

## SECTION B1 PRELIMINARY AND GENERAL

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1	<b>SANS</b>	<b><u>PART A: SECTION 1</u></b>				
	1200 A	<b><u>PRELIMINARY AND GENERAL PROVISIONS</u></b>				
1.1	PSA1	<b>FIXED-CHARGE ITEMS</b>				
	PSA 8.3					
1.1.1	8.3.1	Contractual requirements	Sum	1		
1.1.2	8.3.2	Provision of facilities on site:				
	8.3.2.1	<b>1) Facilities for Engineer:</b>				
		b) Name- boards (No. 2)	Sum	1		
		c) Communication	Prov Sum	1	10 000.00	10 000.00
		Overhead profit on item 3.2.1 c	%	10 000		
		d) Meeting Room Type 1	Sum	1		
		e) Latrine facilities	Sum	1		
		f) Equipment	Sum	1		
1.1.3		<b>2) Facilities for the contractor:</b>				
		a) Offices and storage sheds	Sum	1		
		b) Ablution and latrine facilities	Sum	1		
		c) Tools and Equipment	Sum	1		
		d) Access (See Sub Clause 5.8	Sum	1		
		e) Plant	Sum	1		
		f) Water supplies and electric power and communications	Sum	1		
		g) Dealing with water	Sum	1		
		h) Workshop	Sum	1		
		Other Fixed Charged Obligations	Sum	1		
	PSA 8.3.5.2	OHS Act Obligations (Compilation of OHSAct file)	Sum	1		
	PSA 8.3.5.3	EMP Obligations	Sum	1		
	PSA 8.3.5.1	Issuing of notices to customers also refer to PS6,6	Sum	1		
1.1.4	8.3.4	Removal of Site Establishment	Sum	1		
1200 A	TOTAL CARRIED FORWARD					

## SECTION B1 PRELIMINARY AND GENERAL

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1200 A	Brought Forward					
1.2	8.4	<b>TIME RELATED ITEMS</b>				
1.2.1	8.4.1	Contractual requirements				
		a) Insurance	Month	12		
		b) Workers compensation act	Month	12		
		c) Public liability insurance	Month	12		
		d) Sureties	Month	12		
1.2.2	8.4.2.1	<b>1) Facilities for Engineer:</b>				
		d) Meeting Room Type 1	Month	12		
		e) Latrine facilities	Month	12		
		f) Equipment	Month	12		
	8.4.2.2	<b>2) Facilities for the contractor:</b>				
		a) Offices and storage sheds	Month	12		
		b) Ablution and latrine facilities	Month	12		
		c) Tools and Equipment	Month	12		
		e) Plant	Month	12		
		f) Water supplies and electric power and communications	Month	12		
		g) Workshop	Month	12		
1.2.3	PSA 8.4.6.1	Implementation and compliance with OHAS Acts	Month	12		
1.2.4	PSA 8.4.6.2	EMP implementation and maintenance	Month	12		
2		<b>TEMPORARY WORKS</b>				
2.1		Dealing with traffic for the duration of contract				
		a) Flag person	Month	12		
		b) Stop sign	No.	10		
		c) Warning Signs	No.	8		
		d) Chevron	No.	40		
1200 A	<b>TOTAL CARRIED TO SUMMARY</b>					

