

Item No.	Payment Clause	Description	Unit	Quantity	Rate	Amount
1		SECTION 1: SANS 1200 A: GENERAL				
	8.3	SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS				
1.1	8.3.1	Contractual requirements	Sum	1		
1.2	PSA 8.3.2	Establishment of facilities on the site				
1.2.1	PSA 8.3.2.1	Facilities for engineer				
1.2.1.1	(a)	Nameboard (1 of)	Sum	1		
1.2.2	8.3.2.2	Facilities for contractor				
1.2.2.1	(a)	Offices and storage sheds	Sum	1		
1.2.2.2	(d)	Living accommodation	Sum	1		
1.2.2.3	(e)	Ablution and latrine facilities	Sum	1		
1.2.2.4	(f)	Tools and equipment	Sum	1		
1.2.2.5	(g)	Water supplies, electric power and communications	Sum	1		
1.2.2.6	(h)	Dealing with water	Sum	1		
1.2.2.7	(l)	Access	Sum	1		
1.3	PSA 8.3.3	Other fixed-charge obligations				
1.3.1	PSA 8.3.3.1	Occupational health & safety act	Sum	1		
1.3.2	PSA 8.3.3.2	Environmental management plan	Sum	1		
1.4	8.3.4	Removal of site establishment	Sum	1		
	8.4	SCHEDULED TIME-RELATED ITEMS				
1.5	8.4.1	Contractual requirements	Sum	1		
1.6	PSA 8.4.2	Operation and maintenance of facilities on site, for duration of construction				
1.6.1	PSA 8.4.2.1	Facilities for engineer				
1.6.1.1	(b)	Nameboard (1 of)	Sum	1		
1.6.2	8.4.2.2	Facilities for Contractor				
1.6.2.1	(a)	Offices and storage sheds	Sum	1		
1.6.2.2	(d)	Living accommodation	Sum	1		
1.6.2.3	(c)	Laboratories	Sum	1		
1.6.2.4	(e)	Ablution and latrine facilities	Sum	1		
1.6.2.6	(f)	Tools and equipment	Sum	1		
1.6.2.7	(g)	Water supplies, electric power and communications	Sum	1		
1.6.2.8	(h)	Dealing with water	Sum	1		
		TOTAL CARRIED FORWARD				R -

Item No.	Payment Clause	Description	Unit	Quantity	Rate	Amount
TOTAL BROUGHT FORWARD						R -
1.6.2.9	(l)	Access	Sum	1		
1.7	8.4.3	Supervision for duration of contract	Sum	1		
1.8	8.4.4	Company and head office overhead costs for the duration of the contract	Sum	1		
1.9	PSA 8.4.5	Other time-related obligations				
1.9.1	PSA 8.4.5.1	Occupational health & safety act	Sum	1		
1.9.2	PSA 8.4.5.2	Environmental management plan	Sum	1		
1.9.3	PSA 8.4.5.3	Community liaison officer (CLO)	Prov Sum	1		
1.9.4		Contractors overheads, charges and profit on item 1.9.3 (State % and extend as an amount)	%			
1.10	8.7	Daywork				
1.10.1	(a)	Labour				
1.10.1.1	(i)	Unskilled labour: general labour	hr	10		
1.10.1.2	(ii)	Semi-skilled: pipe layer, section leader, survey assistant	hr	4		
1.10.1.3	(iii)	Skilled: artisan	hr	2		
1.10.1.4	(iv)	Survey including assistants and equipment	hr	2		
1.10.1.5	(v)	Foreman	hr	2		
1.10.2	(b)	Plant				
1.10.2.1	(i)	Compressor complete with all tools including pipes and a minimum air output 7m ³ /min	hr	4		
1.10.2.2	(ii)	Excavator - minimum power of 75 kW (Similar to "Cat 215")	hr	4		
1.10.2.3	(iii)	Motor grader - minimum power of 93 kW (Similar to "Cat 120B")	hr	20		
1.10.2.4	(iv)	Tractor loader backhoe - minimum power of 50 kW (Similar to "Case 580G")	hr	20		
1.10.2.5	(v)	Front end loader - minimum power of 60 kW (Similar to "Cat 920")	hr	20		
1.10.2.6	(vi)	Tiptruck - minimum load mass of 10 ton and minimum load capacity of 6m ³	hr	20		
1.10.2.7	(vii)	Vibrating pedestrian roller - minimum drum width of 0,39 m and minimum power of 3,7 kW	hr	20		
1.10.2.8	(viii)	Vibrating plate compactor - minimum power of 2 kW	hr	20		
TOTAL CARRIED FORWARD						R -

