

SCHEDULE 1 : PRELIMINARY AND GENERAL						
ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
	SABS 1200A	<u>SCHEDULE 1 : PRELIMINARY AND GENERAL</u>				
	8.3	<u>FIXED CHARGE AND VALUE RELATED ITEMS</u>				
1,1	PSA 4.1	Contractual Requirements	Sum	1		
	8.3.2	<u>Establish facilities on the site</u>				
	8.3.2.1	i) <u>Facilities for Engineer</u>				
1,2		a) Engineer's office (PSA 4.3.1)	Sum	1		
1,3		b) Name board (PSA 4.3.2)	No	2		
1,4		c) Survey assistants and material	Sum	1		
	8.3.2.2	ii) <u>Facilities for Contractor</u>				
1,5		a) Offices and storage sheds	Sum	1		
1,6		e) Ablution and latrine facilities	Sum	1		
1,7		g) Water supplies, electric power & communications	Sum	1		
1,8		h) Dealing with water	Sum	1		
1,9	8.3.3	Other fixed charge obligations	Sum	1		
1,10	8.3.4	Removal of Engineer's and Contractor's site establishment from site on completion of works.	Sum	1		
	SABS 1200A					
	8.4	<u>TIME RELATED ITEMS</u>				
	PSA 4.2	Contractual requirements	Sum	1		
1,11	PSA 4.2.1	a) Mobilisation Period	Month	1		
1,12		b) Construction Period	Month	18		
1,13	PSA 4.2.2	c) Commissioning Operating and Training Period	Month	4		
	8.4.2	<u>Operations and maintenance of facilities on site</u>				
	8.4.2.1	Facilities for Engineer for duration of construction (SABS 1200 AB)				
1,14		a) Engineer's office	Sum	1		
1,15		b) Name board	No	2		
1,16		c) Survey assistants and material	Sum	1		
	8.4.2	<u>Operations and maintenance of facilities on site</u>				
	8.4.2.2	<u>Facilities for the Contractor for the duration of the Contract, except where otherwise stated</u>				
1,17		a) Offices and storage sheds	Sum	1		
1,18		d) Ablution and latrine facilities	Sum	1		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
1,19		f) Water supplies, electric power & communications	Sum	1		
1,20		g) Dealing with water	Sum	1		
1,21	8.4.3	Supervision for duration of the construction	Sum	1		
1,22	8.4.4	Company and Head Office overhead costs for the duration of the Contract	Sum	1		
1,23	8.4.5	Other time related obligations	Sum	1		
1,24	PSA 4,4	Excavation by hand in all materials to expose existing services	m³	500		
	PSA 4,5	<u>Occupational Health and Safety</u> Provision for the cost related to the Occupational Health and Safety Act, 85 of 1993, and the relevant Regulations:				
1,25		a) Preparation of a Health & safety Plan	Sum	1		
1,26		b) Compilation of a Risk Assessment prior to Construction	Sum	1		
1,27		c) Health & Safety induction Training of employees	Sum	1		
1,28		d) Compilation and keeping up to date the Health & Safety file which shall include all documentation required in terms of the act	Sum	1		
1,29		e) Implementation of the Health and Safety Plan over the entire construction period	Sum	1		
	PSA 4,6	<u>SUMS STATED PROVISIONALLY BY THE ENGINEER</u>				
1,30	4.6.1	a) Project Liaison Officer	Prov. Sum	1		R 832 500,00
1,31	4.6.2	b) Project Liaison Committee	Prov. Sum	1		R 1 332 000,00
1,32	4.6.3	c) Additional laboratory testing (only when directed by Engineer)	Prov. Sum	1		R 250 000,00
1,33	4.6.4	d) Cathodic Protection	Prov. Sum	1		R 2 000 000,00
1,34	4.6.5	e) Specialised surge verification and monitoring	Prov. Sum	1		R 1 000 000,00
1,35	4.6.6	f) Electrical control panels and telemetry	Prov. Sum	1		R 40 000 000,00
1,36	4.6.7	g) AS BUILT Survey	Prov. Sum	1		R 50 000,00
1,37	4.6.8	h)	Prov. Sum	1		R 20 000 000,00
1,38	4.6.9	<u>Extra-over Item 1.30 to 1.37 for handling fee:</u>	%		R65 464 500,00	
	DWK 6	<u>DAYWORKS</u>				
	DWK 6.1	Labourers:				
1,39		a) Unskilled	hr	800		
1,40		b) Semi-skilled	hr	500		
TOTAL CARRIED FORWARD						

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TOTAL BROUGHT FORWARD						
1,41		c) Skilled	hr	400		
1,42	DWK 6.2	Foreman	hr	500		
	DWK 6.3	Tipper trucks:				
1,43		a) 3 - 5 ton	hr	300		
1,44	DWK 6.4	Loader (0.5m³ bucket)	hr	500		
1,45	DWK 6.5	Excavator (CAT 350 or similar)	hr	500		
1,46	DWK 6.9	Pedestrian roller (Bomag BW90 or similar)	hr	200		
1,47	DWK 6.10	Wackers (Rammers)	hr	200		
1,48	DWK 6.12	Water truck (minimum 10 000liter capacity)	hr	100		
1,49	DWK 6.15	LDV (1800cc minimum)	km	2000		
	DWK 6.16	Materials under dayworks				
1,50		a) Materials acquired under dayworks material	Prov. Sum	1	R 200 000,00	R 200 000,00
TOTAL SCHEDULE 1 CARRIED FORWARD TO SUMMARY						

