Part 1: P&G Civil

1. PRELIMANARY & GENERAL

FIXED P&G RELATED ITEMS

ITEM No.	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200 A	**SECTION A: GENERAL** **SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS** As specified in SANS 1200 A and in the project specifications				
	PSA 8.3	Fixed charges and value related items:				
1,01	PSA 8.3.1	Fixed preliminary and general charges	Sum	1		
1,02	PSA 8.3.2	Value-related preliminary and general charges	Sum	1		
	PSA 8.3.5	Cost of survey in terms of Land Survey Act:				
1,03		Locate, record, protect and reinstate pegs	Sum	1		
	PSA 8.4	Scheduled time related items:				
1,04	PSA 8.4.1	Time-related preliminary and general charges	Sum	1		
	PSA 8.5	Sums stated provisionally by Engineer:				
1,05		1(a) Removal of unknown existing services not indicated on drawings	Prov Sum	1	200 000,00	200 000,00
1,06		(b) Charge required by Contractor on sub-item (a) above	x100%	50 000		
1,07		2(a) Relocation of existing services not indicated on drawings	Prov Sum	1	300 000,00	300 000,00
1,08		(b) Charge required by Contractor on sub-item (a) above	x100%	300 000		
1,09		3(a) Maintenance and Office Equipment	Prov Sum	1	150 000,00	150 000,00
1,10		(b) Charge required by Contractor on sub-item (a) above	x100%	150 000		
1,11		4(a) Waterproofing and strengthening to existing and specific chambers or sumps where structural conditions have to be repaired for normal functional purposes	Prov Sum	1	60 000,00	60 000,00
1,12		(b) Charge required by Contractor on sub-item (a) above	x100%	60 000		
1,13		5(a) Tie in to existing services/structures	Prov Sum	1	50 000,00	50 000,00
1,14		(b) Charge required by Contractor on sub-item (a) above	x100%	50 000		
		Prime cost sums:				
	PSA 8.6	(6) Communication allowances:				
1,15		(a) The cost of calls in connection with contract administration and telephone and cellular telephone rental	Prov Sum	1	18 000,00	18 000,00
1,16		(b) Charge required by Contractor on sub-item (a) above	x100%	18 000		
Total carried forward to summary						

1. PRELIMANARY & GENERAL

TIME RELATED ITEMS

ITEM No.	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
1,17		Allowance for payment of a CLO	Prov Sum	1	384 000,00	384 000,00
1,18		Overheads charges and profit on item above	x100%	384 000		
1,19		Allowance for all COVID-19 related costs	Sum	1		
	8.8.7	**Compliance with OHS Act and Regulations (Including the Construction Regulations 2003)**				
1,20		(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 dealing with Mechanical and Electrical Contractor, Eskom and all other contractors	Sum	1,0		
1,21		(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 dealing with Mechanical and Electrical Contractor, Eskom and all other contractors	Month	48,0		
1,22		(c) Provision of competent Health & Safety Officer and all other competent staff required	Month	48,0		
		Compliance with Environmental Requirements NEMA (Act No. 107 of 1995 and ECA No. 73 of 1989)				
1,23		(a) Compile Method Statement and Implementation and Management Plan required in terms of NEMA and ECA. Include for responsibilities and duties as Main Contractor dealing with Mechanical and Electrical Contractor, Eskom and all other contractors	Sum	1,0		
1,24		(b) Contractor's time-related obligations in respect of complying with the NEMA and ECA requirements. Include for responsibilities and duties as Main Contractor dealing with Mechanical and Electrical Contractor, Eskom and all other contractors	Month	48,0		
1,25		(c) Provision and management of competent staff to monitor, manage and oversee environmental responsibilities	Month	48,0		
Total carried forward to summary						

2. BULK EARTHWORKS

SITE CLEARANCE

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SANS 1200 C		**SITE CLEARANCE**				
PSC 8.2.1		Clear and grub:				
	2,01	Areas	m²	15000		
8.2.10	2,02	Remove topsoil to nominal depth of 150 mm and stockpile	m³	2200		
SANS 1200 D PSD 8.3.2		**EARTHWORKS** **Bulk excavation:**				
	2,03	Excavate for terrace Construction in all materials, and use for backfill or shaped embankment, or dispose as ordered.	m³	35000		
	2,04	Excavate Reactor to foundation level in all materials, and use for backfill or embankment, or dispose as ordered.	m³	30000		
	2,05	Excavate Secondary Clarifiers to foundation level in all materials, and use for backfill or embankment, or dispose as ordered.	m³	15000		
	2,06	Excavate Sludge Storage Tank to foundation level in all materials, and use for backfill or embankment, or dispose as ordered.	m³	2500		
	2,07	Excavate RAS/WAS Pumpstaion and sump to foundation level in all materials, and use for backfill or embankment, or dispose as ordered.	m³	950		
	2,08	Excavate Future PST to foundation level in all materials, and use for backfill or embankment, or dispose as ordered.	m³	350		
	2,09	Excavate Composting slab to foundation level in all materials, and use for backfill or embankment, or dispose as ordered.	m³	4600		
	2,10	Extra-Over for Item 2.01 to 2.09 - Emankemnt spahing to 1:2 slope	m²	1500		
	2,11	Excavate other structures in all materials, and use for backfill or embankment, or dispose as ordered.	m³	5000		
	2,12	Accommodate, manage, pump, divert and deal with all water within any excavation for the duration of the Contract, to ensure construction activities can take place in line with the specifications	Sum	1		
Total carried forward to summary						

2. BULK EARTHWORKS

EARTHWORKS

PAYMENT REFER.	ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Extra over items above for :				
	2,13	Hard rock excavation - Site wide	m³	8500		
	2,14	Hard rock excavation - Reactor	m³	10000		
	2,15	Hard rock excavation - SST	m³	2000		
	2,16	Hard rock excavation - RAS WAS Sump	m³	50		
	2,17	Hard rock excavation - Future PST	m³	50		
	2,18	Hard rock excavation - Aer. Sludge Storage Tank	m³	100		
	2,19	Hard rock excavation - Composting slab	m³	150		
	2,20	Boulder excavation- Class A	m³	3300		
PSD 8.3.3		**Restricted excavation:**				
	2,21	Excavate for strip footings and floor slabs in Intermediate materials, and use for backfill or embankment, or dispose	m³	300		
PSD 8.3.3		Extra over items above for :				
	2,22	Hard rock excavation	m³	50,0		
8.3.5	2,23	Extra excavation in all materials to provide working space around structure	m³	3500		
8.3.4		**Importing of Materials** Selected layer using material from designated				
	2,24	Import G5 Material Compacted to 93% of MOD AASHTO density	m³	1500		
PSDM 8.3.17	2,25	Extra over items 2.24 for obtaining material from commercial sources	m³	1500		
8.3.8.1	2,26	Excavate by hand in soft material	m³	300		
Total carried forward						

2. BULK EARTHWORKS

CONCRETE

PAYMENT REFER.	ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
8.3.2		**Excavation Trenches**				
		Restricted Excavation				
8.3.2		Excavate in all materials for pipe trenches, backfill, compact and dispose of surplus material for:				
		Pipes up to 300 mm dia				
		Over and Up to				
	2,27	0,5 m 1,0 m	m	2000		
	2,28	1,0 m 1,5 m	m	150		
	2,29	1,5 m 2 m	m	50		
		Pipes from 350 mm dia up to 500 mm dia				
		Over and Up to				
	2,30	0,5 m 1,0 m	m	1 500		
	2,31	1,0 m 1,5 m	m	1 000		
	2,32	1,5 m 2,0 m	m	100		
	2,33	2,0 m 2,5 m	m	100		
	2,34	2,5 m 3,0 m	m	50		
8.3.2		**Excavation Trenches - Cont.**				
		Pipes from 550 mm dia up to 800 mm dia				
		Over and Up to				
	2,35	0,5 m 1,0 m	m	50		
	2,36	1,0 m 1,5 m	m	100		
	2,37	1,5 m 2,0 m	m	100		
	2,38	2,0 m 2,5 m	m	100		
	2,39	2,5 m 3,0 m	m	100		
		Pipes from 850 mm dia up to 1350 mm dia				
		Over and Up to				
	2,40	0,5 m 1,0 m	m	300		
	2,41	1,0 m 1,5 m	m	200		
	2,42	1,5 m 2,0 m	m	1		
	2,43	2,0 m 2,5 m	m	500		
	2,44	2,5 m 3,0 m	m	500		
	2,45	Extra-over Items M1.1 and M1.2 for hard rock	m^3	600		
	2,46	Extra-over Item 1.1.1 to Item 1.5.5 to form embankments for Trench	m^3	600		
Total carried forward						

2. BULK EARTHWORKS

CONCRETE

PAYMENT REFER.	ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Excavation ancillaries				
	2,47	Backfill from other necessary excavation	m³	750,0		
	2,48	Additional compaction for trenches subject to traffic loads	m³	100,0		
	2,49	Excavate and dispose of unsuitable material from trench bottom	m³	100,0		
	2,50	Temporary stockpiling of wet material from trench excavations	m³	100		
		BEDDING Provision of bedding from: Trench excavation:				
	2,51	Selected granular material	m³	100		
	2,52	Selected fill material	m³	250		
		From other sources on site:				
	2,53	Selected granular material	m³	500		
	2,54	Selected fill material	m³	150		
	2,55	Selected Dump Rock Size 50mm to 100mm	m³	1000		
	2,56	Selected Backfill	m³	100		
SANS 1200 LB		**MEDIUM PRESSURE PIPELINES**				
		Supply, lay, join and test Concrete Inter Locking Joint (IJ) Pipes Class 100D to SANS 677 in standard lengths complete with couplings, on class B Bedding				
	2,57	Dia 300mm	m	158		
	2,58	Dia 450mm	m	126		
	2,59	Dia 525mm	m	42		
	2,60	Dia 600mm	m	90		
	2,61	Dia 750mm	m	30		
	2,62	Extra-Over for sealing of stormwater pipeline joints	Sum	1		
Total carried forward						

2. BULK EARTHWORKS

CONCRETE

PAYMENT REFER.	ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
8.2.3		**MANHOLES** Precast concrete manholes 1500 mm diameter, complete with reinforced concrete slab, spacer, type 2A concrete manhole cover, in- and outlets, channel sections, benching, concrete foundation and finishing including excavation and backfilling				
	2,63	a) 0 m - 2,0 m deep	no	10		
	2,64	b) 0 m - 3,0 m deep	no	10		
	2,65	c) 0 m - 4,0 m deep	no	10		
	2,66	d) 0 m - 5,0 m deep	no	10		
	2,67	e) 0 m - 6,0 m deep	no	10		
	2,68	Grid Inlets - 550x500 Cast Iron - Summply and Install, c/w drop inlet	No	8		
		RETAINING WALLS				
	2,69	Restricted Excavation for footing and/or base block - excavate, level, compact and cart away of surplus material.	m^3	rate only		
	2,70	Cast Base block 0.5m x1,0m wide - 30MPa Concrete footing	m^3	rate only		
	2,71	Design, Supply, Deliver and Install retaining wall block up to 4m high	m^2	rate only		
	2,72	Supply and Install/lay Geofabricks behind block retaining wall.	m^2	rate only		
	2,73	Import and compact infill behind Block retaining wall- Compact to 95% MOD AASHTO at OMC.	m^3	rate only		
Total carried forward to summary						

3. HEAD OF WORKS - CIVIL WORKS

SITE CLEARANCE

PAYMENT REFER.	ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		INLETWORKS- EARTHWORKS				
SANS 1200		**D: SITE CLEARENCE**				
PSC 8.2.1	3,01	Clearing and Grub	m^2	770,0		
8.3.1.2	3,02	Removal of topsoil to nominal depth of 200mm and stockpile	m^2	770,0		
	3,03	**Earthworks**				
PSD 8.3.2	3,04	Excavate in all material not deeper than 7m & stockpile to designated berm	m^3	100,0		
	3,05	Shaping of the finished level for storm water protection	m^3	30,0		
8.3.8	3,06	Hand excavation	m^3	50,0		
PSD 8.3.5	3,07	Extra over for hard rock	m^3	10,0		
PSD 8.3.3	3,08	Extra over for restricted excavation	m^3	10,0		
	3,09	Selected fill material to be placed in layers not exceeding 150mm thick. Compact	m^3	1 000,0		
8.3.4	3,10	Import from a commercial source G3 material, deliver, place and compact in	m^3	100,0		
8.3.4	3,11	Import from a commercial source G3 material, deliver, stabilize with 4% CEMII 32,5N cement, place & compact to 98% mod AASHTO in layers not exceeding 150mm thick.	m^3	50,0		
8.3.10	3,12	Top soiling from stockpile	m^2	700,0		
8.3.11	3,13	Planting of grass	m^2	700,0		
Total carried forward to summary						

3. HEAD OF WORKS - CIVIL WORKS

CONCRETE

PAYMENT REFER.	ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SANS 1200 G		**G: SCHEDULED CONCRETE ITEMS**				
8,2		**SCHEDULED FORMWORK ITEMS**				
	3,14	**Smoothed vertical uncurved**				
8.2.2	3,15	By-Pass channel internal walls	m^2	21		
8.2.2	3,16	By-Pass channel external walls	m^2	19		
8.2.2	3,17	Internal walls	m^2	650		
8.2.2	3,18	External walls	m^2	180		
8.2.2	3,19	Columns- roof (including footing)	m^2	80		
8.2.2	3,20	Rood - beams	m^2	50		
8.2.2	3,21	Approach channel internal walls	m^2	220		
8.2.2	3,22	Approach channel exterval walls	m^2	220		
		Smoothed vertical curved				
8.2.2	3,23	Vortex	m^2	130		
8.2.2	3,24	Vortex channels	m^2	60		
8.2.2	3,25	**Smoothed horizontal uncurved**				
	3,26	Roof sofit	m^2	80		
	3,27	Bridge slabs sofit	m^2	70		
8.2.5	3,28	**Narrow widths not wider than 300mm**				
	3,29	Inlet works Floor	m	160		
	3,30	Bridge slabs	m	85		
	3,31	Stairs	m	80		
	3,32	Roof	m	50		
	3,33	Approach channel floor	m	130		
	3,34	Skip slab	m	55		
8.2.3	3,35	Inclined formwork	m^2	60		
PSG 8.1.2	3,36	**SCHEDULED REINFORCEMENT**				
		(Provisional Quantity - Steel bars to SABS 920 and 82 - mild steel and high yield steel)				
	3,37	High tensile reinforcement in bars not exceeding 32mm in diameter and not fixed on heights exceeding 7m.	kg	32000		
Total carried forward						

3. HEAD OF WORKS - CIVIL WORKS

CONCRETE

PAYMENT REFER.	ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
8,4	3,38	**CONCRETE**				
8.4.2	3,39	Blinding 20MPa / 19mm stone, 50 mm layer	m^2	270		
8,4,3	3,4	20 Mpa Concrete (GRADE 20/10) for benching to shape slope of floors	m^3	6		
PSD 8.1.3 & 8.4.3	3,41	**35 Mpa Structural concrete (GRADE 35/19) in:**				
	3,42	Inlet works - Floor (250 mm thick)	m^3	60		
	3,43	Inlet works -Walls (250 mm thick)	m^3	120		
	3,44	Inlet works - Roof Columns (450mm x 450mm)	m^3	10		
	3,45	Column footing (450 mm thick)	m^3	10		
	3,46	Roof slab complete with beams	m^3	30		
	3,47	Vortex	m^3	20		
	3,48	Vortex side wall 45 deg	m^3	10		
	3,49	Bridge slabs (150 mm thick)	m^3	20		
	3,50	Approach channel walls	m^3	60		
	3,51	Approach channel floor	m^3	45		
8.5	3,52	**JOINTS**				
	3,53	Water tight expansion Floor Joints with waterbar	m	30		
	3,54	Water tight expansion Wall Joints with waterbar	m	40		
8.4.4	3,55	**FORMED & UNFORMED SURFACE FINISHES**				
	3,56	Wood float Finish	m^2	300		
	3,57	Steel float finish	m^2	170		
	3,58	Finish off corners with bull nosing tool	m	1000		
	3,59	25x25mm corner fillet finish	m	150		
	3,60	Extra-Over : Xypex Admix C-500 NF - Supply and mix into concrete at rate of 3kg/m^3 of the concrete volume	kg	540		
	3,61	Supply, deliver, handle and place 250 micron DPC plastic / bond breaker	m^2	400		
Total carried forward						

3. HEAD OF WORKS - CIVIL WORKS

MISCELLANEOUS

PAYMENT REFER.	ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	3,62	**PIPES AND FITINGS**				
	3,63	**Supply material, deliver to site, distribute, bed on Class B bedding, connect, cut, weld, sterilise and test** Class 12 uPVC pipes with rubber ring joints to SABS 966, 1998, Part 1 in standard lengths complete with one connection collar (outside diameter)				
	3,64	a) 200 mm diam	m	100		
	3,65	b) 500 mm diam	m	20		
	3,66	c) 45 degree uPVC bends (200 mm diam)	no.	5		
	3,67	d) 90 degree uPVC bends (200 mm diam)	no.	2		
	3,68	e) 45 degree uPVC bends (500 mm diam)	no.	1		
	3,69	f) 90 degree uPVC bends (500 mm diam)	no.	2		
	3,70	g) Intermittent pipe supports (for 500 mm diameter pipe) at a maximum spacing of 5 meters.	no.	5		
	3,71	**SUPPLY & INSTALL- MISCELLANEOUS ITEMS**				
	3,72	Galvanised handrails assembly complete with kicker plate	m	120		
	3,73	**Handle & Grout in with abe Dura grout free issue Mechanical equipment to the engineers requirements**				
	3,74	i) Sluices gates not exceeding 4 m² in size	no.	10		
	3,75	ii) Steel puddle pipe 200mm diameter	no.	1		
	3,76	iii) Steel puddle pipe 500mm diameter	no.	1		
	3,77	iv) Steel puddle pipe 1000mm diameter	no.	1		
	3,78	Control and pumping of ground and storm water to keep excavations free from water ingress for the duration of the contract	Sum	1		
	3,79	4m galvanized High Mast fitted with 2x100W OMNIstar LED flood lights. Including the construction of the foundation base for the high mast and electrical connection to the MCC panel in the Control Building	No.	8		
	3,80	**Rectengular long throat-flume**				
	3,81	For maximum rating 426 l/s (small channel)	No.	3		
	3,82	For maximum rating 1280.91 l/s (large channel)	No.	1		
	3,83	**Handling of ground water during construction**	Sum	1		
PSG 7.2.5	3,84	**Test structure for water tightness**	Sum	1		
	3,85	**Temporarily divert the flow from the existing outfall sewer line, upstream of the new manhole MH2 to the existing WwTW, for the time to allow connection of the new inletworks and pipeline to take place.**	Sum	1		
	3,86	**Connect the existing outfall sewerline to the new inlet works, inlcuding all labour, material, plant and equipment required to do so to the satisfaction of the Engineer**	Sum	1		
Total carried forward						