Item No.	Payment Clause	Description	Unit	Quantity	Rate	Amount
TOTAL BROUGHT FORWARD						R -
1.10.2.9	(ix)	Vibro roller - min 12 ton	hr	20		
1.10.2.10	(x)	Water tanker with sprinkler - minimum capacity of 6kl	hr	20		
1.10.2.11	(xii)	Generating set - minimum output power of 10 kW	hr	20		
1.11	PSA 8.8	Temporary works				
1.11.1	PSA 8.8.1	Main access road to works	Sum	1		
1.11.2	PSA 8.8.2	Dealing with Traffic	Sum	1		
	PSA 8.9	MISCELLANEOUS ITEMS				
1.12	PSA 8.9.1	Specialised testing as directed by Engineer	Prov Sum	1		
1.13		Contractors overheads, charges and profit on item 1.14 (State % and extend as an amount)	%			
TOTAL CARRIED FORWARD TO SUMMARY						R -

Item No.	Payment Clause	Description	Unit	Quantity	Rate	Amount
2		SECTION 2: SANS 1200 C: SITE CLEARANCE				
2.1	PSC 8.2.1	Clear and grub:				
2.1.1	(i)	Clear & grub for construction of pipeline for a width of 4 metres wide	m	1160.00		
2.1.2	(ii)	Clear & grub for Construction of Spring Protection	m ²	60.00		
2.1.2	(ii)	Clear & grub for Standpipes and Wash Facilities	m ²	30.00		
2.2	8.2.5	Take down existing fences	m	20.00		
2.30	PSC 8.2.10	Remove topsoil to a nominal depth of 150mm and stockpile:				
2.3.1	(i)	Remove topsoil for construction of pipeline	m ³	0		
2.3.2	(ii)	Remove topsoil for construction of spring protection	m ³	9		
2.3.3	(ii)	Remove topsoil for construction of Standpipes and Wash Facilities	m ³	5		
TOTAL CARRIED FORWARD TO SUMMARY						R -

Item No.	Payment Clause	Description	Unit	Quantity	Rate	Amount
3		SECTION 3: SANS 1200 DA: EARTHWORKS (SMALL WORKS)				
3.1	8.3.1	Excavation:				
3.1.1	(b)	Excavate in all materials and backfill or dispose, as ordered:				
3.1.1.1	(i)	Cut-to-spoil for Spring Protection	m ³	12		
3.1.1.2	(ii)	Cut-to-spoil for Wash Facilities and stock watering facility	m ³	14		
3.1.1.3	(ii)	Cut-to-spoil for Septic Tank	m ³	41		
3.1.1.4	(ii)	Cut-to-spoil for foundations for spring protection	m ³	9		
3.1.1.5	(ii)	Cut-to-spoil for foundations for tank stand	m ³	10		
3.1.2	(c)	Extra-over for:				
3.1.2.1	2)	Hard rock excavation	m ³	13		
3.1.2.2	3)	Boulder excavation, Class A	m ³	-		Rate Only
3.1.2.3	4)	Boulder excavation, Class B	m ³	-		Rate Only
3.2	PSDA 8.3.3	Overhaul				
3.2.1	(b)	Long overhaul (provisional)	m ³ .km	173		
3.3	8.3.4	Importing of materials from commercial sources or from borrow pits				
3.3.1	(i)	Material from commercial sources (G5)	m ³	11		
3.3.2	(ii)	Material from commercial sources (G7)	m ³	11		
3.3.3	(iii)	Material from borrow pits (G5)	m ³	11		
3.3.4	(iv)	Material from borrow pits (G7)	m ³	11		
3.5	8.3.6	Topsoiling	m ²	20		
3.6	8.3.7	Grassing or other vegetation cover	m ²	20		
3.7	PSDA 8.3.9	Backfilling against structures	m ³	15		
TOTAL CARRIED FORWARD TO SUMMARY						R -

