

SECTION 1: PRELIMINARY & GENERAL

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SECTION 1: PRELIMINARY & GENERAL						
1.1	SANS 1200 A	SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS				
1.1.1	PSA 8.3.1	Contractual Requirements	Sum	1		
	8.3.2	Establishment of Facilities on the Site:				
	SANS 1200AB	Facilities for the Engineer:				
1.1.2	PSAB 3.1	Contract Name boards (Refer to Figure 1)	No	2		
1.1.3	PSAB 3.2	Furnished office and Accommodation as specified	P.Sum	1	---	R 16 000.00
1.1.4	PSAB 3.3	Car port	No	1		
1.1.5	PSAB 4.3	Computer	No	1		
	SANS 1200	Facilities for the Contractor:				
1.1.7	8.3.2.2 (a)	Site Offices	Sum	1		
1.1.8	8.3.2.2 (b)	Workshops & Storage Sheds	Sum	1		
1.1.9	8.3.2.2 (d)	Living accommodation	Sum	1		
1.1.10	8.3.2.2 (e)	Ablution and latrine facilities with wash hand basins and taps	Sum	1		
1.1.11	8.3.2.2 (f)	Tools and equipment	Sum	1		
1.1.12	8.3.2.2 (g)	Water supplies, electrical power and communications	Sum	1		
1.1.13	8.3.2.2 (i)	Access	Sum	1		
1.1.14	8.3.2.2 (j)	Plant	Sum	1		
1.1.15	PSA8.3.2.2 (k)	Rain gauge	Sum	1		
1.1.16	8.3.3	Other Fixed-charge obligations not included (To be specified, if any): Note: No payment shall be made if Item 1.1.16 is priced, but not specified.	Sum	1		
1.1.17	8.3.4	Removal, clean and rehabilitate of Contractor's camp and site establishment, including offices, container facilities, fencing, materials, ablutions, fuel supply, etc.	Sum	1		
1.2	SANS 1200 A, AB	SCHEDULED TIME-RELATED ITEMS				
1.2.1	PSA 8.4.1	Contractual Requirements	Month	12		
	PSA 8.4.2	Operation and Maintenance of Facilities on Site for:				
	8.4.2.1	Facilities for Engineer:				
1.2.2	PSAB 3.1	Contract Name boards	Month	12		
1.2.3	PSAB 3.2	Furnished office and Accommodation as specified	P.Sum/month	12	R 7 500.00	R 90 000.00
1.2.4	PSAB 3.3	Car Port	Month	12		
1.2.5	PSAB 4.3	Computer	Month	12		
	8.4.2.2	Facilities for Contractor:				
1.2.7	8.4.2.2 (a)	Site Offices	Month	12		
1.2.8	8.4.2.2 (b)	Workshops and Storage Sheds	Month	12		
1.2.9	8.4.2.2 (d)	Living Accommodation	Month	12		
1.2.10	8.4.2.2 (e)	Ablution and Latrine Facilities	Month	12		
TOTAL CARRIED FORWARD						

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 1: PRELIMINARY & GENERAL

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
	8.4.2.2	Facilities for Contractor (continue) :				
1.2.11	8.4.2.2 (f)	Tools and Equipment	Month	12		
1.2.12	8.4.2.2 (g)	Water, Electricity, Communications	Month	12		
1.2.13	8.4.2.2 (i)	Access	Month	12		
1.2.14	8.4.2.2 (j)	Plant	Month	12		
1.2.15	PSA8.3.2.2 (k)	Rain gauge	Month	12		
1.2.16	PSA 8.4.3	Supervision for Duration of Construction (Refer to Min Requirements in Clause F2.1.4.3) :				
	F2.1.4.3	a) Full Time Construction Manager	Month	12		
	F2.1.4.3	b) Full Time Site Agent	Month	12		
	F2.1.4.7	c) Full Time SMME Manager	Month	12		
1.2.17	8.4.4	Company and Head Office overhead costs for the Duration of the Contract.	Month	12		
1.2.18	PSA 8.4.5.1	Provision of Security Personnel.	Month	12		
		Other Time-related obligations not included (To be specified, if any):				
1.2.19	PSA 8.4.5.2		Month	8		
						
		Note: No payment shall be made if Item 1.2.19 is priced, but not specified.				
		Note: The combined amounts for Fixed and Time-Related charges tendered, in accordance with Clauses PSA 8.3.1 and PSA 8.4.1 may not exceed twenty percent (20%) of the total tendered contract sum excluding contingencies and VAT.				
1.4	PSA 8.5	SUMS STATED PROVISIONALLY BY THE EMPLOYER				
1.4.1	PSA 8.5.1	Community Liaison Officer (CLO) remuneration.	Months	12	R 5 600.00	R 67 200.00
1.4.2	PSA 8.5.2	Attendance and profit on Item 1.4.1	%		R 67 200.00	
1.4.3		Repair and / or relocate damaged unknown sewer, water, stormwater, etc. services (Provisional).	Prov Sum	1	---	R 50 000.00
1.4.4	PSA 8.5.3	Provide <u>formal</u> training to targeted local labour	Prov	1	---	R 60 000.00
1.4.5	PSA 8.5.4	Overhead charges, profit etc. on above item 1.4.4	%		R 60 000.00	
1.4.6	PSA 8.5.5	Transportation and accommodation of targeted labour for training.	Prov Sum	1	---	R 15 000.00
1.4.7	PSA 8.5.6	Overhead charges, Profit etc. on above item 1.4.6	%		R 15 000.00	
1.5	PSA 8.7	DAYWORKS				
		No Dayworks shall be paid unless pre-approved by Engineer in writing :				
		Rates to include all employment costs and profit for:				
		a) Labour:				
1.5.1	(LI)	Unskilled General Worker (Task Grade 1)	hr	300		
1.5.2	(LI)	Semi-skilled (Task Grade 3)	hr	200		
1.5.3	(LI)	Operators (Task Grade 4)	hr	150		
1.5.4	(LI)	Artisan (Task Grade 5)	hr	150		
1.5.5	(LI)	Construction foreman (Task Grade 7)	hr	80		
TOTAL CARRIED FORWARD						

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 1: PRELIMINARY & GENERAL

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
1.5	PSA 8.7	DAYWORKS (Continue) : No Dayworks shall be paid unless pre-approved by Engineer in writing :				
		b) Plant:				
1.5.6		Large Tipper trucks > 10m³	hr	20		
1.5.7		Small Tipper Trucks < 10m³	hr	30		
1.5.8		Tractor Loader Backhoe	hr	30		
1.5.9		Min 7000 litre water cart	hr	20		
1.5.10		Min 1 ton pedestrian Bomag roller	hr	80		
1.5.11		Standard LDV	hr	200		
1.5.12		Generator set, incl diesel supply	hr	50		
1.5.13		Jack hammer / pneumatic driller				
1.5.14		Drain water from manholes or any other structure identified by the Employer's Agent using submersible pump/s.	hr	50		
		c) Travelling :				
1.5.13		Low bed	km	300		
1.5.14		Large trucks > 22 ton	km	300		
1.5.15		Small trucks > 22 ton	km	800		
1.5.16		3t Delivery vehicle	km	800		
1.5.17		Standard LDV	km	2000		
1.6		OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 AND THE CONSTRUCTION REGULATIONS, 2014 (REFER SECTION C3.5 FOR MORE INFORMATION) Compliance with the OHS Act 1993 and Construction Regulations, 2014. The Contractor's rate shall include full compensation for complying, amongst other, with the following provisions:				
1.7.1	PSA 8.9	Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations 2014	Sum	1		
1.7.2	PSA 8.10	Contractor's time related obligations in respect of the Occupational Health & Safety Act and Construction Regulations	Month	12		
1.7.3	PSA 8.11	Provision of <u>full time</u> Construction Safety Officer <i>The list of OH&S Obligations scheduled above are not necessarily complete and shall not limit the Contractor's obligation in terms of the Construction Regulations, 2014 and Section C3.5: H&S Requirements and Procedures.</i>	Month	12		
1.9		QUALITY ASSURANCE PLAN				
1.9.1	PSA 8.13	Provision for the development of a Quality Assurance Plan	Sum	1		
1.9.2	PSA 8.14	Provision for the implementation and management of the Quality Assurance Plan for the duration of the Contract.	Month	12		
1.10		ENVIRONMENTAL AWARENESS				
1.10.1	PSA 8.15	Attend Environmental awareness training and Inductions	Sum	1	---	
1.10.2	PSA 8.16	Compliance with environmental management specification, for the duration of the Contract.	Month	12		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 2 : PHILLIPSVILLE - GRAVITY SEWERAGE NETWORK

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
SECTION 2 : PHILLIPSVILLE - GRAVITY SEWERAGE NETWORK						
2.1	SANS 1200C	<u>SITE CLEARANCE</u>				
2.1.1	8.2.1 (LI)	Clear and grub vegetation, shrubs, rubble & stockpiles in road reserves for new sewer pipes :				
	a)	up to 200mm diameter - 2m wide	m ²	1600		
2.1.2	PSA 8.2.11	<u>SAW-CUT AND REMOVE, SPOIL OFF-SITE TO MUNICIPAL SOLID WASTE SITE, AND REPLACE WITH NEW, AFTER INSTALLATION OF SEWER GRAVITY NETWORK PIPES</u>				
2.1.2.1	(LI)	Paved Sidewalks / Driveways	m ²	1120		
2.1.2.2	(LI)	Concrete Sidewalks / Driveways (15MPa Concrete)	m ²	840		
2.1.2.3	(LI)	Concrete lined stormwater drains / channels (15MPa concrete)	m ²	180		
2.1.2.4	(LI)	Stone-Pitched stormwater channels	m ²	75		
2.1.2.5	(LI)	Concrete kerbs - (barrier and mountable)	m	160		
2.1.2.6	(LI)	Asphalt road surfaces - Premix 30mm thick	m ²	720		
2.2	8.2.2	<u>REMOVE AND GRUB LARGE TREES AND TREE STUMPS OF GIRTH</u>				
2.2.1	(LI)	Smaller than 0.5m	No.	9		
2.2.2		Over 0.5m up to and including 1m	No.	4		
2.2.3		Over 1m up to and including 2m	No.	---		Rate Only
2.3	SANS 1200 D	<u>EXISTING SERVICES (See 5.1.2.2)</u>				
2.3.1	8.3.8.11	The use or hire of specialist equipment for the detection of existing services (eg. cables & water pipes).	P.Sum	1	---	R 30 000.00
2.3.2	PSBD 8.3.4 (c)	Carefully excavate by hand in Road Reserve, to search and locate, expose, safely barricade, record services (type, size & levels for As-built) and protect existing services as identified on drawings or instructed by Engineer on site.	m ³	330		
2.4	PSDB 8.3.5	<u>PROTECTION OF UNDERGROUND SERVICES</u> Existing services that adjoin or intersect a trench				
2.4.1	8.3.5 a)	a) Services & Infrastructure that intersect a trench:				
2.4.1.1		(i) Electrical or telkom cables	No	50		
2.4.1.2		(ii) Overhead Electrical or Telkom cables	No	40		
2.4.1.3		(iii) Electrical or Telkom poles	No	25		
2.4.1.4		(iv) Water Network pipes	No	20		
2.4.1.5		(v) Water HDPE House Connection pipes	No	40		
2.4.1.6		(vi) Water valves or hydrants	No	8		
2.4.1.7		(vii) Stormwater pipes up to 600mm diameter	No	5		
2.4.1.8		(viii) Stormwater manholes, junction boxes or catch pit inlets	No	8		
2.4.1.9		(ix) Road Signs	No	12		
2.4.2		b) Services & Infrastructure that adjoin a trench:				
2.4.2.1		(i) Electrical or telkom cables	m	80		
2.4.2.2		(ii) Overhead Electrical or Telkom cables	m	340		
2.4.2.3		(iv) Water Network pipes	m	820		
2.4.2.4		(v) Water HDPE House Connection pipes	m	60		
2.4.2.5		(vii) Stormwater pipes up to 600mm diameter	m	40		
2.4.2.6		(v) Concrete lined or paved stormwater drains or sidewalks	m	1200		
TOTAL CARRIED FORWARD						

