NALA LOCAL MUNICIPALITY

CONTRACT NO.

NLM/TS/006/2025-26

CONSTRUCTION OF BOTHARNIA 9 PUMP STATION IN KGOTSONG

PART C2

PRICING DATA

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

NALA LOCAL MUNICIPALITY

CONTRACT NO.

NLM/TS/006/2025-26

CONSTRUCTION OF BOTHARNIA 9 PUMP STATION IN KGOTSONG

PART C2: PRICING DATA

CONTENTS

PAGE

C2.1 Pricing Instructions C2.1-1

C2.2 Pricing Schedule C2.2-1

C2.3 Schedule of Quantities..... C2.3-1

C2.4 Banking Details C2.4-1

NALA LOCAL MUNICIPALITY

CONTRACT NO.

NLM/TS/006/2025-26

CONSTRUCTION OF BOTHARNIA 9 PUMP STATION IN KGOTSONG

SECTION C2.1

PRICING INSTRUCTIONS

Pricing Assumptions mean the criteria as set out `below, read together with all Parts of this contract document, which it will be assumed in the contract, that the tenderer has taken into account when developing his prices.

1. This Bill of Quantities has to be read together with the Articles of the Agreement, the Conditions of Contract and Special Conditions of Contract, the Form of Tender, the General Specification, the Project Specification and the Drawings.

2. The method of measurement published by the South African Bureau of Standards in clause 8 of the Standardised Specifications for Civil Engineering Construction is applicable, subject to the variations and amendments contained in the section “Applicable SANS 1200 standardised specifications”.

3. General instruction and description of the Work or materials given in the Specification will not be repeated in the Bill of Quantities. It will only be referred to in the Conditions of Contract(C-22) or, Special Conditions of Contract (SC-11), General Specification (19.1.3), Project Specification (PS 11) or to a Drawing.

4. The clauses in a specification in which further information regarding the schedule item appears under "Reference clause" in the Schedule. The reference clauses indicated are not necessarily the only sources of information in respect of scheduled items. Further information and specifications may be found elsewhere in the contract documents. Standardised Specifications are identified by the letter or letters which follow SANS in the SANS 1200 series of specifications, e.g. G for SANS 1200 G.

5. The quantities set out in the Bills of Quantities are the estimated quantities of the Contract Works, but the Contractor will be required to undertake whatever quantities may be directed by the Engineer from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.

6. The prices and unit prices given in the Bill of Quantities, are all-embracing prices and it should cover the values of the different items completely and have to include all costs and expenses which may occur and for the building of the Work as described and costs and expenses that are required as well as all general liabilities, obligations and risks which forms a part of this contract. The prices should be given separately in the item(s) if special accountability, responsibilities and risks as in the above occur.

7. A price or unit price has to be filled in against every item in the Bill of Quantities even if the amount isn’t shown. Items where no price or unit price has been filled in will be regarded as covered by the other prices and unit prices in the Bill of Quantities. VAT must not be included in the tariffs.

8. The unit rates will be regarded as correct if any calculation errors occur. The total amount will be corrected according to the product of the item quantity and the unit rate. Unit prices will be calculated arithmetically in the case of omissions.

9. Payments will be made exclusively for items listed in the Bill of Quantities (BoQ). If the Contractor identifies an item that is not included, they must seek clarification during the tender period. Alternatively, the Contractor should allocate the cost of the unlisted item under a related item within the relevant section of the BoQ and clearly record this adjustment under Section T2.2.1, “Alterations by Tenderer,” in the returnable documents of Volume 1 of the Tender Document.

10. Except where rates only are required, insert all amounts to be included in the total tendered price in the "Amount" column and show the corresponding total tendered price.

11. The units of measurement described in the Bills of Quantities are metric units. Abbreviations which may be used in these Bills of Quantities are as follows:

Abbreviation	Meaning	Abbreviation	Meaning
%	per cent	MN	meganewton
ha	hectare	MN.m	meganewton-metre
h	hour	m	metre
kl	kilolitre	m^2	square metre
kg	kilogram	m^2.pass	square metre-pass
km	kilometre	mm	millimetre
kW	kilowatt	No.	number
l	litre	P C sum	Prime Cost sum
m^3	cubic metre	Prov sum	Provisional sum
m^3.km	cubic metre-kilometre	sum	lump sum
Ml	megalitre	t	ton (1000 kg)

The Employer has the right to inspect and correct any measurements and/or payments that were made before the final Payment Certificate. The Employer also has the right to deduct payment for any work not complying with the specifications before the submission of the final Payment Certificate.

NALA LOCAL MUNICIPALITY

CONTRACT NO.

NLM/TS/006/2025-26

CONSTRUCTION OF BOTHARNIA 9 PUMP STATION IN KGOTSONG

SECTION C2.2

SCHEDULE OF QUANTITIES

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
1	SANS 1200 A	**SECTION 1: PRELIMINARY & GENERAL** **PRELIMINARY & GENERAL**				
	8.3	FIXED-CHARGE ITEMS				
1.1	8.3.1	Contractual requirements	-	-	Sum	
	8.3.2	Establishment of facilities on Site				
	8.3.2.1 PSAB	a) Facilities for the Engineer				
1.1.1	PSAB1	i) Nameboards (2 no.)	-	-	Sum	
1.1.2	PSAB3	ii) Telephone (1 no.)	-	-	Sum	
1.1.3	PSAB5	iii) Survey assistant	-	-	Sum	
1.1.4	PSAB6	iv) Survey equipment	-	-	Sum	
1.1.5		v) Laptop: Core i11 @ 4.7GHz, 16GB RAM, 512GB SSD, 1xUSB Port minimum, or similar approved, complete with Windows 11 and MS Office Pro.	-	-	Sum	
	8.3.2.2 PSA	b) Facilities for the Contractor				
1.1.6		i) Offices and storage sheds (including meeting room/boardroom)	-	-	Sum	
1.1.7		ii) Workshops	-	-	Sum	
1.1.8		iii) Ablution and latrine facilities	-	-	Sum	
1.1.9		iv) Tools and equipment	-	-	Sum	
1.1.10		v) Water supplies, electric power and communications	-	-	Sum	
1.1.11		vi) Dealing with water (Sub-clause 5.5)	-	-	Sum	
1.1.12		vii) Access (Sub-clause 5.8)	-	-	Sum	
1.1.13		viii) Plant	-	-	Sum	
1.1.14		ix) Site security for duration of contract	-	-	Sum	
1.1.15	8.3.3	Other fixed-charge obligations	-	-	Sum	
1.1.16	8.3.4	De-establishment of site (only on instruction of Engineer)	-	-	Sum	
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
1.2	8.4	TIME-RELATED ITEMS				
1.2.1	8.4.1	Contractual requirements	months	6		
	8.4.2	Operation and maintenance of facilities on the Site for the duration of construction				
	8.4.2.1	a) Facilities for the Engineer				
1.2.2	PSAB3	i) Cellular Phone, Airtime and Data	months	6		
1.2.3	PSAB5	ii) Survey assistant	months	6		
1.2.4	PSAB6	iii) Survey equipment	months	6		
1.2.5		iv) Computer	months	6		
	8.4.2.2	b) Facilities for the Contractor				
1.2.6		i) Offices, storage sheds, boardroom and campsite	months	6		
1.2.7		ii) Workshops	months	6		
1.2.8		iii) Living accommodation	months	6		
1.2.9		iv) Ablution and latrine facilities	months	6		
1.2.10		v) Tools and equipment	months	6		
1.2.11		vi) Water supplies, electric power and communications	months	6		
1.2.12		vii) Dealing with water (Sub-clause 5.5)	months	6		
1.2.13		viii) Access (Sub-clause 5.8)	months	6		
1.2.14		ix) Plant	months	6		
1.2.15		x) Site Security for duration of contract	months	6		
1.2.16	8.4.3	Supervision for duration of construction	months	6		
1.2.17	8.4.4	Company and head office overhead costs for the duration of the contract	months	6		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
1.2.18	8.4.5	Other time-related obligations (specify below):	months	6		
1.3	**PSA9 PSA10**	**<u>OCCUPATIONAL HEALTH AND SAFETY & ENVIRONMENTAL MANAGEMENT</u>**				
		<u>FIXED-CHARGE ITEMS</u>				
	PSA.9	<u>Occupational Health and Safety</u>				
	PSA.9.1 OHSA CR GAR GSR	Compliance with Occupational Health and Safety Act (Act 85 of 1993) and its regulations and with the Employers Health and Safety Specification:				
1.3.1		a) Allow for the cost compiling a Safety Plan as required in the specifications for the Principal Contractor / Contractor (All appointed sub - contractors to provide safety plans)	-	-	Sum	
1.3.2		b) Allow for the cost of the Notification of Construction Work by the Principal Contractor / Contractor	-	-	Sum	
1.3.3		c) Allow for the cost of a copy of OHS Act 85 of 1993 (Book or poster form. To be displayed in the site office)	-	-	Sum	
1.3.4		d) Allow for the costs of required Risk Assessments and method statements (Risk Assessments must include all Safe Work Procedures).	-	-	Sum	
1.3.5		e) Allow for the costs to compile all Health and Safety Inspection Registers for required tasks.	-	-	Sum	
		Health and Safety Training:				
1.3.6		a) Allow for the costs of all revelant training on site	-	-	Sum	
1.3.7		b) General Safety Induction Training of all employees on site	-	-	Sum	
	Carried forward					

