

PART 4:
ELECTRICAL WORKS

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item	Reference	Description	Unit	Qty	Rate	Amount
1		<u>SCHEDULE NO. 1: PRELIMINARY AND GENERAL</u>				
1,1	PE3.5 & PE2.4	OCCUPATIONAL HEALTH & SAFETY Specific to Electrical Works & Temporary Works				
1,2	PE2.7	TRAINING OF JOBURG WATER STAFF (i) Generator plant (ii) VSD, Station Control Unit & HMI (iii) MV Switchboard (iv) Pumpset and valves	Sum Sum Sum Sum	1 1 1 1		
1,3	PE4	INSPECTIONS AND MAINTENANCE DURING GUARANTEE PERIOD <i>Quarterly, 12 months, or as indicated by contract</i>				
	PE8.20	(i) Generator plant	Sum	1		
	PE9.14	(ii) VSD, Station Control Unit & HMI	Sum	1		
	PE4	(iii) MV Switchboard	Sum	1		
1,4		RECORD DOCUMENTATION Marked-up drawings Final drawings (as-installed) Testing records Operating & maintenance manuals & instructions	Sum Sum Sum Sum	1 1 1 1		
SCHEDULE NO. 1: TOTAL CARRIED TO SUMMARY OF SCHEDULES						

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item	Reference	Description	Unit	Qty	Rate	Amount
2		SCHEDULE NO. 2: VARIABLE SPEED DRIVES				
2,1	PE9	VARIABLE SPEED DRIVES (VSD) 160kW (400V input voltage) rated VSD, inclusive of all equipment and enclosures, 4 Off	Sum	1		
2,2	PFM	TRANSDUCERS				
	PE9	<i>Supply, delivery, installation and termination</i>				
		(i) Delivery pressure transducers, 4-20mA output	Sum	2		
		(ii) Suction pressure transducers, 4-20mA output	Sum	1		
2,3	PE12	CABLES				
		<i>Supply, delivery, installation and termination</i>				
		(i) Low Voltage - Switchboard to VSD units	Sum	1		
		(ii) Low Voltage - VSD units to pumpsets	Sum	1		
		(iii) Low Voltage - Control & Instrumentation	Sum	1		
		(iv) Network/Communication	Sum	1		
2,4	PE17	EARTH CONTINUITY CONDUCTOR				
		<i>Supply, delivery, installation and termination</i>				
		(i) Low Voltage - Switchboard to VSD units	Sum	1		
		(ii) Low Voltage - VSD units to pumpsets	Sum	1		
		REFURBISHMENT OF HECTOR NORRIS PUMP STATION	Sum	1		
2,5	PE3.7	TESTING & COMMISSIONING				
		(i) Factory acceptance testing	Sum	1		
		(ii) Site acceptance testing	Sum	1		
		(iii) Temporary commissioning	Sum	1		
		(iv) Final commissioning	Sum	1		
2,6	PE18	TEMPORARY WORKS (ALL STAGES)				
		(i) Design of all stages of temporary installations	Sum	1		
		(ii) Implementation of temporary installations	Sum	1		
2,7	PE2.9	RETURN TO CLIENT STORES: EXISTING EQUIPMENT Removal, transport and off-loading of obsolete existing VSD equipment and cabling to the Client's Glenvista Depot, cnr. Van Beeck & Rolene street, Glenvista.	sum	1		
2,8	PE3.8	CERTIFICATES OF COMPLIANCE				
		(i) Temporary certificates	sum	1		
		(ii) Existing works	sum	1		
		(iii) New installation	sum	1		
SCHEDULE NO. 2: TOTAL CARRIED TO SUMMARY OF SCHEDULES						

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item	Reference	Description	Unit	Qty	Rate	Amount
3		SCHEDULE NO. 3: STATION CONTROL UNIT				
3,1	PE10	STATION CONTROL UNIT Station Control Unit, inclusive of all equipment and enclosure, 1 Off <i>Including Human Machine Interface system</i>	Sum	1		
3,2	PE12	CABLES <i>Supply, delivery, installation and termination</i> <i>All points and sensors</i> Low Voltage - Switchboard to SCU panel Low Voltage - Control & Instrumentation Network/Communication	Sum Sum Sum	1 1 1		
3,3	PE17	EARTH CONTINUITY CONDUCTOR <i>Supply, delivery, installation and termination</i> Low Voltage - Switchboard to SCU panel Low Voltage - SCU panel to VSD units Low Voltage - Control & Instrumentation	Sum Sum Sum	1 1 1		
3,4	PE3.7	TESTING & COMMISSIONING (i) Factory acceptance testing (ii) Site acceptance testing (iii) Temporary commissioning (iv) Final commissioning	Sum Sum Sum Sum	1 1 1 1		
3,5	PE18	TEMPORARY WORKS (ALL STAGES) (i) Design of all stages of temporary installations (ii) Implementation of temporary installations	Sum Sum	1 1		
3,6	PE2.9	RETURN TO CLIENT STORES: EXISTING EQUIPMENT Removal, transport and off-loading of obsolete existing PLC equipment and cabling to the Client's Glenvista Depot, cnr. Van Beeck & Rolene street, Glenvista.	Sum	1		
3,7	PE3.8	CERTIFICATES OF COMPLIANCE (i) Temporary certificates (ii) Existing works (iii) New installation	sum sum sum	1 1 1		
SCHEDULE NO. 3: TOTAL CARRIED TO SUMMARY OF SCHEDULES						

