4		Emergency works required for affected service delivery pipelines	Prov sum	1.0	485 000.00	485 000	00
2.3.5		Overheads, charges and profit on the above item	%	485 000			
2.3.6		Procurement and supply of stanby pump set for water supply to Intabazwe	Prov sum	1.0	1 250 000.00	1 250 000	00
2.3.7		Subcontractor and service provider settlements	Prov sum	1	3 125 000.00	3 125 000	00
2.3.8		Overheads, charges and profit on the above item	%	3 125 000			
Total Carried Forward To Summary							

SCHEDULE OF QUANTITIES

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SCHEDULE OF QUANTITIES

SCHEDULE 4: SITE CLEARANCE

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SCHEDULE 5: EARTHWORKS (PIPE TRENCHES)

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
	SANS 1200 DB	SCHEDULE 5: EARTHWORKS (PIPE TRENCHES)					
5.1		TRENCHES FOR WATER PIPES					
		TRENCHING					
		EXCAVATION AND BACKFILLING					
	SANS 1200 DB PSDB 9	Excavate in all materials, backfill and compact to 90% mod AASHTO density, and dispose of surplus and unsuitable materials within the freehaul distance for trenches					
		Up to 1m wide (Pipe dia 160mm to 315mm)					
5.1.1		Up to 1m deep	m ³	2 000.0			
5.1.2		Over 1m and up to 2m deep	m ³	1 600.0			
	8.3.2	Over 1m and up to 2m wide (Pipe dia 350mm and above)					
5.1.3		Up to 1m deep	m ³	200.0			
5.1.4		Over 1m and up to 2m deep	m ³	200.0			
		Extra over reference 8.3.2 (a) for Hard Rock excavation					
5.1.5		Pipe trenches	m ³	180.0			
	8.3.3	Excavation ancillaries					
		Make up deficiency in main backfill materail where excavated material is not suitable					
5.1.6		from another necessary excavation on site	m ³	50.0			
	PSDB 2	EXISTING SERVICES					
		Protect, maintain, repair existing services that intersect or adjoin pipe trench excavations					
	8.3.5	Services that intersect a trench					
5.1.7		Electrical cable	No.	30.0			
5.1.8		Water main	No.	30.0			
5.1.9		Sewer main	No.	10.0			
5.1.10		Stormwater pipe	No.	15.0			
	8.3.5	Services that ajoin trenches					
5.1.11		Any service ajoining a trech (Electrical, water, etc)	m	300.0			
5.2		ROAD CROSSINGS					
Total Carried Forward							

SCHEDULE OF QUANTITIES

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SCHEDULE 6: MEDIUM PRESSURE PIPELINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
	SANS 1200 L	SCHEDULE 6: MEDIUM PRESSURE PIPELINES					
6.1		PVC - WATER PIPES					
		ONLY lay, join, bed (flexible pipe bedding) and test PVC-O spigot and socket water pipes with moulded rubber rings to SABS 16422:2007					
	8.2.1	PVC-O Tom 500 pipes					
6.1.1		450mm diameter (PN25)	m	40.0			
6.1.2		400mm diameter (PN 20)	m	70.0			
		Supply, lay, joint, bed (flexible pipe bedding) and test PVC-O spigot and socket water pipes with moulded rubber rings to SABS 966					
		uPVC (PN12) pipes					
6.1.3		110 mm diameter	m	100.0			
6.1.4		160 mm diameter	m	840.0			
6.1.5		200 mm diameter	m	1 270.0			
6.1.6		250 mm diameter	m	30.0			
6.1.7		315 mm diameter	m	50.0			
		ONLY, lay, joint, bed (flexible pipe bedding) and test PVC-O spigot and socket water pipes with moulded rubber rings to SABS 966					
6.1.8		160 mm diameter	m	990.0			
6.1.9		200 mm diameter	m	590.0			
6.1.10		250 mm diameter	m	80.0			
6.1.11		315 mm diameter	m	30.0			
6.2		DISINFECT AND PRESSURE TEST PIPES					
6.2.1		450mm diameter	m	3 600.0			
6.2.2		400mm diameter	m	4 250.0			
6.2.3		315mm diameter	m	1 250.0			
6.2.4		250mm diameter	m	1 100.0			
6.2.5		200mm diameter	m	2 400.0			
6.2.6		160mm diameter	m	7 500.0			
6.2.7		110 mm diameter	m	200.0			
6.3		PIPE BENDS AND FITTINGS					
Total Carried Forward							