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		Personal Protective Equipment (PPE) required on site:				
1.3.8		a) First Aid Box (fully stocked)	No.	1		
1.3.9		b) 9.2.9Kg Dc STP Fire Extinguishers	No.	4		
1.3.10		c) Dust Masks	No.	50		
1.3.11		d) Safety Goggles	No.	20		
1.3.12		e) Gloves (leather/PVC)	No.	20		
1.3.13		f) Hard hats	No.	20		
1.3.14		g) Barrier tape (Netting)	m	1 000		
1.3.15		h) Reflective Vests	No.	25		
1.3.16		i) Traffic Control Sign Boards	No.	10		
1.3.17		j) Prohibitive Symbolic Signs (near Diesel / Flammable Fluid Storage).	No.	5		
	PSA.10	Environmental Management				
1.3.18		Development and provision of an Environmental Management Plan	-	-	Sum	
		TIME-RELATED ITEMS				
	PSA9	Occupational Health and Safety				
	PSA9.2	Compliance with Occupational Health and Safety Act (Act 85 of 1993) and its regulations and with the Employers Health and Safety Specification:				
1.3.19		a) Full-time supervision by a registered construction health and safety officer for the duration of construction	months	6		
1.3.20		i) Stationary for health and safety officer	months	6		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
1.3.21		b) Security control for the duration of construction	months	6		
1.3.22		i) Stationary and registers for security personnel and access control	months	6		
1.3.23		c) Refresher training where required during construction	months	6		
1.3.24		d) Refilling of first aid kits for the duration of construction	months	6		
1.3.25		e) Traffic accommodation for the duration of construction, inclusive of a traffic managament plan and traffic safety officer	months	6		
	PSA10	Environmental Management				
1.3.26	PSA10.2	Compliance with Environmental Management Plan	months	6		
1.4	**PSA.12**	**SUMS STATED PROVISIONALLY BY THE ENGINEER**				
		Engineer's requirements:				
1.4.1	PSA12.3	a) CLO/LDO remuneration	-	-	Prov sum	45 000.00
1.4.2		b) Overheads, charges and profit on the above	%	45 000		
1.4.3	PSA12.3	c) PSC remuneration	-	-	Prov sum	2 700.00
1.4.4		d) Overheads, charges and profit on the above	%	2 700		
1.4.5	PSA12.10	e) Locating existing services	-	-	Prov sum	15 000.00
1.4.6		f) Overheads, charges and profit on the above	%	15 000		
1.4.7	PSA12.12	g) Professional or specialist services:	-	-	Prov sum	100 000.00
1.4.8		h) Overheads, charges and profit on the above	%	100 000		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		Community requirements:				
1.4.9	PSA12.4	a) Accredited and approved training courses for selected local and other labourers	-	-	Prov sum	30 000.00
1.4.10		b) Overheads, charges and profit on the above	%	30 000		
		Refurbishment & commissioning of existing services:				
1.4.11	PSA12.11	a) Relocation of existing municipal services not related to the sewer reticulation	-	-	Prov sum	15 000.00
1.4.12		b) Overheads, charges and profit on the above	%	15 000		
1.4.13	PSA12.12	Payments to ESKOM in respect of electrical connection fees	-	-	Prov sum	200 000.00
1.4.14		Overheads, Charges and Profit on Item 1.4.13	%	200 000		
1.5	**SANS 1200 A**	**TEMPORARY WORKS**				
1.5.1	8.8.1	Maintain access road to the works	-	-	Sum	
1.5.2	8.8.2	Deal with traffic or accommodate traffic (as instructed by Engineer)	-	-	Sum	
1.5.3	8.8.5 PSA 5.1	Cost of survey in terms of project specification and land survey act	-	-	Sum	
	TOTAL OF SECTION 1 CARRIED TO SUMMARY					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
2		**SECTION 2: PUMP STATION - CIVIL WORKS** **NEW PUMP STATION**				
2.1	**SANS 1200 D**	**Site Clearance**				
2.1.1	8.3.1	Clear and grub top soil up to 150 mm deep carting away	m^2	610		
2.1.2	PSC 8.2.13	Hydrojet cleaning of blocked sewer lines (Supply all equipment and operate high pressure pumps and jets to clear blocked pipe sections):				
		a) Supply of all equipment complete to hydrojet existing pipelines	No.	1		
		b) Operate and maintain equipment, including labour, fuel and other consumables, to clear blocked sewer pipes of various sizes up to 400 mm ø, remove debris from manholes and dump at municipal dump sites or nearest WWTW	m	200		
2.1.3	PSC 8.2.14	Combination vacuum/jetting trucks to pump out blocked manholes. (Supply tanker trucks complete with vacuum pumps to empty blocked manholes and cart sewer to the nearest WWTW):				
		a) Supply of combination trucks	No.	1		
		b) Operate and maintain the tanker including all running costs per manhole emptied	No.	5		
		c) Supply and operate temporary portable diesel trailer pump for overpumping or dewatering during construction (up to 10m head and 20l/s)	Day	40		
		d) Supply and operate temporary submersible pump with generator for overpumping or dewatering during construction (up to 10m head and 20l/s)	Day	40		
		e) Supply temporary 160mm layflat delivery pipe for overpumping between manholes or dewatering (max. 100m)	No.	1		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		f) Supply of temporary sewer pipe plugs to fit a variety of diameters of sewer pipes to prevent sewerage to enter the construction / refurbishment area (to suit pipe sizes in Section 4 and 9)				
		i) up to 150mm	No.	4		
		ii) over 150mm, up to 250mm	No.	4		
		iii) over 250mm, up to 350mm	No.	2		
		g) Diverting sewer flow from an upstream manhole to a manhole further downstream to allow for upgrades, repairs or connections (overpumping)	Day	20		
		h) Dewatering of excavations during construction	Day	60		
2.2	**SANS 1200 D**	**Bulk Earthworks**				
2.2.1	8.3.4	Importation of material from commercial sources:				
		a) G5/G6 natural gravel compacted to 95% MOD AASHTO for platforms	m³	186		
2.2.2	8.3.4	Importation of material from borrow pits:				
		a) G5/G6 natural gravel compacted to 95% MOD AASHTO	m³	-		Rate Only
2.3		**Testing**				
2.3.1		Allow for the execution of standard Modified AASHTO Density test to the entire satisfaction of the Agent by an approved institution on the site, including payment of all costs involved	m²	610		
2.4		**Soil Poisoning**				
2.4.1		Approved weedkiller under floors, aprons, ramps, steps, paving, etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m²	610		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
2.5	**SANS 1200 G**	**Formwork**				
2.5.1	8.2.2	Smooth vertical formwork to:				
		a) Floor Slab	m^2	6		
		b) Roof Slab	m^2	4		
		c) Plinth	m^2	2		
		d) Beams	m^2	7		
		e) Aprons	m^2	7		
2.5.2		Smooth horizontal formwork to:				
		a) Roof Slab	m^2	26		
		b) Beams	m^2	7		
		c) Floor Slab	m^2	26		
2.6	**SANS 1200 G**	**Reinforcement**				
2.6.1	8.3.1	High-tensile steel bars in the following:				
		a) Building foundation	t	-		Rate Only
		b) Plinth	t	0.2		
		c) Floor Slab	t	0.9		
		d) Roof Slab	t	0.7		
		e) Beams	t	0.5		
2.6.2	8.3.2	High-tensile welded mesh:				
		a) Mesh Ref 193	m^2	50		
		b) Mesh Ref 245	m^2	50		
2.7	**PSGA, SANS 1200G**	**Strength Concrete**				
2.7.1	8.4.3	Class 30 MPa/19mm concrete in:				
		a) Building foundation	m^3	-		Rate Only
		b) Plinth	m^3	1		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		c) Floor Slab	m^3	6		
		d) Roof Slab	m^3	7		
		e) Aprons	m^3	6		
		f) Beams	m^3	3		
		g) Max 75mm thick on floor	m^3	2		
2.8	**SANS 1200 G**	**Unformed Surface Finishes**				
2.8.1	8.4.4	Wood-floated finishes to:				
		a) Aprons, horizontal	m^2	50		
2.8.1	8.4.4	Steel floated finishes to:				
		a) Roof slab, horizontal	m^2	30		
		b) Floor slab, horizontal	m^2	30		
		c) Plinth, horizontal	m^2	5		
		d) Roof slab, vertical	m^2	5		
2.9	**SANS 1200 G**	**Joints**				
2.9.1	8.5	End joint detail as per drawings:				
		a) Apron - 10x10mm Sikaflex Pro 3i with Backing Chord and Primer and 10mm Jointex below	m	50		
2.10	**SANS 1200 G**	**Waterproofing**				
2.10.1	8.5	Waterproofing below foundation:				
		a) 250µm Polyethylene Damp Proof Membrane (DPM)	m^2	-		Rate Only
2.10.2	8.5	Waterproofing the RC roof:				
		a) RC Roof: Siklastic 500 – 1.5mm system with Sika Reemat Premium applied as per suppliers details	m^2	26		
		b) Dia 25 Half Round Edge Drip detail	m	20		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
2.10.3	8.5	Waterproofing at wall:				
		a) 375µm Polyethylene Damp Proof Coarse (DPC)	m	20		
		b) 12mm Bitumen Impregnated Soft Board Sandwiched between walls	m	7		
		c) Install Sikadur Combiflex 250 SG on 50x50 HDPE corner fillets	m	80		
		d) Sika BlacksealLastic with Silvercoat applied as per suppliers spec to 300mm either side of combiflex	m	80		
		e) 375µm Polyethylene DPC on Trowelled Mortar below RC Slab	m	-		Rate Only
2.11	**SANS 1200 G**	**Precast Concrete Elements**				
2.11.1	8.6	Lintels				
		a) High quality pre-stressed concrete lintels: 105mm x 75mm x 2.7m	No.	2		
2.12	**PB 8.2.1**	**Masonry**				
2.12.1		Brickwork:				
		a) Foundation: 110mm brick wall with NFX below DPC with class II mortar	m²	-		Rate Only
		b) 2mm Brick reinforcement every course: 75mm wide built into brick walls with sufficient laps at end joints, angles and intersections	m²	-		Rate Only
		c) Superstructure: 220 brick cavity wall with FBX above DPC with class I mortar, complete with hoop irons and joints where required	m²	68		
		d) Extra over brickwork: for face brickwork in stretcher bond	m²	68		
		e) Extra over brickwork: Brick-on-edge header course coping	m	20		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		f) Ventilation: 220x156x45mm Concrete air bricks	No.	18		
		g) 2mm Galvanised Brick reinforcement every 4th course with additional at openings and below roof: 150mm wide built into brick walls with sufficient laps at end joints, angles and intersections	m	230		
		h) 1mm Thick x 35mm wide x 650mm long overall galvanised hoop iron consertina tie with the necessarary 5 x 25mm high bend in middle (See Engineers General notes)	No.	-		Rate Only
2.13	**PB 8.2.6**	**Plastering**				
2.13.1		Internal Cement Plaster on Brickwork				
		a) On internal pump station walls	m²	62		
2.14	**PB 8.2.20**	**Paintwork**				