## SECTION B2 : DAYWORK SCHEDULE

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3		<b><u>DAYWORK SCHEDULE</u></b>				
3.1		<b>Prime cost items</b>				
		a) Materials used in the execution of dayworks	Pro Sum	1	10 000.00	10 000.00
		b) Overheads, charges and profit on item 1.3.1 above	%	10000		
3.2		<b>Day Works</b>				
		Note: to be executed on instruction of the Engineer Only				
3.2.1		Labour				
		a) Normal working hours				
		i) Skilled	hr	20		
		ii) Sem Skilled	hr	30		
		iii) Unskilled	hr	40		
		b) Overtime and Saturdays				
		i) Skilled	hr	20		
		ii) Sem Skilled	hr	30		
		iii) Unskilled	hr	40		
3.2.2		Foreman	hr	10		
3.2.3		<b>Plant Hire (work rates on site)</b>				
3.2.3.1		Trucks				
		Tipper Trucks				
		e) Capacity 6m3	hr	3		
3.2.3.2		Flatbed Trucks				
		b) Capacity 7 ton	hr	7		
3.2.3.3		LDV's				
		LDV Capacity 1 ton	hr	7		
3.2.3.4		Water Tankers				
		Capacity 5000 litres	hr	6		
3.2.3.5		Excavators				
		Crawler Excavator (Medium)	hr	10		
3.2.3.6		TLBs				
		Model P X 4	hr	6		
1200 AA		TOTAL CARRIED FORWARD				

## SECTION B2 : DAYWORK SCHEDULE

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1200 AA	Brought Forward					
3.2.3.7		Rollers Walk behind vibrating rollers (BW 76) Medium	hr	6		
3.2.3.8		Compactor Wackers (Medium)	hr	6		
3.2.3.9		Compressors Portable diesel compressors, Capacity 125cfm	hr	6		
3.2.3.10		Water pumps Capacity:				
		a) Small	hr	6		
		b) Medium	hr	6		
		c) Large	hr	6		
1200 AA	TOTAL CARRIED TO SUMMARY					

## SECTION C1 : SEWER NETWORK

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
4	SANS 1200 C PSC	<b>SITE CLEARANCE (Note: only for areas not on road reserve)</b>				
4.1	8.3.1	<b>Clear Site</b>				
4.1.1	8.3.1. (a)	Clear and grub (1.5 metre wide strip)		720		
4.1.2	8.2.2	Remove topsoil to nominal depth of 150mm and stockpile and reinstate	m <sup>3</sup>	108		
4.1.9	PSC 8.2.11	Saw cutting of existing asphalt surfaces (20mm to 60mm thickness)	m	18		
5		<b>EARTHWORKS: PIPE TRENCHES</b>				
5.1		<b>Excavations</b>				
5.1.1		Excavate by MACHINE or by hand in all materials for trenches up to 950mm wide, backfill, compact and dispose of surplus or unsuitable material for 110mm to 160mm dia pipes for depths of:				
		<b>Over and up to</b>				
5.1.1.1		0.0m to 1.0m	m <sup>3</sup>	125		
5.1.1.2		1.0m to 2.0m	m <sup>3</sup>	400		
5.1.1.3		2.0m to 3.0m	m <sup>3</sup>	490		
5.1.1.4		3.0m to 4.0m	m <sup>3</sup>	110		
5.1.1.5	8.3.2(b)	<b>Extra over items 4.1.1.1 to 4.1.1.4 for:</b>				
5.1.1.6		Intermediate excavation	m <sup>3</sup>	280		
5.1.1.7		Hard rock excavation	m <sup>3</sup>	430		
5.1.1.8	8.3.2(c) LI	Excavation and disposal of unsuitable material from trench bottom, dispose within free haul	m <sup>3</sup>	1000		
1200 AA	TOTAL CARRIED FORWARD					

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1200 AA	Brought Forward					
5.1.1.9	8.3.3	<b>Excavation Ancillaries</b>				
	8.3.3.3	Compaction in road reserve				
		a) Additional compaction to 93% mod AASHTO density in road reserves	m <sup>3</sup>	500		
5.1.1.10	8.3.5 (a)	<b><u>Existing services that intersect or adjoin a pipe trench</u></b>				
		a) Services that intersect a trench				
		i) Water mains up to 300mm Dia.	No.	20		
		ii) Cables.	No.	10		
		iii) Kerbs and channels.	No.	45		
		iv) Stormwater pipes up to 1050mm Dia.				
	8.3.5 (b)	<b>b) Services that adjoin a trench</b>				
		i) Sewer Pipe up to 300mm Dia.	m	100		
		ii) Cables.	m	100		
		iii) Kerbs and channels.	m	50		
		iv) Stormwater pipes up to 1050mm Dia.	m	100		
		v) Water mains up to 300mm Dia.	m	100		
		Services that require special care				
	8.3.6	<b>Finishing</b>				
5.1.1.11		Reinstatement of kerbs concrete paves and channels	m	250		
5.1.1.12		Reinstatement of grassed surfaces	m <sup>2</sup>	12000		
5.1.1.13		Shoring and safeguarding of trench to the satisfaction of the Engineer and the safety regulations	m	2010		
<b>1200 AA</b>	<b>TOTAL CARRIED FORWARD</b>					

