

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|--------------------|---|-------|----------|----------|------------|
| A1 | 1200A 8.3 | SECTION A: PRELIMINARY AND GENERAL Fixed-charge items | | | | |
| A1.1 | 8.3.1 | Contractual requirements | Sum | 1.00 | | |
| A1.2 | 8.3.2 | Establish facilities on site | | | | |
| A1.2.1 | 8.3.2.1 | Facilities for the Engineer | | | | |
| A1.2.2 | | As per SANS 1200 AB and PS AB, to include but not limited to a site instruction book, protective clothing and safety equipment, Furnished Office (1 No.), project nameboards (2 No), survey equipment, laboratory equipment. | Sum | 1.00 | | |
| A1.2.3 | 8.3.2.2 | Facilities for the Contractor | | | | |
| A1.2.4 | | Facilities for the Contractor, including offices, storage sheds, workshops, ablution and latrine facilities, tools and equipment, water supplies, electric power, communications, dealing with water, access and accommodation of traffic As per SANS 1200 A. | Sum | 1.00 | | |
| A1.2.5 | 8.3.3 | Other fixed charged obligations. | Sum | 1.00 | | |
| A1.2.6 | 8.3.4 | Removal of Engineer's and Contractor's site establishment and reinstatement of site on completion. | Sum | 1.00 | | |
| A2 | 8.4 | Time-related items | | | | |
| A2.1 | 8.4.1 | Contractual requirements | Month | 24.00 | | |
| A2.2 | 8.4.2 | Operate and maintain facilities on site for duration of construction except where otherwise stated | | | | |
| A2.2.1 | 8.4.2.1 8.4.2.3 | Facilities for Engineer | Month | 24.00 | | |
| A2.2.2 | 8.4.2.2 8.4.2.3 | Facilities for Contractor | Month | 24.00 | | |
| A2.3 | 8.4.3 | Supervision for duration of construction | Month | 24.00 | | |
| A2.4 | 8.4.4 | Company and Head Office overhead costs for duration of Contract | Month | 24.00 | | |
| A2.5 | 8.4.5 | Other time-related obligations | Month | 24.00 | | |
| Carried Forward | | | | | | |

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| Brought Forward | | | | | | |
| A3 | 1200A | Setting out of the Works Setting out of the Works and the preservation and replacement of beacons and reference pegs. | | | | |
| A3.1 | 8.3.3 | Fixed-charged obligations for Item A3 | Sum | 1.00 | | |
| A3.2 | 8.4.5 | Time-related obligations for Item A3 | Month | 24.00 | | |
| A4 | 8.8 | Temporary Works | | | | |
| A4.1 | 8.8.1 | Maintain Access Road to works | Sum | 1.00 | | |
| A4.2 | 8.8.3 | Protection of existing structures until construction in vicinity is complete | | | | |
| A4.2.1 | | a) Concrete structures, pipes, kiosks, transformers etc along the cable routes | Sum | 1.00 | | |
| A4.2.2 | | b) Existing and new-substation structures | Sum | 1.00 | | |
| A4.2.3 | | c) Existing Pump Station, storage tanks and outflow canal. | Sum | 1.00 | | |
| A5 | PA A 8.11 | Dealing with Existing Services Existing services are indicated on drawing set P08959-G-LA-001-01 | Sum | 1.00 | | |
| A6 | PA A 8.12 | Detecting of Existing Services | Sum | 1.00 | | |
| A7 | PA A 8.14 | Dealing with water in excavations | Sum | 1.00 | | |
| A8 | PA A 8.14 | Dealing with water inside structures, manholes, sumps and chambers | Sum | 1.00 | | |
| A9 | PA A 8.15 | Allowance for returning to site (If deemed necessary) for commissioning and handover. | Sum | 1.00 | | |
| A10 | PA A 8.16 | Allowance for all Hazard and Operability (HAZOP) studie(s) | Sum | 1.00 | | |
| A11 | PA A 8.17 | Compulsory Data Pack, for all installed equipment. | Sum | 1.00 | | |
| A12 | PA A 8.18 | Operational Training for all equipment installed, including but not limited to, pump controls, VSD's, MV switch gear, HVAC, Overhead Crane, other | Sum | 1.00 | | |
| TOTAL FOR SECTION: Carried to Summary | | | | | | |

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|--|----------------|---|-------|----------|------|-----|------------|
| B1 | | SECTION B: COMPLIANCE WITH HEALTH AND SAFETY AND ENVIRONMENTAL PROTECTION | | | | | |
| | | Compliance with Health and Safety Requirements and Obligations | | | | | |
| B1.1 | PSA 8.3.5 | Fixed-charged cost to meet all of the requirements and obligations in terms of the Occupational Health and Safety Act and the Construction Regulations | Sum | 1.00 | | | |
| B1.2 | PS A 8.4.6 | Time-related cost to meet all of the requirements and obligations in terms of the Occupational Health and Safety Act and the Construction Regulations | Month | 24.00 | | | |
| B2 | | Compliance with Environmental Management Plan and environmental protection obligations | | | | | |
| B2.1 | PS A 8.3.6 | Fixed-charged cost to meet all of the requirements and obligations in terms of the Environmental Management Plan and environmental protection obligations | Sum | 1.00 | | | |
| B2.2 | PS A 8.4.7 | Time-related cost to meet all of the requirements and obligations in terms of the Environmental Management Plan and environmental protection obligations | Month | 24.00 | | | |
| TOTAL FOR SECTION: Carried to Summary | | | | | | | |

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|--|----------------|--|----------|------------|----------|------------|
| | | SECTION C: DAYWORKS | | | | |
| C1 | 1200A | Labour | | | | |
| C1.1 | 8.7 | Skilled labour | h | 90.00 | | |
| C1.2 | 8.7 | Semi-skilled labour | h | 180.00 | | |
| C1.1 | 8.7 | Unskilled labour | h | 180.00 | | |
| C2 | 1200A | Materials | | | | |
| C2.1 | 8.7 | Allow for net cost of goods or materials actually used | Prov Sum | 1.00 | | 100 000.00 |
| C2.2 | | Percentage mark-up on Item C2.1 (State % and extend as an amount) | % | 100 000.00 | | |
| C3 | 1200A | Contractor's own plant on site | | | | |
| C3.1 | 8.7 | Allow for all-inclusive cost of using the Contractor's own plant on Site | Prov Sum | 1.00 | | 100 000.00 |
| | | Plant hired by the Contractor | | | | |
| C3.1 | 8.7 | Allow for net cost of hired plant | Prov Sum | 1.00 | | 50 000.00 |
| C3.2 | | Percentage mark-up on Item C3.1 (State % and extend as an amount) | % | 50 000.00 | | |
| TOTAL FOR SECTION: Carried to Summary | | | | | | |

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| D1 | 1200A | SECTION D: PROVISIONAL SUMS | | | | |
| D1.1 | PS A 8.5.1 | Control testing | | | | |
| D1.1.1 | | Additional testing ordered by the Engineer | | | | |
| D1.1.1 | | Control testing of materials and workmanship | Prov Sum | 1.00 | | 80 000.00 |
| D1.1.2 | | Condition assessment on existing pipework. Transport, grit blasting and evaluation pipework | Prov Sum | 1.00 | | 1 000 000.00 |
| D1.2 | | Percentage adjustment on Item D1.1 for Contractor's overheads and profit (State % and extend as an amount) | % | 1 080 000.00 | | |
| D2 | PS A 8.5 | Sums stated Provisionally by the Engineer | | | | |
| D2.1 | | Cost of Community Liaison Officer for the duration of the contract | Prov Sum | 1.00 | | 700 000.00 |
| D3 | | For works to be executed by the Contractor as instructed by the Engineer | Prov Sum | 1.00 | | 4 500 000.00 |
| D4 | | Galvanised piping, fittings and taps for plumbing inside the Pump Station. Connected to existing connection. | Prov Sum | 1.00 | | 20 000.00 |
| D5 | | Supply and install fire protection equipment as per details provided by the Engineer | Prov Sum | 1.00 | | 250 000.00 |
| D6 | | Adjudicator's fee | Prov Sum | 1.00 | | 50 000.00 |
| D7 | | Installation of cable sleeving for all cables crossing roads. This includes re-instatement of tar and roadwork's as per original. | PC sum | 1 | | 600 000.00 |
| D8 | | Provisional Sum for the modification of the MV Works as per the Engineers Instruction. | PC sum | 1 | | 575 000.00 |
| D8.1 | | Markup on item D8 | % | 575 000.00 | | |
| D9 | PS A 8.5 | INSPECTIONS AND SERVICING | | | | |
| | | Allow the amount of Twenty Thousand Rand (R 20 000.00) for the inspections and servicing of waste area components. | Item | 1.00 | 20 000.00 | 20 000.00 |
| D9.1 | | Allow for profit on the above | % | 20 000.00 | | |
| Carried Forward | | | | | | |

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| Brought Forward | | | | | | |
| D10 | PS A 8.5 | IRONMONGERY Allow the amount of Five thousand, Five hundred Rand (R 5500.00) for the supply and installation of all ironmongery fittings where needed. | Item | 1.00 | 5 500.00 | 5 500.00 |
| D10.1 | | Allow for profit on the above | % | 5 500.00 | | |
| D10.2 | | Allow for attendance on the above | % | 5 500.00 | | |
| D11 | PS A 8.5 | SUB-SOIL DRAINAGE Allow the amount of Fifteen Thousand Rand (R15 000.00) for the supply, manufacture and installation of Sub-soil drainage where needed. | Item | 1.00 | | 15 000.00 |
| D11.1 | | Allow for profit on the above | % | 15 000.00 | | |
| D12 | | Provide the “As Built” information | | | | |
| D12.1 | | Provide the “As Built” drawings, reports Operating Manuals and any other information pertaining to the installation in file format as per specification | Sum | 1 | | |
| D12.2 | | Provide the “As Built” drawings, reports, Operating Manuals and any other information pertaining to the installation in electronic format on a 4 TB external hard drive | Sum | 1 | | |
| D13 | | Provision for Factory Acceptance Testing (FAT) witnessing to be conducted both internationally and locally. Includes travel, accommodation, and subsistence allowances for three (3) Engineers, three (3) Employer Representatives, and one (1) Contractor’s Representative to witness the FAT at the manufacturer’s facility. (Allowance for actual testing to be made elsewhere) | Prov Sum | 1.00 | | 12 000 000.00 |
| D14 | | Allow for the manufacture of complete, new Low Voltage MCC including CS&I Integration into MV Moor Starter Board. (The design of the MCC is to be developed in conjunction with EWS and the Engineer once the design philosophy has been finalised.) | Prov Sum | 1.00 | | 4 500 000.00 |
| D15 | | Allow for the creation of a Digital Twin. The exact scope will be made available to the Contractor after award of the Contract | Prov Sum | 1.00 | | 2 500 000.00 |
| C.16 | | Unforeseen work | Sum | 1.00 | | 2 000 000.00 |
| TOTAL FOR SECTION: Carried to Summary | | | | | | |

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| F1 | | SECTION F : ELECTRICAL - MAIN MEDIUM VOLTAGE RETICULATION | | | | |
| | | Design, manufacture, supply, install, testing and commission 11kV switchgear as per specifications | | | | |
| F1.1 | | Supply and deliver Incoming circuit breaker Motorised - with protection class (5P20) current transformers, protection (class X) current transformers wired for, overcurrent, and earth fault protection with arc protection ALFR. Multifunction overcurrent, earth fault, sensitive earth fault, and thermal overload protection relay. Power meter installed as per specifications (eThekwini Electricity Incoming Circuit Breaker) | No | 1 | | |
| F1.1.1 | | Installation, testing and commissioning of item F1.1 | No | 1 | | |
| F1.2 | | Supply and deliver feeder circuit breaker Motorised - with voltage transformer and protection class (4P20) current transformers, measuring class (0,2) current transformers wired for overcurrent with arc protection ALFR; Multifunction overcurrent and thermal overload protection relay. Power meter installed as per specifications (EWS Feeder Circuit Breaker with Metering) | No | 1 | | |
| F1.2.1 | | Installation, testing and commissioning of item F1.2 | No | 1 | | |
| F1.3 | | Supply and deliver feeder circuit breaker Motorised - with protection class (5P20) current transformers, protection (class X) current transformers wired for overcurrent with arc protection ALFR. Multifunction overcurrent and thermal overload protection relay. Power meter installed as per specifications (Veolia Feeder Circuit Breaker) | No | 1 | | |
| F1.3.1 | | Installation, testing and commissioning of item F1.3 | No | 1 | | |
| F1.4 | | Supply & deliver new 11kV floor standing bulk metering board to accommodate the Municipal metering equipment & mains isolator to eThekwini Electricity requirements (EWS metering) | No | 1 | | |
| Carried Forward | | | | | | |

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| Brought Forward | | | | | | |
| F1.4.1 | | Installation, testing and commissioning of item F1.4 | No | 1 | | |
| F1.5 | | Supply and deliver feeder isolator with transition panel to feeder circuit breakers with arc protection ALFR (EWS Incoming Isolator) | No | 1 | | |
| F1.5.1 | | Installation, testing and commissioning of item F1.5 | No | 1 | | |
| F1.6 | | Supply and deliver feeder circuit breaker Motorised - with protection class (5P20) current transformers, protection (class X) current transformers wired for, overcurrent, and earth fault protection with arc protection ALFR. Multifunction overcurrent, earth fault, sensitive earth fault, and thermal overload protection relay. (Feeder Ring 1, Feeder Ring 2) | No | 2 | | |
| F1.6.1 | | Installation, testing and commissioning of item F1.6 | No | 2 | | |
| F1.7 | | Supply and Deliver Remote Terminal Units as per specification for the following MV Panels: Main Incoming Baord; EWS Board; | No | 2 | | |
| F1.7.1 | | Installation, testing and commissioning of item F1.7 | No | 2 | | |
| F2 | | Design, manufacture, supply, install, testing and commission 11kV Mini Substations with smart RMUs and RTUs as per specifications | | | | |
| F2.1 | | Supply and deliver install 500kVA Mini Subs | NO | 5 | | |
| F2.1.1 | | Installation, testing and commissioning of item F2.1 | No | 5 | | |
| F2.2 | | Supply and deliver install 1000kVA Mini Subs with plinths and circuit breaker protection for transformer, LV isolator and LV feeder circuit breaker to local supplies as per specifications | No | 1 | | |
| F2.2.1 | | Installation, testing and commissioning of item 2,2 | No | 1 | | |
| Carried Forward | | | | | | |

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| Brought Forward | | | | | | |
| F3 | | Design, manufacture, supply, install and commission 11kV metering panel and cabling including racking, conduit, etc. as per eThekweni Electricity Unit Standard specifications | | | | |
| F3.1 | | Main Intake Substation - EWS Switchboard | | | | |
| F3.1.1 | | Supply | No | 1 | | |
| F3.1.2 | | Install | No | 1 | | |
| F4 | | Supply and install 110V DC battery backup unit for MV switchgear complete with batteries, voltmeters, ammeters, filters, all interface wiring between BTU and panel, etc., complete and to specification. Include a 5% factor of safety | | | | |
| F4.1 | | Main Intake Substation | | | | |
| F4.1.1 | | Supply | No | 1 | | |
| F4.1.2 | | Install | No | 1 | | |
| F4.2 | | Low Level Pump Station | | | | |
| F4.2.1 | | Supply | No | 1 | | |
| F4.2.2 | | Install | No | 1 | | |
| F5 | | Removal of existing/redundant switchgear, cabling and ancillary equipment at old Main substations, low level pump station and at old substations 3,4,5 and associated cabling and transportation to Springfield Reclamation stores and make good as per specifications | sum | 1 | | |
| F6 | | Installation of cable sleeving for all cables crossing roads. This includes re-instatement of tar and roadwork's as per original. (PC Sum) | sum | 1 | | |
| F7 | | Allow for the complete MV design for new Main Intake Substation: new EWS Switchboard, new Veolia Switchboard and new Low-level Pump Station Switchboard as per specifications. | sum | 1 | | |
| F8 | | Allow for the production of an integrated changeover plan to ensure minimal interruption to the site and plant operations (as per specifications) | sum | 1 | | |
| Carried Forward | | | | | | |

