

SECTION 1 : PRELIMINARY AND GENERAL

SANS 1200 A

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
						R
1	SANS 1200 A	GENERAL				
1.1	8.3	<u>Fixed-Charge and Value-Related Items</u>				
1.1.1	8.3.1	Contractual Requirements.	Sum	1		
1.2	8.3.2	Establishment of Facilities on the Site				
1.2.1	8.3.2.1 (PS-13.1)	Facilities for Engineer:				
1.2.1.1		a) Furnished Offices (Air-conditioned -1 No.)	Sum	1		
1.2.1.2		b) Nameboards (1 No.).	Sum	1		
1.2.1.3		c) Shaded Carport.	Sum	1		
1.2.2	8.3.2.2	Facilities for Contractor:				
1.2.2.1		a) Offices and Storage Sheds.	Sum	1		
1.2.2.2		b) Laboratories.	Sum	1		
1.2.2.3		c) Ablution and Latrine Facilities.	Sum	1		
1.2.2.4		d) Tools and Equipment.	Sum	1		
1.2.2.5		e) Water Supplies, Electric Power & Communications.	Sum	1		
1.2.2.6		f) Dealing with Water.	Sum	1		
1.2.2.7		g) Access to Works (Sub-Clause 5.8).	Sum	1		
1.2.2.8		h) Plant.	Sum	1		
1.2.2.9		i) Maintaining Access for Residents.	Sum	1		
1.3	8.3.3	Other Fixed-Charge Obligations (List Below):				
1.4	PS-9	All initial works to be completed for compliance with the site specific Environmental Management Programme (EMPr) including all reports, meetings, approvals and general compliance in all	Sum	1		
1.5	8.3.4	Removal of Site Establishment.	Sum	1		
1.6	PSAH-14.1	Contractor's initial obligations in terms of the Occupational Health and Safety Act and Construction Regulations. Rate to include for submission of Health and Safety file and compliance to eThekweni Health & Safety Specifications.	Sum	1		
1.7	PSAH-14.3	Submission of Health and Safety file on completion of works to the satisfaction of the	Sum	1		
1.8	8.4	<u>Scheduled Time-Related Items</u>				
1.8.1	8.4.1	Contractual Requirements.	Weeks	26		
Total Carried Forward						

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ITEM NO.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
						R
Total Brought Forward						
1.8.2	8.4.2	Operation and maintenance of facilities on site for duration of construction, except where otherwise stated.				
1.8.2.1	8.4.2.1	Facilities for Engineer:				
1.8.2.1.1		a) Furnished Offices (Air-conditioned - 1	Weeks	26		
1.8.2.1.2		b) Nameboards (1 No.).	Weeks	26		
1.8.2.1.3		c) Shaded Carport.	Weeks	26		
1.8.2.2	8.4.2.2	Facilities for Contractor:				
1.8.2.2.1		a) Offices and Storage Sheds.	Weeks	26		
1.8.2.2.2		b) Laboratories.	Weeks	26		
1.8.2.2.3		c) Ablution and Latrine Facilities.	Weeks	26		
1.8.2.2.4		d) Tools and Equipment.	Weeks	26		
1.8.2.2.5		e) Water Supplies, Electric Power & Communications.	Weeks	26		
1.8.2.2.6		f) Dealing with Water.	Weeks	26		
1.8.2.2.7		g) Access to Works (Sub-Clause 5.8).	Weeks	26		
1.8.2.2.8		h) Plant.	Weeks	26		
1.8.2.2.9		i) Maintaining Access for Residents.	Weeks	26		
1.8.3	8.4.3	Supervision for duration of construction.	Weeks	26		
1.8.4	8.4.4	Company and head office overheads for the duration of the contract.	Weeks	26		
1.8.5	8.4.5	Other Time Related Obligations (List Below):				
1.8.6	PS-9	All time related works to be completed for compliance with the site specific Environmental Management Programme (EMPr) including all reports, meetings, approvals and general compliance in all regards.	Weeks	26		
1.8.7	PSAH-14.2	Contractor's time-related obligations in terms of the Occupational Health and Safety Act and Construction Regulations. Rate to include for full compensation for all personnel (including a dedicated full-time construction safety officer) and all costs in respect of compliance with and enforcement of the health and safety specifications and compliance for Covid - 19 Health & Safety Specifications.	Weeks	26		
1.8.8	PS-32	Project Photographs (digital and hardcopy).	Weeks	26		
Total Carried Forward						