SCHEDULE 2: SPECIAL PIPE WORKS AND FITTINGS						
ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
2	SABS 1200 DB	<u>SPECIAL PIPE WORK AND FITTINGS</u>				
		<u>EARTHWORKS</u>				
	SABS 1200L PSL4.1	<u>STEEL PIPES and FITTINGS</u>				
		Fabrication, supply, transport and install and test the following pipe fittings. All items to be approved by Engineer prior to ordering.				
		<u>DAM WALL CONNECTION</u>				
		<u>Connection Pipework - (dwg - N/3110/RW/M/11/001,002,003RA and 004RA)</u>				
2,1		a) Pipe item number 1.1.1 : 900mm Ø Flanged MS Pipe Piece 350mm long	no	3		
2,2		b) Pipe item number 1.1.2 900mm Ø Butterfly valve	no	3		
2,3		c) Pipe item number 1.1.3: 900mm Ø Flanged ms pipe. 350mm Long	no	3		
2,4		d) Pipe item number 1.1.4: :900mm Ø to 400mm Ø flanged ms concentric reducer.	no	3		
2,5		e) Pipe item number 1.1.5: 400mm Ø flange adaptor.	no	3		
2,6		f) Pipe item number 1.1.6: 400mm Ø ms 90° bend flanged one end.	no	3		
2,7		g) Pipe item number 1.1.7: 400mm Ø flanged ms pipe. 2494mm Long	no	3		
2,8		h) Pipe item number 1.1.8: 400mm Ø Flanged MS pipe piece. 2667mm long	no	3		
2,9		i) Pipe item number 1.1.9: 400mm Ø ms pipe with flange one end as indicated. 4080mm long	no	1		
2,10		j) Pipe item number 1.1.10: 400mm Ø ms pipe flange one end as indicated. 3042mm long	no	1		
2,11		k) Pipe item number 1.1.11: 400mm Ø ms pipe flange one end as indicated. 5175mm long	no	1		
2,12		l) Pipe item number 1.1.12: 400mm Ø flange adaptor.	no	1		
2,13		m) Pipe item number 1.1.13: :700mm Ø to 400mm Ø flanged ms concentric reducer.	no	1		
2,14		n) Pipe item number 1.1.14: :600mm Ø to 400mm Ø flanged ms concentric reducer.	no	1		
2,15		o) Pipe item number 1.1.15: 400mm Ø flanged ms pipe. 1002mm Long	no	1		
2,16		p) Pipe item number 1.1.16: 400mm Ø flanged ms 90° bend with flange as indicated.	no	1		
2,17		q) Pipe item number 1.1.17: :600mm Ø to 400mm Ø flanged ms concentric reducer.	no	1		
2,18		r) Pipe item number 1.1.18: 600mm Ø x 600mm Ø flanged ms sweep tee- piece.	no	1		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
2,19		s) Pipe item number 1.1.19: 600mm Ø flanged ms pipe. 503mm long	no	1		
2,20		t) Pipe item number 1.1.20: 700mm Ø to 600mm Ø flanged ms concentric reducer.	no	1		
2,21		u) Pipe item number 1.1.21: 700mm Ø x 700mm Ø flanged ms sweep tee- piece.	no	1		
2,22		v) Pipe item number 1.1.22: 700mm Ø flanged ms pipe. 1045mm long	no	1		
2,23		w) Pipe item number 1.1.23: 700mm Ø x 700mm Ø flanged ms tee- piece.	no	1		
2,24		x) Pipe item number 1.1.24: 700mm Ø to 400mm Ø flanged ms concentric reducer.	no	1		
2,25		y) Pipe item number 1.1.25: 400mm x 50mm Ø reducing flange.	no	1		
2,26		z) Pipe item number 1.1.26: 50mm Ø g.m.s extension piece, male threaded. 300mm	no	1		
2,27		aa) Pipe item number 1.1.27: 50mm Ø brass full way gate valve (female threaded).	no	1		
2,28		ab) Pipe item number 1.1.28: 50mm Ø g.m.s extension piece, male threaded. 200mm	no	1		
2,29		ac) Pipe item number 1.1.29: 50mm Ø double acting air release valve assembly.	no	1		
2,30		ad) Pipe item number 1.1.30: 700mm Ø flanged ms 40° bend.	no	1		
2,31		ae) Pipe item number 1.1.31: 700mm Ø flanged ms pipe. 2587mm long	no	2		
2,32		af) Pipe item number 1.1.32: 400mm Ø flanged ms 90° bend.	no	6		
2,33		af) Pipe item number 1.1.33: 700mm to 750mm flanged ms Concentric Reducer	no	1		
<u>PUMP STATION No. 1</u>						
<u>Suction Pipework - (dwg - N/3110/M/6/101RA&102RA)</u>						
2,34		a) Pipe item number 1.2.1 : 750mm to 300mm Flanged MS Concentric Reducer	no	1		
2,35		b) Pipe item number 1.2.2 : 750mm Ø flanged ms pipe with position of puddle flange as indicated. 1906mm long	no	1		
2,36		c) Pipe item number 1.2.3 : 750mm Ø flange adaptor.	no	1		
2,37		d) Pipe item number 1.2.4 : 750mm Ø ms pipe with flange as indicated. 3443mm long.	no	1		
2,38		e) Pipe item number 1.2.5 : 750mm Ø flanged ms pipe. 4060mm long	no	1		
2,39		f) Pipe item number 1.2.6 : 750mm Ø flanged ms sweep tee.	no	2		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
2,40		g) Pipe item number 1.2.7 :750mm Ø flanged ms pipe. 2803mm long.	no	1		
2,41		h) Pipe item number 1.2.8. 750mm Ø flanged ms pipe. 1911mm long	no	1		
2,42		i) Pipe item number 1.2.9. 750mm Ø flanged ms 45° medium radius bend.	no	1		
2,43		j) Pipe item number 1.2.10. : 750mm Ø flanged ms with puddle flange as indicated. 840mm long.	no	3		
2,44		k) Pipe item number 1.2.11. 750mm Ø butterfly valve	no	3		
2,45		l) Pipe item number 1.2.12. 750mm Ø flange adaptor.	no	3		
2,46		m) Pipe item number 1.2.13. 750mm Ø flanged ms with puddle flange as indicated. 855mm long.	no	3		
	PSL4.1	<u>Delivery Pipework (dwg - N/3110/M/6/102RA&103RA)</u>				
2,47		a) Pipe item number 1.3.1. : 400mm Ø TO 250mm Ø Flanged MS concentric reducer. 1030mm in length	no	3		
2,48		b) Pipe item number 1.3.2. : 400mm Ø Flanged check valve. Metal seated single door one piece body non return valve.	no	3		
2,49		c) Pipe item number 1.3.3. : 400mm Ø pump control valve. double chambered, hydraulically operated, diaphragm actuated active check valve that opens fully or shuts off in response to electric signals.	no	3		
2,50		d) Pipe item number 1.3.4. : 400mm Ø RSV Gate Valve	no	3		
2,51		e) Pipe item number 1.3.5. : 600mm Ø x 400mm Ø Flanged MS sweep tee- piece.	no	3		
2,52		f) Pipe item number 1.3.6. : 600mm Ø Flanged MS pipe.2864mm long	no	2		
2,53		g) Pipe item number 1.3.7. : 600mm Ø Flanged MS pipe with position of puddle flange as indicated. 1958mm long	no	1		
2,54		h) Pipe item number 1.3.8. : 600Ø x 600Ø Flanged MS tee-piece.	no	1		
2,55		i) Pipe item number 1.3.9. : 600 mm Ø MS blank flange with 150 mm Ø Flanged tee-stub	no	1		
2,56		j) Pipe item number 1.3.10. : 150 mm Ø Flanged gate valve	no	1		
2,57		k) Pipe item number 1.3.11. : 150 mm Ø Double acting SS air valve	no	1		
2,58		l) Pipe item number 1.3.12. : 600mm Ø Flanged MS 45° bend.	no	1		
2,59		m) Pipe item number 1.3.13. : 600mm Ø Flanged MS pipe. 1673mm long.	no	1		
2,60		n) Pipe item number 1.3.14. : 600mm Ø Flanged MS 45° bend.	no	1		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
2,61		o) Pipe item number 1.3.15. : 600mm Ø Flanged MS pipe. 6000mm long.	no	1		
2,62		p) Pipe item number 1.3.16. : 600mm Ø MS pipe piece, Flanged one end & other end suitable for flange adaptor. 4970mm long	no	1		
2,63		q) Pipe item number 1.3.17. : 500mm Ø MS pipe piece, Flanged one end & other end suitable for flexible coupling. 412mm long	no	1		
2,64		r) Pipe item number 1.3.18. : 500mm Ø Flexible coupling.	no	1		
2,65		s) Pipe item number 1.3.19. : 500mm Ø MS pipe piece, Flanged one end & other end suitable for flexible coupling. puddle flange in position as indicated. 1266mm long.	no	1		
2,66		t) Pipe item number 1.3.20. : 500mm Ø MS pipe piece, Flanged one end & other end suitable for flexible coupling. puddle flange in position as indicated. 1266mm long	no	1		
2,67		u) Pipe item number 1.3.21. : 500mm Ø Flange adaptor. Bolts to suit length of restraining flange.	no	1		
2,68		v) Pipe item number 1.3.22. : 500mm Ø Non - return valve. Axial flow, spring assisted check valve	no	1		
2,69		w) Pipe item number 1.3.23. : 500 x 200 mm Ø Flanged MS tee-piece.	no	1		
2,70		x) Pipe item number 1.3.24. : 500 mm Ø Flanged gate valve	no	1		
2,71		y) Pipe item number 1.3.25. : 500mm Ø to 450mm Ø Flanged MS concentric reducer.	no	2		
2,72		z) Pipe item number 1.3.26. : 600mm Ø Flanged MS pipe piece. puddle flange in position as indicated. 1158mm long	no	1		
2,73		aa) Pipe item number 1.3.27. : 700mm Ø Flange adaptor.	no	1		
2,74		aa) Pipe item number 1.3.28. : 600mm to 700mm Ø Flange MS Reducer	no	1		
	PSL4.1	<u>Surge Pipework (dwg - N/3110/M/6/103RA)</u>				
2,75		a) Pipe item number 1.4.1. : 200mm Ø MS pipe piece, Flanged one end & other end suitable for flange adaptor	no	1		
2,76		b) Pipe item number 1.4.2. : 200mm Ø Flange adaptor.	no	2		
2,77		c) Pipe item number 1.4.3. : 200 mm Ø Flanged RSV valve	no	1		
2,78		d) Pipe item number 1.4.4. : 200mm surge anticipating valve	no	1		
2,79		e) Pipe item number 1.4.5. : 200mm Ø MS pipe piece, Flanged one end & other end suitable for flexible coupling. puddle flange in position as indicated.	no	1		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
2,80		f) Pipe item number 1.4.6. : 200mm Ø Flexible coupling	no	1		
2,81		g) Pipe item number 1.4.7 : 200mm Ø MS Pipe piece, Flanged one end & other end suitable for flexible coupling. 1648mm long.	no	1		
2,82		h) Pipe item number 1.4.8. : 200mm Ø Flanged MS 32° bend.1013mm long	no	1		
2,83		i) Pipe item number 1.4.9. : 200mm Ø Flanged MS pipe. 6000mm long	no	1		
2,84		j) Pipe item number 1.4.10. : 200mm Ø Flanged MS pipe.	no	2		
2,85		k) Pipe item number 1.4.11. : 200mm Ø MS 32° bend, one end Flanged with other end suitable for flange adaptor.	no	1		
2,86		l) Pipe item number 1.4.12. : 200mm Ø MS pipe piece, Flanged one end. puddle flange in position as indicated.	no	1		
	PSL4.1	<u>Meter Chamber Box (dwg - N/3110/M/6/103RA)</u>				
2,87		a) Pipe item number 1.5.1. : 600mm Ø Flange adaptor.	no	1		
2,88		b) Pipe item number 1.5.2. : 600mm Ø Flanged MS pipe piece with puddle flange as indicated. 1144mm long	no	1		
2,89		c) Pipe item number 1.5.3. : 600 x 450mm Ø Flanged MS concentric reducer.	no	1		
2,90		d) Pipe item number 1.5.4. : 450mm Ø RSV gate valve.	no	1		
2,91		e) Pipe item number 1.5.5. : 450mm Ø Flange adaptor.	no	3		
2,92		f) Pipe item number 1.5.6. : 450mm Ø MS pipe piece , Flanged one end only. 2157mm long.	no	1		
2,93		g) Pipe item number 1.5.7. : 450mm Ø Magnetic flow meter.	no	1		
2,94		h) Pipe item number 1.5.8. : 450mm Ø MS pipe piece , Flanged one end only. 1257mm long.	no	1		
2,95		i) Pipe item number 1.5.9. : 450mm Ø Hydraulic control valve. Oblique pattern, globe valves with double chamber unitized actuator	no	1		
2,96		j) Pipe item number 1.5.10. : 450mm Ø Flanged MS pipe piece with puddle flange as indicated.	no	1		
	PSL4.1	<u>Pump station 2</u> <u>STEEL PRESSED TANK Inlet Pipework (dwg - N/3110/M/6/202RA)</u>				
2,97		a) Pipe item number 2.1.1. : 600mm Ø Flange adaptor	no	1		
2,98		b) Pipe item number 2.1.2. : 600mm Ø Flanged MS elbow.	no	2		
2,99		c) Pipe item number 2.1.3. : 600mm Ø Flanged MS pipe. 8400mm long	no	2		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
2,100		d) Pipe item number 2.1.4. : 600mm Ø Flanged MS pipe. 500mm long	no	1		
2,101		e) Pipe item number 2.1.5. : 600mm Ø Flanged MS pipe. 1131mm long.	no	1		
2,102		f) Pipe item number 2.1.6 : 700mm Ø Flange adaptor.	no	1		
2,103		g) Pipe item number 2.1.7 : 600mm Ø Flanged MS pipe piece with puddle flange as indicated. 1144mm long	no	1		
2,104		h) Pipe item number 2.1.8 : 600 x 450mm Ø Flanged MS concentric reducer.	no	2		
2,105		i) Pipe item number 2.1.9 : 450mm Ø RSV gate valve.	no	1		
2,106		j) Pipe item number 2.1.10 : 450mm Ø Flanged MS pipe piece 989mm long	no	1		
2,107		k) Pipe item number 2.1.11 : 450mm Ø Hydraulic control valve. Oblique pattern, globe valves with double chamber unitized actuator	no	1		
2,108		l) Pipe item number 2.1.12 : 450mm Ø Flanged MS pipe piece with puddle flange as indicated. 860mm long	no	1		
2,109		m) Pipe item number 2.1.13 : 600mm Ø MS pipe Flanged one end with other end suitable for flange adaptor.	no	1		
2,110		n) Pipe item number 2.1.14 : 600 x 700mm Ø Flanged MS concentric reducer. 433mm long	no	1		
	PSL4.1	<u>Suction Pipework (dwg - N/3110/M/6/202RA)</u>				
2,111		a) Pipe item number 2.2.1: 700mm Ø to 300mm Ø flanged ms concentric reducer.	no	3		
2,112		b) Pipe item number 2.2.2. : 700mm Ø flanged ms pipe with position of puddle flange as indicated. 2500mm long	no	2		
2,113		c) Pipe item number 2.2.3. :700mm Ø flanged ms 45° bend.	no	3		
2,114		d) Pipe item number 2.2.4. : 700mm Ø flanged ms pipe. 4000mm long	no	2		
2,115		e) Pipe item number 2.2.5. : 700mm Ø flanged ms 45° bend	no	3		
2,116		f) Pipe item number 2.2.6. 700mm Ø butterfly valve	no	3		
2,117		g) Pipe item number 2.2.7. : 1200mm Ø to 700mm Ø bell mouth with flange as indicated.	no	3		
2,118		h) Pipe item number 2.2.8. : 700mm Ø flanged ms pipe. 2831mm long	no	1		
2,119		i) Pipe item number 2.2.9. : 700mm Ø flanged ms pipe with position of puddle flange as indicated. 3467mm long	no	1		
	PSL4.1	<u>Delivery Pipework (dwg - N/3110/M/6/203RA)</u>				
2,120		a) Pipe item number 2.3.1. : 400mm Ø to 250mm Ø Flanged MS	no	3		
TOTAL CARRIED FORWARD						