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| Brought Forward | | | | | | |
| F9 | | Trenching (MV Cables) | | | | |
| F9.1 | | Excavation of a 600mm (Wide) x 1200mm (Deep) trench for the new MV underground cable, including for sifting, back-filling and compaction, as per the Electrical Specification and Drawings. | | | | |
| F9.1.1 | | Soft excavation as classified in SANS 1200 Section D (Earthworks) and Section DB (Pipe Trenches) 1998. Payment for this item shall be as per Clause 8.3.2 of SANS 1200 DB. | m ³ | 10473 | | |
| F9.1.2 | | Intermediate excavation as classified in SANS 1200 Section D (Earthworks) and Section DB (Pipe Trenches) 1998. Payment for this item shall be as per Clause 8.3.2 of SANS 1200 DB. | m ³ | 1238 | | |
| F9.1.3 | | Hard excavation as classified in SANS 1200 Section D (Earthworks) and Section DB (Pipe Trenches) 1998. Payment for this item shall be as per Clause 8.3.2 of SANS 1200 DB. | m ³ | 625 | | |
| F9.2 | | Backfill - 600mm wide by 1200mm deep | | | | |
| F9.2.1 | | Allow for the importation of suitable sand for the cable blanket (cover) and cable bedding. Note the imported soil must meet a thermal resistivity 1,0K.m/W and be of a different colour to the soil found on site. | m ³ | 4191 | | |
| F9.2.2 | | Allow for sifting of excavated trench material for use as backfill. | m ³ | 8146 | | |
| F9.2.3 | | Allow for the importation of suitable sand for backfill of trench. | m ³ | 815 | | |
| F9.2.4 | | Backfill in layers to 90% MOD AASHTO maximum density (100% for sand) in layers not exceeding 200mm. | m ³ | 8146 | | |
| F9.2.5 | | Removal of unusable excavated material to dumpsite. | m ³ | 4191 | | |
| F9.3 | | Danger Tape | | | | |
| F9.3.1 | | Supply | m | 19668 | | |
| F9.3.2 | | Install | m | 19668 | | |
| Carried Forward | | | | | | |

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| Brought Forward | | | | | | |
| F9.4 | | Supply and install 500mm(L) x 250mm(W) x 50mm(T) pre-cast reinforced concrete tiles to cover the entire width and length of the MV cable trench (to provide protection for the MV, Equipotential earthing and fibre optic underground cables) as per the specification | | | | |
| F9.4.1 | | Supply | No | 39336 | | |
| F9.4.2 | | Install | No | 39336 | | |
| F9.5 | | Supply, deliver to site, off-load and install concrete cable markers for the MV cable complete with an aluminium marker plate as per the detail on the MV layout drawing and to Specification | | | | |
| F9.5.1 | | Supply | No | 559 | | |
| F9.5.2 | | Install | No | 559 | | |
| F10 | | Existing Services | | | | |
| F10.1 | | Allow for the appointment of a specialist cable tracing agency, making use of the high frequency cable location test method, to trace and mark existing underground MV and LV cable routes for assistance and determination of the new cable routes and the final decommissioning of redundant cables on commissioning the works | Sum | 1 | | |
| F10.2 | | Based on the information developed from the tracing and verification of existing on site cabling routes allow for the fine tuning of the proposed new cable routes and mark up on the drawings the proposed alterations to the proposed new MV cable routes to avoid conflict with the existing installation for approval by the Engineer. | Sum | 1 | | |
| Carried Forward | | | | | | |

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| Brought Forward | | | | | | |
| F11 | | Supply, deliver to site, off load and install the following MV underground cable | | | | |
| F11.1 | | 120 mm² Cu XLPE insulated, copper tape screened, PVC bedded, steel wire armoured and PVC sheathed, 6.35/11 kV cable complete and to specification. Routing (for information - final measurements to be undertaken by the contractor): Main Intake Sub (EWS) to M/S 1 (local): M/S 1 (local) to Low Level Pump Station: Low Level Pump Station to M/S 2 (Heating & Mixing Bldg 2): M/S 2 (Heating & Mixing Bldg 2) to M/S 3 (Tanker Bay): M/S 3 (Tanker Bay) to M/S 4 (Sludge Dewatering): M/S 4 (Sludge Dewatering) to M/S 5 (Heating Bldg 1): M/S 5 (Heating Bldg 1) to M/S 6 (Raw Sludge): M/S 6 (Raw Sludge) to Main Intake Sub (EWS): Main Intake Sub (Veolia) to Aeration (Veolia M/S): Main Intake Sub (Veolia) to Veolia Works: | | | | |
| F11.1.1 | | Total Supply | m | 7 750 | | |
| F11.1.2 | | Total Install | m | 7 750 | | |
| F12 | | Supply, deliver to site, off load and install indoor termination kits for terminating the following MV underground cable to new MV switchgear and indoor/outdoor Distribution Transformers, including for lugs, shrouds/boot, heatshrink, etc., complete and to specification. | | | | |
| F12.1 | | 120 mm² Cu XLPE insulated, copper tape screened, PVC bedded, steel wire armoured and PVC sheathed, 6.35/11 kV cable. | | | | |
| F12.1.1 | | Supply | No | 22 | | |
| F12.1.2 | | Install | No | 22 | | |
| Carried Forward | | | | | | |

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| Brought Forward | | | | | | |
| F13 | | Supply, deliver to site, off load and install heat shrink type jointing kits for jointing the following MV underground cable, complete and to Specification. | | | | |
| F13.1 | | 120 mm ² Cu XLPE insulated, copper tape screened, PVC bedded, steel wire armoured and PVC sheathed, 6.35/11 kV cable. | | | | |
| F13.1.1 | | Supply | No | 22 | | |
| F13.1.2 | | Install | No | 22 | | |
| F14 | | Supply, deliver and install bare copper earth wire (BCEW) attached to the respective supply cables, buried in ground, pulled into ducts, sleeves or fastened to cables fixed on cable trays, as indicated on drawings, and to specification. | | | | |
| F14.1 | | 120mm ² BCEW | | | | |
| F14.1.1 | | Supply | m | 50 | | |
| F14.1.2 | | Install | m | 50 | | |
| | | 70mm ² BCEW | | | | |
| F14.1.1 | | Supply | m | 8000 | | |
| F14.1.2 | | Install | m | 8000 | | |
| F15 | | Supply and install cable terminations for the following BCEW complete with shrouds, lugs, connectors, etc. and to specification. | | | | |
| F15.1 | | 120mm ² BCEW | | | | |
| F15.1.1 | | Supply | No | 12 | | |
| F15.1.2 | | Install | No | 12 | | |
| | | 70mm ² BCEW | | | | |
| F15.1.1 | | Supply | No | 45 | | |
| F15.1.2 | | Install | No | 45 | | |
| Carried Forward | | | | | | |