SCHEDULE 6: MEDIUM PRESSURE PIPELINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
Brought Forward							
	8.2.2	Extra over reference 8.2.1(a) for supply, install, bed and test the following fittings, including cutting of pipes, couplings, etc.					
		Mild steel bends with flanged ends to suite Steel to be Grade B (5.0 mm wall thicknes) fusion bonded epoxy powder coating with additional Denso Pretrolatum tape wrapping on outside bends					
		DN450 pressure bends - (PN25 Pipes)					
6.3.1		450mm diameter custom made bends to fit angle	No.	22.0			
		DN400 pressure bends - (PN20 Pipes)					
6.3.2		400mm diameter custom made bends to fit angle	No.	28.0			
		uPVC spigot and socket bends with moulded rubber rings to SABS 966					
		DN160 pressure bends - (PN12 Pipes)					
6.3.3		160 mm diameter 11.25deg	No.	11.0			
6.3.4		160 mm diameter 22.5deg	No.	8.0			
6.3.5		160 mm diameter 45deg	No.	2.0			
6.3.6		160 mm diameter 90deg	No.	6.0			
		DN200 pressure bends - (PN12 Pipes)					
6.3.7		200 mm diameter 11.25deg	No.	2.0			
6.3.8		200 mm diameter 22.5deg	No.	1.0			
6.3.9		200 mm diameter 45deg	No.	2.0			
6.3.10		200 mm diameter 90deg	No.			Rate Only	
		DN250 pressure bends - (PN12 Pipes)					
6.3.11		250 mm diameter 11.25deg	No.			Rate Only	
6.3.12		250 mm diameter 22.5deg	No.	1.0			
6.3.13		250 mm diameter 45deg	No.			Rate Only	
6.3.14		250 mm diameter 90deg	No.			Rate Only	
		DN315 pressure bends - (PN12 Pipes)					
6.3.15		315 mm diameter 11.25deg	No.	9.0			
6.3.16		315 mm diameter 22.5deg	No.	5.0			
6.3.17		315 mm diameter 45deg	No.	5.0			
6.3.18		315 mm diameter 90deg	No.	3.0			
Total Carried Forward							

SCHEDULE 6: MEDIUM PRESSURE PIPELINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
Brought Forward							
	8.2.3	Extra over reference 8.2.1(a) for supplying, fixing and bedding of valves					
		Isolating Valves					
		Socketed resilient seal gate valves with clockwise closing with hand wheels:					
6.3.19		100-110mm dia "AVK" gate valve - PN 12.5	No.	3.0			
6.3.20		150-160mm dia "AVK" gate valve - PN 12.5	No.	18.0			
6.3.21		200mm dia "AVK" gate valve - PN 12.5	No.	3.0			
6.3.22		250mm dia "AVK" gate valve - PN 12.5	No.	5.0			
6.3.23		300-315mm dia "AVK" gate valve - PN 12.5	No.			Rate Only	
		Double flanged waterworks gate valves with clockwise closing non-rising spindles fitted with hand wheels:					
6.3.24		50mm dia "AVK" gate valve - PN 16	No.	4.0			
6.4		SUNDRIES					
	8.2.4	Extra over reference 8.2.1(a) for cutting of pipes and supplying and fixing of extra couplings					
6.4.1		450 mm dia flange adaptor to fit 450 mm dia Class 25 PVC-O pipe	No.	2.0			
6.4.2		400 mm dia flange adaptor to fit 400 mm dia Class 25 PVC-O pipe	No.	17.0			
6.4.3		300 mm diameter - uPVC Coupler - PN 12.5	No.	2.0			
6.4.4		250 mm diameter - uPVC Coupler - PN 12.5	No.	2.0			
6.4.5		200 mm diameter - uPVC Coupler - PN 12.5	No.	2.0			
6.4.6		160 mm diameter - uPVC Coupler - PN 12.5	No.	10.0			
6.4.7		250mm dia VJ flange adaptor to fit 250mm dia Class 12.5 uPVC pipe	No.	2.0			
6.4.8		160mm dia VJ flange adaptor to fit 160mm dia Class 12.5 uPVC pipe	No.	2.0			
6.4.9		"M30 X 140mm bolts with gaskets sets	No.	15.0			
6.4.10		< M30 bolts with gaskets sets	No.	60.0			
6.5		CONCRETE					
		CONCRETE ENCASEMENT AND THRUST BLOCKS					
	8.2.11	Anchor/thrust blocks and pedestals in strength concrete 25Mpa/19mm, including all formwork, reinforcement, etc.					
Total Carried Forward							

SCHEDULE 6: MEDIUM PRESSURE PIPELINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
Brought Forward							
6.5.1		Thrust blocks	m³	180.0			
6.5.2		Construction and installation of Precast concrete panels 2.5 x 1.3 x 150 mm thick at minor road crossings	No.	22.0			
6.6		CHAMBERS, ETC MEASURED IN NUMBER					
		ISOLATING VALVE CHAMBERS					
	8.2.13	Isolating valve chambers complete with excavation, formwork, concrete, reinforcing, lockable covers, vents, step irons, etc. as per Dwg 3505.02.00.GZA.05.D007A					
6.6.1		Completion of 400mm diameter pipeline isolating valve chamber (lids, vents, access openings, step irons)	No.	2.0			
6.6.2	8.2.5	Installation of Pipe fittings to isolating valve chambers as per Dwg 3505.02.00.GZA.05.D007A	No.	2.0			
	8.2.13	Isolating valve chambers complete with excavation, backfill, concrete, valve box and cover, sleeve pipe, etc. as per Dwg 3505.02.00.GZA.05.D017					
6.6.3		Typical valve chamber (160mm diameter mainline)	No.	18.0			
6.6.4		Typical valve chamber (200mm diameter mainline)	No.	3.0			
6.6.5		Typical valve chamber (250mm diameter mainline)	No.	5.0			
6.6.6		Installation of Pipe fittings to isolating valve chambers as per Dwg 3505.02.00.GZA.05.D017, 3505.02.00.GZA.05.U003 and 3505.02.00.GZA.05.U004	No.	26.0			
		AIR VALVE CHAMBERS					
	8.2.13	Air valve chambers complete with excavation, formwork, concrete, reinforcing, lockable covers, vents, step irons, etc. as per Dwg 3505.02.00.GZA.05.D008					
6.6.7		"Completion of 450mm main line diameter air valve chamber (lids, vents, access openings, step irons)"	No.	7.0			
6.6.8		"Completion of 400mm main line diameter air valve chamber (lids, vents, access openings, step irons)"	No.	8.0			
6.6.9	8.2.5	Installation of Pipe fittings to air valve chamber as per Dwg 3505.02.00.GZA.05.D007A and D008A	No.	15.0			
Total Carried Forward							

SCHEDULE 6: MEDIUM PRESSURE PIPELINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
Brought Forward							
	8.2.13	Air valve chambers complete with FITTINGS, VALVES, excavation, formwork, concrete, reinforcing, lockable covers, vents, step irons, etc. as per Dwg 3505.02.00.GZA.05.D008					
6.6.10		Construction of 315mm diameter air valve chamber including all fittings Ref to dwg no. 3505.02.00.GZA.05.D008B	No.	1.0			
6.6.11		Construction of 250mm diameter air valve chamber including all fittings Ref to dwg no. 3505.02.00.GZA.05.D00C	No.	1.0			
6.6.12		Construction of 200mm diameter air valve chamber including all fittings Ref to dwg no. 3505.02.00.GZA.05.D00C	No.	1.0			
6.6.13		Construction of 160mm diameter air valve chamber including all fittings Ref to dwg no. 3505.02.00.GZA.05.D00C	No.	2.0			
		SCOUR VALVE CHAMBERS					
	8.2.13	Scour valve chambers complete with excavation, formwork, concrete, reinforcing, precast concrete rings, lockable covers, vents, step irons, etc. as per Dwg 3050.02.00.GZA.05.D009					
6.6.14		Completion of 450mm main line diameter scour valve chamber (overflow chamber, lids, vents, access openings, step irons, small diameter steel pipes)	No.	6.0			
6.6.15		Completion of 400mm main line diameter scour valve chamber (overflow chamber with scour pipes, lids, vents, access openings, step irons, small diameter steel pipes)	No.	6.0			
6.6.16		Installation of Pipe fittings to scour valve chambers as per Dwg 3050.02.00.GZA.05.D009	No.	12.0			
	8.2.13	Scour valve chambers complete with excavation, formwork, concrete, reinforcing, precast concrete rings, lockable covers, vents, step irons, etc. as per Dwg 3505.02.00.GZA.05.D017					
6.6.17		Typical valve chamber (110mm diameter)	No.	4.0			
		FLOW METER CHAMBERS					
	8.2.13	Flow meter chambers complete with excavation, formwork, concrete, reinforcing, lockable covers, vents, step irons, etc. as per Dwg 3505.02.00.GZA.05.D012					
6.6.18		300mm diameter pipeline flow meter chamber	No.	1.0			
	8.2.5	Pipe fittings to flow meter chambers as per Dwg 3505.02.00.GZA.05.D012					
		Pipe fitting number					
Total Carried Forward							

