

| Item No |  | Quantity | Rate | Amount R |
|---------|--|----------|------|----------|
|         | <b><u>SECTION NO. 2</u></b>  |          |      |          |
|         | <b><u>BILL NO. 12</u></b>  |          |      |          |
|         | <b><u>TILING</u></b>   |          |      |          |
|         | Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural, Structural and Electrical Information before pricing this Bill of Quantities |          |      |          |
|         | <b><u>SUPPLEMENTARY PREAMBLES</u></b>  |          |      |          |
|         | <b><u>Proprietary items or materials</u></b>   |          |      |          |
|         | Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent  |          |      |          |
|         | <b><u>WALL TILING</u></b>  |          |      |          |
|         | <b><u>600 x 300 x 8.6mm Italtile porcelain wall tiles (Allow PC sum of R700 per m<sup>2</sup>) fixed with waterproof adhesive to screed (screed elsewhere measured) and flush pointed with antibacterial epoxy tile grout</u></b>                        |          |      |          |
| 1       | On walls   | m2       | 237  |          |
| 2       | On narrow widths   | m2       | 24   |          |
| 3       | On walls in isolated panels, splashbacks, etc  | m2       | 329  |          |
|         | <b><u>FLOOR TILING</u></b>   |          |      |          |
|         | <b><u>600 x 300 x 8.6mm Full bodied porcelain non-slip floor tiles (Allow a PC sum of R750 per m<sup>2</sup>) fixed with adhesive to screed (screed elsewhere) and flush pointed with antibacterial epoxy tile grout</u></b>                             |          |      |          |
| 4       | On floors and landings   | m2       | 330  |          |
| 5       | Skirting 100mm high  | m        | 108  |          |
|         | <b>Carried to Collection</b>   |          |      | R        |
|         | Builders Work<br>Bill No. 12<br>Tiling   |          |      |          |

|   |  |    |       |
|---|--|----|-------|
|   | <u>600 x 600 x 8.6mm Full bodied porcelain non-slip floor tiles (Allow a PC sum of R950 per m²) fixed with adhesive to screed (screed elsewhere) and flush pointed with antibacterial epoxy tile grout</u> |    |       |
| 6 | On floors and landings   | m2 | 1,202 |
| 7 | Skirting 100mm high  | m  | 691   |
|   | <u>45 x 45mm black ceramic mosaic tiles fixed with "Tal Goldstar 6" or equally approved tile adhesive</u>  |    |       |
| 8 | On floors and landings   | m2 | 4     |

Carried to Collection

Builders Work  
 Bill No. 12  
 Tiling

R

Tiling

**COLLECTION**

Total Brought Forward from Page No.

Page  
 No  
 77  
 78

Amount  
 R

**Carried Forward to Final Summary**

R

Builders Work  
 Bill No. 12  
 Tiling

Item  
No

Quantity

Rate

Amount  
R

**SECTION NO. 2**

**BILL NO. 13**

**PLUMBING AND DRAINAGE**

Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural, Structural and Electrical Information before pricing this Bill of Quantities

**SUPPLEMENTARY PREAMBLES**

**Proprietary items or materials**

Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent

**Wire gratings:**

Descriptions of gutter outlets etc. shall be deemed to include wire balloon gratings

**Stormwater channels:**

Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc., and disposal of surplus material on site :

**French drains:**

Descriptions of French drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, geofabric filter blanket over stone, 300mm earth filling over and disposal of surplus material on site :

**Carried to Collection**

Builders Work  
Bill No. 13  
Plumbing and Drainage

R

**Septic tanks:**

Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc. all in accordance with the manufacturer's instructions and disposal of surplus material on site

**Stainless steel basins, sinks, wash troughs, urinals, etc:**

Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0) Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc. shall be Type 304 (18/8) Stainless steel for laboratory sinks, photographic equipment, etc. shall be Type 316 (18/8) Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable

**Sealing of edges:**

Outer edges of sinks, basins, baths, urinals, etc. are to be sealed against adjacent surfaces with approved silicone

**uPVC pipes and fittings:**

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings. Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings

**uPVC pressure pipes and fittings:**

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings. Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints

**High density polyethylene (HDPE) pipes and fittings:**

Pipes shall be type IV and of the class specified with Plasson or Alprene compression fittings

Carried to Collection

Builders Work  
 Bill No. 13  
 Plumbing and Drainage

R

**Polycop polypropylene pipes:**

Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with Fast-fuse heat welded thermoplastic or where so described Polylock compression fittings. Pipes shall be firmly fixed to walls, etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions

**Copper pipes:**

Pipes shall be hard drawn and half-hard Maksimal pipes of the class described. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), Class 2 (half-hard) and Class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-siphon pipes, capillary solder fittings and compression fittings shall be 'Cobra Watertech' or equal approved type. Capillary solder fittings shall comply with ISO 2016

Copper pipes are to be installed in accordance with the latest revision of the Code of Practice for Copper Plumbing soldering techniques. Flux, solder, etc. to be strictly in accordance with the manufacturer's requirements with special attention to copper flux composition

**Reducing fittings:**

Where fittings have reducing ends or branches they are described as 'reducing' and only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained

**Fixing of pipes:**

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc., casting in, building in or suspending not exceeding 1m below suspension level

**Carried to Collection**

Builders Work  
 Bill No. 13  
 Plumbing and Drainage

R

**Paper wrapping to pipes:**

Pipes chased into brickwork must be wrapped with two layers of stout brown paper tied with wire. Rates are to include for wrapping around joints and fittings

**Disinfection of water pipework:**

Water pipework is to be disinfected at completion in accordance with SANS

**Densyl petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd:**

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with 25% overlaps. Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, Layflat sheeting, securing of same, etc

Prices for wrapping of pipes shall include for all work as described to couplings in the length

**Laying, backfilling, bedding, etc. of pipes:**

Pipes shall be laid and bedded in accordance with manufacturers' instructions and trenches shall be carefully backfilled

Where no manufacturers' instructions exist, pipes shall be laid in accordance with SANS

**General:**

Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete and shall include adaptors for joints to PVC pipes, etc.). Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc. shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 98% Mod AASHTO density and disposal of surplus material off site

**Carried to Collection**

Builders Work  
 Bill No. 13  
 Plumbing and Drainage

R

Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc., steel pipes, copper pipes, etc

Descriptions of WC pans, slop hoppers, etc. shall be deemed to include for joints to soil pipes (pan connectors are separately measured)

**As-built drawings:**

The contractor shall prepare an updated set of as-built drawings. At completion of the contract the contractor shall hand these drawings to the principal agent for reproducing onto the originals for handing over to the employer (provision for allowance of as-built drawings elsewhere)

**RAINWATER DISPOSAL**

**0.8mm Seamless aluminium**

|   |   |    |     |
|---|---|----|-----|
| 1 | 150 x 75mm Ogee eaves gutters                     | m  | 650 |
| 2 | Extra over eaves gutter for stopped end           | No | 68  |
| 3 | Extra over eaves gutter for angle                 | No | 68  |
| 4 | Extra over eaves gutter for outlet for 150mm pipe | No | 68  |
| 5 | Extra over rainwater pipe for bend                | No | 136 |
| 6 | Extra over rainwater pipe for shoe                | No | 68  |
| 7 | 150 x 75mm Rainwater pipes                        | m  | 190 |

**Carried to Collection**

Builders Work  
Bill No. 13  
Plumbing and Drainage

R



**SANITARY FITTINGS**

**NOTE:**

All fittings butting up against wall or floor finishes or fitting into preformed openings in timber tops are to be sealed with an approved all purpose silicone sealant

Prices for sinks described as drop in are to include for preparing the worktop to receive the fitting and securely fixing sinks to worktops using clips provided. The contractor is to provide worktop manufacturers with details of cut outs to ensure that the cut openings are sufficiently accurate to provide proper engagement for these clips

**"Franke"**

|    |   |    |   |
|----|---|----|---|
| 8  | Franke- citimetal model "BR6" bedpan and bottle rack - comprising of 18/10 grade 304 stainless steel, fixed to wall surface with stainless steel bar braces with removable drip tray including 19mm drain outlet - size 915mm long (6x bedpan and bottle size)  | No | 1 |
| 9  | Franke Model CH' slop hopper suite with grid size 540 x 545mm with 100mm integral splashback to back and both sides, bowl with integral flushing rim, 110mm diameter waste outlet, hinged bucket grid and set on and including a pair of 40mm square stainless steel gallowes brackets bolted to tiled walls  | No | 1 |
| 10 | Franke PPGL' plaster of paris sink size 1500 x 550 x 1050mm high with a 150mm high splashback complete with pressed preparation bowl with a 40mm waste outlet discharging into a stainless steel plaster bowl complete with stainless steel lid and removable drainer and fixed to wall/floor with 40mm square stainless steel gallowes brackets and front legs with adjustable stainless steel foot pieces | No | 1 |
| 11 | Franke Pressed Shower Tray BS 401' 900 x 900 x 88mm deep, levelled and fully embedded in and including cement and sand 1:3 screed 100mm thick overall   | No | 5 |
| 12 | Franke Quinline "706103" double bowl drop in sink, size overall 1200x500mm set in worktop (elsewhere measured)  | No | 3 |

**Carried to Collection**

Builders Work  
 Bill No. 13  
 Plumbing and Drainage

R

|    |  |    |    |
|----|--|----|----|
| 13 | Franke series "S1" (Code - 2620015) grade 304(18/10) stainless steel single centre bowl catering sink,size 1500 x 600mm with a 150mm high splashback to the rear and 50 x 10mm turn down with beaded edge on the remaining sides . The underside sprayed with vermin proof bitumastic sound deadening and supported on a 30 x 30 x 3mm framework and galvanised mild steel backing sheet. Fitted onto 4no. 38mm diametre stainless steel detachable legs with adjustable flanged foot pieces. bowl size 500 x 500 x 230mm deep | No | 1  |
| 14 | Franke (Code - SKU 7077) grade 304(18/10) stainless steel single drop in bowl sink,size 1200 x 535mm with a 150mm high splashback to the rear and 50 x 10mm turn down with beaded edge on the remaining sides  | No | 7  |
| 15 | Franke series "S2"(Code - 2620015) grade 304(18/10) stainless steel double centre bowl catering sink, with a 150mm high splashback to the rear and 50 x 10mm turndown with beaded edge on the remaining sides . The underside sprayed with vermin proof bitumastic sound deadening and supported on a 30 x 30 x 3mm framework and galvanised mild steel backing sheet. Fitted onto 4no. 38mm diameter stainless steel detachable legs with adjustable flanged foot pieces. bowl size 500 x 500 x 230mm deep                    | No | 1  |
| 16 | Franke series (Code - DN602) Grade 304 (18/10) Stainless steel double end hand bowl sink,size 1500 x 600mm with a 150mm high splashback to the rear and 2no sides with 50x10mm turn down with beaded edge on the front . The underside sprayed with vermin proof bitumastic sound deadening and supported on a 30 x 30 x 3mm framework and galvanised mild steel backing sheet. Fitted onto 4no. 38mm diametre stainless steel detachable legs with adjustable flanged foot pieces. bowl size 760 x 460 x 380mm deep           | No | 1  |
| 17 | Franke wash hand basin (Code - 325000) manufactured from 1.2mm grade (304918/10) Stainless Steel with a one piece pressed bowl and a 50mm splashback and a radius apron, fixed to wall   | No | 12 |

Carried to Collection

Builders Work  
Bill No. 13  
Plumbing and Drainage

R

| <u>'Geberit'</u>             |  |    |    |   |
|------------------------------|--|----|----|---|
| 18                           | "Geberit selnova" comfort wall-hung WC (Code - 500.262.01.1), washdown, large projection, ramfree including 32mm "cobra" toilet flush valve back entry and "Walcro" 25mm diameter bsp concealed vandal resistant brass toilet flush valve with VR push-button and concealed flush pipes installed complete all as per Architects drawing No. 2023_F480-RRA-B00-XX-SH-A-06.02.000 Rev A   | No | 5  |   |
| <u>'Betta'</u>               |  |    |    |   |
| 19                           | "Betta Consul" floor standing WC (Code - XTCOF08A), washdown pan installed complete all as per Architects drawing No. 2023_F480-RRA-B00-XX-SH-A-06.02.000 Rev A  | No | 17 |   |
| <u>'Vaal'</u>                |  |    |    |   |
| 20                           | 590 x 490mm (WHB.01) Semi-rectangular 'solar 510' medical basin (code 703700) basin with no tapholes (in RHS configuration), integrated overflow and chainstay hole bolted to wall with two 10mm bolts (code 8448Z0). Including Cobra Watertech 32mm chrome plated slotted basin waste (code 303) with plug and 62mm diameter flange, 77mm long shank, plug, chain and stay, and 2 x Cobra Watertech 15mm ball type angle valves (Code: 832-10). Cobra Watertech 32mm chrome plated bottle trap (Code: 340) with 75mm deep re-seal, adjustable telescopic pipe and 32mm outlet. All in accordance with manufacturers installation specifications | No | 20 |   |
| 21                           | "Vaal" sanitary ware 565 x 275 x 310mm Sweatpear white vitreous china wall mounted back inlet urinal (Code - 705127) including 38mm chromium plated domical grating (8787z0) and chromium plated back inlet spreader (code: 7054z2), flush valve, flush pipe and fittings (by others), fixed on and including two hanger brackets (code: 8127z0)   | No | 4  |   |
| <b>Carried to Collection</b> |  |    |    |   |
| Builders Work                |  |    |    |   |
| Bill No. 13                  |  |    |    |   |
| Plumbing and Drainage        |  |    |    |   |
|                              |  |    |    | R |

|  |   |    |    |   |
|--|---|----|----|---|
| 22   | <p>Plexicor cross linked cast acrylic Perspex Carmen 1700 rectangular bath colour White, overall size 1700 x 700 x 390mm deep with 52mm end waste outlet, supported on 38 x 38mm timber battens fixed to adjacent walls and bed in 1:5 cement mortar on a brick bed, three bricks wide for full length of bath with the void between the bath and enclosing walls filled with 1:10 uncompacted cement mix and point all round with mildew resistant silicone, all in accordance with the manufacturer's recommendations. Cobra Watertech Noka 15mm chrome plated wall mounted underwall mixer (Code: NA-956), manufactured in accordance with SANS 226:2004 Type 2 (BS 5412).and chainstay hole bolted to wall with two 10mm bolts (Code: 8448Z0) and sealed with silicone sealant where basin meets wall. Including Cobra hand shower set: 067S, 001W-Alpine, 006S-20, 008/5C. Cobra Watertech 40mm chrome plated basin/bath waste (Code: 316) with 70mm diameter flange, 45mm long shank, plug, chain and stay. Cobra Watertech 40mm rough brass bath P trap (Code: 370) with shallow seal and cleaning eyes.</p> | No | 6  |   |
| <b>'Betta'</b>   |   |    |    |   |
| 23   | <p>575 x 490mm (WHB.05) Semi-rectangular basin (code WC0408A BASIN-CONSUL-W/HUNG-WHI) with one tap hole (in RHS configuration), integrated overflow and chain stay hole bolted to wall with two 10mm bolts (code 8448Z0).Including pedestal(Code PHX108A PED-UNIVERSAL-WHI) with plug and 62mm diameter flange, 77mm long shank, plug, chain and stay with 75mm deep re-seal, adjustable telescopic pipe and 32mm outlet. All in accordance with manufacturers installation specifications</p>  | No | 23 |   |
| 24   | <p>575 x 490mm (WHB.06) Semi-rectangular basin (code WC0408A BASIN-CONSUL-W/HUNG-WHI) with one tap hole (in RHS configuration), integrated overflow and chain stay hole bolted to wall with two 10mm bolts (code 8448Z0). with plug and 62mm diameter flange, 77mm long shank, plug, chain and stay with 75mm deep re-seal, adjustable telescopic pipe and 32mm outlet. All in accordance with manufacturers installation specifications</p>  | No | 5  |   |
| <b><u>"Avenge" or similar approved</u></b>                     |   |    |    |   |
| 25   | Concrete wash trough (Code - 2400611Q)  | No | 1  |   |
| <b>Carried to Collection</b>                                   |   |    |    |   |
| <p>Builders Work<br/>Bill No. 13<br/>Plumbing and Drainage</p> |   |    |    |   |
|  |   |    |    | R |

| <b><u>WASTE UNIONS. ETC.</u></b>  |  |    |    |   |
|---|--|----|----|---|
| <b><u>"Cobra Watertech"</u></b>   |  |    |    |   |
| 26  | Cobra 301' chromium plated basin waste, slotted flanged backnut and washer, 62mm flange and 80mm long shank  | No | 11 |   |
| 27  | Cobra 309-32' chromium plated anti-theft plug  | No | 6  |   |
| 28  | Cobra 316' chromium plated unslotted sink / bath waste complete with backnut, plug with stirrup, chain and stay, 70mm flange and 45mm long shank   | No | 22 |   |
| <b><u>"Tivoli"</u></b>  |  |    |    |   |
| 29  | Anti-vandal basin waste to medical basins (Code - TVAC1033/CH)   | No | 20 |   |
| 30  | Pop up basin waste (Code - TVAC1034/CH)  | No | 28 |   |
| <b><u>TRAPS, ETC</u></b>  |  |    |    |   |
| Note: All traps are to include for connectors and fitting to waste outlet at one end and to waste pipe at other end |  |    |    |   |
| <b><u>uPVC</u></b>  |  |    |    |   |
| 31  | 110mm uPVC trap  | No | 22 |   |
| 32  | 110mm uPVC to stainless steel adaptor  | No | 22 |   |
| <b><u>"Flexi Traps"</u></b>   |  |    |    |   |
| 33  | 40 x 50mm Butyl rubber 'P' or 'S' trap jointed to waste outlet fitting and UPVC pipe including clamps  | No | 11 |   |
| <b><u>"Cobra Watertech"</u></b>   |  |    |    |   |
| 34  | 38mm Brass deep seal shower trap as 'Cobra 373' with chromium plated grating as 'Cobra 323' connected to shower tray and set in position in concrete floor and joint to 50mm UPVC pipe including adaptor | No | 13 |   |
| 35  | 32 x 50mm Chromium plated bottle trap as 'Cobra 340/50' and joint to waste outlet fitting and to 50mm UPVC pipe including adaptor  | No | 38 |   |
| <b>Carried to Collection</b>  |  |    |    |   |
| Builders Work   |  |    |    |   |
| Bill No. 13   |  |    |    |   |
| Plumbing and Drainage   |  |    |    |   |
|   |  |    |    | R |

**TAPS, VALVES, ETC**

Note:

All taps and mixers are to be fitted with water saving nuts as supplied by the manufactures of the taps

**"Cobra Watertech"**

|    |  |    |    |
|----|--|----|----|
| 36 | 15mm "Cobra Ball-O-Flo (Ref. 1090-15)" fullway isolating ball valves with plastic coated plated steel lever handle (connectors elsewhere measured)   | No | 21 |
| 37 | 20mm "Cobra Ball-O-Flo (Ref. 1090-20)" fullway isolating ball valves with plastic coated plated steel lever handle (connectors elsewhere measured)   | No | 16 |
| 38 | 15mm Chromium plated single lever basin mixer (Code - NM-851))   | No | 5  |
| 39 | "Cobra"15mm Chromium plated elbow action medical mixer (Code - 515/055-21) mounted to brick walls. 'Cobra 206' and joint to brass connector (elsewhere measured)   | No | 25 |
| 40 | Shower set comprising 2no. Cobra 138 under tile stop taps with KP2.6 Vandalproof shower including "Cobra" focus single lever shower mixer (Code - cob-fc-956) chrome 2 x 1/2 inch bsp female iron inlet and 2 x female iron outlet connection ends | No | 11 |
| 41 | Cobra 108 brass hose union bib tap   | No | 12 |
| 42 | 22mm brass pressure reducing valve   | No | 21 |

**"Tivoli"**

|    |   |    |    |
|----|---|----|----|
| 43 | "Tivoli Teramo DZR"15mm Chromium plated basin mixer (Code - TVDRTA5840/CH) mounted to basin | No | 23 |
|----|---|----|----|

**SANITARY PLUMBING**

**uPVC pipes**

|    |             |   |     |
|----|-------------|---|-----|
| 44 | 50mm Pipes  | m | 630 |
| 45 | 110mm Pipes | m | 225 |

**Carried to Collection**

Builders Work  
Bill No. 13  
Plumbing and Drainage

R

| <u>Extra over uPVC pipes for fittings</u> |                                |      |      |
|---|--------------------------------|------|------|
| 46  | 50mm BSP adaptor               | No   | 80   |
| 47  | 110mm Eccentric Reducer        | No   | 23   |
| 48  | 50mm Bend                      | No   | 240  |
| 49  | 110mm Bend                     | No   | 46   |
| 50  | 50mm Access bend               | No   | 160  |
| 51  | 110mm Access bend              | No   | 23   |
| 52  | 50mm Junction                  | No   | 120  |
| 53  | 110mm Junction                 | No   | 23   |
| 54  | 50mm Access junction           | No   | 80   |
| 55  | 110mm Access junction          | No   | 23   |
| 56  | 110mm Reducing access junction | No   | 23   |
| 57  | 110mm Double junction          | No   | 23   |
| 58  | 110mm Double access junction   | No   | 23   |
| 59  | 50mm Vent valve                | No   | 120  |
| 60  | 110mm Vent valve               | No   | 23   |
| 61  | 110mm Straight pan connector   | No   | 22   |
| 62  | 110mm Bent pan connector       | No   | 5    |
| <u>Testing</u>                            |                                |      |      |
| 63  | Testing waste pipe system      | Item | 1.00 |
| <u>WATER SUPPLIES</u>                     |                                |      |      |
| <u>Class 460/2 copper pipes</u>           |                                |      |      |
| 64  | 15mm Pipes                     | m    | 624  |
| 65  | 22mm Pipes                     | m    | 246  |
| <b>Carried to Collection</b>              |                                |      |      |
| Builders Work                             |                                |      |      |
| Bill No. 13                               |                                |      |      |
| Plumbing and Drainage                     |                                |      |      |

R

|  |  |    |     |
|--|--|----|-----|
| 66   | 28mm Pipes                             | m  | 207 |
| 67   | 35mm Pipes                             | m  | 204 |
| <b><u>Extra over Class 2 copper pipes for capillary fittings</u></b>         |  |    |     |
| 68   | 15mm Fittings                          | No | 704 |
| 69   | 22mm Fittings                          | No | 425 |
| 70   | 28mm Fittings                          | No | 486 |
| 71   | 35mm Elbow                             | No | 216 |
| 72   | 35mm Straight reducing coupler         | No | 243 |
| 73   | 35mm Tee                               | No | 261 |
| 74   | 35mm Reducing tee                      | No | 258 |
| <b><u>Extra over Class 2 copper pipes for brass compression fittings</u></b> |  |    |     |
| 75   | 15mm Fittings                          | No | 44  |
| 76   | 22mm Fittings                          | No | 49  |
| 77   | 28mm Fittings                          | No | 61  |
| 78   | 35mm Copper to iron straight connector | No | 61  |

Carried to Collection

Builders Work  
 Bill No. 13  
 Plumbing and Drainage

R



Plumbing and Drainage

**COLLECTION**

Total Brought Forward from Page No.