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 2 : PHILLIPPSVILLE - GRAVITY SEWERAGE NETWORK

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
2.5	SANS 1200 DB	EARTHWORKS (PIPE TRENCHES) (Refer to SANS DB 8.3.2 and SANS Drw DB-2)				Rate Only
2.5.1	PSDB 8.3.2 (LI)	Excavate BY HAND in all materials for sewerage pipe trenches, and stockpile material on site for backfill. 800mm wide for up to 200mm dia pipes, for trench depths: Over and Up to				
2.5.1.1	(LI)	0,0m 1,0m	m	405		
2.5.1.2	(LI)	1,01m 1,5m	m	545		
2.5.1.3	(LI)	1,51m 2,0m	m	---		
2.5.2	PSDB 8.3.2	Excavate BY MACHINE in all materials for sewerage pipe trenches, including <u>shoring</u> if required, and stockpile material on site for backfill. 800mm wide for up to 200mm dia pipes, for trench depths: Over and Up to				
2.5.2.1		1,51m 2,0m	m	245		
2.5.2.2		2,01m 2,5m	m	145		
2.5.2.3		2,51m 3,0m	m	115		
2.5.2.4		3,01m 3,5m	m	100		
2.5.2.5		3,51m 4,0m	m	10		
2.5.2.6		deeper than 4,0m	m	35		
2.5.3	PSDB 8.3.2	Excavate BY MACHINE upper 300mm material in all trenches crossing gravel and surfaced roads, and stockpile material on site for re-use.	m³	216		
2.5.4	PSDB 8.3.2 (LI)	Excavate BY HAND in all materials for Long Sewer Erf Connections, in trenches crossing roads, and stockpile material on site for re-use.	m³	205		
2.5.5	PSDB 8.3.2, PSD 3.1.2	Hard rock excavation, using 20t or larger excavator, or jack hammers / pneumatic hand tools, as required.	m³	520		
2.5.6	8.3.2 (LI)	Excavate and dispose of unsuitable material from trench bottom.	m³	260		
2.5.7	PSDB 8.3.2 (LI)	Backfill BY HAND all trenches <u>from stockpile material on site</u> , and compact 95% ModAashto density, <u>after</u> Bedding and Blanket was completed, and inspected by Engineer for approval.	m³	1389		
2.6	8.3.3	EXCAVATION ANCILLARIES				
	8.3.3.1 (a)	Make up deficiency in trench backfill material from excavations on / near site.	m³	50		
		Make up deficiency in road layers backfill material by import :				
2.6.1	8.3.3.1	Subbase G3 quality material	m³	86		
2.6.2	8.3.3.1	Selected G5 material	m³	86		
2.6.3	PSDB 8.3.3.3	b) Compaction in road reserves	m³	720		
2.6.4	PSDB	Compaction of Selected layers to 93% Mod. AASHTO density	m³	720		
		c) Overhaul:				
2.6.5	8.3.3.4	Limited overhaul	m³	500		
2.6.6	8.3.3.4	Long overhaul	m³km	2000		
2.7	SANS 1200 LB	BEDDING Provision of bedding for flexible PVC sewerage pipes.				
2.7.1	8.2.2.3	Provision of imported bedding material, compacted to 93% of MOD AASHTO density with material from commercial sources :				
2.7.1.1		Selected granular bedding material - min 100mm below & above pipe	m³	512		
2.7.1.2		Selected blanket material - min 200mm thick	m³	51		
2.7.2	8.2.2.3	Provision of selected bedding material to 93% of MOD AASHTO density with material from trench excavations :				
2.7.2.1		Selected granular bedding material - min 100mm below & above pipe	m³	---		
2.7.2.2		Selected blanket material - min 200mm thick	m³	205		
2.7.3	PSLB 8.2.6	Bedding in waterlogged conditions (only on Approval) :				
2.7.3.1		a) 19mm crushed stone to SANS 1083	m³	20		
2.7.3.2		b) Geotextile - Bidim Type A4 wrapped around / on top of aggregate.	m²	80		
TOTAL CARRIED FORWARD						

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 2 : PHILLIPSVILLE - GRAVITY SEWERAGE NETWORK

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
2.8	SANS 1200 LD	<u>SEWERS</u> All pipe to be PVC Sewer Pipes, Socketed with Rubber O-ring, Heavy Duty - Class 34 (as per SANS 791).				
2.8.1	PSLD 8.2.1	Supply, lay, complete with joints, in-bed on flexible bedding complete, and test, for the following pipe diameters:				
2.8.1.1		110mm diameter for Long Sewer Erf Connections in Road Reserves.	m	182		
2.8.1.2		160mm diameter Sewer Gravity Network Pipes	m	1165		
2.8.1.3		200mm diameter for Gravity Collector Main	m	435		
2.9		<u>MANHOLES</u>				
2.9.1	PSLD 8.2.3	Construct 1,0mø pre-cast concrete ring manholes complete (with Type 4 covers and frames), for sewer pipelines up to 200mmø, for depths up to 3,0m deep: <u>Over and Up to</u>				
2.9.1.1		Up to 1,5m	No	28		
2.9.1.2		1,51m 2,0m	No	8		
2.9.1.3		2,01m 2,5m	No	6		
2.9.1.4		2,51m 3,0m	No	2		
2.9.2	PSLD 8.2.3	Construct 1,25mø pre-cast concrete ring manholes complete (with Type 4 covers and frames), for sewer deeper than 3,0m depth : <u>Over and Up to</u>				
2.9.2.1		3,01m 3,5m	No	3		
2.9.2.2		3,51m 4,0m	No	0		
2.9.2.3		4,01m 4,5m	No	0		
2.9.2.4		4,51m 5,0m	No	2		
2.9.3	PSLD 8.2.3	Extra-over sub-items 2.9.1 to 2.9.3 for construction of backdrops and ramps where indicated, including extra excavation, formwork, joints & Y-junction, complete to Drws, for depths: a) 160mm diameter uPVC pipes:				
2.9.3.1		Depth up to 3,0m (Ramp Junction)	No	2		
2.9.3.2		Depth over 3,0m (Ramp)	No	1		
2.9.3.3		Depth up to 3,0m (Backdrop MH)	No	3		
2.9.3.4		Depth over 3,0m (Ramp)	No	1		
2.9.4	PSLD 8.2.4.2 EME	Extra-over all sub-items 2.9.1 to 2.9.3 for Type 2A cover and frame in road areas.	No	44		
2.9.5		Supply and apply Penetron® liquid slurry water and chemical protection to any exposed concrete surfaces as instructed, inside sewer manholes, as per manufacture's guidelines, at an application rate of 0,8kg/m² (Penetron : water ration is 5:2), typically with hand brush or spray application.	m²	354		
2.9.6	PSLD 8.2.13	Testing of watertightness of manholes	No.off	56		
2.10		<u>SUNDRIES</u>				
2.10.1	PSLD 8.2.7 EME	Concrete encasing (15MPa) of Sewer pipes, only on written instruction of Engineer.	m³	45		
2.10.2		Supply and install Trenchfill at Road Crossings, as instructed by Engineer.	m³	72		
2.10.3		Excavate & construct anchor blocks complete as per Drawings.	No	12		
2.10.4	PSLD 8.2.14	Break into and connect to existing manhole. Connect and repair complete.	No	2		
TOTAL CARRIED FORWARD TO SUMMARY						

KOUGA LOCAL MUNICIPALITY - BID No.: 47/2021
HANKEY SANITATION UPGRADE (PHASE 1) :
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN

SECTION 3 : PHILLIPSVILLE - INTERNAL ERF CONNECTIONS

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
		<u>SECTION 3 : PHILLIPSVILLE - INTERNAL ERF CONNECTIONS</u>				
3.1	SANS 1200C	<u>SITE CLEARANCE</u>				
3.1.1	8.2.1 (LI)	Clear and grub vegetation, shrubs, rubble & stockpiles inside private properties for new internal sewer erf connections :				
3.1.1.1	a)	up to 110mm diameter - 1,2m wide	m ²	638		
3.1.1.2	b)	Grassed Lawns - Remove in sods, stockpile, water and maintain and re-plant.	m ²	958		
3.1.1.3	c)	Flower beds and shrubs - Remove plants and re-plant elsewhere in property.	m ²	190		
3.1.2	PSA 8.2.11	<u>SAW-CUT AND CAREFULLY REMOVE, STOCKPILE, PROTECT AND REINSTATE AFTER INSTALLATION OF INTERNAL HOUSE CONNECTION PIPES</u>				
3.1.2.1	(LI)	Paved Walkways / Driveways, incl Bedding and Filling sand	m ²	137		
3.1.3	PSA 8.2.11	<u>SAW-CUT AND REMOVE, SPOIL OFF-SITE TO MUNICIPAL SOLID WASTE SITE, AND REPLACE WITH NEW, AFTER INSTALLATION OF INTERNAL HOUSE CONNECTION PIPES</u>				
3.1.3.1	(LI)	Paved Walkways / Driveways, incl Bedding and Filling sand	m ²	319		
3.1.3.2	(LI)	Concrete Walkways / Driveways (15MPa Concrete)	m ²	456		
3.2	8.2.2	<u>UPROOT TREES AND REPLANT ELSEWHERE IN PROPERTY, OR DESTROY (ONLY ON WRITTEN INSTRUCTION OF ENGINEER) :</u>				
3.2.1	(LI)	Smaller than 0.5m girth	No.	76		
3.2.2	(LI)	Over 0.5m up to and including 1m girth	No.	19		
3.3	SANS 1200 D	<u>EXISTING SERVICES (See 5.1.2.2)</u>				
3.3.1	8.3.8.11	The use or hire of specialist equipment for the detection of existing services (eg. cables & water pipes).	P.Sum	1	---	R 20 000.00
3.3.2	PSBD 8.3.4 (c)	Carefully excavate by hand inside Private Properties, to search and locate, expose, safely barricade, record services (type, size & levels for As-built) and protect existing services as instructed by Engineer on site.	m ³	131		
3.4	PSDB 8.3.5	<u>PROTECTION OF UNDERGROUND SERVICES</u> Existing services that adjoin or intersect a trench				
3.4.1	8.3.5 a)	<u>a) Services & Infrastructure that intersect a trench:</u>				
3.4.1.1		(i) Electrical or telkom cables	No	39		
3.4.1.2		(ii) Overhead Electrical or Telkom cables	No	8		
3.4.1.3		(iii) Water HDPe House Connection pipes	No	39		
3.4.1.4		(iv) Concrete Palisade boundary wall	No	14		
3.4.1.5		(v) Brick built boundary wall	No	8		
3.4.1.6		(vi) Steel palisade fence	No	7		
3.4.1.7		(vii) Wire Fences	No	10		
3.4.2		<u>b) Services & Infrastructure that adjoin a trench:</u>				
3.4.2.1		(i) Electrical or telkom cables	m	380		
3.4.2.2		(v) Water HDPe House Connection pipes	m	570		
3.4.2.3		(v) Concrete lined or paved Walkways or Driveways	m	456		
3.4.2.4		(v) Grassed Lawns	m	570		
3.5	SANS 1200 DB	<u>EARTHWORKS (PIPE TRENCHES)</u>				
3.5.1	PSDB 8.3.2 (LI)	<u>Excavate BY HAND</u> in all materials for Internal Sewer Erf Connections, in narrow trenches (0,5m wide) inside Private Properties, and stockpile material on site for re-use.	m ³	1074		
3.5.2	PSDB 8.3.2, PSD 3.1.2	Hard rock excavation, using 20t or larger excavator, or jack hammers / pneumatic hand tools, as required.	m ³	54		
3.5.3	8.3.2 (LI)	Excavate and dispose of unsuitable material from trench bottom.	m ³	107		
TOTAL CARRIED FORWARD						

