SCHEDULE A: PRELIMINARY AND GENERAL

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
A .1	8,3	**FIXED-CHARGED ITEMS**				
A .1.1	8.3.1	Contractual Requirements	Sum	1		
A.1.2	8.3.2	Establish Facilities on the site				
A.1.2.1	8.3.2.1	Facilities for Engineer				
		(a) Nameboards (Number 1)	Sum	1		
		(b)Compliance with the OHS specifications	Sum	1		
A.1.2.2	8.3.2.2	Facilities for Contractor				
		(a) Offices and Storage sheds	Sum	1		
		(b) Workshops	Sum	1		
		(c) Laboratories	Sum	1		
		(d) Living accommodation	Sum	1		
		(e) Ablution and latrine facilities	Sum	1		
		(f) Tools and equipment	Sum	1		
		(g) Water supplies, electrical power, communication facilities	Sum	1		
		(h) Dealing with water	Sum	1		
		(i) Access	Sum	1		
		(j) Plant	Sum	1		
A.1.3	8.3.3	Other fixed-charge obligations(Specify)	Sum	1		
A.1.4	8.3.4	Removal of site establishment on completion of works	Sum	1		
A.1.5	SD 26	Health and Safety Plan: submit for approval	Sum	1		
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BROUGHT FORWARD				
A .2	8,4	**TIME-RELATED ITEMS**				
A .2.1	8.4.1	Contractual requirements	Sum	1		
A.2.2	8.4.2	Operate and maintenance of facilities on site				
A .2.2.1	8.4.2.1	Facilities for Engineer for duration of Contract				
		(a) Nameboards (Number 1)	Sum	1		
A.2.2.2	8.4.2.2	Facilities for Contractor for duration of Contract				
		(a) Offices and Storage sheds	Sum	1		
		(b) Workshop	Sum	1		
		(c) Laboratories	Sum	1		
		(d) Living accommodation	Sum	1		
		(e) Ablution and latrine facilities	Sum	1		
		(f) Tools and equipment	Sum	1		
		(g) Water supplies, Electrical power, Communication facilities	Sum	1		
		(h) Dealing with water	Sum	1		
		(i) Access	Sum	1		
		(j) Plant	Sum	1		
A.2.3	8.4.5	Other time-related obligations(Specify)	Sum	1		
A .2.4	8.4.3	Supervision	Sum	1		
A .2.5	8.4.4	Company and head office overhead costs	Sum	1		
A .2.6	PS 25	Adherence to Health and Safety Plan	Sum	1		
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BROUGHT FORWARD				
A .3	8,5	**SUMS STATED PROVISIONALLY BY THE ENGINEER (only payable on discression of the engineer)**				
A .3.1	PSA 8.8	a) Additional tests required by the Engineer	Prov Sum	1	45 000,00	45 000,00
		b) Overheads and charges for item A.3.1 a) above	%			
A.3.2		a) Detection of Underground Services	Prov Sum	1	50 000,00	50 000,00
		b) Overheads and charges for item A.3.1 a) above	%			
A.3.3		a) Community Liasson Officer	Prov Sum	1	120 000,00	120 000,00
		b) Overheads and charges for item A.3.3 a) above	%			
A.3.4		a)Provision for 2 Civil Engineering Graduate Engineers and in-service training for 12 months	Prov Sum	1	288 000,00	288 000,00
		b) Overheads and charges for item A.3.4 a) above	%			
A.3.5		a)Provision for 2 OHS Graduates and in-service training for 12 months	Prov Sum	1	192 000,00	192 000,00
		b) Overheads and charges for item A.3.5 a) above	%			
A.3.6		a)Provision for 2 Environmental Graduates and in-service training for 12 months	Prov Sum	1	192 000,00	192 000,00
		b) Overheads and charges for item A.3.6 a) above	%			
A.3.7		a) Additional Survey and Benchmarks	Prov Sum	1	65 000,00	65 000,00
		b) Overheads and charges for item A.3.7 a) above	%			
A.3.8		a) Training (Accredited and Non-Accredited)	Prov Sum	1	350 000,00	350 000,00
		b) Overheads and charges for item A.3.8 a) above	%			
A.3.9		a) Exposing of Pipes to check the pipe material	Prov Sum	1	250 000,00	250 000,00
		b) Overheads and charges for item A.3.9 a) above	%			
A.3.10		a)Allow for Airtime to the Engineers site Personnel for the duration of the Contract	Prov Sum	1	12 000,00	12 000,00
		b) Overheads and charges for item A.3.10 a) above	%			
A.3.11		a)Allow for the provision of the Engineer's Tranport for the duration of the Contract	Prov. Sum	1	300 000,00	R300 000,00
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BROUGHT FORWARD				
		b) Overheads and charges for item A.3.11 a) above	%			
A.3.12		a)Allow for the provision of the Engineer's Accomodation for the duration of the Contract	Prov. Sum	1	200 000,00	R200 000,00
		b) Overheads and charges for item A.3.12 a) above	%			
A.4.0	8,8	**TEMPORARY WORKS**				
	SPEC OHS	**HEALTH AND SAFETY**				
A .4.1		Health and Safety Plan - Submit for Approval	Sum	1		
A.4.2		Personal Protective Equipment				
A.4.2.1		a) Reflective bibs	No	100		
A.4.2.2		b) Protective Footwear	No	60		
A.4.2.3		c) Work Suits	No	60		
A.4.2.4		d) Gumboots	No	60		
A.4.2.5		e) Hard hats	No	120		
A.4.3		Health and Safety Training as Required	Sum	1		
A.4.3.1		Allowance for the Contractor's time related obligations with respect to adherance of the OHS Act and Construction	months	12		
A.4.3.2		Costs of medical certificates (initial and exit examinations)	No	80		
A.3.4		a) Additional Survey and Benchmarks	Prov Sum	1	65 000,00	65 000,00
		b) Overheads and charges for item A..3 a) above	%			
A.3.5		a) Training (Accredited and Non-Accredited)	Prov Sum	1	450 000,00	450 000,00
		b) Overheads and charges for item A.3.3 a) above	%			
A.3.6		a) Exposing of Pipes to check the pipe material	Prov Sum	1	250 000,00	250 000,00
		b) Overheads and charges for item A.3.3 a) above				
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BROUGHT FORWARD				
A.3.7		a)Allow for Airtime to the Engineers site Personnel for the duration of the Contract	Prov Sum	1	12 000,00	12 000,00
		b) Overheads and charges for item A.3.5 a) above	%			
A.3.8		a)Allow for the provision of the Engineer's Tranport for the duration of the Contract	Prov. Sum	1	300 000,00	R300 000,00
		b) Overheads and charges for item A.3.6 a) above	%			
A.3.9		a)Allow for the provision of the Engineer's Accomodation for the duration of the Contract	Prov. Sum	1	200 000,00	R200 000,00
		b) Overheads and charges for item A.3.7 a) above	%			
A.4.0	8,8	**TEMPORARY WORKS**				
	SPEC OHS	**HEALTH AND SAFETY**				
A .4.1		Health and Safety Plan - Submit for Approval	Sum	1		
A.4.2		Personal Protective Equipment				
A.4.2.1		a) Reflective bibs	No	100		
A.4.2.2		b) Protective Footwear	No	60		
A.4.2.3		c) Work Suits	No	60		
A.4.2.4		d) Gumboots	No	60		
A.4.2.5		e) Hard hats	No	120		
A.4.3		Health and Safety Training as Required	Sum	1		
A.4.3.1		Allowance for the Contractor's time related obligations with respect to adherance of the OHS Act and Construction Regulations	months	12		
A.4.3.2		Costs of medical certificates (initial and exit examinations)	No	80		
		TOTAL SECTION A CARRY FORWARD TO SUMMARY				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		SECTION B: **RETICULATION SEWERS**				
B1	**SABS 1200C**	**SITE CLEARANCE**				
B1.1	8.2.1	Clear and grub 2 m wide strip along sewer pipe routes	km	22		
B1.2	8.2.1	Extra and over B1.1 for additional clearing of routes and provision of survey in natural valley sections should pipe be crossing such sections or as ordered by the Engineer.	ha	1		
B1.3	PSC 8.2	a) Take down and reinstate fence for access to sewer lines	m	3 000		
		b) Temporary gates	No	12		
		c) Permanent gates	No	5		
		d) Fences along pipeline route	m	100		
B1.4	8.2.8	Demolish and remove structures as indicated in drawings	Sum	1		
B2	**SABS 1200D**	**EARTHWORKS**				
B2.1	8.3.1.2	Remove topsoil to a nominal depth of 150mm, stockpile and maintain.	m^2	25 200		
	8.3.2	Bulk Excavation				
		a) Excavate in all materials to form bench and use for embankment as indicated by the Engineer on-site for cross slope 2:1 and flatter	m^3	300		
		b) Excavate in all materials to form bench as indicated by the Engineer on-site for cross slope steeper than 2 : 1	m^3	200		
		Extra over a and b for excavation in hard rock. (Intermediate material is classified under a) and b) above	m^3	100		
	8.3.4	**Importing of Materials**				
		a) Extra and over 8.3.2 (a) for importation of materials from i) from stockpile G7 material	m^3	1 000		
		ii) from commercial sources G7 material	m^3	25		
B2	**SABS 1200DB**	**EARTHWORKS (pipe trenches)**				
B2.1	8.3.2(a)	Excavate in all materials for trenches, backfill, compact and dispose of surplus material for sewers				
B2.1.1		200 mm dia pipe for depths: OVER - UP TO				
B2.1.1.1		0,0 m - 1,5 m	m	40		
B2.1.1.2		1,5 m - 2,0 m	m	32		
B2.1.1.3		2,0 m - 3,0 m	m	38		
B2.1.2.4		3,0 m - 4,0 m	m	45		
B2.1.2.5		4,0 m - 5,0 m	m	22		
B2.1.2.6		5,0 m - 6,0 m	m	150		
B2.1.2		160 mm dia pipe for depths: OVER - UP TO				
B2.1.2.1		0,0 m - 1,5 m	m	6 200		
B2.1.2.2		1,5 m - 2,0 m	m	5 800		
B2.1.2.3		2,0 m - 3,0 m	m	4 500		
B2.1.2.4		3,0 m - 4,0 m	m	2 100		
B2.1.2.5		4,0 m - 5,0 m	m	1 300		
B2.1.2.6		5,0 m - 6,0 m	m	800		
B2.13		110 mm dia pipe for depths:		19 900		
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BROUGHT FORWARD				
		OVER - UP TO				
B2.1.3.1		0,0 m - 1,5 m	m	80		
B2.1.3.2		1,5 m - 2,0 m	m	80		
B2.1.3.3		2,0 m - 3,0 m	m	80		
B2.1.3.4		3,0 m - 4,0 m	m	80		
B2.1.3.5		4,0 m - 5,0 m	m	80		
B2.1.3.6		5,0 m - 6,0 m	m	80		
B2.2	8.3.2(b)	Extra over item B2.1.1 to B2.1.3.6 for excavation in hard rock	m³	900		
B2.3	PSDB 8.3.2 (b5)	Hand excavation and backfill where ordered by the Engineer	m³	800		
B2.4	8.3.2(c)	Excavate unsuitable material from trench bottom if ordered				
		a) in hard rock	m³	800		
		b) in soft material	m³	1 000		
B2.5	8.3.3.3	Extra over item B2.1.1 to B2.1.1.3 for additional Compaction to 95% Mod AASHTO density in cohesive soil under roads where ordered	m³	120		
B2.6	8.3.6.1	Reinstate road surfaces with all courses	m²	500		
B2.7	8.3.5(a)	Existing services:				
39	SABS 1200DB	EXISTING SERVICES				
3.9.1	8.3.5(a)	Services that intersect a trench	No	650		
3.9.2	8.3.5(b)	Services that adjoin a trench	m	1 250		
		Locate from drawings provided by the Employer and protect				
		a) Existing water mains	No	55		
		b) Electrical and telecommunication cables	No	20		