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| Brought Forward | | | | | | |
| F16 | | Supply, deliver to site, off load and install the following fibre optic underground cable | | | | |
| F16.1 | | 12 Core Multi Mode Fibre Optic cable complete to specification and as shown on the detailed drawings | | | | |
| F16.1.1 | | Supply | m | 7 900 | | |
| F16.1.2 | | Install | m | 7 900 | | |
| F16.2 | | Supply, deliver to site, off load and install type ST termination kits for terminating the 12 Core Fibre Optic cable onto the respective fibre optic patch panels complete and to specification. | | | | |
| F16.2.1 | | Supply | No | 24 | | |
| F16.2.2 | | Install | No | 24 | | |
| F16.3 | | Supply, deliver to site, off load and install termination kits for terminating the 12 Core Fibre Optic cable onto the respective MV Switchgear RTUs complete and to specification. | | | | |
| F16.3.1 | | Supply | No | 22 | | |
| F16.3.2 | | Install | No | 22 | | |
| F16.4 | | Supply, deliver to site, off load and install joint kits for the jointing of the 12 Core Fibre Optic cables complete and to specification. | | | | |
| F16.4.1 | | Supply | No | 22 | | |
| F16.4.2 | | Install | No | 22 | | |
| F16.5 | | Supply, deliver to site, off load and install Single Core Fibre Optic patch leads to establish communication between the respective patch panels and the network switches complete and to specification. | | | | |
| F16.5.1 | | Supply | No | 14 | | |
| F16.5.2 | | Install | No | 14 | | |
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| Brought Forward | | | | | | |
| F16.6 | | Supply, deliver to site, off load and install type ST terminations for terminating the Single Core Fibre Optic patch leads onto the respective fibre optic path panels and network switches complete and to Specification. | | | | |
| F16.6.1 | | Supply | No | 26 | | |
| F16.6.2 | | Install | No | 26 | | |
| F16.7 | | Supply and installation of 12 way fibre optic termination/patch panel, including suitable rack and all rack mounted fixings, etc, complete and to specification | | | | |
| F16.7.1 | | Supply | No | 10 | | |
| F16.7.2 | | Install | No | 10 | | |
| F16.8 | | Supply and install all necessary interface cabling, power cabling, Fibre Optic Patch panel interfaces, Fibre Optic fly leads, Ethernet connections and wiring including for all terminations between the MV RTUs, Ethernet Network Switches and Patch Panels as required and indicated on the drawings, necessary to hook up and commission etc. complete and to specification so that all MV RTU equipment is operational and compatible with the future SCADA system | sum | 1 | | |
| F17 | | Panel PC for monitoring the status of the MV network | No | 1 | | |
| F17.1 | | Panel PC to be mounted in a suitable enclosure within the main intake substation building - as per specifications | | | | |
| F17.1.1 | | Supply | No | 1 | | |
| F17.1.2 | | Install | No | 1 | | |
| F17.2 | | Allowance for the software development and integration of a suitable operating system to monitor the MV network | Sum | 1 | | |
| F17.3 | | All wiring, cabling, power supplies, communications to allow connectivity between the panel PC and the MV network | Sum | 1 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|------|----------|----------|------------|
| Brought Forward | | | | | | |
| F18 | | Supply and install the following widths 3CR12 Steel cable ladder, attached to the bottom and/or sides of the purpose built trenches within the Substation Buildings, including for all necessary 3CR12 Steel fixings, bends, nuts, bolts and all 6mm ² Stainless Steel wire rope bonding strap and two 6xM10 lugs per bonding strap etc., complete as per specification | | | | |
| F18.1 | | 600mm wide | | | | |
| F18.1.1 | | Supply | m | 30 | | |
| F18.1.2 | | Install | m | 30 | | |
| F18.2 | | 400mm wide | | | | |
| F18.2.1 | | Supply | m | 20 | | |
| F18.2.2 | | Install | m | 20 | | |
| F18.3 | | 200mm wide | | | | |
| F18.3.1 | | Supply | m | 30 | | |
| F18.3.2 | | Install | m | 30 | | |
| F19 | | New Distribution Kiosk | | | | |
| F19.1 | | Supply, deliver to site, offload, install, test and commission new Distribution Kiosks complete, as per the Schematic Diagrams and to specification. | | | | |
| F19.1.1 | | Supply | No | 7 | | |
| F19.1.2 | | Install | No | 7 | | |
| F20 | | Allow to survey the site to establish any prevailing conditions and carry out soil resistivity testing in the locations indicated on the layout drawings. A detailed report indicating test results and requirements to achieve the necessary earth resistance for each area. As per specification. | | | | |
| F20.1 | | Resistivity test survey in earth | No | 9 | | |
| F20.2 | | Test report indicating electrode requirements to achieve 1 Ohm or less. | No | 1 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|------|----------|----------|------------|
| Brought Forward | | | | | | |
| F20.3 | | Supply and install medium voltage earth mat comprising multiple 1600mm long, 16mm copper clad earth electrodes driven into ground, interconnected with 50mm ² bare copper conductors. Test certificate to be provided for each earth mat. 1 Ohm electrical earth | | | | |
| F20.3.1 | | New Incoming Main Substation | No | 1 | | |
| F20.3.2 | | Minisubstation - 500kVA & 1000kVA | No | 6 | | |
| F20.3.3 | | Aeration Minisub | No | 1 | | |
| F20.4 | | Supply and install pre-drilled copper earth bars with removable test links, secured to wall with insulated mountings | | | | |
| F20.4.1 | | 60mm x 12mm x 8000mm | No | 3 | | |
| F20.4.2 | | 50mm x 6mm x 500mm | No | 2 | | |
| F20.4.3 | | 50mm x 6mm x 300mm | No | 2 | | |
| F20.4.4 | | 25mm x 6mm x 200mm | No | 7 | | |
| F21 | | All Signage's Installed as per OSH Act | sum | 1 | | |
| F22 | | Allow for fire extinguishers as per specification and to meet statutory regulations | sum | 1 | | |
| F23 | | Allow for independent commissioning pressure testing and phase rotation checks of MV Works for certification complete (Note: Cables are XLPE and specific specialist tests are required). | No | 1 | | |
| F24 | | Maintenance SLA on mini substrations and MV switchgear for a 5 year period, consisting of periodic physical inspections, maintenance parts and labour | Sum | 1.00 | | |
| | | TOTAL FOR SECTION: Carried to Summary | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| G1 | | SECTION G : ELECTRICAL - MAIN MEDIUM VOLTAGE RETICULATION - VEOLIA SUBSTATION | | | | |
| | | Allow for the design, manufacture, supply, install, testing and commission 11kV switchgear as per specifications | | | | |
| G1.1 | | Supply & deliver new 11kV floor standing bulk metering board to accommodate the Municipal metering equipment & mains isolator to eThekweni Electricity requirements (Veolia metering) | No | 1 | | |
| G1.1.1 | | Installation, testing and commissioning of item G1.1 | No | 1 | | |
| G1.2 | | Supply and deliver feeder circuit breaker Motorised - with protection class (5P20) current transformers, protection (class X) current transformers wired for, overcurrent, and earth fault protection with arc protection ALFR. Multifunction overcurrent, earth fault, sensitive earth fault, and thermal overload protection relay. (Feeder Veolia Water Plant, Feeder Transformer Aeration) | No | 2 | | |
| G1.2.1 | | Installation, testing and commissioning of item G1.2 | No | 2 | | |
| G1.3 | | Supply and deliver feeder isolator with transition panel to feeder circuit breakers with arc protection ALFR (Veolia Incoming Isolator) | No | 1 | | |
| G1.3.1 | | Installation, testing and commissioning of item G1.3 | No | 1 | | |
| G1.4 | | Supply and Deliver Remote Terminal Units as per specification for the following MV Panel: Veolia Board; | No | 1 | | |
| G1.4.1 | | Installation, testing and commissioning of item G1.4 | No | 1 | | |
| G2 | | Design, manufacture, supply, install, testing and commission 11kV Mini Substations as per specifications | | | | |
| G2.1 | | Supply and deliver install 1000kVA Mini Sub with plinths and LV isolator and LV feeder circuit breaker to local supplies as per specifications (Aeration Minisub) | No | 1 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|------|----------|----------|------------|
| Brought Forward | | | | | | |
| G2.2 | | Installation, testing and commissioning of item G2.1 | No | 1 | | |
| G3 | | Design, manufacture, supply, install and commission 11kV metering panel and cabling including racking, conduit, etc. as per eThekweni Electricity Unit Standard specifications | | | | |
| G3.1 | | Main Intake Substation - Veolia Switchboard | | | | |
| G3.1.1 | | Supply | No | 1 | | |
| G3.1.2 | | Install | No | 1 | | |
| G4 | | Removal of existing/redundant switchgear, ancillary equipment and associated cabling and transportation to Springfield Reclamation stores and make good as per specifications | sum | 1 | | |
| G5 | | Allow for the production of an integrated changeover plan to ensure minimal interruption to the site and plant operations (as per specifications) | sum | 1 | | |
| G6 | | Supply and install all necessary interface cabling, power cabling, Fibre Optic Patch panel interfaces, Fibre Optic fly leads, Ethernet connections and wiring including for all terminations between the MV RTUs, Ethernet Network Switches and Patch Panels as required and indicated on the drawings, necessary to hook up and commission etc. complete and to specification so that all MV RTU equipment is operational and compatible with the future SCADA system | sum | 1 | | |
| G7 | | Supply and install the following widths 3CR12 Steel cable ladder, attached to the bottom and/or sides of the purpose built trenches within the Substation Buildings, including for all necessary 3CR12 Steel bends, fixings, nuts, bolts and all 6mm ² Stainless Steel wire rope bonding strap and two 6xM10 lugs per bonding strap etc., complete as per specification | | | | |
| G7.1 | | 600mm wide | | | | |
| G7.1.1 | | Supply | m | 30 | | |
| G7.1.2 | | Install | m | 30 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| Brought Forward | | | | | | |
| G7.2 | | 400mm wide | | | | |
| G7.2.1 | | Supply | m | 30 | | |
| G7.2.2 | | Install | m | 30 | | |
| G7.3 | | 200mm wide | | | | |
| G7.3.1 | | Supply | m | 30 | | |
| G7.3.2 | | Install | m | 30 | | |
| G8 | | Allow to survey the site to establish any prevailing conditions and carry out soil resistivity testing in the locations indicated on the layout drawings. A detailed report indicating test results and requirements to achieve the necessary earth resistance for each area. As per specification. | | | | |
| G8.1 | | Resistivity test survey in earth | No | 2 | | |
| G8.2 | | Test report indicating electrode requirements to achieve 1 Ohm or less. | No | 1 | | |
| G8.3 | | Supply and install earth mat comprising multiple 1600mm long, 16mm copper clad earth electrodes driven into ground, interconnected with 50mm ² bare copper conductors. Test certificate to be provided for each earth mat. 1 Ohm electrical earth | | | | |
| G8.3.1 | | Minisubstation - 1000kVA | No | 1 | | |
| G8.3.2 | | Veolia Substation - 1000kVA | No | 1 | | |
| G9 | | All Signage's Installed as per OSH Act | sum | 1 | | |
| G10 | | Allow for fire extinguishers as per specification and to meet statutory regulations | sum | 1 | | |
| G11 | | Maintenance SLA on substration for a 5 year period, consisting of periodic physical inspections, maintenance parts and labour | Sum | 1.00 | | |
| | | TOTAL FOR SECTION: Carried to Summary | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|-----------------|----------------|--|------|----------|----------|------------|
| H1 | | SECTION H : ELECTRICAL - MAIN MEDIUM VOLTAGE INSTALLATION - LOW LEVEL PUMP STATION | | | | |
| | | Design, manufacture, supply, install, testing and commission 11kV compact switchgear as per specifications | | | | |
| H1.1 | | Supply and deliver feeder circuit breaker Motorised - with protection class (5P20) current transformers, protection (class X) current transformers wired for, overcurrent, and earth fault protection with arc protection ALFR. Multifunction overcurrent, earth fault, sensitive earth fault, and thermal overload protection relay | No | 2 | | |
| H1.1.1 | | Installation, testing and commissioning of item H1.1 | No | 2 | | |
| H1.2 | | Supply and deliver Incoming circuit breaker Motorised - with protection class (5P20) current transformers, protection (class X) current transformers wired for, overcurrent, and earth fault protection with arc protection ALFR. Multifunction overcurrent, earth fault, sensitive earth fault, and thermal overload protection relay. (Feeders to VSDs and transformer) | No | 5 | | |
| H1.2.1 | | Installation, testing and commissioning of item H1.2 | No | 5 | | |
| H1.3 | | Supply and Deliver Remote Terminal Units as per specification for the following MV Panels: Low Lvl PS 11kV Board with necessary extensions to allow for all switches; | No | 1 | | |
| H1.3.1 | | Installation, testing and commissioning of item H1.3 | No | 1 | | |
| H2 | | Design, manufacture, supply, install, testing and commission 11kV/420V transformer as per specifications | | | | |
| H2.1 | | Supply and deliver install 200kVA transformer as per specifications (Local transformer) | No | 1 | | |
| H2.1.1 | | Installation, testing and commissioning of item H2.1 | No | 1 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| Brought Forward | | | | | | |
| H3 | | Design, manufacture and supply Medium Voltage 11kV/3.3kV VSD motor starters as per specifications | | | | |
| H3.1 | | 2 times immersible pumps and 2 times shaft driven pumps as per specifications | No | 4 | | |
| H3.2 | | Installation, testing and commissioning of item H3.1 | No | 4 | | |
| H4 | | Supply, deliver to site, off load and install the following MV cable (connection between switchgear and VSDs) | | | | |
| H4.1 | | 50 mm ² Cu XLPE insulated, copper tape | | | | |
| H4.1.1 | | Supply | m | 80 | | |
| H4.1.2 | | Install | m | 80 | | |
| H5 | | Supply, deliver to site, off load and install indoor termination kits for terminating the following MV underground cable to new MV switchgear and indoor/outdoor Distribution Transformers, including for lugs, shrouds/boot, heatshrink, etc., complete and to specification. | | | | |
| H5.1 | | 50 mm ² Cu XLPE insulated, copper tape screened, PVC bedded, steel wire armoured and PVC sheathed, 6.35/11 kV cable. | | | | |
| H5.1.1 | | Supply | No | 8 | | |
| H5.1.2 | | Install | No | 8 | | |
| H6 | | Supply, deliver and install bare copper earth wire (BCEW) attached to the respective supply cables, buried in ground, pulled into ducts, sleeves or fastened to cables fixed on cable trays, as indicated on drawings, and to specification. | | | | |
| H6.1 | | 120mm ² BCEW | | | | |
| H6.1.1 | | Supply | m | 100 | | |
| H6.1.2 | | Install | m | 100 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|------|----------|----------|------------|
| Brought Forward | | | | | | |
| H7 | | Supply and install cable terminations for the following BCEW complete with shrouds, lugs, connectors, etc. and to specification. | | | | |
| H7.1 | | 120mm ² BCEW | | | | |
| H7.1.1 | | Supply | No | 16 | | |
| H7.1.2 | | Install | No | 16 | | |
| H8 | | Supply and install the following widths 3CR12 Steel cable ladder, attached to the bottom and/or sides of the purpose built trenches within the Substation Buildings, including for all necessary 3CR12 Steel bends, fixings, nuts, bolts and all 6mm ² Stainless Steel wire rope bonding strap and two 6xM10 lugs per bonding strap etc., complete as per specification | | | | |
| H8.1 | | 600mm wide | | | | |
| H8.1.1 | | Supply | m | 20 | | |
| H8.1.2 | | Install | m | 20 | | |
| H8.2 | | 400mm wide | | | | |
| H8.2.1 | | Supply | m | 10 | | |
| H8.2.2 | | Install | m | 10 | | |
| H8.3 | | 200mm wide | | | | |
| H8.3.1 | | Supply | m | 20 | | |
| H8.3.2 | | Install | m | 20 | | |
| H9 | | Removal of existing Switchgear and associated cabling and transportation to Springfield Reclamation stores | sum | 1 | | |
| H10 | | Allow to survey the site to establish any prevailing conditions and carry out soil resistivity testing in the locations indicated on the layout drawings. A detailed report indicating test results and requirements to achieve the necessary earth resistance for each area. As per specification. | | | | |
| H10.1 | | Resistivity test survey in earth | No | 1 | | |
| H10.2 | | Test report indicating electrode requirements to achieve 1 Ohm or less. | No | 1 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| Brought Forward | | | | | | |
| H10.3 | | Supply and install medium voltage earth mat comprising multiple 1600mm long, 16mm copper clad earth electrodes driven into ground, interconnected with 50mm ² bare copper conductors. Test certificate to be provided for each earth mat. 1 Ohm electrical earth Lower Level Pump Station Substation | No | 1 | | |
| H10.4 | | Supply and install pre-drilled copper earth bars with removable test links, secured to wall with insulated mountings 60mm x 12mm x 8000mm | No | 1 | | |
| H10.5 | | 50mm x 6mm x 500mm | No | 2 | | |
| H11 | | All Signage's Installed as per OSH Act | sum | 1 | | |
| H12 | | Allow for fire extinguishers as per specification and to meet statutory regulations | sum | 1 | | |
| H13 | | Maintenance SLA on MV Switchgear and VSD's for a 5 year period, consisting of periodic physical inspections, maintenance parts and labour | Sum | 1.00 | | |
| | | TOTAL FOR SECTION: Carried to Summary | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| | | SECTION I : ELECTRICAL - LOW VOLTAGE RETICULATION - MAIN CONNECTIONS The Contractor shall note that the LV supply cables, control cables, earthing conductors, terminations and the associated lengths listed hereunder are Provisional and for Tender purposes only. The Contractor shall be responsible for the final sizing, routing and measurements of all supply, earthing and control cables to accommodate the final equipment and instrumentation selected, only after confirmation may any orders be placed for the procurement of these items. | | | | |
| I1 | | Connection Points to Existing Pump Stations & Equipment The Contractor shall also be responsible for determining the final connection points to ensure all existing low voltage supplies are catered for; only after confirmation may any orders be placed for the procurement of these items. | | | | |
| I1.1 | | Minisub 1 - Local Main | | | | |
| I1.1.1 | | Provide 630A Feeder Circuit Breaker to Existing MCC | sum | 1 | | |
| I1.1.2 | | Connection to existing MCC: 630A Main Circuit Breaker | sum | 1 | | |
| I1.1.3 | | Supply & install cabling as per rates stated below | m | 30 | | |
| I1.2 | | Minisub 2 - Heating & Mixing Building 2 | | | | |
| I1.2.1 | | Provide 630A Feeder Circuit Breaker to Existing MCC | sum | 1 | | |
| I1.2.2 | | Connection to existing MCC: 630A Main Circuit Breaker | sum | 1 | | |
| I1.2.3 | | Supply & install cabling as per rates stated in section 2 | m | 50 | | |
| I1.3 | | Minisub 3 - Tanker Bay | | | | |
| I1.3.1 | | Provide 630A Feeder Circuit Breaker to Existing MCC | sum | 1 | | |
| I1.3.2 | | Connection to existing MCC: 630A Main Circuit Breaker | sum | 1 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| Brought Forward | | | | | | |
| I1.3.3 | | Supply & install cabling as per rates stated in section 2 | m | 50 | | |
| I1.3.4 | | Provide 160A Feeder Circuit Breaker to Existing MCC | sum | 1 | | |
| I1.3.5 | | Connection to existing MCC: | sum | 1 | | |
| I1.3.6 | | Supply & install cabling as per rates stated in section 2 | m | 70 | | |
| I1.4 | | Minisub 4 - Sludge De-Watering | | | | |
| I1.4.1 | | Provide 630A Feeder Circuit Breaker to Existing MCC | sum | 1 | | |
| I1.4.2 | | Connection to existing MCC: 630A Main Circuit Breaker | sum | 1 | | |
| I1.4.3 | | Supply & install cabling as per rates stated in section 2 | m | 90 | | |
| I1.5 | | Minisub 5 - Heating Building 1 | | | | |
| I1.5.1 | | Provide 630A Feeder Circuit Breaker to Existing MCC | sum | 1 | | |
| I1.5.2 | | Connection to existing MCC: 630A Main Circuit Breaker | sum | 1 | | |
| I1.5.3 | | Supply & install cabling as per rates stated in section 2 | m | 50 | | |
| I1.6 | | Minisub 6 - Raw Sludge | | | | |
| I1.6.1 | | Provide 630A Feeder Circuit Breaker to Existing MCC | sum | 1 | | |
| I1.6.2 | | Connection to existing MCC: 500A Main Circuit Breaker | sum | 1 | | |
| I1.6.3 | | Supply & install cabling as per rates stated in section 2 | m | 30 | | |
| I2 | | Supply, deliver to site, offload and install the following multicore PVC/PVC/SWA/PVC, 600V/1000V copper cables buried in ground, pulled into ducts, sleeves or on cable trays, as indicated on drawings and to Specification. | | | | |
| I2.1 | | 185mm² x 4 core (Cu) cable. | | | | |
| I2.1.1 | | Supply | m | 100 | | |
| I2.1.2 | | Install | m | 100 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| Brought Forward | | | | | | |
| I2.2 | | 150mm² x 4 core (Cu) cable. | | | | |
| I2.2.1 | | Supply | m | 100 | | |
| I2.2.2 | | Install | m | 100 | | |
| I2.3 | | 120mm² x 4 core (Cu) cable. | | | | |
| I2.3.1 | | Supply | m | 150 | | |
