ITEM NO.	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS 1200 A	**SECTION A: GENERAL**				
	8,3	**SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS**				
1	8.3.1	Contractual requirements	Sum	1,0		
2		Political Riot Insurance	Sum	1,0		
	8.3.2	**Establishment of Facilities on Site**				
	8.3.2.1	**Facilities for Engineer**				
3		a) Furnished office as specified per SABS 1200AB Item No. 3.2	Sum	1,0		
4		b) Communication costs (cellular phone)	Sum	1,0		
5		c) Contract Name boards	Sum	2,0		
6		d) Car port	Sum	1,0		
7		e) Survey equipment and assistants (1 No.)	Sum	1,0		
	8.3.2.2	**Facilities for Contractor**				
8		a) Offices and storage sheds	Sum	1,0		
9		b) Workshops	Sum	1,0		
10		c) Laboratories	Sum	1,0		
11		d) Living Accommodation	Sum	1,0		
12		e) Ablution and latrine facilities	Sum	1,0		
13		f) Tools and equipment	Sum	1,0		
14		g) Water supplies, electric power and communications	Sum	1,0		
15		h) Dealing with water on site for the duration of the contract	Sum	1,0		
16		i) Access	Sum	1,0		
17		j) Plant	Sum	1,0		
18	8.3.3	**Other Fixed Charge Obligations**	Sum	1,0		
19	8.3.4	**Removal of Site Establishment on completion**	Sum	1,0		
	8.4	**SCHEDULED TIME RELATED ITEMS**				
20	8.4.1	**Contractual Requirements**	Sum	1,0		
	8.4.2.1	**Facilities for Engineer**				
21		a) Furnished office	Month	12,0		
22		c) Contract Name boards	Sum	2,0		
23		d) Car ports	Sum	1,0		
24		e) Survey assistants	Sum	1,0		
CARRIED FORWARD						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
	BROUGHT FORWARD					
	8.4.2.2	**Facilities for Contractor**				
25		a) Offices and storage sheds	Sum	1,0		
26		b) Workshops	Sum	1,0		
27		c) Laboratories	Sum	1,0		
28		d) Living accommodation	Sum	1,0		
29		e) Ablution and latrine facilities	Sum	1,0		
30		f) Tools and equipment	Sum	1,0		
31		g) Water supplies, electric power and communications	Sum	1,0		
32		h) Dealing with water on site for the duration of the contract	Sum	1,0		
33		i) Access	Sum	1,0		
34		j) Plant	Sum	1,0		
35	8.4.3	**Supervision for Duration of Construction**	Sum	1,0		
36	8.4.4	**Company and Head Office Overhead Cost for the duration of the Contract**	Sum	1,0		
37	8.4.5	**Other Time-Related Obligations**	Sum	1,0		
38		Provision of Security Personnel	Month	12,0		
	8.4.6	**Standing Time** Compensation for delays incurred				
39		a) Plant	Sum/day	5,0		
40		b) Labour	Sum/day	5,0		
41		c) Supervision	Sum/day	5,0		
42		d) Other facilities not covered by (a), (b) and (c)	Sum/day	3,0		
	8.5	**PROVISIONAL SUMS**				
43	8.5.1	Soil and concrete testing by the Engineer	Prov Sum	1,0	100 000,00	100 000,00
44		Overheads charges and profit on item 43 above	%	100000		
45		Allowance for payment of a CLO	Prov Sum	1,0	120 000,00	120 000,00
46		Overheads charges and profit on item 45 above	%	120000		
47		Reimbursement of PSC members for attaendance of site meetings	Prov Sum	1,0	20 000,00	20 000,00
48		Overheads charges and profit on item 47 above	%	20000		
49		Payment to the Municipality/Eskom for the supply, installation and connection of LV and MV electrical cables	Prov Sum	1,0	300 000,00	300 000,00
50		Overheads charges and profit on item 49 above	%	300000		
CARRIED FORWARD						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD					
51		Provision of permanent potable water supply for the WWTW (including connection, storage, distribution piping, valves, fittings, and compliance testing)	Prov Sum	1,0	400 000,00	400 000,00
52		Overheads charges and profit on item 51 above	%	400000		
53		Provision of solar high mast lighting for WWTW site (including installation and commissioning)	Prov Sum	1,0	500 000,00	500 000,00
54		Overheads charges and profit on item 53 above	%	500000		
55		Office furniture, worktops, cupboards, etc for Office and Control room	Prov Sum	1,0	120 000,00	120 000,00
56		Overheads charges and profit on item 55 above	%	120000		
	8,7	**DAY WORK (Provisional)** **NOTE:** (i) All rates to be Gross (Mark up, profits under overheads, etc. and all requirements listed in item 8.7 included) (ii) The Tenderer must state the capacity of the Plant that his rate is based on: (iii) Dayworks will apply in quantities. Sub clause 6.5 of the General Conditions of Contact Limiting increases in quantities and/or any Sub items will not apply in day works (iv) Standing time will be taken as 2/3 of the Rate				
	8.7.1	**Labour**				
57		a) Site Foreman	Hr	20,0		
58		b) Trade Foreman	Hr	20,0		
59		c) Supervisor	Hr	40,0		
60		d) Artisan	Hr	20,0		
61		e) Operator	Hr	30,0		
62		f) Gang Boss	Hr	20,0		
63		g) Leading Hand	Hr	20,0		
64		h) Survey Assistant	Hr	50,0		
65		i) Labourer	Hr	100,0		
	8.7.2	**Plant**				
66		a) Track Excavator minimum 20 tons. State make ..... and model	Hr	20,0		
67		b) Track Excavator minimum 40 tons. State make ..... and model	Hr	40,0		
68		c) Backhoe TLB type min. 60kW. State make ..... and model	Hr	20,0		
69		d) Bulldozer (CAT D7 or similar approved - approx. 145 Kw)	Hr	20,0		
70		e) Grader (CAT 140H or similar approved)	Hr	30,0		
CARRIED FORWARD						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD					
71		f) Rubber tyred front-end loader mi. 90kW. State make……. and model ……..……	Hr	10,0		
72		g) Pedestrian type vibrating roller (Bomag BW65H or similar approved). State make ……..…… and model ……..……	Hr	10,0		
73		h) Compacting vibrating roller - Single Drum Smooth - Self Propelled - min. 12 tons. State make.……...……...…….. and model …….	Hr	10,0		
74		i) Compacting vibrating roller - Single Drum Padded or Grid - Self Propelled - min. 12 tons. State make ……...…...…….. and model ……..……	Hr	10,0		