Page  
 No  
 80  
 81  
 82  
 83  
 84  
 85  
 86  
 87  
 88  
 89  
 90  
 91  
 92

Amount  
 R

**Carried Forward to Final Summary**

R

Builders Work  
 Bill No. 13  
 Plumbing and Drainage

| Item No |   | Quantity | Rate | Amount R |
|---------|---|----------|------|----------|
|         | <p><b><u>SECTION NO. 2</u></b></p> <p><b><u>BILL NO. 14</u></b></p> <p><b><u>GLAZING</u></b></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural, Structural and Electrical Information before pricing this Bill of Quantities</p>  |          |      |          |
|         | <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Proprietary items or materials</u></b></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p><b><u>Float glass</u></b></p> <p>The term 'float glass' is used for monolithic annealed glass</p> <p><b><u>Laminated glass</u></b></p> <p>Laminated glass to have polyvinyl butyral (PVB) interlayer(s)</p> <p><b><u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u></b></p> <p><b><u>4mm Thick silvered float glass copper backed mirrors with bevelled and polished edges, holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete</u></b></p> |          |      |          |
| 1       | Mirror size 400 x 900mm high with four screws   | No       | 63   |          |
| 2       | Mirror size 600 x 800mm high with four screws   | No       | 2    |          |
|         | <b>Carried Forward to Final Summary</b>   |          |      | R        |
|         | Builders Work<br>Bill No. 14<br>Glazing   |          |      |          |

| Item No |  | Quantity | Rate | Amount R |
|---------|--|----------|------|----------|
|         | <p><b><u>SECTION NO. 2</u></b></p> <p><b><u>BILL NO. 15</u></b></p> <p><b><u>PAINTWORK</u></b></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural, Structural and Electrical Information before pricing this Bill of Quantities</p>   |          |      |          |
|         | <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Proprietary items or materials</u></b></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p><b><u>PAINTWORK ETC TO PREVIOUSLY PAINTED WORK</u></b></p> <p><b><u>Previously painted plastered surfaces</u></b></p> <p>Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth</p> <p><b><u>Previously painted metal surfaces</u></b></p> <p>Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal</p> <p><b><u>Previously painted wood surfaces</u></b></p> <p>Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth</p> |          |      |          |
|         | <b>Carried to Collection</b>   |          |      | R        |
|         | Builders Work<br>Bill No. 15<br>Paintwork  |          |      |          |

**COLOURS**

**Colours, etc.**

Unless otherwise described all paintwork shall be deemed to have a colour value in excess of 7 on the Munsell system in accordance with SANS 1091

**PREPARATORY WORK TO EXISTING WORK**

**Previously painted plastered surfaces**

Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth

**PAINTWORK, ETC TO NEW WORK**

**ON FLOATED PLASTER**

**Prepare and apply one alkali resistant primer to SABS 1414 and two finishing coats ' Double Velvet' acrylic emulsion paint to SABS 1586 Grade 1 on**

|   |                          |    |       |
|---|--------------------------|----|-------|
| 1 | On internal walls        | m2 | 1,640 |
| 2 | On external walls        | m2 | 353   |
| 3 | On ceilings and cornices | m2 | 25    |

**ON FIBRE-CEMENT**

**Prepare and apply one alkali resistant primer to SABS 1414 and two finishing coats ' Double Velvet' acrylic emulsion paint to SABS 1586 Grade 1**

|   |   |    |       |
|---|---|----|-------|
| 4 | On ceilings and cornices                  | m2 | 1,978 |
| 5 | On fascias and barge boards               | m2 | 81    |
| 6 | On window sills not exceeding 300mm girth | m  | 192   |

Carried to Collection

Builders Work  
 Bill No. 15  
 Paintwork

R

| <u>ON METAL</u>  |   |    |       |   |
|--|---|----|-------|---|
| <u>Prepare, prime with one coat self etching primer to SABS 912 and apply one undercoat to SABS 618 type 11 and two finishing coats gloss enamel paint to SABS 630 Type 1</u>  |   |    |       |   |
| 7  | On door frames  | m2 | 44    |   |
| 8  | Gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area) | m2 | 28    |   |
| <u>Spot priming defects in pre primed surfaces with zinc chromate primer and applying one undercoat and two coats alkyd enamel paint in colours which have a value of 7 or less on the Munsell system in accordance with SABS 1091</u> |   |    |       |   |
| 9  | On columns and beams  | m2 | 124   |   |
| <u>ON WOOD</u>   |   |    |       |   |
| <u>Prepare and apply three coats polyurethane varnish</u>  |   |    |       |   |
| 10   | Varnish to external doors   | m2 | 76    |   |
| <u>Prepare and prime with one coat wood primer and paint with two coats plascon velvagio</u>   |   |    |       |   |
| 11   | On doors  | m2 | 329   |   |
| <u>Prepare and prime with one coat fire resistant paint (Allow a PC sum of R800 per m²) to roof truss</u>  |   |    |       |   |
| 12   | On truss  | m2 | 3,315 |   |
| Carried to Collection  |   |    |       |   |
| Builders Work  |   |    |       |   |
| Bill No. 15  |   |    |       |   |
| Paintwork  |   |    |       |   |
|  |   |    |       | R |

|   | Page No | Amount R |
|---|---------|----------|
| Paintwork                                 |         |          |
| <b><u>COLLECTION</u></b>                  |         |          |
| Total Brought Forward from Page No.       | 95      |          |
|   | 96      |          |
|   | 97      |          |
| <b>Carried Forward to Final Summary</b>   |         | R        |
| Builders Work<br>Bill No. 15<br>Paintwork |         |          |

| Bill No | <u>SECTION SUMMARY - Builders Work</u>   | Page No | Amount R |
|---------|--|---------|----------|
| 1       | Earthworks                               | 23      |          |
| 2       | Concrete, Formwork and Reinforcing       | 28      |          |
| 3       | Masonry                                  | 33      |          |
| 4       | Waterproofing                            | 36      |          |
| 5       | Roof Coverings                           | 41      |          |
| 6       | Carpentry and Joinery                    | 47      |          |
| 7       | Ceilings, Partitions and Access Flooring | 51      |          |
| 8       | Floor Coverings, Wall Linings, etc       | 52      |          |
| 9       | Ironmongery                              | 59      |          |
| 10      | Metalwork                                | 71      |          |
| 11      | Plastering                               | 76      |          |
| 12      | Tiling                                   | 79      |          |
| 13      | Plumbing and Drainage                    | 93      |          |
| 14      | Glazing                                  | 94      |          |
| 15      | Paintwork                                | 98      |          |
|         | <b>Carried to Final Summary</b>          |         |          |
|         | Builders Work                            |         | R        |

| Item No |  | Quantity | Rate | Amount R |
|---------|--|----------|------|----------|
|         | <p><b><u>SECTION NO. 3</u></b></p> <p><b><u>BILL NO. 1</u></b></p> <p><b><u>EXTERNAL WORKS</u></b></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural, Structural and Electrical Information before pricing this Bill of Quantities</p>   |          |      |          |
|         | <p>Unless otherwise described, the preambles and full descriptions of the items in the preceding Bills are to apply equally to this Bill</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Proprietary items or materials</u></b></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p><b><u>Concrete Pipes</u></b></p> <p>Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings</p> <p><b><u>Vitrified clay pipes, etc</u></b></p> <p>Pipes shall rest on solid ground and where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including unreinforced concrete laid in a semi-dry state immediately before pipes are laid</p> |          |      |          |
|         | <b>Carried to Collection</b>   |          |      |          |
|         | External Works<br>Bill No. 1<br>External Works   |          | R    |          |



**uPVC Pipes and Fittings**

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

Soil, waste and vent pipes and fittings shall be solvent weld jointed

**uPVC Pressure Pipes and Fittings**

Pipes for water supply shall be of the class stated

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints

**Copper Pipes**

Pipes shall be hard drawn and half-hard pipes of the class stated

Class 0 (thin walled hard drawn) pipes shall not be bent

Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers

Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type

Capillary solder fittings shall comply with ISO 2016

Only compression fittings shall be used in walls or in ground

**Lead Pipes and Traps**

All soldered joints shall be wiped and brass unions shall be used for jointing lead to steel

**Carried to Collection**

External Works  
 Bill No. 1  
 External Works

R

**Reducing Fittings**

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained

**Wire Gratings**

Descriptions of gutter outlets, etc shall be deemed to include wire balloon gratings

**Septic Tanks**

Descriptions of septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions

**Exposed Concrete Surfaces**

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster

**Excavations**

No claim for rock excavation will be entertained unless the contractor has timeously notified the Quantity Surveyor thereof prior to backfilling

"Soft rock" and "Hard rock" shall be as defined in The Standard Preambles to All Trades (WB20)

**Carried to Collection**

External Works  
 Bill No. 1  
 External Works

R

**Laying, Backfilling, Bedding, Etc of Pipes**

Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturer's instructions

Where no manufacturer's instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following:

SABS 1200

- L : Medium-pressure pipelines
- LD : Sewers
- LE : Stormwater drainage

Pipe trenches, etc shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200 DB: Earthworks (Pipe trenches)

Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LB: Bedding (Pipes)

Unless otherwise described bedding of rigid pipes shall be class B bedding

**Steel Sectional Water Tanks**

Tanks shall comply with SABS CKS 114

**REMOVAL OF TREES ETC**

**Taking out and removing, grubbing up roots and filling in holes**

|   |   |    |   |
|---|---|----|---|
| 1 | Tree stump exceeding 200mm and not exceeding 500mm girth  | No | 6 |
| 2 | Tree stump exceeding 500mm and not exceeding 1000mm girth | No | 3 |

**BULK EXCAVATION, FILLING, ETC**

**Open face excavation in earth over sloping site**

|   |                      |    |       |
|---|----------------------|----|-------|
| 3 | Open face excavation | m3 | 5,495 |
|---|----------------------|----|-------|

**Carried to Collection**

External Works  
 Bill No. 1  
 External Works

R

|   |   |      |       |
|---|---|------|-------|
| <b><u>Extra over bulk excavation in earth for excavation in</u></b>   |   |      |       |
| 4   | Soft rock   | m3   | 898   |
| 5   | Hard rock   | m3   | 126   |
| <b><u>Risk of collapse of excavations</u></b>   |   |      |       |
| 6   | Sides of bulk excavations not exceeding 1,5m deep   | m2   | 1,350 |
| <b><u>Keeping excavations free of water</u></b>   |   |      |       |
| 7   | Keeping excavations free of all water other than subterranean water   | Item | 1.00  |
| <b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density</u></b> |   |      |       |
| 8   | Over site to form platforms   | m3   | 5,072 |
| <b><u>Earth filling supplied by the contractor compacted to 95% Mod AASHTO density</u></b>  |   |      |       |
| 9   | Over site to form platforms   | m3   | 2,122 |
| <b><u>Earth filling supplied by the contractor compacted to 98% Mod AASHTO density</u></b>  |   |      |       |
| 10  | G2 material under floors  | m3   | 2,192 |
| <b><u>Compaction of surfaces</u></b>  |   |      |       |
| 11  | Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density | m2   | 2,875 |
| <b><u>Prescribed density tests on filling</u></b>   |   |      |       |
| 12  | "Natural California Bearing Ratio" test   | No   | 25    |
| <b><u>STORMWATER DRAINAGE</u></b>   |   |      |       |
| <b><u>Heavy duty Class 6 uPVC pipes and fittings</u></b>  |   |      |       |
| 13  | 160mm Pipes laid in and including trenches not exceeding 1m deep  | m    | 325   |
| <b>Carried to Collection</b>  |   |      |       |
| External Works  |   |      |       |
| Bill No. 1  |   |      |       |
| External Works  |   |      |       |

R

|  |   |    |     |
|--|---|----|-----|
| 14   | 200mm Pipes laid in and including trenches not exceeding 1m deep  | m  | 245 |
| 15   | 250mm Pipes laid in and including trenches not exceeding 1m deep  | m  | 205 |
| <b><u>Extra over heavy duty uPVC pipes for fittings</u></b>                      |   |    |     |
| 16   | 160mm Bend  | No | 34  |
| 17   | 200mm Bend  | No | 30  |
| 18   | 160mm Junction  | No | 20  |
| 19   | 200mm Reducing junction   | No | 16  |
| <b><u>Class 100D reinforced concrete pipes with spigot and socket joints</u></b> |   |    |     |
| 20   | 300mm pipes laid in and including trenches not exceeding 1m deep  | m  | 62  |
| 21   | 300mm pipes laid in and including trenches exceeding 1m and not exceeding 2m deep   | m  | 22  |
| 22   | 375mm pipes laid in and including trenches not exceeding 1m deep  | m  | 36  |
| 23   | 375mm pipes laid in and including trenches not exceeding 1m and not exceeding 2m deep   | m  | 18  |
| <b><u>Sumps, catchpits, inspection chambers, etc</u></b>                         |   |    |     |
| 24   | Excavate for and construct half brick wall rainwater sump 300 x 300mm and not exceeding 750mm deep internally, including 100mm thick concrete base 300 x 300mm and fitted with cast iron dished grating and frame (elsewhere measured)  | No | 3   |
| 25   | Excavate for and construct one brickwall rainwater sump 600 x 600mm and not exceeding 1000mm deep internally, including 150mm thick concrete base, fitted with concrete cover slab and fitted with grate and frame (elsewhere measured) | No | 20  |

Carried to Collection

External Works  
Bill No. 1  
External Works

R

|  |   |    |     |   |  |
|--|---|----|-----|---|--|
| 26   | Excavate for and construct one brickwall rainwater sump 800 x 800mm and not exceeding 1000mm deep internally, including 150mm thick concrete base, fitted with concrete cover slab and fitted with grate and frame (elsewhere measured) | No | 2   |   |  |
| <b><u>Gratings, covers, etc</u></b>          |   |    |     |   |  |
| 27   | 300 x 300mm x 71kg Cast iron dished grating and frame   | No | 3   |   |  |
| 28   | 600 x 600mm x 50kg Light duty cast iron dished grating and frame  | No | 20  |   |  |
| 29   | 520 x 790mm x 127,4kg Heavy duty cast iron dished grating and frame   | No | 2   |   |  |
| <b><u>Sundries</u></b>                       |   |    |     |   |  |
| 30   | Excavate for construct one brickwall headwall 5,10m overall with 2 No. wing walls each not exceeding 1,7m in length and total height of headwall not exceeding 3m   | No | 5   |   |  |
| 31   | Provide water break in front of headwall comprising 2 No, 6m x 2m x 230mm high GMS Gabion wire baskets filled with hand selected stone and set on geofabric   | No | 5   |   |  |
| 32   | Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock   | m3 | 21  |   |  |
| 33   | Extra over excavation in earth for pipes trenches, chambers, etc for excavation in hard rock  | m3 | 6   |   |  |
| 34   | Extra over excavation for pipe trenches, chambers, etc for carting away surplus material to a dumping site to be located by the Contractor  | m3 | 9   |   |  |
| 35   | Extra over backfilling to pipe trenches, chambers, etc for 100mm thick imported sand bedding material and backfilling same to 300mm above crown of pipe   | m3 | 18  |   |  |
| <b><u>SOIL DRAINAGE</u></b>                  |   |    |     |   |  |
| <b><u>Class 34 Heavy duty uPVC pipes</u></b> |   |    |     |   |  |
| 36   | 110mm Pipes vertically or ramped in ground  | m  | 366 |   |  |
| 37   | 160mm Pipes vertically or ramped in ground  | m  | 191 |   |  |
| <b>Carried to Collection</b>                 |   |    |     |   |  |
| External Works                               |   |    |     |   |  |
| Bill No. 1                                   |   |    |     |   |  |
| External Works                               |   |    |     |   |  |
|  |   |    |     | R |  |

|  |  |    |    |
|--|--|----|----|
| 38   | 200mm Pipes vertically or ramped in ground   | m  | 83 |
| 39   | 110mm Pipes laid in and including trenches not exceeding 1m deep   | m  | 34 |
| 40   | 160mm Pipes laid in and including trenches not exceeding 1m deep   | m  | 24 |
| 41   | 200mm Pipes laid in and including trenches not exceeding 1m deep   | m  | 24 |
| <b><u>Extra over Class 34 uPVC pipes for uPVC fittings</u></b> |  |    |    |
| 42   | 110mm Bend   | No | 36 |
| 43   | 160mm Bend   | No | 28 |
| 44   | 200mm Bend   | No | 24 |
| 45   | 110mm Access bend  | No | 30 |
| 46   | 110mm Junction   | No | 30 |
| 47   | 160mm Junction   | No | 28 |
| 48   | 200mm Junction   | No | 20 |
| 49   | 110mm Access junction  | No | 32 |
| 50   | 160mm Access junction  | No | 24 |
| 51   | 200mm Access junction  | No | 20 |
| 52   | 160mm Access reducing junction   | No | 24 |
| 53   | 200mm Access reducing junction   | No | 20 |
| <b><u>Gulleys</u></b>  |  |    |    |
| 54   | 110mm Diameter gulley trap jointed to drain, complete with hopper head and grid and the whole set on and encased in unreinforced Class A (1:4:8) concrete, 600 x 400mm extreme on plan and not exceeding 75mm deep set 50mm high above ground as surround to gulley and fitted with and including a precast gulley surround, including necessary excavation and formwork | No | 28 |
| <b>Carried to Collection</b>                                   |  |    |    |
| External Works   |  |    |    |
| Bill No. 1   |  |    |    |
| External Works   |  |    |    |