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ITEM NO.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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Total Brought Forward						
1.8.9		Allow for repairs to damaged, unknown services carried out by the Contractor.	Weeks	26		
1.9	PSA-8.5	<u>Sums Stated Provisionally by Engineer</u>				
1.9.1		Allow for additional tacheometry survey works to be undertaken by a Surveyor as directed by the Engineer.	Prov. Sum	1.00	-	50,000.00
1.9.2		Overheads, charges and profit on item 1.9.1	%	50,000.00		
1.9.3	PS-34	Allow for payment to the Community Liaison Officer (CLO).	Prov. Sum	1.00	-	90,000.00
1.9.4		Overheads, charges and profit on item 1.9.3 above. Rate to include for all additional costs for leave days, legal deductions and bonuses.	%	90,000.00		
1.9.5	PS-35	Allow for Institutional and Social Development (ISD) Officer.	Prov. Sum	1.00	-	300,000.00
1.9.6		Overheads, charges and profit on item 1.9.5	%	300,000.00		
1.9.7	PS-2	Allow for relocation of services by the respective service provider where directed by Engineer.	Prov. Sum	1.00	-	5,000.00
1.9.8		Overheads, charges and profit on item 1.9.7	%	5,000.00		
1.9.9	PS.2	Allow for repairs to existing services carried out by respective service provider where directed by the Engineer.	Prov. Sum	1.00	-	5,000.00
1.9.10		Overheads, charges and profit on item 1.9.9	%	5,000.00		
1.10	8.7	<u>Daywork</u>				
1.10.1		Plant, Trucks & Equipment.				
1.10.2		(a) Tractor loader backhoe.	hr	40		RATE ONLY
1.10.3		(b) Plate compactor.	hr	40		RATE ONLY
1.10.4		(c) Pedestrian vibrating roller.	hr	40		RATE ONLY
1.10.5		(d) Bulldozer (D6 or similar).	hr	40		RATE ONLY
1.10.6		(e) Truck with 6m³ capacity.	hr	40		RATE ONLY
1.10.7		(f) Truck with 10m³ capacity.	hr	40		RATE ONLY
1.10.8		(g) Water tanker.	hr	40		RATE ONLY
1.10.9		(h) Light delivery vehicle (1 Ton).	hr	40		RATE ONLY
Total Carried Forward						

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ITEM NO.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
						R
Total Brought Forward						
1.10.10		Labour.				
1.10.11		(a) Artisan.	hr	70		RATE ONLY
1.10.12		(b) Foreman.	hr	70		RATE ONLY
1.10.13		(c) Skilled labour.	hr	70		RATE ONLY
1.10.14		(d) Unskilled labour.	hr	80		RATE ONLY
1.11	8.8	Temporary Works				
1.11.1	8.8.4	Existing Services.				
1.11.1.1	8.8.4 (c)	Excavate by hand in soft material to expose existing services.	hr	80		
1.11.1.2	8.8.4 (d)	Temporary protection of all existing services exposed.	Sum	1		
1.11.1.3		Protect existing underground and overhead services during construction.	Sum	1		
1.12	8.8.5	Cost of Survey in terms of Land Survey Act				
1.12.1	8.8.5 (b) PSA-5.1.2	Protect survey beacons and re-establish, as ordered by the Employer's Agent, by a Registered Land Surveyor on completion of the works.	Sum	1		
1.12.2		Setting out the works and checking and recording positions and level of all services during construction.	Sum	1		
1.12.3		Complete As-Built Survey of the works. Provide Y, X & Z co-ordinates in digital format of all sewer manholes, house connections and concrete piers (cover levels, ground levels and invert levels to be provided).	Sum	1		
		Additional site survey:				
1.12.4		(a) Verify existing sewer tie-in manholes and points by providing Y, X & Z co-ordinates in excel format (cover and invert levels to be provided).	No.	6		
1.12.5	PSA-5.1.3	(b) Survey for the preparation of As-built	Sum	1		
1.12.6	PSA-5.1.1	(c) Setting Out of the works	Sum	1		
SECTION 1: Total Carried Forward to Summary						