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item	Reference	Description	Unit	Qty	Rate	Amount
4		SCHEDULE NO. 4: GENERATOR PLANT				
4,1	PE8	GENERATORS 500kVA prime power, 400V 3-phase generators, including controller, on-board fuel tank, all equipment and enclosure & mounting skid, 2 Off	Sum	1		
4,2	PE8	GENERATOR CONTROL UNIT Generator control unit including switchover, duty monitoring, synchronization and control signalling, all equipment and enclosure	Sum	1		
4,3	PE8	FUEL SUPPLY SYSTEM Including fuel storage, pipework, control valves and filling pump	Sum	1		
4,4	PE12	CABLES <i>Supply, delivery, installation and termination</i> <i>All points, control signals and sensors</i> (i) Low Voltage - Generators to GCU to switchboard (ii) Low Voltage - Control & Instrumentation (iii) Network/Communication	Sum Sum Sum	1 1 1		
4,5	PE17	EARTH CONTINUITY CONDUCTOR <i>Supply, delivery, installation and termination</i> (i) Low Voltage - Generators to GCU to switchboard (ii) Low Voltage - Control & Instrumentation	Sum Sum	1 1		
4,6		GENERATOR ROOM WORKS <i>Establish new generator room in existing building</i>				
4.6.1		Masonry works (i) New load-bearing dividing wall, all ancillary works (ii) Leakproof bund walling around generators and fuel tanks, all coating including	Sum Sum	1 1		
4.6.2		Doors (i) New entrance door double width (ii) Adapt existing door for delivery of generators (iii) New internal door	Sum Sum Sum	1 1 1		
4.6.3		Adapt existing room for exhaust system and ventilation	Sum	1		
4.6.4		Demolition of Existing toilet	Sum	1		
4.6.5		Painting of room	Sum	1		
4.6.6		Signage and Labelling	Sum	1		
4.6.7		Personnel protective equipment	Sum	1		
4,7		GENERATOR ROOM - FLOOR SUPPORT STRUCTURE <i>Investigation, design and implementation</i> <i>Provisional Sum</i> (i) Adjustments to floor (ii) Adjustments to supporting structure	Sum Sum	1 1		
4,8	PE3.7	TESTING & COMMISSIONING (i) Factory acceptance testing (ii) Site acceptance testing (iii) Temporary commissioning (iv) Final commissioning	Sum Sum Sum Sum	1 1 1 1		
		Total carried forward to next page				

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
		Total carried forward from previous page				
4,9	PE18	TEMPORARY WORKS (ALL STAGES) (i) Design of all stages of temporary installations (ii) Implementation of temporary installations	Sum Sum	1 1		
4.10	PE2.9	RETURN TO CLIENT STORES: EXISTING EQUIPMENT Removal, transport and off-loading of obsolete existing generator related equipment and cabling to the Client's Glenvista Depot, cnr. Van Beeck & Rolene street, Glenvista.	Sum	1		
4.11	PE3.8	CERTIFICATES OF COMPLIANCE (i) Temporary certificates (ii) Existing works (iii) New installation	sum sum sum	1 1 1		
SCHEDULE NO. 4: TOTAL CARRIED TO SUMMARY OF SCHEDULES						

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item	Reference	Description	Unit	Qty	Rate	Amount
5		SCHEDULE NO. 5: LV SWITCHBOARD				
5,1	PE7	LOW VOLTAGE SWITCHBOARD (400V) 400V switchboard, including all equipment and enclosure	Sum	1		
5,2	PE12	CABLES <i>Supply, delivery, installation and termination</i> <i>All points, control signals and sensors</i> (i) Low Voltage - Switchboard to Transformers (ii) Low Voltage - Control & Instrumentation (iii) Network/Communication	Sum Sum Sum	1 1 1		
5,3	PE17	EARTH CONTINUITY CONDUCTOR <i>Supply, delivery, installation and termination</i> (i) Low Voltage - Switchboard to Transformers (ii) Low Voltage - Control & Instrumentation	Sum Sum	1 1		
5,4	PE3.7	TESTING & COMMISSIONING (i) Factory acceptance testing (ii) Site acceptance testing (iii) Temporary commissioning (iv) Final commissioning	Sum Sum Sum Sum	1 1 1 1		
5,5	PE18	TEMPORARY WORKS (ALL STAGES) (i) Design of all stages of temporary installations (ii) Implementation of temporary installations	Sum Sum	1 1		
5,6	PE2.9	RETURN TO CLIENT STORES: EXISTING EQUIPMENT Removal, transport and on-loading of obsolete existing switchboard and related equipment and cabling to the Client's Glenvista Depot, cnr. Van Breeck & Rolene	Sum	1		
5,7	PE3.8	CERTIFICATES OF COMPLIANCE (i) Temporary certificates (ii) Existing works (iii) New installation	sum sum sum	1 1 1		
SCHEDULE NO. 5: TOTAL CARRIED TO SUMMARY OF SCHEDULES						

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item	Reference	Description	Unit	Qty	Rate	Amount
6		SCHEDULE NO. 6: MV SWITCHGEAR				
6,1	PES	MEDIUM VOLTAGE SWITCHGEAR				
		(i) 11kV switchgear, including all equipment and enclosure	Sum	1		
		(ii) 11kV T-switch, including all equipment and enclosure	Sum	1		
		(iii) 10A 20Ah Battery tripping Unit	Sum	1		
6,2	PE12	CABLES				
		<i>Supply, delivery, installation and termination</i>				
		<i>All points, control signals and sensors</i>				
		(i) Medium Voltage - Switchgear to Transformers	Sum	1		
		(ii) Medium Voltage - Switchgear to City Power	Sum	1		
		(iii) Low Voltage - Control & Instrumentation	Sum	1		
		(iv) Network/Communication	Sum	1		
6,3	PE5.11	BULK METERING				
		<i>Supply, delivery, installation and commissioning</i>				
		(i) Bulk Supply Metering	Sum	1		
6,4	PE17	EARTH CONTINUITY CONDUCTOR				
		<i>Supply, delivery, installation and termination</i>				
		(i) Medium Voltage - Switchboard to Transformers	Sum	1		
		(ii) Medium Voltage - Switchgear to City Power	Sum	1		
		(iii) Low Voltage - Control & Instrumentation	Sum	1		
6,5	PE3.7	TESTING & COMMISSIONING				
		(i) Factory acceptance testing	Sum	1		
		(ii) Site acceptance testing	Sum	1		
		(iii) Temporary commissioning	Sum	1		
		(iv) Final commissioning	Sum	1		
6,6	PE18	TEMPORARY WORKS (ALL STAGES)				
		(i) Design of all stages of temporary installations	Sum	1		
		(ii) Implementation of temporary installations	Sum	1		
6,7	PE2.9	RETURN TO CLIENT STORES: EXISTING EQUIPMENT				
		Removal, transport and off-loading of obsolete existing switchgear and related equipment and cabling to the Client's Glenvista Depot, cnr. Van Beeck & Rolene street, Glenvista.	Sum	1		
6,8	PE3.8	CERTIFICATES OF COMPLIANCE				
		(i) Temporary certificates	sum	1		
		(ii) Existing works	sum	1		
		(iii) New installation	sum	1		
SCHEDULE NO. 6: TOTAL CARRIED TO SUMMARY OF SCHEDULES						