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TOTAL BROUGHT FORWARD						
2,121		b) Pipe item number 2.3.2. : 400mm Ø Flanged check valve. Metal seated single door one piece body non return valve.	no	3		
2,122		c) Pipe item number 2.3.3. : 400mm Ø pump control valve. double chambered, hydraulically operated, diaphragm actuated active check valve that opens fully or shuts off in response to electric signals.	no	3		
2,123		d) Pipe item number 2.3.4. : 400mm Ø RSV gate valve	no	3		
2,124		e) Pipe item number 2.3.5. : 600mm Ø x 400mm Ø Flanged MS sweep tee- piece.	no	3		
2,125		f) Pipe item number 2.3.6. : 600mm Ø Flanged MS pipe. 2864mm long	no	2		
2,126		g) Pipe item number 2.3.7. : 600mm Ø Flanged MS pipe with position of puddle flange as indicated. 1958mm long	no	1		
2,127		h) Pipe item number 2.3.8. : 600Ø x 600Ø Flanged MS tee-piece.	no	1		
2,128		i) Pipe item number 2.3.9. : 600 mm Ø MS blank flange with 150 mm Ø Flanged tee-stub	no	1		
2,129		j) Pipe item number 2.3.10. : 150 mm Ø Flanged gate valve	no	1		
2,130		k) Pipe item number 2.3.11. : 150 mm Ø Double acting SS air valve	no	1		
2,131		l) Pipe item number 2.3.12. : 600mm Ø Flanged MS 45° bend.	no	1		
2,132		m) Pipe item number 2.3.13. : 600mm Ø Flanged MS pipe. 1674mm long	no	1		
2,133		n) Pipe item number 2.3.14. : 600mm Ø Flanged MS 45° bend.	no	1		
2,134		o) Pipe item number 2.3.15. : 600mm Ø Flanged MS pipe. 6000mm long.	no	1		
2,135		p) Pipe item number 2.3.16. : 600mm Ø Flanged MS pipe. 4970mm long	no	1		
2,136		q) Pipe item number 2.3.17. : 500mm Ø MS pipe piece, Flanged one end & other end suitable for flexible coupling.	no	1		
2,137		r) Pipe item number 2.3.18. : 500mm Ø Flexible coupling.	no	1		
2,138		s) Pipe item number 2.3.19. : 500mm Ø MS pipe piece, Flanged one end & other end suitable for flexible coupling. puddle flange in position as indicated.	no	1		
2,139		t) Pipe item number 2.3.20. : 500mm Ø MS pipe piece, Flanged one end & other end suitable for flexible coupling. puddle flange in position as indicated.	no	1		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
2,140		u) Pipe item number 2.3.21. : 500mm Ø MS flange adaptor bolts to suit length of restraining flange.	no	1		
2,141		v) Pipe item number 2.3.22. : 500mm Ø Flanged concentric non - return valve. Axial flow, spring assisted check valve	no	1		
2,142		w) Pipe item number 2.3.23. : 500 x 200 mm Ø Flanged MS tee-piece.	no	1		
2,143		x) Pipe item number 2.3.24. : 500 mm Ø Flanged gate valve	no	1		
2,144		y) Pipe item number 2.3.25. : 600mm Ø to 500mm Ø Flanged MS concentric reducer.	no	2		
2,145		z) Pipe item number 2.3.26. : 600mm Ø Flanged MS pipe piece. puddle flange in position as indicated. 1158mm long	no	1		
2,146		aa) Pipe item number 2.3.27. : 600mm Ø Flange adaptor.	no	1		
	PSL4.1	<u>Outlet To WTW Pipe work (dwg - N/3110/M/6/203RA)</u>				
2,147		a) Pipe item number 2.6.1. : 300mm Ø Flange Adaptor	no	2		
2,148		b) Pipe item number 2.6.2. : 300mm Ø RSV Gate Valve	no	1		
2,149		c) Pipe item number 2.6.3. : 300mm Ø Flanged MS Pipe Piece. 1080mm long	no	1		
2,150		d) Pipe item number 2.6.4. : 300mm Ø Flanged MS 90° Bend	no	3		
2,151		e) Pipe item number 2.6.5. : 300mm Ø MS Pipe Flange one end. 608mm	no	1		
2,152		f) Pipe item number 2.6.6. : 900mm to 300mm Ø Bell mouth with flange as indicated	no	1		
	PSL4.1	<u>6MI/d Raw Water Meter (dwg - N/3110/M/8/003)</u>				
2,153		a) Pipe item number 10.1. : 300mm Ø Magnetic Raw water flow meter	no	1		
2,154		b) Pipe item number 10.2. : 300mm Ø Flexible coupling	no	2		
2,155		c) Pipe item number 10.3. : 300mm Ø Flanged one end MS Pipe Piece. 1305mm	no	1		
2,156		d) Pipe item number 10.4. : 300mm Ø Flanged RSV Gate Valve	no	1		
2,157		e) Pipe item number 10.5. : 300mm Ø MS Pipe piece. 860mm	no	1		
2,158		f) Pipe item number 10.6. : 300mm Ø Flange adaptor	no	1		
2,159		g) Pipe item number 10.7. 300mm Ø flanged MS Pipe piece. 760mm	no	1		
	PSL4.1	<u>Surge Pipework (dwg - N/3110/M/6/203RA)</u>				
2,160		a) Pipe item number 2.4.1. : 200mm Ø MS pipe piece, Flanged one end & other end suitable for flange adaptor.	no	1		
2,161		b) Pipe item number 2.4.2. : 200mm Ø Flange adaptor.	no	1		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
2,162		c) Pipe item number 2.4.3. : 200 mm Ø Flanged RSV valve	no	1		
2,163		d) Pipe item number 2.4.4. : 200mm surge anticipating valve model 835.	no	1		
2,164		e) Pipe item number 2.4.5. : 200mm Ø MS pipe piece, Flanged one end & other end suitable for flexible coupling. puddle flange in position as indicated.	no	1		
2,165		f) Pipe item number 2.4.6. : 200mm Ø Flexible coupling	no	1		
2,166		g) Pipe item number 2.4.7 : 200mm Ø MS pipe piece, Flanged one end & other end suitable for flexible coupling.	no	1		
2,167		h) Pipe item number 2.4.8. : 200mm Ø Flanged MS 45° bend.	no	1		
2,168		i) Pipe item number 2.4.9. : 200mm Ø Flanged MS pipe. 1013mm long	no	1		
2,169		j) Pipe item number 2.4.10. : 200mm Ø Flanged MS pipe. 6000mm long	no	3		
	PSL4.1	<u>Overflow & Scour Pipe work (dwg - N/3110/M/6/203RA)</u>				
2,170		a) Pipe item number 2.5.1. : 300mm Ø flanged ms pipe. 671mm long	no	1		
2,171		b) Pipe item number 2.5.2. : 300mm Ø flanged ms elbow.	no	1		
2,172		c) Pipe item number 2.5.3. : 300mm Ø flanged ms pipe. 8400mm long	no	1		
2,173		d) Pipe item number 2.5.4. : 300Ø x 300Ø flanged ms tee-piece.	no	1		
2,174		e) Pipe item number 2.5.5. : 300mm Ø flanged ms pipe.	no	1		
2,175		f) Pipe item number 2.5.6. : 300mm Ø ms pipe with flange one end. 627mm long	no	1		
2,176		g) Pipe item number 2.5.7 : 300mm Ø RSV gate valve.	no	1		
2,177		h) Pipe item number 2.5.8. : 900mm Ø to 300mm Ø bell mouth with flange as indicated.	no	1		
2,178		i) Pipe item number 2.5.9. : 300mm Ø ms pipe with flange one end.	no	1		
		<u>Steel Pressed Reservoir</u> Supply, Deliver, Install and Commission the following steel pressed tank with aproximate dimensions and minimum supply volume required. Tank to be corrosion protected according to SANS 121:				
2,179		a) 9.76m x 8.54 x14.64 (H x W x B) with minimum supply capacity of 1220 kl	no	1		
TOTAL SCHEDULE 2 CARRIED FORWARD TO SUMMARY						

SCHEDULE 3 : EARTHWORKS - RESERVOIR & BOOSTER PUMP STATIONS						
ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
3	SABS 1200 D	<u>SITE PREPARATION</u>				
	PSC4.1	<u>Site Clearance</u>				
		<u>Clear and grub</u>				
3,1		ii) Pump Station	m ²	3234		
		<u>Remove topsoil</u>				
	8.3.1.2	<u>Remove topsoil to a nominal depth of 150mm stockpile and maintain</u>				
3,2		ii) Pump Station	m ²	3234		
		<u>BULK EXCAVATION</u>				
		Excavate in all materials and use for embankment or backfill or dispose, as ordered				
	8.3.2 a)					
3,3		a) Cut to Fill	m ³	295		
3,4		b) Cut to Spoil	m ³	15		
	PSDB2.2	<u>Extra-over items 3.3 and 3.4 for excavation in:</u>				
3,5		a) Hard rock excavation (Provisional)	m ³	50		
		<u>RESTRICTED EXCAVATION</u>				
	8.3.3 a)	<u>Excavate for restricted foundations, footings and pipe trenches</u>				
	PSDB2.1	<u>in all materials and backfill to 95% Mod</u>				
		<u>AASHTO density:</u>				
3,6		ii) Pump Station	m ³	1800		
	8.3.3 a)	<u>Excavate for restricted foundations, footings and pipe trenches in all materials and dispose:</u>				
3,7		ii) Pump Station	m ³	1500		
	PSDB2.2	<u>Extra-over items 3.6 and 3.7 for excavation in:</u>				
3,8		b) Hard rock excavation (Provisional)	m ³	850		
TOTAL SCHEDULE 3 CARRIED FORWARD TO SUMMARY						