B2.8	8.3.3.4	Overhaul to dispose hard rock material (Provisional)	m³/km	900		
B3	**SABS 1200LB**	**BEDDING**				
B3.1	8.2.1 & PSLB 5.3	Provision of bedding from trench excavation				
B.3.1.1		Without the need for screening				
		a) Selected granular material	m³	1 500		
		b) Selected fill material (blanket)	m³	3 500		
B3.1.2	8.2.1 & PSLB 5.3	Including for screening				
		a) Selected granular material	m³	20		
		b) Selected fill material (blanket)	m³	20		
B.3.2	8.2.2.3	Provision of bedding from commercial sources (Provisional)				
		a) Selected granular material	m³	5 000		
		b) Selected fill material (blanket)	m³	1 500		
B3.3	8.2.4	Encasing of pipes in concrete 20MPa where ordered by the Engineer				
		a) 110 mm dia	m³	-		
		b) 160 mm dia	m³	120		
		c) 200 mm dia	m³	30		
B3.4	8.2.2.3	Supply and place 40 mm clean stone in bedding beneath pipe where ordered by the Engineer	m³	1 200		
B3.5	8.2.2.3	Supply and place 13 mm clean stone in bedding beneath pipe where ordered by the Engineer	m³	600		
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BROUGHT FORWARD				
B4	**SABS 1200LD**	**PIPELAYING FOR SEWERS**				
B4.2	8.2.1	Supply,handle, lay, joint and test composite sewer - uPVC Class 34 or similar approved pipes to SABS 1601 of the following nominal diameters				
B4.2.1		a) 110 mm dia	m	-		
B4.2.2		b) 160 mm dia	m	23 100		
B4.2.3		c) 200 mm dia	m	850		
B4.2.4	8.2.2	Extra over item B4.2 for the supply, handle and installation of 110mm sewer end caps.	No	310		
B4.3	8.2.3 & PSLD 5.1	Supply, handle and construct precast concrete sewer manholes complete as per drawing, including “Medium Duty” concrete access cover and frame				
B.4.3.1		Over 0,0 m up to 1,5 m	No	250		
B.4.3.2		Over 1,5 m up to 2,0 m	No	65		
B4.3.3		Over 2,0 m up to 3,0 m	No	75		
B4.3.4		Over 3,0 m up to 4,0 m	No	35		
B4.3.5		Over 4,0 m up to 5,0 m	No	20		
B4.3.6		Over 5,0 m up to 6,0 m	No	20		
B4.3.7		Extra over items B4.3 for type “Heavy Duty” concrete manhole covers in lieu of “Medium Duty”	No	40		
B4.6	8.2.8	ANCHOR BLOCKS Construct anchor blocks on slopes of 1 : 10 or steeper, at 2 m vertical intervals along sewer line as detailed on drawing	No	65		
B4.7	PSLD 8.2.6(a)	ERF CONNECTIONS Short erf connections (5m) Depth to invert level of connection for depths of 1.5m - 3m				
B.4.7.1		150mm 405mm (Type 1)	No	190		
B.4.7.2		450mm 710mm (Type 2)	No	240		
B4.7.3		710mm 1010mm (Type 3)	No	280		
B4.7.4		1015mm 1500mm (Type 4)	No	190		
B4.7.5		Greater than 1500mm (Type 5)	No	620		
B4.7.6		Extra Over Item B,4.7 for long erf connections (in excess of 2.3m).	m	8 500		
		TOTAL SECTION B CARRY FORWARD TO SUMMARY				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		SECTION C: **ROADS AND STORMWATER**				
	SABS 1200 DM	**EARTHWORKS (ROADS, SUBGRADE)**				
C.1	8.3.3	TREATMENT OF ROAD-BED				
C.1.2	8.3.3(a)	Road-bed preparation and compaction of material to minimum of 93% of MAASHTO density (100% for sand)	m³	36		
	PS DM 8.3.3(b)	In situ treatment of road-bed in:				
		a) Intermediate material	m³	24		
C.1.3		b) Hard rock material	m³	20		
C.1.4	PS DM 8.3.3(c)	In situ preparation of road-bed with eight roller passes (pneumatic roller)	m²	90		