| I2.3.2 | | Install | m | 150 | | |
| I2.4 | | 95mm² x 4 core (Cu) cable. | | | | |
| I2.4.1 | | Supply | m | 150 | | |
| I2.4.2 | | Install | m | 150 | | |
| I2.5 | | 70mm² x 4 core (Cu) cable. | | | | |
| I2.5.1 | | Supply | m | 150 | | |
| I2.5.2 | | Install | m | 150 | | |
| I2.6 | | 50mm² x 4 core (Cu) cable. | | | | |
| I2.6.1 | | Supply | m | 50 | | |
| I2.6.2 | | Install | m | 50 | | |
| I2.7 | | 35mm² x 4 core (Cu) cable. | | | | |
| I2.7.1 | | Supply | m | 50 | | |
| I2.7.2 | | Install | m | 50 | | |
| I2.8 | | 25mm² x 4 core (Cu) cable. | | | | |
| I2.8.1 | | Supply | m | 50 | | |
| I2.8.2 | | Install | m | 50 | | |
| I2.9 | | 16mm² x 4 core (Cu) cable. | | | | |
| I2.9.1 | | Supply | m | 50 | | |
| I2.9.2 | | Install | m | 50 | | |
| I2.10 | | 10mm² x 4 core (Cu) cable. | | | | |
| I2.10.1 | | Supply | m | 50 | | |
| I2.10.2 | | Install | m | 50 | | |
| I2.11 | | 6mm² x 4 core (Cu) cable. | | | | |
| I2.11.1 | | Supply | m | 50 | | |
| I2.11.2 | | Install | m | 50 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| Brought Forward | | | | | | |
| I2.12 | | 4mm² x 4 core (Cu) cable. | | | | |
| I2.12.1 | | Supply | m | 50 | | |
| I2.12.2 | | Install | m | 50 | | |
| I2.13 | | 2.5mm² x 4 core (Cu) cable. | | | | |
| I2.13.1 | | Supply | m | 50 | | |
| I2.13.2 | | Install | m | 50 | | |
| I2.14 | | 2.5mm² x 7 core (Cu) cable. | | | | |
| I2.14.1 | | Supply | m | 100 | | |
| I2.14.2 | | Install | m | 100 | | |
| I3 | | Supply and install cable terminations for the following multicore PVC/PVC/SWA/PVC copper cables complete with shrouds, lugs, connectors, green heat shrink (over neutral when used as earth cable) etc. and to Specification. | | | | |
| I3.1 | | 185mm² x 4 core (Cu) cable. | | | | |
| I3.1.1 | | Supply | No | 10 | | |
| I3.1.2 | | Install | No | 10 | | |
| I3.2 | | 150mm² x 4 core (Cu) cable. | | | | |
| I3.2.1 | | Supply | No | 10 | | |
| I3.2.2 | | Install | No | 10 | | |
| I3.3 | | 120mm² x 4 core (Cu) cable. | | | | |
| I3.3.1 | | Supply | No | 10 | | |
| I3.3.2 | | Install | No | 10 | | |
| I3.4 | | 95mm² x 4 core (Cu) cable. | | | | |
| I3.4.1 | | Supply | No | 10 | | |
| I3.4.2 | | Install | No | 10 | | |
| I3.5 | | 70mm² x 4 core (Cu) cable. | | | | |
| I3.5.1 | | Supply | No | 10 | | |
| I3.5.2 | | Install | No | 10 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| Brought Forward | | | | | | |
| I3.6 | | 50mm² x 4 core (Cu) cable. | | | | |
| I3.6.1 | | Supply | No | 6 | | |
| I3.6.2 | | Install | No | 6 | | |
| I3.7 | | 35mm² x 4 core (Cu) cable. | | | | |
| I3.7.1 | | Supply | No | 6 | | |
| I3.7.2 | | Install | No | 6 | | |
| I3.8 | | 25mm² x 4 core (Cu) cable. | | | | |
| I3.8.1 | | Supply | No | 6 | | |
| I3.8.2 | | Install | No | 6 | | |
| I3.9 | | 16mm² x 4 core (Cu) cable. | | | | |
| I3.9.1 | | Supply | No | 6 | | |
| I3.9.2 | | Install | No | 6 | | |
| I3.10 | | 10mm² x 4 core (Cu) cable. | | | | |
| I3.10.1 | | Supply | No | 6 | | |
| I3.10.2 | | Install | No | 6 | | |
| I3.11 | | 6mm² x 4 core (Cu) cable. | | | | |
| I3.11.1 | | Supply | No | 6 | | |
| I3.11.2 | | Install | No | 6 | | |
| I3.12 | | 4mm² x 4 core (Cu) cable. | | | | |
| I3.12.1 | | Supply | No | 6 | | |
| I3.12.2 | | Install | No | 6 | | |
| I3.13 | | 2.5mm² x 4 core (Cu) cable. | | | | |
| I3.13.1 | | Supply | No | 6 | | |
| I3.13.2 | | Install | No | 6 | | |
| I3.14 | | 2.5mm² x 7 core (Cu) cable. | | | | |
| I3.14.1 | | Supply | No | 8 | | |
| I3.14.2 | | Install | No | 8 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| Brought Forward | | | | | | |
| I4 | | Supply and install cable jointing kits for the following multicore PVC/PVC/SWA/PVC copper cables complete to Specification. | | | | |
| I4.1 | | 185mm² x 4 core (Cu) cable. | | | | |
| I4.1.1 | | Supply | No | 2 | | |
| I4.1.2 | | Install | No | 2 | | |
| I4.2 | | 150mm² x 4 core (Cu) cable. | | | | |
| I4.2.1 | | Supply | No | 2 | | |
| I4.2.2 | | Install | No | 2 | | |
| I4.3 | | 120mm² x 4 core (Cu) cable. | | | | |
| I4.3.1 | | Supply | No | 2 | | |
| I4.3.2 | | Install | No | 2 | | |
| I4.4 | | 95mm² x 4 core (Cu) cable. | | | | |
| I4.4.1 | | Supply | No | 2 | | |
| I4.4.2 | | Install | No | 2 | | |
| I4.5 | | 70mm² x 4 core (Cu) cable. | | | | |
| I4.5.1 | | Supply | No | 2 | | |
| I4.5.2 | | Install | No | 2 | | |
| I4.6 | | 50mm² x 4 core (Cu) cable. | | | | |
| I4.6.1 | | Supply | No | 4 | | |
| I4.6.2 | | Install | No | 4 | | |
| I4.7 | | 35mm² x 4 core (Cu) cable. | | | | |
| I4.7.1 | | Supply | No | 4 | | |
| I4.7.2 | | Install | No | 4 | | |
| I4.8 | | 25mm² x 4 core (Cu) cable. | | | | |
| I4.8.1 | | Supply | No | 4 | | |
| I4.8.2 | | Install | No | 4 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|----------------|----------|----------|------------|
| Brought Forward | | | | | | |
| I5 | | Trenching (LV Cables) | | | | |
| I5.1 | | Excavation of a 600mm (Wide) x 700mm (Deep) trench for the new LV underground cable, including for sifting, back-filling and compaction, as per the Electrical Specification and Drawings. | | | | |
| I5.1.1 | | Soft excavation as classified in SANS 1200 Section D (Earthworks) and Section DB (Pipe Trenches) 1998. Payment for this item shall be as per Clause 8.3.2 of SANS 1200 DB. | m ³ | 125 | | |
| I5.1.2 | | Intermediate excavation as classified in SANS 1200 Section D (Earthworks) and Section DB (Pipe Trenches) 1998. Payment for this item shall be as per Clause 8.3.2 of SANS 1200 DB. | m ³ | 20 | | |
| I5.1.3 | | Hard excavation as classified in SANS 1200 Section D (Earthworks) and Section DB (Pipe Trenches) 1998. Payment for this item shall be as per Clause 8.3.2 of SANS 1200 DB. | m ³ | 10 | | |
| I5.2 | | Backfill - 600mm wide by 700mm deep | | | | |
| I5.2.1 | | Allow for the importation of suitable sand for the cable blanket (cover) and cable bedding. Note the imported sand must be of a different colour to the sand found on site. | m ³ | 25 | | |
| I5.2.2 | | Allow for sifting of excavated trench material for use as backfill. | m ³ | 115 | | |
| I5.2.3 | | Allow for the importation of suitable sand for backfill of trench. | m ³ | 15 | | |
| I5.2.4 | | Backfill in layers to 90% MOD AASHTO maximum density (100% for sand) in layers not exceeding 200mm. | m ³ | 155 | | |
| I5.2.5 | | Removal of unusable excavated material to dumpsite. | m ³ | 15 | | |
| I5.3 | | Danger Tape | | | | |
| I5.3.1 | | Supply | m | 350 | | |
| I5.3.2 | | Install | m | 350 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| Brought Forward | | | | | | |
| I5.4 | | Supply, deliver to site, off-load and install concrete cable markers for the LV cable complete with an aluminium marker plate as per the detail on the LV layout drawing and to Specification | | | | |
| I5.4.1 | | Supply | No | 50 | | |
| I5.4.2 | | Install | No | 50 | | |
| I6 | | Supply and install the following widths 3CR12 Steel cable ladder, attached to walls or suspended from roof slabs/trusses within the plant buildings, including for all necessary 3CR12 Steel bends, brackets, fixings, nuts, bolts and all 6mm ² Stainless Steel wire rope bonding strap and two 6xM10 lugs per bonding strap etc., complete as per specification. | | | | |
| I6.1 | | 600mm wide | | | | |
| I6.1.1 | | Supply | m | 30 | | |
| I6.1.2 | | Install | m | 30 | | |
| I6.2 | | 400mm wide | | | | |
| I6.2.1 | | Supply | m | 30 | | |
| I6.2.2 | | Install | m | 30 | | |
| I6.3 | | 200mm wide | | | | |
| I6.3.1 | | Supply | m | 30 | | |
| I6.3.2 | | Install | m | 30 | | |
| I6.4 | | 150mm wide | | | | |
| I6.4.1 | | Supply | m | 30 | | |
| I6.4.2 | | Install | m | 30 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|--|----------------|---|------|----------|----------|------------|
| Brought Forward | | | | | | |
| I7 | | Supply and install low voltage earth mat comprising multiple 1600mm long, 16mm copper clad earth electrodes driven into ground, interconnected with 50mm ² bare copper conductors. Test certificate to be provided for each earth mat. 1 Ohm electrical earth | | | | |
| I7.1 | | New Incoming Main Substation | No | 1 | | |
| I7.2 | | Minisubstation - 500kVA & 1000kVA | No | 6 | | |
| I7.3 | | Aeration Minisub | No | 1 | | |
| TOTAL FOR SECTION: Carried to Summary | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|----------------|----------|----------|------------|
| J1 | | SECTION J : LOW LEVEL PUMP STATION - BUILDING WORKS | | | | |
| J1.1 | | FUMIGATION | | | | |
| J2 | | TEMPORARY BARRICADES, SCREENS, ETC | | | | |
| J2.1 | | Temporary barricades, screens, roofs, etc including removal | | | | |
| J2.1.1 | | Dust screen 1.5m high between concrete floor and ceiling, of suitable timber framing with 375 micron polyethylene sheeting stapled on on one side, including corners, ends, etc | m | 25.00 | | |
| J2.2 | | Breaking down and removing brickwork etc | | | | |
| J2.2.1 | | Half brick walls | m ² | 65.00 | | |
| J2.2.2 | | One brick walls | m ² | 125.00 | | |
| J2.3 | | Taking out and removing doors, windows, etc, including thresholds, sills, etc (building up openings and making good finishes elsewhere) | | | | |
| J2.3.1 | | Roller shutter door 3800 x 2100mm high | No | 1.00 | | |
| J2.4 | | Taking out and removing doors, windows, etc, including thresholds, sills, etc and building up openings in brick walls, including making good cement plaster on wall side(s) (making good paintwork | | | | |
| J2.4.1 | | Steel single door and frame 813 x 2013mm high overall from 220mm brick wall | No | 1.00 | | |
| J2.4.2 | | Steel windows and frame 3500 x 940mm high overall from 220mm brick wall | No | 5.00 | | |
| J2.5 | | Taking out/off and removing sundry metalwork | | | | |
| J2.5.1 | | Steel pipe handrails from walls, including brackets, and making good plaster finish. Install new Wecrolock handrails (Elsewhere measured) | m | 30.00 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|----------------|----------|----------|------------|
| Brought Forward | | | | | | |
| J3 | | BUILDING UP OPENINGS | | | | |
| J3.1 | | Brickwork in NFP bricks in class II mortar in building up openings | | | | |
| J3.1.1 | | Half brick walls | m ² | 20.00 | | |
| J3.1.2 | | One brick walls | m ² | 35.00 | | |
| J3.2 | | Sundries | | | | |
| J3.2.1 | | Cutting toothings and bonding new brickwork to existing | m ² | 20.00 | | |
| J3.3 | | Face bricks pointed with recessed horizontal and vertical joints | | | | |
| J3.3.1 | | Extra over brickwork for face brickwork in patches | m ² | 30.00 | | |
| J4 | | PREPARATORY WORK TO EXISTING SURFACES | | | | |
| J4.1 | | Hacking faces of existing concrete columns, beams, etc to receive plaster and paint | m ² | 55.00 | | |
| J5 | | OPENINGS THROUGH EXISTING WALLS ETC | | | | |
| J5.1 | | Altering openings | | | | |
| J5.1.1 | | Altering opening in one brick wall for 1800mm x 944mm high new steel windows and frame overall by breaking out brickwork on both sides and bottom, including pre stressed concrete lintels, making good cement plaster on one side and into reveals and face brickwork on other side and into reveals and with 20 MPa concrete threshold with steel trowelled finish. Window elsewhere measured. | No | 2.00 | | |
| J5.2 | | Hacking up/off and removing granolithic, screeds, plaster, paint etc from concrete or brickwork and preparing surfaces for new screed, plaster, tile finishes, etc | | | | |
| J5.2.1 | | Existing Stoep paint from floors | m ² | 250.00 | | |
| J6 | | PREPARATORY WORK TO EXISTING SURFACES | | | | |
| J6.1 | | Concrete plinth to be pressure cleaned as per architects detail | m ² | 220.00 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|----------------|----------|----------|------------|
| Brought Forward | | | | | | |
| J6.2 | | Cat Ladder to be prepared for new Paint work | m | 6.00 | | |
| J7 | | SITE CLEARANCE | | | | |
| J7.1 | | Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth (Including roofs, court yards, and surround areas where necessary). | m ² | 220.00 | | |
| J8 | | EXCAVATIONS, FILLING ETC (PROVISIONAL) | | | | |
| J8.1 | | Excavations in earth not exceeding 2m deep | | | | |
| J8.1.1 | | Trenches | m ³ | 43.00 | | |
| J8.1.1.1 | | Extra over bulk excavations in earth for excavation in | | | | |
| J8.1.1.2 | | Extra over for Soft rock | m ³ | 20.00 | | |
| J8.2 | | Extra over all excavations for carting away | | | | |
| J8.2.1 | | Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor | m ³ | 30.00 | | |
| J8.3 | | Keeping excavations free of water | | | | |
| J8.3.1 | | Keeping excavations free of all water other than subterranean water | Item | 1.00 | | |
| J8.4 | | FILLING ETC | | | | |
| J8.4.1 | | Earth filling obtained from the excavations (compacted) | | | | |
| J8.4.1.1 | | In prescribed stock piles on site | m ³ | 10 | | |
| J9 | | MASONRY | | | | |
| J9.1 | | FOUNDATIONS (PROVISIONAL) | | | | |
| J9.1.1 | | BRICKWORK | | | | |
| J9.1.1.1 | | Brickwork of NFP bricks in class II mortar | | | | |
| J9.1.1.1.1 | | Half Brick walls | m ² | 20 | | |
| J9.1.1.1.2 | | One Brick Walls | m ² | 95 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|----------------|----------|----------|------------|
| Brought Forward | | | | | | |
| J9.2 | | SUPERSTRUCTURE | | | | |
| J9.2.1 | | FACE BRICKWORK | | | | |
| J9.2.1.1 | | Face bricks pointed with recessed horizontal and flush vertical joints. To Architects details. | | | | |
| J9.2.1.1.1 | | Half brick walls | m ² | 10 | | |
| J9.2.1.1.2 | | One brick walls | m ² | 442 | | |
| J9.2.1.2 | | Extra over brickwork for face brickwork | m ² | 20 | | |
| J9.2.1.3 | | Extra over brickwork to beamfilling for face brickwork | m ² | 85 | | |
| J9.2.2 | | BRICKWORK SUNDRIES | | | | |
| J9.2.2.1 | | Forming toothings and bonding new brickwork to existing | m ² | 20 | | |
| J9.2.2.2 | | Raking out joints of existing face brickwork to receive plaster finish | m ² | 20 | | |
| J9.2.2.3 | | Closing cavities of hollow walls vertically with brickwork one brick wide | m | 10 | | |
| J10 | | WATERPROOFING | | | | |
| J10.1 | | DAMP PROOFING OF WALLS AND FLOORS | | | | |
| J10.1.1 | | One layer of 500 micron "Consol Plastics Brikgrip DPC" embossed damp proof course | | | | |
| J10.1.1.1 | | In walls, sills, etc | m ² | 250 | | |
| | | Cemflex waterproofing to slabs as per specialist specification | | | | |
| J10.1.1.2 | | Slabs | m ² | 250 | | |
| J10.2 | | JOINT SEALANTS ETC. | | | | |
| J10.2.1 | | Bostik 22DS100 Highway polysulphide sealant including backing cord, bond breaker, primer type "Bostik 22DS100GH3", etc. | | | | |
| J10.2.2 | | 15mm x 20mm in expansion joint in floors including racking out, expansion joint filler as necessary | m | 180 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|----------------|----------|----------|------------|
| Brought Forward | | | | | | |
| J11 | | FLOOR COVERINGS, WALL LININGS, ETC | | | | |
| J11.1 | | Epoxy Resin floor coating screed to be applied and installed as per manufacturers specification | | | | |
| J11.1.1 | | On floors | m ² | 250 | | |
| J12 | | METALWORK | | | | |
| J12.1 | | GALVANISED STEEL HANDRAILS Welded handrails to (stair) walls | | | | |
| J12.1.1 | | 50mm External diameter x 1.5mm thick WECROLOCK handrails, to be installed by specialist in accordance with structural engineer's specifications. | m | 30 | | |
| J12.1.2 | | Mentis grating 1000 x 325 x 25x 4.5mm trench cover (Stainless Steel). To architects detail | m | 26 | | |
| J13 | | STEEL WINDOWS, DOORS, ETC | | | | |
| J13.1 | | Galvanised pressed steel combination doors and frames | | | | |
| J13.1.1 | | Galvanised mild steel single door with 50mm frame size 1016x2184mm. 1.6mm thick pressed stainless steel frame to suit wall thickness. 1.5 pairs stainless steel hinges per leaf. S/S handles, Including all ironmongery | No | 4 | | |
| J13.1.2 | | Galvanised mild steel double louvred door in two equal leaves with 50mm frame. Minimum 100mm stile with rebated meeting stiles size 1510x2500mm. 1.6mm thick pressed stainless steel frame to suit wall thickness. 1.5 pairs stainless steel hinges per leaf. Expanded metal antivermin mesh applied to back, Including all ironmongery | No | 1 | | |
| J13.2 | | Purpose made clerestory windows to match existing | | | | |
| J13.2.1 | | Aluminium Casement Window with Aluminium Operable Louver Panels size 8313x1864mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral. W1 | No | 1 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| Brought Forward | | | | | | |
| J13.2.2 | | Aluminium Casement Window size 3563x1864mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver.Single 6.38mm laminated safety glazing Colour: Neutral. W2 | No | 1 | | |
| J13.2.3 | | Aluminium Casement Window with Aluminium Operable Louver Panels size 7470x953mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral.W3 | No | 1 | | |
| J13.2.4 | | Aluminium Casement Window size 3622x1765mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver.Single 6.38mm laminated safety glazing Colour: Neutral W4 | No | 1 | | |
| J13.2.5 | | Aluminium Casement Window size 7101x953mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral W5 | No | 1 | | |
| J13.2.6 | | Aluminium Casement Window with Aluminium Operable Louver Panels size 6407x1864mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral W6 | No | 2 | | |
| J13.2.7 | | Aluminium Casement Window size 1361x1864mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral W7 | No | 1 | | |
| J13.2.8 | | Aluminium Casement Window size 3124x1864mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral W8 | No | 1 | | |
| J13.2.9 | | Aluminium Casement Window size 3210x1864mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral W9 | No | 1 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|------|----------|----------|------------|
| Brought Forward | | | | | | |
| J13.2.10 | | Aluminium Casement Window size 3188x1864mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral W10 | No | 1 | | |
| J13.2.11 | | Aluminium Casement Window size 4652x1864mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral W11 | No | 1 | | |
| J13.2.12 | | Aluminium Casement Window with Aluminium Operable Louver Panels size 5116x940mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral W12 | No | 2 | | |
| J13.2.13 | | Aluminium Casement Window with Aluminium Operable Louver Panels size 3186x940mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral W13 | No | 2 | | |
| J13.2.14 | | Aluminium Casement Window with Aluminium Operable Louver Panels size 4609x940mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral W14 | No | 2 | | |
| J13.2.15 | | Aluminium Casement Window with Aluminium Operable Louver Panels size 3758x940mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral W15 | No | 2 | | |
| J13.2.16 | | Aluminium Casement Window with Aluminium Operable Louver Panels size 7016x1864mm. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral W16 | No | 2 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|----------------|----------|----------|------------|
| Brought Forward | | | | | | |
| J13.2.17 | | Aluminium Window with one side hung opening section, Stainless steel easy clean friction stay hinges to suit opening sections and window size 1847x 1247mm. Matte Silver nylon handles to suit window, to Architect's approval. Aluminium frame with epoxy powder coating - Interpon Class 2 D2525T Colour: Matte Silver. Single 6.38mm laminated safety glazing Colour: Neutral W16 | No | 2 | | |
| J13.3 | | Galvanised steel powder coated roller shutters with 76mm slats (18kg/m ²), fixed to brickwork or concrete Chain operated slatted roller shutter for 3800mm x 4000mm high opening | No | 1 | | |
| J14 | | SCREEDS | | | | |
| J14.1 | | Cement screed to floors. inclusive of all cracks , damage and holes | | | | |
| J14.2 | | 25mm thick on floors and landings | m ² | 250 | | |
| J15 | | INTERNAL PLASTER | | | | |
| J15.1 | | Cement plaster wood floated, on brickwork | | | | |
| J15.1.1 | | On walls | m ² | 365 | | |
| J15.1.2 | | On narrow widths | m ² | 73 | | |
| J15.2 | | Cement plaster rendering coat with gypsum skim plaster finishing coat, on concrete | | | | |
| J15.2.1 | | On Soffits | m ² | 220 | | |
| J16 | | EXTERNAL PLASTER | | | | |
| J16.1 | | Cement plaster wood floated, on brickwork | | | | |
| J16.1.1 | | On walls | m ² | 55 | | |
| J16.1.2 | | On narrow widths | m ² | 20 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|----------------|----------|----------|------------|
| Brought Forward | | | | | | |
| J16.1.3 | | PLUMBING (WORK GROUP 148) | | | | |
| J17 | | RAINWATER DISPOSAL | | | | |
| J17.1 | | 0,6mm Baked enamel pre-painted aluminium alloy H13-35H4. To architects detail | | | | |
| J17.1.1 | | 100 x 165 x 60 x 40mm VHSV eaves gutter with 20mm wide overlapping joints sealed with and including "Compriband" or other approved sealing strip, fixed to falls with and including aluminium hangers at 600mm centres, bolted to steel purlins including holes in purlin | m | 30 | | |
| J17.1.1.1 | | Extra for stopped end | No | 4 | | |
| J17.1.1.2 | | Extra for eaves outlet with nozzle for and joint to 100 x 125mm rectangular downpipe including wire balloon grating | No | 4 | | |
| J17.1.2 | | 100 x 125mm Rectangular rainwater pipes with aluminium brackets fixed to brick wall or concrete | m | 10 | | |