SCHEDULE 4 : PUMPSTATION CONCRETE WORK						
ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
4	SABS 1200G	<u>CONCRETE WORK</u>				
		<u>Concrete</u>				
	8.4.2	Blinding layer in class 15MPa/19mm to a minimum thickness of 50mm underneath structures				
	4,1	ii) Pump Station	m ²	1800		
	8.4.3	<u>Strength concrete - Class 25 MPa/19mm</u>				
	4,2	ii) Pump Station	m ³	493		
	8.4.3	<u>Strength concrete - class 15MPa/10mm Mass concrete to:</u>				
	4,3	i) All structures (provisional)	m ³	155		
	8.4.3	<u>Screed to:</u>				
	4,4	i) All structures	m ³	66		
	SABS 1200G	<u>CONCRETE: Formwork</u>				
	8.2.2	<u>Formwork - Smooth:</u>				
		a) <u>Vertical plane</u>				
	4,5	i) Pump Station	m ²	1479		
		b) <u>Horizontal plane - elevated to walkways and slabs</u>				
	4,6	ii) Pump Station	m ²	480		
		c) <u>Inclined - to staircases</u>				
	4,7	i) Pump Station	m ²	17		
	8.2.5	d) <u>Narrow widths (up to 300mm wide) to:</u>				
	4,8	ii) Pump Station	m	500		
	8.2.6	<u>Box-out holes for pipes</u>				
		<u>Box-out holes, rectangular through concrete 200 to 500 mm thick: for pipework supplied and installed by the Mechanical Contractor : Pump Station:</u>				
	4,9	a) 980 x 980mm box-out for 700mm flanged steel pipe	no	9		
	4,10	b) 930 x 930mm box-out for 600mm flanged steel pipe	no	5		
	4,11	c) 900 x 900mm box-out for 500mm flanged steel pipe	no	2		
	4,12	c) 900 x 900mm box-out for 600mm flanged steel pipe	no	2		
	4,13	d) 700 x 700mm box-out for 450mm flanged steel pipe	no	2		
	4,14	e) 450 x 450 mm box-out for 200mm flanged steel pipe	no	2		
		<u>REINFORCEMENT</u>				
	8.3.1	Reinforcement, high tensile steel				
	4,15	ii) Pump Station	t	65		
	8.3.1	Reinforcement, mild steel				
	4,16	ii) Pump Station	t	6,5		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
4,17	8.3.2	High tensile welded mesh - Ref No 395 (Provisional)	m ²	40		
		ii) Pump Station				
	8.4.4	<u>Unformed surface finish</u>				
		a) Wood floated finish				
4,18		ii) Pump Station	m ²	480		
		b) Steel floated finish				
4,19		ii) Pump Station	m ²	480		
		<u>Grouting / casting in of pipes and specials</u>				
	PSG6.1	a) Grouting/casting in of pipe pieces in the following pipe diameters (Refer also PSG2.6.4)				
		<u>Pump Station:</u>				
4,20		a) 980 x 980mm box-out for 700mm flanged steel pipe	no	9		
4,21		b) 930 x 930mm box-out for 600mm flanged steel pipe	no	5		
4,22		c) 900 x 900mm box-out for 500mm flanged steel pipe	no	2		
4,23		d) 900 x 900mm box-out for 600mm flanged steel pipe	no	2		
4,24		e) 700 x 700mm box-out for 450mm flanged steel pipe	no	2		
4,25		f) 450 x 450 mm box-out for 200mm flanged steel pipe	no	2		
	SABS 1200G	<u>MISCELLANEOUS</u>				
	8.8	Supply and install lockable manhole covers and frames:				
4,26		560mm Heavy Duty Lockable concrete cover with galvanised steel ring encased into concrete cover slab.	no	11		
TOTAL SCHEDULE 4 CARRIED FORWARD TO SUMMARY						

SCHEDULE 5 : PUMPSTATION STEEL WORK ITEMS						
ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
5	SABS 1200HA	STRUCTURAL STEELWORK (Sundry Items)				
	PSHA 4.1	Handrailing				
5,1		a) Top mounted handrailing (galvanised)	m	80		
		ii) Pump Station				
5,2		c) Stair mounted handrailing (galvanised)	m	20		
		i) Pump Station				
	PSHA 4.12	Open grid / chequer plate flooring				
5,3		Supply and install HDG floor grating, bearer bar=40mm. dwg N3110/W/8/097	m²	65		
	PSHA 4.4	Pipe supports				
		Supply and install as per drawing DWG N3110/RWW/11/025RA				
5,4		Type 2 (GMS)	no	6		
5,5		Type 1 (GMS)	no	6		
	PSHA 4.8	Gantry rails				
		Supply and install, align gantry rail for crawl including fastening and corrosion protection (galvanised) as detailed				
5,6		i) 305 x 165 x 67 kg/m in pumping station	m	45		
TOTAL SCHEDULE 5 CARRIED FORWARD TO SUMMARY						

SCHEDULE 6 :PUMPSTATION BUILDING WORKS						
ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
6	PART	PARTICULAR SPECIFICATION				
	SPEC PB	BUILDING WORK				
	PB9	Pump Station:				
	PB9.1.1	Brickwork				
		Walls (including brickforce every fourth course)				
6,1		a) <u>One brick walls (230 mm wide)</u> Face bricks Type FBS external with 6 mm half round ruled joints and type NFP internal, the latter with joints raked for cement plaster	m ²	576		
6,2		b) <u>Half brick walls (110 mm wide)</u> Clay bricks internal to receive plaster	m ²	576		
	PB9.1.3	Windows				
6,3		'Winblock' modular precast concrete window surrounds, finished smooth on exposed surfaces, incl. bedding, jointing and pointing 590x590x260mm Type WB66	no	64		
6,4		'Winblok Winvent' natural anodised aluminium 4mm clear float glass, factory glazed window insets complete:				
6,5		a) 590x590 Type WV(A) 66F fixed frame window fixed in surround with silicone sealant adhesive	no	32		
6,6		b) 590x590 Type WV) 66T top hung window fixed in surround with silicone sealant adhesive in:	no	32		
		<u>Damp Proofing</u>				
6,7		a) Single layer 375 micron "Gundle Brickgrip" plastic waterproof sheeting under all walls at top of floor level, and underneath window sills:	m	120		
	PB9.1.2	Plaster				
6,8		a) One layer cement plaster rendered 12 mm thick and finished smooth with steel trowel	m ²	576		
	PB9.1.2	Painting wall finishes				
6,9		a) One coat universal undercoat, Type 1 to SABS 681	m ²	576		
6,10		b) Two coats approved interior acrylic paint (Gun ship grey)	m ²	1152		
	PB9.1.2	Waterproofing				
6,11		Waterproofing of pumping station roof with "Acrylatic" as supplied by "Gundle coatings" or similar approved	m ²	425		
	PB9.1.3	Doors and Frames				
6,12		a) Mild steel door and frame, 815 mm wide x 2 032 mm high all complete with 3 lever lockset, chrome plated handles and painted	no	2		
6,13		c) Mild steel door and frame, 3 000 mm wide x 3 400 mm high all complete with 3 lever lockset, chrome plated handles and painted	no	2		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
	SPEC PC	<u>FENCING</u>				
		<u>Fence</u>				
	PC4.1	Supply and install 1,8m high security fence as detailed on drawing including excavation, concrete work, corrosion protection (galvanising), corner posts, intermediate posts, stays, diamond mesh, barbed wire, etc. Also refer specification Section PC: Fencing				
6,14		ii) Pump Station	m	205		
		<u>Gate</u>				
	PC4.1	Supply and install 1,8m high security gate Type 'B' as detailed on dwg including excavation, concrete work, corrosion protection (galvanising), gate posts, struts, diamond mesh, padlock, barbed wire, etc. Also refer specification Section PC: Fencing				
6,15		ii) Pump Station	no	1		
		<u>Roof bearing pads:</u>				
6,16		3T50/50 Kilcher Teflon sliding Bearing pad between roof slab and brick work	m	145		
		<u>Cable Trench Filling and Topping</u>				
		All cable trenches to be filled with sand and topped with a concrete topping as per drawing.				
6,17		a) Sand filling	m ³	7		
6,18		b) 80mm Concrete screed topping	m ²	15		
TOTAL SCHEDULE 6 CARRIED FORWARD TO SUMMARY						

SCHEDULE 7 : STRUCTURAL CONCRETE WORKS TO PIPELINE MANHOLES AND CHAMBERS						
ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
10	SABS 1200 G	<u>CONCRETE (Structural)</u>				
	SABS 1200G	<u>CONCRETE WORK</u>				
		<u>Concrete</u>				
7,1	8.4.2	Blinding layer in class 15MPa/19mm to a minimum thickness of 50mm underneath structures	m ²	350		
7,2	8.4.3	<u>Strength concrete - class 25MPa/19mm in manholes</u>				
		i) Air valves on pump mains	m ³	81		
7,3		ii) Scour valve chamber on pump mains	m ³	80		
7,4		iii) Air valve - check valve combination box on pump mains	m ³	32		
7,5		iv) Valve chambers and connection chambers	m ³	15		
7,6		v) Gravity pedestals	m ³	800		
7,7		vi) Concrete Encasing	m ³	152		
7,8		vii) Pump Line Pedestals	m ³	370		
	SABS 1200G	<u>FORMWORK:</u>				
	8.2.2	<u>Formwork - Class S1: Manholes</u>				
7,9		a) <u>Vertical plane</u>				
		i) External and internal walls of manholes	m ²	1800		
7,10		b) <u>Horizontal plane</u>				
		i) Manholes and boxes	m ²	135		
7,11	8.2.5	<u>Narrow width (up to 300mm wide) to:</u>				
		a) Sides of manhole floor slab, roof slabs and support pedestals	m	445		
7,12	8.2.6c)	<u>Box-out holes, rectangular through concrete 150 to 300 mm thick: for pipe fitting equipment supplied by Contractor and installed by the Civil Contractor : (Prov.)</u>				
		i) 930mm x 930mm for 600mm pipe	no	40		
7,13		ii) 400mm x 400mm for 200mm pipe	no	11		
7,14	8.3.1	<u>Reinforcement</u>				
		Reinforcement, (high tensile steel)	t	80		
7,15	8.3.1	Reinforcement, (mild steel)	t	8		
7,16	8.3.2	High tensile welded mesh - Ref No 395	m ²	35		
7,17	8.4.4	<u>Unformed surface finish</u>				
		a) Wood float finish to manhole roof structures	m ²	105		
TOTAL CARRIED FORWARD						

TOTAL CARRIED FORWARD						
ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
		<u>Grouting / casting in of pipe specials</u>				
7,18	PSG6.1	a) Grouting in of puddle flanged pipe pieces (installed by the Civil Contractor) in the following pipe diameters (Refer PSG4.1) (Provisional)				
7,19		i) 200 dia. flanged steel pipe	no	12		
		ii) 600 dia. flanged steel pipe	no	40		
	SABS 1200G	<u>MISCELLANEOUS</u>				
7,20	8.8	Supply and install lockable manhole covers and frames: 650mm Heavy Duty lockable concrete cover with galvanised steel ring encased in concrete cover slab.	no	20		
7,21	PSG6.8	Step irons (calcimite or similar approved)	no	45		
7,22	PSHA 4.11	<u>HOOP STRAP</u>				
		Construct and install steel hoop strap as per detail dwg - N/3110/RWW/11/025RA	no	1065		
TOTAL SCHEDULE 7 CARRIED FORWARD TO SUMMARY						

SCHEDULE 8 : GABIONS						
ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
8	SABS 1200DK	<u>GABIONS</u>				
	8,2	<u>Surface preparation</u>				
8,1	8.2.1	Surface preparation for bedding of gabions	m ²	232		
	8.2.2	<u>Gabions</u>				
8,2		Construction of gabion structure as and when instructed by the Engineer. Gabions to be 2m(L) X 1m(W) X 1m(H) in dimension and the material to be Class A Galvanise with a 0.50mm plastic PVC coating and a 80 x 100mm aperture	m ³	85		
8,3	8.2.2	Construction of reno mattresses with dimensions of 2m(L) X 1m(W) X 0.3m(H) and the material to be Class A Galvanise with a 0.50mm plastic PVC coating and a 60 x 80mm aperture	m ³	50		
8,4	8.2.3	Extra-over item 8.2 and 8.3 for packing selected stone for exposed rock surface	m ³	50		
	8.2.4	<u>Geomembrane</u>				
8,5	a)	Supply, lay bed and secure Fibretex -25 SA geomembrane on interface between gabion and in situ material	m ²	250		
TOTAL SCHEDULE 11 CARRIED FORWARD TO SUMMARY						

SCHEDULE 9: SPECIAL PIPE WORKS AND FITTINGS TO PIPELINE						
ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
	SABS 1200 DB	<u>SECTION 4: SPECIAL PIPE WORK AND FITTINGS</u>				
		<u>EARTHWORKS</u>				
	8.3.2(a)	Excavate in all materials for pipe valve manholes. Backfill, compact, and dispose of surplus/unsuitable material for pipes:				
9,1		a) Air valve chambers	m ³	1600		
9,2		b) Scour valve chambers	m ³	1720		
9,3		c) Junction boxes and chambers	m ³	555		
9,4		d) Surface pipeline pedestals	m ³	1210		
9,5		<u>Extra-over item 9.1 to 9.4 for:</u>				
		a) Hard rock excavation	m ³	1275		
9,6	8.3.3.3	<u>EXCAVATION ANCILLARIES</u>				
		Compaction in roads reserves	m ³	967		
	SABS 1200L PSL 4.1	<u>STEEL PIPES and FITTINGS</u>				
		Fabrication, supply, transport and install and test the following pipe fittings. All items to be approved by Engineer prior to ordering.				
	PSL 4.1	<u>80mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 700mmØ GRP PIPELINE. Class 20. (dwg - N/3110/W/11/026)</u>				
9,7		a) Item 2.1: 700mm dia. flange adaptor.	no	20		
9,8		b) Item 2.2: 700mm dia. flanged MS equal tee-piece	no	10		
9,9		c) Item 2.3: 700 x 400mm dia. flanged MS concentric reducer.	no	10		
9,10		d) Item 2.4: 400mm x 200mm dia. flanged MS concentric reducer.	no	10		
9,11		e) Item 2.5: 80mm Ø MS pipe with one side flanged and the other side a 200mm x 80mm Reducing Flange	no	10		
9,12		f) Item 2.6: 80mm dia. flanged RSV gate valve	no	10		
9,13		g) Item 2.7: 80mm dia. flanged MS pipe piece	no	10		
9,14		h) Item 2.8: 80mm dia. Double acting airvalve with anti shock mechanism, Flanged	no	10		
9,15		i) GMS Gooseneck vent pipe for all structures	no	10		
	PSL 4.1	<u>80mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 700mmØ GRP PIPELINE. Class 16. (dwg - N/3110/W/11/026)</u>				
9,16		a) Item 1.1: 700mm dia. flange adaptor.	no	10		
9,17		b) Item 1.2: 700mm dia. flanged MS equal tee-piece	no	5		
9,18		c) Item 1.3: 700 x 400mm dia. flanged MS concentric reducer.	no	5		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
9,19		d) Item 1.4: 400mm x 200mm dia. flanged MS concentric	no	5		
9,20		e) Item 1.5: 80mm Ø MS pipe with one side flanged and the other side a 200mm x 80mm Reducing Flange	no	5		
9,21		f) Item 1.6: 80mm dia. flanged RSV gate valve	no	5		
9,22		g) Item 1.7: 80mm dia. flanged MS pipe piece	no	5		
9,23		h) Item 1.8: 80mm dia. Double acting airvalve with anti shock mechanism, Flanged	no	5		
9,24		i) GMS Gooseneck vent pipe for all structures	no	5		
	PSL 4.1	<u>100mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 700mmØ GRP PIPELINE. Class 16. (dwg - N/3110/W/11/026)</u>				
9,25		a) Item 3.1: 700mm dia. flange adaptor.	no	12		
9,26		b) Item 3.2: 700mm dia. flanged MS equal tee-piece	no	6		
9,27		c) Item 3.3: 700 x 400mm dia. flanged MS concentric reducer.	no	6		
9,28		d) Item 3.4: 400 x 200mm dia. flanged MS concentric reducer.	no	6		
9,29		e) Item 3.5: 100mm Ø MS pipe with one side flanged and the other side a 200mm x 100mm Reducing Flange	no	6		
9,30		f) Item 3.6: 100mm dia. flanged RSV gate valve	no	6		
9,31		g) Item 3.7: 100mm dia. flanged MS pipe piece	no	6		
9,32		h) Item 3.8: 100mm dia. Double acting airvalve with anti shock mechanism, Flanged	no	6		
9,33		i) GMS Gooseneck vent pipe for all structures	no	6		
	PSL 4.1	<u>150mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 700mmØ GRP PIPELINE. Class 20. (dwg - N/3110/W/11/027)</u>				
9,34		a) Item 5.1: 700mm dia. flange adaptor.	no	6		
9,35		b) Item 5.2: 700mm dia. flanged MS equal tee-piece	no	3		
9,36		c) Item 5.3: 700 x 400mm dia. flanged MS concentric reducer.	no	3		
9,37		d) Item 5.4: 400 x 200mm dia. flanged MS concentric reducer.	no	3		
9,38		e) Item 5.5: 150mm dia. MS pipe with one side flanged and the other side a 200mm x 150mm Reducing Flange	no	3		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
9,39	PSL 4.1	f) Item 5.6: 150mm dia.flanged RSV gate valve	no	3		
9,40		g) Item 5.7: 150mm dia.MS pipe piece flanged	no	3		
9,41		h) Item 5.8: 150mm dia. Double acting airvalve with anti shock mechanism, Flanged	no	3		
9,42		i) GMS Gooseneck vent pipe for all structures	no	3		
		<u>150mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 700mmØ GRP PIPELINE. Class 16. (dwg - N/3110/W/11/027)</u>				
9,43		a) Item 4.1: 700mm dia. flange adaptor.	no	6		
9,44		b) Item 4.2: 700mm dia. flanged MS equal tee-piece	no	3		
9,45		c) Item 4.3: 700 x 400mm dia. flanged MS concentric reducer.	no	3		
9,46		d) Item 4.4: 400 x 200mm dia. flanged MS concentric reducer.	no	3		
9,47		e) Item 4.5: 150mm dia.MS pipe with one side flaged and the other side a 200mm x 150mm Reducing Flange	no	3		
9,48	PSL 4.1	f) Item 4.6: 150mm dia.flanged RSV gate valve	no	3		
9,49		g) Item 4.7: 150mm dia.MS pipe piece flanged	no	3		
9,50		h) Item 4.8: 150mm dia. Double acting airvalve with anti shock mechanism, Flanged	no	3		
9,51		i) GMS Gooseneck vent pipe for all structures	no	3		
		<u>200mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 700mmØ GRP PIPELINE. Class 16.(dwg - N/3110/W/11/027)</u>				
9,52		a) Item 6.1: 700mm dia. flange adaptor.	no	4		
9,53		b) Item 6.2: 700mm dia. flanged MS equal tee-piece	no	2		
9,54		c) Item 6.3: 700 x 400mm dia. flanged MS concentric reducer.	no	2		
9,55		d) Item 6.4: 400 x 200mm dia. flanged MS concentric reducer.	no	2		
9,56		e) Item 6.5: 200mm dia.MS pipe with one side flaged and the other side a 200mm x 150mm Reducing Flange	no	2		
9,57		f) Item 6.6: 200mm dia.flanged RSV gate valve	no	2		
9,58		g) Item 6.7: 200mm dia.MS pipe piece flanged	no	2		
9,59		h) Item 6.8: 200mm dia. Double acting with anti shock mechanism, Flanged	no	2		
9,60		i) GMS Gooseneck vent pipe for all structures	no	2		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
9,61	PSL 4.1	<u>200mm Ø PIP LINE SCOUR ASSEMBLY ON 750mm PIPELINE CLASS 16. (dwg - N/3110/W/11/025)</u>				
		a) Item SC 11.1: 750 x 200mm dia. flanged MS reducing tee-piece.	no	3		
9,62		b) Item SC 11.2: 750mm dia. flanged MS pipe piece, with position of puddle flange as indicated.	no	6		
9,63		c) Item SC 11.3: 750mm dia. flange adaptor.	no	6		
9,64		d) Item SC 11.4: 200mm dia. RSV Gate Valve	no	3		
9,65		e) Item SC 11.5: 200mm dia. flange adaptor.	no	3		
9,66		f) Item SC 11.6: 200mm dia. MS pipe piece, flanged one end, with other end suitable for flange adaptor. position of puddle flange as indicated	no	3		
9,67		g) Item SC 11.7: 200mm dia. flanged MS pipe piece. 1040mm Long	no	3		
9,68		h) Item SC 11.8: 200mm dia. MS puddle pipe piece, flanged one end and the other end plain ended. Position of puddle flange as indicated	no	3		
9,69		i) GMS Gooseneck vent pipe for all structures	no	3		
	PSL 4.1	<u>200mm Ø PIP LINE SCOUR ASSEMBLY ON 700mm PIPELINE Class 25 (dwg - N/3110/W/11/013)</u>				
9,70		a) Item SC 11.1: 700 x 200mm dia. flanged MS reducing tee-piece.	no	3		
9,71		b) Item SC 11.2: 700mm dia. flanged MS pipe piece, with position of puddle flange as indicated. 985mm	no	6		
9,72		c) Item SC 11.3: 700mm dia. flange adaptor.	no	6		
9,73		d) Item SC 11.4: 200mm dia. RSV Gate Valve.	no	3		
9,74		e) Item SC 11.5: 200mm dia. flange adaptor.	no	3		
9,75		f) Item SC 11.6: 200mm dia. MS pipe piece, flanged one end, with other end suitable for flange adaptor. position of puddle flange as indicated. 910mm	no	3		
9,76		g) Item SC 11.7: 200mm dia. flanged MS pipe piece. 1040mm Long	no	3		
9,77		h) Item SC 11.8: 200mm dia. MS puddle pipe piece, flanged one end and the other end plain ended. Position of puddle flange as indicated. 620mm	no	3		
9,78		i) GMS Gooseneck vent pipe for all structures	no	3		
	PSL 4.1	<u>50mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 750mmØ STEEL PIPELINE. Class 10. (dwg - N/3110/RWW/11/005RA)</u>				
9,79		a) Item 1.1: 750mm dia. flange adaptor.	no	10		
9,80		b) Item 1.2: 750mm dia. flanged MS equal tee-piece	no	5		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
9,81		c) Item 1.3: 750 x 500mm dia. flanged MS concentric reducer.	no	5		
9,82		d) Item 1.4: 500mm x 200mm dia. flanged MS concentric reducer.	no	5		
9,83		e) Item 1.5: 50mm Ø MS pipe with one side flanged and the other side a 200mm x 50mm Reducing Flange	no	5		
9,84		f) Item 1.6: 50mm dia. flanged RSV gate valve	no	5		
9,85		g) Item 1.7: 50 mm dia. flanged MS Female Threaded both ends	no	5		
9,86		g) Item 1.8: 50 mm dia. flanged MS Male Threaded both ends	no	5		
9,87		h) Item 1.9: 50mm dia. Double acting airvalve with anti shock mechanism, Flanged	no	5		
9,88		i) GMS Gooseneck vent pipe for all structures	no	5		
	PSL4.1	<u>Irrigation Canal Crossing (dwg - N/3110/M/10/001RA)</u>				
9,89		a) Pipe item number 1.6.1. : 700mm Ø Flange adaptor.	no	2		
9,90		b) Pipe item number 1.6.2. : 700mm Ø Flanged MS 45° bend.	no	4		
9,91		c) Pipe item number 1.6.3. : 700mm Ø Flanged MS pipe. 3315mm long	no	2		
9,92		d) Pipe item number 1.6.4. : 700mm Ø Flanged MS pipe. 2780mm long	no	1		
9,93		e) Pipe item number 1.6.5. : 700mm Ø Flanged MS pipe. 6000mm long	no	1		
9,94		g) Pipe item number 1.6.6. : 700mmØ x 700mmØ Flanged MS tee-piece.	no	1		
9,95		h) Pipe item number 1.6.7. : 700 mm Ø MS blank flange with 150 mm Ø Flanged tee-stub	no	1		
9,96		i) Pipe item number 1.6.8. : 150 mm Ø Flanged RSV gate valve	no	1		
9,97		j) Pipe item number 1.6.9. : 150 mm Ø Double acting SS air valve	no	1		
		<u>Pump Station 1 Pump line stream crossings</u>				
	PSL 4.1	<u>Stream Crossings 1 (dwg - N/3110/W/11/014RA)</u>				
9,98		a) Pipe item number 1.1 : 700mm Ø GMS flange adaptor	no	2		
9,99		b) Pipe item number 1.2 : 700mmØ Flanged GMS pipe piece. 6000mm	no	8		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
9,100	PSL 4.1	<u>Stream Crossings 2 (dwg - N/3110/W/11/015RA)</u>				
		a) Pipe item number 2.1 : 700mm Ø GMS Flange adaptor	no	2		
9,101		b) Pipe item number 2.2 : 700mmØ Flanged GMS pipe piece.	no	5		
	PSL 4.1	<u>Stream Crossings 3 (dwg - N/3110/W/11/016RA)</u>				
9,102		a) Pipe item number 3.1 : 700mm Ø GMS Flange adaptor	no	2		
9,103		b) Pipe item number 3.2 : 700mmØ Flanged GMS pipe piece.	no	5		
	PSL 4.1	<u>Stream Crossings 4 (dwg - N/3110/W/11/017RA)</u>				
9,104		a) Pipe item number 4.1 : 700mm Ø GMS Flange adaptor	no	2		
9,105		b) Pipe item number 4.2 : 700mmØ Flanged GMS pipe piece.	no	5		
	PSL 4.1	<u>HORIZONTAL AND VERTICAL BENDS</u> <u>Fabrication, supply, transport and install and test the following pipe fittings. All items to be approved by Engineer prior to ordering.</u>				
	PSL 4.1	<u>750ND Flanged Long radius steel bends FBE and Drilled SABS 1123, Table 1600/3.</u>				
9,106		a) From 3 degrees to 6 degrees	no	11		
9,107		b) From 6 degrees to 9 degrees	no	15		
9,108		c) From 9 degrees to 12 degrees	no	8		
9,109		d) From 12 degrees to 15 degrees	no	6		
9,110		e) From 15 degrees to 18 degrees	no	8		
9,111		f) From 18 degrees to 21 degrees	no	8		
9,112		g) From 21 degrees to 24 degrees	no	2		
9,113		h) From 24 degrees to 27 degrees	no	1		
9,114		i) From 27 degrees to 30 degrees	no	1		
	PSL 4.1	<u>700ND Flanged Long radius GRP bends FBE and Drilled SABS 1123, Table 2500/3.</u>				
9,115		a) From 3 degrees to 6 degrees	no	26		
9,116		b) From 6 degrees to 9 degrees	no	18		
9,117		c) From 9 degrees to 12 degrees	no	10		
9,118		d) From 12 degrees to 15 degrees	no	10		
9,119		e) From 15 degrees to 18 degrees	no	10		
9,120		f) From 18 degrees to 21 degrees	no	5		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
9,121		g) From 21 degrees to 24 degrees	no	5		
9,122		h) From 24 degrees to 27 degrees	no	5		
9,123		i) From 27 degrees to 30 degrees	no	5		
9,124		j) From 30 degrees to 33 degrees	no	5		
	PSL 4.1	<u>Fabrication, supply, transport and install and test the following MS Flange adaptors. Drilled SABS 1123, table 2500/3</u>				
9,125		a) For 750mm pipe fittings	no	120		
9,126		b) For 700mm pipe fittings	no	198		
	SABS 1200 HA	<u>STRUCTURAL STEELWORK</u>				
9,127	PSHA4.9	Pipe bridge structure over irrigation canal complete (DWG	no	1		
9,128	PSHA4.10	Pipe holding brackets to bridge structure complete (DWG N3110RWW/11/0025RA)	no	6		
TOTAL SCHEDULE 9 CARRIED FORWARD TO SUMMARY						

SCHEDULE 10 : CONSTRUCTION OF PIPELINES

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
10	SABS					
	1200DB	<u>SITE CLEARANCE</u>				
10,1	PSC 4.1	a) Clear and Grub	m	10830		
	SABS					
	1200DB	<u>EXCAVATION</u>				
	PSDB1.1	Excavate in all materials for trenches for 700DN pipes and smaller. Rate to include backfill, compact and dispose of surplus material				
10,2		a) Up to 1.5m deep	m ³	2850		
10,3		b) over 1.5m and up to 2.5m deep	m ³	20000		
10,4		c) over 2.5m and up to 3.5m deep	m ³	1600		
10,5		d) over 3.5m and up to 4.5m deep	m ³	620		
	PSDB1.2	<u>Extra-over item 10.2 to 10.5 for :</u>				
10,6		a) Hard rock excavation	m ³	7500		
10,7	8.3.2c)	Excavate and dispose of unsuitable material from trench bottom (Prove)	m ³	150		
10,8	8.3.3b)	Import backfill material from designated borrow area within the free haul distance of 1.0km.	m ³	150		
10,9	8.3.3.3	Compaction in road reserves	m ³	25000		
	8.3.3.4	<u>Overhaul</u>				
10,10		a) Long overhaul in excess of 2.0km	m ³ .km	15000		
	SABS					
	1200DB	<u>EXISTING SERVICES</u>				
	8.3.5a)	<u>Services that intersect a trench</u>				
10,11		a) Water and sewer pipelines	no	20		
10,12		b) Cables	no	20		
	8.3.5b)	<u>Services that adjoin a trench</u>				
10,13		a) Water and sewer pipelines	m	150		
10,14		b) Cables	m	400		
	SABS					
	1200LB	<u>PIPE BEDDING</u>				
		<u>Selected granular material for bedding cradle from:</u>				
10,15	8.2.1	a) Trench excavation	m ³	12000		
10,16		b) Commercial Sources	m ³	600		
		<u>Provision of selected fill material from:</u>				
10,17	8.2.1	a) Trench excavation	m ³	3200		
10,18	8.2.1	b) Commercial Sources	m ³	160		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
	SABS 1200L	<u>STEEL PIPES</u>				
		<u>Supply, install on concrete pedestals and test the following Mild Steel pipes with fusion bonded epoxy lining and coating</u>				
10,19	8.2.1	b) 750mm Dia. Flanged pipes, Class 25 (6m Lengths)	m	2130		
	SABS 1200L	<u>PRESSURE PIPES</u>				
	8.2.1	<u>Supply, lay, bed and test the following pressure pipes:</u>				
10,20		a) 700mm GRP SN5000 Class 16	m	2200		
10,21		b) 700mm GRP SN5000 Class 20	m	6500		
		<u>Pipeline markers</u>				
10,22		Construct and install concrete pipeline markers as per drawing DWG-N3110/RWW/11/004	no	87		
	SABS 1200L	<u>MISCELLANEOUS</u>				
	8.2.11	<u>Concrete thrust block configuration</u>				
10,23		a) Concrete volume 0.25 - 0.5 m ³	no	80		
10,24		b) Concrete volume 0.5 - 1.0 m ³	no	150		
10,25		c) Concrete volume 1,0 - 1.5 m ³	no	70		
	PSL 4.2	<u>Fabrication, supply, transport and install and test the following VJ couplings.</u>				
10,26		a) For 650mm pipe	no	34		
	PSL 4.3	<u>Reinstate road surface</u>				
		Reinstate road surface as per detail drawing				
10,27		a) Cut and remove existing gravel layer in windrow and stockpile	m ³	120		
10,28		b) Reinstate existing gravel layers to original state (98% MOD AASHTO)	m ³	120		
	SABS 1200L	<u>HDPE PIPES</u>				
	8.2.1	<u>Supply, lay, bed and test the following HDPE pipes:</u>				
10,29		a) 900mm dia. HDPE Pipe PE 100 PN12.5 (Road Crossing Sleeve)	m	120		
	SABS 1200MM	<u>GUARD RAILS</u>				
10,30	8.2.1	<u>Supply Deliver and install galvanized Guard Railings all complete next to canal. Rate to include all labour and equipment for installation.</u>	m	3700		
TOTAL SCHEDULE 10 CARRIED FORWARD TO SUMMARY						

SCHEDULE 11 : MECHANICL EQUIPMENT

ITEM NO.	PAYM. REF.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
11	PSX 1	<u>Pumps</u>				
		<u>Pump Station 1</u>				
	PSX 1.3A	Raw water pumps with a working duty point 1196.6 m³/hr @ 166.5 m. Motors to be compatible with Variable Speed Control. Price provided to include the following:				
11,1		a) Supply, Deliver, Install and Commission	No	2		
11,2		b) Witness testing by design Engineer and Client representative (5x) at manufacturing premises	Sum	1		
11,3		c) Special insurances on items	Sum	1		
		<u>Pump Station 2</u>				
	PSX 1.3B	Raw water pumps with a working duty point 1040m³/hr @ 188 m. Motors to be compatible with Variable Speed Control. Price provided to include the following:				
11,4		a) Supply, Deliver, Install and Commission	No	2		
11,5		b) Witness testing by design Engineer and Client representative (5x) at manufacturing premises	Sum	1		
11,6		c) Special insurances on items	Sum	1		
	PSX2	<u>Gantry Hoist</u>				
		<u>Pump stations</u>				
11,7	PSX2.1	i) Electrically operated crab and hoist rated 4tn capacity	No	2		
	PSX3	<u>FIBRE INSTALLATION</u>				
		<u>HDPE Sleeve</u>				
11,8		i) Installation of 50mm HDPE PE 100 PN 10 sleeve for the installation of fibre optic cable. The rate shall include supply, deliver, excavation(Min depth 0.6m) and backfilling	m	10830		
11,9		ii) Installation of plastic manholes 600mm Diameter for HDPE sleeve. Rate shall cover the supply deliver and installation of the manholes every 200m.	no	54,0		
TOTAL SCHEDULE 11 CARRIED FORWARD TO SUMMARY						

SCHEDULE 12 : TARGETED ENTERPRISE ADMINISTRATION

ITEM NO.	PAYM. REF.		UNIT	QTY	RATE	AMOUNT
		<u>STAKEHOLDER AND COMMUNITY LIAISON</u>				
12,1	PCY13.1a	Cost of liaison and plc support	Prov. Sum	1	R 100 000,00	R 100 000,00
12,2	PCY13.1a	Extra-over item 12.1 for: Contractor's handling fee	%			
		<u>TENDER PROCESS FOR TARGETED ENTERPRISES</u>				
		Contractor's charge for the management and execution of the targeted enterprise procurement process:				
12,3	PCY13.2 (i)	Procurement process for the totality of all tenders concluded for the appointment of CIDB rated targeted enterprise subcontractors.	Sum	1		
		<u>RESPONSIBILITIES OF THE CONTRACTOR TOWARDS TARGETED ENTERPRISES</u>				
12,4	PCY13.3 a	Contractor's establishment, management, management support, assistance, coaching, guidance, mentoring and supervision of targeted enterprises	Month	18		
12,5	PCY13.3 b	Targeted enterprise construction manager	Month	18		
12,6	PCY13.3 c	Targeted enterprise site supervisors	Month	18		
		<u>CONSTRUCTION WORKS BY TARGETED ENTERPRISES</u>				
12,7	PCY 13.4	Payments associated with the construction works carried out by CIDB rated targeted enterprise subcontractors appointed in consultation with the Employer in terms of section PSY	Prov. Sum	1	R 58 000 000,00	R 58 000 000,00
12,8		Extra-over item 12.7 for: Contractor's handling fee	%		R 58 000 000,00	
		<u>TRAINING, COACHING, GUIDANCE, MENTORING AND ASSISTANCE</u>				
		<u>TRAINING COSTS</u>				
12,9	PCY13.5a(iii)	c) Community skills training	Prov. Sum	1		R 300 000,00
12,10	PCY13.5d(iv)	d) Training venue	Prov. Sum	1		R 100 000,00
		<u>STUDENT EXPERIENTIAL TRAINING</u>				
12,11	PCY13.5b(i)	a) Student Stipends	Prov. Sum	1		R 270 000,00
12,12	PCY13.5b(ii)	b) Provision of experiential training	Person Month	20		
12,13		Extra-over item 12.9 to 12.12 for: Contractor's handling fee	%		R 670 000,00	
TOTAL SCHEDULE 12 CARRIED FORWARD TO SUMMARY						

SCHEDULE 13 : MOUTSE WATER SCHEME (3ML/D WTW & 6ML CLEAR WATER RESERVOIR)						
ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
13	SABS 1200G	<u>CONCRETE WORK</u>				
		<u>Concrete</u>				
	8.4.2	Blinding layer in class 15MPa/19mm to a minimum thickness of 50mm underneath structures				
13,1		i) Reservoir	m ²	1257		
	PSG 6.4	No fines concrete (NF19) to a minimum thickness of 80mm underneath structures, complete with mortar seal				
13,2		i) Reservoir	m ²	1257		
	8.4.3	<u>Strength concrete - class 35MPa/19mm</u>				
13,3		i) Reservoir floor slabs and footings	m ³	380		
13,4		ii) Reservoir walls	m ³	290		
13,5		iii) Reservoir roof slabs and columns	m ³	265		
13,6		iv) Valve chamber floor slabs and footings	m ³	6		
	8.4.3	<u>Strength concrete - Class 25 MPa/19mm</u>				
13,7		i) Reservoir apron slab	m ³	40		
13,8		iii) Valve chamber walls	m ³	30		
	8.4.3	<u>Strength concrete - class 15MPa/10mm Mass concrete to:</u>				
13,9		i) All structures (provisional)	m ³	5		
	8.4.3	<u>Screed to:</u>				
13,10		i) All structures	m ³	100		
	SABS 1200G	<u>CONCRETE: Formwork</u>				
	8.2.2	<u>Formwork - Smooth:</u>				
		b) <u>Horizontal plane - elevated to walkways and slabs</u>				
13,11		i) Reservoir	m ²	1060		
	8.2.5	d) <u>Narrow widths (up to 300mm wide) to:</u>				
13,12		i) Reservoir	m	80		
	8.2.2	e) <u>Vertical plane (curved)</u>				
13,13		i) Reservoir walls & footings(curved)	m ²	1615		
13,14		ii) 300 mm diam. columns (reservoir)	m ²	360		
	8.2.5	e) <u>Narrow widths (up to 300mm wide) curved to:</u>				
13,15		i) Reservoir	m	130		
	8.2.6	<u>Box-out holes for pipes</u>				
		<u>Box-out holes, rectangular through concrete 200 to 500 mm thick: for pipework supplied and installed by the Mechanical Contractor :</u>				
		<u>Reservoir: 6ML</u>				
13,16		a) 340 x 340mm box-out for 200mm flanged steel pipe	no	2		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
13,17		b) 530 x 530mm box-out for 300mm flanged steel pipe	no	1		
		<u>REINFORCEMENT</u>				
13,18	8.3.1	Reinforcement, high tensile steel				
		i) Reservoir	t	110		
13,19	8.3.1	Reinforcement, mild steel				
		i) Reservoir	t	11		
13,20	8.3.2	High tensile welded mesh - Ref No 395 (Provisional)				
		i) Reservoir	m²	12		
	8.4.4	<u>Unformed surface finish</u>				
13,21		a) Wood floated finish				
		i) Reservoir	m²	1060		
13,22		b) Steel floated finish				
		i) Reservoir	m²	1060		
		<u>Grouting / casting in of pipes and specials</u>				
	PSG6.2	a) Grouting/casting in of pipe pieces in the following pipe diameters (Refer also PSG2.6.4)				
		<u>Reservoir: 6MI</u>				
13,23		a) 340 x 340mm box-out for 200mm flanged steel pipe	no	2		
13,24		b) 530 x 530mm box-out for 300mm flanged steel pipe	no	1		
	SABS 1200G	<u>MISCELLANEOUS</u>				
	PSG6.3	<u>Watertight testing of structures</u>				
13,25		i) Reservoir	no	1		
	PSG6.1	<u>Subsoil drain (provisional)</u>				
		Subsoil drainage as detailed on drawing				
13,26		i) Reservoir	m	270		
	8.5	<u>Joints</u>				
		<u>Reservoir:</u>				
13,27		Joint type A1 as detailed	m	300		
13,28		Joint type B1 as detailed	m	145		
13,29		Roof joint incl. silicone bearing	m	145		
	PSG 6.5	<u>Items cast into concrete</u>				
		Supply and install the following sleeves (including draw wires) to be cast into concrete				
13,30		i) 110 dia. uPVC telemetry pipe at Reservoir (5950mm long)	no	1		
13,31		ii) 40mm dia. HDPE sleeve in Reservoir roof (500mm long)	no	4		
13,32		iii) 40mm dia. HDPE sleeve in Reservoir wall (5500mm long)	no	4		
		Supply and install the following outlet pipes to be cast into concrete:				
13,33		iv) 50mm diameter uPVC pipe 350mm long for roof drainage	no	50		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
13,34	PSG 6.7	Disinfection of reservoir i) Disinfection and cleaning of reservoir	no	1		
13,35	PSG 6.6	19mm stone on reservoir roof Supply and install 19mm stone on top of reservoir roof: i) Reservoir	m³	250		
13,36	PSG 6.8	Step irons i) Step irons (Calcamite or similar approved)	no	19		
13,37		3MI/D WTW a) Supply, Deliver, Install and Commission of a fully automated 3MI/d water treatment package plant.including operator facility with sanitation infustructure (Septic tank and French Drain)	Sum	1		
13,38	SPEC PC	FENCING Fence PC4.1 Supply and install 1,8m high security fence as detailed on drawing including excavation, concrete work, corrosion protection (galvanising), corner posts, intermediate posts, stays, diamond mesh, barbed wire, etc. Also refer specification Section PC: Fencing i) Reservoir	m	265		
13,39		Gate PC4.1 Supply and install 1,8m high security gate Type 'B' as detailed on dwg including excavation, concrete work, corrosion protection (galvanising), gate posts, struts, diamond mesh, padlock, barbed wire, etc. Also refer specification Section PC: Fencing i) Reservoir	no	1		
13,40	PSL4.1	6ML Raw Water Reservoir Clear water Reservoir (6MI): Inlet Pipework (dwg - N/3110/M/8/001) a) Pipe item number 6.1 : 300mm Ø 90° SS Grade 304 Bend Flanged one end and other end blank	no	1		
13,41		b) Pipe item number 6.2 : 300mm Ø Flanged SS Grade 3.4 pipe with position of puddle flange as indicated. 1219mm	no	1		
13,42		c) Pipe item number 6.3 : 300mm Ø 90' Flanged MS Bend Flanged MS pipe	no	2		
13,43		d) Pipe item number 6.4 : 300mm Ø Flanged MS pipe 2675mm	no	2		
13,44		e) Pipe item number 6.5 : 300mm Ø to 250mm Flanged MS Reducer	no	2		
13,45		f) Pipe item number 6.6 : 250mm Ø MS pipe piece flanged one end & other end suitable for flexible coupling	no	1		
13,46		g) Pipe item number 6.7 : 250mm Ø Flexible coupling	no	1		
13,47		h) Pipe item number 6.8 : 250mm Ø MS pipe piece, flanged one end. 906mm	no	1		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
13,48		i) Pipe item number 6.9 : 250mm Ø Flange adaptor	no	1		
13,49		j) Pipe item number 6.10: 300mm Ø Flanged MS Pipe. 1422mm	no	1		
13,50		k) Pipe item number 6.11 : 300mm Ø Flexible Coupling	no	1		
13,51		l) Pipe item number 6.12 : 300mm Ø MS Pipe Flanged one end with other end suitable for flexible coupling. 264mm	no	1		
13,52		m) Pipe item number 6.13 :250mm Ø Flanged MS pipe flanged one end & other end suitable for flexible coupling 1387mm	no	1		
13,53		n) Pipe item number 6.14 : 250mm Water Meter	no	1		
13,54		o) Pipe item number 6.15 : 250mm Ø Flanged MS Pipe Piece. 762mm	no	1		
13,55		p) Pipe item number 6.16 : 250mm Ø Flange RSV Gate Valve	no	1		
	PSL4.1	<u>Clear Water Reservoir: Scour Pipework (dwg - N/3110/M/8/002)</u>				
13,56		a) Pipe item number 7.1 : 200mm Ø 90° SS Grade 304 Pipe both ends suitable for flexible coupling with puddle flange as indicated. 2430mm	no	1		
13,57		b) Pipe item number 7.2 : 300mm Ø Flexible Coupling	no	1		
13,58		c) Pipe item number 7.3 : 300mm Ø 90° pipe piece, flanged one end & other end suitable for flange adaptor. 855mm	no	1		
13,59		d) Pipe item number 7.4 : 300mm Ø Flanged RSV valve	no	1		
13,60		e) Pipe item number 7.5 : 300mm Ø Flanged MS Equal Tee	no	2		
13,61		f) Pipe item number 7.6 : 300mm Ø Flange Adaptor	no	3		
	PSL4.1	<u>Clear Water Reservoir: overflow Pipework (dwg - N/3110/M/8/002)</u>				
13,62		a) Pipe item number 8.1 :300mm to 200mm Ø Flanged SS grade 304 Bellmouth. 1400mm	no	1		
13,63		b) Pipe item number 8.2 : 300mm Ø 90° Flanged SS Grade 3.4 Bend	no	1		
13,64		c) Pipe item number 8.3 : 300mm Ø Flanged SS Grade 304 Pipe piece with puddle flange in position as indicated. 1367mm	no	1		
13,65		d) Pipe item number 8.4 : 300mm Ø 90° Flanged MS Bend	no	3		
13,66		e) Pipe item number 8.5 : 300mm Ø, Flanged MS Pipe Piece. 3486mm	no	1		
13,67		f) Pipe item number 8.6 : 300mmØ Flanged MS Pipe -piece. 1357mm	no	1		
13,68		g) Pipe item number 8.7 : 300mmØ Flanged MS Pipe -piece. 1030mm	no	1		
13,69		g) Pipe item number 8.8 : 300mmØ Flanged MS Pipe -piece. 1030mm	no	1		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
13,70	PSL4.1	<u>Clear Water Reservoir: Outlet Pipework (dwg - N/3110/M/8/003)</u>				
		a) Pipe item number 9.1 : 300mm Ø SS Grade 304 Pipe both ends suitable for flexible coupling with puddle flange as indicated. 2990mm	no	1		
13,71		b) Pipe item number 9.2 : 300mm Ø Flange adaptor	no	2		
13,72		c) Pipe item number 9.3 : 300mm Ø, RSV gate valve.	no	1		
	PSL4.1	<u>Flow Meter Chamber</u>				
13,73		a) Pipe item number 10.1 : 300mm Magnetic Flow Meter	no	1		
13,74		b) Pipe item number 10.2: 300mm MS Flexible Coupling	no	2		
13,75		c) Pipe item number 10.3 : 300mm Ø, MS Pipe with puddle flange as indicated. 1305mm long	no	1		
13,76		d) Pipe item number 10.4 : 300mm Ø, RSV Gate Valve	no	1		
13,77		e) Pipe item number 10.5 : 300mm Ø, MS Pipe 860mm Long	no	1		
13,78		f) Pipe item number 10.6 : 300mm Ø, Flange Adaptor	no	1		
13,79		g) Pipe item number 10.7 : 300mm Ø, Flanged pipe piece. 760mm long	no	1		
	SABS 1200HA	<u>STRUCTURAL STEELWORK (Sundry Items)</u>				
	PSHA 4.1	<u>Handrailing</u>				
13,80		a) Top mounted handrailing (galvanised) i) Reservoir	m	8		
	PSHA 4.2	<u>Cat ladders</u>				
13,81		<u>Reservoir:</u> Stainless steel cat ladder Type RL1 (inside)	no	1		
13,82		Galvanised cat ladder Type RL2 (outside)	no	1		
	PSHA 4.3	<u>Open grid / chequer plate flooring</u>				
13,83		Supply and install cast-in 25mm Bearer Bars floor grating with 45 x 45 x 5 mm SS angle support complete with fishtail lugs	m ²	2		
	PSHA 4.13	<u>Pipe supports</u>				
13,84		Supply and install as per drawing (DWG N3110/W/8/007) Type D (GMS)	no	3		
13,85		Type D (SS 304)	no	3		
	PSHA 4.5	<u>Reservoir access manholes</u>				
13,86		Access manhole: Supply and install complete 1000x1000mm access manhole cover and frame as detailed (DWG N3110/W/7/100)	no	2		
	PSHA 4.6	<u>Vent pipe</u>				
13,87		Supply and install complete ventilation pipe as detailed (DWG N3110/W/7/100)	no	8		
	PSHA 4.7	<u>Level indicator</u>				
13,88		Supply and install complete level indicator	no	1		
TOTAL SCHEDULE 13 CARRIED FORWARD TO SUMMARY						

LOSKOP REGIONAL BULK WATER SUPPLY SCHEME	
CONSTRUCTION OF THE LOSKOP REGIONAL BULK WATER SUPPLY SCHEME IN THEMBISILE HANI LOCAL MUNICIPALITY, PHASE 1 – WORK PACKAGE 1 (ABSTRACTION WORKS, BULK WATER PIPELINE, CONCRETE RESERVOIR AND PUMP STATIONS)	
DESCRIPTION	AMOUNT
SCHEDULE 1 : PRELIMINARY AND GENERAL	
SCHEDULE 2: SPECIAL PIPE WORKS AND FITTINGS	
SCHEDULE 3 : EARTHWORKS - RESERVOIR & BOOSTER PUMP STATIONS	
SCHEDULE 4 : RESERVOIRS - PIPE FITTINGS	
SCHEDULE 5 : PUMPSTATION CONCRETE WORK	
SCHEDULE 6 : RESERVOIR CONCRETE WORK	
SCHEDULE 7 : PUMPSTATION STEEL WORK ITEMS	
SCHEDULE 8 : RESERVOIR STEEL WORK ITEMS	
SCHEDULE 9 :PUMPSTATION AND RESERVOIR BUILDING WORKS	
SCHEDULE 10 : STRUCTURAL CONCRETE WORKS TO PIPELINE MANHOLES AND CHAMBERS	
SCHEDULE 11 : GABIONS	
SCHEDULE 12: SPECIAL PIPE WORKS AND FITTINGS TO PIPELINE	
SCHEDULE 13 : CONSTRUCTION OF PIPELINES	
SCHEDULE 14 : MECHANICAL EQUIPMENT	
SCHEDULE 15 : TARGETED ENTERPRISE ADMINISTRATION	
SCHEDULE 16 : MOUTSE WATER SCHEME (3ML/D WTW & 6ML CLEAR WATER RESERVOIR)	
SUBTOTAL A	
Allow for 10% Escalation on sub total A	
SUBTOTAL B	
Add 10% for contingencies on subtotal B	
SUBTOTAL C	
Add 15% VAT on subtotal C	
TOTAL AMOUNT CARRIED TO C1.1 FORM OF OFFER AND ACCEPTANCE	