R

| <u>Precast concrete circular inspection chambers</u> |  |    |    |   |
|--|--|----|----|---|
| 55   | Excavate for and construct 1050mm internal diameter circular precast manhole not exceeding 1000mm deep with light duty circular precast concrete rebated cover and frame, 150 mm thick x 1020 mm thick unreinforced concrete grade 25/19mm stone base, benching, channels, fitting precast wall units around drain pipes and making good with cement mortar, including all risk of collapse and backfilling etc on completion                      | No | 14 |   |
| 56   | Excavate for and construct 1050mm internal diameter circular precast manhole exceeding 1000mm but not exceeding 2000mm deep with light duty circular precast concrete rebated cover and frame, 150 mm thick x 1020 mm thick unreinforced concrete grade 25/19mm stone base, benching, channels, fitting precast wall units around drain pipes and making good with cement mortar, including all risk of collapse and backfilling etc on completion | No | 14 |   |
| <u>Covers, etc</u>                                   |  |    |    |   |
| 57   | 600 x 450mm x 72kg Type 8a double seal manhole cover and frame   | No | 14 |   |
| <u>Septic tanks</u>                                  |  |    |    |   |
| 58   | Sand oil and grease trap installation including all excavations, backfilling, concrete, brickwork and fittings etc constructed complete as detailed on drawing attached  | No | 1  |   |
| <u>Sundries</u>                                      |  |    |    |   |
| 59   | Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock  | m3 | 42 |   |
| 60   | Extra over excavation in earth for pipe trenches, chambers, etc for excavation in hard rock  | m3 | 6  |   |
| 61   | Extra over excavation for pipe trenches, chambers, etc for carting away surplus material to a dumping site to be located by the Contractor   | m3 | 20 |   |
| 62   | Extra over backfilling to pipe trenches, chambers, etc for 100mm thick imported sand bedding material and backfilling same to 300mm above crown of pipe.   | m3 | 27 |   |
| <b>Carried to Collection</b>                         |  |    |    |   |
| External Works                                       |  |    |    |   |
| Bill No. 1   |  |    |    |   |
| External Works                                       |  |    |    |   |
|  |  |    |    | R |



|  |   |      |      |
|--|---|------|------|
| 63   | Unreinforced concrete encasing to 110mm horizontal pipe                             | m    | 252  |
| 64   | Unreinforced concrete encasing to 160mm horizontal pipe                             | m    | 82   |
| 65   | 110mm Cast iron rodding eye complete with 300 x 300 x 200mm thick concrete surround | No   | 28   |
| 66   | 160mm Cast iron rodding eye complete with 300 x 300 x 200mm thick concrete surround | No   | 16   |
| 67   | Testing soil drainage pipe system   | Item | 1.00 |
| <b><u>WATER SUPPLIES</u></b>                                       |   |      |      |
| <b><u>Class 9 uPVC pressure pipes</u></b>                          |   |      |      |
| 68   | 160mm Pipes laid in and including trenches not exceeding 1m deep                    | m    | 340  |
| <b><u>Class 10 HDPE pressure pipes</u></b>                         |   |      |      |
| 69   | 40mm Pipes laid in and including trenches not exceeding 1,0m deep                   | m    | 100  |
| 70   | 63mm Pipes laid in and including trenches not exceeding 1,0m deep                   | m    | 49   |
| 71   | 75mm Pipes laid in and including trenches not exceeding 1,0m deep                   | m    | 49   |
| 72   | 100mm Pipes laid in and including trenches not exceeding 1,0m deep                  | m    | 49   |
| <b><u>Extra over Class 9 uPVC pipes for cast iron fittings</u></b> |   |      |      |
| 73   | 160mm Flanged adaptor complete with gasket set                                      | No   | 16   |
| 74   | 160mm Bend  | No   | 20   |
| 75   | 160mm Tee   | No   | 16   |
| 76   | 160 x 110mm Reducer   | No   | 20   |
| 77   | 160mm Saddle  | No   | 20   |

Carried to Collection

External Works  
Bill No. 1  
External Works

R

| <u>Extra over HDPE pressure pipes for plasson fittings</u> |   |    |    |
|--|---|----|----|
| 78   | 40mm Elbow  | No | 12 |
| 79   | 40mm Plasson to iron elbow  | No | 8  |
| 80   | 40mm Tee  | No | 8  |
| 81   | 63mm Elbow  | No | 10 |
| 82   | 63mm Plasson to iron elbow  | No | 10 |
| 83   | 63mm Tee  | No | 10 |
| 84   | 63mm Reducing tee   | No | 8  |
| 85   | 75mm Elbow  | No | 6  |
| 86   | 75mm Plasson to iron elbow  | No | 6  |
| 87   | 75mm Tee  | No | 6  |
| 88   | 75mm Reducing tee   | No | 8  |
| 89   | 110mm Elbow   | No | 7  |
| 90   | 110mm Plasson to iron elbow   | No | 8  |
| 91   | 110mm Tee   | No | 8  |
| 92   | 110mm Reducers  | No | 8  |
| <u>Sundries</u>  |   |    |    |
| 93   | Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock   | m3 | 28 |
| 94   | Extra over excavation in earth for pipes trenches, chambers, etc for excavation in hard rock  | m3 | 10 |
| 95   | Extra over excavation for pipe trenches, chambers, etc for carting away surplus material to a dumping site to be located by the Contractor              | m3 | 14 |
| 96   | Extra over backfilling to pipe trenches, chambers, etc for 100mm thick imported sand bedding material and backfilling same to 300mm above crown of pipe | m3 | 18 |
| <b>Carried to Collection</b>                               |   |    |    |
| External Works<br>Bill No. 1<br>External Works             |   |    | R  |

|  |  |      |      |
|--|--|------|------|
| 97   | Class B (1:3:5) unreinforced concrete in thrust blocks size 500 x 500 x 200mm high at bends, tees, etc, including all necessary excavation, formwork, etc.   | No   | 24   |
| <b><u>TESTING</u></b>  |  |      |      |
| 98   | Testing water pipe system  | Item | 1.00 |
| <b><u>THE FOLLOWING TO RAIN WATER HARVESTING TANKS, ETC.</u></b> |  |      |      |
| <b><u>Polyethylene water storage tanks</u></b>                   |  |      |      |
| 99   | 5000 Litres Jo-jo rainwater tank or similar approved, with 75mm Diameter opening for downpipe from gutter including 50mm Diameter overflow opening with 4mm Diameter galvanised wire looped through top of tank isolated with 15mm diameter hose to top of tank and anchored to top of slab with 'Hilti' hooks drilled into slab at all four corners and 15mm hose bib tap | No   | 8    |
| <b><u>Tank stand</u></b>   |  |      |      |
| 100  | Excavation in earth not exceeding 2m deep to reduce levels   | m3   | 177  |
| 101  | Risk of collapse of sides of trench and hole excavations not exceeding 1,5m deep   | m2   | 128  |
| 102  | Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk) off site to be located by the contractor   | m3   | 121  |
| 103  | Backfilling to trenches, holes, etc.,  | m3   | 131  |
| 104  | Keeping excavations free of all water other than subterranean water  | Item | 1.00 |
| 105  | Reinforced concrete Class 25/19 in surface beds  | m3   | 22   |
| 106  | Reinforced concrete Class 25/19 in strip footings  | m3   | 30   |
| 107  | Finishing top surfaces of concrete smooth with a power float to surface beds, slabs, etc to falls  | m2   | 128  |
| 108  | Rough formwork to sides edges, risers, ends and reveals not exceeding 300mm high or wide   | m    | 128  |
| <b>Carried to Collection</b>                                     |  |      |      |
| External Works   |  |      |      |
| Bill No. 1   |  |      |      |
| External Works   |  |      |      |

R

|     |   |    |      |
|-----|---|----|------|
| 109 | Steel reinforcement of various diameters to concrete foundations  | t  | 4.80 |
| 110 | Type 617 fabric reinforcement   | m2 | 128  |
| 111 | One Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar                                       | m2 | 79   |
| 112 | 20mm COBRA 541 or equally aproved tank locking tap fitted to a 22mm extension pipe with barrel nipple & galvanised socket | No | 8    |

**THE FOLLOWING TO ROADS AND PARKING CONSTRUCTION**

**Earthworks**

|     |   |      |       |
|-----|---|------|-------|
| 113 | Excavation in earth not exceeding 2m deep for reducing levels under floors  | m3   | 1,292 |
| 114 | Extra over trench and hole excavations in earth for excavation in soft rock   | m3   | 110   |
| 115 | Extra over trench and hole excavations in earth for excavation in hard rock   | m3   | 14    |
| 116 | Keeping excavations free of all water other than subterranean water   | Item | 1.00  |
| 117 | Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 98% Mod AASHTO density for backfilling to trenches, holes, etc | m3   | 284   |
| 118 | Extra over excavation for pipe trenches, chambers, etc for carting away surplus material to a dumping site to be located by the Contractor                    | m3   | 723   |
| 119 | 150mm Thick earth filling of G7 quality from commercial sources supplied by the contractor compacted to 95% Mod AASHTO density                                | m3   | 431   |
| 120 | 150mm Thick earth filling of G2 quality supplied by the contractor compacted to 90% Mod AASHTO density  | m3   | 431   |

**Carried to Collection**

External Works  
Bill No. 1  
External Works

R

|   |   |     |       |
|---|---|-----|-------|
| 121   | One layer of 250 micron "Consol Plastics Gunplas USB Green or equally aproved" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape or equally aproved" under surface beds              | m2  | 1,435 |
| 122   | Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density | m2  | 1,435 |
| 123   | Soil poisoning under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming  | m2  | 1,435 |
| <b><u>Additional tests required by the engineer</u></b> |   |     |       |
| 124   | In-situ dry density (sand replacement) test in accordance with method A10 (a) of TMH 1  | No  | 27    |
| 125   | Maximum dry density and optimum moisture content test in accordance with method A7 of TMH 1   | No  | 16    |
| 126   | Road indicator test   | No  | 11    |
| 127   | Atterberg limits test in accordance with methods A2 to A4 of TMH1   | No  | 8     |
| <b><u>Bituminous premix road surfacing</u></b>          |   |     |       |
| 128   | 30mm thick AC continuously graded medium 50/70 pen bitumen mix asphalt  | m2  | 1,435 |
| 129   | Primer coat bituminous primer road surfacing MSP 1 to crusher run base course   | ltr | 773   |
| 130   | Tack coat (30% stable grade emulsion)   | ltr | 773   |
| <b><u>THE FOLLOWING TO PAVING</u></b>                   |   |     |       |
| <b><u>Earthworks</u></b>                                |   |     |       |
| 131   | Excavation in earth not exceeding 2m deep for reducing levels under floors  | m3  | 445   |
| 132   | Extra over excavations in earth for excavation in soft rock   | m3  | 44    |
| <b>Carried to Collection</b>                            |   |     |       |
| External Works<br>Bill No. 1<br>External Works          |   |     |       |

R

|     |  |      |      |   |
|-----|--|------|------|---|
| 133 | Extra over excavations in earth for excavation in hard rock  | m3   | 8    |   |
| 134 | Keeping excavations free of all water other than subterranean water  | Item | 1.00 |   |
| 135 | Rip, scarify as necessary and compact natural ground or excavated surfaces for a depth of 200mm to a density of at least 95% M.O.D. AASHTO   | m2   | 494  |   |
| 136 | 150mm Thick earth filling of G7 quality from commercial sources supplied by the contractor compacted to 95% Mod AASHTO density   | m3   | 148  |   |
| 137 | In-situ dry density (sand replacement) test in accordance with method A10 (a) of TMH 1   | No   | 17   |   |
| 138 | Maximum dry density and optimum moisture content test in accordance with method A7 of TMH 1  | No   | 14   |   |
| 139 | Atterberg limits test in accordance with methods A2 to A4 of TMH1  | No   | 15   |   |
| 140 | Soil poisoning under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming   | m2   | 519  |   |
|     | <b><u>Paving of concrete G Block interlocking paving bricks with butt joints on 25mm thick river sand bed with sand swept into joints (preparation of ground or filling elsewhere)</u></b>   |      |      |   |
| 141 | Paving in herringbone pattern  | m2   | 519  |   |
|     | <b><u>Precast concrete finished smooth on exposed surfaces including bedding, jointing and pointing</u></b>  |      |      |   |
| 142 | Kerb (SABS 927 fig 3) 150 x 300mm high with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint including excavation, backfilling, etc   | m    | 241  |   |
| 143 | Kerb (SABS 927 fig 3) 150 x 300mm high with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint circular on plan exceeding 4m radius formed with short lengths of straight kerb including excavation, backfilling, etc | m    | 62   |   |
|     | <b>Carried to Collection</b>   |      |      |   |
|     | External Works   |      |      |   |
|     | Bill No. 1   |      |      |   |
|     | External Works   |      |      |   |
|     |  |      |      | R |

**THE FOLLOWING TO ROAD MARKINGS TO  
PAVED AREAS**

**"Plascon or equally approved" industrial SABS  
approved road marking paint (colour white)**

|     |   |    |    |
|-----|---|----|----|
| 144 | Line 100mm wide                         | m  | 72 |
| 145 | Traffic arrow 3000 x 300mm wide extreme | No | 11 |
| 146 | Line 100mm wide (T) taxi bay marking    | No | 7  |
| 147 | Ditto, but in paraplegic symbol         | No | 4  |

**THE FOLLOWING TO FENCING AND  
GATES**

**"Cochrane ClearVu" Hot-dipped security fencing  
galvanised with and including marine fusion bond  
coated security fence with posts, stays, gates, etc.  
including hot-dipped galvanised steel bolts, etc.,  
site clearance and preparation of ground**

|     |   |   |     |
|-----|---|---|-----|
| 148 | Security fence 2,7m high vertically with 76,2 x 12,7mm aperture with and including 4 x 50mm deep "V" formation horizontal recessed bands, 2 x 75mm 70 degrees flanges along sides, single bolt comb clamps, and double bolt comb clamp, all as per manufacturer | m | 534 |
|-----|---|---|-----|

**Hot dipped galvanised posts**

|     |   |    |     |
|-----|---|----|-----|
| 149 | 2,7m High post with and including 200 x 200 x 10mm base four times holed welded to one end and polymer cap to the other end, and including 85 x 85mm taper posts cast in 400 x 400 x 600mm deep concrete base. (base elsewhere measured) (Labour Intensive) | No | 181 |
| 150 | 100mm Diameter x 3mm galvanised gate or straining post 1000mm long with cap to top end and other end welded to 300 x 300 x 6mm thick plate cast in and in 450 x 450 x 900mm deep concrete base. (base elsewhere measured) (Labour Intensive)                | No | 3   |
| 151 | 100mm Diameter x 3mm galvanised gate or straining post 6000mm long with cap to top end and other end welded to 300 x 300 x 6mm thick plate cast in and in 450 x 450 x 900mm deep concrete base. (base elsewhere measured) (Labour Intensive)                | No | 2   |

**Carried to Collection**

External Works  
Bill No. 1  
External Works

R

| <u>The following in 20MPa/19mm concrete bases</u> |   |      |      |   |
|---|---|------|------|---|
| 152   | Unreinforced concrete fence post base size 400 x 400 x 600mm deep, including all necessary excavation, formwork, etc. (Labour Intensive)  | No   | 30   |   |
| 153   | Unreinforced concrete fence post base size 450 x 450 x 900mm deep, including all necessary excavation, formwork, etc. (Labour Intensive)  | No   | 187  |   |
| <b><u>THE FOLLOWING TO COVERED CARPORTS</u></b>   |   |      |      |   |
| <b><u>Earthworks</u></b>                          |   |      |      |   |
| 154   | Excavation in soft material not exceeding 2m deep to holes  | m3   | 3    |   |
| 155   | Extra over trench and hole excavations in earth for excavation in soft rock   | m3   | 2    |   |
| 156   | Extra over trench and hole excavations in earth for excavation in hard rock   | m3   | 1    |   |
| 157   | Keeping excavations free of all water other than subterranean water   | Item | 1.00 |   |
| 158   | Coarse river sand supplied by the contractor under floors etc   | m3   | 0.2  |   |
| 159   | In-situ dry density (sand replacement) test in accordance with method A10 (a) of TMH 1  | No   | 2    |   |
| 160   | One layer of 250 micron "Consol Plastics Gunplas USB Green or equally aproved" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape or equally aproved" under pavings                   | m2   | 3    |   |
| 161   | Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density | m2   | 3    |   |
| 162   | Soil poisoning under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming  | m2   | 3    |   |
| <b>Carried to Collection</b>                      |   |      |      |   |
| External Works                                    |   |      |      |   |
| Bill No. 1  |   |      |      |   |
| External Works                                    |   |      |      |   |
|   |   |      |      | R |



| <u>Concrete, Formwork &amp; Reinforcement</u>  |  |        |
|--|--|--------|
| 163  | 25MPa/19mm Reinforced concrete in bases  | m3 2   |
| 164  | 25MPa/19mm Reinforced concrete in stub columns in foundations (provisional)    | m3 3   |
| 165  | Rough formwork 250mm diameter stub column 400mm high                           | No 10  |
| 166  | Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional) | Sets 1 |
| 167  | Steel reinforcement of various diameters to concrete work                      | t 0.60 |
| <u>Welded columns in single lengths embedded in concrete with flat section base, top, bearer and connection plates bolted to concrete including paintwork to Engineer's requirements</u> |  |        |
| 168  | 200 x 3mm Thick circular hollow section posts including beams, etc             | t 1.85 |
| 169  | M12 (Grade 8.8) bolt   | No 265 |
| <u>"Chromadek or equally aproved" 0.8mm thick ISQ230, Z275 spelter galvanised steel sheeting with "Chromadek" finish to both sides and accessories fixed to steel beams</u>              |  |        |
| 170  | Roof covering with pitch not exceeding 25 degrees                              | m2 75  |
| <u>0.8mm Seamless aluminium</u>  |  |        |
| 171  | 125 x 75mm Ogee eaves gutters  | m 25   |
| 172  | Extra over eaves gutter for stopped end  | No 6   |
| 173  | Extra over eaves gutter for angle  | No 6   |
| 174  | Extra over eaves gutter for outlet for 100mm pipe                              | No 6   |
| 175  | Extra over rainwater pipe for bend   | No 12  |
| 176  | Extra over rainwater pipe for shoe   | No 6   |
| 177  | 125 x 75mm Rainwater pipes   | m 17   |
| <b>Carried to Collection</b>   |  |        |
| External Works   |  |        |
| Bill No. 1   |  |        |
| External Works   |  |        |