3. HEAD OF WORKS - CIVIL WORKS

MISCELLANEOUS

PAYMENT REFER.	ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	3,87	**Connect the new inlet works to the existing WwTW, inlcuding all labour, material, plant and equipment required to do so to the satisfaction of the Engineer**	Sum	1		
Total carried forward to Summary						

3. RAW DIVISION BOX 1 - Civil

SITE CLEARANCE

PAYMENT REFER.	ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SANS 1200C		**SITE CLEARANCE**				
PSC 8.2.1		Clear and grub:				
	4,01	Areas	m²	320		
8.2.10	4,02	Remove topsoil to nominal depth of 150 mm and stockpile	m³	50		
Total carried forward						

3. RAW DIVISION BOX 1 - Civil

EARTHWORKS

PAYMENT REFER.	ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SANS 1200D		**EARTHWORKS (SMALL WORKS)**				
8.3.3		**Excavations**				
		Excavate for foundations, footings and trenches in all materials and use for backfill or embankment or dispose				
	4,03	Hand excavation	m³	6		
8.3.3	4,04	Restricted excavations not exceeding 2m deep	m³	125		
8.3.3	4,05	Restricted excavations exceeding 2m not exceeding 4m deep (Provisional Rate)	m³	rate only		
	4,06	Dispose of surplus excavated material	m³	125		
		Extra-over for				
	4,07	Intermediate excavation.	m³	20		
	4,08	Hard rock excavation.	m³	20		
		CONCRETE (SMALL WORKS)				
SABS 1200G		**FORMWORK**				
		VERTICAL				
8.2.1		**Rough, curved**				
	4,09	Walls	m²	rate only		
8.2.2		**Smooth**				
	4,10	Walls	m²	110		
	4,11	Horizontal	m²	rate only		
8.2.2		**Smooth**				
	4,12	Soffit of slab/ walls	m²	35		
8.2.5		**Narrow Widths**				
		Smooth				
	4,13	Vertical Narrow Widths (up to 300mm wide)	m	10		
	4,14	Horizontal Narrow Widths (up to 300mm wide)	m	10		
8.2.6		**BOX OUT HOLES / VOIDS.**				
		Small, circular, of diameter up to and including 0.35m.				
	4,15	Over 0m and up to 0.5m deep.	No	4		
Total carried forward						

3. RAW DIVISION BOX 1 - Civil

CONCRETE

PAYMENT REFERS	ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
8,3		**REINFORCEMENT**				
8.3.1		**Mild steel bars**				
	4,16	Mild steel reinforcement in bars not exceeding 32mm diameter	kg	300		
8.3.1		**High tensile steel bars**				
	4,17	High-tensile steel reinforcement in bars not exceeding 32mm in diameter	kg	3 000		
8,4		**CONCRETE**				
8.4.2		**Blinding layer, 15Mpa/19mm**				
	4,18	75 mm thick under footings and floors	m²	60		
	4,19	In Bencing for sloping floor	m³	10		
8.4.3	4,20	**Strength concrete, 35Mpa/19mm**				
	4,21	Floor slabs	m³	10		
	4,22	Walls	m³	15		
8.4.4		**UNFORMED SURFACE FINISHES**				
		Steel floated finish				
	4,23	Steel floated finish (Degree I Accuracy) on top of walls circular on plan exceeding 150mm but not exceeding 300mm wide	m²	10		
		Wood floated finish				
	4,24	Channels and outlets	m²	10		
	4,25	Floors	m²	30		
	4,26	Sloping floors	m²	15		
		MISCELLANEOUS ITEMS				
	4,27	Test for watertightness	Sum	1		
	4,28	Concrete kerbing c/w 150x150mm toe cast around paved walkway	m³	1		
	4,29	Casting in of Puddle Pipes up to Dia 1350mm pipe	No	2		
		WATERPROOFING				
	4,30	250µm waterprofing membrane between Blinding and Floor slab	m²	60		
SANS 1200H	4,31	Ball type Mild Steel Galv. Handrails	m	30		
Total carried forward to summary						

5. BIOLOGICAL REACTOR - Civil Works

SITE CLEARANCE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		REACTOR EARTHWORKS				
	SANS 1200 D & PS D	**Site Clearance**				
5,01	8.3.1.1	Clearing and Grub	m^2	0		
5,02	8.3.1.2	Removal of topsoil to nominal depth of 200mm and stockpile	m^2	0		
		Excavation				
5,03	8.3.2 & PS D 8.1	Excavate in all material not deeper than 7m & stockpile to designated berm	m^3	0		
5,04	8.3.8	Hand excavation	m^3	60		
5,05	8.3.2 & PS D 8.3.3	Extra over for hard rock	m^3	400		
5,06	8.3.3	Extra over for restricted excavation	m^3	350		
5,07	8.3.4	Import from a commercial source G3 material, deliver, place & compact to 98% mod AASHTO in layers not exceeding 150mm thick	m^3	1000		
5,08	8.3.4	Import from a commercial source G3 material, deliver, stabilize with 4% CEMII 32,5N cement, place & compact to 98% mod AASHTO in layers not exceeding 150mm thick	m^3	450		
5,09	8.3.10	Top soiling from stockpile	m^2	600		
5,10	8.3.11	Grassing with kikuyu	m^2	850		
	SANS 1200 G & PS G	**SCHEDULED CONCRETE ITEMS**				
	8,2	**SCHEDULED FORMWORK ITEMS**				
		VERTICAL				
5,11	8.2.2	Smooth, curved and uncurved for all items/elements not exceeding 7m in height	m^2	6500		
5,12	8.2.2	Smooth horizontal curved and uncureved in all items/elements not exceeding 7m in height	m^2	300		
5,13	8.2.5	Narrow widths (up to 400mm high) for all structural items/elements	m	1800		
	8.2.6	**Boxing out:**				
5,14		Form pockets not exceeding 2m2 in concrete not thicker than 300mm	No.	6		
	8,3 & PS G 8.1.2	**SCHEDULED REINFORCEMENT**				
		(Provisional Quantity - Steel bars to SABS 920 and 82 - mild steel and high yield steel)				
	8.3.1	Mild Steel Bars				
5,15		Mild steel reinforcement in bars not bars not exceeding 32mm in diameter and not fixed on heights exceeding 7m	t	15		
	8.3.1	High tensile steel bars				
5,16		High-tensile steel reinforcement in bars not exceeding 32mm in diameter and not fixed on heights exceeding 7m	t	240		
	8,4	**CONCRETE**				
5,17	8.4.2	Blinding 20MPa / 19mm stone	m^2	2700		
5,18	8.4.3	20 MPa Concrete (GRADE 20/19) cast into all items / elements	m^3	5		
5,19	8.4.1	No-fines Concrete (25mm single grade stone), cement:stone ratio by weight (1:4).	m^3	300		
5,20		20mm thick screed layer on top of the no-fines (sand-cement mix)	m^2	2700		
5,21		Supply, deliver, handle and place 250 micron DPC plastic / bond breaker on top of no-fines	m^2	2700		
5,22		Supply, deliver, handle and place Bidim A4	m^2	5300		
	8.4.3 & PS G 8.1.8	35 Mpa Structural Concrete (GRADE 35/19)				
5,23		Cast concrete in all items/elements not exceeding 7m in high	m^3	1700		
		Extra-Over :				
5,33		Xypex Admix C-500 NF - Supply and mix into concrete at rate of 3kg/m^3 of the concrete volume	kg	5100,0		
5,34	PSG 7.2.5	Test structure for water tightness	Sum	1		
Total carried forward						

5. BIOLOGICAL REACTOR- Civil Works

EARTHWORKS

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	8,5	**JOINTS**				
5,35		Floor slab Joints. The joint consists of a Sika DR-29 waterbar, 15x10mm two component Polyurethane Sealant (abe Flexithane) with a 150mm high, 15mm wide Aquajoint SPX 200 filler material	m	1700		
5,36		Joint Slab to Footing Joints. The joint consists of a Sika DR-29 waterbar, 15x10mm two component Polyurethane Sealant (abe Flexithane) with a 300mm high, 15mm wide Aquajoint SPX 200 filler material	m	900		
5,37		Watertight Expansion Joints Wall with waterbar	m	300		
5,38		Splash Guard Joint - maximum 150mm high and 20mm wide, formed with bitumen impregnated soft board and sealed with 20x20mm abe flexothane P	m	0		
	8.4.4	**FORMED & UNFORMED SURFACE FINISHES**				
5,39		Wood Trowel Finish	m^2	1500		
5,40		Steel float finish	m^2	1500		
5,41		Finish off corners with bull nosing tool	m	2100		
5,42		25x25mm corner fillet finish	m			
5,43		Apply abe Duraflex or similar approved to all joints, inside and outside of the walls, not exceeding 7m in height	m^2	1800		
		SUPPLY & INSTALL - MEDIUM PRESSURE PIPELINES				
5,44		Subsoil drain as per drawings, including all material, fittings, equipment, labour and consumables required for the installation	m	450		
5,45	SANS 1200 L 8.2.1	75 mm HDPe Ducts/Sleeve(Mixer Bridges)	m	50		
5,46		75 mm Dia Pvc Ducts/Sleeve (Aerator Bridges)	m	30		
5,47		75 x 45° Bends	No.	10		
5,48		75 x 90° Bends	No.	10		
5,49	SANS 1200 L 8.2.1	110 mm Dia Pvc Ducts (Aerator Bridges)	m	30		
5,50		110 x 90° Bends	No.	10		
5,51	SANS 1200 L 8.2.14	Manhole Cover and Frame Type 4 - Supply and place (Aerator Bridges)	No.	5		
5,52	SANS 1200 L 8.2.1	Dia 900mm x 6m - Mild Steel Pipe to SABS 719, FBE, Epoxy coated to 350micron DFT.	No.	27		
5,53	SANS 1200 L 8.2.2	Dia 900mm 90° Bend - Mild Steel Pipe to SABS 719, Flanged Both Ends, Epoxy coated to 350micron DFT.	No.	2		
5,54	SANS 1200 L 8.2.14	Manhole Cover and Frame Type 4 - Supply and place (Aerator Bridges)	No.	5		
		SUPPLY & INSTALL- MISCELLANEOUS ITEMS **the rate for the following items to include all cost to manufactured, procured, supply, deliver to site, handle, install, inspect, test & commission for the proper performance of the works**				
5,55		GRP 38x38x38mm Grating	m^2	56		
5,56		50x50x6mm galvanized angle frame with fish tail lugs welded at 200mm c/c (cast into concrete structure) 2mx0.8m	m	16		
5,57		Subsoil drain pump sump as per drawing BC/708/03, including all manhole rings, sealants, benching, plant, material, equipment, labour and consumables required for the installation	Sum	1		
5,58	SANS 1200 G 8.8	Bridge bearing/sliding plates as indicated on the drawings. Each bearing plades consists of two 1600x300x16mm thick galvanised mild steel plates with 200mm long, sixteen 16mm diameter J-anchor rods and two 1600x300x20mm thick Nylatron GS plates bolted together. the rate to including all plant, equipment, materials, fuel, labour and consumables required for the installation	No.	28		
Total carried forward						

5. BIOLOGICAL REACTOR- Civil Works

EARTHWORKS

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SUPPLY & INSTALL- MISCELLANEOUS ITEMS Cont. **the rate for the following items to include all cost to manufactured, procured, supply, deliver to site, handle, install, inspect, test & commission for the proper performance of the works**				
5,58		Galvanized steel staircase as per drawings including all bolts, screws, welds, equipment, plant, labour and consumables required for the installation	No.	4		
5,59		Supply, deliver to site and install 25mm single size stone around reactor, laid on top off	m^2	290		
5,60		Supply, deliver, handle and place 250 micron DPC plastic underneath foot path around the structure	m^2	290		
	SANS 1200 G	**Handle & Grout in with abe Dura grout free issue Mechanical equipment to the engineers requirements**				
5,61	8,7	i) Sluices gates not exceeding 4m2 in size	No.	6		
5,62	8,7	ii) Puddle pipes not exceeding 500mm in diameter	No.	5		
5,63	7.2.5	Water tightness testing of structure	Sum	1		
5,64		Control and pumping of ground and storm water to keep excavations free from water ingress for the duration of the contract	Sum	1		
5,65		4m galvanized Light Mast fitted with 2x100W OMNIstar LED flood lights. Including the construction of the foundation base for the high mast and electrical connection to the MCC panel in the Control Building	No.	12		
		MEATAL WORKS				
5,66		Supply, Deliver and Install Ball Type Handrails: Mild Steel Heavy Coastal HDG Hand and Knee Rails	m	300		
Total carried forward to summary						

6. SECONDARY SETTLING TANK - Civil

SITE CLEARANCE

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SANS 1200 C		**SITE CLEARANCE**				
PSC 8.2.1	6.01	Clear and grub:				
	6.02	Areas	m²	750,0		
8.2.10	6.03	Remove topsoil to nominal depth of 150 mm and stockpile	m²	750,0		
Total carried forward						

6. SECONDARY SETTLING TANK - Civil

EARTHWORKS

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SANS 1200 D		**EARTHWORKS**				
PSD 8.3.2		**Bulk excavation:**				
	6.04	Excavate for strip footings and foundations in all materials, and use for backfill or embankment, or dispose as ordered.	m³	3500		
	6.05	Extra over items above for :				
	6.06	Hard rock excavation	m³	700		
	6.07	Boulder excavation- Class A	m³	rate only		
PSD 8.3.3		**Restricted excavation:**				
	6.08	Excavate for strip footings and floor slabs in Intermediate materials, and use for backfill or embankment, or dispose	m³	50		
PSD 8.3.3	6.09	Extra over items above for :				
	6.10	Hard rock excavation	m³			
8.3.5	6.11	Extra excavation in all materials to provide working space around structure	m²	500		
8.3.4		**Importing of Materials** Selected layer using material from				
	6.12	Import G5 Material Compacted to 93% of MOD AASHTO density	m³	200		
PSDM 8.3.17	6.13	Extra over items 6.12 for obtaining material from commercial sources	m³	200		
8.3.8.1	6.14	Excavate by hand in soft material	m³	20,0		
Total carried forward						

6. SECONDARY SETTLING TANK - Civil

EARTHWORKS

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
8.3.9		Extra-over for Backflll or for Fill Material against Structures	m³	600		
PSD 8.3.10	6.15	Topsoiling	m³	100		
8.3.11	6.16	Grassing or other vegetation cover:				
	6.17	Planting of grass cuttings	m²	100		
PSD 8.3.15	6.18	Extra over items 6.04 and 6.07 for disposing of spoil material outside the freehaul area, on a site provided by the	m³	2500		
Total carried forward						

6. SECONDARY SETTLING TANK - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SCHEDULED FORMWORK ITEMS				
SD8.2.2	6.18	Smooth:				
	6.19	**Vertical formwork to:**				
	6.20	Wall and launder vertical	m²	1500		
		Centre column vertical	m²	50		
	6.21	Battered formwork to:				
		Discharge Box	m²	5		
	6.22	**Horizontal formwork to:**				
	6.23	Launder Horizontal	m²	150		
	6.24	Centre column horizontal	m²	10		
SD8.2.5	6.24	**Narrow widths (up to 300 mm wide):**				
		Different widths in the following ranges:				
	6.25	Over 50 mm and up to 100 mm				
	6.26	Aprons	m	100		
	6.27	Over 200 mm and up to 300 mm to:				
	6.28	Wall footings	m	170		
	6.29	Grooves, chases and splays in the following ranges:				
	6.30	Chamfering of SST Launder Wall	m	100		
Total carried forward						

6. SECONDARY SETTLING TANK - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SCHEDULED REINFORCEMENT ITEMS				
SD8.3.1	6.31	Mild-steel bars in the following:				
	6.32	Diameters up to 16mm	t	2		
SD8.3.1	6.33	High-tensile steel bars in the following:				
	6.34	Diameters up to 16mm	t	50		
	6.35	Diameters greater than 16mm	t	10		
		SCHEDULED CONCRETE ITEMS				
SD8.4.3	6.36	Strength concrete: (to drawings and specification)				
	6.37	Class 35 MPa/19 mm concrete in:				
	6.38	Aprons	m^3	20		
	6.39	Centre Column	m^3	5		
	6.40	Centre Column Base	m^3	10		
	6.41	Outside Wall	m^3	150		
	6.42	Floor	m^3	125		
	6.43	Pipe trench	m^3	50		
	6.44	Class 20 MPa/19 mm concrete in: Blinding	m^3	40		
	6.45	Screeds	m^3	30		
	6.46	Subsiol Drain	m^3	60		
		Extra over for the addition of a concrete hardner as specified on the drawings:				
	6.47	Apply concrete hardner to the top 300mm of the structure outside wall	m^3	20		
		Extra-Over :				
	6.48	Xypex Admix C-500 NF - Supply and mix into concrete at rate of 3kg/m^3 of the concrete volume	kg	780		
5.5.1.8	6.49	No-fines Concrete (25mm single grade stone), cement:stone ratio by weight (1:4),	m^3	100		
	6.50	20mm thick screed layer on top of the no-fines (sand-cement mix)	m^2	650		
Total carried forward						

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SD8.4.4		Unformed surface finishes:				
		Wood-floated finishes to:				
	6.51	Foundations, Launders & Baffles	m²	200		
		Steel-floated finishes to:				
	6.52	Screeds	m²	600		
		Power-floated finishes to:				
	6.53	SST Outside wall Crown	m²	50		
8,5		**JOINTS**				
		Expansion watertight joints as detailed on the Drawings				
	6.53	Floor slab Joints. The joint consists of a Sika DR-29 waterbar, 15x10mm two component Polyurethane Sealant (abe Flexithane) with a 150mm high, 15mm wide Aquajoint SPX 200 filler material.	m	300		
	6.54	Joint Slab to Footing Joints. The joint consists of a Sika DR-29 waterbar, 15x10mm two component Polyurethane Sealant (abe Flexithane) with a 300mm high, 15mm wide Aquajoint SPX 200 filler material.	m	100		
	6.55	250 micron green medium density polyethylene dampproof sheeting under floors	m²	600		
		UNDERFLOOR DRAINAGE				
SABS 1200DB		Excavation				
		Excavate in all materials for trenches				
	6.56	Exceeding 0,0 m but not exceeding 1,0 m	m³	20		
		Pipelines				
		Supply,handle, lay ,test, including cutting of perforated Kaytech Geopipe or similar sections complete with fittings like couplings, to manufacturer's standard and connection to junction box complete				
	6.57	110mm diam (Main drain)	m	120		
	6.58	65mm diam (Laterals)	m	60		
Total carried forward						

6. SECONDARY SETTLING TANK - Civil

BUILDING WORK

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Drains				
		Natural permeable material in subsoil drainage systems :				
	6.59	Crushed stone of 10 to 19mm obtained from commercial sources, and place around perforated pipes	m³	20		
		Bidim sheeting or similar, approved material, for lining subsoil drainage systems around the crushed stones				
	6.60	Supply, deliver, handle and place Bidim A4	m²	1000		
	6.61	Test flushing of pipe subsoil drains	No.	2		
		SEGMENTED PAVING				
		Earthworks				
	6.62	Hand excavation for footing of kerb	m³	10		
	6.63	Compaction of insitu soil up to 90% MOD	m³	150		
		CONCRETE				
		20mPA Concrete				
	6.64	Backing haunch at kerb fig. 8B	m³	150		
	6.65	300mm half round drain channel around	m	100		
		Paving Blocks				
	6.66	60mm Concrete interlocking paving blocks	m²	150		
		Supply Items				
	6.67	Pop Up valves (Gereg Type)	no	rate only		
	6.68	Handling of ground water during construction	sum	1		
PSG 7.2.5	6.69	Test structure for water tightness	Sum	1		
Total carried forward to summary						

7. SECONDARY SETTLING TANK - Civil

SITE CLEARANCE

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SANS 1200 C		**SITE CLEARANCE**				
PSC 8.2.1		Clear and grub:				
	6.01	Areas	m²	750		
8.2.10	6.02	Remove topsoil to nominal depth of 150 mm and stockpile	m²	750		
Total carried forward						

7. SECONDARY SETTLING TANK - Civil

EARTHWORKS

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SANS 1200 D		**EARTHWORKS**				
PSD 8.3.2		**Bulk excavation:**				
	6.03	Excavate for strip footings and foundations in all materials, and use for backfill or embankment, or dispose as ordered.	m³	3500		
	6.04	Extra over items above for :				
	6.05	Hard rock excavation	m³	700		
	6.06	Boulder excavation- Class A	m³	rate only		
PSD 8.3.3		**Restricted excavation:**				
	6.07	Excavate for strip footings and floor slabs in Intermediate materials, and use for backfill or embankment, or dispose	m³	50		
PSD 8.3.3		Extra over items above for :				
	6.08	Hard rock excavation	m³	10		
8.3.5	6.09	Extra excavation in all materials to provide working space around structure	m²	500		
8.3.4		**Importing of Materials** Selected layer using material from				
	6.10	Import G5 Material Compacted to 93% of MOD AASHTO density	m³	200		
PSDM 8.3.17	6.11	Extra over items 147.05 for obtaining material from commercial sources	m³	200		
8.3.8.1	6.12	Excavate by hand in soft material	m³	20		
Total carried forward						

7. SECONDARY SETTLING TANK - Civil

EARTHWORKS

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
8.3.9	**6.13**	Extra-over for Backflll or for Fill Material against Structures	m^3	600		
PSD 8.3.10	6.14	Topsoiling	m^3	100		
8.3.11		Grassing or other vegetation cover:				
	6.15	Planting of grass cuttings	m^2	100		
PSD 8.3.15	6.16	Extra over items 7.04 and 7.07 for disposing of spoil material outside the freehaul area, on a site provided by the	m^3	2500		
Total carried forward						

7. SECONDARY SETTLING TANK - Civil

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SCHEDULED FORMWORK ITEMS				
SD8.2.2		Smooth:				
		Vertical formwork to:				
	6.17	Wall and launder vertical	m²	1500		
	6.18	Centre column vertical	m²	50		
		Battered formwork to:				
	6.19	Discharge Box	m²	5		
		Horizontal formwork to:				
	6.20	Launder Horizontal	m²	150		
	6.21	Centre column horizontal	m²	10		
SD8.2.5		**Narrow widths (up to 300 mm wide):**				
		Different widths in the following ranges:				
	6.22	Over 50 mm and up to 100 mm				
	6.23	Aprons	m	100		
	6.24	Over 200 mm and up to 300 mm to:				
	6.25	Wall footings	m	170		
		Grooves, chases and splays in the following ranges:				
	6.26	Chamfering of SST Launder Wall	m	100		
Total carried forward						

7. SECONDARY SETTLING TANK - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SCHEDULED REINFORCEMENT ITEMS				
SD8.3.1		Mild-steel bars in the following:				
	6.27	Diameters up to 16mm	t	2		
SD8.3.1	6.28	High-tensile steel bars in the following:				
	6.29	Diameters up to 16mm	t	50		
	6.30	Diameters greater than 16mm	t	10		
SD8.3.2		High-tensile welded mesh in the following:				
		SCHEDULED CONCRETE ITEMS				
SD8.4.3		Strength concrete: (to drawings and specification)				
		Class 35 MPa/19 mm concrete in:				
	6.31	Aprons	m^3	20		
	6.32	Centre Column	m^3	5		
	6.33	Centre Column Base	m^3	10		
	6.34	Outside Wall	m^3	150		
	6.35	Floor	m^3	125		
	6.36	Pipe trench	m^3	50		
		Class 20 MPa/19 mm concrete in:				
	6.37	Blinding	m^3	40		
	6.38	Screeds	m^3	30		
	6.39	Subsiol Drain	m^3	60		
		Extra over for the addition of a concrete hardner as specified on the drawings:				
	6.40	Apply concrete hardner to the top 300mm of the structure outside wall	m^3	20		
		Extra-Over :				
	6.41	Xypex Admix C-500 NF - Supply and mix into concrete at rate of 3kg/m^3 of the concrete volume	kg	780		
5.5.1.8	6.42	No-fines Concrete (25mm single grade stone), cement:stone ratio by weight (1:4),	m^3	100		
	6.43	20mm thick screed layer on top of the no-fines (sand-cement mix)	m^2	650		
Total carried forward						

7. SECONDARY SETTLING TANK - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SD8.4.4		Unformed surface finishes:				
		Wood-floated finishes to:				
	6.44	Foundations, Launders & Baffles	m²	200		
		Steel-floated finishes to:				
	6.45	Screeds	m²	600		
	6.46	Power-floated finishes to:				
	6.47	SST Outside wall Crown	m²	50		
8,5		**JOINTS**				
		Expansion joints as detailed on the Drawings				
	6.48	Floor slab Joints. The joint consists of a Sika DR-29 waterbar, 15x10mm two component Polyurethane Sealant (abe Flexithane) with a 150mm high, 15mm wide Aquajoint SPX 200 filler material.	m	300		
	6.49	Joint Slab to Footing Joints. The joint consists of a Sika DR-29 waterbar, 15x10mm two component Polyurethane Sealant (abe Flexithane) with a 300mm high, 15mm wide Aquajoint SPX 200 filler material.	m	100		
	6.50	250 micron green medium density polyethylene dampproof sheeting under floors	m²	600		
SABS 1200DB		**UNDERFLOOR DRAINAGE** Excavation				
		Excavate in all materials for trenches				
	6.51	Exceeding 0,0 m but not exceeding 1,0 m	m³	20		
		Pipelines				
		Supply,handle, lay ,test, including cutting of perforated Kaytech Geopipe or similar sections complete with fittings like couplings, to manufacturer's standard and connection to junction box complete				
	6.52	110mm diam (Main drain)	m	120		
	6.53	65mm diam (Laterals)	m	60		
Total carried forward						

7. SECONDARY SETTLING TANK - Civil

BUILDING WORK

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Drains				
		Natural permeable material in subsoil drainage systems :				
	6.54	Crushed stone of 10 to 19mm obtained from commercial sources, and place around perforated pipes	m³	20		
		Bidim sheeting or similar, approved material, for lining subsoil drainage systems around the crushed stones				
	6.55	Supply, deliver, handle and place Bidim A4	m²	1000		
	6.56	Test flushing of pipe subsoil drains	No.	2		
		SEGMENTED PAVING				
		Earthworks				
	6.57	Hand excavation for footing of kerb	m³	10		
	6.58	Compaction of insitu soil up to 90% MOD	m³	150		
		CONCRETE 20mPA Concrete				
	6.59	Backing haunch at kerb fig. 8B	m³	150		
	6.60	300mm half round drain channel around	m	100		
		Paving Blocks				
	6.61	60mm Concrete interlocking paving	m²	150		
		Supply Items				
	6.62	Pop Up valves (Gereg Type)	no	rate only		
	6.63	Handling of ground water during construction	sum	1		
PSG 7.2.5	**6.64**	Test structure for water tightness	sum	1		
Total carried forward to summary						

7.RAS/WAS PUMPSTATION BUILDING - Civil
Drawing C744-BED-001 **SITE CLEARANCE**

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SANS 1200 C		**SITE CLEARANCE**				
PSC 8.2.1		Clear and grub:				
	7.01	Areas	m^2	250		
8.2.10	7.02	Remove topsoil to nominal depth of 150 mm and stockpile	m^3	50		
Total carried forward						

7.RAS/WAS PUMPSTATION BUILDING - Civil

EARTHWORKS

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Bulk Earthworks				
8.3.2	7.03	a) Excavate in all materials and stockpile	m³	-		
	7.04	b) Shaping of the finished level for storm water protection	m³	100		
PSD 8.3.3		Restricted excavation:				
	7.05	Restricted excavations exceeding 2m not exceeding 4m deep	m³	800		
	7.06	Restricted excavations exceeding 4m not exceeding 6m deep	m³	150		
	7.07	Excavate for sump in all materials, and use for backfill or embankment, or dispose	m³	10		
PSD 8.3.3		Extra over items 7.03 to 7.07 above for :				
	7.08	Hard rock excavation	m³	-		
8.3.5	7.09	Extra excavation in all materials to provide working space around structure	m²	-		
PSD 8.3.10	7.10	Topsoiling	m³	50		
8.3.11		Grassing or other vegetation cover:				
	7.11	Planting of grass cuttings	m²	250		
PSD 8.3.15	7.12	Extra over items 7.03 to 7.09 for disposing of spoil material on a site provided by the Contractor	m³	-		
Total carried forward						

7.RAS/WAS PUMPSTATION BUILDING - Civil

CONCRETE

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
PSDM 8.3.5		Selected layer using material from designated borrow pits or excavations:				
	7.13	G5 Material Compacted to 93% of modified AASHTO density	m^3	45		
PSDM 8.3.17	7.14	Extra over items 147.05 for obtaining material from commercial sources	m^3	45		
SANS 2001 CC1		**CONCRETE (STRUCTURAL)**				
		SCHEDULED FORMWORK ITEMS				
SD8.2.2		Smooth:				
		Vertical formwork to:				
	7.15	Walls	m^2	500		
		Battered formwork to:				
	7.16	Staircase as referred to as per drawing no.	m^2	50		
		Horizontal formwork to:				
	7.17	Roof slab and walkway slab	m^2	150		
	7.18	Ring beams	m^2	-		
SD8.2.5		Narrow widths (up to 300 mm wide): Different widths in the following ranges:				
		Over 50 mm and up to 100 mm				
	7.19	Aprons	m	65		
		Over 200 mm and up to 300 mm to:				
	7.20	Foundation Slab & Walkway Slab	m	80		
Total carried forward						

7.RAS/WAS PUMPSTATION BUILDING - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	7.21	Roof slab	m	50		
	7.22	Ramps	m	20		
		Grooves, chases and splays in the following ranges:				
	7.23	Water Drip groove	m	50		
		Box Outs				
	7.24	Form pockets not exceeding 2 m² in concrete not thicker than 300 mm	no	10		
	7.25	Forming of Electrical Cable trench in Screed 50-100mm deep	m	15		
		SCHEDULED REINFORCEMENT ITEMS				
SD8.3.1		Mild-steel bars in the following:				
	7.26	Diameters up to 12mm	t	1		
SD8.3.1		High-tensile steel bars in the following:				
	7.27	Diameters up to 12mm	t	5		
	7.28	Diameters greater than 12mm	t	7		
SD8.3.2		High-tensile welded mesh in the following:				
	7.29	Mesh ref 245	m²	100		
	7.30	Mesh ref 193	m²	rate only		
	7.31	Mesh ref 395	m²	250		
	7.32	Mesh ref 500	m²	rate only		
Total carried forward						

7.RAS/WAS PUMPSTATION BUILDING - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SCHEDULED CONCRETE ITEMS				
SD8.4.3		Strength concrete: (to drawings and specification)				
		Class 35 MPa/19 mm concrete in:				
	7.33	Aprons	m^3	5		
	7.34	Walls - Sump	m^3	30		
	7.35	Walls - Pumpstation	m^3	50		
	7.36	Floor Slab & Walkway slab	m^3	50		
	7.37	Plinths for Pumps	m^3	5		
		Roof slab	m^3	30		
	7.38	Staircase	m^3	5		
	7.39	Ramps	m^3	5		
	7.40	Extra-Over : Xypex Admix C-500 NF - Supply and mix into concrete at rate of 3kg/m^3 of the concrete volume	kg	45		
	7.41	No Fines Concrete (25mm single grade stone)	m^3	30		
		Casting In of pipes in Concrete walls not Place, Maintain in place and casting of concrete				
	7.42	Dia. 450NB Puddle pipes - Suction	no.	2		
	7.43	Dia. 400NB Puddle pipes - Delivery	no.	1		
	7.44	Dia. 50NB Puddle pipe for drain pump	no.	1		
	7.45	Dia. 110mm uPVC pipe sleeves for Electrical cables	no.	3		
		Strength concrete: (to drawings and specification) Class 20 MPa/19 mm concrete in:				
	7.46	Screeding - Pumpstation floor	m^3	6		
	7.47	Screeding - Pumpstaion Roof	m^3	5		
	7.48	Benching - Sump	m^3	7		
Total carried forward						

7.RAS/WAS PUMPSTATION BUILDING - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Steel-floated finishes to:				
SD8.4.4		**Unformed surface finishes:**				
		Wood-floated finishes to:				
	7.49	Ramps	m²	35		
	7.50	Top of Pumpstation and Sump floor	m²	130		
	7.51	Top of Concrete walls	m²	20		
	7.52	Top of Concrete Roof	m²	110		
	7.53	Aprons	m²	60		
		Power-floated finishes to:				
	7.54	Roof slab	m²	110		
	7.55	Surface beds	m²	130		
SD8.4.8	7.56	Screeds				
	7.57	Roof water proofing: Sika' sealoflex	m²	110		
8.5		**JOINTS**				
	7.58	Expansion joints as detailed on the				
	7.59	Between surface beds and brick walls	m	10		
	7.60	Between surface beds	m	20		
		Formed construction joints as detailed on the Drawings				
	7.61	Between Apron Slabs	m	30		
		Saw joints as detailed on the Drawings				
	7.62	Between Apron Slabs	m	30		
		TESTS				
PSG 7.2.5	7.63	water tightness of structure	Sum	1		
Total carried forward						

7.RAS/WAS PUMPSTATION BUILDING - Civil

STRUCTURAL STEELWORK

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Drawing No: C743-SO-002				
8.3.1		Supply and fabrication:				
	7.64	Preparation of shop detail drawings	Sum	1		
	7.65	Supply and fabrication of steelwork:	Sum	1		
		Hot rolled sections:				
	7.66	Universal beams	t	1		
8.3.2		Delivery to Site, Storage and Installation:				
	7.67	All items	t	1		
	7.68	All items	t	1		
8.3.4		Erection bolts:				
	7.69	All diameters Gr 8.8	kg	25		
		Handrails				
		Supply, fabricate, handle, deliver to site and install:				
	7.70	Mild Steel, Heavy Coastal Galv. Hand and Knee rails - c/w Top mount stanchions, bends, closures and S/S anchor bolts	m	25		
SANS 1200 HC		**CORROSION PROTECTION OF STRUCTURAL STEELWORK**				
		Drawing No:				
8.2.1	7.71	Surface dressing & repairs at place of	t	2		
8.2.2	7.72	Transport	t	2		
8.2.3	7.73	Surface preparation and coating				
		In the shop: To paint system 1				
	7.74	Universal beams	m²	15		
	7.75	On Site: To paint system 1	m²	15		
	7.76	Dia 400mm Puddle pipe Mild Steel -	no.	1		
	7.77	Dia 450mm Puddle pipe 304 S/Steel -	no.	2		
Total carried forward						

7.RAS/WAS PUMPSTATION BUILDING - Civil

BUILDING WORK

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		MASONRY				
PD.01		Brick Work:				
	7.78	230 mm thick, outside face: face brick extra (fbx), topaz satin, stretcher bond. Inside face: non face brick extra (nfx). stretcher bond	m²	110		
	7.79	230 mm thick, non face brick extra (nfx), stretcher bond	m²	110		
PD.09		Miscellaneous Items:				
	7.80	"Brickforce BK 150" or similar approved, built into joints of 220mm brickwork walls (measured net)	m	410		
		WATERPROOFING				
PD.09		Miscellaneous Items:				
	7.81	250 micron green medium density polyethylene dampproof sheeting under floors	m²	150		
	7.82	375 micron embossed black polyethylene dampproof course in walls and sills	m²	50		
		Ant poison, aldrin emulsifiable concentrates solution to SABS 618 spread at a rate recommended by the manufacturer:				
	7.83	In bottom of pad foundations, strip footings and floors	m²	150		
		Torch-on Derbygum to Roof	m²	110		
		DOORS, WINDOWS, GLAZING, IRONMONGARY				
PD.04		Doors and Windows:				
	7.84	Door Type D1 complete as per drawing: C743-SO-005	No.	1		
	7.85	Window Type W1 complete as per	No.	4		
Total carried forward						

7.RAS/WAS PUMPSTATION BUILDING - Civil

BUILDING WORK

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		PLASTERING				
PD.02		Plaster Work:				
	7.86	15 mm thick, steel-float finish	m²	110		
		PAINTWORK				
PD.09		Miscellaneous Items:				
		Items measured by area:				
		Paintwork to Walls:				
	7.87	Undercoat and two coats "PLASCON. COLOUR LIGHT STONE EC68"	m²	220		
		Paintwork to Ceilings:				
	7.88	Undercoat and two coats "Plascon Velvaglo' colour 'White' (VLO 0)	m²	110		
		FIRE AND SAFETY				
PD.09		Miscellaneous Items:				
		Items measured by number:				
	7.89	10 kg CO2 fire extinguisher	No.	1		
	7.90	9 kg DCP fire extinguisher	No.	1		
	7.91	Weather proof extinguisher cabinets	No.	2		
		Photoluminescent signs with pictograms screwed or plugged as shown on Drawing				
	7.92	Sign E6	No.	2		
	7.93	Sign E (Breathing mask)	No.	2		
	7.94	Sign F13	No.	4		
Total carried forward to summary						

8. DISINFECTION CHANNEL - Civil
Drawing C744-GAD-001

SITE CLEARANCE

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SANS 1200 C		**SITE CLEARANCE**				
PSC 8.2.1		Clear and grub:				
	8.01	Areas	m^2	332		
8.2.10	8.02	Remove topsoil to nominal depth of 150 mm and stockpile	m^3	50		
Total carried forward						

8. DISINFECTION CHANNEL - Civil

EARTHWORKS

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SANS 1200 D		**EARTHWORKS**				
		Bulk Earthworks				
8.3.2	8.03	a) Excavate in all materials and stockpile	m³	-		
	8.04	b) Shaping of the finished level for storm water protection	m³	-		
PSD 8.3.3		Restricted excavation:				
	8.05	Excavate for sump in all materials, and use for backfill or embankment, or dispose	m³	800		
PSD 8.3.3		Extra over items 8.03 to 8.05 above for :				
	8.06	Hard rock excavation	m³	160		
8.3.5	8.07	Extra excavation in all materials to provide working space around structure	m²	120		
PSD 8.3.10	8.08	Topsoiling	m³	50		
8.3.11		Grassing or other vegetation cover:				
	8.09	Planting of grass cuttings	m²	520		
PSD 8.3.15	8.10	Extra over items 8.03 to 8.07 for disposing of spoil material on a site provided by the Contractor	m³	520		
Total carried forward						

8. DISINFECTION CHANNEL - Civil

EARTHWORKS

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
PSDM 8.3.5		Selected layer using material from designated borrow pits or excavations:				
	8.11	G5 Material Compacted to 93% of modified AASHTO density	m³	20		
PSDM 8.3.17	8.12	Extra over items 147.05 for obtaining material from commercial sources	m³	20		
SANS 2001 CC1		**CONCRETE (STRUCTURAL)**				
		SCHEDULED FORMWORK ITEMS				
SD8.2.2		Smooth:				
		Vertical formwork to:				
	8.13	Walls	m²	900		
		Battered formwork to:				
	8.14	Staircase as referred to as per drawing	m²	-		
		Horizontal formwork to:				
	8.15	Roof slab	m²	-		
	8.16	Ring beams	m²	-		
SD8.2.5		Narrow widths (up to 300 mm wide): Different widths in the following ranges:				
		Over 50 mm and up to 100 mm				
	8.17	Aprons	m	80		
		Over 200 mm and up to 300 mm to:				
	8.18	Foundation Slab	m	40		
Total carried forward						

8. DISINFECTION CHANNEL - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Grooves, chases and splays in the following ranges:				
	8.19	Water Drip groove	m	-		
		Box Outs				
	8.20	Form pockets not exceeding 2 m² in concrete not thicker than 300 mm	no	2		
	8.21	Forming of Electrical Cable trench in Screed 50-100mm deep	m	15		
		SCHEDULED REINFORCEMENT ITEMS				
SD8.3.1		Mild-steel bars in the following:				
	8.22	Diameters up to 12mm	t	2		
SD8.3.1		High-tensile steel bars in the following:				
	8.23	Diameters up to 12mm	t	15		
	8.24	Diameters greater than 12mm	t	5		
SD8.3.2		High-tensile welded mesh in the following:				
	8.25	Mesh ref 245	m²	rate only		
		SCHEDULED CONCRETE ITEMS				
SD8.4.3		Strength concrete: (to drawings and				
		Class 35 MPa/19 mm concrete in:				
	8.26	Aprons	m³	-		
	8.27	Walls - Sump	m³	100		
	8.28	Walls - Pumpstation	m³	0		
	8.29	Floor Slab	m³	70		
	8.30	Plinths for Pumps	m³	5		
	8.31	Extra-Over : Xypex Admix C-500 NF - Supply and mix into concrete at rate of 3kg/m³ of the concrete volume	kg	300		
	8.32	No Fines Concrete (25mm single grade stone)	m³	40		
Total carried forward						

8. DISINFECTION CHANNEL - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Casting In of pipes in Concrete walls not exceeding 300mm thk. Not exceeding wall height of 4m Place, Maintain in place and casting of concrete				
	8.33	Dia. 700NB Puddle pipe - Mild Steel, Epoxy Painted c/w 1000/3 Flange and Pussdle Flange	no.	2		
		Strength concrete: (to drawings and specification) Class 20 MPa/19 mm concrete in:				
	8.34	Screeding - Pumpstation floor	m²	15		
		Steel-floated finishes to:				
SD8.4.4		**Unformed surface finishes:**				
		Wood-floated finishes to:				
	8.35	Ramps and/or Sloping floors	m²	15		
	8.36	Top of Pumpstation and Sump floor	m²	225		
PSG 7.2.5	8.37	water tightness of structure	Sum	1		
8.5		**JOINTS**				
		Expansion joints as detailed on the				
	8.38	Between surface beds and brick walls	m	-		
	8.39	Between surface beds	m	50		
		Saw joints as detailed on the Drawings				
	8.40	Between Apron Slabs	m	-		
		WATERPROOFING				
PD.09		Miscellaneous Items:				
		Items measured by area:				
	8.41	250 micron green medium density polyethylene dampproof sheeting under floors	m²	80		
		Supply, Deilver, and Install				
SANS 1200H	8.42	Mild Steel, HDG Haindrails	m	65		
Total carried forward to summary						

9. CHLORINE DOSING BUILDING - Civil
Drawing C744-GBD-001 to 009

SITE CLEARANCE

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SANS 1200 C		**SITE CLEARANCE**				
PSC 8.2.1		Clear and grub:				
	9.01	Areas	m^2	600		
8.2.10	9.02	Remove topsoil to nominal depth of 150 mm and stockpile	m^3	100		
Total carried forward						

9. CHLORINE DOSING BUILDING - Civil

EARTHWORKS

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SANS 1200 D		**EARTHWORKS**				
PSD 8.3.3		Restricted excavation:				
	9.03	Excavate for column footings in all materials, and use for backfill or embankment, or dispose	m³	20		
	9.04	Excavate for wall strip footings in all materials, and use for backfill or embankment, or dispose	m³	40		
PSD 8.3.3		Extra over items 9.01 to 9.05 above for :				
	9.05	Hard rock excavation	m³	10		
8.3.5	9.06	Extra excavation in all materials to provide working space around structure	m²	60		
PSD 8.3.10	9.07	Topsoiling	m³	100		
8.3.11		Grassing or other vegetation cover:				
	9.08	Planting of grass cuttings	m²	170		
PSD 8.3.15	9.09	Extra over items 9.01 and 9.05 for disposing of spoil material outside the freehaul area, on a site provided by the	m³	100		
Total carried forward						

9. CHLORINE DOSING BUILDING - Civil

EARTHWORKS (ROADS, SUBGRADE)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
PSDM 8.3.5		Selected layer using material from designated borrow pits or excavations:				
	9.10	G5 Material Compacted to 93% of modified AASHTO density	m³	80		
PSDM 8.3.17	9.11	Extra over items 9,10 for obtaining material from commercial sources	m³	80		
Total carried forward						

9. CHLORINE DOSING BUILDING - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SCHEDULED FORMWORK ITEMS				
SD8.2.2		Smooth:				
		Vertical formwork to:				
	9.12	Columns	m²	80		
		Battered formwork to:				
	9.13	Corbel heads as referred to as per drawing no.	No.	8		
		Horizontal formwork to:				
	9.14	Roof slab	m²	130		
	9.15	Ring beams	m²	15		
SD8.2.5		Narrow widths (up to 300 mm wide):				
		Different widths in the following ranges:				
		Over 50 mm and up to 100 mm				
	9.16	Aprons	m	60		
		Over 200 mm and up to 300 mm to:				
	9.17	Column footings	m	40		
	9.18	Strip footings	m	90		
	9.19	Ring beams	m	140		
	9.20	Roof slab	m	60		
	9.21	Ramps	m	40		
		Grooves, chases and splays in the following ranges:				
	9.22	Water Drip groove	m	60		
Total carried forward						

9. CHLORINE DOSING BUILDING - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SCHEDULED REINFORCEMENT ITEMS				
SD8.3.1		Mild-steel bars in the following:				
	9.23	Diameters up to 12mm	t	1,5		
SD8.3.1		High-tensile steel bars in the following:				
	9.24	Diameters up to 12mm	t	7		
	9.25	Diameters greater than 12mm	t	7		
SD8.3.2		High-tensile welded mesh in the following:				
	9.26	Mesh ref 245	m²	140		
	9.27	Mesh ref 193	m²	50		
		SCHEDULED CONCRETE ITEMS				
SD8.4.3		Strength concrete: (to drawings and specification)				
		Class 30 MPa/19 mm concrete in:				
	9.28	Aprons	m³	4		
	9.29	Column footings	m³	7		
	9.30	Wall strip footings	m³	14		
	9.31	Concrete columns	m³	6		
	9.32	Ring beams	m³	9		
	9.33	Roof slab	m³	51		
	9.34	Surface beds	m³	30		
	9.35	Ramps	m³	20		
SD8.4.4		Unformed surface finishes:				
		Wood-floated finishes to:				
	9.36	Ramps	m²	50		
Total carried forward						

9. CHLORINE DOSING BUILDING - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	9.37	Top of base and strip footings	m²	70		
		Steel-floated finishes to:				
	9.38	Corbel heads	m²	2		
	9.39	Aprons	m²	50		
		Power-floated finishes to:				
	9.40	Roof slab	m²	180		
	9.41	Surface beds	m²	140		
SD8.4.8		Screeds				
	9.42	Roof water proofing: Sika' sealoflex professional (or similar approved) flexible, fibre reinforced waterproofing (applied in accordance with manufacturers specifications) to:	m²	180		
SD8.5		**JOINTS**				
		Expansion joints as detailed on the Drawings				
	9.43	Between surface beds and brick walls	m	72		
	9.44	Between surface beds and ramps	m	10		
		Formed construction joints as detailed on the Drawings				
	9.45	Between surface beds	m	15		
		Saw joints as detailed on the Drawings				
	9.46	Between surface beds	m	31		
Total carried forward						

9. CHLORINE DOSING BUILDING - Civil

STRUCTURAL STEELWORK

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
8.3.1		Supply and fabrication:				
	9.47	Preparation of shop detail drawings	Sum	1		
		Supply and fabrication of steelwork:				
		Hot rolled sections:				
	9.48	Universal beams	t	2		
	9.49	Structural hollow sections	t	1		
	9.50	450*4 mm Flat Plate (Folded)	t	-		
	9.51	Cast in angle	t	-		
8.3.2		Delivery to Site:				
		Normal delivery:				
	9.52	All items	t	2		
8.3.3		Erection on Site:				
	9.53	All items	t	2		
8.3.4		Erection bolts:				
	9.54	All diameters Gr 8.8	kg	50		
8.2.1	9.55	Surface dressing and repairs at place of fabrication	t	2		
8.2.2	9.56	Transport	t	2		
8.2.3		Surface preparation and coating application:				
		In the shop: To paint system 1				
	9.57	Universal beams	m²	32		
	9.58	Structural hollow sections	m²	0		
	9.59	450*4 mm Flat Plate (Folded)	m²	5		
	9.60	On Site: To paint system 1	m²	38		
Total carried forward						

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		MASONRY				
PD.01		Brick Work:				
	9.61	230 mm thick, outside face: face brick extra (fbx), topaz satin, stretcher bond. Inside face: non face brick extra (nfx). stretcher bond	m²	280		
	9.70	230 mm thick, non face brick extra (nfx), stretcher bond	m²	68		
PD.09	9.80	Miscellaneous Items:				
		Items measured by length:				
	9.81	"Brickforce BK 150" or similar approved, built into joints of 220mm brickwork walls (measured net)	m	1012		
	9.82	Brick on edge with single precast 110 x 65 mm Lintel above Y8 reinforcing bars (2 x at lintel level and 1x at centre 4 brick courses higher. Brick force every second layer for 6 courses	m	23		
	9.83	Brick on edge to form window sill	m	9		
PD.09		Miscellaneous Items:				
		Items measured by number:				
	9.84	Hoop iron strap fixed onto concrete column and built into brickwork as per Drawing no.	No.	413		
		WATERPROOFING				
PD.09	9.85	Miscellaneous Items:				
		Items measured by area:				
	9.86	250 micron green medium density polyethylene dampproof sheeting under floors	m²	140		
Total carried forward						

9. CHLORINE DOSING BUILDING - Civil

BUILDING WORK

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	9.87	375 micron embossed black polyethylene dampproof course in walls and sills	m²	16		
	9.88	Ant poison, aldrin emulsifiable concentrates solution to SABS 618 spread at a rate recommended by the manufacturer:				
	9.89	In bottom of pad foundations and strip footings	m²	70		
	9.90	Under floors	m²	140		
		DOORS, WINDOWS, GLAZING, IRONMONGARY				
PD.04		Doors and Windows:				
	9.91	Door Type D1 complete as per drawing	No.	3		
	9.92	Door Type D2 complete as per drawing	No.	2		
	9.93	Door Type D3 complete as per drawing	No.	1		
	9.94	Window Type W1 complete as per drawing	No.	6		
	9.95	Window Type W2 complete as per drawing	No.	3		
		PLASTERING				
PD.02		Plaster Work:				
	9.95	15 mm thick, steel-float finish	m²	416		
Total carried forward						

9. CHLORINE DOSING BUILDING - Civil

BUILDING WORK

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		PAINTWORK				
PD.09		Miscellaneous Items:				
		Items measured by area:				
		Paintwork to Walls:				
	9.96	Undercoat and two coats "Plascon Velvaglo' colour 'Clay Stone' (VLO 083)	m²	420		
		Paintwork to Ceilings:				
	9.97	Undercoat and two coats "Plascon Velvaglo' colour 'White' (VLO 0)	m²	180		
		FIRE AND SAFETY				
PD.09	9.98	Miscellaneous Items:				
		Items measured by number:				
	9.99	10 kg CO2 fire extinguisher	No.	1		
	9.100	9 kg DCP fire extinguisher	No.	1		
	9.101	Weather proof extinguisher cabinets	No.	1		
		Photoluminescent signs with pictograms screwed or plugged as shown on Drawing no.				
	9.102	Sign E6	No.	2		
	9.104	Sign E (Breathing mask)	No.	2		
	9.105	Sign E (Safety glasses)	No.	2		
	9.106	Sign F13	No.	4		
		PLUMBING, DRAINAGE SANITARY FITTINGS				
PD.09		Miscellaneous Items:				
		Items measured by number:				
	9.107	"Spraydrench" Free-standing Face and Eye Wash Station, complete with all plumbing to connect to HDPE DN 25 supply line. Pushplate-operated (EW 111 SH)	No.	1		
Total carried forward to summary						

10. DEWATERING BUILDING - Civil

SITE CLEARANCE

item REFERS	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		DE-WATERING BUILDING : Drawing C744-EAD-001 and 002				
		SUPPLEMENTARY PREAMBLE				
	SANS 1200 C	**SITE CLEARANCE**				
10,01	8.2.1	Clear and grub	m^2	300		
	SANS 1200 D	**EARTHWORKS**				
	8.3.1	**Site Preparation**				
10,02	8.3.1.2	Remove topsoil to a nominal depth of 150mm, stockpile and maintain	m^2	300		
	8.3.2	**Excavations**				
10,03		a) Excavate in all materials and use for embankment or backfill or dispose, as ordered, and compact in 150mm layers to 93% mod AASHTO	m^3	200		
10,04		(a) Excavate for restricted foundations, footings and pipe trenches in all materials and use for backfill or embankment or dispose, and compact in 150mm layers to 93% mod AASHTO	m^3	15		
10,05	8.3.4	Import from a commercial source G3 material, deliver, place & compact to 98% mod AASHTO in layers not exceeding 150mm thick	m^3	120		
10,06	8.3.4	Import from a commercial source G3 material, deliver, stabilize with 4% CEMII 32,5N cement, place & compact to 98% mod AASHTO in layers not exceeding 150mm thick	m^3	-		
		(b) Extra-over for:				
10,07		(2) Hard rock excavation (provisional)	m^3	-		
	8.3.6	**Overhaul**				
10,08		Extra over all excavations and filling for haulage in excess of the 1km freehaul distance, measured one way to the nearest 0.10km, long overhaul	m3/km	-		
	SANS 1200G	**CONCRETE (STRUCTURAL)**				
	8,2	**SCHEDULED FORMWORK ITEMS**				
	8.2.2	**Smooth**				
10,09		Vertical sides of bases, footings, foundation walls etc.	m^2	50		
	8.2.5	**Narrow widths not exceeding 300mm wide**				
10,10		Vertical narrow widths	m	80		
Total carried forward						

10. DEWATERING BUILDING - Civil

CONCRETE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	8.2.6	**Box Out Holes/Form Voids**				
		b) Small, other than circular, of diameter up to and including 0.1m2				
10,11		i) 0m to 0.5m deep	No	2		
	8,3	**SCHEDULED REINFORCEMENT ITEMS**				
	8.3.1	**Steel Bars**				
10,12		High-tensile reinforcement REF.395 MESH	m^2	200		
10,13		High-tensile reinforcement REF.500 MESH	m^2	0		
10,14		High-tensile reinforcement <12mm Dia	t	3		
	8,4	**SCHEDULED CONCRETE ITEMS**				
	8.4.2	**Blinding Layer in Class 20/13mm concrete**				
10,15		Minimum 50mm thickness, and leave ready to receive plastic sheet bond breaker (elsewhere measured)	m^2	250		
		Strength Concrete - Grade 35/19mm				
10,16		In Foundations	m^3	25		
10,17		In sloping bunded area floor	m^3	0		
10,18		In horizontal floor slabs	m^3	50		
10,19		Extra over concrete for casting against face of excavation	m^2	10		
		Cement Screed				
10,20		Average 50mm thick cement screed to falls/cross falls	m^3	10		
	8.4.4	**Unformed Surface Finishes**				
10,21		(a) Wood floated finish	m^2	200		
10,22		(b) Steel floated finish	m^2	20		
Total carried forward						

10. DEWATERING BUILDING - Civil

JOINTS

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	8,5	**JOINTS**				
10,23		Expansion joint (Jointex-IS 100) 150mm high/wide, consisting of 10mm softboard sealed with 15x15mm polysulphide sealer	m	78		
	8.2.12	**Concrete in Encasement to Pipes**				
10,24		Grade 30/19 conrete□	m^3	2		
		Subsoil Drain				
10,25		160mm Core drain pipe (subsoil)	m	10		
		BRICKWORK				
10,26		230 Brickwall with 30mm thk Plaster on both sides	m^2	-		
	8,7	**GROUTING (Non Shrink Grout)**				
10,27		a) Under base plates	m^3	0		
10,28		b) For holding down bolt pockets, etc.	m^3	0		
	8,8	**METAL WORK**				
10,29		**Rates are to include for supply and manufacture of steel roof structure incl. Columns, rafters, purlins, crawl beam with 500kg load capacity, HD bolts, templates, sleeves or pockets formed in concrete for grouting (measured elsewhere) and casting into concrete as work proceeds, including all preparation, cleaning and finishing as per tender drawing no.:**	No.	1		
10,30		Erection of complete dehydrator building including hiring of mobile crane	Sum	1		
10,31		0,5mm IBR Roofing	m^2	200		
		WATERPROOFING				
10,32		250um Plastic sheet bondbreaker placed on top of blinding layer	m^2	200		
		SUNDRY ITEMS				
10,33		Pipe installations (75mm Sleave, 90mm HDPE 25mm HDPE, 160mm PVC diameter pipes into openings including pipes, fittings and grout)(all pipes measured elese where)	Sum	1		
10,34		Construct 1400x1400x0.5m drainage sump with 100mm thk concrete slab	Sum	1		
Total carried forward to summary						

11.1 DIVISION BOX 2- Civil

SITE CLEARANCE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200 C	**SITE CLEARANCE**				
	PSC 8.2.1	Clear and grub:				
11.01		Areas	m²	70		
11.02	8.2.10	Remove topsoil to nominal depth of 150 mm and stockpile	m³	10		
	SANS 1200 D	**EARTHWORKS (SMALL WORKS)**				
	8.3.3	**Excavations**				
		Excavate for foundations, footings and trenches in all materials and use for backfill or embankment or dispose				
11,03		Hand excavation	m³	5		
11,04	8.3.3	Restricted excavations not exceeding 2m deep	m³	130		
11,05	8.3.3	Restricted excavations exceeding 2m not exceeding 4 deep (Provisional Rate)	m³	30		
11,06		Dispose of surplus excavated material	m³	-		
		Extra-over for				
11,07		Intermediate excavation.	m³	-		
11,08		Hard rock excavation.	m³	3		
	SABS 1200G	**CONCRETE (SMALL WORKS)**				
		FORMWORK				
		VERTICAL				
	8.2.1	**Rough, curved**				
11,09		Walls	m²	-		
	8.2.2	**Smooth**				
11,10		Walls	m²	180		
11,11		**HORIZONTAL**				
	8.2.2	**Smooth**				
11,12		Soffit of slab	m²	-		
	8.2.5	**Narrow Width**				
		Smooth				
11,13		NARROW WIDTHS (up to 300mm wide)	m	10		
Total carried forward to summary						

11.1 DIVISION BOX 2- Civil

CONCRETE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	8.2.6	**BOX OUT HOLES / VOIDS.**				
		Small, circular, of diameter up to and including 0.35m.				
11,14		Over 0m and up to 0.5m deep.	No	5		
	8,3	**REINFORCEMENT**				
	8.3.1	**Mild steel bars**				
11,15		Mild steel reinforcement in bars not exceeding 32mm diameter	kg	200		
	8.3.1	**High tensile steel bars**				
11,16		High-tensile steel reinforcement in bars not exceeding 32mm in diameter	kg	2 000		
	8,4	**CONCRETE**				
11,17	8.4.2	**Blinding layer, 15Mpa/19mm** 75 mm thick under footings and floors	m²	70		
11,18		Benching in Sloped Floors	m³	3		
	8.4.3	**Strength concrete, 35MPa/19mm**				
11,19		Floor slabs	m³	10,0		
11,20		45° walls	m³	-		
11,21		Walls	m³	10		
	8.4.4	**UNFORMED SURFACE FINISHES**				
		Steel floated finish				
11,22		Steel floated finish (Degree I Accuracy) on top of walls circular on plan exceeding 150mm but not exceeding 300mm wide	m²	6		
		Wood floated finish				
11,23		Channels and outlets	m²	-		
11,24		Floors	m²	30		
11,25		Sloping floors	m²	-		
Total carried forward						

11.1 DIVISION BOX 2- Civil

CONCRETE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		MISCELLANEOUS ITEMS				
11,26		Test for watertightness	SUM	1		
11,27		60mm Concrete Interlocking paving blocks laid on 150mm thck compacted layerworks	m²	-		
11,28		Concrete kerbing c/w 150x150mm toe cast around paved walkway	m³	-		
11,29		Casting in of Puddle Pipes up to Dia 900mm pipe	No	3		
		WATERPROOFING				
11,30		250µm waterprofing membrane between Blinding and Floor slab	m²	40		
11,31	SANS 1200H	Ball type Mild Steel Heavy Costal Galv. Handrails and Knee	m	25		
Total carried forward to summary						

11.2 DIVISION BOX 3- Civil

SITE CLEARANCE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200 C	**SITE CLEARANCE**				
	PSC 8.2.1	Clear and grub:				
11.01		Areas	m²	40		
11.02	8.2.10	Remove topsoil to nominal depth of 150 mm and stockpile	m³	10		
	SANS 1200 D	**EARTHWORKS (SMALL WORKS)**				
	8.3.3	**Excavations**				
11,03		Excavate for foundations, footings and trenches in all materials and use for backfill or embankment or dispose	m³	-		
11,04		Hand excavation	m³	5		
11,05	8.3.3	Restricted excavations not exceeding 2m deep	m³	80		
11,06	8.3.3	Restricted excavations exceeding 2m not exceeding 4m deep (Provisional Rate)	m³	70		
11,05		Dispose of surplus excavated material	m³	130		
11,06		Extra-over for	m³			
11,05		Intermediate excavation.	m³	-		
11,06		Hard rock excavation.	m³	10		
	SABS 1200G	**CONCRETE (SMALL WORKS)**				
		FORMWORK				
		VERTICAL				
11,07	8.2.1	**Rough, curved**				
11,08		Walls	m²	-		
11,09	8.2.2	**Smooth**				
11,10		Walls	m²	150		
		HORIZONTAL				
11,11	8.2.2	**Smooth**				
11,12		Soffit of slab	m²	-		
Total carried forward						

11.2 DIVISION BOX 3- Civil

CONCRETE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	8.2.5	**Narrow Width**				
		Smooth				
11,13		NARROW WIDTHS (up to 300mm wide)	m	30		
	8.2.6	**BOX OUT HOLES / VOIDS.**				
		Small, circular, of diameter up to and including 0.9m.				
		Over 0m and up to 0.5m deep.	No	4		
	8,3	**REINFORCEMENT**				
11,14	8.3.1	**Mild steel bars**	kg	200		
		Mild steel reinforcement in bars not exceeding 32mm diameter				
	8.3.1	**High tensile steel bars**				
11,15		High-tensile steel reinforcement in bars not exceeding 32mm in diameter	kg	2 000		
	8,4	**CONCRETE**				
11,16	8.4.2	**Blinding layer, 15MPa/19mm** 75 mm thick under footings and floors				
11,17		Benching in Sloped Floors	m³	4		
	8.4.3	**Strength concrete, 35MPa/19mm**				
11,18		Floor slabs	m³	5		
		45° walls	m³	-		
		Walls	m³	15		
	8.4.4	**UNFORMED SURFACE FINISHES**				
		Steel floated finish				
11,19		Steel floated finish (Degree I Accuracy) on top of walls circular on plan exceeding 150mm but not exceeding 300mm wide	m²	3		
		Wood floated finish				
11,20		Channels and outlets		-		
11,21		Floors		20		
11,22		Sloping floors		10		
Total carried forward						

11.2 DIVISION BOX 3- Civil

CONCRETE

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		MISCELLANEOUS ITEMS				
11,23		Test for watertightness	SUM	1		
11,24		230 Brickwall with 30mm thk Plaster on both sides	m²	10		
11,25		Sand fill	m³	15		
11,26		Casting in of Puddle Pipes up to Dia 900mm pipe	No	4		
		WATERPROOFING				
11,27		250µm waterprofing membrane between Blinding and Floor slab	m²	20		
11,28	SANS 1200H	Ball type Mild Steel Heavy Costal Galv. Hand and knee rails	m	20		
Total carried forward to summary						

12. INTERCONNECTING PIPEWORK - Civil

SITE CLEARANCE

ITEM No.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Removal of topsoil 150mm deep	m^2	7500		
		Restricted Excavation				
	8.3.2	Excavate in all materials for pipe trenches, backfill, compact and dispose of surplus material for:				
12,01		Pipes up to 300 mm dia				
		Over and Up to				
12,02		0,5 m 1,0 m	m	-		
12,03		1,0 m 1,5 m	m	150		
12,04		1,5 m 2 m	m	50		
		Pipes from 350 mm dia up to 500 mm dia				
		Over and Up to				
12,05		0,5 m 1,0 m	m	-		
12,06		1,0 m 1,5 m	m	50		
12,07		1,5 m 2,0 m	m	100		
12,08		2,0 m 2,5 m	m	100		
12,09		2,5 m 3,0 m	m	50		
		Pipes from 550 mm dia up to 800 mm dia				
		Over and Up to				
12,10		0,5 m 1,0 m	m	-		
12,11		1,0 m 1,5 m	m	100		
12,12		1,5 m 2,0 m	m	200		
12,13		2,0 m 2,5 m	m	100		
12,14		2,5 m 3,0 m	m	50		
		Pipes from 850 mm dia up to 1350 mm dia				
		Over and Up to				
12,15		0,5 m 1,0 m	m	-		
12,16		1,0 m 1,5 m	m	-		
12,17		1,5 m 2,0 m	m	600		
12,18		2,0 m 2,5 m	m	1800		
12,19		2,5 m 3,0 m	m	600		
		Extra-over Items 12,01 and 12,19 for hard rock	m^3	800		
12,20		Extra-over Item 12,01 and 12,19 to form embankments for Trench	m^3	1200		
Total carried forward						

12. INTERCONNECTING PIPEWORK - Civil

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	8.3.3	**Excavation ancillaries**				
12,21	8.3.3.1	Backfill from other necessary excavation	m³	-		
12,22	8.3.3.3	Additional compaction for trenches subject to traffic loads	m³	600		
12,22	8.3.2	Excavate and dispose of unsuitable material from trench bottom	m³	1600		
12,23		Compaction of in-situ material to 90% of MAMDD to depth of 150 mm	m²	1300		
12,24		Temporary stockpiling of wet material from trench excavations	m³	6400		
	SANS 1200 LB	**Bedding**				
	8.2.1	Provision of bedding from:				
		Trench excavation:				
12,25		Selected granular material	m³	850		
12,26		Selected fill material	m³	2000		
	8.2.2	**From other sources on site:**				
12,27		Selected granular material	m³	800		
12,28		Selected fill material	m³	1900		
	8.2.2.3	**Extra-Over for Sourcing Commercial sources:**				
12,29		Selected granular material	m³	1700		
12,30		Selected fill material	m³	2400		
	SANS 1200 LB	**MEDIUM PRESSURE PIPELINES**				
	8.2.1	**Supply, lay, joint, bed and test pipes with flexible joints:**				
		uPVC Class 9 c/w spigot & socket				
		160 mm dia	m	180		
12,31		200 mm dia	m	rate only		
12,32		250 mm dia	m	rate only		
12,33		315 mm dia	m	rate only		
12,34		355 mm dia	m	24		
12,35		400 mm dia	m	24		
12,36		450mm Dia	m	110		
12,37		500mm dia	m	12		
12,38		600mm dia	m	rate only		
Total carried forward						

12. INTERCONNECTING PIPEWORK - Civil

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	8.2.1	**Supply, lay, joint, bed and test pipes with flexible joints:**				
12,39		**uPVC Class 12 c/w spigot & socket**				
12,40		160 mm dia	m	rate only		
12,41		200 mm dia	m	rate only		
12,42		250 mm dia	m	rate only		
12,43		315 mm dia	m	18		
12,44		355 mm dia	m	rate only		
12,45		450mm Dia	m	18		
12,46		500mm dia	m	rate only		
12,47		600mm dia	m	rate only		
	8.2.1	**Supply, lay, joint, bed and test pipes with flexible joints:**				
		HPDE PN10 PE100				
12,78		50 mm dia	m	50		
12,49		80 mm dia	m	50		
12,50		500mm dia	m	30		
12,51		630mm dia	m	180		
12,52		800 mm dia	m	150		
12,53		900mm dia	m	100		
	8.2.1	**Supply, lay, joint, bed and test pipes with flexible joints:** **6M Mild Steel Pipes with 6mm Wall Thickness to SABS 719 c/w 1000/3 Flanged Both Ends painted with Carboguard 891za**				
12,54		150 mm dia	No	1		
12,55		200 mm dia	No	1		
12,56		300 mm dia	No	rate only		
12,57		350 mm dia	No	rate only		
12,58		400 mm dia	No	6		
12,59		450 mm dia	No	rate only		
12,6		500 mm dia	No	12		
12,61		600 mm dia	No	2		
12,62		700 mm dia	No	8		
	8.2.1	**Mild Steel Pipe 6mm Wall Thickness to SABS 719 - Puddle pipe 1000mm long c/w puddle flange - plain ends, painted with Carboguard 891za**				
12,63		200 mm dia	No	4		
12,64		250 mm dia	No	rate only		
12,65		315 mm dia	No	rate only		
12,66		355 mm dia	No	rate only		
12,67		400 mm dia	No	4		
12,68		450 mm dia	No	rate only		
12,69		500 mm dia	No	8		
12,70		600 mm dia	No	16		
12,71		800 mm dia	No	14		
12,72		900 mm dia	No	10		
12,73		1000 mm dia	No	rate only		
Total carried forward						

12. INTERCONNECTING PIPEWORK - Civil

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Supply, deliver, and install				
	8.2.1	**Mild Steel Pipes with 6mm Wall Thickness to SABS 719 - 45º bend Flanged both Ends with 1000/3 Flange, 2HT, painted with Carboguard 891za**				
12,74		200 mm dia	No	rate only		
12,75		250 mm dia	No	2		
12,76		300 mm dia	No	2		
12,77		350 mm dia	No	rate only		
12,78		400 mm dia	No	rate only		
12,79		450 mm dia	No	rate only		
12,80		500 mm dia	No	rate only		
12,81		600 mm dia	No	rate only		
12,82		800 mm dia	No	rate only		
12,83		900 mm dia	No	rate only		
12,84		1000 mm dia	No	rate only		
	8.2.1	**Mild Steel Pipes with 6mm Wall Thickness to SABS 719 - 90º bend Flanged both Ends with 1000/3 Flange, 2HT, painted with Carboguard 891za**				
12,85		200 mm dia	No	rate only		
12,86		250 mm dia	No	rate only		
12,87		300 mm dia	No	2		
12,88		350 mm dia	No	rate only		
12,89		400 mm dia	No	rate only		
12,90		450 mm dia	No	2		
12,91		500 mm dia	No	rate only		
12,92		600 mm dia	No	rate only		
12,93		800 mm dia	No	rate only		
12,94		900 mm dia	No	rate only		
		1000 mm dia	No	rate only		
	8.2.2	**Supply, lay, joint, bed and test pipes with flexible joints:**				
		uPVC Class 12 c/w spigot & socket Pipe Specials - 90º long Raduis bend				
12,95		160 mm dia	no	rate only		
12,96		200 mm dia	no	2		
12,97		250 mm dia	no	rate only		
12,98		300 mm dia	No	2		
12,99		350 mm dia	No	rate only		
12,100		450mm Dia	no	2		
12,101		500mm dia	no	rate only		
12,102		600mm dia	no	rate only		
		Supply, lay, joint, bed and test 100D spigot & socket joint SANS 677 sewer concrete pipes				
12,103		1350 mm dia	m	2600		
Total carried forward						

12. INTERCONNECTING PIPEWORK - Civil

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Supply, lay, joint, bed and test pipes with flexible joints:				
		HPDE PN10 PE80- Pipe Specials - 90º long radius bend				
12,105		50 mm dia	no	8		
12,106		80 mm dia	no	5		
12,107		500mm dia	no	rate only		
12,108		630mm dia	no	rate only		
12,109		800 mm dia	no	rate only		
12,110		900mm dia	no	rate only		
		HPDE PN10 PE80- Pipe Specials - 45º bend				
12,110		50 mm dia	no	rate only		
12,112		80 mm dia	no	rate only		
12,113		500mm dia	no	rate only		
12,114		630mm dia	no	rate only		
12,115		800 mm dia	no	rate only		
12,116		900mm dia	no	rate only		
	8.2.3	**VJ - COUPLINGS**				
		Supply & Fit V.J's and pack with Denso Mastic, wrap with denso tape and cover with clingwrap for the following diameters:				
12,117		200 mm dia	No	rate only		
12,118		250 mm dia	No	rate only		
12,119		300 mm dia	No	3		
12,120		350 mm dia	No	rate only		
12,120		400 mm dia	No	4		
12,121		450 mm dia	No	rate only		
12,122		500 mm dia	No	4		
12,123		600 mm dia	No	4		
12,124		800 mm dia	No	rate only		
12,125		900 mm dia	No	rate only		
12,126		1000 mm dia	No	rate only		
		Supply & Fit V.J Flange Adaptor & pack with Denso Mastic, wrap with denso tape and cover with clingwrap for the following diameters:				
12,127		200 mm dia	No	rate only		
12,128		250 mm dia	No	rate only		
12,129		300 mm dia	No	3		
12,130		350 mm dia	No	rate only		
12,131		400 mm dia	No	3		
12,132		450 mm dia	No	rate only		
12,133		500 mm dia	No	3		
12,134		600 mm dia	No	rate only		
12,135		800 mm dia	No	rate only		
12,136		900 mm dia	No	rate only		
12,137		1000 mm dia	No	rate only		
Total carried forward						

12. INTERCONNECTING PIPEWORK - Civil

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	8.2.1	**Supply, Deliver and Lay in trench PVC-U heavy duty (SDR 34) sewer pipes:**				
12,138		160 mm dia	m	50		
	8.2.2	**Extra-over Item M4 for supply, lay, joint, bed, specials and fittings, including cut pipes to length where required to:**				
		PVC fittings:				
12,139		Bends Class 9:				
12,140		160 mm dia x 90º	No	3		
12,141		160 mm dia x 45º	No	2		
12,142		160 mm dia x 22.5º	No	rate only		
12,143		300 mm dia x 90º	No	rate only		
		CI tees:				
12.144		110mm Riser Tee	No	2		
	8.2.13	**Chambers**				
		Valve chambers (Drg L-1 of SANS 1200 L) on pipes:				
12,145		300 mm dia up to 1,5 m depth	No	2		
12,146		300 mm dia up to 1,5 m depth	No	2		
		MANHOLES				
		Construct precast concrete manholes (1000 dia) on pipes up to 600 dia for depths:				
12,147		0,5m - 1,0m	No	1		
12,148		1,0m - 1,5m	No	1		
12,149		1,5m - 2,0m	No	1		
12,150		2.0m - 2.5m	No	rate only		
12,151		2.5m - 3.0m	No	1		
12,152		3.0m - 3.5m	No	1		
12,153		3.5m - 4.0m	No	rate only		
12,154		4,0m - 5.0m	No	rate only		
		Construct precast concrete manholes (1500 dia) on pipes up to 1350 dia for depths:				
12,155		2.0m - 2.5m	No	10		
12,156		2.5m - 3.0m	No	20		
12,157		3.0m - 3.5m	No	10		
12,158		3.5m - 4.0m	No	3		
12,159		4,0m - 5.0m	No	3		
Total carried forward						

12. INTERCONNECTING PIPEWORK - Civil

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Construct precast concrete manholes (1500 dia) on pipes up to 600 dia for depths:				
12,160		0,5m - 1,0m	No	1		
12,161		1,0m - 1,5m	No	1		
12,162		1,5m - 2,0m	No	1		
12,163		2.0m - 2.5m	No	rate only		
12,164		2.5m - 3.0m	No	1		
12,165		3.0m - 3.5m	No	1		
12,166		3.5m - 4.0m	No	rate only		
12,167		4,0m - 5.0m	No	rate only		
	8.2.13	Boxes:				
12,168		750x750x1000 deep Brick construction box c/w 100mm 25MPa concrete slab	No	2		
12,169		Connection To Existing manholes	No	5		
Total carried forward to summary						

13. CONTROL BUILDING - Civil

SITE CLEARANCE

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200 C	**SITE CLEARANCE**				
	PSC 8.2.1	Clear and grub:				
13.01		Areas	m^2	280		
13.02	8.2.10	Remove topsoil to nominal depth of 150 mm and stockpile	m^3	40		
Total carried forward						

13. CONTROL BUILDING - Civil

CONCRETE

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SECTION : BUILDING WORK				
		OFFICE/ADMIN AND CONTROL BUILDING INCORPORATING HIGH AND MEDIUM VOLTAGE ROOMS AND BUILDING FOR LOCAL SWITCH CONTROL CENTRE				
		Clear and Grub				
		EXCAVATIONS				
		Excavation in earth not exceeding 2m deep:				
13,03		Foundations	m³	50		
13,04		Reduced levels under floors	m³	12		
		Extra over trench excavations in earth for excavation in:				
13,05		Hard rock	m³	1		
		Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk)				
13,06		Off site to a dumping site to be found by the Contractor	m³	35		
		FILLING Filling with selected earth filling from the excavations on site and compacted to 95% Mod. AASHTO density.				
13,07		Back filling to trenches	m³	20		
		Filling with approved G5 material in accordance with SABS 1200DM supplied by the Contractor and compacted to 95% Mod. AASHTO density				
13,08		Under floors	m³	22		
		TESTS Prescribed density tests on filling:				
13,09		Modified AASHTO Density tests	No	5		
		UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES **15Mpa/19mm Concrete:**				
13,10		Strip footongs	m³	28		
		30Mpa/19mm Concrete:				
13,11		Surface beds cast in panels on waterproofing	m³	16		
13,12		To roof of Control Building	m³	8		
Total carried forward						

13. CONTROL BUILDING - Civil

CONCRETE

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SOUND INSULATION TO CONCRETE FLOORS				
		250 micron USB Green/Black DPC membrane laid with minimium				
13,14		150mm overlaps	m²	140		
		Finishing top surface of concrete smooth with a steel trowel				
13,15		Surface beds	m²	100		
13,16		To roof of Control Building	m²	48		
		MASONARY **BRICKWORK IN FOUNDATIONS** Brickwork of NFX bricks in class ll mortar:				
13,17		220mm Walls	m²	53		
13,18		One brick walls	m²	22		
		BRICKWORK IN SUPERSTRUCTURE Brickwork of NFP bricks in class ll mortar:				
13,19		220mm Walls	m²	250		
13,20		One brick walls	m²	125		
13,21		Brick- on- edge cill 220mm wide set sloping and slightly projecting	m	13		
		BRICKWORK SUNDRIES				
13,22		Leave or form cable duct opening 200x200mm in 270mm hollow walls including later building up opening and sealing around cables.	No	3		
13,23		Extra over for fair face pointed with flush horizontal and vertical joints	m²	151		
13,24		Smooth plaster of 1:3 cement and sand mixture on brick walls	m²	525		
		Brick work reinforcement				
13,25		230mm Wide reinforcement built in horizontally in foundations	m	100		
13,24		Smooth plaster of 1:3 cement and sand mixture on brick walls	m²	525		
		Brick work reinforcement				
13,25		230mm Wide reinforcement built in horizontally in foundations	m	100		
Total carried forward						

13. CONTROL BUILDING - Civil

CONCRETE

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
13,26		230mm Wide reinforcement built in horizontally.	m	180		
		Prestressed fabricated concrete lintels:				
13,27		100x70mm Lintels in lenghts not exceeding 3m	m	15		
13,28		150x70mm Lintels in lenghts not exceeding 3m	m	15		
		GALVANISED STEEL TRANSFORMER ROOM DOORS AND FRAMES				
13,29		Type DV double door and frame, the door 1830x2240mm high overall with louvered vents in both leaves and rebated frame suitable for 230mm wall.	No	3		
13,30		Type DV single door and frame, the door 813x2240mm high overall with louvered vents and rebated frame suitable for 230mm wall.	No	1		
13,31		Supply and install D type C5FH galvanised windows complete with glazing All windows to be covered with Valmetex VEM 620F mesh and frame Frame to be of 50x6mm flat	No	1		
13,32		Supply and install D type D4H galvanised windows complete with glazing All windows to be covered with Valmetex VEM 620F mesh and frame Frame to be of 50x6mm flat	No	3		
13,33		Supply and install D type C4H galvanised windows complete with glazing All windows to be covered with Valmetex VEM 620F mesh and frame				
13,34		Frame to be of 50x6mm flat	No	1		
		PREFABRICATED ROOF TRUSSES,ETC.				
		Plated nailed timber roof trusses:				
13,35		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	1		
		ROOF COVERING				
13,36		0.6mm Corrugated iron roof sheets	Item	1		
		FACIA BOARDS				
13,37		Supply and install 10x225mm Nutec Facia bBards	m	22		
		BARGE BOARDS				
13,38		Supply and install 200x80mm Nutec Barge Boards	m	16		
Total carried forward						

13. CONTROL BUILDING - Civil

CONCRETE

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		NAILED UP CEILINGS				
13,39		38x38mm Sawn softwood brandering at 400mm centers nailed to underside of rafters in one direction only	m	160		
13,40		6,4mm Rhinoboard gypsum pleastered ceiling fixed print side up with 38mm galvanised serrated nails at 150mm centers with pvc cover strips.	m²	70		
		CORNICES				
13,41		75mm Coved cornices	m	90		
		SKIRTINGS				
13,42		76mm Pine skirtings fixed to wall with steel nails.	m	90		
		FRAMED WROUGHT HARDWOOD DOORS				
13,41		44mm Thick framed, ledged and battened hardwood door, size 813x2032mm high complete with hinges and 3 lever door locks.	No	2		
		SOLID CORE FLUSH DOORS.				
13,42		44mm Solid flush doors with 3.2mm standard hardboard covering on both sides,815x2032 high complete with hinges and 2 lever door locks.	No	7		
		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:				
13,43		On interior walls.	m²	400		
13,43		On interior ceilings.	m²	80		
Total carried forward						

13. CONTROL BUILDING - Civil

CONCRETE

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		ON METAL Prepare and degrease galvanized surfaces and apply one coat Iron Primer and two coats Polyurethane Enamel paint on galvanised steel surfaces.:				
13,44		On transformer doors, frames and windows.	m²	40		
		Prepare surfaces and apply three coats Plascon Woodcare Clear pluss high gloss varnish:				
13,45		On exterior doors and frames	m²	20		
		Prepare surfaces and apply one coat Plascon Wood primer and two coats Plascon Velvaglo Polyurethane enamel Paint:				
13,46		On interior doors, frames and skirtings.	m²	30		
		PLUMBING				
13,47		Supply and install all plumbing fittings(pipes, taps, toilets, hand basins etc) to ablutions. Including 150l geyser.	Item	1		
		WATERPROOFING				
13,48		Waterproof shower walls and floor with Cemflex 326 or similar approved product.	m²	10		
13,49		Waterproofing of concrete roof with Sika Sealoflex or similar approved product.	m²	20		
		TILING				
		White glazed ceramic wall tiles fixed with Tylon cement based wall adhesive and flush pointed with Tylon grout.				
13,50		On walls including all cuttings.	m²	10		
13,51		On shower floor including cuttings to form mosaic pattern.	m²	1		
		FLOOR COVERINGS				
13,52		Vinyl floor tiles including pavelite screed to concrete floor.	m²	58		
13,53		300mm half round drain channel around control building paving. Quantity per civil contractor ans as per tender specification	m	50		
13,54		1,2 m wide Paving around control building. Paving to be done as per tender spacification	m²	36		
13,56		Control Building interior finishing and furniture as per tender specification	sum	1		
Total carried forward to summary						

14. AEROBIC SLUDGE STORAGE TANK

SITE CLEARANCE

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SANS 1200 C		**SITE CLEARANCE**				
PSC 8.2.1		Clear and grub:				
	14.01	Areas	m²	950		
8.2.10	14.02	Remove topsoil to nominal depth of 150 mm and stockpile	m²	950		
Total carried forward						

14. AEROBIC SLUDGE STORAGE TANK

EARTHWORKS

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SANS 1200 D		**EARTHWORKS**				
PSD 8.3.2		**Bulk excavation:**				
	14.03	Excavate for strip footings and foundations in all materials, and use for backfill or embankment, or dispose as ordered.	m³	1850		
	14.04	Extra over items above for :				
	14.05	Hard rock excavation	m³	180		
	14.06	Boulder excavation- Class A	m³			
PSD 8.3.3		**Restricted excavation:**				
	14.07	Excavate for strip footings and floor slabs in Intermediate materials, and use for backfill or embankment, or dispose	m³	50		
PSD 8.3.3	14.08	Extra over items above for :				
	14.09	Hard rock excavation	m³	5		
8.3.5	14.10	Extra excavation in all materials to provide working space around structure	m²	250		
8.3.4		**Importing of Materials**				
	14.11	Selected layer using material from				
	14.12	Import G5 Material Compacted to 93% of MOD AASHTO density	m³	250		
PSDM 8.3.17	14.13	Extra over items 147.05 for obtaining material from commercial sources	m³	250		
8.3.8.1	14.14	Excavate by hand in soft material	m³	5		
Total carried forward						

14. AEROBIC SLUDGE STORAGE TANK

EARTHWORKS

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
8.3.9		Extra-over for Backflll or for Fill Material against Structures	m³	300		
PSD 8.3.10	14.15	Topsoiling	m³	100		
8.3.11	14.16	Grassing or other vegetation cover:				
	14.17	Planting of grass cuttings	m²	100		
PSD 8.3.15	14.18	Extra over items 14.01 to 14.05 for disposing of spoil material outside the freehaul area, on a site provided by the	m³	1350		
		SCHEDULED FORMWORK ITEMS				
SD8.2.2	14.19	Smooth:				
		Vertical formwork to:				
	14.20	Wall and launder vertical	m²	1300		
	14.21	Centre column vertical	m²	40		
	14.22	Battered formwork to:				
		Discharge Box	m²	5		
		Horizontal formwork to:				
	14.23	Launder	m²	110		
	14.24	Centre column horizontal	m²	2		
SD8.2.5		**Narrow widths (up to 300 mm wide):**				
		Different widths in the following ranges:				
		Over 50 mm and up to 100 mm				
	14.25	Aprons	m	110		
		Over 200 mm and up to 300 mm to:				
	14.26	Wall footings	m	200		
		Grooves, chases and splays in the following ranges:				
	14.27	Chamfering of SST Launder Wall	m	100		
Total carried forward						

14. AEROBIC SLUDGE STORAGE TANK

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SCHEDULED REINFORCEMENT ITEMS				
SD8.3.1		Mild-steel bars in the following:				
	14.28	Diameters up to 16mm	t	2		
SD8.3.1		High-tensile steel bars in the following:				
	14.29	Diameters up to 16mm	t	35		
	14.30	Diameters greater than 16mm	t	10		
SD8.3.2		High-tensile welded mesh in the following:				
	14.31	Mesh ref 245	m²	rate only		
	14.32	Mesh ref 193	m²	rate only		
		SCHEDULED CONCRETE ITEMS				
SD8.4.3		Strength concrete: (to drawings and specification)				
		Class 35 MPa/19 mm concrete in:				
	14.33	Aprons	m³	20		
	14.34	Centre Column	m³	5		
	14.35	Centre Column Base	m³	15		
	14.36	Outside Wall	m³	200		
	14.37	Floor	m³	160		
	14.38	Pipe trench	m³	60		
	14.39	Class 20 MPa/19 mm concrete in:				
	14.40	Blinding	m³	45		
	14.41	Screeds	m³	40		
	14.42	Subsiol Drain	m³	120		
Total carried forward						

14. AEROBIC SLUDGE STORAGE TANK

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SD8.4.4		Unformed surface finishes:				
		Wood-floated finishes to:				
	14.43	Foundations, Launders & Baffles	m²	80		
	14.44	Steel-floated finishes to:				
	14.45	Screeds	m²	800		
	14..46	Power-floated finishes to:				
	14.47	SST Outside wall Crown	m²	30		
SD8.5		**JOINTS**				
		Expansion joints as detailed on the Drawings				
	14.48	Floor slab Joints. The joint consists of a Sika DR-29 waterbar, 15x10mm two component Polyurethane Sealant (abe Flexithane) with a 150mm high, 15mm wide Aquajoint SPX 200 filler material.	m	400		
	14.49	Joint Slab to Footing Joints. The joint consists of a Sika DR-29 waterbar, 15x10mm two component Polyurethane Sealant (abe Flexithane) with a 300mm high, 15mm wide Aquajoint SPX 200 filler material.	m	110		
	14.50	250 micron green medium density polyethylene dampproof sheeting under floors	m²	1600		
SABS 1200DB		**UNDERFLOOR DRAINAGE** Excavation				
		Excavate in all materials for trenches				
	14.51	Exceeding 0,0 m but not exceeding 1,0 m	m³	20		
		Pipelines				
		Supply,handle, lay ,test, including cutting of perforated Kaytech Geopipe or similar sections complete with fittings like couplings, to manufacturer's standard and connection to junction box complete				
	14.52	100mm diam (Main drain)	m	120		
	14.53	65mm diam (Laterals)	m	70		
Total carried forward						

14. AEROBIC SLUDGE STORAGE TANK

BUILDING WORK

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Drains				
		Natural permeable material in subsoil drainage systems :				
	14.54	Crushed stone of 10 to 19mm obtained from commercial sources, and place around perforated pipes	m³	20		
		Bidim sheeting or similar, approved material, for lining subsoil drainage systems around the crushed stones				
	14.55	Geotextile Grade A4	m²	300		
	14.56	Test flushing of pipe subsoil drains	No.	2		
		SEGMENTED PAVING				
		Earthworks				
	14.57	Hand excavation for footing of kerb	m³	10		
	14.58	Compaction of insitu soil up to 90% MOD	m³	130		
		CONCRETE				
		20mPA Concrete				
	14.59	Backing haunch at kerb fig. 8B	m³	130		
	14.60	300mm half round drain channel around	m	110		
		Paving Blocks				
	14.61	60mm Concrete interlocking paving	m²	130		
		Supply Items				
	14.62	Pop Up valves (Gereg Type)	no	rate only		
	14.63	Handling of ground water during	sum	1		
Total carried forward to summary						

15. COMPOSTING WIND ROWS - Civil

SITE CLEARANCE

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SANS 1200 C		**SITE CLEARANCE**				
PSC 8.2.1		Clear and grub:				
	15.01	Areas	m^2	12000		
8.2.10	15.02	Remove topsoil to nominal depth of 150 mm and stockpile	m^3	1800		
Total carried forward to summary						

15. COMPOSTING WIND ROWS - Civil

EARTHWORKS

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Bulk Earthworks				
8.3.2	15.03	a) Excavate in all materials and stockpile	m^3	12000		
	15.04	b) Shaping of the finished level for thickening in slab	m^3	150		
PSD 8.3.3		Restricted excavation:				
	15.05	Excavate for sump in all materials, and use for backfill or embankment, or dispose	m^3	250		
PSD 8.3.3		Extra over items 15,01 to 15,05 above for :				
	15.06	Hard rock excavation	m^3	60		
8.3.5	15.07	Extra excavation in all materials to provide working space around structure	m^2	150		
PSD 8.3.10	15.08	Topsoiling	m^3	110		
8.3.11		Grassing or other vegetation cover:				
	15.09	Planting of grass cuttings	m^2	1100		
PSD 8.3.15	15.10	Extra over items 15,01 to 15,05 for disposing of spoil material on a site provided by the Contractor	m^3	6000		
Total carried forward to summary						

15. COMPOSTING WIND ROWS - Civil

EARTHWORKS (ROADS, SUBGRADE)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
PSDM 8.3.5		Selected layer using material from designated borrow pits or excavations:				
	15.11	G5 Material Compacted to 95% of modified AASHTO density	m³	900		
PSDM 8.3.17	15.12	Extra over items 147.05 for obtaining material from commercial sources	m³	900		
SANS 2001 CC1		**CONCRETE (STRUCTURAL)**				
		SCHEDULED FORMWORK ITEMS				
SD8.2.2		Smooth:				
		Vertical formwork to:				
	15.13	Walls	m²	500		
SD8.2.5		Narrow widths (up to 300 mm wide): Different widths in the following ranges:				
		Over 50 mm and up to 100 mm				
	15.14	Aprons	m	-		
		Over 200 mm and up to 300 mm to:				
	15.15	Surface beds	m	300		
	15.16	Ramps	m	20		
		SCHEDULED REINFORCEMENT ITEMS				
SD8.3.1		Mild-steel bars in the following:				
	15.17	Diameters up to 12mm	t	1,5		
SD8.3.1		High-tensile steel bars in the following:				
	15.18	Diameters up to 12mm	t	40		
	15.19	Diameters greater than 12mm	t	60		
SD8.3.2	15.20	High-tensile welded mesh in the following:				
	15.21	Mesh ref 245	m²	rate only		
	15.22	Mesh ref 193	m²	50		
Total carried forward						

15. COMPOSTING WIND ROWS - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SCHEDULED CONCRETE ITEMS				
SD8.4.3		Strength concrete: (to drawings and				
		Class 30 MPa/19 mm concrete in:				
	15.23	Aprons	m³	-		
	15.24	Walls - Bund Wall and Trench Walls	m³	160		
	15.25	Walls - Pumpstation	m³	-		
	15.26	Surface bed and Trench Slab	m³	1150		
	15.27	Ramps	m³	10		
		Strength concrete: (to drawings and specification) Class 20 MPa/19 mm concrete in:				
	15.28	Screeding - Pumpstation floor	m³	-		
	15.29	Screeding - Pumpstation Roof	m³	-		
		Benching - Trench	m³	16		
SD8.4.4		**Unformed surface finishes:**				
		Wood-floated finishes to:				
	15.30	Ramps	m²	36		
	15.31	Top of Pumpstation and Sump floor	m²	-		
	15.32	Top of Concrete walls,Bump block,Trench walls	m²	80		
	15.33	Top of Concrete Roof	m²	-		
	15.34	Trench Slab	m²	250		
	15.35	Power-floated finishes to:				
	15.36	Roof slab	m²	-		
	15.37	Surface beds	m²	12000		
SD8.4.8		Screeds				
Total carried forward to summary						

15. COMPOSTING WIND ROWS - Civil

STRUCTURAL STEELWORK

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SD8.5		**JOINTS**				
		Expansion joints as detailed on the				
	15.38	Between surface beds and brick walls	m	100		
	15.39	Floor slab Joints. The joint consists of a Sika DR-29 waterbar, 15x10mm two component Polyurethane Sealant (abe Flexithane) with a 150mm high, 15mm wide Aquajoint SPX 120 filler material.	m	1700		
	15.40	Formed construction joints as detailed on the Drawings				
	15.41	Between Surface bed	m	-		
		Saw joints as detailed on the Drawings				
	15.42	Between surface bed joints	m	-		
		Handrails				
	15.43	Supply, fabricate, handle, deliver to site and install: Mild Steel, Heavy Coastal Galv. Hand and Knee rails - c/w Top mount stanchions, bends, closures and S/S anchor bolts	m	100		
	15.44	250 micron green medium density polyethylene dampproof sheeting under floors	m^2	12000		
Total carried forward to summary						

16. ROADS - Civil Works **SITE CLEARING**

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		SECTION 15 : ROADS				
	SABS 1200 C	**Clearing existing roads, parking areas and road reserves**				
16,01		a) Clearing and grubbing of road reserves	m²	3 758		
16,02		b) Rip up existing entrances, dispose of excess material and grade to finish	m²	rate only		
	SABS 1200 DM	**Earthworks**				
16,03	8.3.2	Preparation and stripping of top soil to 100 mm in road reserves, stockpiling and spreading on sidewalks	m³	376		
16,04	8.3.3	Preparation of in-situ roadbed 150 mm thick compacted to 93% mod AASHTO density, including impact rolling	m³	347		
	8.3.4	**Cut to fill**				
16,05		a) excavation from road prism to backfill and sidefill compacted to 90% mod AASHTO density, including temporary stockpiling	m³	520		
	8.3.5	Selected layer compacted to 93% or 95% mod AASHTO density				
16,06		a) lower selected supgrade imported G7 material, including haulage from borrow pit (93%)	m³	434		
16,07		b) upper selected subgrade, imported G5 material, including haulage from borrow pit (95%)	m³	434		
16,08	8.3.7	Excavation from road prism to spoil on site provided by Contractor	m³	694		
16,09	8.3.13	Working off of sidewalks from kerb to road reserve boundary including spreading of 50 mm thick topsoil from stockpile in Item 15.2	m²	2 601		
Total carried forward to summary						

16. ROADS - Civil Works **SUB-BASE**

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	SABS 1200 ME	**Subbase**				
		Subbase				
16,10	8.3.2	Construction of 150 mm thick subbase using approved C4 material from a commercial source, to meet required specification, compacted to 95% mod AASHTO density, including selecting, transporting, stockpiling, spreading, mixing, compaction, grading and testing	m^3	434		
		Process subbase material by				
16,11		a) mechanical modification	m^3	434		
16,12		b) stabilisation	m^3	434		
		Stablising agent				
16,13		a) road cement - specific product	t	43		
		RoadCem (CEM 11 32,5 N cement) or Roadstab cement or similar				
	SABS 1200 MF	**Base**				
	8.3.3	Construction of crushed stone base course using imported material, compacted to 88% of apparent density, as per specification				
16,14		a) 100 mm thick (allow for 700 m^3)	m^3	rate only		
16,15		b) 125 mm thick (allow for 860 m^3)	m^3	rate only		
		Construction of base course for roads, using C4 imported material compacted to 97% mod AASHTO density	m^3	289		
16,16		Process base material by				
		a) mechanical modification	m^3	289		
		b) stabilisation	m^3	289		
Total carried forward to summary						

16. ROADS - Civil Works **SURFACING**

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Stablising agent				
16,17		a) road cement - specific product RoadCem (CEM 11 32,5 N cement) or Roadstab cement or similar	t	29		
	SABS 1200 MH	**Asphalt Surfacing**				
		Prime Coat				
16,18		RTH 3/12 P (1,0 litre / m²)	litre	2 312		
16,19	8.5.3	Tackcoat with 33% cationic bitumen emulsion applied at 0,55 l / m²)	m²	1 272		
16,20		Aggregate for blinding	m³	10		
	8.5.4	Asphalt surfacing continuously medium graded				
16,21		a) 40 mm thickness	m²	rate only		
16,22		b) 30 mm thickness	m²	2 312		
16,23		c) cutting existing 20 to 40 mm thick asphalt to start new joint	m	60		
	SABS 1200 MJ	**Segmented Paving**				
16,24		Segmented paving using 25 MPa concrete G1 block, 80mm thick paving block (colour black)	m²	1 156		
	SABS 1200 MK	**Kerbing and Channelling**				
16,25	8.2.2	Semi mountable precast concrete kerbing. Figure 3, laid flat on concrete bedding	m	1 156		
Total carried forward to summary						

16. ROADS - Civil Works

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	8.2.2	Mountable (sloping) kerbing cast in-situ (to detail)				
16,26		a) 400 mm wide, 120 mm front height, 190 mm rear height	m	50		
16,27		b) Altenative to (a) Fig 3 kerb laid horisontally in concrete bedding (allow 480 m)	m	50		
16,28		c) Fig 3 kerb edge strip, including excavating into subbase, cast into concrete bedding	m	180		
16,29		d) Supply and install precast concrete tree rings, 1,0 metre diameter	no	20		
16,30		e) Marking of kerbing for identification of services	no	20		
	SABS 1200 MM	**Ancillary Roadworks**				
	8.3.8	Road signs complete				
16,31		(a) Stop sign R1	no	2		
16,32		(b) Yield sign R2	no	2		
16,33		(c) Other W204, W205, etc	no	2		
16,34		(d) Junction chevron W409	no	3		
16,35		Street nameboard complete, including all material, each pole with 2 street names	no	4		
	8.4.1	Road markings				
16,36		(a) White line 300mm wide (broken or sold)	m	56		
16,37		(b) White line 100mm wide (broken or sold)	m	578		
16,38		(c) Arrows or lettering	no	16		
16,39		Extra over item 15.6 for hard rock excavation and removal from site	m^3	350		
Total carried forward to summary						

17. IRRIGATION - Civil Works

SITE CLEARING

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200 DB	**EARTHWORKS (PIPE TRENCHES)**				
		Site Clearance				
17,01		Clear and Grub	m^2	623		
	8.3.2	**Excavation**				
	8.3.2. (a)	Excavate in all materials for pipe trenches, backfill, compact and dispose of surplus material for the following depths:				
		Over and Up to				
17,02		0,0m 0,5m	m	rate only		
17,03		0,5m 1.0m	m	415		
17,04	8.3.2 (c)	Excavate and dispose of unsuitable material from trench bottom	m^3	62		
17,05		Excavate by hand in soft material to expose existing services, Rate only	m^3	42		
	8.3.5	**Existing services**				
17,06	8.3.5 (a)	*Services that intersect a trench*	No	6		
17,07		Pipes	No	8		
17,08		Underground electrical cables	No	5		
17,09	8.3.5 (b)	*Services that adjoin a trench*	No	5		
	SANS 1200LB	**BEDDING (PIPES)**				
	8.2.1	**Provision of bedding from trench or other excavations**				
17,10	8.2.1 (b)	Selected fill material (200mm above pipe), (Material previously stockpiled on site with no rocks larger than 50mm)	m^3	62		
	SANS 1200 L	**MEDIUM-PRESSURE PIPELINES**				
	PS 8.2.1	Supply, lay, bed (Class C), on site welding and test the following HDPE pipes				
	PS 8.2.2	Extra-over 8.2.1 for the Supplying, Laying and bedding of Specials including welding.- Rate only				
		HDPE Pipes				
17,11		50mm, HDPE PIPE,CLASS 9	m	415		
17,12		Plasson Quick coupling valve 25mm	no.	42		
17,13		Plasson quick coupling key for Quick coupling valve including sprayer body	no.	21		
		Fittings				
17,14		50mm Plasson HDPE Coupling- Female	no.	10		
17,15		50mm Plasson HDPE 90deg Elbow - Female	no.	10		
17,16		50mm Plasson end plug	no.	5		
17,17		50mm Plasson T-piece - Female	no.	32		
	8.2.12	**Concrete in Encasement to Pipes:**				
17,18		Grade 30/19 concrete (Provisional)	m^3	4		
Total carried forward to summary						

18. ELECTRICAL TRENCHES - Civil Works

SITE CLEARING

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SANS 1200 C	**SITE CLEARANCE**				
	PSC 8.2.1	Clear and grub:				
18.01		Areas	m²	1350		
18.02	8.2.10	Remove topsoil to nominal depth of 150 mm and stockpile	m³	200		
		Excavation				
		Excavate in all materials for pipe trenches, backfill, compact and dispose of surplus material for:				
		Trench width 0 to 450mm				
		Over and Up to				
18,03		0,5 m 1,0 m	m	280		
18,04		1,0 m 1,5 m	m			
18,05		1,5 m 2 m	m			
		Trench width 450mm to 900mm				
		Over and Up to				
18,06		0,5 m 1,0 m	m	230		
18,07		1,0 m 1,5 m	m			
18,08		1,5 m 2,0 m	m			
18,09		2,0 m 2,5 m	m			
18,10		2,5 m 3,0 m	m			
18,11		Extra-over Items M1.1 and M1.2 for hard rock	m³	70		
		Excavation ancillaries				
18,12		Backfill from other necessary excavation	m³	20		
18,13		Additional compaction for trenches subject to traffic loads	m³	30		
18,14		Excavate and dispose of unsuitable material from trench bottom	m³	50		
18,15		Compaction of in-situ material to 90% of MAMDD to depth of 150 mm	m³	50		
Total carried forward to summary						

18. ELECTRICAL TRENCHES - Civil Works

SUB-BASE

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
18,16		Temporary stockpiling of wet material from trench excavations	m³	300		
		Bedding				
		Provision of bedding from: Trench excavation:				
18,17		Selected granular material	m³	100		
18,18		Selected fill material	m³	150		
		From other sources on site:				
18,19		Selected granular material	m³	35		
18,20		Selected Dump Rock Size 50mm to 100mm	m³	rate only		
18,21		Selected Backfill	m³	120		
		Commercial sources:				
18,22		Selected granular material	m³	60		
18,23		Selected fill material	m³	50		
		110mm Sleeve pipe	m	200		
18,24		Placing cable and Danger tape	m	500		
Total carried forward to summary						

19. MISCELANIOUS - Civil Works

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	8.2.14	**Manholes**				
19,01		1250mm diameter x 2000mm deep ROCLA concrete manhole, complete with concrete lid to suit, base and benching, as per detail.	No	5		
19,02		1500mm diameter x 5500mm deep ROCLA concrete manhole, complete with concrete lid to suit, base and benching, as per detail.	No	2		
19,03		1800mm diameter x 6000mm deep ROCLA concrete manhole, complete with concrete lid to suit, base and benching, as per detail.	No	rate only		
19,04		1050mm diameter x 2000mm deep ROCLA concrete manhole, complete with concrete lid to suit, base and benching, as per detail.	No	rate only		
	SANS 1200 C	**SITE CLEARANCE**				
19,05	8.2.1	Clear and grub	m2	100		
	SANS 1200 D	**EARTHWORKS**				
	8.3.1	**Site Preparation**				
19,06	8.3.1.2	Remove topsoil to a nominal depth of 150mm, stockpile and maintain	m2	100		
	8.3.2	**Bulk Excavations**				
19,07		a) Excavate in all materials and use for stormwater berm or backfill or dispose, as ordered, and compact in 150mm layers to 93% mod AASHTO	m3	450		
	8.3.3	**Restricted Excavations**				
19,08		(a) Excavate for restricted foundations, footings and pipe trenches in all materials and use for backfill or embankment or dispose, and compact in 150mm layers to 93% mod AASHTO	m3	45		
		(b) Extra-over for:				
19,09		(2) Hard rock excavation	m3	25		
		(b) Extra-over for:				
19,10		Backfill around structures	m3	-		
Total carried forward to summary						