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 3 : PHILLIPSVILLE - INTERNAL ERF CONNECTIONS

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
3.5.4	PSDB 8.3.2 (LI)	Backfill BY HAND all trenches <u>from stockpile material on site</u> , and compact 95% ModAashto density, <u>after</u> Bedding and Blanket was completed, and inspected by Engineer for approval.	m³	675		
3.6	SANS 1200 LB	BEDDING Provision of bedding for flexible PVC sewerage pipes.				
3.6.1	8.2.2.3	Provision of selected bedding material to 93% of MOD AASHTO density with material from trench excavations :				
3.6.1.1		Selected granular bedding material - min 100mm below & above pipe	m³	266		
3.6.1.2		Selected blanket material - min 200mm thick	m³	133		
3.7	SANS 1200 LD	SEWERS All pipe to be PVC Sewer Pipes, Socketed with Rubber O-ring, Heavy Duty - Class 34 (as per SANS 791).				
3.7.1	PSLD 8.2.1	Supply, lay, complete with joints, in-bed on flexible bedding complete, and test, for the following pipe diameters:				
3.7.1.1		110mm diameter for Internal Sewer Erf Connections in Private Properties.	m	1330		
3.7.2	PSLD 8.2.1	Supply, lay and join PVC Sewer fittings for the following pipe diameters:				
3.7.2.1		110 mm diameter - 11,25° or 22,5° Bends	No.off	40		
3.7.2.2		110 mm diameter - 45° or 90° Bends	No.off	40		
3.7.2.3		160 mm diameter - 11,25° or 22,5° Bends	No.off	3		
3.7.2.4		160 mm diameter - 45° or 90° Bends	No.off	3		
3.7.2.5		110 x 110mm diameter Y-junction	No.off	78		
3.7.2.6		160 x 110mm diameter Reducing Y-junction	No.off	39		
3.7.2.7		160 x 160mm diameter Y-junction	No.off	2		
3.8	SANS 1200 LD	ERF CONNECTIONS Supply all fittings and install Erf Connections complete from Graviy Sewer Main to inside Property Boundary.				
3.8.1	(LI)	Type 1 (Depth = up to 400mm)	No	8		
3.8.2	(LI)	Type 2 (Depth = 400mm to 800mm)	No	13		
3.8.3	(LI)	Type 3 (Depth = 800mm to 1500mm)	No	11		
3.8.4	(LI)	Type 4 (Depth > 1500mm)	No	6		
3.9	SANS 1200 LD	RODDING EYES Supply all fittings and construct Rodding Eye complete as per Drawing, including concrete and DI frame and cover, inside Properties as instructed by Engineer.	No	76		
3.10		SUNDRIES				
3.10.1	PSLD 8.2.7 EME	Concrete encasing (15MPa) of Sewer pipes, only on written instruction of Engineer.	m³	48		
3.10.2	PSLD 8.2.14	Break into and connect to existing internal sewer pipes inside Private Properties. Connect and repair complete.	No	76		
TOTAL CARRIED FORWARD TO SUMMARY						

KOUGA LOCAL MUNICIPALITY - BID No.: 47/2021
HANKEY SANITATION UPGRADE (PHASE 1) :
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN

SECTION 4 : OLD HANKEY - GRAVITY SEWERAGE NETWORK

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
		<u>SECTION 4 : OLD HANKEY - GRAVITY SEWERAGE NETWORK</u>				
4.1	SANS 1200C	<u>SITE CLEARANCE</u>				
4.1.1	8.2.1 (LI)	Clear and grub vegetation, shrubs, rubble & stockpiles in road reserves for new sewer pipes :				
	a)	up to 200mm diameter - 2m wide	m ²	1995		
4.1.2	PSA 8.2.11	<u>SAW-CUT AND REMOVE, SPOIL OFF-SITE TO MUNICIPAL SOLID WASTE SITE, AND REPLACE WITH NEW, AFTER INSTALLATION OF SEWER GRAVITY NETWORK PIPES</u>				
4.1.2.1	(LI)	Paved Sidewalks / Driveways	m ²	620		
4.1.2.2	(LI)	Concrete Sidewalks / Driveways (15MPa Concrete)	m ²	2100		
4.1.2.3	(LI)	Concrete lined stormwater drains / channels (15MPa concrete)	m ²	360		
4.1.2.4	(LI)	Stone-Pitched stormwater channels	m ²	120		
4.1.2.5	(LI)	Concrete kerbs - (barrier and mountable)	m	420		
4.1.2.6	(LI)	Asphalt road surfaces - Premix 30mm thick	m ²	1440		
4.2	8.2.2	<u>REMOVE AND GRUB LARGE TREES AND TREE STUMPS OF GIRTH</u>				
4.2.1	(LI)	Smaller than 0.5m	No.	16		
4.2.2		Over 0.5m up to and including 1m	No.	6		
4.2.3		Over 1m up to and including 2m	No.	---		Rate Only
4.3	SANS 1200 D	<u>EXISTING SERVICES (See 5.1.2.2)</u>				
4.3.1	8.3.8.11	The use or hire of specialist equipment for the detection of existing services (eg. cables & water pipes).	P.Sum	1	---	R 40 000.00
4.3.2	PSBD 8.3.4 (c)	Carefully excavate by hand in Road Reserve, to search and locate, expose, safely barricade, record services (type, size & levels for As-built) and protect existing services as identified on drawings or instructed by Engineer on site.	m ³	225		
4.4	PSDB 8.3.5	<u>PROTECTION OF UNDERGROUND SERVICES</u> Existing services that adjoin or intersect a trench				
4.4.1	8.3.5 a)	a) Services & Infrastructure that intersect a trench:				
4.4.1.1		(i) Electrical or telkom cables	No	40		
4.4.1.2		(ii) Overhead Electrical or Telkom cables	No	18		
4.4.1.3		(iii) Electrical or Telkom poles	No	12		
4.4.1.4		(iv) Water Network pipes	No	24		
4.4.1.5		(v) Water HDPE House Connection pipes	No	50		
4.4.1.6		(vi) Water valves or hydrants	No	6		
4.4.1.7		(vii) Stormwater pipes up to 600mm diameter	No	2		
4.4.1.8		(viii) Stormwater manholes, junction boxes or catch pit inlets	No	4		
4.4.1.9		(ix) Road Signs	No	8		
4.4.2		b) Services & Infrastructure that adjoin a trench:				
4.4.2.1		(i) Electrical or telkom cables	m	120		
4.4.2.2		(ii) Overhead Electrical or Telkom cables	m	410		
4.4.2.3		(iv) Water Network pipes	m	1240		
4.4.2.4		(v) Water HDPE House Connection pipes	m	240		
4.4.2.5		(vii) Stormwater pipes up to 600mm diameter	m	20		
4.4.2.6		(v) Concrete lined or paved stormwater drains or sidewalks	m	440		
TOTAL CARRIED FORWARD						

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 4 : OLD HANKEY - GRAVITY SEWERAGE NETWORK

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
4.5	SANS 1200 DB	EARTHWORKS (PIPE TRENCHES) (Refer to SANS DB 8.3.2 and SANS Drw DB-2)				
4.5.1	PSDB 8.3.2 (LI)	Excavate BY HAND in all materials for sewerage pipe trenches, and stockpile material on site for backfill. 800mm wide for up to 200mm dia pipes, for trench depths: <u>Over</u> <u>and</u> <u>Up to</u>				
4.5.1.1	(LI)	0,0m 1,0m	m	605		
4.5.1.2	(LI)	1,01m 1,5m	m	860		
4.5.1.3	(LI)	1,51m 2,0m	m	---		Rate Only
4.5.2	PSDB 8.3.2	Excavate BY MACHINE in all materials for sewerage pipe trenches, <u>including shoring</u> if required, and stockpile material on site for backfill. 800mm wide for up to 200mm dia pipes, for trench depths: <u>Over</u> <u>and</u> <u>Up to</u>				
4.5.2.1		1,51m 2,0m	m	380		
4.5.2.2		2,01m 2,5m	m	125		
4.5.2.3		2,51m 3,0m	m	20		
4.5.2.4		3,01m 3,5m	m	5		
4.5.2.5		3,51m 4,0m	m	---		Rate Only
4.5.2.6		deeper than 4,0m	m	---		Rate Only
4.5.3	PSDB 8.3.2	Excavate BY MACHINE upper 300mm material in all trenches crossing gravel and surfaced roads, and stockpile material on site for re-use.	m³	432		
4.5.4	PSDB 8.3.2 (LI)	Excavate BY HAND in all materials for Long Sewer Erf Connections, in trenches crossing roads, and stockpile material on site for re-use.	m³	292		
4.5.5	PSDB 8.3.2, PSD 3.1.2	Hard rock excavation, using 20t or larger excavator, or jack hammers / pneumatic hand tools, as required.	m³	517		
4.5.6	8.3.2 (LI)	Excavate and dispose of unsuitable material from trench bottom.	m³	258		
4.5.7	PSDB 8.3.2 (LI)	Backfill BY HAND all trenches <u>from stockpile material on site</u> , and compact 95% ModAashto density, <u>after</u> Bedding and Blanket was completed, and inspected by Engineer for approval.	m³	1131		
4.6	8.3.3	EXCAVATION ANCILLARIES				
	8.3.3.1 (a)	Make up deficiency in trench backfill material from excavations on / near site. Make up deficiency in road layers backfill material by import :	m³	60		
4.6.1	8.3.3.1	Subbase G3 quality material	m³	173		
4.6.2	8.3.3.1	Selected G5 material	m³	173		
4.6.3	PSDB 8.3.3.3	b) Compaction in road reserves Compaction of Selected layers to 93% Mod. AASHTO density	m³	1440		
4.6.4	PSDB	Compaction of Sub-base to 95% Mod. AASHTO density	m³	1440		
4.6.5	8.3.3.4	c) Overhaul: Limited overhaul	m³	600		
4.6.6	8.3.3.4	Long overhaul	m³km	2200		
4.7	SANS 1200 LB	BEDDING Provision of bedding for flexible PVC sewerage pipes.				
4.7.1	8.2.2.3	Provision of imported bedding material, compacted to 93% of MOD AASHTO density with material from commercial sources :				
4.7.1.1		Selected granular bedding material - min 100mm below & above pipe	m³	638		
4.7.1.2		Selected blanket material - min 200mm thick	m³	64		
4.7.2	8.2.2.3	Provision of selected bedding material to 93% of MOD AASHTO density with material from trench excavations :				
4.7.2.1		Selected granular bedding material - min 100mm below & above pipe	m³	---		Rate Only
4.7.2.2		Selected blanket material - min 200mm thick	m³	255		
4.7.3	PSLB 8.2.6	Bedding in waterlogged conditions (only on Approval) :				
4.7.3.1		a) 19mm crushed stone to SANS 1083	m³	20		
4.7.3.2		b) Geotextile - Bidim Type A4 wrapped around / on top of aggregate.	m²	80		
TOTAL CARRIED FORWARD						