Item No.	Payment Clause	Description	Unit	Quantity	Rate	Amount
4		SECTION 4: SANS 1200 DB: EARTHWORKS (PIPE TRENCHES)				
4.1	PSDB 8.3.2	Excavation				
4.1.1	(a)	Excavate in all material for trenches, backfill, compact and dispose of surplus material				
		Over and up to:				
4.1.1.1	(i)	0.600m - 1.000m	m ³	1160		
4.1.1.2	(ii)	1.001m - 1.500m	m ³	50		
4.1.2	(b)	Extra-over for				
4.1.2.1	2)	Hard rock excavation	m ³	188		
4.1.3	(c)	Excavate and dispose of unsuitable material from trench bottom (provisional)	m ³	50		
4.2	8.3.3	Excavation ancillaries				
4.2.1	8.3.3.1	Make up deficiency in backfill material (provisional)				
4.2.1.1	(a)	From other necessary excavations on site	m ³	94		
4.2.1.2	(b)	By importation from designated borrow pits	m ³	94		
4.2.3	8.3.3.4	Overhaul				
4.2.3.1	(b)	Long overhaul (provisional)	m ³ .km	282		
TOTAL CARRIED FORWARD TO SUMMARY						R -

Item No.	Payment Clause	Description	Unit	Quantity	Rate	Amount
5		SECTION 5: SANS 1200 DK: GABIONS AND PITCHING				
5.1	8.2.1	Surface preparation for bedding of gabions				
5.1.1	(a)	Cavities filled with approved excavation material or rock	m ²	18		
5.1.2	(b)	Cavities filled with grade 15 concrete	m ²	2		
5.2	8.2.2	Gabions	m ³	22		
5.3	8.2.3	Extra-over 8.2.2 for packing selected stone for exposed face	m ²	-		
5.4	8.2.4	Geotextile (or geomembrane)	m ²	156		
5.5	8.2.5	Pitching	m ²	10		
TOTAL CARRIED FORWARD TO SUMMARY						R -

Item No.	Payment Clause	Description	Unit	Quantity	Rate	Amount
7		SECTION 7: SANS 1200 G: CONCRETE (STRUCTURAL)				
	8.2	Scheduled formwork items				
7.1	8.2.1	Rough walls below ground to the following:				
7.1.1	(i)	Vertical plane to concealed surfaces of wash facility	m ²	11		
7.1.2	(ii)	Vertical plane to concealed surfaces of stock watering facility	m ²	5		
7.1.3	(iii)	Vertical plane to spring protection	m ²	14		
7.1.4	(iii)	Vertical plane to Tank Stand	m ²	26		
7.2	8.2.2	Smooth formwork to the following:				
7.2.1	(ii)	Horizontal plane to spring protection roof	m ²	24		
7.3	8.2.6	Box out holes/form voids				
7.3.1	b)	Small, other than circular, of area up to and including 0.1m ²	No	6		
7.4	8.3	Scheduled reinforcement items				
7.5.2	8.3.2	High-tensile welded mesh up to Reference 617	m ²	123		
7.5	8.4	Scheduled concrete items				
7.5.1	8.4.1	Prescribed mix concrete				
7.5.1	(i)	75mm Thick no-fines layer in 1:8 cement/stone	m ²	10		
7.5.2	8.4.2	Blinding layer up to 150mm concrete of 15MPa	m ²	5		
7.5.3	8.4.3	Strength concrete: 25MPa/19mm				
7.5.3.1	(i)	Spring Protection base slab and foundations	m ³	22		
7.5.3.2	(ii)	Spring Protection roof slab	m ³	4		
7.5.3.3	(iii)	Wash facility slab	m ³	5		
7.5.3.4	(iv)	Stock watering facility	m ³	1		
7.5.3.5	(v)	Septic tank base slab	m ³	3		
7.5.3.6	(vi)	Septic tank roof slab	m ³	3		
7.5.3.7	(vii)	Tankstand foundations	m ³	-		
7.5.3.8	(vii)	Tankstand slab	m ³	11		
7.6.4	PSG 8.4.3	Brickwalls to :				
7.6.4.1	(i)	Spring Protection - solid walls - 220mm thick	m ²	36		
7.6.4.2	(ii)	Spring Protection - honey comb walls	m ²	12		
7.6.4.3	(iii)	Septic tank walls - 350mm cavity filled with concrete complete	m ²	49		
		TOTAL CARRIED FORWARD				R -

TOTAL BROUGHT FORWARD					R	-
7.6.5	8.4.4	Unformed surface finishes				
7.6.5.1	a)	Wood-floated finish				
7.6.5.1.1	(i)	Top of spring protection slab	m ²	12		
7.6.5.1.2	(ii)	Septic tank roof slab	m ²	14		
7.6.5.1.3	(iii)	Tankstand slab	m ²	68		
7.7		Specials				
7.7.1	a)	Supply and install crushed stone filter material as per specification on drawing	m ³	11		
7.7.2	b)	Jo-jo Tanks - 5000 litres installed with stay wires	No	8		
7.7.3		Stockwatering facility	No	3		
7.7.4		600x600 Cast iron manhole cover and frame for spring protection	No	6		
7.7.5		600x600 Cast iron manhole cover and frame for septic tanks	No	6		
7.7.6		Concrete wash trough	No	9		
TOTAL CARRIED FORWARD TO SUMMARY					R0.00	