R

**THE FOLLOWING IN LANDSCAPING**

**Excavate in earth not exceeding 2m deep and dispose on site**

178 To remove humps, form shallow ditches, etc. (Labour Intensive) m3 300

**Ground preparation**

179 Cultivation and preparation of areas to be planted. (Labour Intensive) m3 200

**Topsoil obtained from prescribed stock piles on site, including spreading and levelling**

180 In plant beds, grassed areas and holes for trees, shrubs, etc. (Labour Intensive) m3 300

181 In plant boxes, pots, etc. (Labour Intensive) m3 100

**Compost, lime and fertilizer**

182 Compost in plant beds, holes for trees, shrubs, etc. (Labour Intensive) m3 80

183 Compost in plant boxes, pots, etc. (Labour Intensive) m3 20

**Roof garden and Planters**

184 Aloe vanballenii (3l) (Labour Intensive) No 50

185 Euphorbia tirrucalli (5l) (Labour Intensive) No 82

186 Carissa 'Green carpet' (1l) (Labour Intensive) No 795

**Trees/Shrubs**

187 Commiphora harveyii (3m eog) (Labour Intensive) No 13

188 Erythrina lysistemon (3m, eog) (Labour Intensive) No 15

**Grassing, ground covers, etc.**

189 Cynodon dactylon (instant lawn) size 1000x500. (Labour Intensive) m2 225

**Carried to Collection**

R

External Works  
Bill No. 1  
External Works

|     |   |      |      |   |
|-----|---|------|------|---|
|     | <b><u>Maintenance</u></b>   |      |      |   |
| 190 | Allow for maintaining landscaping for a period of 6 months, including watering, weeding, cutting, replacing dead plants, etc.   | Item | 1.00 |   |
|     | <b><u>THE FOLLOWING TO WATER TANKS</u></b>  |      |      |   |
|     | <b><u>HOT DIPPED GALVANISED DRIP TRAYS, TANKS, ETC</u></b>  |      |      |   |
|     | <b><u>"View Engineering" or other approved hot dipped galvanised steel sectional water tanks, complying with SANS 10329:2004 :</u></b>  |      |      |   |
|     | Note: Rates for tanks shall include for complete installation including emergency alarm system, all necessary connections, inspections, certification, commissioning, etc. to render a complete installation to the approval of the Principal Agent.  |      |      |   |
| 191 | 30,000 Litre capacity pressed galvanised mild steel water storage tank size approximately 4880 x 2440 x 2440mm high of minimum 3mm thick panel thickness, set on concrete plinth (elsewhere measured) at roof level, including all necessary copper riser pipes, outlets, inlets, overflows, etc., and bolting to concrete plinth with and including manufacturer approved bolts, plates, fixings etc. all to the satisfaction of the structural engineer | No   | 2    |   |
| 192 | 3,600 Litre capacity pressed galvanised mild steel break pressure tank size approximately 2440 x 1220 x 1220mm high of minimum 3mm thick panel thickness, set on concrete plinth (elsewhere measured) at roof level, including all necessary copper riser pipes, outlets, inlets, overflows, etc., and bolting to concrete plinth with and including manufacturer approved bolts, plates, fixings etc. all to the satisfaction of the structural engineer | No   | 2    |   |
| 193 | Outlet union for 22mm copper pipe, including hole through tank  | No   | 2    |   |
| 194 | Outlet union for 32mm copper pipe, including hole through tank  | No   | 2    |   |
| 195 | Outlet union for 40mm copper pipe, including hole through tank  | No   | 2    |   |
|     | <b>Carried to Collection</b>  |      |      |   |
|     | External Works  |      |      |   |
|     | Bill No. 1  |      |      |   |
|     | External Works  |      |      |   |
|     |   |      |      | R |

| <b><u>PIPE INSULATION</u></b>   |   |      |      |
|---|---|------|------|
| <b><u>20mm Thick copper pipe insulation</u></b>   |   |      |      |
| 196   | Insulation to 35mm pipes including couplings          | m    | 104  |
| <b><u>Extra over pipe insulation for insulation around</u></b>  |   |      |      |
| 197   | 35mm Fittings, valves, etc                            | No   | 62   |
| <b><u>PVC sleeves for pipes not exceeding 100mm diameter</u></b>  |   |      |      |
| 198   | Sleeve exceeding 250mm and not exceeding 500mm long   | No   | 62   |
| <b><u>Core drilling hole exceeding 50mm and not exceeding 100mm diameter</u></b>  |   |      |      |
| 199   | 300mm Thick reinforced concrete slab, beam, wall, etc | No   | 42   |
| <b><u>Drawings</u></b>  |   |      |      |
| 200   | Provision of as-built drawings                        | Item | 1.00 |
| <b><u>THE FOLLOWING TO STAINLESS STEEL TURNSTILES, ETC</u></b>  |   |      |      |
| <p>The following turnstiles are to be supplied with a minimum five years' manufacturer guarantee on mechanical components and a minimum one year guarantee on electrical components</p> <p>Prices for turnstiles will be deemed to include for supply from approved manufacturer, installation by an installer approved by the manufacturer and commissioning upon completion</p> |   |      |      |
| <b>Carried to Collection</b>  |   |      |      |
| External Works<br>Bill No. 1<br>External Works  |   |      | R    |

|     |   |    |   |
|-----|---|----|---|
| 201 | <p><u>Grade 316 brushed stainless steel "Turnstar Tribune" or other approved electronically controlled bi-directional rotation turnstile with and including specialist approved card reader unit, mounting brackets for card reader unit, battery back-up system, "Rotalok" or other approved locking mechanism, restrictor tubes, split cover unit, internal mechanism dust cover, heavy duty base, LED red and green circle indicator light, random search device, low energy light, etc. complete</u></p> <p>Turnstile size 2150 x 2125mm high</p> | No | 4 |
|-----|---|----|---|

**THE FOLLOWING TO DRY STACK  
RETAINING WALL**

|     |   |    |     |
|-----|---|----|-----|
| 202 | <p><u>Precast concrete interlocking planter blocks finished smooth on exposed surfaces with stepped face and curves as required to suit slopes with planter blocks laid with horizontal bed joints to 60 degree slope including backfilling with earth obtained from the excavations and filling the blocks with garden soil lightly tamped as the work proceeds</u></p> <p>Excavation not exceeding 2m deep for trenches including risk of collapse, carting away, etc</p> | m3 | 63  |
| 203 | Soilcrete backfilling stabilised with 6% cement and compacted to 95% mod aashto density in minimum layers of 150mm  | m3 | 13  |
| 204 | 25MPa/19mm Reinforced concrete in foundation  | m3 | 24  |
| 205 | "Infraset Paving Terrace Blok® Concrete Retaining Walls or equally aproved" TB500 Interlocking blocks in foundations  | m2 | 50  |
| 206 | "Infraset Paving Terrace Blok® Concrete Retaining Walls or equally aproved" TB500 Interlocking blocks   | m2 | 250 |
| 207 | Extra over for filling in retaining blok with 25MPa/19mm unreinforced concrete in foundations   | m3 | 5   |
| 208 | "Geogrid" or other approved 100 x 100 at 500mm laps vertically behind wall  | m2 | 250 |

Carried to Collection

External Works  
Bill No. 1  
External Works

R

|     |   |    |      |
|-----|---|----|------|
| 209 | 160mm Diameter "Drainex or equally aproved" slotted pipe encased and including 19mm stones wrapped in bitem | m  | 100  |
| 210 | 50mm Diameter PVC weepholes 250mm long wrapped in bitem   | No | 540  |
| 211 | Steel reinforcement of various diameters to concrete foundations  | t  | 3.60 |

**THE FOLLOWING TO ATTENUATION TANK**

**Earthworks**

|     |   |      |      |
|-----|---|------|------|
| 212 | Excavation in soft material not exceeding 2m deep to attenuation tanks  | m3   | 145  |
| 213 | Excavation in soft material to trenches   | m3   | 42   |
| 214 | Extra over trench and hole excavations in earth for excavation in soft rock   | m3   | 81   |
| 215 | Extra over trench and hole excavations in earth for excavation in hard rock   | m3   | 16   |
| 216 | Keeping excavations free of all water other than subterranean water   | Item | 1.00 |
| 217 | Risk of collapse of sides of trench and hole excavations not exceeding 1,5m deep  | m2   | 155  |
| 218 | Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk) off site to be located by the contractor                  | m3   | 121  |
| 219 | Coarse river sand supplied by the contractor under floors etc   | m3   | 3    |
| 220 | In-situ dry density (sand replacement) test in accordance with method A10 (a) of TMH 1  | No   | 4    |
| 221 | One layer of 250 micron "Consol Plastics Gunplas USB Green or equally aproved" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape or equally aproved" under pavings | m2   | 58   |

**Carried to Collection**

External Works  
Bill No. 1  
External Works

R

|  |   |      |      |  |  |
|--|---|------|------|--|--|
| 222  | Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density   | m2   | 58   |  |  |
| 223  | Compaction of ground surface under trenches etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density | m2   | 17   |  |  |
| 224  | Soil poisoning under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming  | m2   | 58   |  |  |
| 225  | Soil poisoning to bottom and sides of trenches etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming   | m2   | 17   |  |  |
| <b><u>Concrete, Formwork &amp; Reinforcement</u></b> |   |      |      |  |  |
| 226  | 25MPa/19mm Reinforced concrete in foundation slabs  | m3   | 6    |  |  |
| 227  | 25MPa/19mm Reinforced concrete in trenches  | m3   | 5    |  |  |
| 228  | 25MPa/19mm Reinforced concrete in slabs   | m3   | 10   |  |  |
| 229  | Rough formwork to slabs not exceeding 250mm thick propped up exceeding 1.5m and not exceeding 3.5m high   | m2   | 58   |  |  |
| 230  | Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)  | Sets | 3    |  |  |
| 231  | Steel reinforcement of various diameters to concrete work   | t    | 2.50 |  |  |
| 232  | Type 245 fabric reinforcement   | m2   | 58   |  |  |
| <b><u>Precast concrete</u></b>                       |   |      |      |  |  |
| 233  | 1000mm Diameter precast manhole cover and frame   | No   | 6    |  |  |
| <b>Carried to Collection</b>                         |   |      |      |  |  |
| External Works                                       |   |      |      |  |  |
| Bill No. 1   |   |      |      |  |  |
| External Works                                       |   |      |      |  |  |

R

|                                     |   |      |      |            |            |
|-------------------------------------|---|------|------|------------|------------|
| <b><u>Masonry</u></b>               |   |      |      |            |            |
| 234                                 | One Brick wall of NFX bricks (14 MPa nominal compressive strength) in Class I mortar bagged and sealed  | m2   | 121  |            |            |
| 235                                 | 150mm Wide reinforcement built in horizontally  | m    | 925  |            |            |
| <b><u>Waterproofing</u></b>         |   |      |      |            |            |
| 236                                 | Apply Sika 720 all as per the manufactures instructions   | m2   | 143  |            |            |
| 237                                 | Apply Sika 63N all as per the manufactures instructions   | m2   | 143  |            |            |
| <b><u>Plastering</u></b>            |   |      |      |            |            |
| 238                                 | Cement plaster on walls   | m2   | 143  |            |            |
| <b><u>Plumbing and drainage</u></b> |   |      |      |            |            |
| 239                                 | 50mm Diameter uPVC air vent pipe  | No   | 6    |            |            |
| 240                                 | 110mm Diameter uPVC inlet pipe including all fittings and bends etc   | No   | 6    |            |            |
| 241                                 | 110mm Diameter uPVC overflow pipe including all fittings and bends etc  | No   | 6    |            |            |
| 242                                 | 110mm Diameter uPVC outlet pipe including all fittings and bends etc  | No   | 6    |            |            |
| <b><u>BUDGETARY ALLOWANCES</u></b>  |   |      |      |            |            |
| 243                                 | Allow an amount of R 350 000.00 (Three Hundred and Fifty Thousand Rand) for the supply and installation of an evaporation area as determined by the Principal Agent | Item | 1.00 | 350,000.00 | 350,000.00 |
| 244                                 | Allow an amount of R 750 000.00 (Seven Hundred and Fifty Thousand Rand) for the construction of retaining walls as determined by the Principal Agent                | Item | 1.00 | 750,000.00 | 750,000.00 |
| <b>Carried to Collection</b>        |   |      |      |            |            |
| External Works                      |   |      |      |            |            |
| Bill No. 1                          |   |      |      |            |            |
| External Works                      |   |      |      |            |            |
|                                     |   |      |      | R          |            |



| External Works                                 |         |   |          |
|--|---------|---|----------|
| <u>COLLECTION</u>                              |         |   |          |
|  | Page No |   | Amount R |
| Total Brought Forward from Page No.            | 100     |   |          |
|  | 101     |   |          |
|  | 102     |   |          |
|  | 103     |   |          |
|  | 104     |   |          |
|  | 105     |   |          |
|  | 106     |   |          |
|  | 107     |   |          |
|  | 108     |   |          |
|  | 109     |   |          |
|  | 110     |   |          |
|  | 111     |   |          |
|  | 112     |   |          |
|  | 113     |   |          |
|  | 114     |   |          |
|  | 115     |   |          |
|  | 116     |   |          |
|  | 117     |   |          |
|  | 118     |   |          |
|  | 119     |   |          |
|  | 120     |   |          |
|  | 121     |   |          |
|  | 122     |   |          |
| <b>Carried Forward</b>                         |         | R |          |
| External Works<br>Bill No. 1<br>External Works |         |   |          |

| External Works                                 |         |   |          |
|--|---------|---|----------|
| <u>COLLECTION</u>                              | Page No |   | Amount R |
| <b>Brought Forward</b>                         |         | R |          |
| Total Brought Forward from Page No.            | 123     |   |          |
|  | 124     |   |          |
| <b>Carried to Final Summary</b>                |         | R |          |
| External Works<br>Bill No. 1<br>External Works |         |   |          |

**BLOCK B: ADMINISTRATION, MAIN CENTRAL AREA****ELECTRICAL INSTALLATION****PROVISIONAL BILLS OF QUANTITIES****SECTION A**

| Item   | Description   | Qty               | Unit     | Rate       | Amount |
|--|---|-------------------|----------|------------|--------|
| 1.1  | <b>Distribution Boards</b><br>Supply, installation and commissioning of Kiosk, Distribution Boards, including all circuit breakers (as per load schedule), earthing straps, labels the making off of wire connections (external wiring, conduit, armoured cable and terminations given elsewhere). All DB's are to be equipped with a three phase or single phase surge arrestor. Special note, the accessories are inclusive on the quoted price |                   |          |            |        |
| 1.1.1  | Distribution Board  | Supply<br>Install | 1<br>1   | No.<br>No. |        |
| 1.1.2  | <b>Security System</b><br>Installation of Camera Sytem equipment and All Access Control Systems as specified of the Detailed Specification.   |                   |          |            |        |
| 1.1.2.1  | 360 Degree resolution CCTV Camera   | Supply<br>Install | 6<br>6   | No.<br>No. |        |
| 1.1.2.3  | Double Door Access Controller Panel   | Supply<br>Install | 3<br>3   | No.<br>No. |        |
| 1.1.2.4  | Fingerprint Keypad Reader-Standalone  | Supply<br>Install | 3<br>3   | No.<br>No. |        |
| 1.1.2.5  | Magnetic Lock 544 KG Holding Force  | Supply<br>Install | 3<br>3   | No.<br>No. |        |
| 1.1.2.6  | Emergency Door Release Call Point (Breaker Glass)   | Supply<br>Install | 3<br>3   | No.<br>No. |        |
| 1.2  | <b>Ancillary Distribution Boards and Outlets</b><br>Supply and installation of the following metal Ancillary Distribution Boards and coverplates for Data and Telephone outlets. (Conduit and Conduit boxes given elsewhere).   |                   |          |            |        |
| 1.2.1  | Telephone Distribution Board (450mm x 450mm).   | Supply<br>Install | 1<br>1   | No.<br>No. |        |
| 1.2.2  | Data Distribution Board (450mm x 450mm)   | Supply<br>Install | 1<br>1   | No.<br>No. |        |
| 1.2.4  | Data, Telephone and Ancillary Coverplates   | Supply<br>Install | 17<br>17 | No.<br>No. |        |
| 1.3  | <b>Cables</b><br>Supply, delivery and laying of PVC/SWA/PVC ECC Aluminium cables as specified, excluding terminations and cable supports. Lengths given shall be taken as measured lengths to cable runs from terminal to terminal and rates quoted shall include for off-cuts.   |                   |          |            |        |
| 1.3.1  | 35mm <sup>2</sup> 4C Aluminium Cable PVC Mains 600/1000V  | Supply<br>Install | 65<br>65 | m<br>m     |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |                   |          |            |        |

| Item   | Description  | Qty               | Unit       | Rate       |
|--|--|-------------------|------------|------------|
| 1.4  | <b><u>Cable Terminations</u></b><br>Including the supply and fitting of Pratley Cable gland, shroud, making off the cable and fitting the gland to gland plates, switchgear or equipment including final connections of cable tails with lugs onto board terminals and including earth in ECC cable. |                   |            |            |
| 1.4.1  | 35mm <sup>2</sup> 4C Aluminium Cable PVC Mains 600/1000V   | Supply<br>Install | 2<br>2     | No.<br>No. |
| 1.5  | <b><u>Cable Sleeves</u></b><br>Supply and Installation of Cable Sleeves as specified, in trenches  |                   |            |            |
| 1.5.1  | 110mm Ø Flexible Cable Sleeve  | Supply<br>Install | 65<br>65   | m<br>m     |
|  | <b>EXCAVATIONS</b>   |                   |            |            |
| 1.6  | In trenches for cables and sleeves   | 65                | m3         |            |
|  | extra over soft excavation intermediate  | 65                | m3         |            |
|  | extra over soft excavation in hard rock  | 65                | m3         |            |
| 1.7  | <b><u>Conduit</u></b><br>Supply and installation of PVC conduit. Lengths given shall be taken as measured horizontal and vertical runs between conduit terminations. Rates quoted shall allow for wastage, offcuts, couplings, cuttings, bending, jointing socket and tees.                          |                   |            |            |
| 1.7.1  | 25mm Conduit   | Supply<br>Install | 850<br>850 | m<br>m     |
| 1.8  | <b><u>Conduit Boxes and Ends</u></b><br>Terminate and connect one pair of conduit ends including supply and installation of 1, 2, 3 or 4 way box on surface or in brickwork. (excluding coverplates), including holes for conduit.   |                   |            |            |
| 1.8.1  | 25mm Conduit (100 x 100mm) Galvanized Box  | Supply<br>Install | 81<br>81   | No.<br>No. |
| 1.9  | <b><u>Conduit Ends</u></b><br>Terminate and connect one pair of conduit ends including lock nuts, bushes, etc. connecting into board tray, wiring channel etc. including cutting holes for conduit entries, but excluding conduit box.   |                   |            |            |
| 1.9.1  | 25mm uPVC Conduit  | Supply<br>Install | 81<br>81   | No.<br>No. |
| 1.10   | <b><u>Conductors</u></b><br>Supply and installation of PVC insulated copper conductors drawn into conduit or wiring channel in groups of 2, 3, 4, etc. with the required colour coding, but excluding any wiring connections.  |                   |            |            |
| 1.10.1   | 2,5 mm <sup>2</sup> PVC Conductors Red   | Supply<br>Install | 800<br>800 | m<br>m     |
|  | 2,5 mm <sup>2</sup> PVC Conductors Black   | Supply<br>Install | 800<br>800 | m<br>m     |
|  | 2,5 mm <sup>2</sup> PVC Conductors Pink  | Supply<br>Install | 800<br>800 | m<br>m     |
|  | 4 x 2 PVC Wall Box   | Supply<br>Install | 21<br>21   | No.<br>No. |
|  | Hospital Saddle  | Supply<br>Install | 65<br>65   | No.<br>No. |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |                   |            |            |

| Item   | Description   | Qty               | Unit       | Rate       | Amount |
|--|---|-------------------|------------|------------|--------|
|  | 4-Way Box PVC   | Supply<br>Install | 65<br>65   | No.<br>No. |        |
| 1.10.2   | 4 mm <sup>2</sup> PVC Conductors Blue   | Supply<br>Install | 500<br>500 | m<br>m     |        |
|  | 4 mm <sup>2</sup> PVC Conductors Brown  | Supply<br>Install | 500<br>500 | m<br>m     |        |
|  | 4 mm <sup>2</sup> PVC Conductors Earth  | Supply<br>Install | 500<br>500 | m<br>m     |        |
|  | Adaptors 25mm   | Supply<br>Install | 35<br>35   | No.<br>No. |        |
|  | 4 x 4 PVC Wall Box  | Supply<br>Install | 40<br>40   | No.<br>No. |        |
|  | Coupling 25mm   | Supply<br>Install | 50<br>50   | No.<br>No. |        |
| 1.12   | <b><u>Light Switches</u></b><br>Supply, fitting and electrical connection of a Legrand type flush or surface mounted 16A switch in 100 x 50 excluding box (for flush type) and conduit connections, but including cover plates. |                   |            |            |        |
| 1.12.1   | 16A 1 Lever 1 Way   | Supply<br>Install | 18<br>18   | No.<br>No. |        |
| 1.12.2   | 16A 1 Lever 2 Way   | Supply<br>Install | 4<br>4     | No.<br>No. |        |
| 1.13   | <b><u>Luminaires</u></b><br>Mounting, fixing and electrically connecting the following luminaires, complete with lamps as specified in Section E of the Detailed Specification.   |                   |            |            |        |
| 1.13.1   | Type B1<br>50w 1200 x 600 LED Panel Surface Mount Non-Dimmable, 3400lm, 5000k, as per Regent, Beka, Rubicon   | Supply<br>Install | 44<br>44   | No.<br>No. |        |
| 1.13.5   | Type J1.1<br>Round LED Bulkhead Light, 18w, 220-240v ac, IP54   | Supply<br>Install | 16<br>16   | No.<br>No. |        |
| 1.14   | <b><u>Daylight Switch</u></b><br>Supply and installation of approved daylight switch.   |                   |            |            |        |
| 1.14.1   | Daylight Switch   | Supply<br>Install | 1<br>1     | No.<br>No. |        |
| 1.15.2   | Elbows Internal/External  | Supply<br>Install | 20<br>20   | No.<br>No. |        |
| 1.15.3   | End Caps  | Supply<br>Install | 20<br>20   | No.<br>No. |        |
| 1.15.4   | Cover Joiner Clips  | Supply<br>Install | 20<br>20   | No.<br>No. |        |
| 1.15.5   | 16A SSO's c/w cover on Powerskirting  | Supply<br>Install | 12<br>12   | No.<br>No. |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |                   |            |            |        |

| Item   | Description   | Qty               | Unit                   | Rate | Amount |
|--|---|-------------------|------------------------|------|--------|
| 1.16   | <b>Socket Outlets</b><br>Supply, fitting and electrical connection of flush or surface mounted Legrand type switched socket in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate.   |                   |                        |      |        |
| 1.16.1   | 5A Single SSO c/w coverplate.Legrand type.  | Supply<br>Install | No.<br>No.             |      |        |
| 1.16.2   | 16A Double SSO c/w coverplate.Legrand type.   | Supply<br>Install | 16<br>16<br>No.<br>No. |      |        |
| 1.16.3   | 16A Dedicated Double SSO c/w coverplate.Legrand type.   | Supply<br>Install | 24<br>24<br>No.<br>No. |      |        |
| 1.16.4   | Powerskirting, Legrand Type   | Supply<br>Install | 30<br>30<br>m<br>m     |      |        |
| 1.16.5   | RJ11 Connector with cradle/ cover and mod blank, Legrand Type   | Supply<br>Install | 12<br>12<br>No.<br>No. |      |        |
| 1.16.6   | RJ45 Connector with cradle/ cover mod blank, Legrand Type   | Supply<br>Install | 12<br>12<br>No.<br>No. |      |        |
| 1.17   | <b>Isolators</b><br>Supply, fitting and electrical connection of flush or surface mounted Metal Clad Isolators in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. For more details please refer to the specific drawings |                   |                        |      |        |
| 1.17.1   | 20A Double2 Pole Flush waterproof Isolator for HVAC   | Supply<br>Install | 6<br>6<br>No.<br>No.   |      |        |
| 1.17.2   | 32A Double-Pole waterproof Isolator for Handdryer   | Supply<br>Install | 1<br>1<br>No.<br>No.   |      |        |
| 1.17.3   | 20A 2 Pole Flush waterproof Isolator - Geyser   | Supply<br>Install | 2<br>2<br>No.<br>No.   |      |        |
| 1.18   | <b>Electrical connection of appliances and installations.</b>   |                   |                        |      |        |
| 1.18.1   | Total Airconditioning Plant (Internal/External Units): Single and three phase   | Connect           | 6<br>No.               |      |        |
| 1.18.2   | Hand dryers   | Connect           | 1<br>No.               |      |        |
| 1.19   | <b>TELEPHONE INSTALLATION</b><br>Supply and installation of the following items for the Telephone Installation  |                   |                        |      |        |
| 1.19.1   | 25mm PVC Conduit  | Supply<br>Install | 130<br>130<br>m<br>m   |      |        |
| 1.19.2   | 25mm PVC Conduit end  | Supply<br>Install | 11<br>11<br>No.<br>No. |      |        |
| 1.19.3   | 25mm PVC Conduit box  | Supply<br>Install | 11<br>11<br>No.<br>No. |      |        |
| 1.20   | <b>DATA INSTALLATION</b><br>Supply and installation of the following items for the Data installation  |                   |                        |      |        |
| 1.20.1   | 25mm PVC Conduit  | Supply<br>Install | 130<br>130<br>m<br>m   |      |        |
| 1.20.2   | 25mm PVC Conduit end  | Supply<br>Install | 11<br>11<br>No.<br>No. |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |                   |                        |      |        |

| Item   | Description  | Qty                   | Unit       | Rate           | Amount |
|--|--|-----------------------|------------|----------------|--------|
| 1.20.3   | 25mm PVC Conduit box   | Supply<br>Install     | 11<br>11   | No.<br>No.     |        |
| 1.20.4   | <b>UPS</b><br>Supply and install of UPS for IT and electronic equipment housed in the server room. Capacity 6KVA, or a minimum of 2 hours backup   | Supply<br>Install     | 1<br>1     | No.<br>No.     |        |
| 1.20.5   | <b>IT Server Cabinet</b><br><br>Complete Wi-fi and network points to all rooms, security, Admin building.Refer to technical specification for system details.Detail design and layout to be done by contractor. 2 Main fibre feeds to be provide. All sever room compete supply of server and all accessories, including 48 Port Gigabit PoE Managed Switch, 12 Port SFP+ Router, 24 port CAT6 shielded patch panel, 42U 1M Deep Cabinet and all accessories. Fans,shelves., 8 Way C13 IEC Aluminium Rack Mount PDU-With surge protection, Cat6 Flylead, Fibre Patch Panel and associated assessories, Environment Monitoring Kit-In main server rooms Supply,install,program and layout of 6 wireless routes (one per block). All equipment to be preapproved by Engineer | Supply<br><br>Install | 1<br><br>1 | No.<br><br>No. |        |
| 1.20.6   | <b>LAN points</b><br>Supply and install cat 6A Shielded cable LAN from server room to each LAN point<br>Included wall box and patch lead to device & Labour for each point.incl cable. Termination on field and server patch panel   | Supply<br>Install     | 55<br>55   | No.<br>No.     |        |
| 1.21   | <b>Nurse Call System</b><br>Supply and installation of approved Nurse Call System.   |                       |            |                |        |
| 1.20.1   | Nurse call Panel   | Supply<br>Install     | 1<br>1     | No.<br>No.     |        |
| 1.20.2   | PA System  | Supply<br>Install     | 1<br>1     | No.<br>No.     |        |
| 1.20.3   | Microphone   | Supply<br>Install     | 1<br>1     | No.<br>No.     |        |
| 1.20.4   | Loud Speaker   | Supply<br>Install     | 3<br>3     | No.<br>No.     |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |                       |            |                |        |

**BLOCK - F - CHRONIC CARE****ELECTRICAL INSTALLATION****PROVISIONAL BILLS OF QUANTITIES****SECTION A**

| Item   | Description  | Qty               | Unit       | Rate       | Amount |
|--|--|-------------------|------------|------------|--------|
| 1.1  | <b>Security System</b><br>Installation of Camera Sytem equipment and All Access Control Systems as specified of the Detailed Specification.  |                   |            |            |        |
| 1.1.1  | 360 Degree resolution CCTV Camera  | Supply<br>Install | 4<br>4     | No.<br>No. |        |
| 1.1.2  | Double Door Access Controller Panel  | Supply<br>Install | 2<br>2     | No.<br>No. |        |
| 1.1.3  | Fingerprint Keypad Reader-Standalone   | Supply<br>Install | 2<br>2     | No.<br>No. |        |
| 1.1.4  | Magnetic Lock 544 KG Holding Force   | Supply<br>Install | 2<br>2     | No.<br>No. |        |
| 1.1.5  | Emergency Door Release Call Point (Breaker Glass)  | Supply<br>Install | 2<br>2     | No.<br>No. |        |
| 1.2  | <b>Ancillary Distribution Boards and Outlets</b><br>Supply and installation of the following metal Ancillary Distribution Boards and coverplates for Data and Telephone outlets. (Conduit and Conduit boxes given elsewhere).  |                   |            |            |        |
| 1.2.1  | Data, Telephone and Ancillary Coverplates  | Supply<br>Install | 8<br>8     | No.<br>No. |        |
| 1.5  | <b>Cable Sleeves</b><br>Supply and Installation of Cable Sleeves as specified, in trenches   |                   |            |            |        |
| 1.6  | <b>Conduit</b><br>Supply and installation of PVC conduit. Lengths given shall be taken as measured horizontal and vertical runs between conduit terminations. Rates quoted shall allow for wastage, offcuts, couplings, cuttings, bending, jointing socket and tees. |                   |            |            |        |
| 1.6.1  | 25mm Conduit   | Supply<br>Install | 330<br>330 | m<br>m     |        |
| 1.7  | <b>Conduit Boxes and Ends</b><br>Terminate and connect one pair of conduit ends including supply and installation of 1, 2, 3 or 4 way box on surface or in brickwork. (excluding coverplates), including holes for conduit.  |                   |            |            |        |
| 1.7.1  | 25mm Conduit (100 x 100mm) Galvanized Box  | Supply<br>Install | 20<br>20   | No.<br>No. |        |
| 1.8  | <b>Conduit Ends</b><br>Terminate and connect one pair of conduit ends including lock nuts, bushes, etc. connecting into board tray, wiring channel etc. including cutting holes for conduit entries, but excluding conduit box.                                      |                   |            |            |        |
| 1.8.1  | 25mm uPVC Conduit  | Supply<br>Install | 20<br>20   | No.<br>No. |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |                   |            |            |        |



| Item   | Description  | Qty               | Unit       | Rate       | Amount |
|--|--|-------------------|------------|------------|--------|
| 1.9  | <b>Conductors</b><br>Supply and installation of PVC insulated copper conductors drawn into conduit or wiring channel in groups of 2, 3, 4, etc. with the required colour coding, but excluding any wiring connections.   |                   |            |            |        |
| 1.9.1  | 2.5 mm <sup>2</sup> PVC Conductors Red   | Supply<br>Install | 300<br>300 | m<br>m     |        |
|  | 2.5 mm <sup>2</sup> PVC Conductors Black   | Supply<br>Install | 300<br>300 | m<br>m     |        |
|  | 2.5 mm <sup>2</sup> PVC Conductors Pink  | Supply<br>Install | 300<br>300 | m<br>m     |        |
|  | 4 x 2 PVC Wall Box   | Supply<br>Install | 8<br>8     | No.<br>No. |        |
|  | Hospital Saddle  | Supply<br>Install | 15<br>15   | No.<br>No. |        |
|  | 4-Way Box PVC  | Supply<br>Install | 10<br>10   | No.<br>No. |        |
| 1.9.2  | 4 mm <sup>2</sup> PVC Conductors Blue  | Supply<br>Install | 150<br>150 | m<br>m     |        |
|  | 4 mm <sup>2</sup> PVC Conductors Brown   | Supply<br>Install | 150<br>150 | m<br>m     |        |
|  | 4 mm <sup>2</sup> PVC Conductors Earth   | Supply<br>Install | 100<br>100 | m<br>m     |        |
|  | Adaptors 25mm  | Supply<br>Install | 15<br>15   | No.<br>No. |        |
|  | 4 x 4 PVC Wall Box   | Supply<br>Install | 13<br>13   | No.<br>No. |        |
|  | Coupling 25mm  | Supply<br>Install | 10<br>10   | No.<br>No. |        |
| 1.10.  | <b>Light Switches</b><br>Supply, fitting and electrical connection of a Legrand type flush or surface mounted 16A switch in 100 x 50 excluding box (for flush type) and conduit connections, but including cover plates. |                   |            |            |        |
| 1.10.1   | 16A 1 Lever 1 Way  | Supply<br>Install | 6<br>6     | No.<br>No. |        |
| 1.10.2   | 16A 1 Lever 2 Way  | Supply<br>Install | 2<br>2     | No.<br>No. |        |
| 1.11   | <b>Luminaires</b><br>Mounting, fixing and electrically connecting the following luminaires, complete with lamps as specified in Section E of the Detailed Specification.   |                   |            |            |        |
| 1.11.1   | Type B1<br>50w 1200 x 600 LED Panel Surface Mount Non-Dimmable, 3400lm, 5000k, as per Regent, Beka, Rubicon  | Supply<br>Install | 28<br>28   | No.<br>No. |        |
| 1.11.2   | Type J1.1<br>Round LED Bulkhead Light, 18w, 220-240v ac, IP54  | Supply<br>Install | 10<br>10   | No.<br>No. |        |
| 1.12   | <b>Daylight Switch</b><br>Supply and installation of approved daylight switch.   |                   |            |            |        |
| 1.12.1   | Daylight Switch  | Supply<br>Install | 1<br>1     | No.<br>No. |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |                   |            |            |        |

| Item   | Description   |         | Qty | Unit | Rate | Amount |
|--|---|---------|-----|------|------|--------|
| 1.12.2   | Elbows Internal/External  | Supply  | 10  | No.  |      |        |
|  |   | Install | 10  | No.  |      |        |
| 1.12.3   | End Caps  | Supply  | 10  | No.  |      |        |
|  |   | Install | 10  | No.  |      |        |
| 1.12.4   | Cover Joiner Clips  | Supply  | 10  | No.  |      |        |
|  |   | Install | 10  | No.  |      |        |
| 1.12.5   | 16A SSO's c/w cover on Powerskirting  | Supply  | 13  | No.  |      |        |
|  |   | Install | 13  | No.  |      |        |
| 1.13   | <b>Socket Outlets</b><br>Supply, fitting and electrical connection of flush or surface mounted Legrand type switched socket in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate.   |         |     |      |      |        |
| 1.13.1   | 5A Single SSO c/w coverplate.Legrand type.  | Supply  | 2   | No.  |      |        |
|  |   | Install | 2   | No.  |      |        |
| 1.13.2   | 16A Double SSO c/w coverplate.Legrand type.   | Supply  | 2   | No.  |      |        |
|  |   | Install | 2   | No.  |      |        |
| 1.13.3   | 16A Dedicated Double SSO c/w coverplate.Legrand type.   | Supply  | 8   | No.  |      |        |
|  |   | Install | 8   | No.  |      |        |
| 1.13.4   | 16A UPS Single SSO c/w coverplate.Legrand type.   | Supply  | 3   | No.  |      |        |
|  |   | Install | 3   | No.  |      |        |
| 1.13.5   | Powerskirting, Legrand Type   | Supply  | 26  | m    |      |        |
|  |   | Install | 26  | m    |      |        |
| 1.13.6   | RJ11 Connector with cradle/ cover and mod blank   | Supply  | 4   | No   |      |        |
|  |   | Install | 4   | No   |      |        |
| 1.13.7   | RJ45 Connector with cradle/ cover mod blank   | Supply  | 4   | No   |      |        |
|  |   | Install | 4   | No   |      |        |
| 1.14   | <b>Isolators</b><br>Supply, fitting and electrical connection of flush or surface mounted Metal Clad Isolators in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. For more details please refer to the specific drawings |         |     |      |      |        |
| 1.14.1   | 20A Double2 Pole Flush waterproof Isolator for HVAC   | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| 1.14.2   | 32A Double-Pole waterproof Isolator for Handdryer   | Supply  | 2   | No.  |      |        |
|  |   | Install | 2   | No.  |      |        |
| 1.14.3   | 5A 2 Pole Flush waterproof Isolator   | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.14.4   | 20A 2 Pole Flush waterproof Isolator - Geysers  | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |         |     |      |      |        |

| Item   | Description  |                   | Qty      | Unit       | Rate | Amount |
|--|--|-------------------|----------|------------|------|--------|
| 1.15   | <b><u>Electrical connection of appliances and installations.</u></b>   |                   |          |            |      |        |
| 1.15.1   | Total Airconditioning Plant (Internal/External Units): Single and three phase                                  | Connect           | 4        | No.        |      |        |
| 1.16   | <b>TELEPHONE INSTALLATION</b><br>Supply and installation of the following items for the Telephone Installation |                   |          |            |      |        |
| 1.16.1   | 25mm PVC Conduit   | Supply<br>Install | 50<br>50 | m<br>m     |      |        |
| 1.16.2   | 25mm PVC Conduit end   | Supply<br>Install | 8<br>8   | No.<br>No. |      |        |
| 1.16.3   | 25mm PVC Conduit box   | Supply<br>Install | 5<br>5   | No.<br>No. |      |        |
| 1.17   | <b>DATA INSTALLATION</b><br>Supply and installation of the following items for the Data installation           |                   |          |            |      |        |
| 1.17.1   | 25mm PVC Conduit   | Supply<br>Install | 50<br>50 | m<br>m     |      |        |
| 1.17.2   | 25mm PVC Conduit end   | Supply<br>Install | 8<br>8   | No.<br>No. |      |        |
| 1.17.3   | 25mm PVC Conduit box   | Supply<br>Install | 5<br>5   | No.<br>No. |      |        |
| 1.18   | <b><u>Nurse Call System</u></b><br>Supply and installation of approved Nurse Call System.                      |                   |          |            |      |        |
| 1.18.1   | Loud Speaker   | Supply<br>Install | 1<br>1   | No.<br>No. |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |                   |          |            |      |        |

**BLOCK - E - ACUTE CARE****ELECTRICAL INSTALLATION****PROVISIONAL BILLS OF QUANTITIES****SECTION A**

| Item   | Description  |         | Qty | Unit | Rate | Amount |
|--|--|---------|-----|------|------|--------|
| 1.1  | <b>Security System</b><br>Installation of Camera Sytem equipment and All Access Control Systems as specified of the Detailed Specification.  |         |     |      |      |        |
| 1.1.1  | 360 Degree resolution CCTV Camera  | Supply  | 5   | No.  |      |        |
|  |  | Install | 5   | No.  |      |        |
| 1.1.2  | Double Door Access Controller Panel  | Supply  | 2   | No.  |      |        |
|  |  | Install | 2   | No.  |      |        |
| 1.1.3  | Fingerprint Keypad Reader-Standalone   | Supply  | 2   | No.  |      |        |
|  |  | Install | 2   | No.  |      |        |
| 1.1.4  | Magnetic Lock 544 KG Holding Force   | Supply  | 2   | No.  |      |        |
|  |  | Install | 2   | No.  |      |        |
| 1.1.5  | Emergency Door Release Call Point (Breaker Glass)  | Supply  | 2   | No.  |      |        |
|  |  | Install | 2   | No.  |      |        |
| 1.2  | <b>Ancillary Distribution Boards and Outlets</b><br>Supply and installation of the following metal Ancillary Distribution Boards and coverplates for Data and Telephone outlets. (Conduit and Conduit boxes given elsewhere).  |         |     |      |      |        |
| 1.2.1  | Data, Telephone and Ancillary Coverplates  | Supply  | 6   | No.  |      |        |
|  |  | Install | 6   | No.  |      |        |
| 1.3  | <b>Conduit</b><br>Supply and installation of PVC conduit. Lengths given shall be taken as measured horizontal and vertical runs between conduit terminations. Rates quoted shall allow for wastage, offcuts, couplings, cuttings, bending, jointing socket and tees. |         |     |      |      |        |
| 1.3.1  | 25mm Conduit   | Supply  | 300 | m    |      |        |
|  |  | Install | 300 | m    |      |        |
| 1.4  | <b>Conduit Boxes and Ends</b><br>Terminate and connect one pair of conduit ends including supply and installation of 1, 2, 3 or 4 way box on surface or in brickwork. (excluding coverplates), including holes for conduit.  |         |     |      |      |        |
| 1.4.1  | 25mm Conduit (100 x 100mm) Galvanized Box  | Supply  | 20  | No.  |      |        |
|  |  | Install | 20  | No.  |      |        |
| 1.5  | <b>Conduit Ends</b><br>Terminate and connect one pair of conduit ends including lock nuts, bushes, etc. connecting into board tray, wiring channel etc. including cutting holes for conduit entries, but excluding conduit box.                                      |         |     |      |      |        |
| 1.5.1  | 25mm uPVC Conduit  | Supply  | 25  | No.  |      |        |
|  |  | Install | 25  | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |         |     |      |      |        |