SECTION 2: SITE CLEARANCE**SANS 1200 C**

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
						R
2.	SANS 1200 C	SITE CLEARANCE				
2.1	8.2.1	Clear vegetation and trees of girth up to 1m (maximum width = 3m).	m	680		
2.2	8.2.2	Remove and dispose of trees of girth:				
2.3		a) Over 1m and up to and including 2m.	No.	1		
2.3.1	8.2.6	Clear hedges	m	50		
2.4	8.2.10	Remove topsoil to nominal depth of 150mm and stockpile on site for re-use.	m ³	78		
2.6		Remove and dispose of existing services at approved dumpsite:				
2.6.1		a) Sewer pipes up to 160mm dia. Pipe	m	130		
2.6.2		b) Sewer concrete manholes up to 3.5m depth	No.	7		
SECTION 2: Total Carried Forward to Summary						

SECTION 3: EARTHWORKS (PIPE TRENCHES)**SANS 1200 DB**

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
						R
3.	SANS 1200 DB	EARTHWORKS (PIPE TRENCHES)				
3.1	8.3.2(a)	Selective excavation in all materials for Pipe trenches, backfill, compact to 90% Mod. AASHTO minimum density and dispose of surplus and unsuitable material. Rates shall include for cutting of level bench on steep terrain for excavation purposes, reinstatement of bench and shoring of trench in terms of the Occupational Health and Safety Act.				
		For OD 160mm pipes:				
3.1.1		Over 0m to 1.0m	m	26		
3.1.2		Over 1m to 2.0m	m	474		
3.1.3		Over 2.0m to 3.0m	m	130		
3.1.4		Over 3m to 4.0m	m	50		
3.2	8.3.2(b)	Extra-over items 3.1.1 to 3.1.4 for :-				
3.2.1	8.3.2(b)(2)	Excavation in hard rock (no blasting permitted).	m ³	5		
3.2.2	8.3.2(c)	Excavate and dispose of unsuitable material from trench bottom (Provisional).	m ³	30		
3.3	8.3.3	<u>Excavation Ancillaries</u>				
3.3.1	8.3.3.1	Make up deficiency in backfill material (provisional).				
3.3.1.1		a) from other necessary excavations on site.	m ³	20.3		
3.3.1.2		c) by importation from commercial or off-site sources selected by the Contractor.	m ³	20.3		
3.4	8.3.4	<u>Particular Items</u>				
3.4.1	8.3.4(a)	Shore trench adjacent to structures and services as per requirements of Occupational Health and Safety Act.	m	200		
SECTION 3: Total Carried Forward to Summary						

SECTION 4: GABIONS AND PITCHING

SANS 1200 DK

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
						R
4.	SANS 1200 DK	GABIONS AND PITCHING				
4.1	8.2.1	Surface preparation for gabions including levelling, bedding, filling and compacting to create a firm base.				
4.1.1		(a) Cavities filled with approved excavated material or rock.	m ²	50		
4.1.2		(b) Cavities filled with 15 MPa concrete (provisional).	m ²	50		
4.2	8.2.2	Supply, assemble, align and fill PVC galvanised wire coated gabion baskets and reno mattresses.				
4.2.1		(a) Gabion Basket - 1.0m x 1.0m x 3.0m.	m ³	100		
4.3	8.2.4	Supply, assemble, and align membrane.				
4.3.1		(a) Geotextile Membrane	m ²	40		
SECTION 4: Total Carried Forward to Summary						

SECTION 5: BEDDING (PIPES)

SANS 1200 LB

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
						R
5.	SANS 1200 LB	BEDDING (PIPES)				
5.1	8.2.1	Provision of bedding from trench excavation:				
5.1.1		(a) Selected fill material (Provisional).	m ³	50		
5.2	8.2.2	Supply only of bedding by importation.				
5.2.1	8.2.2.3	From commercial sources:				
5.2.1.1		(a) Selected granular material.	m ³	30		
5.2.1.2		(b) Selected fill material.	m ³	200		
5.2.1.3		(c) Engineering fill material.	m ³	50		
5.3		Provision of Trenchbreakers for erosion protection - 20MPa Concrete Blocks (As per standard detail drawing)	No.	14		
SECTION 5: Total Carried Forward to Summary						