| J17.1.2.1 | | Extra for shoe | No | 4 | | |
| J17.1.2.2 | | Extra for swan neck 1050mm projection | No | 4 | | |
| J17.1.2.3 | | Extra for spreador | No | 4 | | |
| J18 | | PAINT WORK | | | | |
| J18.1 | | ON INTERNAL FLOATED PLASTER SURFACES One coat primer and two coats interior quality PVA emulsion paint in colours which have a value of 7 or less on the Munsell system in accordance with SABS 1091 to Architects Details. | | | | |
| J18.1.1 | | On walls | m ² | 365 | | |
| J18.1.2 | | On narrow widths | m ² | 73 | | |
| J18.2 | | ON EXTERNAL FLOATED PLASTER SURFACES One coat primer and two coats exterior quality PVA emulsion paint. To Architects Details. | | | | |
| J18.2.1 | | On walls | m ² | 55 | | |
| J18.2.2 | | On narrow widths | m ² | 20 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|----------------|----------|----------|------------|
| Brought Forward | | | | | | |
| J18.3 | | ON SMOOTH CONCRETE SURFACES One coat bonding liquid, one coat primer and two coats superior quality acrylic emulsion paint for interior and exterior use, including stopping blow holes | | | | |
| J18.3.1 | | Walls and columns | m ² | 120 | | |
| J18.3.2 | | Ceilings, soffits and beams | m ² | 250 | | |
| J18.4 | | ON METAL SURFACES One coat self etching primer and two coats premium quality polyurethane enamel paint, on galvanised steel | | | | |
| J18.4.1 | | Gates, grilles, burglar screens, balustrades, catladders etc (both sides measured over the full flat area) | m ² | 35 | | |
| | | TOTAL FOR SECTION: Carried to Summary | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|--------------------|----------|----------|------------|
| K1 | SANS 1200 C | SECTION K : LOW LEVEL PUMP STATION - STRUCTURAL WORKS | | | | |
| | | SITE CLEARANCE | | | | |
| K1.1 | 8.2.8 | Demolish and remove structures/buildings and dismantle steelwork | m ³ | 47.00 | | |
| K1.2 | 8.2.8 | Concrete Palisade Fence | m | 27.00 | | |
| K1.3 | 8.2.8 | Saw cut edge, breakout concrete and cut off rebar for openings in 300 mm thick slab and repair with repair grout as per detail | m ² | 17.00 | | |
| K1.4 | 8.2.9 | Transport materials from items (K1.1 and K1.2 and debris and dispose | m ³ .km | 1074.00 | | |
| K2 | SANS 1200 D | EARTHWORKS | | | | |
| K2.1 | 8.3.3(a) | Restricted excavation in all materials and use for backfill and dispose of surplus material. | m ³ | | | |
| K2.1.1 | | Strip footings | m ³ | 125.00 | | |
| K2.1.2 | | Cable trench for Electrical Room | m ³ | 23.00 | | |
| K2.1.3 | 8.3.3(b) | Extra-over Item K2.1 for hard rock excavation | m ³ | 8.0 | | |
| K3 | SANS 1200 G | CONCRETE WORKS | | | | |
| K3.1 | | Formwork (Rate to include for forming of 25 X 25 mm chamfers to all exposed edges) | | | | |
| K3.1.1 | 8.2.2 | Smooth, vertical to walls, columns and beams | m ² | 284.00 | | |
| K3.1.2 | 8.2.5 | Smooth, vertical to edges of foundations or slabs up to 300 mm thick | m | 171.00 | | |
| K3.1.3 | 8.2.5 | Smooth, horizontal to soffits of slabs and beams | m ² | 190.00 | | |
| K3.1.4 | 8.2.6 | Formed voids in walls and slabs up to 300 mm thick | | | | |
| K3.1.4.1 | | Openings up to 1000 X 1000 mm for equipment | No | 7.00 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|----------------|----------|----------|------------|
| Brought Forward | | | | | | |
| K3.1.5 | 8.4.4 | Uniformed surface finishes | | | | |
| K3.1.5.1 | | Steel floated finish | m ² | 324.00 | | |
| K3.2 | | Concrete | | | | |
| K3.2.1 | 8.4.3 | Strength concrete Grade 35 MPa/19mm Walls, beams and slabs | m ³ | 210.00 | | |
| K3.2.2 | 8.4.3 | Strength concrete Grade 20 MPa/19mm Blinding layer, 50 mm thick | m ² | 230.00 | | |
| K3.2.3 | 8.4.3 | Strength concrete Grade 20 MPa/19mm Benching within structures | m ³ | 10.00 | | |
| K3.3 | | Reinforcement | | | | |
| K3.4 | 8.3.1 | High Tensile Steel Bars | | | | |
| K3.5 | | a) Bars 8 mm diameter and larger | t | 22.00 | | |
| K3.6 | 8.3.1 | Mild steel bars | | | | |
| K3.7 | | a) Bars 8 mm diameter and larger | t | 6.00 | | |
| K3.8 | | Joints between existing and new concrete | | | | |
| K3.8.1 | PS G 8.10 | Drill and epoxy cast in of dowel bars Y16 800 mm long, 300 mm deep into existing concrete | No | 854.00 | | |
| K3.8.2 | PS G 8.10 | Apply Epoxy bonding compound, Epidermix 344 or similar | m ² | 65.00 | | |
| K3.8.3 | PS G 8.10 | Core up to 200 mm through existing slabs for cable ways or pouring of concrete | No | 4.00 | | |
| K3.8.4 | PS G 8.10 | Drill 20 mm Dia. Into exiting slab for air release | No | 6.00 | | |
| K3.9 | | Concrete repair and sealing | | | | |
| K3.9.1 | PS G 8.10 | Remove all vegetation from structure roof | Sum | 1.00 | | |
| K3.9.2 | PS G 8.10 | Grit blasting roof soffit and columns to remove paint and dirt | m ² | 2120.00 | | |
| K3.9.3 | PS G 8.10 | High Pressure wash upstand beams, top of roof surface, roof soffit, sump walls, floor and soffit. | m ² | 3012.00 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|----------------|----------|----------|------------|
| Brought Forward | | | | | | |
| K3.9.4 | PS G 8.10 | Flood test roof to identify ponding areas | Sum | 1.00 | | |
| K3.9.5 | PS G 8.10 | Chip away bitumen paste to reach bare concrete in areas where ponding was observed. Apply wet to dry epoxy and screen to correct fall | m ² | 42.00 | | |
| K3.9.4 | PS G 8.10 | Chip away loose/spalling concrete on walls, columns, beams and slabs | m ² | 10.00 | | |
| K3.9.5 | PS G 8.10 | Wire brush and clean exposed rebar. Coat exposed rebar with epoxy protective coting | m ² | 10.00 | | |
| K3.9.6 | PS G 8.10 | Patch prepared area with cementitious repair grout (OPC based) | ltr | 1000.00 | | |
| K3.9.7 | PS G 8.10 | Coat walls, columns, beams and soffit of slabs with a surface applied, crystalline water proofing compound | m ² | 2120.00 | | |
| K3.9.8 | PS G 8.10 | Reseal downpipes by chipping out concrete around downpipe, insert Penebar or similar and apply repair grout. | No | 20.00 | | |
| K3.9.9 | PS G 8.10 | Apply two coats of aluminium pigmented bitumen solution paint to roof area and beams | m ² | 900.00 | | |
| K4 | SANS 1200 HA | Structural Steelwork | | | | |
| K4.1 | 8.3.1 | Structural Stainless Steel 304L, steps, platforms and walkways, complete including all grids, handrailing, bolts, nuts, washers, and HD bolts. | t | 5.00 | | |
| K4.2 | 8.3.2 | Ball and Tube stainless steel 304L Handrail assembly complete. | | | | |
| K4.2.1 | | 1) Horizontal | m | 48.00 | | |
| K4.2.2 | | 2) Sloping | m | 11.00 | | |
| K4.2.3 | | 3) Shaped ends | No | 20.00 | | |
| K4.3 | 8.3.4 | Stainless Steel 304L ladders complete for lengths below, as per detailed drawing P08959-S-DT-001-01 | | | | |
| K4.3.1 | | 3 000 mm | No | 2.00 | | |
| K4.3.2 | | 6 800 mm | No | 1.00 | | |
| K4.3.3 | | 7 000 mm | No | 2.00 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|----------------|----------|----------|------------|
| Brought Forward | | | | | | |
| K4.3.4 | | 7 700 mm | No | 2.00 | | |
| K4.4 | 8.3.3 | Flooring, Complete and Installed with fishlugged Frames | | | | |
| K4.4.1 | | Open Grid Floors RS40 or similar, Stainless Steel 304L | m ² | 104.00 | | |
| K5 | | Miscellaneous Steel Items | | | | |
| K5.1 | PS HA 8.3.7 | Grab rails, Stainless Steel 304L, Complete as per as per detailed drawing P08959-S-DT-001-01 | No | 2.00 | | |
| K5.2 | PS HA 8.3.7 | Slab opening Sliding Covers for sizes below, Stainless Steel 304L, complete including manufacture, transportation and installation | | | | |
| K5.2.1 | | 1.0 x 1.0 m | No | 2.00 | | |
| K5.2.2 | | 1.2 x 1.1 m | No | 1.00 | | |
| K5.2.3 | | 1.3 x 1.3 m | No | 1.00 | | |
| K5.3 | PS HA 8.3.7 | Dismantle, handle, transport, sand blast and recoat, return to site and reassemble existng structural steel work. Coating System as per PS HA 5.7 | kg | 611.00 | | |
| K5.4 | | Valve and Pipe Supports | | | | |
| K5.4.1 | PS HA 8.3.7 | Pipe Support Strap for 600-700 mm Pipe as per details on drawing P08959-M-DT-013-01 | No | 4.00 | | |
| K5.4.2 | PS HA 8.3.7 | Valve Support for Check Valve as per details on drawing P08959-M-DT-013-01 Height: 260 mm Length: 900 mm | No | 8.00 | | |
| K5.4.3 | PS HA 8.3.7 | Horizontal Pipe Bracket for pipes <150 mm Various sizes as per drawing P08959-M-DT-013-01 | No | 3.00 | | |
| K5.4.4 | PS HA 8.3.7 | Vertical Pipe Bracket for pipes <150 mm Various sizes as per drawing P08959-M-DT-013-01 | No | 10.00 | | |
| K5.4.5 | PS HA 8.3.7 | Pipe Clips | No | 18.00 | | |
| | | TOTAL FOR SECTION: Carried to Summary | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate | ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|------|-----|------------|
| L1 | | SECTION L : LOW LEVEL PUMP STATION - MECHANICAL | | | | | |
| | | Dismantling, removing and transport to EWS store or disposal of redundant existing Pipework, fittings and equipment, as directed by the engineer | | | | | |
| L1.1 | | Existing EMU submersible pump, duckfoot, and pipework in sump. | Sum | 1.00 | | | |
| L1.2 | | Existing enf suction pumps including motors | No. | 3.00 | | | |
| L1.3 | | Exisitng 750 mm ND pipework including gate valves and check valves (per pumping line) | No | 4.00 | | | |
| L2 | | Main Duty Pumps and Pipework Design, supply, manufacture, transport, install, test and commision main duty pumps and pipework inline with specifications, including protection equipment. Mechanical drawings P08959-M-DT-001 - 002 and -010 and P08959-M-PI-001 to -005 provides a concept layout of the pump system. | | | | | |
| L2.1 | | Design, supply and deliver to site main duty pumps | | | | | |
| L2.1.1 | | ITEM I7: Immersable Pump, 90° intake bend with celanign port, including pump support structure (steel or concrete) and protection equipment. Duty 750-1500 ℓ/s @ 12-24 m Head | No | 2.00 | | | |
| L2.1.2 | | Maintenance SLA on Pumps and Motors for a 5 year period, consisting of periodic physical inspections, maintenance parts and labour on item L2.1.1 | Sum | 1.00 | | | |
| L2.1.3 | | ITEM I8: Vertical End Suction Pump, including extended cardon shaft with motor, coupler, 90° intake bend with cleaning port, including pump support structure (steel or concrete). Duty 750-1500 ℓ/s @ 12-24 m Head | No | 2.00 | | | |
| L2.1.4 | | Maintenance SLA on Pumps and Motors for a 5 year period, consisting of periodic physical inspections, maintenance parts and labour on item L2.1.3 | Sum | 1.00 | | | |
| Carried Forward | | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate | ZAR | Amount ZAR |
|------------------------|----------------|--|------|----------|------|-----|------------|
| Brought Forward | | | | | | | |
| L2.2 | | Design, supply and deliver to site main duty valves and equipment | | | | | |
| L2.2.1 | | ITEM I3: 750 mm NB Wedge Gate Valve to SANS 664, PN10. Flanged. Including gearbox and extended spindle (approx 3 950 mm long) | No | 12.00 | | | |
| L2.2.2 | | ITEM I9: 600 mm Dismantling Coupler, PN 10, Stainless steel. | No | 4.00 | | | |
| L2.2.3 | | ITEM I13: 700 mm Swing Check Valve. PN 10, Flanged | No | 4.00 | | | |
| L2.2.4 | | 2" No Flow switch to fit Item I9 PN 10 | No | 4.00 | | | |
| L2.2.5 | | 3/4" Pressure Transducer to fit Item I9, PN 10, stainless steel | No | 8.00 | | | |
| L2.2.6 | | 3/4" Pressure guage (Bourdon tube), glycerine filled, op fit Item I9, PN 10, stainless steel | No | 4.00 | | | |
| L2.2.7 | | 3/4" stainless steel ball valve to fit Item I9, PN 10 | No | 24.00 | | | |
| L2.3 | | Design, supply and deliver to site main duty pipework All pipework is to be stainless steel 316L with wall thickness of 9.53 mm | | | | | |
| L2.3.1 | | ITEM I1: 1 200 mm ND to 750 mm ND Bell Mouth 90° Bend, one end flanged, | No | 4.00 | | | |
| L2.3.2 | | ITEM I4: 750 mm ND Pipe piece, 955 mm long, both ends flanged. Fitted with 3/9" threaded socket, compatible with a pressure transducer, pressure transducer to be fitted with ball valve | No | 2.00 | | | |
| L2.3.3 | | ITEM I5: 750 mm ND Pipe piece, 850 mm long, both ends flanged. Fitted with 3/9" threaded socket, compatible with a pressure transducer, pressure transducer to be fitted with ball valve | No | 2.00 | | | |
| L2.3.4 | | ITEM I6: 750 mm ND to 600 mm ND concentric reducer, both ends flanged, fitted with 3/4" threaded socket | No | 4.00 | | | |
| L2.3.5 | | ITEM I10: 600 mm ND double bend to align pump and discharge valves. Flanged both ends. Fitted with 3/4" and 2" threaded sockets compatible with no-flow switch, pressure transducer and pressure guage | No | 2.00 | | | |
| Carried Forward | | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate | ZAR | Amount ZAR |
|------------------------|----------------|--|------|----------|------|-----|------------|
| Brought Forward | | | | | | | |
| L2.3.6 | | ITEM I11: 600 mm ND double bend to align pump and discharge valves. Flanged both ends. Fitted with 3/4" and 2" threaded sockets compatable with no-flow switch, pressure transducer and pressure guage | No | 2.00 | | | |
| L2.3.7 | | ITEM I12: 600 mm ND to 700 mm ND concentric reducer, both ends flanged | No | 4.00 | | | |
| L2.3.8 | | ITEM I14: 700 mm ND 45° Lateral Juction, flanged all ends, with 2" threaded socket | No | 4.00 | | | |
| L2.3.9 | | ITEM I15: 700 mm ND 45° bend, Flanged, | No | 4.00 | | | |
| L2.3.10 | | ITEM I16: 750 mm ND Pipe piece, 246 mm long, both ends flanged. | No | 8.00 | | | |
| L2.3.11 | | ITEM I17: 750 mm ND to 700 mm ND concentric reducer, both ends flanged | No | 4.00 | | | |
| L2.3.12 | | Isolation Kits | | | | | |
| L2.3.12.1 | | 750 mm | No | 16.00 | | | |
| L2.3.12.2 | | 700 mm | No | 8.00 | | | |
| L2.3.12.3 | | 600 mm | No | 8.00 | | | |
| L2.4 | | Installation of Equipment | | | | | |
| L2.4.1 | | Main Duty pumps supplied under item L2.1.1 | Sum | 1.00 | | | |
| L2.4.2 | | Main Duty pumps supplied under item L2.1.3 | Sum | 1.00 | | | |
| L2.4.3 | | Valves and Specials supplied under items L2.2 and L2.3 | Sum | 1.00 | | | |
| L2.5 | | Refirbish and apply lining and coat in-place as per specification | | | | | |
| L2.5.1 | | ITEM I2: Exisitng 750 mm ND Puddle pipe 1081 mm long, flanged | No | 4.00 | | | |
| L2.5.2 | | ITEM I18: Exisitng 750 mm ND Puddle pipe 1382 mm long, flanged | No | 8.00 | | | |
| L2.6 | | Testing and commissioning of equipment Testing and commissioning of all equipment supplied and installed under Items L2.1, L2.2, L2.3 and L2.5 | Sum | 1.00 | | | |
| Carried Forward | | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate | ZAR | Amount ZAR |
|------------------------|----------------|--|------|----------|------|-----|------------|
| Brought Forward | | | | | | | |
| L3 | | Drainage Pipework Design, supply, manufacture, transport, install and test drainage pipework inline with specifications, including protection equipment. Mechanical drawings P08959-M-DT-001 - 002 and -011 and P08959-M-PI-001 to -005 provides a concept layout of the pump system. | | | | | |
| L3.1 | | Design, supply and deliver to site drainage pumps, valves and equipment | | | | | |
| L3.1.1 | | Immersible Pump, including duckfoot, quick release coupler, lifting chain and guide rail. Duty 4 l/s @ 10 m Head. | No | 1.00 | | | |
| L3.1.2 | | 50 mm NB Swing Check valve, PN 10, stainless steel, flanged | No | 1.00 | | | |
| L3.1.3 | | 50 mm NB Gate Valve, PN 10, stainless steel, flanged. | No | 1.00 | | | |
| L3.1.4 | | 2" stainless steel ball valve to fit Item I9, PN 10 | No | 4.00 | | | |
| L3.2 | | Design, supply and deliver to site drainage pipework | | | | | |
| L3.2.1 | | 50 mm ND Stainless steel, SCH 40, pipework, threaded as indicated on tender drawings | m | 25.00 | | | |
| L3.2.2 | | 50 mm ND Female-Female threaded elbow | No | 7.00 | | | |
| L3.2.3 | | 50 mm ND Threaded Male-Male coupling | No | 8.00 | | | |
| L3.2.4 | | 50 mm ND Female-Female threaded T-piece | No | 3.00 | | | |
| L3.2.5 | | 50 mm ND Stainless steel, SCH 40, pipework, flanged as indicated on tender drawings | m | 16.00 | | | |
| L3.2.6 | | 50 mm ND 90° Elbow, SHC40, flanged, stainless steel | No | 2.00 | | | |
| L3.2.7 | | 50 mm ND to 100 mm ND concentric Reducer, flanged, stainless steel | No | 1.00 | | | |
| L3.2.8 | | Isolation Kits | | | | | |
| L3.2.8.1 | | 50 mm | No | 5.00 | | | |
| Carried Forward | | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate | ZAR | Amount ZAR |
|------------------------|----------------|--|------|----------|------|-----|------------|
| Brought Forward | | | | | | | |
| L3.3 | | Installation of Equipment | | | | | |
| L3.3.1 | | Equipment, Valves and Specials supplied under items L3.1 and L3.2 | Sum | 1.00 | | | |
| L3.4 | | Testing and commissioning of equipment | | | | | |
| | | Testing and commissioning of all equipment supplied and installed under Items L3.1 and L3.2 | Sum | 1.00 | | | |
| L4 | | Main Sump Pump Pipework | | | | | |
| | | Design, supply, manufacture, transport, install and test drainage pipework inline with specifications, including protection equipment. | | | | | |
| | | Mechanical drawings P08959-M-DT-001 - 002 and -012 and P08959-M-PI-001 to -005 provides a concept layout of the pump system. | | | | | |
| L4.1 | | Design, supply and deliver to site drainage pumps, valves and equipment | | | | | |
| L4.1.1 | | Immersible Pump, including duckfoot, quick release coupler, lifting chain and guide rail. Duty 12 l/s @ 10 m Head. | No | 4.00 | | | |
| L4.1.2 | | 80 mm NB Swing Check valve, PN 10, stainless steel, flanged | No | 4.00 | | | |
| L4.1.3 | | 80 mm NB Gate Valve, PN 10, stainless steel, flanged. | No | 4.00 | | | |
| L4.2 | | Design, supply and deliver to site main sump pump pipework | | | | | |
| L4.2.1 | | 50 mm ND Stainless steel, SCH 40, pipework, flanged as indicated on tender drawings | m | 22.00 | | | |
| L4.2.2 | | 80 mm ND 90° Elbow, SHC40, flanged, stainless steel | No | 2.00 | | | |
| L4.2.3 | | 80 mm ND Equal T-piece, SHC40, flanged, stainless steel | No | 2.00 | | | |
| L4.2.4 | | 80 mm ND to 100 mm ND concentric Reducer, flanged, stainless steel | No | 2.00 | | | |
| L4.2.5 | | 100 mm ND Stainless steel, SCH 40, pipework, flanged as indicated on tender drawings | m | 11.00 | | | |
| L4.2.6 | | 100 mm ND Equal T-piece, SHC40, flanged, stainless steel | No | 1.00 | | | |
| Carried Forward | | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate | ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|------|-----|------------|
| Brought Forward | | | | | | | |
| L4.2.7 | | 100 mm ND to 150 mm ND concentric Reducer, flanged, stainless steel | No | 1.00 | | | |
| L4.2.8 | | 150 mm ND x 100 mm ND Reducing T-piece, SHC40, flanged, stainless steel | No | 1.00 | | | |
| L4.2.9 | | 150 mm ND Blank flange, stainless steel | No | 1.00 | | | |
| L4.2.10 | | 150 mm ND Stainless steel, SCH 40, pipework, flanged as indicated on tender drawings | m | 8.00 | | | |
| L4.2.11 | | 150 mm ND 90° Elbow, SHC40, flanged, stainless steel | No | 1.00 | | | |
| L4.2.12 | | Isolation Kits | | | | | |
| L4.2.12.1 | | 80 mm | No | 20.00 | | | |
| L4.3 | | Installation of Equipment | | | | | |
| L4.3.1 | | Equipment, Valves and Specials supplied under items L4.1 and L4.2 | Sum | 1.00 | | | |
| L4.4 | | Testing and commissioning of equipment | | | | | |
| L4.5 | | Testing and commissioning of all equipment supplied and installed under Items L4.1 and L4.2 | Sum | 1.00 | | | |
| L5 | | Purge Pipework Design, supply, manufacture, transport, install and test drainage pipework inline with specifications, including protection equipment. | | | | | |
| L5.1 | | Design, supply and deliver to site purge Vales and fittings | | | | | |
| L5.1.1 | | 3/4" stainless steel ball valve to fit Item I9, PN 10 | No | 8.00 | | | |
| L5.1.2 | | Brass Compression fittings, elbows, T's and straight connectors | No | 18.00 | | | |
| L5.2 | | Design, supply and deliver to site main sump pump pipework | | | | | |
| L5.2.1 | | 22 mm Polucop pipe | m | 76.00 | | | |
| L6 | | Sluice Gates | | | | | |
| L6.1 | | 1,1 m x 1x1 m Stainless Steel sluice gate inclduing extended spindle to ground floor (approx length 5.3 m), gearbox and handle | No | 3.00 | | | |
| Carried Forward | | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate | ZAR | Amount ZAR |
|--|----------------|---|------|----------|------|-----|------------|
| Brought Forward | | | | | | | |
| L7 | | Overhead Crane and Gantries | | | | | |
| L7.1 | MS 1 | Overhead crane, complete as per specification, including rails, clips and electrical supply | No | 1.00 | | | |
| L7.2 | MS 2 | Supply and deliver to site and install, A-frame Gantry Crane, with SWL of 500 kg | No | 1.00 | | | |
| L7.3 | MS 3 | Supply, delivery to site and install, chain block-and tackle for A-frame gantry complete with trolley. Capacity 500 kg | No | 1.00 | | | |
| L7.4 | MS 4 | Evaluation of existing crane rails by crane supplier. Removal for existing rails, transport to EWS store or dispose of all rails, clips and sundry items. | Sum | 1.00 | | | |
| L7.5 | MS 5 | Dismantling, removing and transport to EWS store or disposal of existing manual overhead crane as directed by the engineer | Sum | 1.00 | | | |
| L8 | | Miscellaneous Items | | | | | |
| L8.1 | | Mobile torque wrench to fit valve heads for opening and closing valves. | Sum | 1.00 | | | |