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 4 : OLD HANKEY - GRAVITY SEWERAGE NETWORK

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
4.8	SANS 1200 LD	SEWERS All pipe to be PVC Sewer Pipes, Socketed with Rubber O-ring, Heavy Duty - Class 34 (as per SANS 791).				
4.8.1	PSLD 8.2.1	Supply, lay, complete with joints, in-bed on flexible bedding complete, and test, for the following pipe diameters:				
4.8.1.1		110mm diameter for Long Sewer Erf Connections in Road Reserves.	m	300		
4.8.1.2		160mm diameter Sewer Gravity Network Pipes	m	1995		
4.8.1.3		200mm diameter for Gravity Collector Main	m	---		Rate Only
4.9		MANHOLES Construct 1,0mø pre-cast concrete ring manholes complete (with Type 4 covers and frames), for sewer pipelines up to 200mmø, for depths up to 3,0m deep:				
		<u>Over</u> and <u>Up to</u>				
4.9.1.1		Up to 1,5m	No	39		
4.9.1.2		1,51m 2,0m	No	7		
4.9.1.3		2,01m 2,5m	No	4		
4.9.1.4		2,51m 3,0m	No	1		
4.9.2	PSLD 8.2.3	Construct 1,25mø pre-cast concrete ring manholes complete (with Type 4 covers and frames), for sewer deeper than 3,0m depth :				
		<u>Over</u> and <u>Up to</u>				
4.9.2.1		3,01m 3,5m	No	1		
4.9.2.2		3,51m 4,0m	No	---		Rate Only
4.9.3	PSLD 8.2.3	Extra-over sub-items 2.9.1 to 2.9.3 for construction of backdrops and ramps where indicated, including extra excavation, formwork, joints & Y-junction, complete to Drws, for depths:				
		a) 160mm diameter uPVC pipes:				
4.9.3.1		Depth up to 3,0m (Ramp Junction)	No	2		
4.9.3.2		Depth over 3,0m (Ramp)	No	1		
4.9.3.3		Depth up to 3,0m (Backdrop MH)	No	3		
4.9.3.4		Depth over 3,0m (Ramp)	No	1		
4.9.4	PSLD 8.2.4.2 EME	Extra-over all sub-items 2.9.1 to 2.9.3 for Type 2A cover and frame in road areas.	No	48		
4.9.5		Supply and apply Penetron® liquid slurry water and chemical protection to any exposed concrete surfaces as instructed, inside sewer manholes, as per manufacture's guidelines, at an application rate of 0,8kg/m² (Penetron : water ration is 5:2), typically with hand brush or spray application.	m²	314		
4.9.6	PSLD 8.2.13	Testing of watertightness of manholes	No.off	59		
4.10		SUNDRIES				
4.10.1	PSLD 8.2.7 EME	Concrete encasing (15MPa) of Sewer pipes, only on written instruction of Engineer.	m³	40		
4.10.2		Supply and install Trenchfill at Road Crossings, as instructed by Engineer.	m³	144		
4.10.3		Excavate & construct anchor blocks complete as per Drawings.	No	12		
4.10.4	PSLD 8.2.14	Break into and connect to existing manhole. Connect and repair complete.	No	1		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 5 : OLD HANKEY - INTERNAL ERF CONNECTIONS

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
SECTION 5 : OLD HANKEY - INTERNAL ERF CONNECTIONS						
5.1	SANS 1200C	<u>SITE CLEARANCE</u>				
5.1.1	8.2.1 (LI)	Clear and grub vegetation, shrubs, rubble & stockpiles inside private properties for new internal sewer erf connections :				
5.1.1.1	a)	up to 110mm diameter - 1,2m wide	m²	924		
5.1.1.2	b)	Grassed Lawns - Remove in sods, stockpile, water and maintain and re-plant.	m²	1386		
5.1.1.3	c)	Flower beds and shrubs - Remove plants and re-plant elsewhere in property.	m²	275		
5.1.2	PSA 8.2.11	<u>SAW-CUT AND CAREFULLY REMOVE, STOCKPILE, PROTECT AND REINSTATE AFTER INSTALLATION OF INTERNAL HOUSE CONNECTION PIPES</u>				
5.1.2.1	(LI)	Paved Walkways / Driveways, incl Bedding and Filling sand	m²	198		
5.1.3	PSA 8.2.11	<u>SAW-CUT AND REMOVE, SPOIL OFF-SITE TO MUNICIPAL SOLID WASTE SITE, AND REPLACE WITH NEW, AFTER INSTALLATION OF INTERNAL HOUSE CONNECTION PIPES</u>				
5.1.3.1	(LI)	Paved Walkways / Driveways, incl Bedding and Filling sand	m²	462		
5.1.3.2	(LI)	Concrete Walkways / Driveways (15MPa Concrete)	m²	660		
5.2	8.2.2	<u>UPROOT TREES AND REPLANT ELSEWHERE IN PROPERTY, OR DESTROY (ONLY ON WRITTEN INSTRUCTION OF ENGINEER) :</u>				
5.2.1	(LI)	Smaller than 0.5m girth	No.	110		
5.2.2	(LI)	Over 0.5m up to and including 1m girth	No.	28		
5.3	SANS 1200 D	<u>EXISTING SERVICES (See 5.1.2.2)</u>				
5.3.1	8.3.8.11	The use or hire of specialist equipment for the detection of existing services (eg. cables & water pipes).	P.Sum	1	---	R 20 000.00
5.3.2	PSBD 8.3.4 (c)	Carefully excavate by hand inside Private Properties, to search and locate, expose, safely barricade, record services (type, size & levels for As-built) and protect existing services as instructed by Engineer on site.	m³	190		
5.4	PSDB 8.3.5	<u>PROTECTION OF UNDERGROUND SERVICES</u> Existing services that adjoin or intersect a trench				
5.4.1	8.3.5 a)	a) Services & Infrastructure that intersect a trench:				
5.4.1.1		(i) Electrical or telkom cables	No	39		
5.4.1.2		(ii) Overhead Electrical or Telkom cables	No	8		
5.4.1.3		(iii) Water HDPe House Connection pipes	No	39		
5.4.1.4		(iv) Concrete Palisade boundary wall	No	14		
5.4.1.5		(v) Brick built boundary wall	No	8		
5.4.1.6		(vi) Steel palisade fence	No	7		
5.4.1.7		(vii) Wire Fences	No	10		
5.4.2		b) Services & Infrastructure that adjoin a trench:				
5.4.2.1		(i) Electrical or telkom cables	m	550		
5.4.2.2		(v) Water HDPe House Connection pipes	m	825		
5.4.2.3		(v) Concrete lined or paved Walkways or Driveways	m	660		
5.4.2.4		(v) Grassed Lawns	m	825		
5.5	SANS 1200 DB	<u>EARTHWORKS (PIPE TRENCHES)</u>				
5.5.1	PSDB 8.3.2 (LI)	<u>Excavate BY HAND</u> in all materials for Internal Sewer Erf Connections, in narrow trenches (0,5m wide) inside Private Properties, and stockpile material on site for re-use.	m³	1554		
5.5.2	PSDB 8.3.2, PSD 3.1.2	Hard rock excavation, using 20t or larger excavator, or jack hammers / pneumatic hand tools, as required.	m³	78		
5.5.3	8.3.2 (LI)	Excavate and dispose of unsuitable material from trench bottom.	m³	155		
TOTAL CARRIED FORWARD						

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 5 : OLD HANKEY - INTERNAL ERF CONNECTIONS

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
5.5.4	PSDB 8.3.2 (LI)	Backfill BY HAND all trenches from stockpile material on site, and compact 95% ModAashto density, after Bedding and Blanket was completed, and inspected by Engineer for approval.	m³	976		
5.6	SANS 1200 LB	BEDDING Provision of bedding for flexible PVC sewerage pipes.				
5.6.1	8.2.2.3	Provision of selected bedding material to 93% of MOD AASHTO density with material from trench excavations :				
5.6.1.1		Selected granular bedding material - min 100mm below & above pipe	m³	385		
5.6.1.2		Selected blanket material - min 200mm thick	m³	193		
5.7	SANS 1200 LD	SEWERS All pipe to be PVC Sewer Pipes, Socketed with Rubber O-ring, Heavy Duty - Class 34 (as per SANS 791).				
5.7.1	PSLD 8.2.1	Supply, lay, complete with joints, in-bed on flexible bedding complete, and test, for the following pipe diameters:				
5.7.1.1		110mm diameter for Internal Sewer Erf Connections in Private Properties.	m	1925		
5.7.2	PSLD 8.2.1	Supply, lay and join PVC Sewer fittings for the following pipe diameters:				
5.7.2.1		110 mm diameter - 11,25° or 22,5° Bends	No.off	40		
5.7.2.2		110 mm diameter - 45° or 90° Bends	No.off	40		
5.7.2.3		160 mm diameter - 11,25° or 22,5° Bends	No.off	3		
5.7.2.4		160 mm diameter - 45° or 90° Bends	No.off	3		
5.7.2.5		110 x 110mm diameter Y-junction	No.off	78		
5.7.2.6		160 x 110mm diameter Reducing Y-junction	No.off	39		
5.7.2.7		160 x 160mm diameter Y-junction	No.off	2		
5.8	SANS 1200 LD	ERF CONNECTIONS Supply all fittings and install Erf Connections complete from Graviy Sewer Main to inside Property Boundary.				
5.8.1	(LI)	Type 1 (Depth = up to 400mm)	No	12		
5.8.2	(LI)	Type 2 (Depth = 400mm to 800mm)	No	17		
5.8.3	(LI)	Type 3 (Depth = 800mm to 1500mm)	No	21		
5.8.4	(LI)	Type 4 (Depth > 1500mm)	No	5		
5.9	SANS 1200 LD	RODDING EYES				
5.9.1	(LI)	Supply all fittings and construct Rodding Eye complete as per Drawing, including concrete and DI frame and cover, inside Properties as instructed by Engineer.	No	110		
5.10		SUNDRIES				
5.10.1	PSLD 8.2.7 EME	Concrete encasing (15MPa) of Sewer pipes, only on written instruction of Engineer.	m³	69		
5.10.2	PSLD 8.2.14	Break into and connect to existing internal sewer pipes inside Private Properties. Connect and repair complete.	No	110		
TOTAL CARRIED FORWARD TO SUMMARY						