Item No.	Payment Clause	Description	Unit	Quantity	Rate	Amount
6		SECTION 6: SANS 1200 L: MEDIUM-PRESSURE PIPELINES				
6.1	PSL 8.2.1	Supply, Lay, and Bed Pipes Complete with Couplings				
6.1.1	(i)	50mm Diameter HDPEPN 10	m	950		
6.1.2	(ii)	110mm diameter sewer pipe from wash troughs to septic tanks	m	30		
6.2	PSL 8.2.2	Extra-over 5.2.1 for supplying, laying, and Bedding of Specials Complete with Couplings				
6.2.1	(a)	Plasson Compression End Caps				
6.2.1.1	(i)	50mm Diameter	No	5		
6.2.3	(c)	Plasson Compression Couplings				
6.2.3.1	(i)	50mm Diameter	No	12		
6.3	PSL 8.2.3	Extra-over Item 8.1 for Supplying, Fixing and Bedding of Valves				
6.3.1	(a)	Air valve chamber fittings				
6.3.1.1	1)	50mm diameter pipe, as per drawing				
6.3.1.1.1	(i)	50mm Ø Plasson Compression Saddle x 25mm	No	6		
6.3.1.1.2	(v)	25mm Ø Nominal bore GMS riser pipe, threaded both ends	No	6		
6.3.1.1.3	(vi)	25mm Ø ball valve, threaded, class 25	No	6		
6.3.1.1.4	(vii)	25mm Ø Class 25 RBX type 3 double acting air valve, threaded, as supplied by Vent-O-Mat or similar approved	No	6		
6.3.2	(b)	Scour valve chamber fittings				
6.3.2.1	1)	50mm diameter pipe				
6.3.2.1.1	(i)	50mm Ø Plasson Compression Equal Tee	No	5		
6.3.2.1.2	(iv)	50mm Ø Brass Gate Valve, Threaded	No	5		
6.3.2.1.3	(v)	50mm Ø Plasson Compression male brass thread	No	10		
		TOTAL CARRIED FORWARD				R -

Item No.	Payment Clause	Description	Unit	Quantity	Rate	Amount
TOTAL BROUGHT FORWARD						R -
6.3.3	(c)	Isolating valve chamber fittings				
6.3.3.1	1)	50mm diameter pipe				
6.3.3.1.3	(iii)	50mm Ø AVK RS gate valve class 25 with hand wheel or similar approved cast onto concrete pedestal	No	12		
6.3.3.1.4	(iv)	50mm Ø Plasson Compression male brass thread	No	24		
6.3.4	(e)	Standtap details connected to pipelines				
6.3.4.1	1)	Off 50mm Ø pipe				
6.3.4.1.1	(i)	50mm to 3/4" Ø Plasson Compression Sadle	No	12		
6.3.4.1.2	(ii)	20mm Ø GMS 90° elbow, male one side female otherside	No	12		
6.3.4.1.3	(iii)	20mm to 1" Ø HDPE male adaptor compression fitting	No	12		
6.3.4.1.4	(iv)	25mm Ø HDPE class 10 pipe	m	36		
6.3.4.1.5	(v)	20mm Ø Type D004 BSP metal seated isolating valve	No	12		
6.3.4.1.6	(vi)	20mm Ø GMS 90° elbow, female both sides	No	12		
6.3.4.1.7	(vii)	20mm Ø x 1500 mm long GMS standtap pipe, male one side female the other side	No	12		
6.3.4.1.8	(viii)	20mm Ø Heavy duty brass bibtap	No	12		
6.4	8.2.13	Valve and Hydrant Chambers, etc				
6.4.1	(i)	Construct air valve chamber complete	No	6		
6.4.2	(ii)	Construct scour valve chamber complete	No	5		
6.4.3	(iii)	Construct isolating valve chamber	No	12		
6.4.2	(v)	Construct standtap to detail including all concrete works (Pipe work measured seperatley) complete as per drawing	No	12		
6.4.6	(vi)	Supply and install pipe markers complete as per drawing S173055-WD-08	No	10		
TOTAL CARRIED FORWARD TO SUMMARY						R -