C.1.5	PS DM 8.3.3(d)	Variations in compaction effort (pneumatic roller)	m². pass	0		
C.2		EARTHWORKS				
C.2.1	PS DM 8.3.4	Cut to fill, compacted to 90% of MAASHTO density (100% for sand) in:				
		a) Road prism	m³	30		
C.2.2	PS DM 8.3.4	Borrow to fill, compacted to 90% of MAASHTO density (100% for sand) in:				
		b) Road prism	m³	30		
C2.3	8.3.6	Extra-over items PS DM 8.3.4 fpr excavating and breaking down material in:				
		a) Intermediate excavation	m³	30		
		b) Hard rock excavation	m³	20		
C.6.4	8.3.3	Construct wearing course with material from commercial sources compacted to 95% of MAASHTO density				
		a) 150 mm (G7 material)	m³	120		
C.6.5	8.3.5	Processing of subbase material by the following processes, as relevant, and use in the subbase				
		a) Heavy grid rolling	m²	90		
C.7	SANS 1200 DB	EXCAVATION				
C.7.1	SD DB 8.3.2(a)	Excavate in all materials for trenches backfill, compact, and dispose of surplus/unsuitable material, for pipes greater than 450mm and up to 900 mm diam. for total trench depth:				
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BROUGHT FORWARD				
		(a)Exceeding 0,0 m but not exceeding 1,0 m	m	80		
		(b)Exceeding 1,0 m but not exceeding 2,0 m	m	80		
C.7.2	8.3.2(b)	Extra-over PS DB for excavation in				
	8.3.2(b)(2)	(a)Hard rock excavation	m^3	20		
	SANS 1200 LB	BEDDING MATERIAL				
C.8.1		Supply and compact bedding to 93% MOD AASHTO density with material Imported from				
		1) Selected granular material	m^3	25		
		2) Selected fill blanket	m^3	28		
		SECTION :STORMWATER DRAINAGE SITE CLEARANCE AND EXCAVATION				
C.9	SANS 1200 LE	PIPES				
	8.2.1	Supply, handle, lay, bed (Class C Bedding) Concrete pipe				
		b) 600 mm diameter100D	m	80		
C.16		**SEGMENTED PAVING**				
C.16.1	4.1	Construction of Paving Complete 80mm Class 25, Type S-C on 25 mm thick compacted sand bed as shown on Long Sections & Layout Plans	m^2	1 600		
C.16.1	4.2	Supply and lay 60 mm bond pavers on 25 mm sand layer	m^2	1 600		
C.16.2	4.3	Cutting units to Fit Edge Restraints Straight and curves	m	450		
C.16.3	4.4	Rolling to locked-up condition	m^2	1 600		
C.16.3	4.5	100Micron HDPE Sheet	m^2	1 600		
C.16.3	4.6	Sand	m^3	120		
		Precast Kerbing				
		Supply and install precast kerbs along straights and curves with long radii, complete and all inclusive				
C.17.1	4.7	Non-Mountable kerb (Fig.3)	m	80		
C.17.2	4.8	Mountable kerb and Chaneel (Fig.14 & Fig.8)	m	80		
C.17.3	4.9	Edge restraint - Seperation beam between paving & non paved area (Fig. 7) or alternatively grade 25/19 in-situ cast.	m	40		
		TOTAL SECTION C CARRY FORWARD TO SUMMARY				

Item No	Payment Refers	DesDription	Unit	Qty	Rate	Amount
		SEDTION D: **MECHANICAL WORKS**				
D1		**SDREENS**				
D1.1		Supply 12mm Manual Screens	No	1		
D1.2		Installation of Manual Screens	No	1		
D1.3		Supply of flow meters (Mechanical Flow Meters)	No	2		
D1.4		Installation of Flow meters	No	2		
TOTAL SECTION D CARRY FORWARD TO SUMMARY						

DESCRIPTION: WATERFALL SEWER UPGRADE PROJECT

SUMMARY OF SCHEDULE OF QUANTITIES

Item No	Description	Amount
1	Section A: Preliminary and General	
2	Section B: Sewers	
3	Section C: Roads and Stormwater	
4	Section D: Mechanical Works	
	TOTAL	
	Add Contingencies (10%)	
	Sub-total	
	Add 15% VAT	
	TOTAL VALUE OF TENDER	