KOUGA LOCAL MUNICIPALITY - BID No.: 47/2021
HANKEY SANITATION UPGRADE (PHASE 1) :
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN

SECTION 6 : HANKEY - GRAVITY SEWERAGE NETWORK

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
6.1	SANS 1200C	<u>SECTION 6 : HANKEY - GRAVITY SEWERAGE NETWORK</u>				
		<u>SITE CLEARANCE</u>				
6.1.1	8.2.1 (LI)	Clear and grub vegetation, shrubs, rubble & stockpiles in road reserves for new sewer pipes :				
	a)	up to 200mm diameter - 2m wide	m ²	3410		
6.1.2	PSA 8.2.11	<u>SAW-CUT AND REMOVE, SPOIL OFF-SITE TO MUNICIPAL SOLID WASTE SITE, AND REPLACE WITH NEW, AFTER INSTALLATION OF SEWER GRAVITY NETWORK PIPES</u>				
6.1.2.1	(LI)	Paved Sidewalks / Driveways	m ²	1640		
6.1.2.2	(LI)	Concrete Sidewalks / Driveways (15MPa Concrete)	m ²	2860		
6.1.2.3	(LI)	Concrete lined stormwater drains / channels (15MPa concrete)	m ²	320		
6.1.2.4	(LI)	Stone-Pitched stormwater channels	m ²	120		
6.1.2.5	(LI)	Concrete kerbs - (barrier and mountable)	m	420		
6.1.2.6	(LI)	Asphalt road surfaces - Premix 30mm thick	m ²	1080		
6.2	8.2.2	<u>REMOVE AND GRUB LARGE TREES AND TREE STUMPS OF GIRTH</u>				
6.2.1	(LI)	Smaller than 0.5m	No.	16		
6.2.2		Over 0.5m up to and including 1m	No.	5		
6.2.3		Over 1m up to and including 2m	No.	---		Rate Only
6.3	SANS 1200 D	<u>EXISTING SERVICES (See 5.1.2.2)</u>				
6.3.1	8.3.8.11	The use or hire of specialist equipment for the detection of existing services (eg. cables & water pipes).	P.Sum	1	---	R 60 000.00
6.3.2	PSBD 8.3.4 (c)	<u>Carefully excavate by hand in Road Reserve, to search and locate</u> , expose, safely barricade, record services (type, size & levels for As-built) and protect existing services as identified on drawings or instructed by Engineer on site.	m ³	675		
6.4	PSDB 8.3.5	<u>PROTECTION OF UNDERGROUND SERVICES</u> Existing services that adjoin or intersect a trench				
6.4.1	8.3.5 a)	a) Services & Infrastructure that intersect a trench:				
6.4.1.1		(i) Electrical or telkom cables	No	120		
6.4.1.2		(ii) Overhead Electrical or Telkom cables	No	60		
6.4.1.3		(iii) Electrical or Telkom poles	No	60		
6.4.1.4		(iv) Water Network pipes	No	80		
6.4.1.5		(v) Water HDPe House Connection pipes	No	110		
6.4.1.6		(vi) Water valves or hydrants	No	16		
6.4.1.7		(vii) Stormwater pipes up to 600mm diameter	No	8		
6.4.1.8		(viii) Stormwater manholes, junction boxes or catch pit inlets	No	12		
6.4.1.9		(ix) Road Signs	No	36		
6.4.2		b) Services & Infrastructure that adjoin a trench:				
6.4.2.1		(i) Electrical or telkom cables	m	240		
6.4.2.2		(ii) Overhead Electrical or Telkom cables	m	520		
6.4.2.3		(iv) Water Network pipes	m	1840		
6.4.2.4		(v) Water HDPe House Connection pipes	m	620		
6.4.2.5		(vii) Stormwater pipes up to 600mm diameter	m	60		
6.4.2.6		(v) Concrete lined or paved stormwater drains or sidewalks	m	3400		
TOTAL CARRIED FORWARD						

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 6 : HANKEY - GRAVITY SEWERAGE NETWORK

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
6.5	SANS 1200 DB	<u>EARTHWORKS (PIPE TRENCHES)</u> (Refer to SANS DB 8.3.2 and SANS Drw DB-2)				
6.5.1	PSDB 8.3.2 (LI)	Excavate BY HAND in all materials for sewerage pipe trenches, and stockpile material on site for backfill. 800mm wide for up to 200mm dia pipes, for trench depths: <u>Over</u> <u>and</u> <u>Up to</u>				
6.5.1.1	(LI)	0,0m 1,0m	m	510		Rate Only
6.5.1.2	(LI)	1,01m 1,5m	m	530		
6.5.1.3	(LI)	1,51m 2,0m	m	---		
6.5.2	PSDB 8.3.2	Excavate BY MACHINE in all materials for sewerage pipe trenches, including <u>shoring</u> if required, and stockpile material on site for backfill. 800mm wide for up to 200mm dia pipes, for trench depths: <u>Over</u> <u>and</u> <u>Up to</u>				
6.5.2.1		1,51m 2,0m	m	675		
6.5.2.2		2,01m 2,5m	m	800		
6.5.2.3		2,51m 3,0m	m	460		
6.5.2.4		3,01m 3,5m	m	200		
6.5.2.5		3,51m 4,0m	m	40		
6.5.2.6		deeper than 4,01m up to 6,0m	m	135		
6.5.2.7		deeper than 6,01m up to 8,0m	m	60		
6.5.3	PSDB 8.3.2	Excavate BY MACHINE upper 300mm material in all trenches crossing gravel and surfaced roads, and stockpile material on site for re-use.	m³	324		
6.5.4	PSDB 8.3.2 (LI)	Excavate BY HAND in all materials for Long Sewer Erf Connections, in trenches crossing roads, and stockpile material on site for re-use.	m³	648		
6.5.5	PSDB 8.3.2, PSD 3.1.2	Hard rock excavation, using 20t or larger excavator, or jack hammers / pneumatic hand tools, as required.	m³	1439		
6.5.6	8.3.2 (LI)	Excavate and dispose of unsuitable material from trench bottom.	m³	719		
6.5.7	PSDB 8.3.2 (LI)	<u>Backfill BY HAND</u> all trenches <u>from stockpile material on site</u> , and compact 95% ModAashto density, after Bedding and Blanket was completed, and inspected by Engineer for approval.	m³	4550		
6.6	8.3.3	<u>EXCAVATION ANCILLARIES</u>				
	8.3.3.1 (a)	Make up deficiency in trench backfill material from excavations on / near site.	m³	80		
		Make up deficiency in road layers backfill material by import :				
6.6.1	8.3.3.1	Subbase G3 quality material	m³	130		
6.6.2	8.3.3.1	Selected G5 material	m³	130		
6.6.3	PSDB 8.3.3.3	b) Compaction in road reserves	m³	1080		
6.6.4	PSDB	Compaction of Selected layers to 93% Mod. AASHTO density	m³	1080		
		Compaction of Sub-base to 95% Mod. AASHTO density				
6.6.5	8.3.3.4	c) Overhaul:	m³	1400		
6.6.6	8.3.3.4	Limited overhaul	m³km	4500		
		Long overhaul				
6.7	SANS 1200 LB	<u>BEDDING</u>				
		Provision of bedding for flexible PVC sewerage pipes.				
6.7.1	8.2.2.3	Provision of imported bedding material, compacted to 93% of MOD AASHTO density with material from commercial sources :				
6.7.1.1		Selected granular bedding material - min 100mm below & above pipe	m³	1091		
6.7.1.2		Selected blanket material - min 200mm thick	m³	109		
6.7.2	8.2.2.3	Provision of selected bedding material to 93% of MOD AASHTO density with material from trench excavations :				
6.7.2.1		Selected granular bedding material - min 100mm below & above pipe	m³	---		Rate Only
6.7.2.2		Selected blanket material - min 200mm thick	m³	436		
6.7.3	PSLB 8.2.6	Bedding in waterlogged conditions (only on Approval) :				
6.7.3.1		a) 19mm crushed stone to SANS 1083	m³	20		
6.7.3.2		b) Geotextile - Bidim Type A4 wrapped around / on top of aggregate.	m²	80		
TOTAL CARRIED FORWARD						

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 6 : HANKEY - GRAVITY SEWERAGE NETWORK

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
6.8	SANS 1200 LD	<u>SEWERS</u> All pipe to be PVC Sewer Pipes, Socketed with Rubber O-ring, Heavy Duty - Class 34 (as per SANS 791).				
6.8.1	PSLD 8.2.1	Supply, lay, complete with joints, in-bed on flexible bedding complete, and test, for the following pipe diameters:				
6.8.1.1		110mm diameter for Long Sewer Erf Connections in Road Reserves.	m	576		
6.8.1.2		160mm diameter Sewer Gravity Network Pipes	m	2890		
6.8.1.3		200mm diameter for Gravity Collector Main	m	520		
6.9		<u>MANHOLES</u>				
6.9.1	PSLD 8.2.3	Construct 1,0mø pre-cast concrete ring manholes complete (with Type 4 covers and frames), for sewer pipelines up to 200mmø, for depths up to 3,0m deep: <u>Over and Up to</u>				
6.9.1.1		Up to 1,5m	No	31		
6.9.1.2		1,51m 2,0m	No	21		
6.9.1.3		2,01m 2,5m	No	26		
6.9.1.4		2,51m 3,0m	No	15		
6.9.2	PSLD 8.2.3	Construct 1,25mø pre-cast concrete ring manholes complete (with Type 4 covers and frames), for sewer deeper than 3,0m depth : <u>Over and Up to</u>				
6.9.2.1		3,01m 3,5m	No	8		
6.9.2.2		3,51m 4,0m	No	3		
6.9.2.3		4,01m 4,5m	No	---		Rate Only
6.9.2.4		4,51m 5,0m	No	1		
6.9.2.5		5,01m 6,0m	No	3		
6.9.2.6		6,01m 7,0m	No	---		Rate Only
6.9.2.7		7,01m 8,0m	No	2		
6.9.3	PSLD 8.2.3	Extra-over sub-items 2.9.1 to 2.9.3 for construction of backdrops and ramps where indicated, including extra excavation, formwork, joints & Y-junction, complete to Drws, for depths: a) 160mm diameter uPVC pipes:				
6.9.3.1		Depth up to 3,0m (Ramp Junction)	No	6		
6.9.3.2		Depth over 3,0m (Ramp)	No	3		
6.9.3.3		Depth up to 3,0m (Backdrop MH)	No	8		
6.9.3.4		Depth over 3,0m (Ramp)	No	2		
6.9.4	PSLD 8.2.4.2 EME	Extra-over all sub-items 2.9.1 to 2.9.3 for Type 2A cover and frame in road areas.	No	106		
6.9.5		Supply and apply Penetron® liquid slurry water and chemical protection to any exposed concrete surfaces as instructed, inside sewer manholes, as per manufacture's guidelines, at an application rate of 0,8kg/m ² (Penetron : water ration is 5:2), typically with hand brush or spray application.	m ²	968		
6.9.6	PSLD 8.2.13	Testing of watertightness of manholes	No.off	110		
6.10		<u>SUNDRIES</u>				
6.10.1	PSLD 8.2.7 EME	Concrete encasing (15MPa) of Sewer pipes, only on written instruction of Engineer.	m ³	64		
6.10.2		Supply and install Trenchfill at Road Crossings, as instructed by Engineer.	m ³	108		
6.10.3		Excavate & construct anchor blocks complete as per Drawings.	No	26		
6.10.4	PSLD 8.2.14	Break into and connect to existing manhole. Connect and repair complete.	No	6		
TOTAL CARRIED FORWARD TO SUMMARY						