## SECTION C1 : SEWER NETWORK

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1200 AA		Brought Forward				
6		<b>Provision of Bedding</b>				
6.1		Available from trench within 0.5km				
6.1.1		Selected granular material	m³	350		
6.1.2		Selected fill material	m³	450		
6.2		Imported from commercial sources (provisional)				
6.2.1		Selected granular material	m³	550		
6.2.2		Selected fill material	m³	1 125		
7		<b>SEWERS</b>				
7.1		<b>Pipework</b>				
7.1.1		Supply, lay, joint and test structured wall PVC Class 34 normal duty or similar approved socket-ended pipes on granular bedding as shown on drawings				
7.1.1.1		110mm dia	m	800		
7.1.1.2		160mm dia	m	115		
7.2		<b>Manholes</b>				
7.2.1		Supply all materials and labour for the construction of concrete manholes from precast sections (SABS Specification 1294-81) complete with cover and frame, including step irons, channelling, benching, grouting, Kimberley socket, short pipes, etc in the following diameter and depth categories:				
7.2.2		1 000mm dia : 0,0m - 1,0m	No.	9		
7.2.3		1 000mm dia : 1.0m - 1,5m	No.	5		
7.2.3		1 000mm dia : 1,5m - 2,0m	No.	2		
7.2.4		1 000mm dia : 1,5m - 2,0m	No.	2		
7.2.5		1 500mm dia : 2,0m - 2,5m	No.	2		
7.2.6		1.500mm dia : 2,5m - 3,0m	No.	2		
7.2.7		1 500mm dia : 3,0m - 3,5m	No.	1		
7.3		Connect to existing sewer and manholes				
7.3.1		New sewer to existing bulk sewer for depths of:				
		a) 3.5m to 4m	No.	2		
1200 AA		<b>TOTAL CARRIED TO SUMMARY</b>				

## SECTION C2 : WATER NETWORK

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
8		<b>EXCAVATION</b>				
8.1		Excavate by MACHINE or by hand in all materials for trenches up to 700mm wide, backfill, compact and dispose of surplus or unsuitable material up to 110mm dia pipes for depths of:				
		<b>Over and up to</b>				
8.1.1		0.0m to 1.5m	m³	780		
8.1.2		Extra over item 4.1.1 for:				
8.1.3		Intermediate excavation	m³	320		
8.1.4		Hard rock excavation	m³	200		
9		<b>PROVISION OF BEDDING</b>				
9.1		Available from trench within 0.5km				
9.1.1		Selected granular material	m³	450		
9.1.2		Selected fill material	m³	200		
9.3		Imported from commercial sources (provisional)				
9.3.1		Selected granular material	m³	200		
9.3.2		Selected fill material	m³	350		
10		<b>MEDIUM PRESSURE PIPELINES</b>				
		HDPE PN16				
10.1		Supply, handle, lay and bed HDPE PN16, test and disinfect				
10.1.1		50mm dia	m	135		
10.1.2		75mm dia	m	1 200		
SEC C2	TOTAL CARRIED FORWARD					