| L8.2 | | Clean uPVC ventilation pipes | Sum | 1.00 | | | |
| L8.3 | | 800 mm Turbine Vent, stainless steel | No | 2.00 | | | |
| TOTAL FOR SECTION: Carried to Summary | | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| M1 | | SECTION M : LOW LEVEL PUMP STATION - ELECTRICAL MV | | | | |
| M1.1 | | 3.3kV 3 Phase Cables to Pumps | | | | |
| M1.1.1 | | Dry Type Motors | | | | |
| M1.1.1.1 | | Cable PVC Insulated, PVC Bedded, SWA 1.9/3.3kV 35mm ² Cu x 3 core SANS 1507-3 | m | 120 | | |
| M1.1.2 | | Terminations at motor | ea | 2 | | |
| M1.1.3 | | Terminations at drive | ea | 2 | | |
| M1.1.4 | | Earthing, 25mm ² copper insulated green and yellow | m | 30 | | |
| M1.1.5 | | Earth wire terminations | ea | 4 | | |
| M1.1.6 | | Emergency Stop | ea | 2 | | |
| M1.2 | | Immersible Pump | | | | |
| M1.2.1 | | Cable PVC Insulated, PVC Bedded, SWA 1.9/3.3kV 50mm ² Cu x 3 core SANS 1507-3 | m | 120 | | |
| M1.2.2 | | Terminations at motor | ea | 2 | | |
| M1.2.3 | | Terminations at drive | ea | 2 | | |
| M1.2.4 | | Earthing, 25mm ² copper insulated green and yellow | m | 30 | | |
| M1.2.5 | | Earth wire terminations | ea | 4 | | |
| M1.2.6 | | Emergency Stop | ea | 2 | | |
| M1.3 | | Cable Trays <i>Wire basket cable tray Heavy Duty 5mm wire, hot dip galvanised, 50x50mm pitch apertures. Rate to include joiner clamp sets, hold down saddles, support channels, hangers, etc.</i> | | | | |
| M1.3.1 | | 400mm wide by 75mm high | m | 120 | | |
| M1.3.2 | | 100mm wide by 75mm high | m | 48 | | |
| M1.3.3 | | <i>Cable tray bend horizontal</i> | | | | |
| M1.3.3.1 | | 400mm wide by 75mm high | ea | 2 | | |
| M1.3.3.2 | | 100mm wide by 75mm high | ea | 4 | | |
| | | <i>Cable tray bends vertical</i> | | | | |
| M1.3.3.1 | | 400mm wide by 75mm high | ea | 2 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|--|----------------|--|------|----------|----------|------------|
| Brought Forward | | | | | | |
| M1.3.3.2 | | 100mm wide by 75mm high | ea | 4 | | |
| M1.3.4 | | Cable tray T | | | | |
| M1.3.4.1 | | 400mm wide by 75mm high to 100 mm wide | ea | 4 | | |
| TOTAL FOR SECTION: Carried to Summary | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|-----------------|----------------|--|------|----------|----------|------------|
| N1 | | SECTION N : LOW LEVEL PUMP STATION - ELECTRICAL SMALL POWER AND LIGHTING | | | | |
| N1.1 | | Low-Level Pump Station: Substation Small Power and Lighting | | | | |
| N1.1.1 | | Lighting | | | | |
| N1.1.1 | | Type A IP65 LED 41W with plastic clips, vapour proof 4ft | ea | 67 | | |
| N1.1.2 | | Type B IP65 LED Floodlight 5355 Optic 38W | ea | 9 | | |
| N1.2 | | Socket Outlets and Light Switches | | | | |
| N1.2.1 | | Water Proof Socket Outlets, double 16A, surface mount, PVC cover and PVC screws | ea | 12 | | |
| N1.2.1 | | 3-Phase 5-Pin Outlet (IP44 32A 3P+N+E) Surface Mounted | ea | 14 | | |
| N1.2.2 | | Light Switch, 16A, 1 lever 1 way | ea | 13 | | |
| N1.2.3 | | Light Switch, 16A, 2 lever 1 way | ea | 4 | | |
| N1.2.4 | | Light Switch, 16A, 3 lever 1 way | ea | 1 | | |
| N1.2.5 | | Light Switch, 16A, 2 lever 2 way | ea | 4 | | |
| N1.2.6 | | Photocell, IP65, corrosion proof, in clear weatherproof box to withstand corrosive gases and coastal air | ea | 2 | | |
| N1.3 | | Power Points | | | | |
| N1.3.1 | | Crane 3 Phase 32A | ea | 1 | | |
| N1.3.2 | | Socket outlet welding/ testing 32A | ea | 3 | | |
| N1.3.3 | | 32A 3-Pole Isolator (DIP) - PUH/1 | ea | 6 | | |
| N1.3.4 | | 20A 3-Pole Isolator (PEA-RP400GAQ) | ea | 3 | | |
| N1.3.5 | | 20A 3-Pole Isolator (AXIAL FAN) | ea | 4 | | |
| N1.3.6 | | 10A 3-Pole Fan Isolator (AXIAL FAN) | ea | 2 | | |
| N1.3.7 | | 10A 3-Pole Isolator (5 x SUMP PUMP) on Mounting Bracket | ea | 5 | | |
| N1.3.8 | | 160A 3-Pole 50kA Isolator (2 x 650kW MV PUMP MOTOR SET) on Mounting Bracket | ea | 2 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| Brought Forward | | | | | | |
| N1.3.9 | | 1250A 3-Pole 50kA Isolator (2 x 550kW MV PUMP MOTOR SET) on Mounting Bracket | ea | 2 | | |
| N1.4 | | Cable Trays <i>Wire basket cable tray Medium Duty 4mm wire, hot dip galvanised, 100x50mm pitch apertures. Rate to include joiner clamp sets, hold down saddles, support channels, hangers, etc.</i> | | | | |
| N1.4.1 | | 300mm wide by 50mm high | m | 251 | | |
| N1.4.2 | | 100mm wide by 50mm high | m | 164 | | |
| N1.4.3 | | 50mm wide by 50mm high | m | 197 | | |
| N1.4.4 | | <i>Cable tray bend horizontal</i> | | | | |
| N1.4.5 | | 300mm wide by 50mm high | ea | 8 | | |
| N1.4.6 | | 100mm wide by 50mm high | ea | 6 | | |
| N1.4.7 | | 50mm wide by 50mm high | ea | 7 | | |
| N1.4.7 | | <i>Cable tray bends vertical</i> | | | | |
| N1.4.8 | | 300mm wide by 50mm high (external/internal) | ea | 8 | | |
| N1.4.9 | | 100mm wide by 50mm high (external/internal) | ea | 6 | | |
| 1.4.10 | | 50mm wide by 50mm high (external/internal) | ea | 7 | | |
| N1.5 | | Cable tray T | | | | |
| N1.5.1 | | 300mm wide by 50mm high | ea | 4 | | |
| N1.5.2 | | 100mm wide by 50mm high | ea | 3 | | |
| N1.5.3 | | 50mm wide by 50mm high | ea | 4 | | |
| N1.5.4 | | Power Supplies to Valves | ea | 1.00 | | |
| N1.6 | | Trunking | | | | |
| N1.6.1 | | PVC grey 100mm x 50mm | m | 60 | | |
| N1.6.2 | | PVC grey 50mm x 50mm | m | 60 | | |
| N1.7 | | Conduit | | | | |
| N1.7.1 | | 20mm PVC conduit, complete with hospital stand-off saddles and stainless steel screws | m | 1679 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|------|----------|----------|------------|
| Brought Forward | | | | | | |
| N1.7.2 | | Expansion couplers | ea | 10 | | |
| N1.7.3 | | Round box, PVC, 2 way | ea | 120 | | |
| N1.7.4 | | Round box, PVC, 3 way | ea | 120 | | |
| N1.8 | | LV Cables | | | | |
| N1.8.1 | | 2.5mm ² copper, 4 core PVC insulated, black, red and green/yellow | m | 504 | | |
| N1.8.2 | | 4mm ² copper, 4 core PVC insulated, black, red and green/yellow | m | 216 | | |
| N1.9 | | Terminations Cables | | | | |
| N1.9.1 | | 2.5mm ² copper, 4 core PVC insulated, black, red and green/yellow | ea | 28 | | |
| N1.9.2 | | 4mm ² copper, 4 core PVC insulated, black, red and green/yellow | ea | 12 | | |
| N.10 | | Wiring | | | | |
| N1.10.1 | | 1.5mm ² copper, PVC insulated, black, red and green/yellow | m | 1953 | | |
| N.10.2 | | 2.5mm ² copper, PVC insulated, black, red and green/yellow | m | 1364 | | |
| N10.3 | | 2.5mm ² copper, PVC insulated, blue, red, green and yellow | m | 2544 | | |
| N10.4 | | 4mm ² copper, PVC insulated, blue, red, green and yellow | m | 624 | | |
| N10.5 | | 10mm ² copper insulated copper earth wire | m | 684 | | |
| N11 | | Main LV Distribution Board | | | | |
| N11.1 | | Main LV DB as per SLD and specification | ea | 1 | | |
| N11.2 | | Sub DB A as per SLD | ea | 1 | | |
| N.12 | | Earthing and Lightning Protection | | | | |
| N12.1 | | Main Building | ea | 1 | | |
| N12.2 | | Additional Points | ea | 10 | | |
| | | TOTAL FOR SECTION: Carried to Summary | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|---------|----------------|---|------|----------|----------|------------|
| | | SECTION O : LOW LEVEL PUMP STATION - ELECTRICAL CONTROL | | | | |
| O1 | | Emergency Stop | | | | |
| O1.1 | | Distribution Board Enclosure for Feeding Emergency Stop's | ea | 1 | | |
| O1.2 | | Galvanised and painted post for mounting emergency stop | ea | 4 | | |
| O2 | | Cable Trays 300mm wide galvanised wire mesh tray medium duty 100x50mm 4mm dia. Wire | | | | |
| O2.1 | | Power Supplies to Valves | m | 200 | | |
| O2.1 | | Control and Monitoring Cables | m | 200 | | |
| O3 | | Communications Cables | | | | |
| O3.1 | | Motor monitoring | m | 200 | | |
| O3.2 | | Temperature | m | 200 | | |
| O3.3 | | Bearing Vibration | m | 200 | | |
| O4 | | Communications | | | | |
| O4.1 | | Ethernet Cat 6A cable | m | 500 | | |
| O4.2 | | Ultrasonic level sensor | ea | 3 | | |
| O4.3 | | Bracket for sensor as per detail dwg | ea | 3 | | |
| O4.4 | | Control unit for ultrasonic | ea | 3 | | |
| O4.5 | | PVC conduits 20mm dia | m | 200 | | |
| O4.6 | | Three prong stainless steel liquid level | ea | 1.00 | | |
| O4.7 | | Digital I/O Communications Box, IP65, industrial rugged | ea | 10 | | |
| O5 | | Motor Monitoring | | | | |
| O5.1 | | Vibration evaluation unit, ethernet/IP communication. Edge connection for IOT | ea | 4.00 | | |
| O5.2 | | 24V DC Power supply for IO-Link and VSE units 5Amp | ea | 4.00 | | |
| O5.3 | | Software package monitoring vibration analysis, QM9102 moneo RTM | ea | 1.00 | | |
| | | TOTAL FOR SECTION: Carried to Summary | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| P1 | 600-04 | SECTION P : LOW LEVEL PUMP STATION - HVAC | | | | |
| | | PUMP SUMPS - EXTRACT AIR DUCT SYSTEM | | | | |
| P1.1 | 600.0.01.00 | Round Ducting | | | | |
| P1.1.1 | .01.01 | Category 6 - (Round Ducting) Ø560 & 1mm Galv Thick | m | 4.00 | | |
| P1.1.2 | .01.02 | Category 6 - (Round Ducting) Ø800 & 1mm Galv Thick | m | 2.00 | | |
| P1.2 | 600.0.02.00 | Duct Fittings | | | | |
| P1.2.1 | | Discharge Cowl (Including Mounting Brackets to PVC Pipe Ø560 and installation) | | | | |
| P1.2.1.1 | 0.2.01 | Ø560 Marine Discharge Cowl | No | 2.00 | | |
| P1.2.2 | | Bends | | | | |
| P1.2.2.1 | .02.02 | Category 6 - (Round Ducting) & 1mm Galv Thick Ø560 (90° Vertical bend) | No | 2.00 | | |
| P1.2.3 | | Transformers Category 6 - (Round Ducting) & 1mm Galv Thick | | | | |
| P1.2.3.1 | .02.03 | Ø800 - Ø560 | No | 2.00 | | |
| P2 | 600-04 | PUMP SUMPS - EXTRACT AIR MECHANICAL EQUIPMENT | | | | |
| P2.1 | 600.0.07.00 | Mechanical Equipment Fans in accordance with Section 300 | | | | |
| P2.2 | | Ventilation Fans Axial flow fan, C/W steel galvanised mounting frame ,mounting feet, spring mounts, flanges as specified, suitable electrical connection wiring (1,5m long) between isolator and fan terminals, vibration isolators, tested, commissioned and installed in position. FAN MUST BE SPARK-PROOF & CERTIFIED. | | | | |
| P2.2.1 | .07.01 | Axial Flow Fan Ø560: >1.4 m ³ /s @150 Pa | No | 1.00 | | |
| P2.2.2 | .07.02 | Axial Flow Fan Ø560: >1.7 m ³ /s @150 Pa | No | 1.00 | | |
| P2.2.3 | .07.03 | Circular Sound Attenuator Ø560, 560mm long | No | 4.00 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|------|----------|----------|------------|
| Brought Forward | | | | | | |
| P2.3 | | Sheet Metal Ducting Sheet metal ducting in accordance with Section 300 | | | | |
| P2.3.1 | 600.0.01.00 | Straight Ducting | | | | |
| P2.3.1.1 | .01.01 | Category 1 - (up to 750mm with semi perimeter < 1150mm) & 1mm Galv Thick | m² | 40.00 | | |
| P2.3.1.2 | .01.02 | Category 3 - (751mm to 1350mm) & 1mm Galv Thick | m² | 20.00 | | |
| P2.4 | 600.0.02.00 | Duct Fittings | | | | |
| P2.4.1 | | Bends | | | | |
| P2.4.1.1 | | Category 1 - (up to 750mm with semi perimeter < 1150mm) & 1mm Galv Thick | | | | |
| P2.4.1.1.1 | .02.01 | 350x200 (90° Horizontal Bend) | No | 1.00 | | |
| P2.4.1.1.2 | .02.02 | 700x200 (90° Vertical Bend) | No | 1.00 | | |
| P2.4.1.1.3 | .02.03 | 700x200 (90° Horizontal Bend) | No | 1.00 | | |
| P2.4.1.2 | | Category 3 - (751mm to 1350mm) & 1mm Galv Thick | | | | |
| P2.4.1.2.1 | .02.04 | 1300x350 (90° Vertical Bend) | No | 4.00 | | |
| P2.4.1.2.2 | .02.05 | 1300x350 (90° Horizontal Bend) | No | 1.00 | | |
| P2.4.2 | | Transformations | | | | |
| | | Category 3 - (751mm to 1350mm) & 1mm Galv Thick | | | | |
| P2.4.2.1 | .02.06 | 700x200 - 350x200 | No | 3.00 | | |
| P2.4.2.2 | .02.07 | 700x350-700x250-FOT | No | 2.00 | | |
| P2.4.2.3 | .02.08 | 1300x350 - Ø800 | No | 2.00 | | |
| P2.4.2.4 | .02.09 | Ø800 - 1200x1200 | No | 2.00 | | |
| P2.4.3 | | Shoes | | | | |
| P2.4.3.1 | | Category 3 - (751mm to 1350mm) & 1mm Galv Thick | | | | |
| P2.4.3.1.1 | .02.10 | 700x200 | No | 1.00 | | |
| P2.4.3.1.2 | .02.11 | 700x350 | No | 2.00 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|---|------|----------|----------|------------|
| Brought Forward | | | | | | |
| P2.4.4 P2.4.4.1 | | Stop Ends Category 1 - (up to 750mm with semi perimeter < 1150mm) & 1mm Galv Thick | | | | |
| P2.4.4.1.1 | .02.12 | 350x200 | No | 3.00 | | |
| P2.4.4.2 | | Category 3 - (751mm to 1350mm) & 1mm Galv Thick | | | | |
| P2.4.4.2.1 | .02.13 | 1300x350 | No | 1.00 | | |
| P2.5 | 600.0.06.00 | Air Terminals Air Terminals in accordance with Sections 300. Rates to include installation, fittings etc. | | | | |
| P2.4.1 | | Extraction Air Grilles | | | | |
| P2.4.1.1 | .06.01 | 300x300 | No | 6.00 | | |
| P2.4.1.2 | .06.02 | 600x600 | No | 1.00 | | |
| P2.4.2 | | Weather Louvres | | | | |
| P2.4.2.1 | .06.03 | 1200x1200 | No | 2.00 | | |
| P2.4.3 | | Dampers | | | | |
| P2.4.3.1 | | Opposed Blade Damper | | | | |
| P2.4.3.1.1 | .06.04 | 300x300 | No | 6.00 | | |
| P2.4.3.1.1 | .06.05 | 600x600 | No | 1.00 | | |
| P2.4.3.2 | | Gravity Damper | | | | |
| P2.4.3.2.1 | .06.06 | 1200x1200 | No | 2.00 | | |
| P2.5 | 600.0.07.00 | Mechanical Equipment Fans in accordance with Section 300 | | | | |
| P2.5.1 | | Ventilation Fans Axial flow fan, C/W mounting by threaded rods suspended by roof slab, spring mounts and flanges as specified, suitable electrical connection wiring (1,5m long) between isolator and fan terminals, including mounting frame, vibration isolators, tested, commissioned and installed in position. | | | | |
| P2.5.1.1 | .07.01 | Axial Flow Fan Ø800: >5,3 m³/s @ 250 Pa | No | 2.00 | | |
| P2.5.1.2 | .07.02 | Circular Sound Attenuator Ø800, 800mm long | No | 4.00 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|------|----------|----------|------------|
| Brought Forward | | | | | | |
| P2.6 | | Sheet Metal Ducting Sheet metal ducting in accordance with Section 300 | | | | |
| P2.6.1 | 600.0.01.00 | Spiral Ducting | | | | |
| P2.6.0.1 | .01.01 | Category 6 - (Round/Spiral Ducting) & 1mm Galv Thick | m | 8.00 | | |
| P2.6.1 | 600.0.02.00 | Duct Fittings | | | | |
| P2.6.1.1 | | Bends Category 6 - (Round/Spiral Ducting) & 1mm Galv Thick | | | | |
| P2.6.1.1.1 | .02.01 | Ø800 (90 deg) | No | 6 | | |
| P2.6.1.2 | | Transformations Category 6 - (Round/Spiral Ducting) & 1mm Galv Thick | | | | |
| P2.6.1.2.1 | .02.02 | Ø800 - 650x650 | No | 2.00 | | |
| P2.6.1.2.2 | .02.03 | Ø800 - 1800x600 | No | 2.00 | | |
| P2.7 | 600.0.06.00 | Air Terminals Air Terminals in accordance with Sections 300. Rates to include installation, fittings etc. | | | | |
| P2.7.1 | | Supply Louvres (Punkah Louvre with double deflection blades, including mounting bracket, installation, testing and commissioning as per detailed spec. | | | | |
| P2.7.1.1 | .06.01 | 600x600 | No | 2.00 | | |
| P2.7.2 | | Filters (To be installed as filter bank 1200x1200 in accordance with Axial Flow Fans, including filter bank frame square position to form 1200x1200 Filter Bank) | | | | |
| P2.7.2.1 | .06.02 | 3 x (600x600mm) | Lot | 2.00 | | |
| P2.7.3 | | In-take Cowls (Including Wire Mesh Screen, 45 degrees as specified per drawing with a bottom of 300mm minimum) | | | | |
| P2.7.3.1 | .06.03 | 1200x1200 | No | 2.00 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|------|----------|----------|------------|
| Brought Forward | | | | | | |
| P2.8 | 600.0.07.00 | Mechanical Equipment Fans in accordance with Section 300 | | | | |
| P2.8.1 | | Ventilation Fans Axial flow fan, C/W steel galvanised mounting frame ,mounting feet, spring mounts, flanges as specified, suitable electrical connection wiring (1,5m long) between isolator and fan terminals, including mounting frame, vibration isolators, tested, commissioned and installed in position. | | | | |
| P2.8.0.1 | .07.01 | Axial Flow Fan Ø800: 4 m3/s @ 250 Pa | No | 2.00 | | |
| P2.8.0.1 | .07.02 | Circular Sound Attenuator | No | 4.00 | | |
| P2.8.1 | | Indoor Units (Supply and installation of Inverter Hide-Away Indoor Unit. Systems to be tested, installed, and commissioned. Units to include factory fitted primary filters, drainpump and drainpipes as per drawing, hard wired controller per unit. Galvanised steel mounting frame c/w anti-vibration mounts included. Equipment to be factory treated against corrosion) | | | | |
| P2.8.1.1 | .07.01 | 38 kW Cooling Inverter Type Hide-Away Unit | No | 3.00 | | |
| P2.8.2 | | G4 Primary Return Air Filter including filterbox, mounting and installation as per detailed specification | | | | |
| P2.8.2.1 | .07.02 | 1618x525mm | No | 3.00 | | |
| P2.8.3 | | Condensate piping | | | | |
| P2.8.3.1 | .07.03 | Ø32 PVC Medium Class | m | 80.00 | | |
| P2.8.3.2 | 0.7.05 | Stainless steel drainpan, p-trap, drainpump as per detailed specification | No | 3.00 | | |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|--|----------------|--|------|----------|----------|------------|
| Brought Forward | | | | | | |
| P2.8.4 | | Outdoor Units (Supply and installation of compatible x2 Outdoor Condensing Units for Hide-Away Indoor Units. Note two outdoor units are required per indoor unit for the specified mitsubishi products given. Systems to be tested, installed, and commissioned. Units to include refrigerant piping of 6m measured one way with complete trunking from indoor to outdoor, anti vibration pads and galvanised steel frame mounting unit as per detail spec. Equipment to be factory treated against corrosion) | | | | |
| P2.8.4.1 | .07.06 | Inverter Type Outdoor Condensing Units Compatible with 38kW Indoor Hide-Away Unit | No | 3.00 | | |
| P2.8.4.2 | .07.07 | Ø32 PVC Medium Class | m | 80.00 | | |
| P3 | | Allow for testing, balancing, commissioning and handover of all equipment. | Sum | 1.00 | | |
| P4 | | Allow for cleaning and start-up of the installation. | Sum | 1.00 | | |
| P5 | | Allow for one year comprehensive maintenance and guarantees. | Sum | 1.00 | | |
| P6 | | Labelling (inclusive of labels on ceiling to indicate mechanical equipment positions) | Sum | 1.00 | | |
| P7 | | Allow for Electrical & Refrigeration COC for all final connections between Isolators and Mechanical Equipment. | Sum | 1.00 | | |
| TOTAL FOR SECTION: Carried to Summary | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|-------------------------|--|----------------|----------|----------|------------|
| Q1 | SANS 1200 DM | SECTION Q : LOW LEVEL PUMP STATION - CIVIL WORKS | | | | |
| Q1.1 | | SECTION C: ROAD WORKS | | | | |
| Q1.1.1 | 8.3.7 | EARTHWORKS | | | | |
| Q1.1.1.1 | | Cut to spoil | | | | |
| Q1.1.1.1.1 | | Cut material to road bed depth over area for road. | m ³ | 363.00 | | |
| Q1.1.2 | | TREATMENT OF ROAD-BED | | | | |
| Q1.1.1.1.1 | 8.3.3(a) | Road-bed preparation and compaction of material | | | | |
| Q1.1.1.1.1.1 | | Rip and recompact to 93 % mod. AASHTO maximum density | m ³ | 114.00 | | |
| Q1.2 | SANS 1200 ME | SELECTED LAYER | | | | |
| Q1.2.1 | 8.3.1 | Construct gravel selected layer | | | | |
| Q1.2.1.1 | | G6 material to roads and hard stands compacted to 95% mod. AASHTO maximum density | m ³ | 151.00 | | |
| Q1.3 | SANS 1200 ME | SUBBASE | | | | |
| Q1.3.1 | 8.3.1 | Construct gravel subbase | | | | |
| Q1.3.1.1 | | G5B material to roads and hard stands compacted to 97% mod. AASHTO maximum density | m ³ | 114.00 | | |
| Q1.4 | SANS 1200 MF | BASE | | | | |
| Q1.4.1 | 8.3.1 | Construct gravel subbase | | | | |
| Q1.4.1.1 | | G5B material to roads and hard stands compacted to 97% mod. AASHTO maximum density | m ³ | 62.00 | | |
| Q1.4.2 | 8.3.5 | Process material by means of: | | | | |
| Q1.4.2.1 | | Stabilizing agent | ... | ... | | |
| Q1.4.2.2 | 8.3.8 | Stabilizing agent | | | | |
| Q1.4.2.2.1 | | Portland cement | t | 8.00 | | |
| Q1.4.2.0.1 | | Lime | t | - | | Rate Only |
| Carried Forward | | | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|------------------------|----------------|--|----------------|----------|----------|------------|
| Brought Forward | | | | | | |
| Q1.5 | | SURFACING | | | | |
| Q1.5.1 | | SEGMENTED PAVING | | | | |
| Q1.5.1.1 | SANS 1200 MJ | CONSTRUCTION BELOW DESIGNATED TOP OF SUBBASE | | | | |
| Q1.5.1.1.1 | 8.2.3 | CUT UNITS TO FIT EDGE RESTRAINTS | m | 348.00 | | |
| Q1.5.1.2 | 8.2.2 | CONSTRUCT PRECAST CONCRETE SEGMENTED PAVING complete on Areas as shown on Dwg., pattern to approval, samples to be provided on request. | | | | |
| Q1.5.1.2.1 | | 80 mm Interlocking precast paving blocks, Type S-A or similar, 25MPa, on 20 mm selected sand layer | m ² | 408.00 | | |
| Q1.5.1.2.2 | | 60 mm Interlocking precast paving blocks, Type S-A or similar, 25MPa, on 20 mm selected sand layer | m ² | 348.00 | | |
| Q1.6 | | CONCRETE KERBING AND CHANNELLING | | | | |
| Q1.6.1 | 8.2.2 | Type semi-mountable, Fig.7 kerb | m | 50.00 | | |
| Q1.7 | | Edge and cross beams | | | | |
| Q1.7.1 | SANS 1200 D | Earth Works | | | | |
| Q1.7.1.1 | PS D 8.3.3 | Restricted excavation | | | | |
| Q1.7.1.1.1 | | For foundation and dispose | m ³ | 11.00 | | |
| Q1.7.2 | SANS 1200 G | Concrete works | | | | |
| Q1.7.2.1 | | Formwork Including Chamfers | | | | |
| Q1.7.2.1.1 | 8.2.1 | Formwork (Rough) | m ² | 36.00 | | |
| Q1.7.2.2 | | Concrete | | | | |
| Q1.7.2.2.1 | 8.4.2 | 50 mm Blinding layer 15MPa/19mm | m ² | 18.00 | | |
| Q1.7.2.2.2 | 8.4.3 | Grade 35MPa/19mm concrete for foundation | m ³ | 8.00 | | |
| Q1.7.2.3 | 8.4.4 | Unformed Surface Finishes | | | | |
| Q1.7.2.3.1 | | Wood floated | m ² | 18.00 | | |
| | | TOTAL FOR SECTION: Carried to Summary | | | | |

| Item No | Payment Clause | Short Description | Unit | Quantity | Rate ZAR | Amount ZAR |
|---------|----------------|--|------|----------|----------|------------|
| R1 | | SECTION R : TEMPORARY WORKS/CHANGE-OVER EQUIPMENT HIRE Develop a methodology to move the existing 2500kVA auto transformer at the low level pump station to a temporary location to allow for the construction of a new electrical substation (as per specs) | sum | 1 | | |
| R2 | | Works associated to item 1.0 of this section: | | | | |
| R2.1 | | Disconnect and make safe all electrical connections to allow the relocation of the transformer | sum | 1 | | |
| R2.2 | | Relocate the transformer to a temporary position | sum | 1 | | |
| R2.3 | | Reconnect, test and commission transformer and associated MV switchgear to allow the continued operation of the pumping system | sum | 1 | | |
| R2.4 | | Include for any additional MV cable, trenching, backfill, mechanical protection, terminations and joints that may be required. | sum | 1 | | |
| R2.4 | | Develop a change over plan to move from the existing MV network to the new MV network(as per specs) | sum | 1 | | |
| R3 | | Standby generator for change-over process | | | | |
| R3.1 | | Hire of 200 kVA Prime rated generator including: | sum | 1 | | |
| R3.2 | | Hire of change-over panel, suitably designed power cables (30 m) and all other auxiliaries | sum | 1 | | |
| R3.3 | | Delivery, installation, testing and commissioning | sum | 1 | | |
| R3.4 | | Supplying of diesel per generator at full load for 72Hrs per generator. | Sum | 1 | | |
| | | TOTAL FOR SECTION: Carried to Summary | | | | |