75		j) Compactor (PAN)	Hr	10,0		
76		k) Water cart (9000 litre)	Hr	20,0		
77		l) Water cart (5000 litre)	Hr	20,0		
78		m) Tip-up truck (10 m³)	Hr	20,0		
79		n) Tip-up truck (6 m³)	Hr	20,0		
80		o) Compressor: min 250 cfm complete with hand tools and attachments. State make……..…….. and model ……..……..……	Hr	10,0		
81		p) Bakkie (1 ton)	Hr	20,0		
82		q) Cement	Bag	1,0		
83		r) Building Sand	m³	1,0		
84		s) Crushed Stone (19mm)	m³	1,0		
85		t) Bricks (ROK's)	No.	1 000,0		
	8,8	**TEMPORARY WORK**				
	8.8.2	**Accommodation of Traffic**				
86		Provide and erect warning signs, flag persons, lights, controls for duration of Contract in crossings of roads	Sum	1,0		
	8.8.4	**Existing Services**				
87		Excavate by hand in soft material to locate existing services	m³	10,0		
	8.8.5	**Cost of survey in terms of Land Survey Act**				
88		a) Locate, record and protect erf boundaries and survey pegs	Sum	1,0		
89		b) Replace pegs recorded as missing at commencement of Contract	No.	5,0		
	8.8.7	**Compliance with OHS Act and Regulations (Including the Construction Regulations 2003)**				
90		(a) Contractor's initial obligation in respect to the Occupational Health and Safety Act and Construction Regulations, including the preparation of a Health & Safety Plan. Include for responsibilities and duties as Main Contractor and dealing with all other contractors	Sum	1,0		

CARRIED FORWARD	

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
91		(b) Contractor's time-related obligations in respect of complying with the Occupational Health and Safety Act and Construction Regulations. Include for responsibilities and duties as Main Contractor and dealing with all other contractors	Month	12,0		
92		(c) Provision of competent Health & Safety Officer and all other competent staff required	Month	12,0		
	8.8.8	**Compliance with Environmental Requirements**				
		NEMA (Act No. 107 of 1995 and ECA No. 73 of 1989)				
93		(a) Compile Method Statement and Implementation and Management Plan required in terms of NEMA and ECA. Include for responsibilities and duties as Main Contractor and dealing with all other contractors	Month	12,0		
94		(b) Contractor's time-related obligations in respect of complying with the NEMA and ECA requirements. Include for responsibilities and duties as Main Contractor and dealing with all other contractors	Month	12,0		
95		(c) Provision and management of competent staff to monitor, manage and oversee environmental responsibilities	Month	12,0		
	8.8.9	**Training**				
96		Training of targeted labour	Sum	1,0		
97		Overheads and Charges on item 96	%			

CARRIED FORWARD TO SUMMARY OF SECTIONS						
ITEM NO	**PAYMENT CLAUSE**	**DESCRIPTION**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	SABS 1200 C	**SECTION C: SITE CLEARANCE**				
	8.2.1	**Clear and grub**				
1		a) Clear site as directed, including spoiling material within the free haul distance of 3km	ha	5,5		
2	8.2.8	Demolish and remove existing brick and concrete structures / buildings and cart rubble to spoil at an approved Municipal Tip Site	Sum	1,0		
3		Remove existing liner and concrete at ponds and cart rubble to spoil at an approved Municipal Tip Site	Sum	1,0		
CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS 1200D	**SECTION D: EARTHWORKS**				
	8.3.1.2	Remove topsoil to nominal depth 150mm, stockpile, and maintain				
1		To stockpile for later re-use	m²	1 000,0		
2		To spoil on site	m²	3 033,0		
	8.3.2	**BULK EXCAVATION**				
		a) CUT TO FILL in all materials within a free haul distance of 1km, and compacted to 95% of MOD AASHTO density				
3		From excavations to construct terrace at Night Soil Discharge and Inlet Channels	m³	100,0		
4		**b) CUT TO STOCKPILE** within a free haul distance of 1km,	m³	100,0		
5		**c) CUT TO SPOIL** within a free haul distance of 1km	m³	150,0		
		d) STOCKPILE TO FILL				
6		**To construct terrace at Night Soil Discharge and Inlet Channels. Fill compacted to 95% MOD AASHTO**	m³	145,0		
7		To construct other embankments and terraces	m³	100,0		
		Extra Over Items 3, 4, 5 and 6 for:				
9	8.3.2 b) 2)	Excavation in hard rock material (Provisional)	m³	100,0		
	8.3.3	**RESTRICTED EXCAVATION**				
	8.3.3a)	**Excavate in all materials and use for backfill or spoil within free haul distance:**				
10		Night Soil Discharge and Inlet Channel	m³	36,0		
11		Other structures, not measured elsewhere	m³	50,0		
	8.3.3 b) 2)	**Extra Over Items 10 to 16 for:**				
12		Hard rock material (Provisional)	m³	50,0		
	8.3.5	**Extra excavation in all materials to provide working space for outside formwork:**				
13		Around structures	m²	250,0		
		Extra Over Backfill against structures (non cohesive free drainage sandy soil) Payment only for volume 1m from outside face of wall of structure				
14		Night Soil Discharge and Inlet Channel	m³	450,0		
15	8.3.9	**Top Soiling areas as directed 100mm thick with material from stockpile**	m²	2 800,0		
CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS 1200DB	**SECTION DB: PIPE TRENCHES**				
	8.3.2 a)	**Excavation in all materials for trenches backfill, compact, and dispose of surplus/unsuitable material, for pipes:** **Pipes up to 400mm diameter for depths:**				
1		Less than 1m deep	m	2 154,0		
2		Exceeding 1.0 m but not exceeding 2.0 m	m	125,0		
3		Exceeding 2.0 m but not exceeding 3.0 m	m	21,0		
4		Exceeding 3.0 m but not exceeding 4.0 m	m	5,0		
		Extra over item 8.3.2 (a) for excavation in:				
5	b)	Hard rock material Provisional)	m³	126,0		
	8.3.5	**Existing Services**				
		a) Services that intersect a trench:				