| Item   | Description  | Qty               | Unit       | Rate       | Amount |
|--|--|-------------------|------------|------------|--------|
| 1.6  | <b>Conductors</b><br>Supply and installation of PVC insulated copper conductors drawn into conduit or wiring channel in groups of 2, 3, 4, etc. with the required colour coding, but excluding any wiring connections.   |                   |            |            |        |
| 1.6.1  | 2.5 mm <sup>2</sup> PVC Conductors Red   | Supply<br>Install | 200<br>200 | m<br>m     |        |
|  | 2.5 mm <sup>2</sup> PVC Conductors Black   | Supply<br>Install | 200<br>200 | m<br>m     |        |
|  | 2.5 mm <sup>2</sup> PVC Conductors Pink  | Supply<br>Install | 200<br>200 | m<br>m     |        |
|  | 4 x 2 PVC Wall Box   | Supply<br>Install | 9<br>9     | No.<br>No. |        |
|  | Hospital Saddle  | Supply<br>Install | 15<br>15   | No.<br>No. |        |
|  | 4-Way Box PVC  | Supply<br>Install | 10<br>10   | No.<br>No. |        |
| 1.6.2  | 4 mm <sup>2</sup> PVC Conductors Blue  | Supply<br>Install | 150<br>150 | m<br>m     |        |
|  | 4 mm <sup>2</sup> PVC Conductors Brown   | Supply<br>Install | 150<br>150 | m<br>m     |        |
|  | 4 mm <sup>2</sup> PVC Conductors Earth   | Supply<br>Install | 100<br>100 | m<br>m     |        |
|  | Adaptors 25mm  | Supply<br>Install | 15<br>15   | No.<br>No. |        |
|  | 4 x 4 PVC Wall Box   | Supply<br>Install | 14<br>14   | No.<br>No. |        |
|  | Coupling 25mm  | Supply<br>Install | 10<br>10   | No.<br>No. |        |
| 1.7  | <b>Light Switches</b><br>Supply, fitting and electrical connection of a Legrand type flush or surface mounted 16A switch in 100 x 50 excluding box (for flush type) and conduit connections, but including cover plates. |                   |            |            |        |
| 1.7.1  | 16A 1 Lever 1 Way  | Supply<br>Install | 8<br>8     | No.<br>No. |        |
| 1.7.2  | 16A 1 Lever 2 Way  | Supply<br>Install | 2<br>2     | No.<br>No. |        |
| 1.8  | <b>Luminaires</b><br>Mounting, fixing and electrically connecting the following luminaires, complete with lamps as specified in Section E of the Detailed Specification.   |                   |            |            |        |
| 1.8.1  | Type B1<br>50w 1200 x 600 LED Panel Surface Mount Non-Dimmable, 3400lm, 5000k, as per Regent, Beka, Rubicon  | Supply<br>Install | 24<br>24   | No.<br>No. |        |
| 1.8.2  | Type J1.1<br>Round LED Bulkhead Light, 18w, 220-240v ac, IP54  | Supply<br>Install | 12<br>12   | No.<br>No. |        |
| 1.9  | <b>Daylight Switch</b><br>Supply and installation of approved daylight switch.   |                   |            |            |        |
| 1.9.1  | Daylight Switch  | Supply<br>Install | 1<br>1     | No.<br>No. |        |
| 1.9.2  | Elbows Internal/External   | Supply<br>Install | 10<br>10   | No.<br>No. |        |
| 1.9.3  | End Caps   | Supply<br>Install | 10<br>10   | No.<br>No. |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |                   |            |            |        |

| Item   | Description   |         | Qty | Unit | Rate | Amount |
|--|---|---------|-----|------|------|--------|
| 1.9.4  | Cover Joiner Clips  | Supply  | 10  | No.  |      |        |
|  |   | Install | 10  | No.  |      |        |
| 1.9.5  | 16A SSO's c/w cover on Powerskirting  | Supply  | 9   | No.  |      |        |
|  |   | Install | 9   | No.  |      |        |
| 1.10.  | <b>Socket Outlets</b>   |         |     |      |      |        |
|  | Supply, fitting and electrical connection of flush or surface mounted Legrand type switched socket in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate.  |         |     |      |      |        |
| 1.10.1   | 5A Single SSO c/w coverplate.Legrand type.  | Supply  | 2   | No.  |      |        |
|  |   | Install | 2   | No.  |      |        |
| 1.10.2   | 16A Double SSO c/w coverplate.Legrand type.   | Supply  | 3   | No.  |      |        |
|  |   | Install | 3   | No.  |      |        |
| 1.10.3   | 16A Dedicated Double SSO c/w coverplate.Legrand type.   | Supply  | 8   | No.  |      |        |
|  |   | Install | 8   | No.  |      |        |
| 1.10.4   | 16A UPS Single SSO c/w coverplate.Legrand type.   | Supply  | 3   | No.  |      |        |
|  |   | Install | 3   | No.  |      |        |
| 1.10.5   | Powerskirting, Legrand Type   | Supply  | 15  | m    |      |        |
|  |   | Install | 15  | m    |      |        |
| 1.10.6   | RJ11 Connector with cradle/ cover and mod blank   | Supply  | 13  | m    |      |        |
|  |   | Install | 13  | m    |      |        |
| 1.10.7   | RJ45 Connector with cradle/ cover mod blank   | Supply  | 13  | m    |      |        |
|  |   | Install | 13  | m    |      |        |
| 1.11   | <b>Isolators</b>  |         |     |      |      |        |
|  | Supply, fitting and electrical connection of flush or surface mounted Metal Clad Isolators in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. For more details please refer to the specific drawings |         |     |      |      |        |
| 1.11.1   | 20A Double2 Pole Flush waterproof Isolator for HVAC   | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| 1.11.2   | 20A 2 Pole Flush waterproof Isolator - Geysers  | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |         |     |      |      |        |

| Item   | Description  |         | Qty | Unit | Rate | Amount |
|--|--|---------|-----|------|------|--------|
| 1.12   | <b><u>Electrical connection of appliances and installations.</u></b>   |         |     |      |      |        |
| 1.12.1   | Total Airconditioning Plant (Internal/External Units): Single and three phase                                  | Connect | 4   | No.  |      |        |
| 1.13   | <b>TELEPHONE INSTALLATION</b><br>Supply and installation of the following items for the Telephone Installation |         |     |      |      |        |
| 1.13.1   | 25mm PVC Conduit   | Supply  | 15  | m    |      |        |
|  |  | Install | 15  | m    |      |        |
| 1.13.2   | 25mm PVC Conduit end   | Supply  | 9   | No.  |      |        |
|  |  | Install | 9   | No.  |      |        |
| 1.13.3   | 25mm PVC Conduit box   | Supply  | 5   | No.  |      |        |
|  |  | Install | 5   | No.  |      |        |
| 1.14   | <b>DATA INSTALLATION</b><br>Supply and installation of the following items for the Data installation           |         |     |      |      |        |
| 1.14.1   | 25mm PVC Conduit   | Supply  | 15  | m    |      |        |
|  |  | Install | 15  | m    |      |        |
| 1.14.2   | 25mm PVC Conduit end   | Supply  | 8   | No.  |      |        |
|  |  | Install | 8   | No.  |      |        |
| 1.14.3   | 25mm PVC Conduit box   | Supply  | 5   | No.  |      |        |
|  |  | Install | 5   | No.  |      |        |
| 1.15   | <b><u>Nurse Call System</u></b><br>Supply and installation of approved Nurse Call System.                      |         |     |      |      |        |
| 1.15.1   | Loud Speaker   | Supply  | 1   | No.  |      |        |
|  |  | Install | 1   | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |         |     |      |      |        |

**BLOCK - A - GUARD HOUSE & PUBLIC ABLUTIONS****ELECTRICAL INSTALLATION****PROVISIONAL BILLS OF QUANTITIES****SECTION A**

| Item   | Description   | Qty               | Unit     | Rate       | Amount |
|--|---|-------------------|----------|------------|--------|
| 1.1  | <b>Distribution Boards</b><br>Supply, installation and commissioning of Kiosk, Distribution Boards, including all circuit breakers (as per load schedule), earthing straps, labels the making off of wire connections (external wiring, conduit, armoured cable and terminations given elsewhere). All DB's are to be equipped with a three phase or single phase surge arrester. Special note, the accessories are inclusive on the quoted price |                   |          |            |        |
| 1.1.1  | Distribution Board  | Supply<br>Install | 1<br>1   | No.<br>No. |        |
| 1.1.2  | <b>Security System</b><br>Installation of Camera Sytem equipment and All Access Control Systems as specified of the Detailed Specification.   |                   |          |            |        |
| 1.1.2.1  | 360 Degree resolution CCTV Camera   | Supply<br>Install | 4<br>4   | No.<br>No. |        |
| 1.1.2.3  | Double Door Access Controller Panel   | Supply<br>Install | 1<br>1   | No.<br>No. |        |
| 1.1.2.4  | Fingerprint Keypad Reader-Standalone  | Supply<br>Install | 1<br>1   | No.<br>No. |        |
| 1.1.2.5  | Magnetic Lock 544 KG Holding Force  | Supply<br>Install | 1<br>1   | No.<br>No. |        |
| 1.1.2.7  | CCTV Monitor Screen   | Supply<br>Install | 3<br>3   | No.<br>No. |        |
| 1.2  | <b>Ancillary Distribution Boards and Outlets</b><br>Supply and installation of the following metal Ancillary Distribution Boards and coverplates for Data and Telephone outlets. (Conduit and Conduit boxes given elsewhere).   |                   |          |            |        |
| 1.2.1  | Data, Telephone and Ancillary Coverplates   | Supply<br>Install | 11<br>11 | No.<br>No. |        |
| 1.3  | <b>Cables</b><br>Supply, delivery and laying of PVC/SWA/PVC ECC Aluminium cables as specified, excluding terminations and cable supports. Lengths given shall be taken as measured lengths to cable runs from terminal to terminal and rates quoted shall include for off-cuts.   |                   |          |            |        |
| 1.3.1  | 25mm <sup>2</sup> 4C Aluminium Cable PVC Mains 600/1000V  | Supply<br>Install | 80<br>80 | m<br>m     |        |
| 1.4  | <b>Cable Terminations</b><br>Including the supply and fitting of Pratley Cable gland, shroud, making off the cable and fitting the gland to gland plates, switchgear or equipment including final connections of cable tails with lugs onto board terminals and including earth in ECC cable.   |                   |          |            |        |
| 1.4.1  | 25mm <sup>2</sup> 4C Aluminium Cable PVC Mains 600/1000V  | Supply<br>Install | 2<br>2   | No.<br>No. |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |                   |          |            |        |



| Item   | Description  | Qty               | Unit       | Rate       |
|--|--|-------------------|------------|------------|
| 1.5  | <b>Cable Sleeves</b><br>Supply and Installation of Cable Sleeves as specified, in trenches or cast in concrete, excluding trenching or backfilling.  |                   |            |            |
| 1.5.1  | 110mm Ø Flexible Cable Sleeve  | Supply<br>Install | 80<br>80   | m<br>m     |
|  | <b>EXTRA ON upvc piping for:</b><br>100mm Diameter long radius bend  |                   | 80         | m3         |
|  | <b>EXCAVATIONS</b>   |                   |            |            |
| 1.6  | In trenches for cables and sleeves   |                   | 80         | m3         |
|  | extra over soft excavation intermediate  |                   | 80         | m3         |
|  | extra over soft excavation in hard rock  |                   | 80         | m3         |
| 1.7  | <b>Conduit</b><br>Supply and installation of PVC conduit. Lengths given shall be taken as measured horizontal and vertical runs between conduit terminations. Rates quoted shall allow for wastage, offcuts, couplings, cuttings, bending, jointing socket and tees. |                   |            |            |
| 1.7.1  | 25mm Conduit   | Supply<br>Install | 640<br>640 | m<br>m     |
| 1.8  | <b>Conduit Boxes and Ends</b><br>Terminate and connect one pair of conduit ends including supply and installation of 1, 2, 3 or 4 way box on surface or in brickwork. (excluding coverplates), including holes for conduit.  |                   |            |            |
| 1.8.1  | 25mm Conduit (100 x 100mm) Galvanized Box  | Supply<br>Install | 31<br>31   | No.<br>No. |
| 1.9  | <b>Conduit Ends</b><br>Terminate and connect one pair of conduit ends including lock nuts, bushes, etc. connecting into board tray, wiring channel etc. including cutting holes for conduit entries, but excluding conduit box.                                      |                   |            |            |
| 1.9.1  | 25mm uPVC Conduit  | Supply<br>Install | 20<br>20   | No.<br>No. |
| 1.10   | <b>Conductors</b><br>Supply and installation of PVC insulated copper conductors drawn into conduit or wiring channel in groups of 2, 3, 4, etc. with the required colour coding, but excluding any wiring connections.   |                   |            |            |
| 1.10.1   | 2,5 mm <sup>2</sup> PVC Conductors Red   | Supply<br>Install | 420<br>420 | m<br>m     |
|  | 2,5 mm <sup>2</sup> PVC Conductors Black   | Supply<br>Install | 420<br>420 | m<br>m     |
|  | 2,5 mm <sup>2</sup> PVC Conductors Pink  | Supply<br>Install | 420<br>420 | m<br>m     |
|  | 4 x 2 PVC Wall Box   | Supply<br>Install | 10<br>10   | No.<br>No. |
|  | Hospital Saddle  | Supply<br>Install | 15<br>15   | No.<br>No. |
|  | 4-Way Box PVC  | Supply<br>Install | 15<br>15   | No.<br>No. |
| 1.10.2   | 4 mm <sup>2</sup> PVC Conductors Blue  | Supply<br>Install | 500<br>500 | m<br>m     |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |                   |            |            |

| Item   | Description  |         | Qty | Unit | Rate | Amount |
|--|--|---------|-----|------|------|--------|
|  | 4 mm <sup>2</sup> PVC Conductors Brown   | Supply  | 500 | m    |      |        |
|  |  | Install | 500 | m    |      |        |
|  | 4 mm <sup>2</sup> PVC Conductors Earth   | Supply  | 500 | m    |      |        |
|  |  | Install | 500 | m    |      |        |
|  | Adaptors 25mm  | Supply  | 20  | No.  |      |        |
|  |  | Install | 20  | No.  |      |        |
|  | 4 x 4 PVC Wall Box   | Supply  | 15  | No.  |      |        |
|  |  | Install | 15  | No.  |      |        |
|  | Coupling 25mm  | Supply  | 15  | No.  |      |        |
|  |  | Install | 15  | No.  |      |        |
| 1.12   | <b><u>Light Switches</u></b>   |         |     |      |      |        |
|  | Supply, fitting and electrical connection of a Legrand type flush or surface mounted 16A switch in 100 x 50 excluding box (for flush type) and conduit connections, but including cover plates.  |         |     |      |      |        |
| 1.12.1   | 16A 1 Lever 1 Way  | Supply  | 10  | No.  |      |        |
|  |  | Install | 10  | No.  |      |        |
| 1.13   | <b><u>Luminaires</u></b>   |         |     |      |      |        |
|  | Mounting, fixing and electrically connecting the following luminaires, complete with lamps as specified in Section E of the Detailed Specification.  |         |     |      |      |        |
| 1.13.1   | Type B1<br>50w 1200 x 600 LED Panel Surface Mount Non-Dimmable, 3400lm, 5000k, as per Regent, Beka, Rubicon  | Supply  | 12  | No.  |      |        |
|  |  | Install | 12  | No.  |      |        |
| 1.13.5   | Type J1.1<br>Round LED Bulkhead Light, 18w, 220-240v ac, IP54  | Supply  | 21  | No.  |      |        |
|  |  | Install | 21  | No.  |      |        |
| 1.14   | <b><u>Daylight Switch</u></b>  |         |     |      |      |        |
|  | Supply and installation of approved daylight switch.   |         |     |      |      |        |
| 1.14.1   | Daylight Switch  | Supply  | 1   | No.  |      |        |
|  |  | Install | 1   | No.  |      |        |
| 1.15.2   | Elbows Internal/External   | Supply  | 10  | No.  |      |        |
|  |  | Install | 10  | No.  |      |        |
| 1.15.3   | End Caps   | Supply  | 10  | No.  |      |        |
|  |  | Install | 10  | No.  |      |        |
| 1.15.4   | Cover Joiner Clips   | Supply  | 10  | No.  |      |        |
|  |  | Install | 10  | No.  |      |        |
| 1.15.5   | 16A SSO's c/w cover on Powerskirting   | Supply  | 9   | No.  |      |        |
|  |  | Install | 9   | No.  |      |        |
| 1.16   | <b><u>Socket Outlets</u></b>   |         |     |      |      |        |
|  | Supply, fitting and electrical connection of flush or surface mounted Legrand type switched socket in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. |         |     |      |      |        |
| 1.16.1   | 16A Double SSO c/w coverplate.Legrand type.  | Supply  | 5   | No.  |      |        |
|  |  | Install | 5   | No.  |      |        |
| 1.16.2   | 16A Dedicated Double SSO c/w coverplate.Legrand type.  | Supply  | 10  | No.  |      |        |
|  |  | Install | 10  | No.  |      |        |
| 1.16.3   | Powerskirting, Legrand Type  | Supply  | 9   | m    |      |        |
|  |  | Install | 9   | m    |      |        |
| 1.16.4   | RJ11 Connector with cradle/ cover and mod blank  | Supply  | 8   | m    |      |        |
|  |  | Install | 8   | m    |      |        |
| 1.16.5   | RJ45 Connector with cradle/ cover mod blank  | Supply  | 8   | m    |      |        |
|  |  | Install | 8   | m    |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |         |     |      |      |        |

| Item   | Description   |                   | Qty    | Unit       | Rate | Amount |
|--|---|-------------------|--------|------------|------|--------|
| 1.17   | <b>Isolators</b><br>Supply, fitting and electrical connection of flush or surface mounted Metal Clad Isolators in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. For more details please refer to the specific drawings |                   |        |            |      |        |
| 1.17.1   | 20A Double2 Pole Flush waterproof Isolator for HVAC   | Supply<br>Install | 4<br>4 | No.<br>No. |      |        |
| 1.17.2   | 32A Double-Pole waterproof Isolator for Handdryer   | Supply<br>Install | 2<br>2 | No.<br>No. |      |        |
| 1.17.3   | 20A 4 Pole Flush waterproof Isolator for Scanner & Turnstill gate   | Supply<br>Install | 2<br>2 | No.<br>No. |      |        |
| 1.17.4   | 5A 2 Pole Flush waterproof Isolator   | Supply<br>Install | 2<br>2 | No.<br>No. |      |        |
| 1.17.4   | 20A 2 Pole Flush waterproof Isolator - Geysler  | Supply<br>Install | 1<br>1 | No.<br>No. |      |        |
| 1.18   | <b>Electrical connection of appliances and installations.</b>   |                   |        |            |      |        |
| 1.18.1   | Total Airconditioning Plant (Internal/External Units): Single and three phase   | Connect           | 4      | No.        |      |        |
| 1.18.2   | Hand dryers   | Connect           | 2      | No.        |      |        |
| 1.19   | <b>TELEPHONE INSTALLATION</b><br>Supply and installation of the following items for the Telephone Installation  |                   |        |            |      |        |
| 1.19.1   | 25mm PVC Conduit  | Supply<br>Install | 9<br>9 | m<br>m     |      |        |
| 1.19.2   | 25mm PVC Conduit end  | Supply<br>Install | 5<br>5 | No.<br>No. |      |        |
| 1.19.3   | 25mm PVC Conduit box  | Supply<br>Install | 5<br>5 | No.<br>No. |      |        |
| 1.20   | <b>DATA INSTALLATION</b><br>Supply and installation of the following items for the Data installation  |                   |        |            |      |        |
| 1.20.1   | 25mm PVC Conduit  | Supply<br>Install | 9<br>9 | m<br>m     |      |        |
| 1.20.2   | 25mm PVC Conduit end  | Supply<br>Install | 5<br>5 | No.<br>No. |      |        |
| 1.20.3   | 25mm PVC Conduit box  | Supply<br>Install | 5<br>5 | No.<br>No. |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |                   |        |            |      |        |