## SECTION C2 : WATER NETWORK

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SEC C2	Brought Forward					
11		<b>PIPE FITTINGS AND SPECIALS</b>				
11.1		Extra-over 8.2.1 for the supplying, Laying and Bedding of Specials complete with Coupling as Follows:-				
11.1.1		Supply, lay, joint and bed including cutting pipes where required for the following				
11.1.1.1		SG Iron Hydrant Tees				
		a) 75mm dia	No.	1		
11.2		<b>Fittings for HDPe Pipes</b>				
11.2.1		HDPE Compression Flange Adaptors for Reticulation Pipelines				
		a) 50mm dia x 2"	No.	6		
		b) 75mm dia x 3"	No.	6		
11.2.2		HDPE Compression T-pieces for Reticulation Pipelines				
		a) 50mm dia.	No.	6		
		b) 75mm dia.	No.	6		
11.2.3		Threaded HDPE Compression T-pieces with female BSP threads and S/S stiffening ring for Reticulation Pipelines				
		a) 75mm dia x 2" x 75mm diam	No.	6		
		b) 75mm dia x 3" x 75mm diam	No.	6		
11.2.4		HDPE Compression male Adaptors for Reticulation Pipelines				
		a) 75mm dia x 2"	No.	8		
		b) 75mm dia x 3"	No.	10		
11.3		<b>Anchor/ Trust Blocks and Pedestals</b>				
11.3.1		Construct using grade 15MPa Contrete inclusive of end shuttering for the following :				
		a) Equal and Reducing Tees.	m³	3		
		b) Fire Hydrant Installations	m³	3		
1200 AA	TOTAL CARRIED FORWARD					

## SECTION C2 : WATER NETWORK

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SEC C2	Brought Forward					
12		<b>VALVES</b>				
12.1		Isolation Valve Assemblies				
12.1.1		Supply and install the following flanged resilient seal Gate valves, PN 16 with non rising spindle, clockwise closing including all gaskets,bolts, nuts and washers complete with Durban coorporate pattern No. 5b, 250mm uPVC pipe piece and concrete slabs as per details on Drawing N° MAT-038-STD-101				
		a) ND50mm	No.	2		
		b) ND80mm	No.	14		
12.1.2		Supply and install Air Valve assemblies as per details on Drawing N° MAT-038-STD-103 consisting of: <b>(Note: All inclusive Rate)</b>	No.	1		
		a) Threaded HDPE Compression T-pieces with female BSP threads and S/S stiffening ring for Reticulation Pipelines	INCL			
		b) Galvanised Reducing Bush 50mm x 25mm	INCL			
		c) ND25mm GMS Pipe threaded both ends (700mm long)				
		d) 50mm Vent-O-Matt Screw Type Air Valve to be supplied complete with brass valve ending with 1/4" female BSP thread and 1/4" brass nipple	INCL			
12.2		<b>Scour Vaves Assemblies</b>				
12.2.1		Supply and install Scour Valve assemblies with wedge gate valve as per detail Drawing N° MAT-038-STD-101 consisting of: <b>(Note: All inclusive Rate)</b>	No.			
		a) ND75mm HDPE Compression Flange Adaptor	INCL			
		b) ND80mm Hydrant Tee	INCL			
		c) ND100mm x ND80mm GMS flanged Reducer	INCL			
		d) ND100mm GMS Pipe flanged on both ends (935mm long) with Puddle Flange 420mm from one end	INCL			
SEC C2	TOTAL CARRIED FORWARD					

## SECTION C2 : WATER NETWORK

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SEC C2	Brought Forward					
12.3		e) ND100mm flanged RSV Valve	INCL			
		f) ND100mm GMS Pipe flanged one end (935mm long) with Puddle Flange 420mm from one end	INCL			
		g) ND100mm GMS Pipe flanged one end (150mm long) and ND100mm GMS Pipe flanged one end (2100mm long welded to a 45 degree GMS bend	INCL			
		h) ND100mm flanged Jet Dispencer as per Detail	INCL			
12.3.1		<b>Fire Hydrants Assemblies</b>				
		Supply and install Hydrants assemblies for 80mm ND above ground fire hydrants, including all fittings, bends, risers, up to 3m flanged lateral pipe and duckfoot bend support slab, valve box as per Drawing N° MAT-038-STD-101	No.	2		
13		<b>VALVE CHAMBERS</b>				
13.1		<b>Scour Vaves Chamber</b>				
13.1.1		Construct scour valve chamber as per detail Drawing No. MAT-038-STD-101 complete with 1.0m x 1.0m x 1.0m gabion basket	No.	1		
13.2		<b>Air Valve Chambers</b>				
		a) Construct air valve chamber as per detail Drawing No. MAT-038-STD-103 complete with concrete slab and air vent	No.	1		
		b) Extra-over item for Maveric Frame Type 2A Cover including 3 set of keys	No.	1		
14		<b>All Provisional Sum of R 50 000.00 for materials ordered by the engineer</b>	Prov Sum	1	50 000.00	50 000.00
SEC C2	<b>TOTAL CARRIED TO SUMMARY</b>					

## SECTION C1 : STORMWATER DRAINAIING

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
15		<b>PIPE TRENCHES</b>				
15.1		EXCAVATIONS				
15.1.1		Excavate in all materials backfill, compact and dispose of surplus / unsuitable material for portal culverts :				
15.1.1.1		0.0m to 1.0m	m³	12		
15.1.1.2		1.0m to 2.0m	m³	650		
15.1.1.3		Extra over Items 5.1.1 and 5.1.2 for:				
15.1.1.4		Intermediate excavation	m³	265		
15.1.1.3		Hard rock excavation	m³	190		
16		<b>BEDDING (PIPES)</b>				
16.1		Provision of bedding from commercial sources:				
16.1.1		Selected fill material	m³	75		
17		<b>STORMWATER DRAINAGE</b>				
17.1		<b>Stormwater Pipes</b>				
17.1.1		Supply, handle, lay, bed on Class C, class 75D concrete pipe, socket & spigot type				
17.1.1.1		600mm Diametre	m	320		
17.2		<b>Kerb Side inlet kerb as indicated on drawings 1.4 deep</b>				
17.2.1		2m Inlets	No.	8		
17.3		<b>Manholes</b>				
17.3.1		Construct complete manholes as per drawings. 1,0m to 1,5m	No.	1		
17.4		<b>Construct complete the stormwater Headwalls as specified by engineers:</b>				
17.4.1		Outlet	No.	1		
SEC C3		<b>TOTAL CARRIED TO SUMMARY</b>				

## SECTION C4 : INTERNAL ROADS

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
18	1200 C+D	<b>SITE CLEARANCE</b>				
18.1		Clear and grub				
18.1.1	PSC 2 PSC 4	Remove existing material to nominal depth 150 mm in 3 layers and stockpile	m <sup>2</sup>	7300		
18.1.2		Transport excavated materials and debris from all excavation to approved sites and dump	m <sup>3</sup> .km	5020		
19		<b>EARTHWORKS</b>				
19.1	8.3.7	Cut to spoil material - roads	m <sup>3</sup>	1220		
20		<b>SUBGRADE</b>				
20.1	8.3.3(a)	Treatment of road-bed. Road- bed Preparation (to a depth 150 mm) and compaction of material to 93% of Mod AASHTO (100% if sand)	m <sup>3</sup>	980		
21		<b>SUBBASE</b>				
21.1	8.2.3	Construct 150mm G5 thick cemented subbase at 2% and compact to 95% MOD AASHTO	m <sup>3</sup>	960		
21.2		<b>Stabilizing Agent:</b>				
21.2.1		Portland Cement	tons	28		
22		<b>BASE</b>				
22.1	PSMF 1.1	Construct 150 mm G2 thick graded crushed stone base with material from commercial source and compact to 98% Mod ASSHTO	m <sup>3</sup>	870		
23		<b>BITUMINOUS SURFACE TREATMENT</b>				
23.1	8.4.1	Prime coat (cut back bitumen grade MC 30 as per Project Spec.at a rate of 0.7 litres/m2)	m <sup>2</sup>	3 940		
23.2		Variations in quantities of prime and bituminous binders	litres	150		
23.3		Tack coat using 30% of bitumen emulsion @ 0.3 l/m2	m <sup>2</sup>	39 440		
24		<b>ASPHALT</b>				
24.1		30 mm thick premix	m <sup>2</sup>	3 940		
24.2		Variation in quantities of premix	m <sup>3</sup>	150		
25	SANS 1200 MK	<b>CONCRETE KERBING AND CHANNELLING</b>				
25.1	8.2.2	Straight and curves radii greater than 20m	m	870		
25.2		Curves, radii up to 20m	m	160		
SEC C4	TOTAL CARRIED FORWARD					