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item	Reference	Description	Unit	Qty	Rate	Amount
7		SCHEDULE NO. 7: MV/LV TRANSFORMERS				
7,1	PE6	MEDIUM VOLTAGE TRANSFORMERS 11kV/400V 1250kVA transformers, including all equipment and enclosures, 2 Off	Sum	1		
7,2	PE12	CABLES <i>Supply, delivery, installation and termination</i> <i>All points, control signals and sensors</i> (i) Low Voltage - Control & Instrumentation (ii) Network/Communication	Sum Sum	1 1		
7,3		TRANSFORMER ROOM WORKS Adapt doors to transformer rooms for installation of new transformers				
7,4	PE17	EARTH CONTINUITY CONDUCTOR <i>Supply, delivery, installation and termination</i> (i) Medium Voltage - Switchboard to Transformers (ii) Medium Voltage - Switchgear to City Power (iii) Low Voltage - Control & Instrumentation	Sum Sum Sum	1 1 1		
7,5	PE3.7	TESTING & COMMISSIONING (i) Factory acceptance testing (ii) Site acceptance testing (iii) Temporary commissioning (iv) Final commissioning	Sum Sum Sum Sum	1 1 1 1		
7,6	PE18	TEMPORARY WORKS (ALL STAGES) (i) Design of all stages of temporary installations (ii) Implementation of temporary installations	Sum Sum	1 1		
7,7	PE2.9	RETURN TO CLIENT STORES: EXISTING EQUIPMENT Removal, transport and off-loading of obsolete existing transformers and related equipment and cabling to the Client's Glenvista Depot, cnr. Van Bееck & Rolene street, Glenvista.	Sum	1		
7,8	PE3.8	CERTIFICATES OF COMPLIANCE (i) Temporary certificates (ii) Existing works (iii) New installation	sum sum sum	1 1 1		
SCHEDULE NO. 7: TOTAL CARRIED TO SUMMARY OF SCHEDULES						

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item	Reference	Description	Unit	Qty	Rate	Amount
8		SCHEDULE NO. 8: GENERAL FACILITY				
8,1	PE16	LUMINAIRES				
		Replacement of existing indoor luminaires with LED luminaires	Sum	1		
		New outdoor lighting installation	Sum	1		
8,2	PE14	CABLE WIREWAYS	Sum	1		
		<i>Supply, delivery, installation and termination</i>				
		<i>Wall mounted and suspended</i>				
		<i>All Equipment points, all masonry works</i>				
8,3	PE19	FIRE DETECTION SYSTEM	Sum	1		
		<i>All equipment, wiring and sensors, integration</i>				
8,4	PE15	SIGNAGE AND LABELLING				
8,5	PE17	FACILITY EARTHING SYSTEM				
		(i) Facility main earth system and electrode	Sum	1		
		(ii) Earth continuity throughout facility	Sum	1		
8,6	PE17	LIGHTNING PROTECTION SYSTEM	Sum	1		
		Including surge suppression equipment				
8,7	PE20	EXISTING LV MAIN CONTROL CENTRE				
		(i) Remedial works	Sum	1		
8,8	PE3.7	TESTING & COMMISSIONING				
		(i) Temporary commissioning	Sum	1		
		(ii) Final commissioning	Sum	1		
8,9	PE18	TEMPORARY WORKS (ALL STAGES)				
		(i) Design of all stages of temporary installations	Sum	1		
		(ii) Implementation of temporary installations	Sum	1		
		(iii) Temporary 400V Distribution board	Sum	1		
		(iv) Temporary 660V Distribution board	Sum	1		
8.10	PE2.9	RETURN TO CLIENT STORES: EXISTING EQUIPMENT				
		Removal, transport and off-loading of obsolete existing equipment and cabling (excluding those measured elsewhere) to the Client's Glenvista Depot, cnr. Van Beeck & Rolene street, Glenvista.	Sum	1		
8.11	PE3.8	CERTIFICATES OF COMPLIANCE				
		(i) Temporary certificates	sum	1		
		(ii) Existing works	sum	1		
		(iii) New installation	sum	1		
SCHEDULE NO. 8: TOTAL CARRIED TO SUMMARY OF SCHEDULES						