KOUGA LOCAL MUNICIPALITY - BID No.: 47/2021
HANKEY SANITATION UPGRADE (PHASE 1) :
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN

SECTION 7 : HANKEY - INTERNAL ERF CONNECTIONS

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
7.1	SANS 1200C	<u>SECTION 7 : HANKEY - INTERNAL ERF CONNECTIONS</u>				
		<u>SITE CLEARANCE</u>				
7.1.1	8.2.1 (LI)	Clear and grub vegetation, shrubs, rubble & stockpiles inside private properties for new internal sewer erf connections :				
7.1.1.1	a)	up to 110mm diameter - 1,2m wide	m ²	1663		
7.1.1.2	b)	Grassed Lawns - Remove in sods, stockpile, water and maintain and re-plant.	m ²	2495		
7.1.1.3	c)	Flower beds and shrubs - Remove plants and re-plant elsewhere in property.	m ²	495		
7.1.2	PSA 8.2.11	<u>SAW-CUT AND CAREFULLY REMOVE, STOCKPILE, PROTECT AND REINSTATE AFTER INSTALLATION OF INTERNAL HOUSE CONNECTION PIPES</u>				
7.1.2.1	(LI)	Paved Walkways / Driveways, incl Bedding and Filling sand	m ²	356		
7.1.3	PSA 8.2.11	<u>SAW-CUT AND REMOVE, SPOIL OFF-SITE TO MUNICIPAL SOLID WASTE SITE, AND REPLACE WITH NEW, AFTER INSTALLATION OF INTERNAL HOUSE CONNECTION PIPES</u>				
7.1.3.1	(LI)	Paved Walkways / Driveways, incl Bedding and Filling sand	m ²	832		
7.1.3.2	(LI)	Concrete Walkways / Driveways (15MPa Concrete)	m ²	1188		
7.2	8.2.2	<u>UPROOT TREES AND REPLANT ELSEWHERE IN PROPERTY, OR DESTROY (ONLY ON WRITTEN INSTRUCTION OF ENGINEER) :</u>				
7.2.1	(LI)	Smaller than 0.5m girth	No.	198		
7.2.2	(LI)	Over 0.5m up to and including 1m girth	No.	50		
7.3	SANS 1200 D	<u>EXISTING SERVICES (See 5.1.2.2)</u>				
7.3.1	8.3.8.11	The use or hire of specialist equipment for the detection of existing services (eg. cables & water pipes).	P.Sum	1	---	R 20 000.00
7.3.2	PSBD 8.3.4 (c)	Carefully excavate by hand inside Private Properties, to search and locate, expose, safely barricade, record services (type, size & levels for As-built) and protect existing services as instructed by Engineer on site.	m ³	342		
7.4	PSDB 8.3.5	<u>PROTECTION OF UNDERGROUND SERVICES</u> Existing services that adjoin or intersect a trench				
7.4.1	8.3.5 a)	a) Services & Infrastructure that intersect a trench:				
7.4.1.1		(i) Electrical or telkom cables	No	39		
7.4.1.2		(ii) Overhead Electrical or Telkom cables	No	8		
7.4.1.3		(iii) Water HDPe House Connection pipes	No	39		
7.4.1.4		(iv) Concrete Palisade boundary wall	No	14		
7.4.1.5		(v) Brick built boundary wall	No	8		
7.4.1.6		(vi) Steel palisade fence	No	7		
7.4.1.7		(vii) Wire Fences	No	10		
7.4.2		b) Services & Infrastructure that adjoin a trench:				
7.4.2.1		(i) Electrical or telkom cables	m	990		
7.4.2.2		(v) Water HDPe House Connection pipes	m	1485		
7.4.2.3		(v) Concrete lined or paved Walkways or Driveways	m	1188		
7.4.2.4		(v) Grassed Lawns	m	1485		
7.5	SANS 1200 DB	<u>EARTHWORKS (PIPE TRENCHES)</u>				
7.5.1	PSDB 8.3.2 (LI)	<u>Excavate BY HAND</u> in all materials for Internal Sewer Erf Connections, in narrow trenches (0,5m wide) inside Private Properties, and stockpile material on site for re-use.	m ³	2797		
7.5.2	PSDB 8.3.2, PSD 3.1.2	Hard rock excavation, using 20t or larger excavator, or jack hammers / pneumatic hand tools, as required.	m ³	140		
7.5.3	8.3.2 (LI)	Excavate and dispose of unsuitable material from trench bottom.	m ³	280		
TOTAL CARRIED FORWARD						

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 7 : HANKEY - INTERNAL ERF CONNECTIONS

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
7.5.4	PSDB 8.3.2 (LI)	Backfill BY HAND all trenches <u>from stockpile material on site</u> , and compact 95% ModAashto density, <u>after</u> Bedding and Blanket was completed, and inspected by Engineer for approval.	m³	1757		
7.6	SANS 1200 LB	BEDDING Provision of bedding for flexible PVC sewerage pipes.				
7.6.1	8.2.2.3	Provision of selected bedding material to 93% of MOD AASHTO density with material from trench excavations :				
7.6.1.1		Selected granular bedding material - min 100mm below & above pipe	m³	693		
7.6.1.2		Selected blanket material - min 200mm thick	m³	347		
7.7	SANS 1200 LD	SEWERS All pipe to be PVC Sewer Pipes, Socketed with Rubber O-ring, Heavy Duty - Class 34 (as per SANS 791).				
7.7.1	PSLD 8.2.1	Supply, lay, complete with joints, in-bed on flexible bedding complete, and test, for the following pipe diameters:				
7.7.1.1		110mm diameter for Internal Sewer Erf Connections in Private Properties.	m	3465		
7.7.2	PSLD 8.2.1	Supply, lay and join PVC Sewer fittings for the following pipe diameters:				
7.7.2.1		110 mm diameter - 11,25° or 22,5° Bends	No.off	40		
7.7.2.2		110 mm diameter - 45° or 90° Bends	No.off	40		
7.7.2.3		160 mm diameter - 11,25° or 22,5° Bends	No.off	3		
7.7.2.4		160 mm diameter - 45° or 90° Bends	No.off	3		
7.7.2.5		110 x 110mm diameter Y-junction	No.off	78		
7.7.2.6		160 x 110mm diameter Reducing Y-junction	No.off	39		
7.7.2.7		160 x 160mm diameter Y-junction	No.off	2		
7.8	SANS 1200 LD	ERF CONNECTIONS Supply all fittings and install Erf Connections complete from Graviy Sewer Main to inside Property Boundary.				
7.8.1	(LI)	Type 1 (Depth = up to 400mm)	No	42		
7.8.2	(LI)	Type 2 (Depth = 400mm to 800mm)	No	27		
7.8.3	(LI)	Type 3 (Depth = 800mm to 1500mm)	No	21		
7.8.4	(LI)	Type 4 (Depth > 1500mm)	No	9		
7.9	SANS 1200 LD	RODDING EYES				
7.9.1	(LI)	Supply all fittings and construct Rodding Eye complete as per Drawing, including concrete and DI frame and cover, inside Properties as instructed by Engineer.	No	198		
7.10		SUNDRIES				
7.10.1	PSLD 8.2.7 EME	Concrete encasing (15MPa) of Sewer pipes, only on written instruction of Engineer.	m³	124		
7.10.2	PSLD 8.2.14	Break into and connect to existing internal sewer pipes inside Private Properties. Connect and repair complete.	No	198		
TOTAL CARRIED FORWARD TO SUMMARY						

KOUGA LOCAL MUNICIPALITY - BID No.: 47/2021
HANKEY SANITATION UPGRADE (PHASE 1) :
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN

SECTION 8 : HANKEY TOWN - GRAVITY SEWERAGE NETWORK

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
		<u>SECTION 8 : HANKEY TOWN - GRAVITY SEWERAGE NETWORK</u>				
8.1	SANS 1200C	<u>SITE CLEARANCE</u>				
8.1.1	8.2.1 (LI)	Clear and grub vegetation, shrubs, rubble & stockpiles in road reserves for new sewer pipes :				
	a)	up to 200mm diameter - 2m wide	m ²	3635		
8.1.2	PSA 8.2.11	<u>SAW-CUT AND REMOVE, SPOIL OFF-SITE TO MUNICIPAL SOLID WASTE SITE, AND REPLACE WITH NEW, AFTER INSTALLATION OF SEWER GRAVITY NETWORK PIPES</u>				
8.1.2.1	(LI)	Paved Sidewalks / Driveways	m ²	1520		
8.1.2.2	(LI)	Concrete Sidewalks / Driveways (15MPa Concrete)	m ²	2440		
8.1.2.3	(LI)	Concrete lined stormwater drains / channels (15MPa concrete)	m ²	280		
8.1.2.4	(LI)	Stone-Pitched stormwater channels	m ²	90		
8.1.2.5	(LI)	Concrete kerbs - (barrier and mountable)	m	380		
8.1.2.6	(LI)	Asphalt road surfaces - Premix 30mm thick	m ²	1008		
8.2	8.2.2	<u>REMOVE AND GRUB LARGE TREES AND TREE STUMPS OF GIRTH</u>				
8.2.1	(LI)	Smaller than 0.5m	No.	14		
8.2.2		Over 0.5m up to and including 1m	No.	4		
8.2.3		Over 1m up to and including 2m	No.	---		Rate Only
8.3	SANS 1200 D	<u>EXISTING SERVICES (See 5.1.2.2)</u>				
8.3.1	8.3.8.11	The use or hire of specialist equipment for the detection of existing services (eg. cables & water pipes).	P.Sum	1	---	R 60 000.00
8.3.2	PSBD 8.3.4 (c)	Carefully excavate by hand in Road Reserve, to search and locate, expose, safely barricade, record services (type, size & levels for As-built) and protect existing services as identified on drawings or instructed by Engineer on site.	m ³	675		
8.4	PSDB 8.3.5	<u>PROTECTION OF UNDERGROUND SERVICES</u> Existing services that adjoin or intersect a trench				
8.4.1	8.3.5 a)	a) Services & Infrastructure that intersect a trench:				
8.4.1.1		(i) Electrical or telkom cables	No	110		
8.4.1.2		(ii) Overhead Electrical or Telkom cables	No	50		
8.4.1.3		(iii) Electrical or Telkom poles	No	50		
8.4.1.4		(iv) Water Network pipes	No	70		
8.4.1.5		(v) Water HDPe House Connection pipes	No	100		
8.4.1.6		(vi) Water valves or hydrants	No	12		
8.4.1.7		(vii) Stormwater pipes up to 600mm diameter	No	6		
8.4.1.8		(viii) Stormwater manholes, junction boxes or catch pit inlets	No	8		
8.4.1.9		(ix) Road Signs	No	28		
8.4.2		b) Services & Infrastructure that adjoin a trench:				
8.4.2.1		(i) Electrical or telkom cables	m	220		
8.4.2.2		(ii) Overhead Electrical or Telkom cables	m	490		
8.4.2.3		(iv) Water Network pipes	m	1760		
8.4.2.4		(v) Water HDPe House Connection pipes	m	580		
8.4.2.5		(vii) Stormwater pipes up to 600mm diameter	m	50		
8.4.2.6		(v) Concrete lined or paved stormwater drains or sidewalks	m	2800		
TOTAL CARRIED FORWARD						