6		Fences	No.	2,0		
7		Pipelines	No.	2,0		
8		Cables	No.			
		b) Services that adjoin a trench:				
9		Fences	m	30,0		
10		Pipeline	m	150,0		
11		Cables	m			
CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS 1200DE	**SECTION DE: SMALL EARTH DAMS**				
	8.3.3	**Excavation:**				
1	8.3.3a)	**Material unsuitable for embankment: Remove to spoil on site**	m³	100,0		
	8.3.3b)	**Material suitable for embankment from essential excavations for:**				
2		Core trench	m³	10,0		
3		Pipe trenches	m³	10,0		
4		Extra Over for excavations in rock	m³	20,0		
	8.3.4	**Preparation of exposed surfaces for:**				
5		Core trench	m²	100,0		
6		Area to be covered by damm wall	m²	1 280,0		
	8.3.5	**Forming embankment from materials excavated under 8.3.3b) and stockpiles formed from other excavations from site**				
7		Selected impervious material	m³	100,0		
8		Unselected pervious material	m³	50,0		
9		Topsoil	m³	20,0		
10		Gravel capping	m³	20,0		
CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS 1200DM	**SECTION DM: EARTHWORKS (ROADS, SUBGRADE)**				
	8.3.4	**Cut to fill, borrow to fill:**				
1		a) Cut to fill compacted to 93% Mod AASHTO	m³	450,0		
2		b) Borrow to fill from stockpile on site	m³	550,0		
	8.3.3	**TREATMENT OF ROAD-BED**				
3		Road- bed preparation and compaction of material to 93% Mod AASHTO density	m³	450,0		
	8.3.5	**Selected layers:**				
		a) Using material cut from site				
4		150mm Selected subgrade (SSG), G7 selected layer compacted to 95% Mod ASSHTO density	m³	110,0		
		b) Using material from commercial or off site sources located by the Contractor				
5		150mm Selected subgrade (SSG), G5 selected layer compacted to 95% Mod AASHTO density	m³	180,0		
CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS1200G	**SECTION G: CONCRETE (STRUCTURAL)**				
		Mass concrete of 20 MPa (19mm coarse aggregate) in :				
1		Thrust, anchor blocks and pipe supports	m³	10,0		
2		Pipe collars at outlet of Emergency Storage Pond	m³	5,0		
3		Base to precast concrete retaining walls	m³	50,0		
4		Benching to Grit Inlet Channels	m³	25,0		
5		Infill as backing to fix Parshall Flume to channel floor and wall	m³	1,0		
6		Foundations for pre-cast concrete walling	m³	8,0		
7		Pipe encasings at Grid Inlet Channels	m³	3,0		
		Mass concrete of 30 MPa (19mm coarse aggregate) with				
8		Hardstand at Night Soil Discharge terrace	m³	107,0		
	8.4.3	**Strength reinforced concrete of 35 MPa (19 mm coarse aggregate)**				
9		Floor and upstands of drain area, and channel base, walls and support to grid, of Night Soil Bucket Discharge facility	m³	15,0		
10		Bases and stub columns to Canopy Shelter at Night Soil Discharge area	m³	2,5		
11		Base, walls and grid support for Grit Inlet Channels and all chambers and boxes connected to Inlet Channels	m³	43,0		
12		Base and walls of Inlet and Outlet structures to Emergency Storage Dam	m³	1,0		
13		Base, walls and roof of Outlet and Overflow Chamber	m³	8,0		
14		Staircase and landing of Chlorination Building	m³	15,0		
15		Generator building floor, ramp and roof slab	m³	12,0		
	8.1.1 8.2.1	**FORMWORK** **Rough formwork to sides of :**				
16		50mm Thick blinding layer under base and floor and base of channel of night soil drainage slab (Provisional)	m²	3,0		
17		50mm Thick blinding layer under base and floor and base of channel of night soil drainage slab (Provisional)	m²	3,0		
18		50mm Thick blinding layer under base of Grit Inlet channels, chambers and boxes that are part of Inlet Works (Provisional)	m²	5,0		
19		50 mm Thick blinding layer under inlet and outlets to Emergency Storage Dam, Outlet and Overflow Chamber (Provisional)	m²	1,0		
20		50 mm Thick blinding layer under bases of Canopy Shelter at Grid Inlet Works (Provisional)	m²	1,0		
21		50 mm Thick blinding layer under Division Box (Provisional)	m²	0,7		
22		50 mm Thick blinding layer under Inlet and Outlet structures at Pond (Provisional)	m²	10,0		
23		Pipe encasing at Grid Inlet Channels	m²	1,0		
CARRIED FORWARD						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD					
	8.2.2	**Smooth formwork to sides of :**				
24		Perimeter upstand of Night Soil Drain Slab	m²	8,0		
25		Wall bases (floors), floor upstands, and walls of Night Soil channel and Grid Inlet Channel, and chambers and boxes linked to the Grid Inlet Channel	m²	421,0		
26		Cover slab supporting grid at Night Soil Channel and at Grid Channel	m²	3,0		
27		Bases and stub columns of Canopy Shelter at Night Soil Discchare area	m²	11,0		
28		Floor base of Inlet Channel and chambers and boxes connected to Inlet Channel	m²	30,0		
29		Walls and floor upstands of Inlet Channel and chambers and boxes connected to Inlet Channel	m²	25,0		
30		Sides of Grid Support (drainage platform) of Inlet Channels	m²	15,0		
31		Base, walls and division wall of Outlet and Overflow Chamber	m²	8,0		