2.14.1		On Floated Plaster:				
		a) One universal undercoat and two coats "Dulux" pure acrylic paint on internal walls to Client's specification	m²	62		
2.14.3		On Concrete roof slabs:				
		a) One coat concrete primer and two coats "Dulux" pure acrylic paint on underside of roof slabs to Client's specification	m²	18		
2.15		**Metalwork**				
2.15.1		Doors:				
		a) Security door for pump station as required by the Client	-	-	Prov sum	20 000.00
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		b) "Stronghold" Type DVA double transformer room door complying with SABS specifications with door frame and painted to client's specification: Supplying, Fabricating and installation of DOOR TYPE DVA Double Door – 1830 x 2440 x 230mm with 4 x heavy duty stainless steel hinges per leaf. The transformer door and frames is manufactured from 1.6mm mild steel sheeting and powder coated to Client spec. (Including ventilation louvres, panic bolt with outside access device, door closer and locks). The top of the door frame to be strengthened with a custom frame of 60x60x5mm angle iron, and cut at the top to create an opening for the gantry. A 250x75020x2.5mm lip channel to be welded to the door frame that extends to the underside of the roof slab on each side of the I-beam, and fixed to the concrete beam with 3 x M12 anchor bolts. The opening should be covered by a split rubber mat, notched to the shape of the I-beam, to create closure.	No.	1		
2.15.2		Louvres:				
		a) Safintra 600x1000mm steel louvres, painted / coated to client's specification	No.	1		
2.15.3	SANS 1200 H 8.3.1	Structural Steelwork a) Crane Gantry (Supply, manufacture and install - crawlbeam complete with all brackets, bolts, grouting, corrosion protection, etc. as detailed on drawings: *Cost must cover all relevant material, labour, machinery, equipment, and fabrication for the construction of structural steelwork with all Connection Materials and Consumables as required.* i) UB 254x146x31 I-Section	m	7		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		ii) TP1.0 1-ton Plain Beam Trolley with chains. (Including a storage case)	No	1		
2.15.4	PB 8.2.18	Ironmongery:				
		a) Letters, Nameplates, etc.	-	-	PC Sum	5 000.00
		b) Signage	-	-	PC Sum	5 000.00
2.16		**Grating**				
2.16.1		Supply, deliver and install 38mm deep fibreglass moulded horizontal grating with 50x50mm openings, mounted on 60x60x6mm angle iron with stainless steel anchors, complete. All steel item to be 316L stainless steel. Size 2050x900mm.	No	1		
2.17		**Ventilation Pipes**				
2.17.1		Supply, deliver and install 6m x 225mmØ HDPE PE100 PN6 ventilation pipe, mounted to the wall with 3 staggered brackets, through penetrations in the floor slab and the roof slab, and sealed.	No	2		
	Part. Spec. PA	**NEW SECURITY FENCING AROUND THE NEW PUMP STATION**				
2.18		**Electric Fencing (Inner Fence)**				
		NOTE: *The Contractor that must install the electric fencing shall be registered at department of labour and shall be a specialist contractor.*				
2.18.1	PA 8.2	Supply, delivery and installation of, painted or coated fence posts including excavation and 600x600x600mm 20MPa concrete foundations:				
		a) 3,0m high 75x75mmx3mm steel square tubing fence post	No.	42		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
2.18.2		Supply of JVA Z14 Fence energizer with backup battery, plug in power supply, sherlotronics 1CH receiver and 2 remotes (to be handed over to client), alarm indication surface mounted strobe light and siren, in a outdoor weatherproof wall mounted steel cabinet, manufactured from 1,6mm 3CR12 stainless steel, complete with doors with metal-t hinges, padlockable lever lock handles, equipment rails, terminations plates, name plate holders on face plate, busbars, non-removeable laminated legend card and prepare for and including all internal wiring for the equipment-cabinet to be approved by Engineer	-	-	Sum	
2.18.3		Installation of complete cabinet with energizer as per item 2.18.2 above	-	-	Sum	
2.18.4		Supply, delivery, installation and testing of 24 Strand electrical fence with 2,24mm high strain galvanised wires on steel fencing posts, spaced at not more than 2m apart, complete with mounting plates, corner strains, intermediate insulators, tensioner insulators, gate contacts, earth spikes spaced as per SANS, danger boards, indicator on light, etc. to be in working order complete with earthloops mounted between each intermediate pole between all live and earth wires (plan length)	m	78		
2.18.5		Supply, delivery, installation and testing of 24 strand piggyback electrical fencing on a 4 meter wide sliding gate complete with all insulators, gate contacts, danger boards, etc. to be in working order.	No.	1		
2.18.6		Supply, delivery, installation and testing of HT leads from energizer to electrical fence, complete in conduit estimated 10m from energizer to fence.	-	-	Sum	
2.18.7		Supply, delivery, installation and testing of Electric fence red alarm strobe light, mounted to the building in a visible location	No.	1		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
2.19		**Concrete Pallisade Fencing (Outer Fence)**				
2.19.1	PA 8.2	Supply, delivery and installation of fence posts, including excavation and 600x600x600mm 20MPa concrete foundations: a) 3,0m high pre-stressed precast concrete fence posts, 225mm thick and with tapered witdths, with 2 slots for horizontal load bearing rails/beams	No.	44		
2.19.2		Supply, delivery and installation of precast concrete rails/beams to suit slots in item 2.19.1 a) above and 2,37m high, 75mm thick pales with pointed tops @ 200mm centres, including all bolts and related material required to attach onto fence posts (plan length)	m	82		
2.19.3		Supply, delivery and installation of galvanized razor wire flat wrap to the top of the concrete pallisade fence above, including straining wire and all required material (plan length)	m	82		
2.20		**Security Gates**				
2.20.1		Supply, delivery, installation and testing of a pair of sliding security gates (4m wide), complete including gate posts, as per dwg. 35563-BCN-ZZZ-00-DR-CIV-133-TS-011	-	-	Sum	
		NEW ACCESS ROAD AND PAVING AROUND THE NEW PUMP STATION				
2.21	**SANS 1200 DM**	**Earthworks (Roads & Subgrade)**				
2.21.1	8.3.2	Preparation of Site: a) Removal of topsoil to a maximum depth of 150mm, hauling and spreading of topsoil to a minimum depth of 100mm	m³	91		
2.21.2	8.3.3	Treatment of roadbed: a) Roadbed preparation and compaction of material to: i) Minimum of 93% of modified AASHTO maximum density	m³	91		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
2.21.3	8.3.4	Cut to fill:				
		a) Compact to 90% of modified AASHTO maximum density	m³	30		
2.21.4		Weed control:				
		a) Supply, deliver to site and place weed control fabric over the roadbed area	m²	610		
2.22	**SANS 1200 ME**	**Subbase**				
2.22.1	8.3.3	Construct the subbase course with material from commercial sources				
		a) 150mm thick G7 gravel material, compacted in to 95% MOD AASHTO density at OMC	m³	92		
2.23	**SANS 1200 MF**	**Base**				
2.23.1	8.3.3	Construct base with material from commercial sources:				
		a) 150mm thick C4 stabilized (3%) gravel, material compacted in to 97% MOD AASHTO density at OMC	m³	92		
2.23.2	8.3.8	Stabilizing agent:				
		a) Portland cement	t	5.4		
2.24	**SANS 1200 MJ**	**Segmented Paving**				
2.24.1	8.2.2	Construction of paving complete, including 20mm bedding sand:				
		a) 60mm Class 40/2,6 interlocking concrete paving blocks laid in herringbone pattern	m²	525		
2.24.2	8.2.3	Cutting blocks to fit edge restraints:				
		a) Straight cutting	m	124		
		b) Circular cutting	m	40		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
2.25	**SANS 1200 MK**	**Kerbing and Channeling**				
2.25.1	8.2.1	Precast concrete kerbing:				
		a) SANS 927 fig 8c:				
		i) Curved sections	m	40		
		ii) Straight sections	m	40		
		b) SANS 927 fig 10:				
		i) Straight sections	m	86		
2.25.2		Construction of 300x300mm Class 30/19 concrete edge beam (plan length)	m	36		
2.26	**SANS 1200 DK**	**Stone Pitching**				
2.26.1	8.2.5	Grouted stone pitching on a concrete bed (75 - 150mm thick Class 25/19) (LI)	m²	100		
2.27	**SANS 1200 G**	**Walkway between fences**				
2.27.1	8.4.3	60mm deep Class 20 MPa/19mm concrete walkway between fences with joints every 5m	m³	6		
2.27.2	8.3.2	Mesh Ref. 100 in walkways	m²	68		
2.28	**SANS 1200 LE**	**Stormwater Drainage**				
2.28.1	8.2.1	Supply and lay concrete pipe culverts on class A bedding:				
		a) Type SC 100D-load pipes with ogee joints:				
		i) 450mm dia.	m	10		
2.28.2	SABS 1200 G	Scheduled formwork items:				
	8.2.2	a) Smooth	m²	10		
2.28.3	8.3	Scheduled reinforcement items:				
	8.3.1	a) Mild steel	t	1.0		
		b) High-tensile steel	t	1.0		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
	8.3.2	c) High-tensile welded mesh, ref no 193	m²	10		
2.28.4	8.4	Scheduled reinforcement items:				
	8.4.3	a) Strength concrete:				
		i) Class 30 MPa/19 mm concrete in inlet and outlet structures, catchpits, manholes, thrust blocks, anchor blocks and other similar structures	m³	4		
	8.4.4	b) Unformed surface finishes:				
		i) Steel-floated finish	m²	6		
		WATER CONNECTION FOR THE NEW PUMP STATION				
2.29	**SANS 1200 C**	**Site Clearance**				
2.29.1	PSC 8.2.1	Clear and grub areas	ha	0.2		
2.29.2	PSC 8.2.12	Take down and re-erect existing fencing	m	10		
2.30	**SANS 1200 DB**	**Earthworks (Pipe Trenches)**				
2.30.1	PSDB 8.3.2	Excavate in all materials for trenches, backfill, compact and dispose of surplus material:				
		a) Pipes up to 700 mm dia for depths:				
		i) up to 1,0m	m³	128		
		ii) from 1,01m up to 2,0m	m³	540		
2.30.2	PSDB 8.3.2	Extra over item 6.2.1 above for:				
		a) Hard rock excavation	m³	10		
2.30.3	8.3.3	Existing services that intersect or adjoin a pipe trench (protection of underground services):				