SCHEDULE 6: MEDIUM PRESSURE PIPELINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
Brought Forward							
6.6.19		FM1 Flange adaptor	No.	2.0			
6.6.20		FM2 Pipe section	No.	1.0			
6.6.21		FM4 Pipe section	No.	1.0			
6.6.22		FM6 Restraining VJ	No.	1.0			
	8.2.13	Flow meter chambers complete with excavation, formwork, concrete, reinforcing, lockable covers, vents, step irons, etc. as per Dwg 3505.02.00.GZA.05.D013					
6.6.23		200mm diameter pipeline flow meter chamber	No.	1.0			
	8.2.5	Pipe fittings to flow meter chambers as per Dwg 3505.02.00.GZA.05.D013 Pipe fitting number					
6.6.24		FM1 Flange adaptor	No.	2.0			
6.6.25		FM2 Pipe section	No.	1.0			
6.6.26		FM3 Gate valve	No.	1.0			
6.6.27		FM4 Pipe section	No.	1.0			
6.6.28		FM5 Flow meter	No.	1.0			
6.6.29		FM6 Restraining VJ	No.	1.0			
		OTHER VALVE CHAMBERS					
	8.2.13	Non-return valve chambers complete with excavation, formwork, concrete, reinforcing, lockable covers, vents, step irons, etc. as per Dwg 3505.02.00.GZA.05.D010					
6.6.23		400mm diameter pipeline	No.	1.0			
	8.2.5	Pipe fittings to NRV chambers as per Dwg 3505.02.00.GZA.05.D010					
		Pipe fitting number					
6.6.24		N2 Flange adaptor	No.	2.0			
6.6.25		N4 Special scour tee	No.	1.0			
6.6.26		N5 Restraining VJ	No.	1.0			
6.6.27		N10 90deg bend	No.	1.0			
6.6.28		N11 Wedge gate valve	No.	1.0			
6.6.29		N12 Restraining VJ	No.	1.0			
6.6.30		N13 Special pipe section/bend	No.	1.0			
6.6.31		N15 Isolating valve	No.	1.0			
6.6.32		N16 Air valve	no	1.0			
Total Carried Forward							

SCHEDULE 6: MEDIUM PRESSURE PIPELINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
Brought Forward							
	8.2.13	Off-take meter chambers complete with excavation, formwork, concrete, reinforcing, lockable covers, vents, step irons, etc. as per Dwg 3505.02.00.GZA.05.D015					
6.6.33		160mm diameter pipeline	No.	1.0			
6.6.34		250mm diameter pipeline	No.	1.0			
6.6.35	8.2.5	Installation of Pipe fittings to off-take chambers as per Dwg 3050.02.00.GZA.05.D015	No.	5.0			
6.6.36		Interconnecting pipework from new rising main to existing pipelines	No.	5.0			
	8.2.13	Altitude control valve chambers complete with excavation, formwork, concrete, reinforcing, lockable covers, vents, step irons, etc. as per Dwg 3505.02.00.GZA.05.D014					
6.6.37		Completion of Altitude Control valve chamber (Reservoir A + B) (lids, vents, access openings, step irons)"	No.	2.0			
6.6.38	8.2.5	Procurement of outstanding pipe fittings and Installation of pipe fittings to chambers as per Dwg 3505.02.00.GZA.05.D014	No.	2.0			
6.7	SANS 1200 LD	Markings and marker posts , etc. Dwg 3505.02.00.GZA.05.D003					
	8.2.9	Marker posts					
6.7.1		Marker post	No.	150.0			
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SCHEDULE OF QUANTITIES

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SCHEDULE OF QUANTITIES

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SCHEDULE 9: PIPE SPECIALS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
						R	c
	SANS 1200 L	SCHEDULE 9: PIPE SPECIALS					
9.1	PLN	STEEL PIPELINES					
		PIPE JACKING STEEL PIPELINE INSTALLATION					
	8.2.1	Supply, coat, line, lay, join and bed 400mm dia steel pipes, 6mm wall thickness, flanged to SABS 1123, epoxy lined and additional Denso Mastic blanket at flanges, all included					
		Steel pipe with solvent free epoxy internal lining and external coating (600 microns)					
9.1.1		400mm diameter Pipe installation into jacking sleeve (N5)	m	30.0			
9.1.2		400mm diameter Pipe installation into jacking sleeve (RAIL LINE)	m	15.0			
9.1.3		400mm diameter Pipe installation into jacking sleeve (MURRAY ROAD)	m	24.0			
9.1.4		400mm steel pipe special pieces	Sum	1.0			
9.1.5		450mm steel pipe special pieces	Sum	1.0			
9.1.6		Interconnection pipework at reservoir A and B as per drw no. 3505.02.00.GZA.05.D014/A	Sum	2.0			
9.2		ROAD CROSSING : STEEL PIPELINE INSTALLATIONS					
		Supply, lay, join and bed 400mm dia steel pipes, 6mm wall thickness, flanged to SABS 1123, epoxy lined and additional Denso Mastic blanket at flanges, INCLUDING sleeve installation, road rehabilitation and finishing as per drw no. 3505 02.00.GZA.05.D021 and 3505 02.00.GZA.05.D022"					
9.2.1		400mm diameter Pipe installation S1371 Road crossing	No.	1.0			
9.2.2		400mm diameter Pipe installation S787 Road crossing	No.	1.0			
Total Carried Forward To Summary							

SCHEDULE OF QUANTITIES

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