32		Base, and floor upstand of Chlorination Channels, including side of cover slab as building building (Steel or GRP formwork only)	m²	4,0		
33		Construction joint in 250mm thick floor of Chlorination Channels	m²	364,0		
34		Walls of Chlorination Channels, including side of cover slab as building building (Steel or GRP formwork only)	m²	13,0		
36		Construction joint in 250mm thick wall of Chlorination Channels	m²	13,0		
37		45 degree chamfer 125mm high to top of weir wall at Chlorination tank	m²	6,0		
38		200mm wide construction joint in hardstand at Night Soil Discharge	m²	5,0		
	8.2.2	**Smooth formwork to horizontal soffits of :**				
39		Grid supports at Night Soil Discharge and at Inlet Channels	m²	5,0		
		Smooth formwork to inclined soffits of :				
40		Staircases at Control Room and Gaurdhouse	m²	14,0		
	8.2.2	**Smooth formwork to form :**				
41		30mm wide x 1.285m high slot through 200mm thick wall of flow meter chamber at Inlet Channels	No	1,0		
42		250mm x 2500mm openings in 250mm thick wall at Chlorination Channels	No	8,0		
43		30mm diameter openings in Grid Support slab at Night Soil Discharge	No	6,0		
44		20mm diameter openings in Grid Support slab at Inlet Channels	No	6,0		
CARRIED FORWARD						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD					
	8.1.2	**REINFORCEMENT**				
	8.3.1	**Mild steel rod reinforcement**				
45		Not exceeding 12 mm diameter	t	1,0		
46		Exceeding 12 mm diameter	t	2,5		
	8.3.1	**High tensile rod reinforcement**				
47		Not exceeding 12 mm diameter	t	50,0		
48		Exceeding 12 mm diameter	t	60,0		
49		High tensile welded mesh reinforcement Ref 617	m²	55,0		
	8.4.4	**CONCRETE SURFACE FINISHES** **Wood floated finish to top of:**				
50		150mm thick surface drainage platform at Night Soil Discharge	m²	28,0		
51		200mm wide perimeter upstand around drainage platform at Night Soil Discharge	m²	5,0		
52		400 mm bases for Canopy Shelter at Night Soil Discharge	m²	1,0		
53		Top of surface of outer edge of 250mm thick edge of base of Chlorination Channels	m²	8,0		
54		Top of surface of 250mm floor of Chlorination Channels	m²	55,0		
55		Top of surface of outer edge of staircase base of Chlorination Channels	m²	1,0		
56		Top of floor and staircase landing of Chlorination Building	m²	2,0		
57		250mm thick base of Night Soil Discharge channel	m²	7,8		
58		200mm wide wall of Night Discharge Channel	m²	4,0		
59		250mm thick base of Grid Inlet Channels and all chambers and baxes	m²	80,0		
60		200mm wide top of walls of channels and all chambers and boxes	m²	2,0		
61		Top of Grid Support (drainage platform) of Inlet Channels	m²	2,0		
62		400 x 400mm stub columns for Canopy Shelter at Night Soil Discharge	m²	0,8		
63		200mm thick walls of Outlet/Overflow Chamber	m²	1,8		
64		150mm wide circular overflow wall, inclusive of the 45 degree chamfered edge	m²	10,0		
		1 : 3 Cement and sand screed :				
65		20 mm thick (maximum) to inclined benching surfaces in Grid Inlet Channels and Central Sludge Collection Chamber of Sedimentation Tanks and finished to a smooth even surface	m²	101,0		
66		220 to 20mm thick in Overflow Channel of Sedimentation Tank and finished to a smooth even surface	m²	50,0		
CARRIED FORWARD						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD					
	8,5	**JOINTS** (Formwork, surface finishes, curing, sealant grooves, waterstops and sealants elsewhere measured unless specifically noted) **Construction joints in :** (Rates for construction joints to include all costs for formwork, stopends, joint preparation for following casts and "Vandex Super" application unless specifically noted. Extra reinforcement at construction joints elsewhere measured) **Inlet Channels**				
67		250 mm Thick floor and 200mm wide walls of Inlet Channels	m	6,0		
		Concrete Hardstand on terrace ta Night Soil Discharge and Inlet Works				
68		200mm thick concrete hardstand	m	40,0		
		Concrete Hardstand on terrace ta Night Soil Discharge and Inlet Works				
69		Saw cut joints	m	105,0		
		"Vandex Cemelast waterproofing slurry" or similar approved across construction joints :				
70		Wall sections	m	380,0		
		170mm wide "Vandex construction joint tape" or similar approved to cover construction joints				
71		Wall sections	m	380,0		
		SEALANT GROOVES **Alternative cutting of sealant grooves for the installation of two-part polysulphide sealant in place of specified bandage seals** **15 x 20 mm Sealant groove to joints in** **Inlet Channels**				
72		250mm floor base and 200mm wide walls	m	18		Rate Only
		Concrete Hardstand on terrace ta Night Soil Discharge and Inlet Works				
73		200mm thick concrete hardstand	m	40,0		
		Concrete Hardstand on terrace ta Night Soil Discharge and Inlet Works				
74		Saw cut joints	m	185,0		
		SUNDRIES				
75		Fibre glass Parshall Flume, manufacture to dimensions shown on drawing	No	1,0		
76		Stainless steel frame for Stop Logs 500mm wide for opening size 500mm wide x 1.75m high, including all fixings.	No	5,0		
77		Aluminium frame for Stop Log 500mm wide 300mm high. Each Stop Log must have a flexible seal at to top and bottom end to allow stacked Logs to give tight grip.	No	24,0		
CARRIED FORWARD						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD					
		Two layers of 3 ply Malthoid sliding strip				
78		On top of 250 wide concrete wall	m	46,0		
79		On top of 230mm brick wall	m	20,0		
80		Cast 400 mm diameter pipe into 200mm thick wall of Night Soil Discharge Channel surface bed	No	2,0		
81		Cast 400 mm diameter pipes into 200mm thick wall of Inlet Channel	No	2,0		
82		Cast 300 mm diameter pipe into 200mm thick wall of Inlet Channel	No	1,0		
83		Cast 150 mm diameter pipes into 200mm thick wall of Inlet Channel	No	2,0		
84		Cast 100 mm diameter pipe into 200mm thick wall of Inlet Channels	No	4,0		
85		Cast 100 mm diameter pipe into encasings under Inlet Channels	No	2,0		
86		Cast 300 mm diameter pipe into sloped wall of Inlet to Emergency Storage Dam	No	1,0		
87		Cast 300 mm diameter pipe into sloped wall of Outlet to Emergency Storage Dam	No	1,0		
88		Cast 300 mm diameter pipe into 200mm thick wall of Outlet and Overflow Chmaber	No	3,0		
89		Cast 250 mm diameter pipe into 250mm thick wall of Chlorination Channels	No	2,0		
90		Cast 300 mm diameter pipe into wall of Pond Outlet	No	1,0		
		Precast concrete (Terraforce or similar approved) Retaining Wall (concrete to foundations measured separately). Wall constructed in steps as shown on Drawing				
91		400 x 300 x 225mm precast concrete blocks	m²	220,0		
92		Grouted stone pitching (as per Clause 5.3.3 of SABS1200DK)	m²	400,0		
TOTAL CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS1200H	**SECTION H: STRUCTURAL STEELWORK**				
		STAINLESS STEEL **Supply, fabricate and install the following items complete, including protective treatment and all necessary stainless steel fasteners :**				
1		Stainless steel sluice gate only for 1.0m wide channel, including all fixinings as per Detail 1 on Drawing S0323-01-HWST-001-T-00	No	1,0		
2		Stainless steel frame only for sluice gate for 1.0m wide channel, including all fixings as per Detail 1 on Drawing S0323-01-HWST-001-R-00	No	2,0		
3		Stainless steel sluice gate only for 1.0m wide channel, including all fixinings as per Detail 2 on Drawing S0323-01-HWST-001-T-00	No	1,0		
4		Stainless steel frame only for sluice gate for 1.0m wide channel, including all fixings as per Detail 2 on Drawing S0323-01-HWST-001-T-00	No	2,0		
5		Stainless steel sluice gate only for 1.0m wide channel, including all fixings as per Detail 3 on Drawing S0323-01-HWST-001-T-00	No	1,0		
6		Stainless steel frame only for sluice gate for 0.3m wide and 1.0m deep channel, including all fixings as per Detail 3 on Drawing S0323-01-HWST-001-T-00	No	2,0		
		HOT DIP GALVANISED MILD STEEL				
7		Grid for night Soil Discharge Channel. Complete installation to be hot dipped galvanised. Include stainless steel fixing bolts, all as shown on Drawing No S0323-01-HWST-002-T-00	No	1		
8		Grid for Inlet Channels. Complete installation to be hot dipped galvanised. Include stainless steel fixing bolts, all as shown on Drawing No 8358AU-ST100	No	1		
9		Drainage Grid for night Soil discharge Channels, including angle iron frame, all as shown on Drawing No S0323-01-HWST-002-T-00, Complete installation to be hot dipped galvanised	No	1		
10		**Canopy at Night Soil Discharge Platform:** Complete as detailed on Drawing S0323-01-HWST-001-T-00. Concrete measured separately. Include for all fixings and finishes	Item	1		
CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS 1200L	**SECTION L: MEDIUM PRESSURE PIPELINES**				
	8.2.1 **8.2.1.1**	**Supply, lay, bed and test Pipes complete with couplings** **uPVC Pipelines to SABS/ISO 966-1:**				
1		200mm diameter Class 12 uPVC Pumping Main from Raw Sewage Pump Station	m	50,0		
	8.2.2	**Extra Over 8.2.1 for the Supply, Fix and Bed of uPVC Pressure Pipe Specials, complete with couplings**				
2		200mm X 90 degree bend	No.	1,0		
3		200 x 200 diameter Tee	No	1,0		
		HDPE Pipelines: Type PE 60 Class 10 to SABS/ISO 4427:				
4		32mm diameter	m	20,0		
5		50mm diameter	m	20,0		
		Valves				
	8.2.3	**Extra Over 8.2.1 for the Supplying, Fixing and Bedding of Valves**				
6		315mm Dia. Knife Gate Valve (Orbinox or Similar with Stainless Steel Blade)	No.	1,0		
7		160mm Dia. Knife Gate Valve (Orbinox or Similar with Stainless Steel Blade)	No.	1,0		
8	8.2.11	Anchor / Thrust Blocks and Pedestals: Cost to cover concrete and formwork	m^3	4,0		
		PIPE SPECIALS Supply, lay, joint and maintain pipework specials and fittings including bedding, complete with couplings, bolts, nuts, washers, gaskets and any other items required by the specifications or necessary in the interests of good workmanship. Allow for corrosion protection as specified in the Project Specification and shown on the drawings.				
		STAND PIPES				
9		Supply and erect stand pipe as per detail on Drg. No	No	2,0		
CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS1200LB	**SECTION LB: BEDDING (PIPES)**				
	8.2.1	**Provision of Bedding from Trench Excavations**				
1	8.2.1 (a)	Selected granular material	m^3	100		Rate Only
2	8.2.1 (b)	Selected fill material	m^3	300		Rate Only
	8.2.2.3	**Provision of Bedding from Commercial Sources**				
3	8.2.2.3 (a)	Selected granular material	m^3	15		
4	8.2.2.3 (b)	Selected fill material	m^3	15		
5	8.2.3	Concrete bedding (20 MPa/19 mm)	m^3	10		Rate Only
CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS 1200LD	**SECTION LD: SEWERS**				
	8.2.1	**Supply, lay, bed and test sewer pipes complete with couplings**				
	8.2.1.1	**uPVC Pipelines**				
1		110mm diameter Class 34	m	20,0		
	8.2.3	**Sewer Manholes**				
		900mm diameter precast concrete manholes complete as shown on the drawings, without cover, for depths:				
2		0.5m - 1.0m	No.	1,0		
3		1.0 m - 2.0 m	No.	0,0		
		900mm diameter precast concrete manholes complete as shown on the drawings, with cover, for depths:				
4		0.5m - 1.0m	No.	5,0		
5		1.0 m - 2.0 m	No.	0,0		
6		2.0 m - 3.0 m	No	0,0		
7		3.0 m - 4.0 m	No	0,0		
		PIPE SPECIALS				
		Supply, lay, joint and maintain pipework specials and fittings including bedding, complete with couplings, bolts, nuts, washers, gaskets and any other items required by the specifications or necessary in the interests of good workmanship. Allow for corrosion protection as specified in the Project Specification and shown on the drawings.				
		Grit Channels:(Drg. No S0323-01-HWST-001-T-00)				
8		Pipe Tag No GRC01	No	1,0		
9		Pipe Tag No GRC02	No	1,0		
10		Pipe Tag No GRC03	No	2,0		
11		Pipe Tag No GRC04	No	1,0		
12		Pipe Tag No GRC05	No	2,0		
13		Pipe Tag No GRC06	No	2,0		
14		Pipe Tag No GRC07	No	1,0		
15		Pipe Tag No GRC08	No	1,0		
		Night Soil Disposal Facility: (Drg No S0323-01-HWST-001-T-00)				
16		Pipe Tag No DF01	No	2,0		
	8.2.1	**Supply, lay and bed "Cordrain" uPVC flexible slotted drainage pipes with socket "push-fit" type joints at bends and junction pieces in no-fines concrete collector drains:**				
17		160 mm Diam	m	0,0		
18		110 mm Diam	m	2 298,0		
	8.2.2	**Extra over 8.2.1 for the supply, lay and bedding of specials complete with couplings:**				
		uPVC:				
		Reducers:				
19		160 x 110 mm Diam	No	0		
		Bends:				
20		110 mm Diam x 90 degree	No	16		
CARRIED FORWARD						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD					
		Tees:				
21		160 mm x 160 mm Diam	No	0		
22		110 mm x 110 mm Diam	No	6		
		Y Junction:				
23		110 mm x 110 mm Diam	No	36		
		Crosses:				
24		110 mm x 110 mm Diam	No	0		
		End Caps:				
25		110 mm x 110 mm Diam	No	36		
CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS 1200LE	**SECTION LE: STORMWATER DRAINAGE**				
	8.2.1	**Supply and lay concrete pipe culverts on Class C bedding, Class 50D, for:**				
1		375mm diameter	m	12,0		
2		450mm diameter	m	0,0		
	8.2.8	**Supply and install manholes, catchpits and the like**				
		Type A Drainage Manholes as per detail for Stormwater Manholes shown on Drawing No S0323-01-LDLP-001-R-00, to depths of				
3		upto 1,0m	No	3,0		
4		deeper than 1,0m and upto 1,5m	No	1,0		
5		deeper than 1,5m and upto 2,0m	No	1,0		
6		deeper than 2,0m and upto 2,5m	No	0,0		
7		deeper than 2,5m and upto 3,0m	No	0,0		
		Type B Drainage Manholes as per detail for Stormwater Manholes shown on Drawing No S0323-01-LDLP-001-R-00, to depths of				
8		upto 1,0m	No	3,0		
9		deeper than 1,0m and upto 1,5m	No	2,0		
10		deeper than 1,5m and upto 2,0m	No	1,0		
		Headwalls as per detail for brick headwalls for stormwater pipes shown on Drawing No, for pipe sizes:				
11		110mm diameter stormwater pipe	No	5,0		
12		450mm diameter stormwater pipe	No	0,0		
CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS1200MJ	**SECTION MJ: SEGMENTED PAVING**				
	8.2.1	**Provision of Edge Restraint**				
1		75mm x 150mm in straights. Cost to include for 100mm thick concrete bedding and 75mm concrete backing	m	145,0		
	8.2.2	**Construction of paving complete**				
2		80mm Type SA Class 25 interlocking concrete pavers. Include for 20mm sand bedding. Lay in herringbone pattern	m²	270,0		
	8.2.3	**Cutting units to fit Edge Restraints**				
3		Straight	m	70,0		
4		Circular	m	120,0		
CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SABS1200MK	**SECTION MK: KERBING AND CHANNELLING**				
		Concrete kerbing				
		Precast barrier kerb, 150 x 225mm high. Include for 150mm concrete bedding and 150mm concrete backing				
1		Straight	m	165,0		
2		Curved	m	65,0		
CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	PPB	**SECTION : BUILDING WORK**				
		OFFICE/ADMIN AND CONTROL BUILDING INCORPORATING THE GAURDHOUSE				
		EXCAVATIONS				
		Excavation in earth not exceeding 2m deep:				
1		Foundations	m³	25,0		
2		Reduced levels under floors	m³	6,0		
		Extra over trench excavations in earth for excavation in:				
3		Hard rock	m³	0,5		
		Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk)				
4		Off site to a dumping site to be found by the Contractor	m³	15,0		
		FILLING				
		Filling with selected earth filling from the excavations on site and compacted to 95% Mod. AASHTO density.				
5		Back filling to trenches	m³	9,0		
		Filling with approved G5 material in accordance with SABS 1200DM supplied by the Contractor and compacted to 95% Mod. AASHTO density				
6		Under floors	m³	11,0		
		TESTS				
		Prescribed density tests on filling:				
7		Modified AASHTO Density tests	No	3,0		
		UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
		15Mpa/19mm Concrete:				
8		Strip footings	m³	12,0		
		30Mpa/19mm Concrete:				
9		Surface beds cast in panels on waterproofing	m³	4,0		
		TEST CUBES				
10		Making and testing of three 150x150x150mm concrete strength test cubes for 7day and 28 day results for each batch of concrete	No	7,0		
		SOUND INSULATION TO CONCRETE FLOORS				
11		250 micron USB Green/Black DPC membrane laid with minimium 150mm overlaps	m²	70,0		
		Finishing top surface of concrete smooth with a steel trowel				
12		Surface beds	m²	100,0		
		MASONARY				
		BRICKWORK IN FOUNDATIONS				
		Brickwork of NFX bricks in class II mortar:				
13		220mm Walls	m²	53,0		
14		One brick walls	m²	11,0		
CARRIED FORWARD						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	
	BROUGHT FORWARD					
		BRICKWORK IN SUPERSTRUCTURE				
		Brickwork of NFP bricks in class ll mortar:				
15		220mm Walls	m²	305,0		
16		One brick walls	m²	65,0		
17		Brick- on- edge cill 220mm wide set sloping and slightly projecting	m	35,0		
		BRICKWORK SUNDRIES				
18		Leave or form cable duct opening 200x200mm in 270mm hollow walls	No	3,0		
19		Extra over for fair face pointed with flush horizontal and vertical joints	m²	77,0		
20		Smooth plaster of 1:3 cement and sand mixture on brick walls	m²	305,0		
		Brick work reinforcement				
21		230mm Wide reinforcement built in horizontally in foundations	m	55,0		
22		230mm Wide reinforcement built in horizontally.	m	65,0		
		Prestressed fabricated concrete lintels:				
23		100x70mm Lintels in lengths not exceeding 3m	m	15,0		
24		150x70mm Lintels in lenghts not exceeding 3m	m	15,0		
		PREFABRICATED ROOF TRUSSES,ETC.				
25		**Plated nailed timber roof trusses:** Allow all costs roof trusses, purlins and wall plates designed by specialists to Engineer's approval, supplied and delivered to site, including all necessary clips, brackets etc. and allow for hoisting and fixing in position.	Item		Sum	
		ROOF COVERING				
26		0.6mm Corrugated iron roof sheets	Item		Sum	
		FACIA BOARDS				
27		Supply and install 10x225mm Nutec Facia bBards	m	22,0		
		BARGE BOARDS				
28		Supply and install 200x80mm Nutec Barge Boards	m	16,0		
		NAILED UP CEILINGS				
29		38x38mm Sawn softwood brandering at 400mm centers nailed to underside of rafters in one direction only	m	316,0		
30		6,4mm Rhinoboard gypsum pleastered ceiling fixed print side up with 38mm galvanised serrated nails at 150mm centers with pvc cover strips.	m²	150,0		
		CORNICES				
31		75mm Coved cornices	m	44,0		
		SKIRTINGS				
32		76mm Pine skirtings fixed to wall with steel nails.	m	50,0		
		FRAMED WROUGHT HARDWOOD DOORS				
33		44mm Thick framed, ledged and battened hardwood door, size 813x2032mm high complete with hinges and 3 lever door locks.	No	3,0		
CARRIED FORWARD						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BROUGHT FORWARD					
		SOLID CORE FLUSH DOORS.				
34		44mm Solid flush doors with 3.2mm standard hardboard covering on both sides,815x2032 high complete with hinges and 2 lever door locks.	No	5,0		
		PAINTWORK				
		General: All work to be executed in strict accordance with the specifications of the manufacturer. Primers and first coats may be thinned in accordance with the paint specifications. All surfaces must be sound, clean and have a moister content of less than 8% for walls.				