**BLOCK - E - PREVENTIVE & PROMOTIVE****ELECTRICAL INSTALLATION****PROVISIONAL BILLS OF QUANTITIES****SECTION A**

| Item   | Description  |         | Qty | Unit | Rate | Amount |
|--|--|---------|-----|------|------|--------|
| 1.1  | <b>Security System</b><br>Installation of Camera Sytem equipment and All Access Control Systems as specified of the Detailed Specification.  |         |     |      |      |        |
| 1.1.1  | 360 Degree resolution CCTV Camera  | Supply  | 1   | No.  |      |        |
|  |  | Install | 1   | No.  |      |        |
| 1.1.2  | Double Door Access Controller Panel  | Supply  | 2   | No.  |      |        |
|  |  | Install | 2   | No.  |      |        |
| 1.1.3  | Fingerprint Keypad Reader-Standalone   | Supply  | 2   | No.  |      |        |
|  |  | Install | 2   | No.  |      |        |
| 1.1.4  | Magnetic Lock 544 KG Holding Force   | Supply  | 2   | No.  |      |        |
|  |  | Install | 2   | No.  |      |        |
| 1.1.5  | Emergency Door Release Call Point (Breaker Glass)  | Supply  | 2   | No.  |      |        |
|  |  | Install | 2   | No.  |      |        |
| 1.2  | <b>Ancillary Distribution Boards and Outlets</b><br>Supply and installation of the following metal Ancillary Distribution Boards and coverplates for Data and Telephone outlets. (Conduit and Conduit boxes given elsewhere).  |         |     |      |      |        |
| 1.2.1  | Data, Telephone and Ancillary Coverplates  | Supply  | 8   | No.  |      |        |
|  |  | Install | 8   | No.  |      |        |
| 1.3  | <b>Conduit</b><br>Supply and installation of PVC conduit. Lengths given shall be taken as measured horizontal and vertical runs between conduit terminations. Rates quoted shall allow for wastage, offcuts, couplings, cuttings, bending, jointing socket and tees. |         |     |      |      |        |
| 1.3.1  | 25mm Conduit   | Supply  | 250 | m    |      |        |
|  |  | Install | 250 | m    |      |        |
| 1.4  | <b>Conduit Boxes and Ends</b><br>Terminate and connect one pair of conduit ends including supply and installation of 1, 2, 3 or 4 way box on surface or in brickwork. (excluding coverplates), including holes for conduit.  |         |     |      |      |        |
| 1.4.1  | 25mm Conduit (100 x 100mm) Galvanized Box  | Supply  | 20  | No.  |      |        |
|  |  | Install | 20  | No.  |      |        |
| 1.5  | <b>Conduit Ends</b><br>Terminate and connect one pair of conduit ends including lock nuts, bushes, etc. connecting into board tray, wiring channel etc. including cutting holes for conduit entries, but excluding conduit box.                                      |         |     |      |      |        |
| 1.5.1  | 25mm uPVC Conduit  | Supply  | 25  | No.  |      |        |
|  |  | Install | 25  | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |         |     |      |      |        |

| Item   | Description   |         | Qty | Unit | Rate | Amount |
|--|---|---------|-----|------|------|--------|
| 1.6  | <b><u>Conductors</u></b><br>Supply and installation of PVC insulated copper conductors drawn into conduit or wiring channel in groups of 2, 3, 4, etc. with the required colour coding, but excluding any wiring connections.   |         |     |      |      |        |
| 1.6.1  | 2.5 mm <sup>2</sup> PVC Conductors Red  | Supply  | 300 | m    |      |        |
|  |   | Install | 300 | m    |      |        |
|  | 2,5 mm <sup>2</sup> PVC Conductors Black  | Supply  | 300 | m    |      |        |
|  |   | Install | 300 | m    |      |        |
|  | 2,5 mm <sup>2</sup> PVC Conductors Pink   | Supply  | 300 | m    |      |        |
|  |   | Install | 300 | m    |      |        |
|  | 4 x 2 PVC Wall Box  | Supply  | 9   | No.  |      |        |
|  |   | Install | 9   | No.  |      |        |
|  | Hospital Saddle   | Supply  | 15  | No.  |      |        |
|  |   | Install | 15  | No.  |      |        |
|  | 4-Way Box PVC   | Supply  | 10  | No.  |      |        |
|  |   | Install | 10  | No.  |      |        |
| 1.6.2  | 4 mm <sup>2</sup> PVC Conductors Blue   | Supply  | 150 | m    |      |        |
|  |   | Install | 150 | m    |      |        |
|  | 4 mm <sup>2</sup> PVC Conductors Brown  | Supply  | 150 | m    |      |        |
|  |   | Install | 150 | m    |      |        |
|  | 4 mm <sup>2</sup> PVC Conductors Earth  | Supply  | 100 | m    |      |        |
|  |   | Install | 100 | m    |      |        |
|  | Adaptors 25mm   | Supply  | 15  | No.  |      |        |
|  |   | Install | 15  | No.  |      |        |
|  | 4 x 4 PVC Wall Box  | Supply  | 16  | No.  |      |        |
|  |   | Install | 16  | No.  |      |        |
|  | Coupling 25mm   | Supply  | 10  | No.  |      |        |
|  |   | Install | 10  | No.  |      |        |
| 1.7  | <b><u>Light Switches</u></b><br>Supply, fitting and electrical connection of a Legrand type flush or surface mounted 16A switch in 100 x 50 excluding box (for flush type) and conduit connections, but including cover plates. |         |     |      |      |        |
| 1.7.1  | 16A 1 Lever 1 Way   | Supply  | 7   | No.  |      |        |
|  |   | Install | 7   | No.  |      |        |
| 1.7.2  | 16A 1 Lever 2 Way   | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| 1.8  | <b><u>Luminaires</u></b><br>Mounting, fixing and electrically connecting the following luminaires, complete with lamps as specified in Section E of the Detailed Specification.   |         |     |      |      |        |
| 1.8.1  | Type B1<br>50w 1200 x 600 LED Panel Surface Mount Non-Dimmable, 3400lm, 5000k, as per Regent, Beka, Rubicon   | Supply  | 27  | No.  |      |        |
|  |   | Install | 27  | No.  |      |        |
| 1.8.2  | Type J1.1<br>Round LED Bulkhead Light, 18w, 220-240v ac, IP54   | Supply  | 8   | No.  |      |        |
|  |   | Install | 8   | No.  |      |        |
| 1.9  | <b><u>Daylight Switch</u></b><br>Supply and installation of approved daylight switch.   |         |     |      |      |        |
| 1.9.1  | Daylight Switch   | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |         |     |      |      |        |

| Item   | Description   |         | Qty | Unit | Rate | Amount |
|--|---|---------|-----|------|------|--------|
| 1.9.2  | Elbows Internal/External  | Supply  | 10  | No.  |      |        |
|  |   | Install | 10  | No.  |      |        |
| 1.9.3  | End Caps  | Supply  | 10  | No.  |      |        |
|  |   | Install | 10  | No.  |      |        |
| 1.9.4  | Cover Joiner Clips  | Supply  | 10  | No.  |      |        |
|  |   | Install | 10  | No.  |      |        |
| 1.9.5  | 16A SSO's c/w cover on Powerskirting  | Supply  | 12  | No.  |      |        |
|  |   | Install | 12  | No.  |      |        |
| 1.10.  | <b>Socket Outlets</b>   |         |     |      |      |        |
|  | Supply, fitting and electrical connection of flush or surface mounted Legrand type switched socket in either 100 x 100, 100 x 50, round box or wiring channel. <u>excluding</u> box (for flush type) and conduit connections, but including cover plate.  |         |     |      |      |        |
| 1.10.1   | 5A Single SSO c/w coverplate.Legrand type.  | Supply  | 2   | No.  |      |        |
|  |   | Install | 2   | No.  |      |        |
| 1.10.2   | 16A Double SSO c/w coverplate.Legrand type.   | Supply  | 6   | No.  |      |        |
|  |   | Install | 6   | No.  |      |        |
| 1.10.3   | 16A Dedicated Double SSO c/w coverplate.Legrand type.   | Supply  | 9   | No.  |      |        |
|  |   | Install | 9   | No.  |      |        |
| 1.10.4   | 16A UPS Single SSO c/w coverplate.Legrand type.   | Supply  | 3   | No.  |      |        |
|  |   | Install | 3   | No.  |      |        |
| 1.10.5   | Powerskirting, Legrand Type   | Supply  | 20  | m    |      |        |
|  |   | Install | 20  | m    |      |        |
| 1.10.6   | RJ11 Connector with cradle/ cover and mod blank   | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| 1.10.7   | RJ45 Connector with cradle/ cover mod blank   | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| 1.11   | <b>Isolators</b>  |         |     |      |      |        |
|  | Supply, fitting and electrical connection of flush or surface mounted Metal Clad Isolators in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. For more details please refer to the specific drawings |         |     |      |      |        |
| 1.11.1   | 20A Double2 Pole Flush waterproof Isolator for HVAC   | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| 1.11.2   | 5A 2 Pole Flush waterproof Isolator   | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |         |     |      |      |        |

| Item   | Description  |         | Qty | Unit | Rate | Amount |
|--|--|---------|-----|------|------|--------|
| 1.12   | <b><u>Electrical connection of appliances and installations.</u></b>   |         |     |      |      |        |
| 1.12.1   | Total Airconditioning Plant (Internal/External Units): Single and three phase                                  | Connect | 4   | No.  |      |        |
| 1.13   | <b>TELEPHONE INSTALLATION</b><br>Supply and installation of the following items for the Telephone Installation |         |     |      |      |        |
| 1.13.1   | 25mm PVC Conduit   | Supply  | 35  | m    |      |        |
|  |  | Install | 35  | m    |      |        |
| 1.13.2   | 25mm PVC Conduit end   | Supply  | 9   | No.  |      |        |
|  |  | Install | 9   | No.  |      |        |
| 1.13.3   | 25mm PVC Conduit box   | Supply  | 5   | No.  |      |        |
|  |  | Install | 5   | No.  |      |        |
| 1.14   | <b>DATA INSTALLATION</b><br>Supply and installation of the following items for the Data installation           |         |     |      |      |        |
| 1.14.1   | 25mm PVC Conduit   | Supply  | 35  | m    |      |        |
|  |  | Install | 35  | m    |      |        |
| 1.14.2   | 25mm PVC Conduit end   | Supply  | 8   | No.  |      |        |
|  |  | Install | 8   | No.  |      |        |
| 1.14.3   | 25mm PVC Conduit box   | Supply  | 5   | No.  |      |        |
|  |  | Install | 5   | No.  |      |        |
| 1.15   | <b><u>Nurse Call System</u></b><br>Supply and installation of approved Nurse Call System.                      |         |     |      |      |        |
| 1.15.1   | Loud Speaker   | Supply  | 1   | No.  |      |        |
|  |  | Install | 1   | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |         |     |      |      |        |

**BLOCK - C & D - SERVICE ACCESS, EMERGENCY & SUPPORT SERVICE****ELECTRICAL INSTALLATION****PROVISIONAL BILLS OF QUANTITIES****SECTION A**

| Item   | Description   |         | Qty | Unit | Rate | Amount |
|--|---|---------|-----|------|------|--------|
| 1.1  | <b>Distribution Boards</b><br>Supply, installation and commissioning of Kiosk, Distribution Boards, including all circuit breakers (as per load schedule), earthing straps, labels the making off of wire connections (external wiring, conduit, armoured cable and terminations given elsewhere). All DB's are to be equipped with a three phase or single phase surge arrestor. Special note, the accessories are inclusive on the quoted price |         |     |      |      |        |
| 1.1.1  | Distribution Board  | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.1.2  | <b>Security System</b><br>Installation of Camera Sytem equipment and All Access Control Systems as specified of the Detailed Specification.   |         |     |      |      |        |
| 1.1.2.1  | 360 Degree resolution CCTV Camera   | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| 1.1.2.3  | Double Door Access Controller Panel   | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.1.2.4  | Fingerprint Keypad Reader-Standalone  | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.1.2.5  | Magnetic Lock 544 KG Holding Force  | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.1.2.6  | Emergency Door Release Call Point (Breaker Glass)   | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.2  | <b>Ancillary Distribution Boards and Outlets</b><br>Supply and installation of the following metal Ancillary Distribution Boards and coverplates for Data and Telephone outlets. (Conduit and Conduit boxes given elsewhere).   |         |     |      |      |        |
| 1.2.1  | Data, Telephone and Ancillary Coverplates   | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| 1.3  | <b>Cables</b><br>Supply, delivery and laying of PVC/SWA/PVC ECC Aluminium cables as specified, excluding terminations and cable supports. Lengths given shall be taken as measured lengths to cable runs from terminal to terminal and rates quoted shall include for off-cuts.   |         |     |      |      |        |
| 1.3.1  | 25mm <sup>2</sup> 4C Aluminium Cable PVC Mains 600/1000V  | Supply  | 35  | m    |      |        |
|  |   | Install | 35  | m    |      |        |
| 1.4  | <b>Cable Terminations</b><br>Including the supply and fitting of Pratley Cable gland, shroud, making off the cable and fitting the gland to gland plates, switchgear or equipment including final connections of cable tails with lugs onto board terminals and including earth in ECC cable.   |         |     |      |      |        |
| 1.4.1  | 25mm <sup>2</sup> 4C Aluminium Cable PVC Mains 600/1000V  | Supply  | 2   | No.  |      |        |
|  |   | Install | 2   | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |         |     |      |      |        |



| Item   | Description  |         | Qty | Unit | Rate |
|--|--|---------|-----|------|------|
| 1.5  | <b>Cable Sleeves</b><br>Supply and Installation of Cable Sleeves as specified, in trenches   |         |     |      |      |
| 1.5.1  | 110mm Ø Flexible Cable Sleeve  | Supply  | 35  | m    |      |
|  |  | Install | 35  | m    |      |
|  | <b>EXTRA ON upvc piping for:</b><br>100mm Diameter long radius bend  |         | 35  | m3   |      |
| 1.6  | <b>EXCAVATIONS</b><br>In trenches for cables and sleeves   |         | 35  | m3   |      |
|  | Extra over soft excavation intermediate  |         | 10  | m3   |      |
|  | Extra over soft excavation in hard rock  |         | 10  | m3   |      |
| 1.7  | <b>Conduit</b><br>Supply and installation of PVC conduit. Lengths given shall be taken as measured horizontal and vertical runs between conduit terminations. Rates quoted shall allow for wastage, offcuts, couplings, cuttings, bending, jointing socket and tees. |         |     |      |      |
| 1.7.1  | 25mm Conduit   | Supply  | 610 | m    |      |
|  |  | Install | 610 | m    |      |
| 1.8  | <b>Conduit Boxes and Ends</b><br>Terminate and connect one pair of conduit ends including supply and installation of 1, 2, 3 or 4 way box on surface or in brickwork. (excluding coverplates), including holes for conduit.  |         |     |      |      |
| 1.8.1  | 25mm Conduit (100 x 100mm) Galvanized Box  | Supply  | 25  | No.  |      |
|  |  | Install | 25  | No.  |      |
| 1.9  | <b>Conduit Ends</b><br>Terminate and connect one pair of conduit ends including lock nuts, bushes, etc. connecting into board tray, wiring channel etc. including cutting holes for conduit entries, but excluding conduit box.                                      |         |     |      |      |
| 1.9.1  | 25mm uPVC Conduit  | Supply  | 35  | No.  |      |
|  |  | Install | 35  | No.  |      |
| 1.10   | <b>Conductors</b><br>Supply and installation of PVC insulated copper conductors drawn into conduit or wiring channel in groups of 2, 3, 4, etc. with the required colour coding, but excluding any wiring connections.   |         |     |      |      |
| 1.10.1   | 2,5 mm <sup>2</sup> PVC Conductors Red   | Supply  | 500 | m    |      |
|  |  | Install | 500 | m    |      |
|  | 2,5 mm <sup>2</sup> PVC Conductors Black   | Supply  | 500 | m    |      |
|  |  | Install | 500 | m    |      |
|  | 2,5 mm <sup>2</sup> PVC Conductors Pink  | Supply  | 500 | m    |      |
|  |  | Install | 500 | m    |      |
|  | 4 x 2 PVC Wall Box   | Supply  | 25  | No.  |      |
|  |  | Install | 25  | No.  |      |
|  | Hospital Saddle  | Supply  | 20  | No.  |      |
|  |  | Install | 20  | No.  |      |
|  | 4-Way Box PVC  | Supply  | 40  | No.  |      |
|  |  | Install | 40  | No.  |      |
| 1.10.2   | 4 mm <sup>2</sup> PVC Conductors Blue  | Supply  | 500 | m    |      |
|  |  | Install | 500 | m    |      |
|  | 4 mm <sup>2</sup> PVC Conductors Brown   | Supply  | 500 | m    |      |
|  |  | Install | 500 | m    |      |
|  | 4 mm <sup>2</sup> PVC Conductors Earth   | Supply  | 300 | m    |      |
|  |  | Install | 300 | m    |      |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |         |     |      |      |

| Item   | Description  |         | Qty | Unit | Rate | Amount |
|--|--|---------|-----|------|------|--------|
|  | Adaptors 25mm  | Supply  | 20  | No.  |      |        |
|  |  | Install | 20  | No.  |      |        |
|  | 4 x 4 PVC Wall Box   | Supply  | 45  | No.  |      |        |
|  |  | Install | 45  | No.  |      |        |
|  | Coupling 25mm  | Supply  | 15  | No.  |      |        |
|  |  | Install | 15  | No.  |      |        |
| 1.12   | <b>Light Switches</b>  |         |     |      |      |        |
|  | Supply, fitting and electrical connection of a Legrand type flush or surface mounted 16A switch in 100 x 50 excluding box (for flush type) and conduit connections, but including cover plates.  |         |     |      |      |        |
| 1.12.1   | 16A 1 Lever 1 Way  | Supply  | 18  | No.  |      |        |
|  |  | Install | 18  | No.  |      |        |
| 1.12.2   | 16A 1 Lever 2 Way  | Supply  | 6   | No.  |      |        |
|  |  | Install | 6   | No.  |      |        |
| 1.13   | <b>Luminaires</b>  |         |     |      |      |        |
|  | Mounting, fixing and electrically connecting the following luminaires, complete with lamps as specified in Section E of the Detailed Specification.  |         |     |      |      |        |
| 1.13.1   | Type B1  |         |     |      |      |        |
|  | 50w 1200 x 600 LED Panel Surface Mount Non-Dimmable, 3400lm, 5000k, as per Regent, Beka, Rubicon   | Supply  | 26  | No.  |      |        |
|  |  | Install | 26  | No.  |      |        |
| 1.13.2   | Type J1.1  |         |     |      |      |        |
|  | Round LED Bulkhead Light, 18w, 220-240v ac, IP54   | Supply  | 24  | No.  |      |        |
|  |  | Install | 24  | No.  |      |        |
| 1.14   | <b>Daylight Switch</b>   |         |     |      |      |        |
|  | Supply and installation of approved daylight switch.   |         |     |      |      |        |
| 1.14.1   | Daylight Switch  | Supply  | 1   | No.  |      |        |
|  |  | Install | 1   | No.  |      |        |
| 1.15.2   | Elbows Internal/External   | Supply  | 15  | No.  |      |        |
|  |  | Install | 15  | No.  |      |        |
| 1.15.3   | End Caps   | Supply  | 15  | No.  |      |        |
|  |  | Install | 15  | No.  |      |        |
| 1.15.4   | Cover Joiner Clips   | Supply  | 15  | No.  |      |        |
|  |  | Install | 15  | No.  |      |        |
| 1.15.5   | 16A SSO's c/w cover on Powerskirting   | Supply  | 12  | No.  |      |        |
|  |  | Install | 12  | No.  |      |        |
| 1.16.7   | RJ11 Connector with cradle/ cover and mod blank  | Supply  | 2   | m    |      |        |
|  |  | Install | 2   | m    |      |        |
| 1.16.8   | RJ45 Connector with cradle/ cover mod blank  | Supply  | 2   | m    |      |        |
|  |  | Install | 2   | m    |      |        |
| 1.16   | <b>Socket Outlets</b>  |         |     |      |      |        |
|  | Supply, fitting and electrical connection of flush or surface mounted Legrand type switched socket in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. |         |     |      |      |        |
| 1.16.1   | 5A Single SSO c/w coverplate.Legrand type.   | Supply  | 1   | No.  |      |        |
|  |  | Install | 1   | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |         |     |      |      |        |

| Item   | Description   |         | Qty | Unit | Rate | Amount |
|--|---|---------|-----|------|------|--------|
| 1.16.2   | 16A Double SSO c/w coverplate.Legrand type.   | Supply  | 16  | No.  |      |        |
|  |   | Install | 16  | No.  |      |        |
| 1.16.3   | 16A Dedicated Double SSO c/w coverplate.Legrand type.   | Supply  | 20  | No.  |      |        |
|  |   | Install | 20  | No.  |      |        |
| 1.16.4   | 16A UPS Single SSO c/w coverplate.Legrand type.   | Supply  | 3   | No.  |      |        |
|  |   | Install | 3   | No.  |      |        |
| 1.16.5   | Medical Gas Outlets   | Supply  | 6   | No.  |      |        |
|  |   | Install | 6   | No.  |      |        |
| 1.16.6   | Powerskirting, Legrand Type   | Supply  | 28  | m    |      |        |
|  |   | Install | 28  | m    |      |        |
| 1.16.7   | Bedhead Trunking  |         |     |      |      |        |
|  | The adaptable HU10-01 is a wall mounted horizontal bedhead service system, which includes customized electrical and medical gas outlets to suit the clients' unique requirements.   | Supply  | 6   | m    |      |        |
|  |   | Install | 6   | m    |      |        |
| 1.17   | <b><u>Isolators</u></b>   |         |     |      |      |        |
|  | Supply, fitting and electrical connection of flush or surface mounted Metal Clad Isolators in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. For more details please refer to the specific drawings |         |     |      |      |        |
| 1.17.1   | 20A Double2 Pole Flush waterproof Isolator for HVAC   | Supply  | 6   | No.  |      |        |
|  |   | Install | 6   | No.  |      |        |
| 1.17.2   | 32A Double-Pole waterproof Isolator for Handdryer   | Supply  | 2   | No.  |      |        |
|  |   | Install | 2   | No.  |      |        |
| 1.17.3   | 5A 2 Pole Flush waterproof Isolator   | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.17.4   | 20A 2 Pole Flush waterproof Isolator - Geysers  | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |         |     |      |      |        |

| Item   | Description  |         | Qty | Unit | Rate | Amount |
|--|--|---------|-----|------|------|--------|
| 1.18   | <b><u>Electrical connection of appliances and installations.</u></b>   |         |     |      |      |        |
| 1.18.1   | Total Airconditioning Plant (Internal/External Units): Single and three phase                                  | Connect | 3   | No.  |      |        |
| 1.18.2   | Hand dryers  | Connect | 2   | No.  |      |        |
| 1.19   | <b>TELEPHONE INSTALLATION</b><br>Supply and installation of the following items for the Telephone Installation |         |     |      |      |        |
| 1.19.1   | 25mm PVC Conduit   | Supply  | 40  | m    |      |        |
|  |  | Install | 40  | m    |      |        |
| 1.19.2   | 25mm PVC Conduit end   | Supply  | 5   | No.  |      |        |
|  |  | Install | 5   | No.  |      |        |
| 1.19.3   | 25mm PVC Conduit box   | Supply  | 5   | No.  |      |        |
|  |  | Install | 5   | No.  |      |        |
| 1.20   | <b>DATA INSTALLATION</b><br>Supply and installation of the following items for the Data installation           |         |     |      |      |        |
| 1.20.1   | 25mm PVC Conduit   | Supply  | 40  | m    |      |        |
|  |  | Install | 40  | m    |      |        |
| 1.20.2   | 25mm PVC Conduit end   | Supply  | 5   | No.  |      |        |
|  |  | Install | 5   | No.  |      |        |
| 1.20.3   | 25mm PVC Conduit box   | Supply  | 5   | No.  |      |        |
|  |  | Install | 5   | No.  |      |        |
| 1.21   | <b><u>Nurse Call System</u></b><br>Supply and installation of approved Nurse Call System.                      |         |     |      |      |        |
| 1.20.1   | Nurse call Push Button   | Supply  | 3   | No.  |      |        |
|  |  | Install | 3   | No.  |      |        |
| 1.20.2   | Emergency call Push Button   | Supply  | 3   | No.  |      |        |
|  |  | Install | 3   | No.  |      |        |
| 1.20.3   | Nurse call Light   | Supply  | 2   | No.  |      |        |
|  |  | Install | 2   | No.  |      |        |
| 1.20.4   | Loud Speaker   | Supply  | 2   | No.  |      |        |
|  |  | Install | 2   | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |         |     |      |      |        |