19. MISCELANIOUS - Civil Works

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
	SANS 1200G	**CONCRETE (STRUCTURAL)**				
	8,2	**SCHEDULED FORMWORK ITEMS**				
	8.2.2	**Smooth**				
19,11		Vertical	m2	376		
19,12		Horizontal	m2	-		
	8.2.5	**Narrow widths not exceeding 300mm wide**				
19,13		Vertical narrow widths	m	39		
19,14		Horozontal Narrow widths	m	39		
	8,3	**SCHEDULED REINFORCEMENT ITEMS**				
	8.3.1	**Steel Bars**				
19,15		High-tensile reinforcement	t	8		
	8,4	**SCHEDULED CONCRETE ITEMS**				
	8.4.2	**Blinding Layer in Class 20/13mm concrete**				
19,16		Minimum 50mm thickness, and leave ready to receive plastic sheet bond breaker (elsewhere measured) a) Under foundations	m2	120		
		Strength Concrete - Grade 30/19mm				
19,17		Floor slabs and Concrete Lid	m3	12		
19,18		In walls	m3	51		
	8.4.4	**Unformed Surface Finishes**				
19,19		(a) Wood floated finish	m2	18		
	8,5	**JOINTS**				
19,20		Expantion Joints Floor Joints c/w with dura joint type 'E' 200mm wide, Aqua joint SPX120 abe Plyastic sealer	m	rate only		
Total carried forward to summary						

19. MISCELANIOUS - Civil Works

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
19,21		**Miscellaneous items** Laid below no-fines concrete layer under wall bases and surface bed to outside face of wall bases to perimeter walls including shaped profiles at collector drains (measured on net plan area) for Bio-Reactor and Sedimentation Tank	m²	rate only		
		<u>Casting of pipes</u>				
19,22		Cast 40 mm diameter pipe into 220mm thick Concr. wall	no.	rate only		
19,23		Cast 50 mm diameter pipe into 220mm thick Concr. wall	no.	rate only		
19,24		Cast 80 mm diameter pipe into 220mm thick Concr. wall	no.	rate only		
19,25		Cast 100 mm diameter pipe into 250mm thick wall	no.	rate only		
19,26		Cast 110 mm diameter pipe into 250mm thick wall	no.	rate only		
19,27		Cast 160 mm diameter pipe into 250mm thick wall	no.	rate only		
19,28		Cast 200 mm diameter pipe into 250mm thick wall	no.	rate only		
19,29		Cast 300 mm diameter pipe into 250mm thick wall	no.	rate only		
19,30		Cast 315 mm diameter pipe into 250mm thick wall	no.	rate only		
19,31		Cast 400 mm diameter pipe into 250mm thick wall	no.	rate only		
19,32		Cast 900 mm diameter pipe into 400mm thick wall	no.	14		
Total carried forward to summary						

19. MISCELANIOUS - Civil Works

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Open Grid Floors: Mentis grating Type RS40 25 x 4.5 mm, including 45 x 45 x 5 mm mild steel angle frame on four sides, including fish tail lugs and hot dip galvanising and painting of the complete assembly for covering of:				
19,33		Sludge Pump Stations	m^2	50,00		
19,34		Mixed Liquor Pump Station at Bio-Reactor	m^2	50,00		
19,35		Soil/Cement stabilisation 6% cement for foundations of waterholding structures (Optional extra)	m^3	50,00		
19,36		Cast in Circural Pavement Type 4 man Hole frame and cover	No.	7		
19,37		Supply, Deliver and Install Security Fencing	m	545		
Total carried forward to summary						

20. REFURBISHMENT OF EXIST. EQUIPM. - Mechanical

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		MECHANICAL AND ELECTRICAL WORK				
20,01		Refubishment	Provisional Sum	1	R 9 460 000,00	R9 460 001,00
20,02		Overheads charges and profit on item above	x100%			
Total carried forward to summary						

22. MECHANICAL AND ELECTRICAL PACKAGE A

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		MECHANICAL AND ELECTRICAL WORK				
21,01		Package A	Provisional Sum	1	R 40 742 612,73	R40 742 612,73
21,02		Overheads charges and profit on item above	x100%			
Total carried forward to summary						

22. MECHANICAL AND ELECTRICAL PACKAGE B

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		MECHANICAL AND ELECTRICAL WORK				
22,01		Package B	Provisional Sum	1	R 32 256 444,35	R32 256 444,35
22,02		Overheads charges and profit on item above	x100%			
Total carried forward to summary						

23. MECHANICAL AND ELECTRICAL PACKAGE C

ITEM	PAYMENT REFER.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		MECHANICAL AND ELECTRICAL WORK				
23,01		Package C	Provisional Sum	1	R 2 400 000,00	R2 400 000,00
23,02		Overheads charges and profit on item above	x100%			
Total carried forward to summary						

24.PRIMARY SETTLING TANK -1 - Civil

SITE CLEARANCE

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SANS 1200 C		**SITE CLEARANCE**				
PSC 8.2.1		Clear and grub:				
	24.01	Areas	m²	600		
8.2.10	24.02	Remove topsoil to nominal depth of 150 mm and stockpile	m²	600		
Total carried forward to summary						

24.PRIMARY SETTLING TANK -1 - Civil

EARTHWORKS

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SANS 1200 D		**EARTHWORKS**				
PSD 8.3.2		**Bulk excavation:**				
	24.03	Excavate for strip footings and foundations in all materials, and use for backfill or embankment, or dispose as ordered.	m^3	1500		
	24.04	Extra over items above for :				
	24.05	Hard rock excavation	m^3	500		
	24.06	Boulder excavation- Class A	m^3			
PSD 8.3.3		**Restricted excavation:**				
	24.06	Excavate for strip footings and floor slabs in Intermediate materials, and use for backfill or embankment, or dispose	m^3	50		
PSD 8.3.3	24.07	Extra over items above for :				
	24.08	Hard rock excavation	m^3	40		
8.3.5	24.09	Extra excavation in all materials to provide working space around structure	m^2	250		
8.3.4		**Importing of Materials**				
	24.10	Selected layer using material from				
	24.11	Import G5 Material Compacted to 93% of MOD AASHTO density	m^3	150		
PSDM 8.3.17	24.12	Extra over items 147.05 for obtaining material from commercial sources	m^3	150		
8.3.8.1	24.13	Excavate by hand in soft material	m^3	10		
Total carried forward to summary						

24.PRIMARY SETTLING TANK -1 - Civil

EARTHWORKS (ROADS, SUBGRADE)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
8.3.9	24.14	Extra-over for Backflll or for Fill Material against Structures	m^3	300		
PSD 8.3.10	24.15	Topsoiling	m^3	100		
8.3.11	24.16	Grassing or other vegetation cover:				
	24.17	Planting of grass cuttings	m^2	100		
PSD 8.3.15	24.18	Extra over items 140.01.01.02 and 140.01.02 for disposing of spoil material outside the freehaul area, on a site	m^3	990		
Total carried forward to summary						

24.PRIMARY SETTLING TANK -1 - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SCHEDULED FORMWORK ITEMS				
SD8.2.2		Smooth:				
		Vertical formwork to:				
	24.19	Wall and launder vertical	m²	700		
	24.20	Centre column vertical	m²	60		
	24.21	Battered formwork to:				
	24.22	Discharge Box	m²	5		
		Horizontal formwork to:				
	24.23	Launder Horizontal	m²	100		
	24.24	Centre column horizontal	m²	10		
SD8.2.5		**Narrow widths (up to 300 mm wide):**				
		Different widths in the following ranges:				
	24.25	Over 50 mm and up to 100 mm				
	24.26	Aprons	m	80		
	24.27	Over 200 mm and up to 300 mm to:				
	24.28	Wall footings	m	150		
		Grooves, chases and splays in the following ranges:				
	24.29	Chamfering of SST Launder Wall	m	70		
Total carried forward						

24.PRIMARY SETTLING TANK -1 - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SCHEDULED REINFORCEMENT ITEMS				
SD8.3.1		Mild-steel bars in the following:				
	24.30	Diameters up to 16mm	t	2		
SD8.3.1		High-tensile steel bars in the following:				
	24.31	Diameters up to 16mm	t	22		
	24.32	Diameters greater than 16mm	t	6		
SD8.3.2	24.33	High-tensile welded mesh in the following:				
	24.34	Mesh ref 245	m²	rate only		
	24.35	Mesh ref 193	m²	rate only		
		SCHEDULED CONCRETE ITEMS				
SD8.4.3		Strength concrete: (to drawings and specification)				
		Class 30 MPa/19 mm concrete in:				
	24.36	Aprons	m³	15		
	24.37	Centre Column	m³	10		
	24.38	Centre Column Base	m³	5		
	24.39	Outside Wall	m³	130		
	24.40	Floor	m³	60		
	24.41	Pipe trench	m³	40		
		Class 20 MPa/19 mm concrete in:				
	24.42	Blinding	m³	25		
	24.43	Screeds	m³	25		
	24.44	Subsiol Drain	m³	45		
Total carried forward						

24.PRIMARY SETTLING TANK -1 - Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SD8.4.4		Unformed surface finishes:				
		Wood-floated finishes to:				
	24.45	Foundations, Launders & Baffles	m²	150		
		Steel-floated finishes to:				
	24.46	Screeds	m²	450		
		Power-floated finishes to:				
	24.47	SST Outside wall Crown	m²	25		
SD8.5		**JOINTS**				
		Expansion joints as detailed on the Drawings				
	24.48	Between surface beds	m	250		
	24.49	Between surface bed and wall	m	80		
	24.50	250 micron green medium density polyethylene dampproof sheeting under floors	m²	450		
SABS 1200DB		**UNDERFLOOR DRAINAGE** Excavation				
		Excavate in all materials for trenches				
	24.51	Exceeding 0,0 m but not exceeding 1,0 m	m³	20		
		Pipelines				
		Supply,handle, lay ,test, including cutting of perforated Kaytech Geopipe or similar sections complete with fittings like couplings, to manufacturer's standard and connection to junction box complete				
	24.53	110mm diam (Main drain)	m	100		
	24.54	65mm diam (Laterals)	m	50		
Total carried forward to summary						

24.PRIMARY SETTLING TANK -1 - Civil

BUILDING WORK

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Drains				
		Natural permeable material in subsoil drainage systems :				
	24.55	Crushed stone of 10 to 19mm obtained from commercial sources, and place around perforated pipes	m³	15		
		Bidim sheeting or similar, approved material, for lining subsoil drainage systems around the crushed stones				
	24.56	Geotextile Grade A4	m²	225		
		Test flushing of pipe subsoil drains	No.	2		
		SEGMENTED PAVING				
		Earthworks				
	24.57	Hand excavation for footing of kerb	m³	10		
	24.58	Compaction of insitu soil up to 90% MOD	m³	100		
		CONCRETE				
		20mPA Concrete				
	24.58	Backing haunch at kerb fig. 8B	m³	100		
	24.59	300mm half round drain channel around	m	80		
		Paving Blocks				
	24.60	60mm Concrete interlocking paving blocks	m²	100		
Total carried forward to summary						

25. COMPOSTING WIND ROWS Ph.2- Civil

SITE CLEARANCE

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SANS 1200 C		**SITE CLEARANCE**				
PSC 8.2.1		Clear and grub:				
	25.01	Areas	m^2	12000		
8.2.10	25.02	Remove topsoil to nominal depth of 250 mm and stockpile	m^3	1800		
Total carried forward to summary						

25. COMPOSTING WIND ROWS Ph.2- Civil

EARTHWORKS

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		Bulk Earthworks				
8.3.2	25.03	a) Excavate in all materials and stockpile	m^3	12000		
	25.04	b) Shaping of the finished level for thickening in slab	m^3	250		
PSD 8.3.3		Restricted excavation:				
	25.05	Excavate for sump in all materials, and use for backfill or embankment, or dispose	m^3	250		
PSD 8.3.3		Extra over items 25,01 to 25,05 above for :				
	25.06	Hard rock excavation	m^3	60		
8.3.5	25.07	Extra excavation in all materials to provide working space around structure	m^2	250		
PSD 8.3.10	25.08	Topsoiling	m^3	110		
8.3.11		Grassing or other vegetation cover:				
	25.09	Planting of grass cuttings	m^2	1100		
PSD 8.3.25	25.10	Extra over items 25,01 to 25,05 for disposing of spoil material on a site provided by the Contractor	m^3	6000		
Total carried forward to summary						

25. COMPOSTING WIND ROWS Ph.2- Civil

EARTHWORKS (ROADS, SUBGRADE)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
PSDM 8.3.5		Selected layer using material from designated borrow pits or excavations:				
	25.11	G5 Material Compacted to 95% of modified AASHTO density	m³	900		
PSDM 8.3.17	25.12	Extra over items 147.05 for obtaining material from commercial sources	m³	900		
SANS 2001 CC1		**CONCRETE (STRUCTURAL)**				
		SCHEDULED FORMWORK ITEMS				
SD8.2.2		Smooth:				
		Vertical formwork to:				
	25.13	Walls	m²	500		
SD8.2.5		Narrow widths (up to 300 mm wide): Different widths in the following ranges:				
		Over 50 mm and up to 100 mm				
	25.14	Aprons	m	-		
		Over 200 mm and up to 300 mm to:				
	25.25	Surface beds	m	300		
	25.16	Ramps	m	20		
		SCHEDULED REINFORCEMENT ITEMS				
SD8.3.1		Mild-steel bars in the following:				
	25.17	Diameters up to 12mm	t	1,5		
SD8.3.1		High-tensile steel bars in the following:				
	25.18	Diameters up to 12mm	t	40		
	25.19	Diameters greater than 12mm	t	60		
SD8.3.2	25.20	High-tensile welded mesh in the following:				
	25.21	Mesh ref 245	m²	rate only		
	25.22	Mesh ref 193	m²	50		
Total carried forward						

25. COMPOSTING WIND ROWS Ph.2- Civil

CONCRETE (STRUCTURAL)

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
		SCHEDULED CONCRETE ITEMS				
SD8.4.3		Strength concrete: (to drawings and				
		Class 30 MPa/19 mm concrete in:				
	25.23	Aprons	m^3	-		
	25.24	Walls - Bund Wall and Trench Walls	m^3	160		
	25.25	Walls - Pumpstation	m^3	-		
	25.26	Surface bed and Trench Slab	m^3	1250		
	25.27	Ramps	m^3	10		
		Strength concrete: (to drawings and specification) Class 20 MPa/19 mm concrete in:				
	25.28	Screeding - Pumpstation floor	m^3	-		
	25.29	Screeding - Pumpstation Roof	m^3	-		
		Benching - Trench	m^3	26		
SD8.4.4		**Unformed surface finishes:**				
		Wood-floated finishes to:				
	25.30	Ramps	m^2	36		
	25.31	Top of Pumpstation and Sump floor	m^2	-		
	25.32	Top of Concrete walls,Bump block,Trench walls	m^2	80		
	25.33	Top of Concrete Roof	m^2	-		
	25.34	Trench Slab	m^2	250		
	25.35	Power-floated finishes to:				
	25.36	Roof slab	m^2	-		
	25.37	Surface beds	m^2	12000		
SD8.4.8		Screeds				
Total carried forward to summary						

25. COMPOSTING WIND ROWS Ph.2- Civil

STRUCTURAL STEELWORK

PAYMENT REFERS	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Total brought forward						
SD8.5		**JOINTS**				
		Expansion joints as detailed on the				
	25.38	Between surface beds and brick walls	m	100		
	25.39	Floor slab Joints. The joint consists of a Sika DR-29 waterbar, 25x10mm two component Polyurethane Sealant (abe Flexithane) with a 250mm high, 25mm wide Aquajoint SPX 120 filler material.	m	1700		
	25.40	Formed construction joints as detailed on the Drawings				
	25.41	Between Surface bed	m	-		
		Saw joints as detailed on the Drawings				
	25.42	Between surface bed joints	m	-		
		Handrails				
	25.43	Supply, fabricate, handle, deliver to site and install: Mild Steel, Heavy Coastal Galv. Hand and Knee rails - c/w Top mount stanchions, bends, closures and S/S anchor bolts	m	100		
	25.44	250 micron green medium density polyethylene dampproof sheeting under floors	m²	12000		
Total carried forward to summary						

SUMMARY OF BILL OF QUANTITIES

SECTION	DESCRIPTION	Amount
	PHASE 1 CONSTRUCTION	
SECTION 1	General P&G	
SECTION 2	Bulk Earthworks	
SECTION 3	Head of Works	
SECTION 4	Raw Transfer Box	
SECTION 5	BNR Orbal Reactor, Post Anoxic Tank	
SECTION 6	Clarifiers (SST 1 & SST 2)	
SECTION 7	RAS/WAS Pump station	
SECTION 8	Chlorination Contact Tank	
SECTION 9	Chlorine Dosing Building	
SECTION 10	Dewatering System	
SECTION 11	Division Structures	
SECTION 12	Internal Pipework	
SECTION 13	Control Building	
SECTION 14	Sludge Storage Tank	
SECTION 15	Composting Slab	
SECTION 16	Site Roads	
SECTION 17	Irrigation	
SECTION 18	Electrical	
SECTION 19	Miscellaneous	
SECTION 20	Refurbishment of Existing Plant (Estimate)	
SECTION 21	M&E Package A	
SECTION 22	M&E Package B	
SECTION 23	M&E Package C	
	PHASE 2	
SECTION 24	Primary Settling Tank	
SECTION 25	Composting Slab Phase 2	
Preliminary total 1		
Contingencies, allow for 10%		
Preliminary total 2		
VAT (15%)		
TOTAL		

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NAME AND SIGNATURE OF TENDERER DATE

……..... ……
NAME AND SIGNATURE OF EMPLOYER DATE