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item	Reference	Description	Unit	Qty	Rate	Amount
9		<u>SCHEDULE NO. 9: MOBILE DIESEL GENERATORS</u>				
	PE21	DIESEL GENERATORS				
9.1		750 kVA truck mounted generators	No.	1		
9.2		Truck for 750kVA generator	No.	1		
9.3		550 kVA truck mounted generators	No.	2		
9.4		Truck for 550kVA generator	No.	2		
9.5		350 kVA trailer mounted generators	No.	2		
9.6		Trailer for 350kVA generator	No.	2		
9.7		150 kVA trailer mounted generators	No.	4		
9.8		Trailer for 150kVA Generator	No.	4		
9.9		350 kVA skid mounted generator	No.	1		
9.10		2000l Diesel bowser trailer mounted	No.	1		
9.11		Single core flexible electrical cabling 185mm ² Cu	m	2500		
9.12		Single core flexible electrical cabling 185mm ² Terminations	No.	156		
9.13		Single core flexible electrical cabling 70mm ² Cu	m	270		
9.14		Single core flexible electrical cabling 70mm ² Terminations	No.	18		
9.15		Testing and commissioning	Sum	1		
9.15		Employer training	Sum	1		
9.16		Maintenance contract	Sum	1		
9.17		Vehicle tracking equipment	Sum	1		
9.18		GSM communication equipment	Sum	1		
9.19		Percentage mark-up for attendance of free issue equipment (Trucks and trailers)	%			
SCHEDULE NO. 9: TOTAL CARRIED TO SUMMARY OF SCHEDULES						

PART 3:
MECHANICAL WORKS

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item No	Payment Clause	Description	Unit	Quantity	Rate	Amount
C		HECTOR NORRIS PUMP STATION				
C1	PM	Mechanical Works (Pump Station)				
C1.1	PM 8.1	Medium Pressure Pipework, Valves & Fittings				
C1.1.1	8.1.1	<u>Supply and deliver to site complete new suction and delivery pipework, specials, valves & fittings as per drawings and specifications:</u>				
C1.1.1.1		SP01	No	1		
C1.1.1.2		SP02A (note SP02A and SP02B are the same)	No	3		
C1.1.1.3		SP02B (note SP02A and SP02B are the same)	No	1		
C1.1.1.4		SP03	No	4		
C1.1.1.5		SP04	No	4		
C1.1.1.6		SP05	No	1		
C1.1.1.7		SP06	No	1		
C1.1.1.8		AIR VALVE STUB SPOOL	No	1		
C1.1.1.9		Air Valve (DN150 PN16)	No	4		
C1.1.1.10		Wedge Gate Valve (DN150 PN16)	No	4		
C1.1.1.11		Wedge Gate Valve (DN200 PN16)	No	1		
C1.1.1.12		Motorised Butterfly Valve (DN600 PN16)	No	4		
C1.1.1.13		Motorised Butterfly Valve (DN700 PN16)	No	4		
C1.1.1.14		Automatic Non-Return Valve (DN600 PN16)	No	4		
C1.1.1.15		Ball Valve (DN15 PN16)	No	16		
C1.1.1.16		Ball Valve (DN25 PN16)	No	8		
		Total carried forward to next page				

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
		Total carried forward from previous page				
C1.1.1.17		Loose Flange (DN400 PN16)	No	4		
C1.1.1.18		Loose Flange (DN500 PN16)	No	4		
C1.1.1.19		Blank Flange (DN1200 PN16)	No	2		
C1.1.2	8.1.2	<u>Install, test & commission complete new suction and delivery pipework, specials, valves & fittings as per specifications:</u>				
C1.1.2.1		SP01	No	1		
C1.1.2.2		SP02A	No	3		
C1.1.2.3		SP02B	No	1		
C1.1.2.4		SP03	No	4		
C1.1.2.5		SP04	No	4		
C1.1.2.6		SP05	No	1		
C1.1.2.7		SP06	No	1		
C1.1.2.8		AIR VALVE STUB SPOOL	No	1		
C1.2.1.9		Air Valve (DN150 PN16)	No	4		
C1.2.1.10		Wedge Gate Valve (DN150 PN16)	No	4		
C1.2.1.11		Wedge Gate Valve (DN200 PN16)	No	1		
C1.2.1.12		Motorised Butterfly Valve (DN600 PN16)	No	4		
C1.2.1.13		Motorised Butterfly Valve (DN700 PN16)	No	4		
C1.2.1.14		Automatic Non-Return Valve (DN600 PN16)	No	4		
		Total carried forward to next page				

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
		Total carried forward from previous page				
C1.2.1.15		Ball Valve (DN15 PN16)	No	16		
C1.2.1.16		Ball Valve (DN25 PN16)	No	8		
C1.2.1.17		Loose Flange (DN400 PN16)	No	4		
C1.2.1.18		Loose Flange (DN500 PN16)	No	4		
C1.2.1.19		Blank Flange (DN1200 PN16)	No	2		
C1.2	PM 8.2	Medium Pressure Water Pumps				
C1.2.1	8.2.1	<u>Supply and deliver to site complete new pumpset as per specifications:</u>				
C1.2.1.1		Split Casing type Pump No 4 complete with pump, motor, couplings, baseframe, pressure gauges and gauge stand.	No	1		
C1.2.2	8.2.2	<u>Install, test and commission new pumpset:</u>				
C1.2.2.1		Split Casing type Pump No 4 complete with pump, motor, couplings, baseframe, pressure gauges and gauge stand.	No	1		
C1.2.3	8.2.3	Supply and deliver to site complete spare rotating assembly for Pumps	No	1		
		Total carried forward to next page				

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
		Total carried forward from previous page				
C1.3	PM 8.4	Refurbishment of Existing Equipment				
C1.3.1	8.4.2	<u>Refurbish the following existing pumps as per the drawings and specifications:</u>				
C1.3.1.1		Split Casing type Pump No 1 complete with pump, new 160 kW motor, couplings, baseframe and pressure gauges.	No	1		
C1.3.1.2		Split Casing type Pump No 2 complete with pump, new 160 kW motor, couplings, baseframe and pressure gauges.	No	1		
C1.3.1.3		Split Casing type Pump No 3 complete with pump, new 160 kW motor, couplings, baseframe and pressure gauges.	No	1		
C1.3.2	8.4.3	<u>Install, Test and Commission the following refurbished pumps as per the drawings and specifications:</u>				
C1.3.2.1		Split Casing type Pump No 1 complete with pump, new 160 kW motor, couplings, baseframe and pressure gauges.	No	1		
C1.3.2.2		Split Casing type Pump No 2 complete with pump, new 160 kW motor, couplings, baseframe and pressure gauges.	No	1		
C1.3.2.3		Split Casing type Pump No 3 complete with pump, new 160 kW motor, couplings, baseframe and pressure gauges.	No	1		
C2	PM	<u>Mechanical Works (By-pass Valve Chamber)</u>				
C2.1	PM 8.1	Medium Pressure Pipework, Valves & Fittings				
		Total carried forward to next page				