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 8 : HANKEY TOWN - GRAVITY SEWERAGE NETWORK

SECTION 8 : HANKEY TOWN GRAVITY SEWERAGE NETWORK																								
ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT																		
BROUGHT FORWARD																								
8.5	SANS 1200 DB	EARTHWORKS (PIPE TRENCHES) (Refer to SANS DB 8.3.2 and SANS Drw DB-2)																						
8.5.1	PSDB 8.3.2 (LI)	Excavate BY HAND in all materials for sewerage pipe trenches, and stockpile material on site for backfill. 800mm wide for up to 200mm dia pipes, for trench depths: <table><tr><td>Over</td><td>and</td><td>Up to</td></tr><tr><td>0,0m</td><td></td><td>1,0m</td></tr><tr><td>1,01m</td><td></td><td>1,5m</td></tr><tr><td>1,51m</td><td></td><td>2,0m</td></tr></table>	Over	and	Up to	0,0m		1,0m	1,01m		1,5m	1,51m		2,0m	m	770		Rate Only						
Over	and	Up to																						
0,0m		1,0m																						
1,01m		1,5m																						
1,51m		2,0m																						
8.5.1.1			m	1380																				
8.5.1.2			m	---																				
8.5.1.3			m																					
8.5.2	PSDB 8.3.2	Excavate BY MACHINE in all materials for sewerage pipe trenches, including shoring if required, and stockpile material on site for backfill. 800mm wide for up to 200mm dia pipes, for trench depths: <table><tr><td>Over</td><td>and</td><td>Up to</td></tr><tr><td>1,51m</td><td></td><td>2,0m</td></tr><tr><td>2,01m</td><td></td><td>2,5m</td></tr><tr><td>2,51m</td><td></td><td>3,0m</td></tr><tr><td>3,01m</td><td></td><td>3,5m</td></tr><tr><td>deeper than 3,5m</td><td></td><td></td></tr></table>	Over	and	Up to	1,51m		2,0m	2,01m		2,5m	2,51m		3,0m	3,01m		3,5m		deeper than 3,5m			m	790	
Over	and	Up to																						
1,51m		2,0m																						
2,01m		2,5m																						
2,51m		3,0m																						
3,01m		3,5m																						
deeper than 3,5m																								
8.5.2.1			m	435																				
8.5.2.2			m	205																				
8.5.2.3			m	40																				
8.5.2.4			m	15																				
8.5.2.5			m																					
8.5.3	PSDB 8.3.2	Excavate BY MACHINE upper 300mm material in all trenches crossing gravel and surfaced roads, and stockpile material on site for re-use.	m³	302																				
8.5.4	PSDB 8.3.2 (LI)	Excavate BY HAND in all materials for Long Sewer Erf Connections, in trenches crossing roads, and stockpile material on site for re-use.	m³	540																				
8.5.5	PSDB 8.3.2, PSD 3.1.2	Hard rock excavation, using 20t or larger excavator, or jack hammers / pneumatic hand tools, as required.	m³	1099																				
8.5.6	8.3.2 (LI)	Excavate and dispose of unsuitable material from trench bottom.	m³	549																				
8.5.7	PSDB 8.3.2 (LI)	Backfill BY HAND all trenches <u>from stockpile material on site</u> , and compact 95% ModAashto density, <u>after</u> Bedding and Blanket was completed, and inspected by Engineer for approval.	m³	3071																				
8.6	8.3.3	EXCAVATION ANCILLARIES																						
	8.3.3.1 (a)	Make up deficiency in trench backfill material from excavations on / near site. Make up deficiency in road layers backfill material by import :	m³	80																				
8.6.1	8.3.3.1	Subbase G3 quality material	m³	121																				
8.6.2	8.3.3.1	Selected G5 material	m³	121																				
8.6.3	PSDB 8.3.3.3	b) Compaction in road reserves Compaction of Selected layers to 93% Mod. AASHTO density	m³	1008																				
8.6.4	PSDB	Compaction of Sub-base to 95% Mod. AASHTO density	m³	1008																				
8.6.5	8.3.3.4	c) Overhaul: Limited overhaul	m³	1200																				
8.6.6	8.3.3.4	Long overhaul	m³km	4100																				
8.7	SANS 1200 LB	BEDDING Provision of bedding for flexible PVC sewerage pipes.																						
8.7.1	8.2.2.3	Provision of imported bedding material, compacted to 93% of MOD AASHTO density with material from commercial sources :																						
8.7.1.1		Selected granular bedding material - min 100mm below & above pipe	m³	1163																				
8.7.1.2		Selected blanket material - min 200mm thick	m³	116																				
8.7.2	8.2.2.3	Provision of selected bedding material to 93% of MOD AASHTO density with material from trench excavations :																						
8.7.2.1		Selected granular bedding material - min 100mm below & above pipe	m³	---		Rate Only																		
8.7.2.2		Selected blanket material - min 200mm thick	m³	465																				
8.7.3	PSLB 8.2.6	Bedding in waterlogged conditions (only on Approval) :																						
8.7.3.1		a) 19mm crushed stone to SANS 1083	m³	20																				
8.7.3.2		b) Geotextile - Bidim Type A4 wrapped around / on top of aggregate.	m²	80																				
TOTAL CARRIED FORWARD																								

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 8 : HANKEY TOWN - GRAVITY SEWERAGE NETWORK

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
8.8	SANS 1200 LD	<u>SEWERS</u> All pipe to be PVC Sewer Pipes, Socketed with Rubber O-ring, Heavy Duty - Class 34 (as per SANS 791).				
8.8.1	PSLD 8.2.1	Supply, lay, complete with joints, in-bed on flexible bedding complete, and test, for the following pipe diameters:				
8.8.1.1		110mm diameter for Long Sewer Erf Connections in Road Reserves.	m	480		
8.8.1.2		160mm diameter Sewer Gravity Network Pipes	m	3440		
8.8.1.3		200mm diameter for Gravity Collector Main	m	195		
8.9		<u>MANHOLES</u> Construct 1,0mø pre-cast concrete ring manholes complete (with Type 4 covers and frames), for sewer pipelines up to 200mmø, for depths up to 3,0m deep:				
		Over and Up to				
8.9.1.1		Up to 1,5m	No	59		
8.9.1.2		1,51m 2,0m	No	23		
8.9.1.3		2,01m 2,5m	No	12		
8.9.1.4		2,51m 3,0m	No	7		
8.9.2	PSLD 8.2.3	Construct 1,25mø pre-cast concrete ring manholes complete (with Type 4 covers and frames), for sewer deeper than 3,0m depth :				
		Over and Up to				
8.9.2.1		3,01m 3,5m	No	3		
8.9.2.2		3,51m 4,0m	No	1		
8.9.2.3		4,01m 4,5m	No	---		Rate Only
8.9.3	PSLD 8.2.3	Extra-over sub-items 2.9.1 to 2.9.3 for construction of backdrops and ramps where indicated, including extra excavation, formwork, joints & Y-junction, complete to Drws, for depths:				
		a) 160mm diameter uPVC pipes:				
8.9.3.1		Depth up to 3,0m (Ramp Junction)	No	2		
8.9.3.2		Depth over 3,0m (Ramp)	No	1		
8.9.3.3		Depth up to 3,0m (Backdrop MH)	No	3		
8.9.3.4		Depth over 3,0m (Ramp)	No	1		
8.9.4	PSLD 8.2.4.2 EME	Extra-over all sub-items 2.9.1 to 2.9.3 for Type 2A cover and frame in road areas.	No	97		
8.9.5		Supply and apply Penetron® liquid slurry water and chemical protection to any exposed concrete surfaces as instructed, inside sewer manholes, as per manufacture's guidelines, at an application rate of 0,8kg/m² (Penetron : water ration is 5:2), typically with hand brush or spray application.	m²	690		
8.9.6	PSLD 8.2.13	Testing of watertightness of manholes	No.off	112		
8.10		<u>SUNDRIES</u>				
8.10.1	PSLD 8.2.7 EME	Concrete encasing (15MPa) of Sewer pipes, only on written instruction of Engineer.	m³	56		
8.10.2		Supply and install Trenchfill at Road Crossings, as instructed by Engineer.	m³	101		
8.10.3		Excavate & construct anchor blocks complete as per Drawings.	No	26		
8.10.4	PSLD 8.2.14	Break into and connect to existing manhole. Connect and repair complete.	No	2		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 9 : HANKEY TOWN - INTERNAL ERF CONNECTIONS