| eTHEKWINI MUNICIPALITY: WATER AND SANITATION UNIT SOUTHERNWORKS WASTE WATER TREATMENT WORKS ELECTRO-MECHANICAL UPGRADES | |
|---|--------------|
| DESCRIPTION | AMOUNT (ZAR) |
| SECTION A PRELIMINARY AND GENERAL | |
| SECTION B COMPLIANCE WITH HEALTH & SAFETY AND ENVIRONMENTAL | |
| SECTION C DAYWORKS | |
| SECTION D PROVISIONAL SUMS | |
| SECTION F ELECTRICAL - MAIN MEDIUM VOLTAGE RETICULATION | |
| SECTION G ELECTRICAL - MAIN MEDIUM VOLTAGE RETICULATION - VEOLIA SUBSTATION | |
| SECTION H ELECTRICAL - MAIN MEDIUM VOLTAGE INSTALLATION - LOW LEVEL PUMP STATION | |
| SECTION I ELECTRICAL - LOW VOLTAGE RETICULATION - MAIN CONNECTIONS | |
| SECTION J LOW LEVEL PUMP STATION - BUILDING WORKS | |
| SECTION K LOW LEVEL PUMP STATION - STRUCTURAL WORKS | |
| SECTION L LOW LEVEL PUMP STATION - MECHANICAL | |
| SECTION M LOW LEVEL PUMP STATION - ELECTRICAL MV | |
| SECTION N LOW LEVEL PUMP STATION - ELECTRICAL SMALL POWER AND LIGHTING | |
| SECTION O LOW LEVEL PUMP STATION - ELECTRICAL CONTROL | |
| SECTION P LOW LEVEL PUMP STATION - HVAC | |
| SECTION Q LOW LEVEL PUMP STATION - CIVIL WORKS | |
| SECTION R TEMPORARY WORKS / CHANGE-OVER EQUIPMENT | |
| SUB-TOTAL | |
| | |
| | |
| TOTAL (Excluding VAT) | |
| VAT (15 %) | |
| TOTAL (Including VAT) Carried forward to Form of Offer | |