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
		Total carried forward from previous page				
C2.1.1	8.1.1	<u>Supply and deliver to site complete new specials. valves & fittings as per drawings and specifications:</u>				
C2.1.1.1		Wedge Gate Valve (DN150 PN16)	No	2		
C2.1.1.2		Wedge Gate Valve (DN250 PN16)	No	5		
C2.1.1.3		Butterfly Valve (DN250 PN16) - scour valve chamber	No	2		
C2.1.1.4		Butterfly Valve (DN900 PN16)	No	2		
C2.1.1.5		Butterfly Valve (DN1200 PN16)	No	6		
C2.1.1.6		Non-Return Valve (DN1200 PN16)	No	1		
C2.1.1.7		Loose Flange (DN1200 PN16)	No	5		
C2.1.1.8		Loose Flange (DN900 PN16)	No	2		
C2.1.1.9		Spoolpiece SPC01	No	1		
C2.1.1.10		Spoolpiece SPC02	No	1		
C2.1.1.11		Spoolpiece SPC03	No	1		
C2.1.1.12		Spoolpiece SPC04	No	1		
C2.1.1.13		Spoolpiece SPC05	No	1		
C2.1.1.14		Spoolpiece SPC06	No	1		
C2.1.1.15		Spoolpiece SPC07	No	1		
C2.1.1.16		Spoolpiece SPC08	No	1		
		Total carried forward to next page				

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
		Total carried forward from previous page				
C2.1.2	8.1.2	<u>Install, test & commission complete new specials, valves & fittings as per specifications:</u>				
C2.1.2.1		Wedge Gate Valve (DN150 PN16)	No	2		
C2.1.2.2		Wedge Gate Valve (DN250 PN16)	No	5		
C2.1.2.3		Butterfly Valve (DN250 PN16) - scour valve chamber	No	2		
C2.1.2.4		Butterfly Valve (DN900 PN16)	No	2		
C2.1.2.5		Butterfly Valve (DN1200 PN16)	No	6		
C2.1.2.6		Non-Return Valve (DN1200 PN16)	No	1		
C2.1.2.7		Loose Flange (DN1200 PN16)	No	5		
C2.1.2.8		Loose Flange (DN900 PN16)	No	2		
C2.1.2.9		Spoolpiece SPC01	No	1		
C2.1.2.10		Spoolpiece SPC02	No	1		
C2.1.2.11		Spoolpiece SPC03	No	1		
C2.1.2.12		Spoolpiece SPC04	No	1		
C2.1.2.13		Spoolpiece SPC05	No	1		
C2.1.2.14		Spoolpiece SPC06	No	1		
C2.1.2.15		Spoolpiece SPC07	No	1		
C2.1.2.16		Spoolpiece SPC08	No	1		
		TOTAL Carried to Summary			R	

PART 1:

PRELIMINARY & GENERAL

ITEMS MUST ALLOW FOR CIVIL, ELECTRICAL AND MECHANICAL WORK

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item No	Payment Clause	Description	Unit	Quantity	Rate	Amount
1	<u>1200A</u>	HECTOR NORRIS PUMP STATION				
		<u>PRELIMINARY & GENERAL</u>				
1.1	8,3	SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS MUST ALLOW FOR CIVIL, ELECTRICAL AND MECHANICAL WORK				
1.1.1	8.3.1	Contractual Requirements	Sum	1		
1.1.2	8.3.2	Establishment of facilities on the site				
1.1.2.1	8.3.2.1	Facilities for Engineer				
1.1.2.1.1	PSA 8.3.2.1	(a) Furnished office	Sum	1		
1.1.2.1.2		(c) Nameboards	No	1		
1.1.2.2	8.3.2.2 PSA 8.3.2.2	Facilities for Contractor				
1.1.2.2.1		(a) Offices and storage sheds	Sum	1		
1.1.2.2.2		(b) Workshops	Sum	1		
1.1.2.2.3		(c) Laboratories	Sum	1		
1.1.2.2.4		(d) Living accommodation	Sum	1		
1.1.2.2.5		(e) Ablution and latrine facilities	Sum	1		
1.1.2.2.6		(f) Tools and equipment	Sum	1		
1.1.2.2.7		(g) Water supplies, electric power and communications	Sum	1		
1.1.2.2.8		(h) Dealing with water	Sum	1		
1.1.2.2.9		(i) Access	Sum	1		

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
1.1.2.2.10		(j) Plant	Sum	1		
		Total carried forward to next page				

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
		Total carried forward from previous page				
1.1.3	8.3.3	Other fixed-charge obligations	Sum	1		
1.1.4	8.3.4	Removal of site establishment	Sum	1		
1.2	8.4	SCHEDULED TIME-RELATED ITEMS MUST ALLOW FOR CIVIL, MECAHNICAL AND ELECTRICAL WORK				
1.2.1	8.4.1	Contractual Requirements	Sum	1		
1.2.2	8.4.2	Operation and maintenance of facilities on site, for duration of construction, except where otherwise stated				
1.2.2.1	8.4.2.1 PSA 8.4.2.1	Facilities for Engineer				
1.2.2.1.1		(a) Furnished office	Month	20		
1.2.2.1.2		(b) Telephone	Month	20		
1.2.2.1.3		(c) Nameboards	Sum	1		
1.2.2.2	8.4.2.2 PSA 8.4.2.2	Facilities for Contractor				
1.2.2.2.1		(a) Offices and storage sheds	Sum	1		
1.2.2.2.2		(b) Workshops	Sum	1		
1.2.2.2.3		(c) Laboratories	Sum	1		
1.2.2.2.4		(d) Living accommodation	Sum	1		
1.2.2.2.5		(e) Ablution and latrine facilities	Sum	1		
1.2.2.2.6		(f) Tools and equipment	Sum	1		
1.2.2.2.7		(g) Water supplies, electric power and communications	Month	20		
		Total carried forward to next page				

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
		Total carried forward from previous page				
1.2.2.2.8		(h) Dealing with water	Sum	1		
1.2.2.2.9		(i) Access	Sum	1		
1.2.2.2.10		(j) Plant	Month	20		
1.2.3	8.4.3	Supervision for duration of construction	Month	6		
1.2.4	8.4.4	Company and head office overhead costs for the duration of the contract	Month	14		
1.2.5	8.4.5	Other time-related obligations	Month	20		
1.2.6	PSA 8.4.6	Cathodic Protection				
		a) Cathodic protection design	Sum	1		
		b) Implementation of Cathodic protection Design	Sum	1		
1.2.7	PSA 8.4.7	Telemetry Design				
		a) Telemetry design	Sum	1		
		b) Implementation of Telemetry Design	Sum	1		
1.2.8	PSA 8.4.8	Security at pump station and bypass valve chamber for duration of construction	Month	20		
1.2.9	PSA 8.4.9	Health and Safety Plan				
		a) Compile Health and Safety Plan	Sum	1		
		b) Implementation of Health and Safety Plan	Sum	1		
		c) Health and Safety Officer (Number of:)	Sum	1		
		Total carried forward to next page				

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
		Total carried forward from previous page				
1.2.10	PSA 8.4.10	Provision of related Health and Safety training				
		a) First aid training	Sum	1		
		b) Health and Safety Representative Training	Sum	1		
		c) Emergency Rescue Training	Sum	1		
		d) Hazard Identification Training	Sum	1		
		e) Induction Training for all personnel and visitors	Sum	1		
		f) Health and Safety Officer Training	Sum	1		
		g) HIV/Aids Awareness	Sum	1		
1.2.11	PSA 8.4.11	Implementation and Maintenance of an Environmental Management Plan	Sum	1		
1.2.12	PSA 8.4.12	Provision of facilities and equipment for compliance with OHS and EMP	Sum	1		
1,3	8.7	DAYWORK				
1.3.1		a) Labour				
1.3.1.1		1) Contractor's representative/Project Manager	hr	24		
1.3.1.2		2) Site Manager/Engineer/Site Agent	hr	24		
1.3.1.3		3) Foreman/Surveyor	hr	24		
1.3.1.4		4) Artisan	hr	96		
1.3.1.5		5) Semi-skilled labourer	hr	240		
1.3.1.6		6) Unskilled Labourer	hr	240		
		7) Extra over for night- or non-working times	%	15%		
1.3.2		b) Materials				
1.3.2.1		1) Provisional sum for purchase of materials	PC Sum	1	R 730 340	R 730 340
1.3.2.2		2) Mark up on 1) above	%		R 730 340	

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
		Total carried forward to next page				

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
		Total carried forward from previous page				
1.3.3		c) Plant and Equipment				
1.3.3.1		1) Crane 65 - 80 t Capacity	hr	12		
1.3.3.2		2) Wheel loader 140 - 150 Kw	hr	12		
1.3.3.3		3) Plate compactor and tampers	hr	24		
1.3.3.4		4) Motor grader 150 - 160 Kw	hr	18		
1.3.3.5		5) Vibrating roller (500 - 630kg)	hr	24		
1.3.3.6		6) Concrete mixer	hr	24		
1.3.3.7		7) Concrete saw (self propelled)	hr	18		
1.3.3.8		8) Water pump with 200mm DN outlet (diesel driven)	hr	24		
1.3.3.9		9) Excavator	hr	12		
1.3.3.10		10) Generator 30 kVA (Diesel driven)	hr	24		
1.4	8,8	TEMPORARY WORKS				
1.4.1	8.8.2 PSA 8.8.2	Dealing with traffic (or accommodation of traffic)	Month	12		
1.4.2	8.8.3	Protection of the pump station building and by-pass valve chamber until construction in vicinity is complete	Month	20		
1.4.3	8.8.4 PSA 8.8.4	Existing Services				
1.4.3.1		(a) Supply or hire of specialist equipment for the detection of a particular service	Sum	1		
1.4.3.2		(b) The use of equipment referred to in item (a) above	Day	1		
1.4.3.3		(c) Excavation by hand in all material to expose existing services	m ³	1		

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
1.4.4	8.8.6	Special water control in terms of Project specification	Sum	1		
		Total carried forward to next page				

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION				
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
		Total carried forward from previous page				
1.4.5		Management of SMME				
1.4.5.1	C2.1.5	General Management	Month	20		
1.4.5.2	C2.1.5	Formal Training	PC Sum	1		R 300 000
		Total carried Summary			R	

PART 2:
SMME CONTRACTOR
CIVIL WORKS

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION - CIVIL				
Item No	Payment Clause	Description	Unit	Quantity	Rate	Amount
1	1200A	HECTOR NORRIS PUMP STATION <u>PRELIMINARY & GENERAL SMME CONTRACTOR</u>				
1,1	8,3	SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS MUST ALLOW FOR SMME CONTRACTOR				
1.1.1	8.3.1	Contractual Requirements	Sum	1	R 77 416	R 77 416
1.1.2	8.3.2	Establishment of facilities on the site				
1.1.2.2	8.3.2.2 PSA 8 3 2 2	Facilities for Contractor				
1.1.2.2.1		(a) Offices and storage sheds	Sum	1	R 154 833	R 154 833
1.1.3	8.3.4	Removal of site establishment	Sum	1	R 154 833	R 154 833
1,2	8,4	SCHEDULED TIME-RELATED ITEMS MUST ALLOW FOR SMME CONTRACTOR				
1.2.1	8.4.1	Contractual Requirements	Sum	1	R 38 709	R 38 709
1.2.2	8.4.2	Operation and maintenance of facilities on site, for duration of construction, except where otherwise stated				
1.2.2.2	8.4.2.2 PSA 8 4 2 2	Facilities for Contractor				
1.2.2.2.1		(a) Offices and storage sheds	Sum	1	R 77 416	R 77 416
1.2.3	8.4.3	Supervision for duration of construction	Month	6	R 38 709	R 232 253
1.2.4	8.4.4	Company and head office overhead costs for the duration of the contract	Month	14	R 15 484	R 216 780
1.2.5	PSA 8.4.9	Health and Safety Plan				
		a) Compile Health and Safety Plan	Sum	1	R 12 388	R 12 388
		b) Implementation of Health and Safety Plan	Sum	1	R 123 867	R 123 867
		c) Health and Safety Officer (Number of:)	Sum	1	R 154 833	R 154 833
		Total carried to Summary				R 1 243 327

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION - CIVIL				
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
3	<u>1200DA</u>	<u>EARTHWORKS (SMALL WORKS)</u>				
3,1	PSDA 8.3.1 a)	Excavation				
3.1.1		(a) i) Remove topsoil to nominal depth 150mm at by-pass valve chamber, stockpile, maintain..	m ²	315	R 75	R 23 751
3.1.2		(a) ii) Remove topsoil to nominal depth 150mm at Thrust Block A, stockpile, maintain	m ²	122	R 75	R 9 199
3.1.3	PSDA 8.3.1 b)	(b) Excavate in all materials at the by-pass valve chamber and use for backfill or dispose, as ordered	m ³	32	R 221	R 7 072
3,2	PSDA 8.3.2	Restricted Excavation				
3.2.1		(a) Excavate for restricted foundations, footings and trenches in all materials and use for backfill or embankment or dispose...				
		0 up to 2m	m ³	210	R 332	R 69 615
		2m up to 4m	m ³	138	R 488	R 67 275
		4m up to 6m	m ³	83	R 745	R 61 454
3.2.2		(b) Extra-over for:				
3.2.2.2		1) Hard rock excavation	m ³	82	R 1 086	R 89 358
3,3	PSDA 8.3.6	Topsoiling	m ²	437	R 25	R 10 794
3,4	PSDA 8.3.7	Grassing or other Vegetation Cover	m ²	122	R 51	R 6 185
3,5	PSDA 8.3.9	Flood control	Sum	1	R 13 244	R 13 244
3,6	PSDA 8.3.10	Bypass valve chamber finishing				
3.6.1		(a) Re-install the 400mm deep PC planks	No.	30	R 13 163	R 394 875
3.6.2		(b) Replacement of 50mm screed	m ²	165	R 153	R 25 311
3.6.3		(c) Replacement of 1 Layer Thermoflex impervious membrane on bypass valve chamber	m ²	170	R 125	R 21 216

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION - CIVIL				
		Total carried to Summary				R 799 350

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION - CIVIL				
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
4	1200G	<u>CONCRETE (STRUCTURAL)</u>				
4,1	8	Form Work				
4.1.1	8.1.3.3	Curing Compound to be included with concrete rates				
4.1.2	8.2.1	Rough Formwork for:				
		(i) Thrust Block A	m ²	103	R 818	R 84 223
		(ii) Thrust Block D	m ²	8	R 818	R 6 542
		(iii) Thrust Block E	m ²	22	R 818	R 17 989
		(iv) Pedestal 1	m ²	2	R 818	R 1 635
		(v) Pedestal 2	m ²	1	R 818	R 818
4,2	8,3	Scheduled Reinforcement Items				
4.2.1	8.3.1	(a) Reinforcement for (High-tensile):				
		(i) Thrust Block A	kg	3679	R 30	R 110 002
		(ii) Thrust Block D	kg	219	R 30	R 6 548
		(iii) Thrust Block E	kg	1020	R 30	R 30 498
		(iv) Pedestal 1	kg	102	R 30	R 3 050
		(v) Pedestal 2	kg	45	R 30	R 1 346
4.2.2	8.3.2	Welded Mesh (High - tensile)				
		(i) Thrust Block A	kg	50	R 30	R 1 495
		(ii) Thrust Block D	kg	5	R 30	R 150
		(iii) Thrust Block E	kg	10	R 30	R 299
		(iv) Pedestal 1	kg	2	R 30	R 60
		(v) Pedestal 2	kg	1	R 30	R 30
4.2.3	8.3.4	Drilling of Anchor bar holes				
		(a) Holes for Anchor Bars in Floor Slab				
		(i) Y20 Bars	No.	43	R 517	R 22 248
		(ii) Y16 Bars	No.	18	R 517	R 9 313
		(b) Holes for Anchor Bars in Hard Rock Foundation				
		(i) Y32 Bars	No.	25	R 517	R 12 935

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION - CIVIL				
		Total carried forward to next page				R 309 180
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
		Total carried forward from previous page				R 309 180
4.3	8.4	Scheduled Concrete Items				
4.3.1	8.4.2	<u>75mm Blinding Layer concrete of grade 15/19 for:</u>				
		(i) Thrust Block A (i to v combined)	m ³	10	R 3 037	R 30 748
		(ii) Thrust Block D				
		(iii) Thrust Block E				
		(iv) Pedestal 1				
		(v) Pedestal 2				
4.3.2	8.4.3	Structural concrete of grade 30/19 for:				
		(i) Thrust Block A	m ³	90	R 3 717	R 334 503
		(ii) Thrust Block D	m ³	2	R 3 717	R 7 433
		(iii) Thrust Block E	m ³	5	R 3 717	R 18 584
		(iv) Pedestal 1	m ³	0,6	R 3 717	R 2 230
		(v) Pedestal 2	m ³	0,2	R 3 717	R 743
4.3.3	8.4.4	Unformed Surface Finishes				
		b) Steel-Float Finish for:				
		(i) Thrust Block A	m ²	103	R 74	R 7 632
		(ii) Thrust Block D	m ²	8	R 74	R 593
		(iii) Thrust Block E	m ²	22	R 74	R 1 630
		(iv) Pedestal 1	m ²	2	R 74	R 148
		(v) Pedestal 2	m ²	1	R 74	R 74
		Total carried to Summary				R 713 499

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION - CIVIL				
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
5	<u>1200L</u>	<u>MEDIUM PRESSURE PIPELINES</u>				
5,1	8.2.3	Supply , installing and testing of class 16 air valves along C12 and G15 pipeline as per				
		a) 250 mm	No	16	R 111 480	R 1 783 683
		b) 150 mm	No	4	R 83 611	R 334 443
5,2	8.2.3	Supply , installing and testing of class 16 scour valves along C12 pipeline as per specifications.				
		a) 250 mm	No	2	R 120 770	R 241 540
5,3	8.2.3	Supply , installing and testing of class 16 isolation gate valves along C12 and G15 pipelines as per specifications.				
		a) 1200 mm	No	2	R 176 510	R 353 020
		b) 900 mm	No	2	R 130 060	R 260 120
5,4	8.2.13	Valve and Hydrant chambers				
		a) Valve chambers for air valves up to 250mm as per drawing JW13766-C-VC-04	No	20	R 46 450	R 929 006
		b) Valve chambers for isolation gate valves up to 1200mm as per drawing JW13766-C-VC-05	No	4	R 74 320	R 297 279
5,5	PSL 8.2.16	Draining and filling of C12 pipeline	PSum	1	R 185 799	R 185 799
5,6	PSL 8.2.17	Draining and filling of G15 pipeline	PSum	1	R 278 698	R 278 698
5,7	PSL 8.2.18	Pumping of water from the bypass valve chamber	12 hours	1	R 46 450	R 46 450
5,8	PSL 8.2.18	Cutting of valves under pressure along C12 and G15 pipelines (including all fittings and equipment)	PSum	1	R 650 295	R 650 295

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION - CIVIL				
		Total carried to Summary				R 5 360 333

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION - CIVIL				
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
6	<u>PFM</u>	<u>FLOW METER and SUNDRIES</u>				
6,1	16.2.1	Remove existing mag flow meter	No.	1	R 20 626	R 20 626
6,2	16.2.2	Procure, Supply and install insertion flow meter	No.	1	R 101 262	R 101 262
6,3	16.2.3	Test and commission new insertion flow meter on completion	Sum	1	R 10 314	R 10 314
6,4	16.2.4	Preparation of operation and maintenance manuals and drawings	Sum	1	R 10 314	R 10 314
6,5	PM8.1.1	Supply and delivery to site complete new spool piece for flow meter chamber as per drawings and specifications	Sum	1	R 83 611	R 83 611
6,6	PM 8.1.2	Intall, test and commission complete new spool piece as per specifications	Sum	1	R 28 178	R 28 178
		Total carried to Summary				R 254 305

CONTRACT No. JW14287		REFURBISHMENT OF HECTOR NORRIS PUMP STATION - CIVIL				
Item No	Payment Clause	Short Description	Unit	Quantity	Rate	Amount
7	<u>PFS</u>	<u>FENCING AND SECURITY</u>				
	6.2.1	Removal of existing fencing and gate(s)	m	250	R 196	R 49 075
	6.2.2	Install 3m high Clearvu Cochrane Grade 22 fencing, galvanised and PVC coated, complete with razor coils and anti-burrow plinth	m	250	R 10 033	R 2 508 350
	6.2.3	Lockable 6m sliding gate in same material as fencing, with 150X75X3 RHS galvanised and PVC coated frame	Sum	1	R 111 480	R 111 480
	6.2.4	Construction of a guard hut	Sum	1	R 247 485	R 247 485
		Total carried to Summary			R	R 2 916 390

SUMMARY OF SCHEDULE OF QUANTITIES		
PART	DESCRIPTION	AMOUNT (RAND)
1	PRELIMINARY & GENERAL	
	CIVIL WORKS	
SMME1	PRELIMINARY & GENERAL SMME CONTRACTOR	R 1 243 326,50
SMME2	SITE CLEARANCE	R 400 372,70
SMME3	EARTHWORKS (SMALL WORKS)	R 799 350,11
SMME4	CONCRETE (STRUCTURAL)	R 713 498,76
SMME5	MEDIUM PRESSURE PIPELINES	R 5 360 332,90
SMME6	FLOW METER and SUNDRIES	R 254 304,70
SMME7	FENCING AND SECURITY	R 2 916 390,10
	MECHANICAL WORKS	
M1	MECHANICAL WORKS	
	ELECTRICAL WORKS	
E1	PRELIMINARY & GENERAL	
E2	VARIABLE SPEED DRIVES	
E3	STATION CONTROL UNIT	
E4	GENERATOR PLANT	
E5	LV SWITCHBOARD	
E6	MV SWITCHGEAR	
E7	MV/LV TRANSFORMERS	
E8	GENERAL FACILITY	
E9	MOBILE DIESEL GENERATORS	
SUB TOTAL A		
ADD 15% ALLOWANCE FOR VAT		
TOTAL (INCLUSIVE OF VAT) CARRIED FORWARD TO FORM OF OFFER AND ACCEPTANCE		
SIGNATURE OF TENDERER: _____		
NAME IN BLOCKLETTERS : _____		
DATE: _____		