## SECTION C4 : INTERNAL ROADS

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SEC C4	Brought Forward					
26	8.4.1	<b>ANCILLARY ROAD WORKS</b>				
26.1		<b>Sign faces</b>				
26.1.1		Statutory signs, supplied and erected complete for the following :				
26.1.1.1		Stop sign - R1	No.	10		
26.2		<b>Road Markings</b>				
26.2.1		Non-reflectorised paint applied at nominal rate of 0.42l/m <sup>2</sup> to the following:				
26.2.1		100mm wide white lines (broken or unbroken)	km	1		
26.2.2		100mm wide yellow lines (broken or unbroken)	km	1.1		
26.2.3		White characters and symbols	m <sup>2</sup>	25		
26.2.4		Setting out and premarking of lines (including traffic island markings, characters and symbols)	km	1.7		
27		<b>SIDEWALKS</b>				
27.1		80mm Paving Blocks	m <sup>2</sup>	660		
27.2		25 mm thick sand layer	m <sup>3</sup>	95		
27.3		Construct 150 mm thick G2 graded crushed stone base with material from commercial source and compact to 98% Mod ASSHTO	m <sup>3</sup>	250		
27.4		Construct 150 mm thick gravel base with material from commercial source and compact to 98% Mod ASSHTO	m <sup>3</sup>	370		
27.5		Precast kerbing - Straight and curves radii greater than 20m	m	1 740		
27.6		Precast concrete Kerbing - Curves, radii up to 20m	m	310		
SEC C4	TOTAL CARRIED FORWARD					

## SECTION C4 : INTERNAL ROADS

ITEM NO	REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SEC C4	Brought Forward					
28		<b>Subsoil Drainage</b>				
28.1		Geocomposite pre-manufactured drainage system( Kaytech Flo-Drain ) with Flownet drainage core	m	650		
		(i) Flodrain A2 ( 30m x 750mm )				
		(ii) GeoPipe ( 6m x 100mm ) M100 meshcore HDPE drainage pipe	m	650		
SEC C4	TOTAL CARRIED TO SUMMARY					

**SUMMARY OF SCHEDULE OF QUANTITIES**

DESCRIPTION		ENGINEER'S ESTIMATE
<b>PART A</b>	<b>EMAXESIBENI EXTENTION 6 SERVICES</b>	
SCHEDULE B1	PRELIMINARY & GENERAL	R
SCHEDULE B2	DAYWORK SCHEDULE	R
SCHEDULE C1	SEWER	R
SCHEDULE C2	WATER	R
SCHEDULE C3	STORMWATER DRAINAGE	R
SCHEDULE C4	ROADS	R
<b>PART A</b>	<b>EMAXESIBENI EXTENTION 6 SERVICES (SUB-TOTAL)</b>	R
<b>TOTAL OF SCHEDULE OF QUANTITIES</b>		R
CONTINGENCIES The sum provided here is under the sole control of the Engineer and may be deducted in whole or in part. (The Tenderer must add <b>10%</b> of the total of schedule of quantities) . . . . .		R
SUBTOTAL (1) . . . . .		R
CONTRACT PRICE ADJUSTMENT Sum provided in terms of the provisions of the General Conditions of Contract (The Tenderer must add 5 % of Subtotal (1))		R
SUBTOTAL (2) . . . . .		R
VALUE-ADDED TAX (VAT) The tenderer shall add 15% of subtotal (2) for VAT . . . . .		R
<b>TENDER SUM CARRIED TO FORM OF TENDER</b>		<b>R</b>