		ON FLOATED PLASTER				
		Prepare surfaces and apply one coat Plaster Primer and two coats coats Acrylic paint:				
35		On interior walls.	m²	305,0		
36		On interior ceilings.	m²	150,0		
		ON METAL				
		Prepare and degrease galvanized surfaces and apply one coat Iron Primer and two coats Polyurethane Enamel paint on galvanised steel surfaces.:				
37		On frames and windows.	m²	16,0		
		Prepare surfaces and apply three coats Plascon Woodcare Clear pluss high gloss varnish:				
38		On exterior doors and frames	m²	10,0		
		Prepare surfaces and apply one coat Plascon Wood primer and two coats Plascon Velvaglo Polyurethane enamel Paint:				
39		On interior doors, frames and skirtings.	m²	20,0		
		PLUMBING				
40		Supply and install all plumbing fittings(pipes, taps, toilets, hand basins etc) to ablutions as per drawing (S0323-01-TD-004-T-00 and S0323-01-TD-003-T-00).	Item		Sum	
		WATERPROOFING				
41		Waterproof shower walls and floor with Cemflex 326 or similar approved product.	m²	7,5		
		TILING				
		White glazed ceramic wall tiles fixed with Tylon cement based wall adhesive and flush pointed with Tylon grout.				
42		On walls including all cuttings.	m²	8,5		
43		On shower floor including cuttings to form mosaic pattern.	m²	4,0		
		FLOOR COVERINGS				
44		Vinyl floor tiles including pavelite screed to concrete floor.	m²	40,0		
TOTAL CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION P: FENCING				
		CLEAR FENCE LINE				
1	PA.8.8.1	Clear fence line for erection of new fencing	m	600		
2		a) New 2.4m high see-through steel fence complete with spikes and under-dig protection (Refer to Drawing S0323-01-TD-003-T-00 for details)	m	1 045,0		
3		b) New 2.1m high see-through steel gate, with tamper proof lock and spiked top, complete as shown in the drawing S0323-01-TD-003-T-00 (1 No.)	No	1,0		
4		Supply and installation of solar-powered LED security lights mounted on fence posts, including all brackets and commissioning (spaced every 25 meters)	No	25,0		

TOTAL CARRIED FORWARD TO SUMMARY OF SECTIONS	

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		PW : WATERPROOFING (PARTICULAR SPECIFICATION PW)				
		WATERSTOPS				
		Construction Joints in Sludge Beds Underflow Return Pump				
1		Continuous vertically placed 250 mm ABE Durajoint PVC Dumbbell waterstop (sole approved waterstop) in construction joint in kicker of well of Night Soil Discharge Facility	m	6,0		
2		Infill as backing to fix Parshall Flume to channel floor and wall	m	20,0		
3		Continuous vertically placed 150 mm ABE Durajoint PVC Cenre Bulb waterstop (sole approved waterstop) in contraction joint in floor base and walls of Inlet Channels	m	12,0		
		Allow for all costs connected with preparing for and carrying out the procedures described in the Project Specification for the water testing complete :				
		WATER TEST				
4		Water test: Night Soil Dischage Facility	No	2		
5		Water test: Chlorination Channels	No	1		
6		Water test: Inlet Channels	No	1		
TOTAL CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO.	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		PX : SEALANTS (PARTICULAR SPECIFICATION PX)				
		BANDAGE SEALS				
		Sikadur-Combiflex or equal and approved flexible bandage seals with minimum 150 mm geomembrane bandage width x 2 mm minimum thickness installed complete at contraction joints including all preparation, sandblasting, polysulphide filling, bondbreaking tape and protection at :				
		Inlet Channels				
1		250mm floor base and 200mm wide walls	m	6		
		SEALANTS				
		Alternative installation of two-part polysulphide sealant with two-part primer in 15 x 20 mm sealant grooves to contraction joints, including preparation of sealant grooves and placing of bondbreaking tape in :				
		Inlet Channels				
2		250mm floor base and 200mm wide walls	m	18		Rate Only
TOTAL CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO.	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	PAA	**GEOMEMBRANE SHEETING**				
		Sheeting and lining to Oxidation Ponds:				
		b) Supply, install and test BGCL - Bentonite Geosynthetic Clay Liner or approved equivalent as:				
1		i) Primary liner to horizontal and and sloping surfaces of dam including fixing into anchor trench.	m²	25845		
TOTAL CARRIED FORWARD TO SUMMARY OF SECTIONS						

ITEM NO.	PAYMENT CLAUSE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	PAB	**NON-WOVEN PROTECTION GEOTEXTILES**				
		Geotextile placing to the dams:				
		a) Supply, install and stitch Bidim A6 or approved equivalent as:				
1		i) Protection layer around 19 mm stone in the leakage detection sump.	m²	2020		
2		ii) Protection layer around 19 mm stone in the subsurface drainage system	m²	2695		
3		iii) Protection layer below the Geosynthetic Clay Liner	m²	21859		
TOTAL CARRIED FORWARD TO SUMMARY OF SECTIONS						

SUMMARY OF BILL OF QUANTITIES		
Section	**Description**	**Amount**
A	**General**	
C	**Site Clearance**	
D	**Earthworks**	
DB	**Pipe Trenches**	
DE	**Small Earth Dams**	
DM	**Earthworks: (Roads, Subgrade)**	
G	**Concrete (Structural)**	
H	**Structural Steel Work**	
L	**Medium Pressure Pipelines**	
LB	**Bedding**	
LD	**Sewers**	
LE	**Storm Water Drainage**	
MJ	**Segmented Paving**	
MK	**Kerbing and Channeling**	
PPB	**Buildings**	
P	**Fencing**	
PW	**Waterproofing**	
PX	**Sealants**	
PAA	**Geomembrane Sheeting**	
PAB	**Non-Woven Protection Geotextiles**	
SUB TOTAL		
Add: 10% Contingencies		
SUB TOTAL		
Add: 15% VAT		
TOTAL		