Item No.	Payment Clause	Description	Unit	Quantity	Rate	Amount
7		SECTION 7: SANS 1200 LB: BEDDING (PIPES)				
7.1	PSLB 8.2.1	Provision of bedding from trench excavation				
7.1.1	(a)	Selected granular material	m ³	57		
7.1.2	(b)	Selected fill material	m ³	228		
7.2	8.2.2	Supply only of bedding by importation				
7.2.1	8.2.2.1	From other necessary excavations				
7.2.1.1	(a)	Selected granular material	m ³	10		
7.2.1.2	(b)	Selected fill material	m ³	20		
TOTAL CARRIED FORWARD TO SUMMARY						R -

Item No.	Payment Clause	Description	Unit	Quantity	Rate	Amount
8		SECTION 8: SANS 1200 LE: STORMWATER DRAINAGE				
8.1	8.2.10	Subsoil drainage, supply and lay as per detail to standtaps				
8.1.1	(i)	Perforated uPVC pipes - 110mm diameter	m	72		
8.1.2	(iv)	Geofabric bidim grade A2 - laid in trench with width of 0.25 metres and depth of 0.25 metres, including 200mm overlap	m ²	90		
8.1.3	(v)	19mm stone laid in sub-soil drainage trench as per detail	m ³	5		
8.2	8.2.10	Subsoil drainage, supply and lay as per detail to wash facility				
8.2.1	(i)	Perforated uPVC pipes - 110mm diameter	m	36		
8.2.2	(iv)	Geofabric bidim grade A2 - laid in trench with width of 0.25 metres and depth of 0.25 metres, including 200mm overlap	m ²	45		
8.2.3	(v)	19mm stone laid in sub-soil drainage trench as per detail	m ³	2		
8.3	8.2.10	Subsoil drainage, supply and lay as per detail to stock watering facility				
8.3.1	(i)	Perforated uPVC pipes - 110mm diameter	m	27		
8.3.2	(iv)	Geofabric bidim grade A2 - laid in trench with width of 0.25 metres and depth of 0.25 metres, including 200mm overlap	m ²	34		
8.3.3	(v)	19mm stone laid in sub-soil drainage trench as per detail	m ³	2		
8.4	8.2.10	Subsoil drainage, supply and lay as per detail to septic tanks discharge				
8.4.1	(i)	Perforated uPVC pipes - 110mm diameter	m	45		
8.4.1	(ii)	Concrete end cap for 110mm diameter subsoil drainage pipe	No.	3		
8.4.2	(iii)	PVC inspection eye for 110mm diameter subsoil drainage pipe	No.	6		
8.4.3	(iv)	Geofabric bidim grade A2 - laid in trench with width of 0.25 metres and depth of 0.25 metres, including 200mm overlap	m ²	56		
8.4.4	(v)	19mm stone laid in sub-soil drainage trench as per detail	m ³	3		
TOTAL CARRIED FORWARD TO SUMMARY						R -

SUMMARY PAGE OF BILL OF QUANTITIES

<u>Section No.</u>	<u>Description</u>	<u>Amount</u>
1	SANS 1200 A: GENERAL	R -
2	SANS 1200 C: SITE CLEARANCE	R -
3	SANS 1200 DA: EARTHWORKS (SMALL WORKS)	R -
4	SANS 1200 DB: EARTHWORKS (PIPE TRENCHES)	R -
4	SANS 1200 DK: GABIONS AND PITCHING	R -
5	SANS 1200 G: CONCRETE (STRUCTURAL)	R -
6	SANS 1200 L: MEDIUM-PRESSURE PIPELINES	R -
7	SANS 1200 LB: BEDDING (PIPES)	R -
8	SANS 1200 LE: STORMWATER DRAINAGE	R -
9	SUB-TOTAL OF BILL OF QUANTITIES	R -
10	Notice to Tenderer's No.01 (If applicable)	R -
11	Notice to Tenderer's No.02 (If applicable)	R -
12	SUB-TOTAL	R -
13	Allow 5% Contingencies to be used as directed	R -
14	Allow 0% for CPA / Escalation	R -
15	NETT TOTAL OF TENDER	R -
16	Allow 15% Value Added Tax (VAT)	R -
17	GROSS TOTAL OF TENDER (CARRIED TO FORM OF OFFER AND ACCEPTANCE)	R -

Maximum time for completion of the works to be completed in ten (10) months.

Tenderer's tendered time for completion months / weeks.

Signature of Tenderer:

Date: