

WORK SCOPE PACKAGE 3 : HANKEY SEWER PUMP STATION (MECHANICAL AND ELECTRICAL)

COL	1	2	3	4	5	6	7	8
ITEM	DESCRIPTION / ACTIVITY	UNIT	TOTAL	SUPPLY, WORKS TEST, DELIVER		INSTALL, SITE TEST & COMMISSION		GRAND TOTAL
			QTY	RATE	AMOUNT	RATE	AMOUNT	
SECTION A	<u>PRELIMINARY AND GENERAL</u>							
A.	Allow for the following as described and called for :							
A.01	<u>Contractual Items</u>							
A.01.1	All conditions of contract	sum	1		0.00		0.00	0.00
A.01.2	Statutory & regulatory requirements	sum	1		0.00		0.00	0.00
A.01.3	Attendance of progress meetings as required	sum	1		0.00		0.00	0.00
A.01.4	All tests, inspections & drawings	sum	1		0.00		0.00	0.00
A.02	<u>Fixed Price Items</u>							
A.02.1	Erection of stores	sum	1		0.00		0.00	0.00
A.02.2	Establishment of communication	sum	1		0.00		0.00	0.00
A.02.3	Removal of site on completion	sum	1		0.00		0.00	0.00
A.03	<u>Variable Items</u>							
A.03.1	Variable w.r.t. Contract Value	sum	1		0.00		0.00	0.00
A.03.2	Variable w.r.t. Contract Period	sum	1		0.00		0.00	0.00
A.04	<u>Other requirements (specify)</u>							
A.04.1		sum	1		0.00		0.00	0.00
A.04.2		sum	1		0.00		0.00	0.00
A.04.3		sum	1		0.00		0.00	0.00
Total for section A - carried forward to "SUMMARY"								0.00
SECTION B	<u>DISTRIBUTION BOARDS</u>							
B.01	<u>Electrical DB's</u>							
	<u>All Board to have 30% spare space</u>							
B.01.1	<u>DB - Main Board - Control Panels & Switch Gear</u> <u>(Refer to Schematic Diagram, Drw. 2025-E-HC-001)</u>	no	1		0.00		0.00	0.00
B.01.2	Pump Control 1	no	1		0.00		0.00	0.00
B.01.3	Pump Control 2	no	1		0.00		0.00	0.00
Total for section B - carried forward to "SUMMARY"								0.00
SECTION C	<u>CABLES, WIRING & ACCESSORIES</u>							
C.2	<u>Allow for the following LV (1000V) cables (incl. Install/laying/bedding material and backfilling)</u> <u>All LV cables - PVC/PVC/SWA/PVC</u>							
C.2.1	<u>25 mm² x 4c (DB-Main)</u>							
C.2.1.1	Supply and Install/Lay	m	75		0.00		0.00	0.00
C.2.1.2	Terminate	no	2		0.00		0.00	0.00
C.2.2	<u>16 mm² x 4c (Pumps)</u>							
C.2.2.1	Supply and Install/Lay	m	30		0.00		0.00	0.00
C.2.2.2	Terminate	no	4		0.00		0.00	0.00
C.2.2	<u>4 mm² x 4c (Macerator)</u>							
C.2.2.1	Supply and Install/Lay	m	25		0.00		0.00	0.00
C.2.2.2	Terminate	no	2		0.00		0.00	0.00
C.3	<u>Wiring - PVC insulated copper wire of the following sizes:</u>							
C.3.1	6,0 mm ²	m	0					
C.3.2	4,0 mm ²	m	120		0.00		0.00	0.00
C.3.3	2,5 mm ²	m	320		0.00		0.00	0.00
C.3.4	1,5 mm ²	m	0					
C.4	<u>Draw wire</u>							
C.4.1	16 swg galvanised	m	125		0.00		0.00	0.00
C.5	<u>BCE - Bare Copper Earth Wire</u>							
C.07.3	70 mm ² supply and install	m	0					
C.07.4	70 mm ² terminate	no	0					
C.5.1	35 mm ² supply and install	m	0					
C.5.2	35 mm ² terminate	no	0					
C.07.5	25 mm ² supply and install	m	0					
C.07.6	25 mm ² terminate	no	0					
C.5.3	16 mm ² supply and install	m	105		0.00		0.00	0.00
C.5.4	16 mm ² terminate	no	6		0.00		0.00	0.00
C.5.7	6 mm ² supply and install	m	0					
C.5.8	6 mm ² terminate	no	0					
C.5.11	2,5 mm ² supply and install and terminate	m	132		0.00		0.00	0.00
Total for section C - carried forward to "SUMMARY"								0.00

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			QTY	RATE	AMOUNT	RATE	AMOUNT	
SECTION D	<u>CONDUIT, WIREWAYS & ACC. ELECTRICAL INSTALLATION</u>							
D.01	<u>SABS Approved PVC conduit, complete with all couplings, saddles etc. (On surface, build- and cast-in)</u>							
D.01.1	20 mm PVC Sprag	m	50		0.00		0.00	0.00
D.01.2	20 mm PVC	m	95		0.00		0.00	0.00
D.01.3	25 mm PVC	m	0					
D.02	<u>Outlet boxes</u>							
D.02.1	100 x 100 x 50 galvanised build/cast-in	no	4		0.00		0.00	0.00
D.02.2	100 x 100 x 50 galvanised on surface	no	0					
D.02.3	100 x 100 x 50 galvanised chased in	no	0					
D.02.4	100 x 50 x 50 galvanised build/cast-in	no	1		0.00		0.00	0.00
D.02.5	100 x 50 x 50 galvanised on surface	no	0					
D.02.6	100 x 50 x 50 galvanised chased-in	no	0					
D.02.7	Round PVC Box	no	9		0.00		0.00	0.00
D.03	<u>OTHER INSTALLATIONS INSTALLATION (Fire, Security ect)</u>							
	<u>SABS Approved PVC or Bosal conduit, complete with all couplings, saddles etc. (On surface, build- and cast-in)</u>							
D.03.1	20 mm dia. PVC	m	0					
D.03.2	25 mm dia PVC	m	75		0.00		0.00	0.00
D.03.3	20 mm PVC Sprag	m	0					
D.03.4	25 mm Bosal	m	0					
D.04	<u>Outlet boxes</u>							
D.04.1	100 x 100 x 50 galvanised build/cast-in	no	5		0.00		0.00	0.00
D.04.2	100 x 100 x 50 galvanised on surface	no	0					
D.04.3	100 x 100 x 50 galvanised chased in	no	0					
D.04.4	100 x 50 x 50 galvanised build/cast-in	no	0					
D.04.5	100 x 50 x 50 galvanised on surface	no	0					
D.04.6	100 x 50 x 50 galvanised chased-in	no	0					
D.04.7	Round PVC Box	no	15		0.00		0.00	0.00
Total for section D - carried forward to "SUMMARY"								0.00
SECTION E	<u>SWITCHES AND SOCKET OUTLETS</u>							
E.01	<u>Light switches</u>							
E.01.1	16 A 1 Lever 1 way fitted with cover plate	no	0					
E.01.2	16 A 2 Lever 1 way fitted with cover plate	no	1		0.00		0.00	0.00
E.01.3	16 A 3 Lever 1 way fitted with cover plate	no	0					
E.01.4	16 A 1 Lever 2 way fitted with cover plate	no	0					
E.01.5	16 A 2 Lever 2 way fitted with cover plate	no	0					
E.01.6	16 A 3 Lever 2 way fitted with cover plate	no	0					
E.01.7	16 A 4 Lever 2 way fitted with cover plate	no	0					
E.01.8	16A 1 Lever 1 way fitted with cover plate and neon light	no	0					
E.01.9	16A 1 Lever 1 way fitted with cover plate and 800W dimmer	no	0					
E.02	<u>Socket outlets</u>							
E.02.1	16 A SSO fitted with cover plate (with 1 x 164.2)	no	4		0.00		0.00	0.00
E.02.2	16 A SSO Dedicated fitted with cover plate	no	0					
E.02.3	16 A double SSO fitted with cover plate	no	0					
E.02.4	16 A SSO Normal on Power Skirting	no	0					
E.02.5	16 A SSO Dedicated on Power Skirting	no	0					
E.02.6	3 Pin Module (SANS 164-2) on Power Skirting	no	0					
E.02.7	5 A SSO on round box	no	8		0.00		0.00	0.00
E.02.8	32A Three Phase	no	0					
E.03	<u>Provision for other services</u>							
E.03.1	Telephone RJ11 outlet mounted to power skirting complete with cov	no	0					
E.03.2	Data RJ45 outlet mounted to power skirting complete with cover plat	no	0					
E.03.3	Cover plate Tel on power skirting with outlet	no	0					
E.04	<u>Isolators</u>							
E.04.1	20 A Two pole in weather proof box to feed equipment	no	2		0.00		0.00	0.00
E.04.2	20 A Triple pole in weather proof box to feed equipment	no	1		0.00		0.00	0.00
E.04.3	60 A Triple pole in weather proof box to feed equipment	no	0					
E.04.4	80 A Triple pole in weather proof box to feed equipment	no	0					
Total for section E - carried forward to "SUMMARY"								0.00

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SECTION F	LUMINAIRES							
F.01	<u>Luminaires</u> Allow for a 3m cabtyre and 5A plugtop to all recessed lights							
F.01.1	Type A : Recessed 600x600mm LED Panels	no	0					
F.01.2	Type A : With Battery Backup	no	0					
F.01.3	Type B : Recessed 12W 60Deg LED Downlighter	no	0					
F.01.4	Type B : With Battery Backup	no	0					
F.01.5	Type C : Vapour Proof Flourescent - 2x36W	no	4		0.00		0.00	0.00
F.01.6	Type D : 15W Floodlight	no	4		0.00		0.00	0.00
F.01.7	Type D : 8m Mount Hight Galvanised Pole	no	0					
F.01.8	Type E : LED High Bay (150W) Wide Beam	no	0					
F.01.9	Type G : LED Strips in 5m lengths of Aluminium extrusion with covers IP 67 per 5 meter length	no	0					
F.01.10	Type G : LED Striplight Driver (IP65)	no	0					
F.01.11	IP65 Bulkhead	no	0					
F.02	<u>Photocell</u>							
F.02.1	Type P photocell in cheese bulkhead	no	1		0.00		0.00	0.00
F.03	<u>Exit Lights</u>							
F.03.1	Ceiling mounted double sided self contained battery exit sign	no	0					
Total for section F - carried forward to "SUMMARY"								0.00
SECTION G	MISCELLANEOUS							
G.01	<u>Power Skirting</u>							
G.01.1	PC03 Two Tier Power skirting c/w end stops & duct dividers-light grey or as spec'd	m	0					
G.01.2	PC06 3 x P9000 in ceiling void for power and tel/data	m	0					
G.01.3	P2000 Galvanized trunking	m	5		0.00		0.00	0.00
G.01.4	Perforated Medium Duty Cable Tray 229mm Wide	m	0					
G.01.5	Perforated Medium Duty Cable Tray 76mm Wide	m	0					
G.01.6	Power Pole	m	0					
G.02	<u>Earthing</u>							
G.02.1	Earth resistivity test to SABS	no	1		0.00		0.00	0.00
G.02.2	Earthing as required at each DB to achieve max 1 Ohm	no	1		0.00		0.00	0.00
G.02.3	Testing and commissioning of earthing installation	no	1		0.00		0.00	0.00
G.03	<u>Occupancy Sensors</u>							
G.03.1	OS1 : Ceiling Mounted PIR and Sound	no	2		0.00		0.00	0.00
G.04	<u>Intruder Alarm - (Refer to Electrical Specifications : Section E1)</u>							
G.04.1	PIR Sensor	no	2		0.00		0.00	0.00
G.04.2	Industrial door sensor	no	2		0.00		0.00	0.00
G.04.3	Keypad	no	1		0.00		0.00	0.00
G.04.4	Control Panel with 9V Battery back-up	no	1		0.00		0.00	0.00
G.05	<u>Telemetry (Refer to Electrical Specifications : Section E2)</u>							
G.05.1	Flow Sensor - Pickup only meter already installed	no	2		0.00		0.00	0.00
G.05.2	Status of power supply - pickup only	no	2		0.00		0.00	0.00
G.05.3	Ultrasonic meter - supply and install	no	1		0.00		0.00	0.00
G.05.4	Status of instuder alarm	no	1		0.00		0.00	0.00
G.05.5	Status of generator - pickup from generator controller	no	1		0.00		0.00	0.00
G.05.6	Status of diesel pump - pickup from generator controller	no	1		0.00		0.00	0.00
G.05.7	Status of macerator - pickup from controller	no	1		0.00		0.00	0.00
G.06	<u>Back-up Diesel Generator (Refer to Electrical Specifications : Section F)</u>							
G.06.1	10.0 kV Back-up diesel generator as per specification	no	1		0.00		0.00	0.00
Total for section G - carried forward to "SUMMARY"								0.00
SECTION H	EXCAVATION AND SLEEVES							
H.01	<u>Excavation of cable trench including backfill and compacting (see details)</u>							
H.01.1	Soft, hand pickable soil	m	100		0.00		0.00	0.00
H.01.2	Intermediate soil requiring the use of pneumatic tools	m	0					
H.01.3	Hard rock requiring blasting	m	0					
H.02	<u>Sleeves</u>							
H.02.1	110 mm dia PVC sleeve	m	100		0.00		0.00	0.00
H.02.2	110 mm dia PVC slow bend	no	4		0.00		0.00	0.00
H.02.3	75 mm dia PVC sleeve	m	0					
H.02.4	75 mm dia PVC slow bend	no	0					
H.02.5	50 mm dia PVC sleeve	m	25		0.00		0.00	0.00
H.02.6	50 mm dia PVC slow bend	no	2		0.00		0.00	0.00
H.03	<u>Miscellaneous</u>							
H.03.1	Cable marker tape 320 mm wide	m	125		0.00		0.00	0.00
H.03.2	Cable route markers	no	5		0.00		0.00	0.00
H.03.3	Concrete slabs over MV Cable	m	0					
Total for section H - carried forward to "SUMMARY"								0.00

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			QTY	RATE	AMOUNT	RATE	AMOUNT	
SECTION I	<u>MECHANICAL EQUIPMENT</u> (Refer to Mechanical Specifications : Section G4.0) Self Priming waste water pumps of the VS series capable of solids up to 63.5mm , have a 5 year warranty, Make/ Model complete on galvanised slide rail base, balanced with belt drives and electric motor on raised galvanised steel platform.							
I.02	12.15 l/s @ 44m head [NPSH = 4,79m]							
I.02.1	Suction Flange [16bar]: 100mm	no	2		0.00		0.00	0.00
I.02.2	Delivery Flange [16 Bar]: 100mm	no	2		0.00		0.00	0.00
I.03	Supply and Install a 30kVA [23kW], 1750 rpm. Diesel engine to direct drive Pump No3. (The Diesel engine shall have a separate Control panel allowed for on the LV Switch-board for Control and indication of the Diesel engine). (Refer to Mechanical Specifications : Section G3.0)							
I.03.1	12.15 l/s @ 44m head [NPSH = 4,79m]							
I.03.2	Suction Flange [16bar]: 100mm	no	1		0.00		0.00	0.00
I.03.3	Delivery Flange [16 Bar]: 100mm	no	1		0.00		0.00	0.00
I.03.4	200 ltr welded steel fuel tank and all accessories	no	1		0.00		0.00	0.00
I.03.5	Allow for engine exhaust connection	no	1		0.00		0.00	0.00
I.04	Anti-Corrosive Direct Drive Single Inlet Centrifugal Fan c/w 200 dia uPVC Class 4 duct and air grilles in PVC. (Refer to Mechanical Specifications : Section G1.0)							
I.04.1	Duty: 0.225m3/s @ 200Pa 0.35kW, 230V, 1 Ph	no	1		0.00		0.00	0.00
I.04.2	200mm uPVC Class 4 pipe	no	6		0.00		0.00	0.00
I.04.3	200mm uPVC Class 4 - end cap	no	1		0.00		0.00	0.00
I.04.4	200 x 120 mm cut in slots	no	4		0.00		0.00	0.00
I.04.5	450 x 600 mm Galvanised weather louvre c/w insect mesh screen	no	1		0.00		0.00	0.00
I.04.6	Stainless Steel Flange and duct bend c/w insect mesh screen	no	1		0.00		0.00	0.00
I.04.7	5.0kg CO ² extinguisher in Fibre glass housing c/w signage, with CoC certificate.	no	1		0.00		0.00	0.00
Total for section I - carried forward to "SUMMARY"								0.00
SECTION J	<u>PROVISIONAL SUM ALLOWANCES</u>							
J.01	<u>Allowances</u>							
J.01.1	For building of electrical and communications manholes	P.Sum						15 000.00
J.01.2	For additional earthing if required	P.Sum						10 000.00
J.01.3	Lightning protection	P.Sum						50 000.00
J.01.4	Allowance for mechanical installation	P.Sum						15 000.00
J.01.5	Contingency sum	P.Sum						35 000.00
Total for section I - carried forward to "SUMMARY"								125 000.00