

SECTION A - PRELIMINARY AND GENERAL						
Item No	Payment	Description	Unit	Qty	Rate	Amount
	SABS 1200 A	PRELIMINARY AND GENERAL				
A.1	8.3	FIXED-CHARGE AND VALUE-RELATED ITEMS				
A.1.1	8.3.1	Contractual requirements	Sum	1		
A.2	8.3.2	Establishment of Facilities on the Site				
A.2.1	8.3.2.1	<u>Facilities for Engineer:</u>				
A.2.1.1	a)	i) Offices (3x3m and 3x5m) complete with powerpoints (x3), lights (x3), aircon (x2) and blinds	m ²	48		
A.2.1.2	b)	ii) Furniture and Equipment: Chairs (x8), Desk complete with drawer and lock (x1), Conference table (x1), Refrigerators (x1) and Floodlights (500W x2)	Sum	1		
A.2.1.3	c)	iii) Carports (3x5m)	No.	2		
A.2.1.4	d)	Telephone	Sum	1		
A.2.1.5	e)	Construction Nameboard	No.	2		
A.2.2	8.3.2.2	<u>Facilities for Contractor</u>				
A.2.2.1	a)	Office and storage	Sum	1		
A.2.2.2	b)	Workshops on site and elsewhere	Sum	1		
A.2.2.3	c)	Laboratories	Sum	1		
A.2.2.4	d)	Living accommodation	Sum	1		
A.2.2.5	e)	Ablution and latrine facilities (Flush toilets only)	Sum	1		
A.2.2.6	f)	Tools and equipment	Sum	1		
A.2.2.7	g)	Water supplies, electric power and communications	Sum	1		
A.2.2.8	h)	Dealing with water	Sum	1		
A.2.2.9	i)	Access	Sum	1		
A.2.2.10	j)	Plant for road building	Sum	1		
A.2.2.11		Plant for transportation of plant	Sum	1		
A.2.2.12		Plant for excavation	Sum	1		
A.2.3	8.3.3	Other Fixed Charge Obligations	Sum	1		
A.2.4	8.3.4	Removal of Site Establishment	Sum	1		
A.3	8.4	TIME RELATED ITEMS				
A.3.1	8.4.1	Contractual requirements	Month	12		
A.3.2	8.4.2	Operation and Maintenance of Facilities on Site				
A.3.2.1	8.4.2.1	<u>Facilities for Engineer</u>				
A.3.2.1.1	a)	Furnished Offices	Month	12		
A.3.2.1.2	b)	Construction Nameboard (x2) (2000 x 1600)	Month	12		
A.3.2.1.3	c)	Survey Assistants and materials	Month	12		
A.3.2.1.4	d)	Laptop (including Microsoft Office and 4G modem)	Prov. Sum	1	R30 000.00	R30 000.00
A.3.5.1.5		% mark-up on above items for contractors overheads, administration charge and profit		R30 000.00		
A.3.2.2	8.4.2.2	<u>Facilities for Contractor</u>				
A.3.2.2.1	a)	Office and storage	Month	12		
A.3.2.2.2	b)	Workshops	Month	12		
A.3.2.2.3	c)	Laboratories	Month	12		
A.3.2.2.4	d)	Living accommodation	Month	12		
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SECTION A - PRELIMINARY AND GENERAL (Continued)						
Item No	Payment	Description	Unit	Qty	Rate	Amount
BROUGHT FORWARD FROM PREVIOUS PAGE						
A.3.2.2.5	e)	Ablution and latrine facilities (Flush toilets only)	Month	12		
A.3.2.2.6	f)	Tools and equipment	Month	12		
A.3.2.2.7	g)	Water supplies, electric power and comms	Month	12		
A.3.2.2.8	h)	Dealing with water	Month	12		
A.3.2.2.9	i)	Access	Month	12		
A.3.2.2.10	j)	Plant for finishing of road reserve	Month	12		
A.3.2.2.11	k)	Plant for transportation of plant	Month	12		
A.3.2.2.12	l)	Plant for excavation	Month	12		
A.3.2.2.13	8.4.3	Supervision for the duration of Construction	Sum	1		
A.3.2.2.14	8.4.4	Company and Head Office Overhead Cost	Sum	1		
A.3.2.2.15	8.4.5	Other Time-related Obligations	Sum	1		
A.4	8.5	SUMS STATED PROVISIONALLY BY ENGINEER				
A.4.1	a)	Control testing by approved independent laboratory	Prov. Sum	1	R50 000.00	R150 000.00
	b)	Sampling and testing of proposed borrowpit	Prov. Sum	1	R100 000.00	R200 000.00
A.4.2	c)	Staking and levelling by independent Surveyor	Prov. Sum	1	R100 000.00	R100 000.00
A.4.3	d)	Community Liaison Officers (CLO) Salaries	Month	12	R10 000.00	R120 000.00
A.4.4	e)	Pressure testing of existing water mains	Prov. Sum	1	R50 000.00	R50 000.00
A.4.6	f)	Engineer's accommodation	Month	12	R10 000.00	R120 000.00
A.4.7	g)	Mechanical & Electrical Specialist	Prov. Sum	1	R400 000.00	R400 000.00
A.4.8	h)	% mark-up on above items for contractors overheads, administration charge and profit	%	R1 140 000.00		
A.5	PART E	HEALTH AND SAFETY				
A.5.1		Health and Safety Act (Compliance) To include compilation of health & safety file	Sum	1		
A.5.2		Re-imbursment of on site Safety Officer	Month	12		
A.5.3		Prime costs for Health & Safety Act (incl. initial safety equipment/PPE for all labour) - LED Procurement locally & embroidery	Sum	1		
A.5.4		Time related obligation to items above	Month	12		
A.5.5		Monthly health and safety audits conducted by independent firm. As approved by Engineer	Prov. Sum	1	R480 000.00	R480 000.00
A.5.6		% mark-up on above items for contractors overheads, administration charge and profit	%	R480 000.00		
A.6	8.8	TEMPORARY WORKS				
A.6.1	8.8.1	Provision and maintaining of temporary by-passes (including road signs)	Sum	1		
A.7	8.8.4	EXISTING SERVICES				
A.7.1	c)	Hand excavation to expose existing services	m ³	300		
A.7.2	d)	<u>Protect existing services:</u>				
A.7.3		Pipelines (up to 400mm dia.)	m	300		
A.7.4		Electrical cables & poles	No.	15		
A.7.5		Telecommunication cables & poles	No.	15		
A.7.6		Electrical cables	m	500		
A.7.7		House connections	No.	80		
A.8	8.4.2.1	PROVISION OF STRUCTURED TRAINING				
A.8.1	g)	Generic skills and accredited training	Prov. Sum	1	R200 000.00	R200 000.00
A.8.2	h)	Experiential training for Civil Engineering student	Prov. Sum	1	R120 000.00	R120 000.00
SECTION A CARRIED FORWARD TO NEXT PAGE						

SECTION A - PRELIMINARY AND GENERAL (Continued)						
Item No	Payment	Description	Unit	Qty	Rate	Amount
BROUGHT FORWARD FROM PREVIOUS PAGE						
A.9		PROVISION OF OTHER ITEMS				
A.9.1		As-builts for entire works	Prov. Sum	1	R100 000.00	R100 000.00
A.9.1.1		% mark-up on above items for contractors overheads, administration charge and profit	%	R100 000.00		
A.9.3		Relocation of existing services where ordered by Engineer	Prov. Sum	1	R250 000.00	R250 000.00
A.9.3.1		% mark-up on above items for contractors overheads, administration charge and profit	%	R250 000.00		
A.9.4		Manuals (O & M) for pumps, valves & telemetry	Sum	1	R150 000.00	R150 000.00
A.9.4.1		% mark-up on above items for contractors overheads, administration charge and profit	%	R150 000.00		
A.9.5		Provision of Social Facilitation Services by External Service Provider as approved by the Engineer	Prov. Sum	1	R480 000.00	R480 000.00
A.9.5.1		% mark-up on above items for contractors overheads, administration charge and profit	%			
A.9.6		ENVIRONMENTAL MANAGEMENT Environmental control officer	Prov. Sum	1	R300 000.00	R300 000.00
A.9.6.1		% mark-up on above items for contractors overheads, administration charge and profit	%	R300 000.00		
TOTAL SECTION A TO SUMMARY						

SECTION B: PUMP STATION						
Item No	Payment	Description	Unit	Qty	Rate	Amount
CIVIL WORKS						
B.1	SABS 1200 D	EARTHWORKS				
B.1.1	8.3.1 8.3.1.1	SITE PREPERATION Clear and strip site (sub-contract)	m ²	200		Included in Item B.5.3
B.1.2	8.3.2 a)	BULK EXCAVATION Bulk excavation in all materials for pump house & surrounding area up to design levels, use for backfill compacted to 93% MOD AASHTO density and dispose of surplus material where instructed (sub-contract)	m ³	40		Included in Item B.5.3
B.1.3		Treatment of final layer with poison for termites and vegetation (sub-contract)	m ²	70		Included in Item B.5.3
B.1.4	b)	<u>Extra over for:</u> 1) Intermediate excavation (sub-contract)	m ³	5		Included in Item B.5.3
B.1.5		2) Hard Rock Excavation (sub-contract)	m ³	5		Included in Item B.5.3
B.2	SABS 1200 G	CONCRETE (STRUCTURAL)				
B.2.1	8.2 8.2.2	FORMWORK <u>Smooth</u> Horizontal plane (sub-contract)	m ²	62		Included in Item B.5.3
B.2.2		Vertical plane (sub-contract)	m ²	10		Included in Item B.5.3
B.2.3	8.3 8.3.1	REINFORCING <u>Steel bars</u> <u>Mild steel in:</u> Foundation, plinths and roof (sub-contract)	t	0.5		Included in Item B.5.3
B.2.4		<u>High-tensile steel in:</u> Foundation, plinths and roof (sub-contract)	t	3		Included in Item B.5.3
B.2.5	8.3.2	<u>High-Tensile welded mesh</u> Ref. 395 in floor slab and apron (sub-contract)	m ²	120		Included in Item B.5.3
B.2.6		Ref. 193 in plinths (sub-contract)	m ²	17		Included in Item B.5.3
B.2.7	8.4 8.4.2	CONCRETE <u>Blinding layer</u> Blinding layer, class 15 MPa/19mm concrete, 50mm thick for all levels where reinforced concrete will be placed, including the necessary shuttering and finishing (sub-contract)	m ²	30		Included in Item B.5.3
B.2.8	8.4.3	<u>Strength concrete, class 25 Mpa/19mm for:</u> Foundation (sub-contract)	m ³	12		Included in Item B.5.3
B.2.9		Floor slab (sub-contract)	m ³	10		Included in Item B.5.3
B.2.10		Plinths (sub-contract)	m ³	3		Included in Item B.5.3
B.2.11		Roof (sub-contract)	m ³	18		Included in Item B.5.3
B.2.12		Apron (sub-contract)	m ³	5		Included in Item B.5.3
B.2.13		Concrete filling, class 15 MPa/19mm concrete for anchor blocks, filling where ordered by Engineer (sub-contract)	m ³	3		Included in Item B.5.3
B.3	SABS 1200 LE	MASONRY & BRICKWORK				
B.3.1	8.2.9 a)	<u>Brickwork:</u> 230 mm thick (sub-contract)	m ²	190		Included in Item B.5.3
B.3.2		<u>Damp proof coarse:</u> a) 375 Micron Polyethylene waterproof sheeting under floor slab and window cills (sub-contract)	m ²	70		Included in Item B.5.3
TOTAL CARRIED FORWARD						

SECTION B: PUMP STATION (continued)						
Item No	Payment	Description	Unit	Qty	Rate	Amount
BROUGHT FORWARD FROM PREVIOUS PAGE						
B.3.3		<u>Brickforce:</u> a) 0.6mm thick draw wire nominal 230mm wide brickforce (sub-contract)	m	350	Included in Item B.5.3	
B.4		METAL, TIMBER AND ANCILLARY WORKS				
B.4.1		D1 - Transformer Room Door complete incl. frame, ironmongery and finishing. See Drawing NKP487-00-02-01-03 (sub-contract)	No.	2	Included in Item B.5.3	
B.4.2		L1 - Ventilation louvres complete as per drawing NKP487-00-02-01-03 (sub-contract)	No.	3	Included in Item B.5.3	
B.4.3		W1 - NE22 window complete incl. ironmongery and burglar bars (sub-contract)	No.	1	Included in Item B.5.3	
B.4.4		150x110mm PVC-U sewer gully with CI grate (sub-contract)	No.	1	Included in Item B.5.3	
B.4.5		110mm PVC-U drain pipe (sub-contract)	m	70	Included in Item B.5.3	
B.5	SABS 1200H	STRUCTURAL STEELWORK				
B.5.1	8.3.1.2	<u>Supply and fabrication of steelwork</u> Supply and fix flange of I-beam to concrete beam with M16 anchor bolts at 500mm c/c. Including stop ends, paint, etc. (sub-contract)	t	0.5	Included in Item B.5.3	
B.5.2		Supply and install 2 ton chain hoist with hook and 3m chain (sub-contract)	No.	1	Included in Item B.5.3	
B.5.3		Total for construction of pump station by sub-contractor	Prov. Sum	1		R438 110.00
B.5.4		Handling fee for main contractor on item B.5.3	%	R438 110.00		
MECHANICAL WORKS						
B.6		PUMPS				
B.6.1		Supply & Install pump (Etanorm 125-100-200 or similar approved), complete with 75kW IP55 Cast Iron IE1 TEFC motor (WEG W20 or similar approved) including tyre coupling & guard. VSD operated - Pumps should be able to supply 312.5 m ³ /h @ 54m head per pump, including transport, mechanical installation and comissioning.	No.	2		
B.7	SABS 1200 L	PIPEWORK				
B.7.1	8.2.5	Suction Suction pipework - Excluding Valves	Prov. Sum	1	R 100 000.00	R 100 000.00
B.7.2	8.2.5	Discharge Discharge pipework - Excluding Valves	Prov. Sum	1	R 100 000.00	R 100 000.00
B.7.3	8.2.5	Valves & Meters DN350 PN16 RSV Gate Valve, both end flanged to SABS 1123-1600/3	No.	2		
B.7.4		DN250 PN16 RSV Gate Valve, both end flanged to SABS 1123-1600/3	No.	2		
B.7.5		DN150 PN16 RSV Gate Valve, both end flanged to SABS 1123-1600/3	No.	2		
B.7.6		80mm PN16 Double Air Release Valve (Tripple acting - Variant Model LX or similar approved), including ball valve and 80mm soffit	No.	1		
B.7.7		DN250 PN16 Silent Check Valve, both ends flanged to SABS 1123-1600/3	No.	2		
B.7.8		DN250 Electromagnetic Flow Meter (Flow Metrix SAFMAG or similar approved)	No.	1		
TOTAL CARRIED FORWARD						

SECTION B: PUMP STATION (continued)						
Item No	Payment	Description	Unit	Qty	Rate	Amount
BROUGHT FORWARD FROM PREVIOUS PAGE						
B.7.9		DN150 PN16 Surge Anticipator Valve, both ends flanged to SABS 1123-1600/3 (Bermad Model WW-735-M or similar approved)	No.	1		
B.7.10		100mm Pressure Guages with Isolation Ball Valve	No.	4		
Notes on pipework: Corrosion Protection: Hot Dipped Galvanized Flanges: FF MS to SANS 1123 1600/3 Fasteners: MS HDG Bolt, Nut 2 x washer each Gaskets: 3mm NAF FF Flange Adaptor: Klamflex Restrained cw HDG Tie Rods						
ELECTRICAL WORKS						
B.8.1		Internal electrical works at pump station (including complete MCC's with switchgear, pump starters, metering, 2 x 75kW VSD, surge protections, cabling, automation, domestic lighting, earthing, testing and comissioning, etc.)	Prov. Sum	1	R 2 050 000.00	R 2 050 000.00
B.8.2		Upgrade of bulk electrical infrastructure	Prov. Sum	1	R 800 000.00	R 800 000.00
B.8.3		Supply, deliver and install 100 kVA generator	Sum	1		
TOTAL SECTION B TO SUMMARY						

SECTION C - GUARDHOUSE						
ITEM NO	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C.1	SABS 1200 C	SITE CLEARANCE				
C.1.1	8.2.1	Clear & Grub Site for new Guard House (sub-contract)	m ²	30		Included in Item C.8.2
C.2	SABS 1200 D	EARTHWORKS				
C.2.1	8.3.2	Bulk excavation in all materials for guard house & surrounding area up to design levels, including foundation excavation, use for backfill compacted to 93% MOD AASHTO density and dispose of surplus material where instructed (sub-contract)	m ³	20		Included in Item C.8.2
C.2.2		Treatment of surface bed with poison for termites and vegetation (sub-contract)	m ²	30		Included in Item C.8.2
C.2.3	8.3.2	<u>Extra Over item A.3.1 for:</u> Hard Rock Excavation (sub-contract)	m ³	5		Included in Item C.8.2
C.3	SABS 1200 G	CONCRETE				
C.3.1	8.4.3	25 MPa Concrete for wall foundations, apron & floor (sub-contract)	m ³	5		Included in Item C.8.2
C.3.2		25mm Cement Screed Floor Finish (sub-contract)	m ²	12		Included in Item C.8.2
C.3.3		10mm Softboard Joint Sealed with Polyurethane Joint Sealant (sub-contract)	m	16		Included in Item C.8.2
C.3.4		25mm - 10 MPa Blinding under wall foundations (sub-contract)	m ²	10		Included in Item C.8.2
C.4	SABS 1200 G	REINFORCEMENT				
C.4.1	8.3.2	<u>High Tensile Steel Mesh</u> Ref. 200 (sub-contract)	m ²	25		Included in Item C.8.2
C.4.2		Ref. 617 (sub-contract)	m ²	3		Included in Item C.8.2
C.4.3		Y12 High Tensile Bars (sub-contract)	kg	126		Included in Item C.8.2
C.5		MASONRY & BRICKWORK				
C.5.1		<u>External walls:</u> 230mm Non-Facing inside and Outside (Plaster & Paint) (no-alterations) wall with general purpose Cement 32.5 CEM II as mortar (sub-contract)	m ²	50		Included in Item C.8.2
C.5.2		Air Ventilation Brick (sub-contract)	No	4		Included in Item C.8.2
C.5.3		230mm None Facebrick for foundation walls with general purpose Cement 32.5 CEM II as mortar (sub-contract)	m ²	8		Included in Item C.8.2
C.5.4		<u>Window-sills (Internal and External):</u> External Face brick window-sills (Brick-on-Edge) (sub-contract)	m	6		Included in Item C.8.2
C.5.5		Internal Window Sills - 150mm x 10mm Fibre cement embedded in 1:3 cement mortar (sub-contract)	m	6		Included in Item C.8.2
TOTAL CARRIED FORWARD						

SECTION C - GUARDHOUSE (Continued)						
ITEM NO	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SECTION C BROUGHT FORWARD FROM PREVIOUS PAGE						
C.5.6		<u>Damp proof coarse:</u> a) 375 Micron Polyethylene waterproof sheeting under floor slab (sub-contract)	m ²	16		Included in Item C.8.2
C.5.7		b) 375 Micron Polyethylene waterproof sheeting in 230mm thick walls and window sills (sub-contract)	m ²	3		Included in Item C.8.2
C.5.8		<u>Brickforce:</u> a) 0.6mm thick draw wire nominal 230mm wide brickforce (sub-contract)	m	300		Included in Item C.8.2
C.5.9		230mm External foundation wall - Plasterbrick both sides - No plaster & Paint (sub-contract)	m ²	10		Included in Item C.8.2
C.6		METAL, TIMBER AND ANCILLARY WORKS:				
C.6.1		<u>Steel window types:</u> a) Type W05 - SS22 as per window schedule incl. ironmongery and burglar bars (sub-contract)	No	2		Included in Item C.8.2
C.6.2		b) Type W02 - SSF35 as per window schedule incl. ironmongery and burglar bars (sub-contract)	No	1		Included in Item C.8.2
C.6.3		c) Type W03 - SS21 as per window schedule incl. ironmongery and burglar bars (sub-contract)	No	2		Included in Item C.8.2
C.6.4		<u>Wooden Doors & Door Frames</u> Type D01 as per door schedule incl. ironmongery and finishing (sub-contract)	No	1		Included in Item C.8.2
C.6.5		Type D02 as per door schedule incl. ironmongery and finishing (sub-contract)	No	2		Included in Item C.8.2
C.6.6		<u>Roof Sheeting incl. Fasteners</u> 0.6mm Corrugated Roof Sheeting (sub-contract)	m ²	22		Included in Item C.8.2
C.6.7		<u>Roof Trusses - Structural Timber incl. Fasteners, Connectors and Hanger Brackets</u> 152mm x 38mm Structural Roof Timber (sub-contract)	m	42		Included in Item C.8.2
C.6.8		76mm x 38mm Structural Roof Timber (sub-contract)	m	12		Included in Item C.8.2
C.6.9		38mm x 38mm Structural Roof Timber (sub-contract)	m	42		Included in Item C.8.2
C.7		PLUMBING, TILING & ELECTRICAL				
C.7.1		Hand Wash Basin (sub-contract)	Sum	1		Included in Item C.8.2
C.7.2		Ceramic Toilet & Plastic Cistern (sub-contract)	Sum	1		Included in Item C.8.2
C.7.3		Cobra Tap 1/2 " Star (sub-contract)	Sum	1		Included in Item C.8.2
TOTAL CARRIED FORWARD						

SECTION C - GUARDHOUSE (Continued)						
ITEM NO	PAYMENT REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SECTION C BROUGHT FORWARD FROM PREVIOUS PAGE						
C.7.4		22mm HDPE Piping incl. Wall Connectors (sub-contract)	m	12		Included in Item C.8.2
C.7.5		22mm 90 Degree HDPE Elbows (sub-contract)	No	4		Included in Item C.8.2
C.7.6		Complete Toilet Connector Set (sub-contract)	No	1		Included in Item C.8.2
C.7.7		87.5 Degree PVC Soil & Vent Horn Access Heel Bend (110mm) (sub-contract)	No	1		Included in Item C.8.2
C.7.8		110mm PVC Sewer Pipe (sub-contract)	m	6		Included in Item C.8.2
C.7.9		contract	No	4		Included in Item C.8.2
C.7.10		contract	No	2		Included in Item C.8.2
C.7.11		40mm P-Trap (sub-contract)	No	1		Included in Item C.8.2
C.7.12		40mm PVC Piping (sub-contract)	m	6		Included in Item C.8.2
C.7.13		40mm PVC 90 Degree Elbow (sub-contract)	No	2		Included in Item C.8.2
C.7.14		40mm PVC 45 Degree Elbow (sub-contract)	No	2		Included in Item C.8.2
C.8		PLUMBING, TILING & ELECTRICAL				
C.8.1		Provisional Sum for Sanitation disposal, Water Supply & domestic lighting (sub-contract)	Prov. Sum	1		Included in Item C.8.2
C.8.2		Total for construction of guardhouse by sub-contractor	Prov. Sum	1		R 245 820.00
C.8.3		Handling fee for main contractor on item C.8.2	%	R 245 820.00		
TOTAL SECTION C CARRIED FORWARD TO SUMMARY						

SECTION D: RISING MAIN - MAIN CONTRACTOR						
Item No	Payment	Description	Unit	Qty	Rate	Amount
D.1	SABS 1200 DB	EARTHWORKS (PIPE TRENCHES)				
D.1.1	8.3.1	TOPSOIL a) Clear vegetation and trees of girth up to 1m (4m wide)	m	5 380		
D.1.2		b) Clear trees of girth over 1.0m and designated obstacles	No.	2		
D.1.3	8.3.2 8.3.2 (a)	EXCAVATION <u>Excavate in all materials for trenches, backfill, compact and dispose of surplus material.</u> Trenches 1m wide for 355mm dia. watermain, depth of trench up to but not exceeding: 2m	m ³	5 920		
D.1.4	8.3.2 (b)	<u>Extra-over excavation items for:</u>				
D.1.5	8.3.2 (b.1)	Intermediate excavation	m ³	1 184		
D.1.6	8.3.2 (b.2)	Hard rock excavation	m ³	1 500		
D.1.7	8.3.2 (c)	Excavate and dispose of unsuitable material from trench bottom	m ³	120		
D.1.8	8.3.3	EXCAVATION ANCILLARIES				
D.1.9	8.3.3.1	<u>Make up deficiency in backfill material</u> a) From other necessary excavations on site b) By importation from designated borrow pits c) By importation from commercial or off-site sources selected by the contractor	m ³ m ³ m ³	150 150 40		
D.1.10	8.3.3.2	Opening and closing down of designated borrow	Sum	1		
D.1.11		Compaction to 93% mod AASTHO Density in all trenches at road crossings and where directed by the Engineer. (Soilcrete with a ratio of 8% cement, entire trench)	m ³	140		
D.1.12	8.3.3.4	<u>Overhaul</u> b) Long overhaul	m ³ .km	1 650		
D.1.13	8.3.5	EXISTING SERVICES THAT INTERSECT OR ADJOIN A PIPE TRENCH a) Service that intersect a trench	No.	30		
D.2	SABS 1200 LB	PROVISION OF BEDDING				
D.2.1	8.2.1	<u>Provision of bedding from trench excavation</u> a) Selected granular material for bedding cradle	m ³	955		
D.2.2		b) Selected fill blanket	m ³	1 615		
D.2.3	8.2.2 8.2.2.2	<u>Supply only of bedding from importation</u> <u>From borrow pits</u> a) Selected granular material for bedding cradle	m ³	410		
D.2.4		b) Selected fill blanket	m ³	690		
TOTAL CARRIED FORWARD						

SECTION D: RISING MAIN - MAIN CONTRACTOR (continued)						
Item No	Payment	Description	Unit	Qty	Rate	Amount
BROUGHT FORWARD FROM PREVIOUS PAGE						
D.2.5	8.2.2.3	From Commercial sources a) Selected granular material for bedding cradle	m ³	5		
D.2.6		b) Selected fill blanket	m ³	5		
D.2.7	8.2.3	Concrete bedding cradle	m ³	5		
D.2.8	8.2.5	<u>Overhaul of material for bedding cradle and selected fill blanket</u> The provision for overhaul on material hauled in excess of the specified freehaul distance of 5km, only on instruction of the engineer.	m ³ .km	4 400		
D.3	SABS 1200 L	PIPEWORK				
		SUPPLY, LAY AND BED PIPES COMPLETE WITH COUPLINGS				
D.3.1	8.2.1	a) 350mm Sch40 STD flanged galvanised steel	m	30		
D.3.2		b) 355mm dia. oPVC Class 16	m	5 380		
D.3.3		c) 355mm dia. oPVC Class 12	m	10		
		EXTRA-OVER ITEMS B.12.1 FOR THE SUPPLYING, LAYING AND BEDDING OF SPECIALS COMPLETE WITH COUPLINGS				
	8.2.2	<u>Bends</u>				
D.3.4		a) 355mm dia. 90° oPVC	No.	3		
D.3.5		b) 355mm dia. 45° oPVC	No.	6		
D.3.6		c) 355mm dia. 22.5° oPVC	No.	10		
D.3.7		d) 355mm dia. 11.25° oPVC	No.	5		
D.4	SABS 1200 L	VALVE CHAMBERS				
		GATE VALVES (SLUICE VALVES) AND CHAMBER				
D.4.1	8.2.3 & 8.2.13	Civil and structural works for the construction of gate valve chamber as per drawing NKP487-00-01-02-01.	No.	2		
D.4.2		Mechanical works for the construction of gate valve chamber including supply and fitting of valves, pipe specials, fittings, flange adaptors as per drawing NKP487-00-01-02-01. All items to comply with SABS 664 & fitted with resilient seal	No.	2		
D.4.3	8.2.3 & 8.2.13	SCOUR VALVES AND CHAMBER Civil and structural works for the construction of scour valve chamber as per drawing NKP487-00-01-02-01.	No.	2		
D.4.4		Mechanical works for the construction of scour valve chamber including supply and fitting of valves, pipe specials, fittings, flange adaptors as per drawing NKP487-00-01-02-01. All items to comply with SABS 664 & fitted with resilient seal	No.	2		
TOTAL CARRIED FORWARD						

SECTION D: RISING MAIN - MAIN CONTRACTOR (continued)						
Item No	Payment	Description	Unit	Qty	Rate	Amount
BROUGHT FORWARD FROM PREVIOUS PAGE						
D.4.5	8.2.13	AIR VALVE WITH PIPEWORK AND CHAMBER Civil and structural works for the construction of air valve chamber as per drawing NKP487-00-01-02-02.	No.	8		
D.4.6		Mechanical works for the construction of air valve chamber including supply and fitting of valves, pipe specials, fittings, flange adaptors as per drawing NKP487-00-01-02-02. All items to comply with SABS 664 & fitted with resilient seal seats.	No.	8		
D.5	1200 L	MISCELLANEOUS				
D.5.1		Concrete pipe markers (As per drawing NKP400_B2.5)	No.	20		
D.5.2	b)	<u>Anchor blocks</u> Concrete (25/19)	m ³	27		
D.5.3		Formwork	m ²	60		
D.5.4		Provisional sum for river crossing	Prov. Sum	1	R 350 000.00	R 350 000.00
D.5.5		Provisional sum for wetlands crossing	Prov. Sum	1	R 350 000.00	R 350 000.00
D.5.6		Provisional sum for connection at Gemsbokspruit reservoir	Prov. Sum	1	R 150 000.00	R 150 000.00
D.5.7		Provisional sum for connection at Tweefontein D reservoir	Prov. Sum	1	R 150 000.00	R 150 000.00
D.6	SABS 1200 LG	PIPE JACKING				
D.6.1	8.2.1	JACKING ESTABLISHMENT a) Fixed Charges (Including preparation of thrust pit with ground level thrust wall)	Sum	1		
D.6.2		b) Time related P & G Charges	Months	1		
D.6.3		c) OHS Act compliance & provision of safety file	Sum	1		
D.6.4	8.2.6	SUPPLY OF CONCRETE PIPES TO BE JACKED 600mm Class 100D precast concrete pipe - Spigot & Socket (Main Road Crossing)	m	36		
D.6.5	8.2.3	JACKING OF PIPES BY PIPE JACKING 600mm Class 100D precast concrete sleeve	m	36		
TOTAL SECTION D TO SUMMARY						

SECTION E: RISING MAIN - SUB-CONTRACTOR						
Item No	Payment	Description	Unit	Qty	Rate	Amount
E.1	SABS 1200 DB	EARTHWORKS (PIPE TRENCHES)				
E.1.1	8.3.1	TOPSOIL a) Clear vegetation and trees of girth up to 1m (4m wide) (sub-contract)	m	4 000		Included in Item E.5.4
E.1.2		b) Clear trees of girth over 1.0m and designated obstacles (sub-contract)	No.	2		Included in Item E.5.4
E.1.3	8.3.2 8.3.2 (a)	EXCAVATION <u>Excavate in all materials for trenches, backfill, compact and dispose of surplus material</u> Trenches 1m wide for 355mm dia. watermain, depth of trench up to but not exceeding: 2m (sub-contract)	m ³	4 400		Included in Item E.5.4
E.1.4	8.3.2 (b)	<u>Extra-over excavation items for:</u> Intermediate excavation (sub-contract)	m ³	880		Included in Item E.5.4
E.1.5	8.3.2 (b.2)	Hard rock excavation (sub-contract)	m ³	350		Included in Item E.5.4
E.1.6	8.3.2 (c)	Excavate and dispose of unsuitable material from trench bottom (sub-contract)	m ³	80		Included in Item E.5.4
E.1.7	8.3.3 8.3.3.1	EXCAVATION ANCILLARIES <u>Make up deficiency in backfill material</u> a) From other necessary excavations on site (sub-contract)	m ³	115		Included in Item E.5.4
E.1.8		b) By importation from designated borrow pits (sub-contract)	m ³	115		Included in Item E.5.4
E.1.9		c) By importation from commercial or off-site sources selected by the contractor (sub-contract)	m ³	10		Included in Item E.5.4
E.1.10	8.3.3.2	Opening and closing down of designated borrow pit (sub-contract)	Sum	1		Included in Item E.5.4
E.1.11	8.3.3.3	Compaction to 93% mod AASTHO Density in all trenches at road crossings and where directed by the Engineer. (Soilcrete with a ratio of 8% cement, entire trench) (sub-contract)	m ³	180		Included in Item E.5.4
E.1.12	8.3.3.4	<u>Overhaul</u> b) Long overhaul (sub-contract)	m ³ .km	1 300		Included in Item E.5.4
E.1.13	8.3.5	EXISTING SERVICES THAT INTERSECT OR ADJOIN A PIPE TRENCH a) Service that intersect a trench (sub-contract)	No.	25		Included in Item E.5.4
E.2	SABS 1200 LB	PROVISION OF BEDDING				
E.2.1	8.2.1	<u>Provision of bedding from trench excavation</u> a) Selected granular material for bedding cradle (sub-contract)	m ³	708		Included in Item E.5.4
E.2.2		b) Selected fill blanket (sub-contract)	m ³	1 200		Included in Item E.5.4
E.2.3	8.2.2 8.2.2.2	<u>Supply only of bedding from importation</u> <u>From borrow pits</u> a) Selected granular material for bedding cradle (sub-contract)	m ³	300		Included in Item E.5.4
E.2.4		b) Selected fill blanket (sub-contract)	m ³	515		Included in Item E.5.4
TOTAL CARRIED FORWARD						

SECTION E: RISING MAIN - SUB-CONTRACTOR (continued)						
Item No	Payment	Description	Unit	Qty	Rate	Amount
BROUGHT FORWARD FROM PREVIOUS PAGE						
E.2.5	8.2.2.3	<u>From Commercial sources</u> a) Selected granular material for bedding cradle (sub-contract)	m ³	5		Included in Item E.5.4
E.2.6		b) Selected fill blanket (sub-contract)	m ³	5		Included in Item E.5.4
E.2.7	8.2.3	Concrete bedding cradle (sub-contract)	m ³	10		Included in Item E.5.4
E.2.8	8.2.5	<u>Overhaul of material for bedding cradle and selected fill blanket</u> The provision for overhaul on material hauled in excess of the specified freehaul distance of 5km, only on instruction of the engineer. (sub-contract)	m ³ .km	3 300		Included in Item E.5.4
E.3	SABS 1200 L	PIPEWORK SUPPLY, LAY AND BED PIPES COMPLETE WITH COUPLINGS				
E.3.1	8.2.1	a) 350mm Sch40 STD flanged galvanised steel pipe (sub-contract)	m	20		Included in Item E.5.4
E.3.2		b) 355mm dia. oPVC Class 16 (sub-contract)	m	2 020		Included in Item E.5.4
E.3.3		c) 355mm dia. oPVC Class 12 (sub-contract)	m	1 980		Included in Item E.5.4
	8.2.2	EXTRA-OVER ITEMS B.12.1 FOR THE SUPPLYING, LAYING AND BEDDING OF SPECIALS COMPLETE WITH COUPLINGS				
E.3.4		<u>Bends</u> a) 355mm dia. 90° oPVC (sub-contract)	No.	3		Included in Item E.5.4
E.3.5		b) 355mm dia. 45° oPVC (sub-contract)	No.	5		Included in Item E.5.4
E.3.6		c) 355mm dia. 22.5° oPVC (sub-contract)	No.	6		Included in Item E.5.4
E.3.7		d) 355mm dia. 11.25° oPVC (sub-contract)	No.	5		Included in Item E.5.4
E.4	SABS 1200 L	VALVE CHAMBERS GATE VALVES (SLUICE VALVES) AND CHAMBER				
E.4.1	8.2.3 & 8.2.13	Civil and structural works for the construction of gate valve chamber as per drawing NKP487-00-01-02-01 (sub-contract)	No.	2		Included in Item E.5.4
E.4.2		Mechanical works for the construction of gate valve chamber including supply and fitting of valves, pipe specials, fittings, flange adaptors as per drawing NKP487-00-01-02-01. All items to comply with SABS 664 & fitted with resilient seal seats. (sub-contract)	No.	2		Included in Item E.5.4
E.4.3	8.2.3 & 8.2.13	SCOUR VALVES AND CHAMBER Civil and structural works for the construction of scour valve chamber as per drawing NKP487-00-01-02-01 (sub-contract)	No.	1		Included in Item E.5.4
E.4.4		Mechanical works for the construction of scour valve chamber including supply and fitting of valves, pipe specials, fittings, flange adaptors as per drawing NKP487-00-01-02-01. All items to comply with SABS 664 & fitted with resilient seal seats. (sub-contract)	No.	1		Included in Item E.5.4
TOTAL CARRIED FORWARD						

SECTION E: RISING MAIN - SUB-CONTRACTOR (continued)						
Item No	Payment	Description	Unit	Qty	Rate	Amount
BROUGHT FORWARD FROM PREVIOUS PAGE						
E.4.5	8.2.13	AIR VALVE WITH PIPEWORK AND CHAMBER Civil and structural works for the construction of air valve chamber as per drawing NKP487-00-01-02-02 (sub-contract)	No.	7		Included in Item E.5.4
E.4.6		Mechanical works for the construction of air valve chamber including supply and fitting of valves, pipe specials, fittings, flange adaptors as per drawing NKP487-00-01-02-02. All items to comply with SABS 664 & fitted with resilient seal seats. (sub-contract)	No.	7		Included in Item E.5.4
E.5	1200 L	MISCELLANEOUS				
E.5.1		Concrete pipe markers (sub-contract)	No.	18		Included in Item E.5.4
E.5.2	b)	<u>Anchor blocks</u> Concrete (25/19) (sub-contract)	m ³	19		Included in Item E.5.4
E.5.3		Formwork (sub-contract)	m ²	40		Included in Item E.5.4
E.5.4		Total for pipeline installation by sub-contractor	Prov. Sum	1		R 7 763 400.00
E.5.5		Handling fee for main contractor on item E.5.4	%	R 7 763 400.00		
TOTAL SECTION E TO SUMMARY						

SECTION	DESCRIPTION	AMOUNT
A	PRELIMINARY AND GENERAL	
B	PUMP STATION	
C	GUARDHOUSE	
D	RISING MAIN - MAIN CONTRACTOR	
E	RISING MAIN - SUB-CONTRACTOR	
	SUB-TOTAL FOR CONSTRUCTION	
ADD 10% CONTINGENCIES (This amount is under the sole control of the Engineer and may be omitted partially or as a whole)		
SUB-TOTAL		
ADD 15% VAT		
TOTAL TO FORM OF OFFER		
TIME FOR COMPLETION (WEEKS)		
SIGNED ON BEHALF OF TENDER		