SECTION 6: SEWERS

SANS 1200 LD

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
						R
6.	SANS 1200 LD	SEWERS				
6.1	8.2.1	Supply, lay, joint, bed and test gravity sewer pipes with spigot and socket joints.				
6.1.1		160mm dia. uPVC, class 34, heavy duty.	m	680		
6.2	8.2.3	<u>Manholes:</u>				
6.2.1		Precast Concrete Manholes (1000mmØ) with light duty cover and frame, complete with channels, Type 'A' benching, etc. as per standard details (Durban Corp Dwg No's 38570 & 38574). Rate shall include for excavation, shoring, backfilling, and compaction to 93% Mod AASHTO minimum density.				
6.2.1.1		Over 0m to 1,0m to invert.	No.	1		
6.2.1.2		Over 1,0m to 2,0m to invert.	No.	29		
6.2.1.3		Over 2,0m to 3.0m to invert.	No.	6		
6.2.1.4		Over 3.0m to 4.0m to invert (provisional)	No.	3		
6.3		Connection made into a manhole, rate to include for benching inside manhole.	No.	5		
6.4	8.2.4	Extra-over items 6.4.1 to 6.4.2 for :-				
6.4.1	PSLD-8.2.13	a) Type 'B' benching	No.	20		
6.4.2		b) Supply and fit heavy duty concrete manhole cover and frame as per standard details.	No.	20		
6.5	PSLD - 8.2.11	Break into and connect to existing manholes for new connection, and make good all benching.				
6.5.1		a) 160 mm Ø Class 34 HDuPVC sewer	No.	5		
6.5.2	8.2.12	Raising of existing Manhole (500mm to new cover level)	No.	5		
6.5.3	PSLD - 7.2.2	Conduct manhole water test as described in Project Specification	No.	39		
6.6	PS.37	CCTV camera inspection of existing sewer	m	650.0		
6.7		Removal of soil and refuse material inside existing manholes by means of high pressure	No.	8.0		
SECTION 6: Total Carried Forward to Summary						

SECTION 7: REINSTATEMENT

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
						R
7.		REINSTATEMENT				
7.1	8.3.6	Finishing				
7.1.1		Supply and lay new:				
7.1.1.1		Standard Figure 6. concrete barrier kerbs, Type 2A, complete as per standard detail drawing no. 38577. Rate to include for concrete haunching, base, fillet / channel etc.	m	120		
7.1.1.2		Concrete channel, 300mm wide, 100mm thick plus 100mm G2 (provisional).	m	120		
7.1.2		Rip subgrade layer to a depth of 150mm and re-compact to 93% MOD AASHTO.	m ³	12		
7.1.3		Supply G5 material from commercial sources and construct subbase layer compacted to 95% MOD AASHTO.	m ³	12		
7.1.4		Supply G2 material from commercial sources and construct base layer (150mm) and compact to 98% MOD AASHTO.	m ³	12		
7.1.5		Supply 50mm thick continuously graded asphalt (Mix D) and construct wearing course for roadway.	m ²	75		
7.1.6		Tack Coat of 30% stable grade emulsion (application=0.3l/m ²).	ℓ	23		
7.1.7		Construct concrete slab protection complete as per standard detail. Refer to drawing No. 38575.	m	7		
SECTION 7: Total Carried to Summary						

SUMMARY OF BILL OF QUANTITIES

SECTION	DESCRIPTION	AMOUNT R
SECTION 1:	GENERAL	_____
SECTION 2:	SITE CLEARANCE	_____
SECTION 3:	EARTHWORKS (PIPE TRENCHES)	_____
SECTION 4:	GABIONS AND PITCHING	_____
SECTION 5:	BEDDING (PIPES)	_____
SECTION 6:	SEWERS	_____
SECTION 7:	REINSTATEMENT	_____
SUB-TOTAL		_____
ADD 15% OF SUBTOTAL (VAT)		_____
TOTAL CARRIED FORWARD TO FORM OF OFFER		_____
SIGNED ON BEHALF OF TENDERER:	_____	
DATE:	_____	