		a) Services that intersect a trench	No.	5		
		b) Services that adjoin a trench	m	20		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
2.31	**SANS 1200 L**	**Medium Pressure Pipelines**				
2.31.1	8.2.1	Supply, lay and bed on class B bedding, HDPE PN10 pipeline complete with joint welding, backfill and testing:				
		a) 32mm dia. (from water mains)	m	650		
		b) 20mm dia. (inside property)	m	50		
2.31.2		Supply, install and test 15mm standpipes, complete with taps and all fittings required	No.	2		
2.32	**SANS 1200 LB**	**Bedding for sewer rising mains**				
2.32.1	8.2.2	Supply only of bedding by importation:				
		a) From commercial sources:				
		i) Selected granular material	m³	140		
		ii) Selected fill material	m³	56		
2.33	**SANS 1200 LF**	**Erf Connections (Water)**				
2.33.1	8.2.2	Supply, lay and test erf connections:				
		a) Short single connection, as per dwg. no. 35563-BCN-ZZZ-00-DR-CIV-133-TS-003	No.	1		
2.33.2		Water connection by Local Authority	-	-	Prov sum	10 000.00
2.33.3		Profit and handling fee	%	10000		
	TOTAL OF SECTION 2 CARRIED TO SUMMARY					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
3	**Part. Spec. PSM**	**SECTION 3: NEW SEWER PUMP STATION - MECHANICAL WORKS**				
3.1		**Manufacture, supply, deliver, transport, handle, protect, store, install, test, commission and uphold during the Defects Liability Period:**				
3.1.1	PSM 17	Self-priming centrifugal sewage pumps sets for the new sewer pump station: a) Operation: Only 1 pump running at a time. Two pumps to alternate at each startup. b) Required delivery: 22 l/s with max. 1 pump in operation c) Pumping head: 21m maximum d) Rising main: 160mm dia. x 966m e) Main suction pipe: 225mm dia. HDPE f) NPSH: 2m maximum g) Pump set: Cornell 3STX pump set or approved equivalent NPSH: 2m maximum	No.	2		
3.1.2	PSM 18	Muffin Monster open channel type grinders with immersible motors, complete with ancillary work with controller to operate in wet well. The grinder must further be fitted with Wipes Ready Technology (macerator) with a nominal cutting area width of not less than 200mm: a) Supply and install in pump house new JWC load sensing smart controller to operate and protect the grinder, or similar approved	No.	1		
		b) New JWC 30005-0018 series Muffin Monster with immersible motor IP68, suitable for open channel installation, complete or similar approved	No.	1		
3.1.2	PSM 19	Stainless steel (SS) guide rail for grinder, complete:				
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		a) Supply and install guide rail and slider bracket, complete. This should include material guides (SS 304 fixed to sump wall with SS bolts) and lifting eye (SS 304), legs stabilizer (SS), sliding gate (SS 304) and cable holder (SS 304)	-	-	Sum	
3.1.4	PSM 20	Sluice gates, manually activated: *No manufacturing or fabrication may happen prior to onsite conditions being confirmed.* a) Supply and install a inlet sluice gate with rising spindle and handwheel, complete, with 1.2mØ Precast manhole rings, with lid (core drilled) with extension shaft complete. all inclusive and testing, as per dwg. no. 35563-BCN-ZZZ-00-DR-CIV-135-TS-004	No.	1		
3.2		**Supply, Installation, Testing and Commisioning of pipework and valves** *No manufacturing or fabrication may happen prior to onsite conditions being confirmed. Pipework to be measured on site to fit installation.*				
3.2.1		Complete supply & installation of Special Pipe fittings and valves (Class PN10) at the pump station, complete including all bolts, material and labour required. as per Drawing No. 35563-BCN-ZZZ-00-DR-CIV-135-TS-003. All steel specials to be FBE hot dipped galvanized steel and epoxy coated to SANS 719 (200 microns). Flanges drilled to SANS 1123 Table 1000/3: a) 200x65mm dia. mild steel flanged eccentric reducer (length = ±327mm) [Item S1]	No.	2		
		b) 200mm dia. mild steel flanged 90° medium radius bend with a mechanical pressure gauge (Wika model 232.50 or smilar approved) [Item S2]	No.	2		
		c) 200mm dia. HDPE flange adaptor (to suit 225mm dia. HDPE) [Item S3]	No.	2		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		d) 225mm dia. HDPE PE100 PN10 pipe (length = ±4898mm) [Item S4]	No.	2		
		e) 355x225mm dia. HDPE PE100 PN10 bellmouth [Item S5]	No.	2		
		f) 150x65mm dia. mild steel flanged concentric reducer (length = ±279mm) [Item D1]	No.	2		
		g) 150mm dia. mild steel flanged PN10 non-return valve [Item D2]	No.	2		
		h) 150mm dia. mild steel flanged PN10 RSV gate valve with handwheel and stainless steel shaft [Item D3]	No.	2		
		i) 150mm dia. mild steel dismantling joint [Item D4]	No.	2		
		j) 150mm dia. mild steel flanged 90° medium radius bend [Item D5]	No.	4		
		k) 150mm dia. mild steel straight piece, both ends flanged (length = ±216mm) [Item D6]	No.	1		
		l) 150mm dia. mild steel flanged 45° medium radius bend [Item D7]	No.	1		
		m) 150mm dia. mild steel straight piece, both ends flanged (length = ±495mm) [Item D8]	No.	1		
		n) 150x150mm dia. mild steel flanged 45° lateral (length = ±457mm) [Item D9]	No.	1		
		o) 150mm dia. mild steel straight piece, both ends flanged, with puddle flange (length = ±918mm) [Item D10]	No.	1		
		p) 150mm dia. mild steel straight piece, both ends flanged (length = ±3432mm) [Item D11]	No.	1		
		q) 150mm dia. PVC-U flange adaptor (to suit 160mm dia. PVC-U) [Item D12]	No.	1		
	TOTAL OF SECTION 3 CARRIED TO SUMMARY					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
4		**SECTION 4: NEW SEWER PUMP STATION - ELECTRICAL WORKS** *SUPPLEMENTARY PREAMBLES* *Specifications, drawings, etc* *Tenderers are referred to the specification and drawings prepared by the Consulting Engineer, annexed to these bills of quantities for the electrical work, for the full descriptions of the following items which are to be read and priced in conjunction with the said specification and drawings.* *Preliminaries* *Any preliminaries that may be required by subcontractors are to be included in the itemised rates or included with the main contractor's preliminaries as no separate preliminary items have been provided for pricing nor will such separate items be accepted.* *Distribution boards and Kiosks* *Rates for distribution boards etc are to include for busbars, jumpers, neutral bars, internal wiring and connections, circuit identification markers, control gear labels, circuit legend cards and shop drawings. Complete to be as per SANS specifications.* *Distribution boards and Kiosks plinths* *Rates for DB and Kiosk plinths are to be inclusive of excavation and backfill next/ around it to be level and concrete to specified strength.* *Cables* *Rates for cables are to include laying of the cables in trenches (measured elsewhere), installation in cable ducts (measured elsewhere), installation in trays (measured elsewhere) and installation in sleeves (measured elsewhere) and roof spaces incl. cable saddles, as per manufacturers spec. and SANS standards. Cable ends to be sealed until connection takes place.*				
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		Sleeves *Rates for sleeves are to include laying/ installation of sleeves in trenches (measured elsewhere) and chasing and installation into walls. The rate shall include 1.6mm draw wire, sleeve couplings and ends.* *Draw boxes and manholes* *Rates for manholes and draw boxes are to include benching, drilling of holes through as per amount of sleeves/cables to enter installation and complete with cover slabs and lid.* *Light fittings* *Rates for light fittings are to include for hanging, fixing and connecting and for lamp holders and fluorescent tubes and lamps of the type and wattage described the rate includes brackets etc.* *Switches, socket outlets, etc* *Rates for switches, socket outlets, etc are to include for screwing to outlet boxes, connecting up and cover plates.* *Materials arising from the demolitions* *Materials arising from the demolitions will become the property of the contractor unless stated otherwise for reuse.* *Quantity breakdown* *In this Section of the Bills of Quantities a breakdown of the total quantities into the various locations is indicated below each description to each as follows:* *SITE - It should be noted that due to the rounding off factor marginal differences can occur between the sum of the parts to the total given in the quantity column. For pricing purposes only the amount in the quantity column is to be used.*				
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		ELECTRICAL WORK - LV INSTALLATION				
		Note: All items to include for supply, design manufacture, delivery, installation, commissioning and maintenance as per specifications.				
4.1	**ELSPEC-06-LVMOT**	**Electrical Motors**				
4.1.1	35563-BCN-ZZZ-00-DR-ELC-311-TS-001	Supply and deliver electrical motors complete with pulleys, fan belts, wire guards, belt guards, brackets and required spacers in the following types: Manufacturer: WEG Three phase with VSD starting				
		a) 15 kW (Model: W22Xec)	No.	2		
4.1.2	35563-BCN-ZZZ-00-DR-ELC-311-TS-001	Install and commission electrical motors complete with pulleys, fan belts,wire gaurds and required spacers in the following types: Three phase with VSD starting				
		a) 15 kW (Model: W22Xec)	No.	2		
4.2	**ELSPEC-01-LVCAB**	**Low Voltage Cable Installation**				
4.2.1	35563-BCN-ZZZ-00-DR-ELC-311-TS-001	Supply and install the following 600/1000V PVC insulated PVC bedded SWA PVC sheathed stranded copper cables in trenches, sleeves and cable trays and deliver to site (excavations, sleeves, cable trays and terminations measured elsewhere):				
		a) 25 mm² x 4 core PVCSWA CU LV	m	150		
		b) 10 mm² x 4 core PVCSWA CU LV	m	120		
		c) 6 mm² x 4 core PVCSWA CU LV	m	30		
		d) 2,5 mm² x 3 core PVCSWA CU LV	m	30		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
4.2.2	35563-BCN-ZZZ-00-DR-ELC-311-TS-001	Cable termination complete, including glands, shrouds, lugs etc. fully supplied, installed and connected:				
		a) 25 mm² x 4 core PVCSWA CU LV	ea	2		
		b) 10 mm² x 4 core PVCSWA CU LV	ea	8		
		c) 6 mm² x 4 core PVCSWA CU LV	ea	4		
		d) 2,5 mm² x 3 core PVCSWA CU LV	ea	4		
4.2.3	35563-BCN-ZZZ-00-DR-ELC-311-TS-001	Earth conductors:				
		a) The supply and installation of bare stranded copper conductors installed in the same route as the cables:				
		i) 25 mm²	m	150		
		ii) 10 mm²	m	120		
		iii) 6 mm²	m	150		
		b) Bare copper earth termination complete, including glands, shrouds, lugs etc. fully supplied, installed and connected:				
		i) 25 mm²	ea	2		
		ii) 10 mm²	ea	8		
		iii) 6 mm²	ea	4		
4.2.4	35563-BCN-ZZZ-00-DR-ELC-311-TS-001	Sleeves:				
		a) Supply and install the following HDPE corrugated flexible sleeves in trenches with a maximum depth not to exceed 1m:				
		NEXTUBE TYPE (bends and excavation measured elsewhere)				
		i) 110mm dia.	m	20		
		ii) 50mm dia.	m	20		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
4.2.5	35563-BCN-ZZZ-00-DR-ELC-311-TS-001	Excavations, Imported Material and Backfilling: *The contractor to supply all equipment and carry out all tasks to excavate, import material, compaction etc as necessary as per drawings and specifications.* *Excavation in earth not exceeding 2m deep including risk of collapse of excavations, keeping excavations free from water, setting aside excavated material and later refilling.* LV cable trenches 750 x 400mm: a) Soft Excavation (for classification refer to SANS 1200D: Earthworks, paragraph 3.1) b) Intermediate Excavation (for classification refer to SABS 1200D: Earthworks, paragraph 3.1) c) Hard rock Excavation (for classification refer to SABS 1200D: Earthworks, paragraph 3.1) d) Supply, import and install a sand bedding/blanket from fine river sand in trench - 300mm deep (150mm above and 150mm below the cable) e) Backfilling of trenches with excavated soil after cables have been laid and tested complete with compacting of backfilling, leveling-off of trenches and removing, carting away and dumping of surplus excavated material f) backfilling material to consist of Soilcrete ratio of 1:12 g) Supply and Install danger tape	 m^3 m^3 m^3 m^2 m^3 m^3 m	 81 20 20 35 45 45 270		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
4.3	**ELSPEC-02-LVDBMCC**	**Distribution Boards and Motor Control Centres** *The board must be priced seperately from the equipment listed below, if tenderers price the boards as only one item, tenderers will not be evaluated.*				
4.3.1	35563-BCN-ZZZ-00-DR-ELC-312-TS-004	Supply and install the following new 1.6mm Stainless steel distribution boards/ Motor Control Centres complete with sheet metal back tray, front panel, face plate with panel key catch at the tops, doors with metal-t hinges, padlockable lever lock handles, equipment rails, terminations plates, name plate holders on face plate, busbars, non removeable laminated legend card and prepare for and including all internal wiring for the equipment listed below plus 30% spare space. Colours of the different sections must be: Normal-Orange, Emergency-red, Uninteruptable Power-violet. **Shop drawings to be approved before ordering.**				
		a) **15kW** Surface mounted/Weatherproof MCC's complete with the following equipment mounted and operational:	No.	1		
		i) 63A 3PH 6kA changeover with panel mount rotary handle-GA063SAET6 63A changeover switch CW GAX61CB door mount handle and extention shaft	No.	1		
		ii) 15kW 3PH 6kA motor protection circuit breaker with Aux 1x N/O contacts and 1x N/C contacts - SM1R3200 15kW motor protection circuit breaker CW SM1X1211 clip on 1 NO 1 NC Aux contact CW 1x SM1X18200R panel mount door rotary handle with shaft	No.	2		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		iii) 15kW 3PH Variable Speed Drive Delta C2000-120.5KW VFD Three Phase VFD110C4EA-21	No.	2		
		iv) 10A 3P 6kA MCB-CBI	No.	1		
		v) 10A 2P 6kA MCB-CBI	No.	1		
		vi) 2A 24VDC DVPPS02 power supply	No.	1		
		vii) 63A 1P+N 30mA Earth leakage 6kA-CBI	No.	1		
		viii) 10A 1P 6kA MCB-CBI	No.	1		
		ix) 20A 1P 6kA MCB-CBI	No.	1		
		x) TYPE 1+2 CIPROTEC S/A PSC4-12.5 / 400 TT 3PH+N S/A	No.	1		
		xi) 60/5A CL1 CT'S-ASK31.3 7039 60/A CL1 current transformers	No.	5		
		xii) 0-60A max demand ammeters - 96 X 96 ERBC05A9/63 max demand ammeter with selector switch	No.	2		
		xiii) 96 X 96 BEHCA/9 running hour meter	No.	2		
		xiv) 6A fuses and holders - 420006 10 x 35mm gG 6A fuses and 6 X 485101 32A 10 X 38mm PMX fuse holders	No.	10		
		xv) Panel mount indicator LED lights - 22mm dia AD22-22VM pilot lights (red, yellow, blue)	No.	9		
		xvi) PM2210 Easylogic power meter	No.	1		
		xvii) EE3RMH1 ESTOP complete with LPX AU113 label ring	No.	2		
		xviii) AS218RX-A 8DI / 6DO / 2AI / 2AO	No.	1		
		xix) AS-PS02 DELTA POWER SUPPLY	No.	1		
		xx) DELTA INDUSTRIAL ETHERNET	No.	1		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		xxi) DELTA DOP 107 7inch TOUCH HMI	No.	1		
		xxii) Auto/off/manual spring return selector switch complete - LPC S233	No.	2		
		xxiii) Copper busbars, wiring ducting, labelling and terminations, all included	No.	1		
		b) Locks:				
		i) Supply and installation of No. 2 locks	No.	5		
4.4	**ELSPEC-04-LVLUM**	**Lighting and Small Power Light Fittings**				
4.4.1	35563-BCN-ZZZ-00-DR-ELC-311-TS-003	Supply and install the following light fittings as per schedule type (samples of light fittings must be approved by the engineer):				
		a) Type A-24W 5FT weatherproof channel LED similar to Synerji	No.	2		
		b) Type B-15W Weatherproof bulkheadd LED Similar to Beka Series 30	No.	4		
		c) Type C-40W streetlight LED luminaire similar to Genlux SL1	No.	8		
		d) 6m Mounting height pole, planted type, complete with brackets for type C luminaire mounting, complete with 5A 1P 6KA MCB etc. similar to Beka GRP pole including single spigot	No.	4		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
4.5 4.5.1	**ELSPEC-05-LVSPP** 35563-BCN-ZZZ-00-DR-ELC-311-TS-002	**Small Power Points** Supply and install the following equipment necessary to leave in a working order as per specification of all electrical outlets: *Contractors to allow for all off-cutts, screws, couplings, bushes, etc. not measured.* a) Light Switches: *Switch complete with cover plate (surround) fixed onto flush or surface mounted outlet box.* i) 16A rotary weatherproof light switch ii) 16A Day night switch mounted inside clear lid outlet box b) Switched Socket Outlets: *Switched socket outlets etc. complete with cover plate(surround) fixed onto flush or surface mounted outlet box.* i) Wall mount combo type A: Crabtree range outlets: 1 X 16A SSO normal white + SW, 2 X 16A SANS 164-2 normal white + SW white mounted inside PSO2 stealth IP65 box complete ii) Surface mount Industrial Appliance Inlet: 63A 3P+N+E IP66 complete with protection Cap. Wired to MCC Change over via 2m x 16mm SQ 4C+E conductors c) Isolators and Power Outlets: *Isolator outlets etc. complete with cover plate (surround) fixed onto flush or surface mounted outlet box.* i) 60A Triple pole three phase, complete with PS02 stealth box	 No. No. No. No. No.	 2 1 2 2 2		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		d) Cable Trays and Wiring Ducting:				
		Steel wiring channel complete with cover plates, fixing to structure or fixed to walls or concrete surfaces to include suspension rods etc. to make complete.				
		i) 150mm wide wire mesh cable tray heavy duty	m	20		
		ii) Horizontal elbow	No.	2		
		iii) T-pieces	No.	2		
		iv) Crossovers	No.	2		
		v) internal/external riser and drop	No.	2		
		vi) wall mounting P2000 channels (200mm)	No.	20		
		e) Conduit:				
		Conduit placed in position for casting into concrete slabs, surface beds, screeds, for building into brickwork, surface mounted on brick walls and fixed in ceiling voids and dry wall partitioning.				
		i) 20mm diameter Galvanised	m	50		
		ii) 25mm diameter Galvanised	m	25		
		f) Conduit Boxes and Fittings:				
		Placed in position for casting into concrete, building or chased into brickwork, flush or surface mounted.				
		i) Back/side entry 50mm round outlet box (average 1 to 4 way)	No.	10		
		ii) 100x50x50mm wall outlet box	No.	2		
		iii) 100x100x50mm wall outlet box	No.	2		
		iv) 100x100x50mm Extension box	No.	2		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		g) PVC Insulated Conductors:				
		PVC insulated stranded copper conductors drawn into conduits or wire ways etc.				
		i) 2.5 mm² Red & Black	m	100		
		ii) 4 mm² Red & Black	m	100		
		h) Bare Copper Earth Conductors:				
		Bare stranded copper earth conductors drawn into conduit or wire ways.				
		i) 2.5 mm²	m	100		
		ii) 4 mm²	m	100		
		i) Bonding and Earthing:				
		The contractors shall supply and install the following complete:				
		i) Bonding of all pipework via 6mm Earth cable from the earthing busbar to the pipework complete with terminations, lugs, screws etc.	No.	1		
		ii) Supply and install Lightning protection earth electrode and down conductor points complete to obtain a earth resistance of less than 1Ohm	No.	4		
		j) General:				
		i) Electrical spares per installation	No.	1		
		ii) Operation and maintenance manuals including circuit diagrams (3 sets) per installation measured under Schedule 8	No.	1		
		iii) All items and labour necessary to complete test and commission the complete electrical installation including the issuing of all relevant test certificates and the certificate of compliance	No.	1		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		k) Testing:				
		i) Allow for testing and commisioning of complete electrical installation and issueing of Certificate Of Compliance (COC) by an accredited person in terms of the newest electrical act for each distribution board	No.	1		
		ii) Allow for full commissioning per installation	No.	1		
4.6	**ELSPEC-07-LVCI**	**Control Equipment and Instrumentation**				
4.6.1	35563-BCN-ZZZ-00-DR-ELC-311-TS-002	The contractor is to supply, deliver, install and commission the following Control Equipment and Instrumentation:				
		a) Pressure Switch/Sensors:				
		i) HUBA TYPE 528 0-16BAR 4-20mA IP67 transmitter sensor	No.	2		
		b) Flow Switch/Sensors:				
		The supply and installation of Flow Switches installed in steel pipe.The rate shall include for reduction of pipe work where required.				
		i) Type Wika FSD4 with contract and 4-20mA output complete with M12 connection cables etc. Flow Switch	No.	1		
		c) Level Transmitter Sumps:				
		i) EM 10-30VDC 600mm-8000mm ultrasonic level sensor complete with 4-20mA, PNP, N/O, N/C output with M12 plug and cable and mounting bracket similar to M30 UT5L/G6-1ESY	No.	1		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		d) Termination, Cable and Wiring Numbers:				
		i) Allow under this item for wire, cable and termination numbering not allowed for elsewhere per MCC	No.	1		
		e) Drawings:				
		i) Work drawings of all MCC's and equipment for approval by the Eng.	-	-	Sum	
		ii) The supply of As-build drawings in electronic format (Autocad) DXF files, amount is per installation	-	-	Sum	
4.7	**ELSPEC-08-GENSET**	**Generator** The Contractor to supply, deliver and install complete PV system with battery backup, modules, etc. complete in working order.				
4.7.1		Generator Installation:				
		a) Supply and install silent canopy standby generator set complete with set mounted integrated AMF and ATS Control Panel, deep sea AMF plc, battery charger, water jacket heater, electric fuel filling pump, base mount fuel tank (for 12 hour operation) and Sync panel. All offloading requirements to be included:				
		i) 60 kVA prime power with onboard AMF and ATS panel wired to DB	-	-		Rate Only
4.7.2		Generator sundries:				
		a) Re-inforced Concrete Plinth for above generator, complete:				
		i) Supply and Install generator earthing below concrete base plinth. The earth mat shall compromise of 16mm SQ copper conductor with a total length of 20m and 4 x 1500mm SABS earth rods. Earthmat to be installed 500mm below base level and this amount shall include for the excavation of the earthmat and testing of the earth mat.	-	-		Rate Only
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		ii) Co-ordination by the specialist generator supplier/installer with the electrical contractor for the interconnection of the standby generator and the Main LV panel with the changeover.	-	-		Rate Only
		iii) All danger signage and painting	-	-		Rate Only
		iv) Training of the user department's staff in the operation of the generator and pumps	No.	3		
		v) 12 Months guarantee and maintenance on the generator system from Practical Completion	-	-	Sum	
4.7.3		Testing:				
		a) Allow for testing, balancing and commissioning of the complete electrical installation in the following areas:				
		i) Diesel for testing after commisioning	l	50		
		ii) Complete testing and commissioning of the generator	-	-	Sum	
4.7.4		Drawings:				
		a) Submit to the Consulting Engineer three (3) sets of the Manufacturer's drawings each for approval of the distribution boards, complete	No.	3		
4.7.5		Submit to the Consulting Engineer three (3) complete sets of Operation and Maintenance Manuals	No.	3		
4.8		**Pepper Spray Alarm Panel**				
4.8.1		The Contractor is to supply and install a pepper spray alarm panel inside the pump station complete:				
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		a) Surface mounted Skunk pepper spray master alarm panel with battery backup, 2 x PIR sensors, door magnet, sound bomb, receiver and 2 x remotes, power supply and led surface mounted indicator light outside building. Unit complete with wiring to siren and Led indicator light, spare pepper spray canister, etc. to be in working order	-	-	Sum	
4.9		**GSM Remote Relays**				
4.9.1		The Contractor is to supply and install a GSM / LTE alarm and fence remote alarm system:				
		a) GSM commander LITE GC-0321, complete with plug in power supply mounted inside electric fence energizer DB. The commander to monitor the electric fence active/non-active, and alarm outputs as well as the Skunk spray active / non-active and alarm outputs and a message to be sent to the municipality when alarms are activated	-	-	Sum	
		b) 4G LTE wifi router 50Mb/150Mb with ethernet ports	-	-	Sum	
4.10		**Sundries**				
4.10.1		Allow for testing and commisioning of complete electric fence system and providing a COC	-	-	Sum	
4.10.2		Provision for as built drawings, manuals and operative training	-	-	Sum	
4.10.3		Allow for registered data sim cards to be installed in router and GSM Commanders preloaded with R 1000,00 vouchers for communications	-	-	Sum	
	TOTAL OF SECTION 4 CARRIED TO SUMMARY					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
5		**SECTION 5: GRAVITY SEWER PIPELINES**				
5.1	**SANS 1200 C**	**Site Clearance**				
5.1.1	PSC 8.2.1	Clear and grub areas	ha	0.1		
5.1.2	PSC 8.2.12	Take down and re-erect existing fencing	m	10		
5.2	**SANS 1200 DB**	**Earthworks (Pipe Trenches)**				
5.2.1	PSDB 8.3.2	Excavate in all materials for trenches, backfill, compact and dispose of surplus material:				
		a) Pipes up to 700 mm dia for depths:				
		i) up to 1,0m	m³	-		Rate Only
		ii) from 1,01m up to 2,0m	m³	89		
		iii) from 2,01m up to 3,0m	m³	9		
		iv) from 3,01m up to 4,0m	m³	128		
		v) from 4,01m up to 5,0m	m³	-		Rate Only
5.2.2	PSDB 8.3.2	Extra over item 5.2.1 above for:				
		a) Hard rock excavation	m³	10		
5.2.3	8.3.3	Existing services that intersect or adjoin a pipe trench (protection of underground services):				
		a) Services that intersect a trench	No.	5		
		b) Services that adjoin a trench	m	5		
5.3	**SANS 1200 LD**	**Sewers**				
5.3.1	8.2.1	Supply, lay, joint, bed, test and backfill uPVC "Durodrain" or similar approved solid wall HD class 34 pipeline:				
		a) 160mm dia.	m	120		
		b) 200mm dia.	m	13		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
5.3.2	8.2.3	Precast concrete manhole with sacrificial layer with SANS558 type 2A cover and frame: (as per dwg. no. 35563-BCN-ZZZ-00-DR-CIV-133-TS-002 & 35563-BCN-ZZZ-00-DR-CIV-133-TS-004)				
		a) DN 1000mm, complete as per drawings, for depths:				
		i) Depth to invert from 1,01m to 1,5m	No.	1		
		ii) Depth to invert from 1,51m to 2,0m	No.	1		
		iii) Depth to invert from 2,01m to 2,5m	No.	1		
		iv) Depth to invert from 2,51m to 3,0m	No.	-		Rate Only
		v) Depth to invert from 3.01m to 3,51m	No.	2		
		vi) Depth to invert from 3,51m to 4,0m	No.	1		
		vii) Depth to invert from 4,01m to 4,5m	No.	-		Rate Only
5.3.3	8.2.4	Extra over Item 5.3.2 for Backdrops, etc.				
		a) High inlet ramp type complete as per dwg. 35563-BCN-ZZZ-00-DR-CIV-133-TS-004	No.	-		Rate Only
		b) High inlet vertical drop type complete as per dwg. 35563-BCN-ZZZ-00-DR-CIV-133-TS-004	No.	1		
5.3.4	PSLD 8.2.11	Connection to existing manholes for depths:				
		a) Depth to invert up to 1,0m	No.	-		Rate Only
		b) Depth to invert from 1,01m to 1,5m	No.	1		
		c) Depth to invert from 1,51m to 2,0m	No.	-		Rate Only
		d) Depth to invert from 2,01m to 2,5m	No.	-		Rate Only
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
5.4	**SANS 1200 LB**	**Bedding for sewer pipes**				
5.4.1	8.2.2	Supply only of bedding by importation:				
		a) From commercial sources:				
		i) Selected granular material	m³	34		
		ii) Selected fill material	m³	21		
5.4.2		Underdrains: (where instructed by the Engineer; as per dwg. no. 35563-BCN-ZZZ-00-DR-CIV-133-TS-001, Detail U1)				
	PSME 8.3.3	a) 200mm thick, 19mm stone bedding placed in trench and compacted	m³	4		
	PSLB 8.2.7	b) Geotextile wrapping around the bedding (Bidim U24 or approved equivalent)	m²	54		
	TOTAL OF SECTION 5 CARRIED TO SUMMARY					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
6		**SECTION 6: SEWER RISING MAINS**				
6.1	**SANS 1200 C**	**Site Clearance**				
6.1.1	PSC 8.2.1	Clear and grub areas	ha	0.3		
6.1.2	PSC 8.2.12	Take down and re-erect existing fencing	m	10		
6.2	**SANS 1200 DB**	**Earthworks (Pipe Trenches)**				
6.2.1	PSDB 8.3.2	Excavate in all materials for trenches, backfill, compact and dispose of surplus material:				
		a) Pipes up to 700 mm dia for depths:				
		i) up to 1,0m	m³	165		
		ii) from 1,01m up to 2,0m	m³	629		
6.2.2	PSDB 8.3.2	Extra over item 6.2.1 above for:				
		a) Hard rock excavation	m³	50		
6.2.3	8.3.3	Existing services that intersect or adjoin a pipe trench (protection of underground services):				
		a) Services that intersect a trench	No.	5		
		b) Services that adjoin a trench	m	20		
6.3	**SANS 1200 L**	**Medium Pressure Pipelines**				
6.3.1	8.2.1	Supply, lay and bed on class B bedding, uPVC Class 9 pipeline complete with couplings, backfill and testing:				
		a) 160mm dia.	m	509		
6.3.2	8.2.1	Supply, lay and bed on class B bedding, HDPE PN10 pipeline complete with joint welding, backfill and testing:				
		a) 160mm dia.	m	424		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
6.3.3	8.2.2	Extra over item 6.3.1 for the supplying, laying, and bedding of uPVC specials complete with couplings, and testing:				
		a) 11.25° bends:				
		i) 160mm dia.	No.	3		
		b) 22.5° bends:				
		i) 160mm dia.	No.	1		
		c) 45° bends:				
		i) 160mm dia.	No.	-		Rate Only
		d) 90° bends:				
		i) 160mm dia.	No.	1		
6.3.4	8.2.2	Extra over item 6.3.2 for the supplying, laying, and bedding of HDPE specials complete with couplings, and testing:				
		a) 30° segmented bends:				
		i) 160mm dia.	No.	-		Rate Only
		b) 45° segmented bends:				
		i) 160mm dia.	No.	9		
		c) 90° segmented bends:				
		i) 160mm dia.	No.	-		Rate Only
6.3.5	8.2.2	Extra over item 6.3.1 - 6.3.2 for the supplying, laying, and bedding connections complete with couplings, and testing:				
		a) Viking Johnson flange adaptor				
		i) 160mm dia.	No.	2		
		b) Viking Johnson couplings				
		i) 160mm dia.	No.	4		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
6.3.6	8.2.3	Extra over items 6.3.1 - 6.3.2 for supplying, fixing and bedding of air release valves (Bermad Model C, Vent-O-Mat RGXII or equivalent), including vert. distance pieces:				
		a) Single:				
		i) 50mm air valve on pipes of varying sizes	No.	1		
6.3.7	PSL8.2.11	Anchor/thrust blocks and pedestals: (as per dwg. no. 35563-BCN-ZZZ-00-DR-CIV-133-TS-009)				
		a) Concrete:				
		i) Class 25/19 concrete	m³	19		
		b) Formwork:				
		i) Rough	m²	38		
		ii) Smooth	m²	-		Rate Only
		c) Reinforcement:				
		i) Mild steel	t	-		Rate Only
		ii) High tensile steel	t	2.000		
6.3.8	8.2.12	Encasing of pipes in concrete: (only on instruction from the Engineer)				
		a) Class 15/19 concrete	m³	-		Rate Only
		b) Class 20/19 concrete	m³	-		Rate Only
		c) Class 25/19 concrete	m³	5		
		d) Class 30/19 concrete	m³	-		Rate Only
6.3.9	8.2.13	DN 1500mm precast concrete manhole ring air valve chamber, complete as per dwg. no. 35563-BCN-ZZZ-00-DR-CIV-133-TS-006, including fittings and couplings, exculding items measured under Item 6.3.6	No.	1		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
6.3.10	8.2.13	DN 1500mm precast concrete manhole ring rising main outlet chamber, complete as per dwg. 35563-BCN-ZZZ-00-DR-CIV-133-TS-006	No.	1		
6.3.11	PSL8.2.17	Supply and install complete marker posts as per dwg. no. 35563-BCN-ZZZ-00-DR-CIV-133-TS-006:				
		a) Pipeline route markers	No.	15		
6.4	**SANS 1200 LB**	**Bedding for sewer rising mains**				
6.4.1	8.2.2	Supply only of bedding by importation:				
		a) From commercial sources:				
		i) Selected granular material	m³	237		
		ii) Selected fill material	m³	142		
6.4.2		Underdrains: (where instructed by the Engineer; as per dwg. 35563-BCN-ZZZ-00-DR-CIV-133-TS-001, Detail U1)				
	PSME 8.3.3	a) 200mm thick, 19mm stone bedding placed in trench and compacted	m³	12		
	PSLB 8.2.7	b) Geotextile wrapping around the bedding (Bidim U24 or approved equivalent)	m²	162		
6.5		**Pipe Supports at Stream Crossings**				
6.5.1		Construction of reinforced concrete pipe supports with pipe brackets, complete as per dwg. no. 35563-BCN-ZZZ-00-DR-CIV-133-TS-007 & 35563-BCN-ZZZ-00-DR-CIV-133-TS-008 (height varies between 800mm and 1500mm)	No.	8		
6.5.2		Extra over Item 6.5.1 for dowels into the rock bed, waterproofing and reno matresses, for pipe supports in watercourses, as per dwg. no. 35563-BCN-ZZZ-00-DR-CIV-133-TS-007	No.	4		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
6.5.3		Supply and installation of DN 250mmØ flanged, galvanised mild steel pipes onto new pipe supports, inlcuding bolting of flanges and fastening of pipes to pipe brackets, as per dwg. 35563-BCN-ZZZ-00-DR-CIV-133-TS-008:				
		a) 3m lengths	No.	4		
		a) 6m lengths	No.	2		
6.5.4		Encasing of daylighting pipes in concrete:				
		a) Class 25/19 concrete	m³	10		
6.5.5		Supply and installation of 300mm thick Reno mattress in double twist PVC-coated containers, with stone material sizes of between 75 and 200mm, in watercourses:				
		a) 3,0m wide sections	m²	60		
	TOTAL OF SECTION 6 CARRIED TO SUMMARY					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
7	**SASTT-TS-TT1**	**SECTION 7: SLIPLINING OF PIPELINES**				
		Installation, plugging and grouting of gravity sewer mains and sewer rising mains into sleeve pipes				
		Refer to dwg. no. 35563-BCN-ZZZ-00-DR-CIV-133-TS-005				
7.1	1.1	Install by sliplining, solid wall HDPE or uPVC liner pipes into sleeve pipes of up to 310mm inside diameter, plug ends, grout and test:				
		a) 160mm dia.	m	76		
7.2	1.3	Excavate pit for insertion of liner between manholes. Rate shall include all materials and labour required:				
		a) Depth to invert up to 2,0m	No.	-		Rate Only
		b) Depth to invert from 2,01m to 3,0m	No.	1		
		c) Depth to invert from 3,01m to 4,0m	No.	1		
		CCTV Surveys				
7.5		CCTV camera survey of pipelines after upgrade works, of all diameters, including any cleaning required	m	76		
	TOTAL OF SECTION 7 CARRIED TO SUMMARY					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
8		**SECTION 8: SEWER SUMP/WET WELL**				
8.1	**SANS 1200 D**	**Bulk Earthworks**				
8.1.1	8.3.3	Restricted excavation: a) Excavate for restricted foundations, footings and pipe trenches in all materials and use for backfill or embankment or dispose for the sewer sump including 2m working space	m^3	610		
8.1.2	8.3.2	Extra over item 8.1.1 above for: a) Hard rock	m^3	50		
8.1.3	8.3.4	Importation of material from commercial sources: a) G5/G6 natural gravel compacted to 95% MOD AASHTO	m^3	38		
		b) Rock Fill Pioneer layer (Max Stone Size: 150mm)	m^3	30		
8.2		**Testing**				
8.2.1		Allow for the execution of standard Modified AASHTO Density test to the entire satisfaction of the Agent by an approved institution on the site, including payment of all costs involved	m^2	150		
8.3		**Soil Poisoning**				
8.3.1		Approved weedkiller under floors, aprons, ramps, steps, paving, etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m^2	150		
8.4	**SANS 1200 G**	**Formwork**				
8.4.1	8.2.2	Smooth vertical formwork to: a) Walls	m^2	398		
		b) Foundation	m^2	25		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
8.5	**SANS 1200 G**	**Box out Holes / Form Voids**				
8.5.1	8.2.6	Box-out holes/ voids and grout in pipes up to 400 mm dia with puddle flanges in walls up to 350 mm thick	No.	3		
8.5.2	8.2.6	Box-out holes/voids manholes in RC slab up to 350 mm thick	No.	5		
8.6	**SANS 1200 G**	**Reinforcement**				
8.6.1	8.3.1	High-tensile steel bars in the following:				
		a) Complete for base	t	3.5		
		b) Complete for Walls	t	7.1		
8.7	**PSGA, SANS**	**Strength Concrete**				
8.7.1	**1200G** 8.4.3	Strength concrete Grade 15 MPa/19mm to:				
		a) Blinding 50mm thick to foundation	m^3	5		
		b) Sump floor: cast to fall	m^3	2		
8.7.2	8.4.3	Strength concrete 30 MPa/19mm with Sikaplast WT 160 to:				
		a) Foundation	m^3	32		
		b) Walls	m^3	42		
		c) Sump floor: cast to fall	m^3	3		
8.8	**SANS 1200 G**	**Unformed Surface Finishes**				
8.8.1	8.4.4	Steel floated finishes to:				
		a) Floor slab, horizontal	m^2	83		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
8.9	**SANS 1200 G**	**Construction Joints**				
8.9.1	8.5	Foundation to RC wall construction joint:				
		a) During Foundation Pour: Supply and install Sika Waterbar O-25 or equivalent during foundation pour and remove all loose material and cement paste to expose aggregates when concrete is set.	m	50		
		b) Before Wall Pour: Use Sikadur 32N epoxy before following concrete pour.	m	50		
		c) After Wall Installation: Install Sikadur Combiflex 250 SG on 50x50 HDPE corner fillets.	m	100		
8.9.2	8.5	RC wall construction joint:				
		a) During Foundation Pour: Remove all loose material and cement paste to expose aggregates when concrete is set.	m	6		
		b) Before Contunuing Wall Pour: Use Sikadur 32N epoxy before following concrete pour.	m	6		
		c) After Wall Installation: Install Sikadur Combiflex 160 SG on internal side of sump.	m	6		
8.9.3	8.5	RC wall to RC slab construction joint:				
		a) During Wall Pour: Remove all loose material and cement paste to expose aggregates when concrete is set.	m	20		
		b) Before RC Slab Pour: Use Sikadur 32N epoxy before following concrete pour.	m	20		
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
8.10	**SANS 1200 G**	**Waterproofing**				
8.10.1	8.5	Waterproofing the interior of the tank:				
		a) Surface Preparation: Waterproofing Surfaces must be sound, of sufficient strength, clean, dry and free of dirt, oil, grease and other contamination. Depending on the material the substrate must be primed or mechanically cleaned. Grinding may be necessary to level the surface. (Refer To Suppliers Specifications)	m^2	200		
		b) First Layer: Sealing inside of sump complete with 3mm SikaGuard 716 EPOCEM as per suppliers details	m^2	200		
		c) Second Layer: Sikaguard 63N Epoxy Coating as per suppliers details	m^2	200		
8.10.2	8.5	Waterproofing at penetrations:				
		a) Cast-in situ pipes: Sikaswel wrapped around pipe with 100mm cover both sides and Sikaflex Tank N 15mm thick	No.	3		
		b) Tie rod closures: Cork with Non-Shrink Grout and apply two layers of Sikalastic 152 100mm around penetration interior and exterior	-	-	Sum	
8.10.3	8.5	Waterproofing below foundation:				
		a) 250µm Polyethylene Damp Proof Membrane (DPM)	m^2	85		
8.10.4		Testing:				
		a) Test tank for water tightness	-	-	Sum	
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
8.11	**SANS 1200 G**	**Precast Concrete Elements**				
8.11.1	8.6	Precast concrete roof slabs:				
		a) High quality pre-stressed hollow core slabs 6,2m span x 1,2m wide x 150mm thick, with 7 x 5mm and 5 x 9.53mm strand wiring pattern, 2,5kN/m² live load capacity	No.	6		
8.12	**PB 8.2.1**	**Masonry**				
8.12.1		Brickwork:				
		a) Superstructure: 220 brick cavity wall with FBX above DPC with class I mortar, complete with hoop irons and joints where required	m²	7		
		b) Extra over brickwork: for face brickwork in stretcher bond	m²	7		
		c) Extra over brickwork: Brick-on-edge header course coping	m	-		Rate Only
		d) Ventilation: 220x156x45mm Concrete air bricks	No.	20		
		e) 2mm Galvanised Brick reinforcement every 4th course with additional at openings and below roof: 150mm wide built into brick walls with sufficient laps at end joints, angles and intersections	m	21		
8.13	**SANS 1200 G**	**Grouting**				
8.13.1	8.6	HD (Holding Down) bolts:				
		a) Dia 16 Grade 8.8 cast-in situ J-bolts (416mm long)	No.	12		
8.14	**SANS 1200 H**	**Structural Steelwork**				
8.14.1	8.3	Supply, fabrication and installation:				
	8.3.1	a) Preparation of detail shop drawings (SANS 1200 H 5.1.2 refers):				
		i) Catladder SS 316	-	-	Sum	
	Carried forward					

ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		ii) Manhole Covers	-	-	Sum	
	8.3.8	b) Manhole Covers, Frames and ladders:				
		i) Supply and install galvanised steel access cover and frame complete with locking mechanism	No.	1		
		ii) Supply and install stainless steel ladder including drilling, fixing and grouting (Refer to dwg. no. 35563-BCN-ZZZ-00-DR-CIV-133-TS-004)	No.	1		
	8.3.10	c) Non Destructive Testing (NDT):				
		i) X-Ray or Phased Array Ultrasonic Testing of welds if required by the engineer (SANS 1200 H 7.3b refers)	No.	4		
	8.3.11	d) Corrosion Protection:				
		i) Corrosion Protection to All External Steel Elements for Environmental Class C4 Industrial for a 5 Year Maintenance Period in accordance with ISO 12944 Part 2	m^2	20		
	TOTAL OF SECTION 8 CARRIED TO SUMMARY					

NALA LOCAL MUNICIPALITY

CONTRACT NO.

NLM/TS/006/2025-26

CONSTRUCTION OF BOTHARNIA 9 PUMP STATION IN KGOTSONG

SECTION C2.3

SUMMARY OF SCHEDULES

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

SCHEDULE OF QUANTITIES

SECTION 1	:	PRELIMINARY & GENERAL	R	. . . . .
SECTION 2	:	PUMP STATION - CIVIL WORKS	R	. . . . .
SECTION 3	:	PUMP STATION - MECHANICAL WORKS	R	. . . . .
SECTION 4	:	PUMP STATION - ELECTRICAL WORKS	R	. . . . .
SECTION 5	:	GRAVITY SEWER PIPELINES	R	. . . . .
SECTION 6	:	SEWER RISING MAINS	R	. . . . .
SECTION 7	:	SLIPLINING OF PIPELINES	R	. . . . .
SECTION 8	:	SEWER SUMP/WET WELL	R	. . . . .

TOTAL OF SCHEDULE OF QUANTITIES **R** **. . . . . .**

CALCULATION OF TENDER SUM

TOTAL OF SCHEDULE OF QUANTITIES . . . . . R . . . . . .

CONTINGENCIES (10%)
The Sum provided here is under the sole control of the Principal Agent and may be deducted in whole or in part if not required . . . . . R . . . . . .

SUBTOTAL . . . . . R . . . . . .

VALUE-ADDED TAX (VAT)
The tenderer shall add 15% of the subtotal for value-added tax . . . . . R . . . . . .

TOTAL TENDER SUM **R** **. . . . . .**

NALA LOCAL MUNICIPALITY

CONTRACT NO.

NLM/TS/006/2025-26

CONSTRUCTION OF BOTHARNIA 9 PUMP STATION IN KGOTSONG

SECTION C2.4

BANKING DETAILS

NALA LOCAL MUNICIPALITY

CONTRACT NO.

NLM/TS/006/2025-26

CONSTRUCTION OF BOTHARNIA 9 PUMP STATION IN KGOTSONG

FINANCIAL REFERENCES

(a) BANK RATING

1. It is requisite that a bank rating be obtained, bearing an original stamp by the relevant bank.

2. Failure to complete the bank rating Form overleaf may invalidate the tender rating should be based on the highest contract value tendered for and the corresponding timeframe.

(b) FINANCIAL STATEMENTS

I/We agree, if required, to furnish an audited copy of the latest set of financial statements together with my/our Directors' and Auditors' report for consideration by the Employer.

(c) DETAILS OF COMPANY'S BANK

I/We hereby authorize the Employer/Engineer to approach all or any of the following banks for a reference:

DESCRIPTION OF BANK DETAIL	BANK DETAIL APPLICABLE TO COMPANY HEAD OFFICE	BANK DETAIL APPLICABLE TO THE SITE OF THE WORKS
Name of bank		
Branch name		
Branch Code		
Street Address		
Name of manager		
Telephone number	( )	( )
Account number		
Bank Rating		

…… ……..
SIGNATURE OF TENDERER: DATE:

DECLARATION BY BANK MANAGER

This is to certify that the Tenderer has sufficient good standing with this bank that he will, in my opinion, be financially able to complete a contract to the value as entered, by the Tenderer, in Form C1.1 over the specified duration, or such other duration as the Tenderer may offer. In addition, we confirm that, for the amount of the enquiry, the Tenderer is rated Code

……. ……..
SIGNATURE OF BANK MANAGER: DATE:

Place bank stamp here

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2