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
SECTION 9 : HANKEY TOWN - INTERNAL ERF CONNECTIONS						
9.1	SANS 1200C	<u>SITE CLEARANCE</u>				
9.1.1	8.2.1 (LI)	Clear and grub vegetation, shrubs, rubble & stockpiles inside private properties for new internal sewer erf connections :				
9.1.1.1	a)	up to 110mm diameter - 1,2m wide	m²	2134		
9.1.1.2	b)	Grassed Lawns - Remove in sods, stockpile, water and maintain and re-plant.	m²	3200		
9.1.1.3	c)	Flower beds and shrubs - Remove plants and re-plant elsewhere in property.	m²	635		
9.1.2	PSA 8.2.11	<u>SAW-CUT AND CAREFULLY REMOVE, STOCKPILE, PROTECT AND REINSTATE AFTER INSTALLATION OF INTERNAL HOUSE CONNECTION PIPES</u>				
9.1.2.1	(LI)	Paved Walkways / Driveways, incl Bedding and Filling sand	m²	457		
9.1.3	PSA 8.2.11	<u>SAW-CUT AND REMOVE, SPOIL OFF-SITE TO MUNICIPAL SOLID WASTE SITE, AND REPLACE WITH NEW, AFTER INSTALLATION OF INTERNAL HOUSE CONNECTION PIPES</u>				
9.1.3.1	(LI)	Paved Walkways / Driveways, incl Bedding and Filling sand	m²	1067		
9.1.3.2	(LI)	Concrete Walkways / Driveways (15MPa Concrete)	m²	1524		
9.2	8.2.2	<u>UPROOT TREES AND REPLANT ELSEWHERE IN PROPERTY, OR DESTROY (ONLY ON WRITTEN INSTRUCTION OF ENGINEER) :</u>				
9.2.1	(LI)	Smaller than 0.5m girth	No.	254		
9.2.2	(LI)	Over 0.5m up to and including 1m girth	No.	64		
9.3	SANS 1200 D	<u>EXISTING SERVICES (See 5.1.2.2)</u>				
9.3.1	8.3.8.11	The use or hire of specialist equipment for the detection of existing services (eg. cables & water pipes).	P.Sum	1	---	R 20 000.00
9.3.2	PSBD 8.3.4 (c)	Carefully excavate by hand inside Private Properties, to search and locate, expose, safely barricade, record services (type, size & levels for As-built) and protect existing services as instructed by Engineer on site.	m³	439		
9.4	PSDB 8.3.5	<u>PROTECTION OF UNDERGROUND SERVICES</u> Existing services that adjoin or intersect a trench				
9.4.1	8.3.5 a)	a) Services & Infrastructure that intersect a trench:				
9.4.1.1		(i) Electrical or telkom cables	No	39		
9.4.1.2		(ii) Overhead Electrical or Telkom cables	No	8		
9.4.1.3		(iii) Water HDPE House Connection pipes	No	39		
9.4.1.4		(iv) Concrete Palisade boundary wall	No	14		
9.4.1.5		(v) Brick built boundary wall	No	8		
9.4.1.6		(vi) Steel palisade fence	No	7		
9.4.1.7		(vii) Wire Fences	No	10		
9.4.2		b) Services & Infrastructure that adjoin a trench:				
9.4.2.1		(i) Electrical or telkom cables	m	1270		
9.4.2.2		(v) Water HDPE House Connection pipes	m	1905		
9.4.2.3		(v) Concrete lined or paved Walkways or Driveways	m	1524		
9.4.2.4		(v) Grassed Lawns	m	1905		
9.5	SANS 1200 DB	<u>EARTHWORKS (PIPE TRENCHES)</u>				
9.5.1	PSDB 8.3.2 (LI)	<u>Excavate BY HAND</u> in all materials for Internal Sewer Erf Connections, in narrow trenches (0,5m wide) inside Private Properties, and stockpile material on site for re-use.	m³	3588		
9.5.2	PSDB 8.3.2, PSD 3.1.2	Hard rock excavation, using 20t or larger excavator, or jack hammers / pneumatic hand tools, as required.	m³	179		
9.5.3	8.3.2 (LI)	Excavate and dispose of unsuitable material from trench bottom.	m³	359		
TOTAL CARRIED FORWARD						

HANKEY SANITATION UPGRADE (PHASE 1)
NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN
SECTION 9 : HANKEY TOWN - INTERNAL ERF CONNECTIONS

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
BROUGHT FORWARD						
9.5.4	PSDB 8.3.2 (LI)	Backfill BY HAND all trenches <u>from stockpile material on site</u> , and compact 95% ModAashto density, <u>after</u> Bedding and Blanket was completed, and inspected by Engineer for approval.	m³	2254		
9.6	SANS 1200 LB	BEDDING Provision of bedding for flexible PVC sewerage pipes.				
9.6.1	8.2.2.3	Provision of selected bedding material to 93% of MOD AASHTO density with material from trench excavations :				
9.6.1.1		Selected granular bedding material - min 100mm below & above pipe	m³	889		
9.6.1.2		Selected blanket material - min 200mm thick	m³	445		
9.7	SANS 1200 LD	SEWERS All pipe to be PVC Sewer Pipes, Socketed with Rubber O-ring, Heavy Duty - Class 34 (as per SANS 791).				
9.7.1	PSLD 8.2.1	Supply, lay, complete with joints, in-bed on flexible bedding complete, and test, for the following pipe diameters:				
9.7.1.1		110mm diameter for Internal Sewer Erf Connections in Private Properties.	m	4445		
9.7.2	PSLD 8.2.1	Supply, lay and join PVC Sewer fittings for the following pipe diameters:				
9.7.2.1		110 mm diameter - 11,25° or 22,5° Bends	No.off	40		
9.7.2.2		110 mm diameter - 45° or 90° Bends	No.off	40		
9.7.2.3		160 mm diameter - 11,25° or 22,5° Bends	No.off	3		
9.7.2.4		160 mm diameter - 45° or 90° Bends	No.off	3		
9.7.2.5		110 x 110mm diameter Y-junction	No.off	78		
9.7.2.6		160 x 110mm diameter Reducing Y-junction	No.off	39		
9.7.2.7		160 x 160mm diameter Y-junction	No.off	2		
9.8	SANS 1200 LD	ERF CONNECTIONS Supply all fittings and install Erf Connections complete from Graviy Sewer Main to inside Property Boundary.				
9.8.1	(LI)	Type 1 (Depth = up to 400mm)	No	38		
9.8.2	(LI)	Type 2 (Depth = 400mm to 800mm)	No	51		
9.8.3	(LI)	Type 3 (Depth = 800mm to 1500mm)	No	22		
9.8.4	(LI)	Type 4 (Depth > 1500mm)	No	16		
9.9	SANS 1200 LD	RODDING EYES Supply all fittings and construct Rodding Eye complete as per Drawing, including concrete and DI frame and cover, inside Properties as instructed by Engineer.	No	254		
9.10		SUNDRIES				
9.10.1	PSLD 8.2.7 EME	Concrete encasing (15MPa) of Sewer pipes, only on written instruction of Engineer.	m³	159		
9.10.2	PSLD 8.2.14	Break into and connect to existing internal sewer pipes inside Private Properties. Connect and repair complete.	No	254		
TOTAL CARRIED FORWARD TO SUMMARY						

SECTION 10 : HORIZONTAL DIRECTIONAL PIPE DRILLING (HDD)

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
		SECTION 10 : HORIZONTAL DIRECTIONAL PIPE DRILLING (HDD)				
	PLX	TRENCHLESS PIPE INSTALLATION AT PROVINCIAL ROAD CROSSINGS				
10.1	PLX 8.1	<u>SITE ESTABLISHMENT OF DRILLING CONTRACTOR</u>				
10.1.1		Fixed costs to establish "HDD" Plant, equipment, labourers etc in Hankey. Cost to incl Construction Mangement, Office Over-head costs, Method Statement, Transport to Hankey, Accommodation and OHS requirements as specified, for full duration of "HDD" processes on site.	Sum	1	---	
10.2	PLX 8.2	<u>TRAFFIC ACCOMMODATION AT "HDD" ROAD SECTIONS</u>				
10.2.1		Traffic Accommodation & Road signs, as well as flagmen, at each "HDD" position, for full duration of "HDD" processes on site.	Sum	6		
10.3	PLX 8.3	<u>SETTING UP AT EACH DRILLING LOCATION</u>				
10.3.1	PLX 8.3.1	Move and Re-establish "HDD" plant at next position.	Sum	5		
10.3.2	PLX 8.3.2	<u>Excavation, Preparation and Levelling of Launch and Reception Pits</u>				
10.3.2.1		Excavate at Position A @ 2,0m depth	Sum	1	---	
10.3.2.2		Excavate at Position B @ 1,8m depth	Sum	1	---	
10.3.2.3		Excavate at Position C @ 3,2m depth	Sum	1	---	
10.3.2.4		Excavate at Position D @ 1,2m depth	Sum	1	---	
10.3.2.5		Excavate at Position E @ 0,95m depth	Sum	1	---	
10.3.2.6		Excavate at Position H @ 1,4m depth	Sum	1	---	
10.4	PLX 8.4	<u>HORIZONTAL DIRECTIONAL DRILLING</u>				
		<i>Refer to table in specification - Section PLX 1.</i>				
10.4.1		Pipe boring at Position A @ 2,0m depth	m	20		
10.4.2		Pipe boring at Position B @ 1,8m depth	m	20		
10.4.3		Pipe boring at Position C @ 3,2m depth	m	20		
10.4.4		Pipe boring at Position D @ 1,2m depth	m	12		
10.4.5		Pipe boring at Position E @ 0,95m depth	m	12		
10.4.6		Pipe boring at Position H @ 1,4m depth	m	20		
10.5	PLX 8.5	<u>SUPPLY AND PULLING THROUGH OF PIPES</u>				
		Supply, cutting & welding, trimming beads, pulling pipe through drilling pilot hole and supply and connect HPDe to PVC couplings each side of pipe section.				
10.5.1		Position A - 160mmø HDPe	m	22		
10.5.2		Position B - 200mmø HDPe	m	22		
10.5.3		Position C - 200mmø HDPe	m	22		
10.5.4		Position D - 200mmø HDPe	m	14		
10.5.5		Position E - 160mmø HDPe	m	14		
10.5.6		Position F - 160mmø HDPe	m	22		
TOTAL CARRIED FORWARD TO SUMMARY						

KOUGA LOCAL MUNICIPALITY - BID No.: 47/2021**HANKEY SANITATION UPGRADE (PHASE 1) :****NEW SEWERAGE GRAVITY NETWORKS FOR PHILLIPSVILLE, OLD HANKEY, HANKEY AND HANKEY TOWN****SUMMARY OF SCHEDULE OF QUANTITIES**

DESCRIPTION OF WORK SCOPE SECTIONS		TENDER AMOUNTS
SECTION 1: PRELIMINARY & GENERAL		
SECTION 2 : PHILLIPSVILLE - GRAVITY SEWERAGE NETWORK		
SECTION 3 : PHILLIPSVILLE - INTERNAL ERF CONNECTIONS		
SECTION 4 : OLD HANKEY - GRAVITY SEWERAGE NETWORK		
SECTION 5 : OLD HANKEY - INTERNAL ERF CONNECTIONS		
SECTION 6 : HANKEY - GRAVITY SEWERAGE NETWORK		
SECTION 7 : HANKEY - INTERNAL ERF CONNECTIONS		
SECTION 8 : HANKEY TOWN - GRAVITY SEWERAGE NETWORK		
SECTION 9 : HANKEY TOWN - INTERNAL ERF CONNECTIONS		
SECTION 10 : HORIZONTAL DIRECTIONAL PIPE DRILLING (HDD)		
SUB-TOTAL TENDER AMOUNT (A) - excl VAT		
ESCALATION (5% of Sub-Total A)	5.0%	
SUB-TOTAL (B)		
VALUE ADDED TAX (15% of Sub-total B)	15.0%	
TOTAL TENDER AMOUNT (incl VAT)		