**BLOCK - H - YOUTH & OUTREACH CENTER****ELECTRICAL INSTALLATION****PROVISIONAL BILLS OF QUANTITIES****SECTION A**

| Item   | Description   |         | Qty | Unit | Rate | Amount |
|--|---|---------|-----|------|------|--------|
| 1.1  | <b>Distribution Boards</b><br>Supply, installation and commissioning of Kiosk, Distribution Boards, including all circuit breakers (as per load schedule), earthing straps, labels the making off of wire connections (external wiring, conduit, armoured cable and terminations given elsewhere). All DB's are to be equipped with a three phase or single phase surge arrestor. Special note, the accessories are inclusive on the quoted price |         |     |      |      |        |
| 1.1.1  | Distribution Board  | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.1.2  | <b>Security System</b><br>Installation of Camera Sytem equipment and All Access Control Systems as specified of the Detailed Specification.   |         |     |      |      |        |
| 1.1.2.1  | 360 Degree resolution CCTV Camera   | Supply  | 2   | No.  |      |        |
|  |   | Install | 2   | No.  |      |        |
| 1.1.2.3  | Double Door Access Controller Panel   | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.1.2.4  | Fingerprint Keypad Reader-Standalone  | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.1.2.5  | Magnetic Lock 544 KG Holding Force  | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.1.2.6  | Emergency Door Release Call Point (Breaker Glass)   | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.2  | <b>Ancillary Distribution Boards and Outlets</b><br>Supply and installation of the following metal Ancillary Distribution Boards and coverplates for Data and Telephone outlets. (Conduit and Conduit boxes given elsewhere).   |         |     |      |      |        |
| 1.2.1  | Data, Telephone and Ancillary Coverplates   | Supply  | 12  | No.  |      |        |
|  |   | Install | 12  | No.  |      |        |
| 1.3  | <b>Cables</b><br>Supply, delivery and laying of PVC/SWA/PVC ECC Aluminium cables as specified, excluding terminations and cable supports. Lengths given shall be taken as measured lengths to cable runs from terminal to terminal and rates quoted shall include for off-cuts.   |         |     |      |      |        |
| 1.3.1  | 25mm <sup>2</sup> 4C Aluminium Cable PVC Mains 600/1000V  | Supply  | 50  | m    |      |        |
|  |   | Install | 50  | m    |      |        |
| 1.4  | <b>Cable Terminations</b><br>Including the supply and fitting of Pratley Cable gland, shroud, making off the cable and fitting the gland to gland plates, switchgear or equipment including final connections of cable tails with lugs onto board terminals and including earth in ECC cable.   |         |     |      |      |        |
| 1.4.1  | 25mm <sup>2</sup> 4C Aluminium Cable PVC Mains 600/1000V  | Supply  | 2   | No.  |      |        |
|  |   | Install | 2   | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |         |     |      |      |        |

| Item   | Description  | Qty               | Unit       | Rate       |
|--|--|-------------------|------------|------------|
| 1.5  | <b>Cable Sleeves</b><br>Supply and Installation of Cable Sleeves as specified, in trenches   |                   |            |            |
| 1.5.1  | 110mm Ø Flexible Cable Sleeve  | Supply<br>Install | 50<br>50   | m<br>m     |
|  | <b>EXTRA ON upvc piping for:</b><br>100mm Diameter long radius bend  |                   | 50         | m3         |
|  | <b>EXCAVATIONS</b><br>In trenches for cables and sleeves   |                   | 50         | m3         |
|  | extra over soft excavation intermediate  |                   | 15         | m3         |
|  | extra over soft excavation in hard rock  |                   | 15         | m3         |
| 1.7  | <b>Conduit</b><br>Supply and installation of PVC conduit. Lengths given shall be taken as measured horizontal and vertical runs between conduit terminations. Rates quoted shall allow for wastage, offcuts, couplings, cuttings, bending, jointing socket and tees. |                   |            |            |
| 1.7.1  | 25mm Conduit   | Supply<br>Install | 450<br>450 | m<br>m     |
| 1.8  | <b>Conduit Boxes and Ends</b><br>Terminate and connect one pair of conduit ends including supply and installation of 1, 2, 3 or 4 way box on surface or in brickwork. (excluding coverplates), including holes for conduit.  |                   |            |            |
| 1.8.1  | 25mm Conduit (100 x 100mm) Galvanized Box  | Supply<br>Install | 20<br>20   | No.<br>No. |
| 1.9  | <b>Conduit Ends</b><br>Terminate and connect one pair of conduit ends including lock nuts, bushes, etc. connecting into board tray, wiring channel etc. including cutting holes for conduit entries, but excluding conduit box.                                      |                   |            |            |
| 1.9.1  | 25mm uPVC Conduit  | Supply<br>Install | 25<br>25   | No.<br>No. |
| 1.10   | <b>Conductors</b><br>Supply and installation of PVC insulated copper conductors drawn into conduit or wiring channel in groups of 2, 3, 4, etc. with the required colour coding, but excluding any wiring connections.   |                   |            |            |
| 1.10.1   | 2,5 mm <sup>2</sup> PVC Conductors Red   | Supply<br>Install | 500<br>500 | m<br>m     |
|  | 2,5 mm <sup>2</sup> PVC Conductors Black   | Supply<br>Install | 500<br>500 | m<br>m     |
|  | 2,5 mm <sup>2</sup> PVC Conductors Pink  | Supply<br>Install | 500<br>500 | m<br>m     |
|  | 4 x 2 PVC Wall Box   | Supply<br>Install | 11<br>11   | No.<br>No. |
|  | Hospital Saddle  | Supply<br>Install | 20<br>20   | No.<br>No. |
|  | 4-Way Box PVC  | Supply<br>Install | 15<br>15   | No.<br>No. |
| 1.10.2   | 4 mm <sup>2</sup> PVC Conductors Blue  | Supply<br>Install | 450<br>450 | m<br>m     |
|  | 4 mm <sup>2</sup> PVC Conductors Brown   | Supply<br>Install | 450<br>450 | m<br>m     |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |                   |            |            |

| Item   | Description   |         | Qty | Unit | Rate | Amount |
|--|---|---------|-----|------|------|--------|
|  | 4 mm <sup>2</sup> PVC Conductors Earth  | Supply  | 200 | m    |      |        |
|  |   | Install | 200 | m    |      |        |
|  | Adaptors 25mm   | Supply  | 20  | No.  |      |        |
|  |   | Install | 20  | No.  |      |        |
|  | 4 x 4 PVC Wall Box  | Supply  | 24  | No.  |      |        |
|  |   | Install | 24  | No.  |      |        |
|  | Coupling 25mm   | Supply  | 15  | No.  |      |        |
|  |   | Install | 15  | No.  |      |        |
| 1.11   | <b><u>Light Switches</u></b>  |         |     |      |      |        |
|  | Supply, fitting and electrical connection of a Legrand type flush or surface mounted 16A switch in 100 x 50 excluding box (for flush type) and conduit connections, but including cover plates. |         |     |      |      |        |
| 1.11.1   | 16A 1 Lever 1 Way   | Supply  | 7   | No.  |      |        |
|  |   | Install | 7   | No.  |      |        |
| 1.11.2   | 16A 1 Lever 2 Way   | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| 1.12   | <b><u>Luminaires</u></b>  |         |     |      |      |        |
|  | Mounting, fixing and electrically connecting the following luminaires, complete with lamps as specified in Section E of the Detailed Specification.   |         |     |      |      |        |
| 1.12.1   | Type B1   |         |     |      |      |        |
|  | 50w 1200 x 600 LED Panel Surface Mount Non-Dimmable, 3400lm, 5000k, as per Beka, Regent, Rubicon, Altsa   |         |     |      |      |        |
|  |   | Supply  | 16  | No.  |      |        |
|  |   | Install | 16  | No.  |      |        |
| 1.12.1   | Type J1.1   |         |     |      |      |        |
|  | Round LED Bulkhead Light, 18w, 220-240v ac, IP54  |         |     |      |      |        |
|  |   | Supply  | 15  | No.  |      |        |
|  |   | Install | 15  | No.  |      |        |
| 1.13   | <b><u>Daylight Switch</u></b>   |         |     |      |      |        |
|  | Supply and installation of approved daylight switch.  |         |     |      |      |        |
| 1.13.1   | Daylight Switch   | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.13.2   | Elbows Internal/External  | Supply  | 15  | No.  |      |        |
|  |   | Install | 15  | No.  |      |        |
| 1.13.3   | End Caps  | Supply  | 15  | No.  |      |        |
|  |   | Install | 15  | No.  |      |        |
| 1.13.4   | Cover Joiner Clips  | Supply  | 15  | No.  |      |        |
|  |   | Install | 15  | No.  |      |        |
| 1.13.5   | 16A SSO's c/w cover on Powerskirting  | Supply  | 13  | No.  |      |        |
|  |   | Install | 13  | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |         |     |      |      |        |

| Item   | Description   |         | Qty | Unit | Rate | Amount |
|--|---|---------|-----|------|------|--------|
| 1.16   | <b>Socket Outlets</b><br>Supply, fitting and electrical connection of flush or surface mounted Legrand type switched socket in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate.   |         |     |      |      |        |
| 1.16.1   | 5A Single SSO c/w coverplate.Legrand type.  | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.16.2   | 16A Double SSO c/w coverplate.Legrand type.   | Supply  | 8   | No.  |      |        |
|  |   | Install | 8   | No.  |      |        |
| 1.16.3   | 16A Dedicated Double SSO c/w coverplate.Legrand type.   | Supply  | 12  | No.  |      |        |
|  |   | Install | 12  | No.  |      |        |
| 1.16.4   | 16A UPS Single SSO c/w coverplate.Legrand type.   | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.16.5   | Powerskirting, Legrand Type   | Supply  | 30  | m    |      |        |
|  |   | Install | 30  | m    |      |        |
| 1.16.6   | RJ11 Connector with cradle/ cover and mod blank   | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| 1.16.7   | RJ45 Connector with cradle/ cover mod blank   | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| 1.17   | <b>Isolators</b><br>Supply, fitting and electrical connection of flush or surface mounted Metal Clad Isolators in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. For more details please refer to the specific drawings |         |     |      |      |        |
| 1.17.1   | 20A Double2 Pole Flush waterproof Isolator for HVAC   | Supply  | 4   | No.  |      |        |
|  |   | Install | 4   | No.  |      |        |
| 1.17.2   | 5A 2 Pole Flush waterproof Isolator   | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| 1.17.3   | 20A 2 Pole Flush waterproof Isolator - Geysers  | Supply  | 2   | No.  |      |        |
|  |   | Install | 2   | No.  |      |        |
| 1.18   | <b>Electrical connection of appliances and installations.</b>   |         |     |      |      |        |
| 1.18.1   | Total Airconditioning Plant (Internal/External Units): Single and three phase   | Connect | 4   | No.  |      |        |
| 1.19   | <b>TELEPHONE INSTALLATION</b><br>Supply and installation of the following items for the Telephone Installation  |         |     |      |      |        |
| 1.19.1   | 25mm PVC Conduit  | Supply  | 35  | m    |      |        |
|  |   | Install | 35  | m    |      |        |
| 1.19.2   | 25mm PVC Conduit end  | Supply  | 9   | No.  |      |        |
|  |   | Install | 9   | No.  |      |        |
| 1.19.3   | 25mm PVC Conduit box  | Supply  | 5   | No.  |      |        |
|  |   | Install | 5   | No.  |      |        |
| 1.20   | <b>DATA INSTALLATION</b><br>Supply and installation of the following items for the Data installation  |         |     |      |      |        |
| 1.20.1   | 25mm PVC Conduit  | Supply  | 35  | m    |      |        |
|  |   | Install | 35  | m    |      |        |
| 1.20.2   | 25mm PVC Conduit end  | Supply  | 8   | No.  |      |        |
|  |   | Install | 8   | No.  |      |        |
| 1.20.3   | 25mm PVC Conduit box  | Supply  | 5   | No.  |      |        |
|  |   | Install | 5   | No.  |      |        |
| 1.21   | <b>Nurse Call System</b><br>Supply and installation of approved Nurse Call System.  |         |     |      |      |        |
| 1.20.1   | Loud Speaker  | Supply  | 1   | No.  |      |        |
|  |   | Install | 1   | No.  |      |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |         |     |      |      |        |



**LIGHTNING PROTECTION****BILL OF QUANTITIES****SECTION A**

**Note:** All rates for items contained in this Bill shall be computed excluding the applicable Value Added Tax. The Contractor shall include in the rates for any work or anything in the Conditions of Contract or Specification or shown on the Drawings not included elsewhere in the Bills of Quantities and for which he considers charges are required.

**Allowance for Complete Lightning Protection Installation of all the Ideal Clinics.**  
**The Lightning Protection installation is to be undertaken by a specialist and is required to provide two soil resistivity tests, one at the beginning of the project and one at completion. The first test is to be conducted within 14 days of the contractor being appointed. The Lightning Protection installer is to provide a Test Certificate in accordance with SANS 10313. The Contractor to provide a lightning protection design report based on SANS 10313 & 62305. The contractor to note that all conduit provisions for the Lightning Protection installation are to be recessed and provided by the Electrical Sub-Contractor.**

| Item   | Description  | Qty | Unit | Rate | Amount |
|--|--|-----|------|------|--------|
| 1.   | <b><u>Down Conductors</u></b><br>Supply and fixing on surface in an approved manner of aluminium conductor including all fixing accessories, such as insulating sleeves and stand-off brackets, but not including terminations. Rates quoted shall allow for wastage, off-cuts and joints.                           |     |      |      |        |
| 1.1  | 50mm <sup>2</sup> aluminium conductor  | 108 | m    |      |        |
| 2.   | <b><u>Air Terminal Conductors</u></b><br>Supply and fixing on surface in an approved manner of 50mm <sup>2</sup> aluminium conductor including all fixing accessories, such as insulating sleeves and stand-off brackets, but not including terminations. Rates quoted shall allow for wastage, off-cuts and joints. |     |      |      |        |
|  |  | 108 | m    |      |        |
| 3.   | <b><u>Terminations of Down Conductors to Air Terminals</u></b><br>Termination of aluminium conductor to metal roof as specified in Clause A1.4 including lugs and making off of the ends etc.  |     |      |      |        |
| 3.1  | 50mm <sup>2</sup> aluminium conductor to metal roof.   | 24  | No.  |      |        |
| 4.   | <b><u>Earthing Conductors</u></b><br>Supply and laying in the ground and in conduits of copper earth wire as specified in Clause A1.5 excluding terminations. Rates quoted shall allow for wastage, off-cut and joints.  |     |      |      |        |
| 4.1  | 50mm <sup>2</sup> Green PVC insulated copper conductor   | 108 | m    |      |        |
| 5.   | <b><u>Termination of Earthing Conductors to Down Conductors</u></b><br>Termination of earth conductor to aluminium down conductor and earth electrodes including making off the ends, lugs, clamps, etc.   |     |      |      |        |
| 5.1  | 50mm <sup>2</sup> Termination to 50mm <sup>2</sup> conductor   | 24  | No.  |      |        |
| 5.2  | Connecting conductor all around the roof   | 632 | m    |      |        |
| 6.   | <b><u>Earth Electrodes</u></b><br>Supply and installation of earth electrodes generally as specified in Clause A1.3.3.   |     |      |      |        |
| 6.1  | 3,6m long earth electrodes   | 24  | No.  |      |        |
| 7.   | <b><u>Termination of Earth Conductors to Earth Electrodes</u></b><br>Termination of Earth Conductors to Earth Electrodes including making off of ends, lugs, clamps, etc.  |     |      |      |        |
| 7.1  | 50mm <sup>2</sup> Earth Conductor to Earth Electrode   | 24  | No.  |      |        |
| 8.   | <b><u>General Earth Bonding</u></b><br>Bonding of metal drainage down pipes and items.   |     |      |      |        |
|  |  | 24  | Item |      |        |
| 9.   | <b><u>Testing</u></b><br>Supply and testing apparatus and testing in accordance with SABS Code.  |     |      |      |        |
| 9.1  | Testing of joint continuity  | 2   | Item |      |        |
| 9.2  | Testing of Lightning Protection System   | 2   | Item |      |        |
| 9.3  | Testing of Earthing Points   | 2   | Item |      |        |
| 9.4  | Soil Resistivity Test and Report   | 2   | Item |      |        |
| Total for Bill No. 2 : Carried Forward to Summary Page |  |     |      |      |        |

**ELECTRICAL INSTALLATION MECHANICAL EQUIPMENT****BILLS OF QUANTITIES****SECTION A**

| Item  | Description   | Qty               | Unit     | Rate       | Amount |
|-------|---|-------------------|----------|------------|--------|
| 1.1   | <b>PUMPS</b><br><br>Refer to the attached Specifications for the Electrical Installation. The Tenderer must at all times read the Bills of Quantities in conjunction with the specification and drawings prior to pricing this section. Items 1-4 below applies to the entire electrical installation for the Clinic.   |                   |          |            |        |
| 1.1.1 | <b>General Earthing</b><br><br>Earthing and bonding of all other metal to comply with regulations.  | 1                 | Item     |            |        |
| 1.1   | <b>Distribution Boards</b><br><br>Supply, installation and commissioning of Kiosk, Distribution Boards, including all circuit breakers (as per load schedule), earthing straps, labels the making off of wire connections (external wiring, conduit, armoured cable and terminations given elsewhere). All DB's are to be equipped with a three phase or single phase surge arrestor. Special note, the accessories are inclusive on the quoted price |                   |          |            |        |
| 1.1.1 | Distribution Board  | Supply<br>Install | 1<br>1   | No.<br>No. |        |
| 1.2   | <b>Isolators</b><br><br>Supply, fitting and electrical connection of flush or surface mounted Metal Clad Isolators in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. For more details please refer to the specific drawings   |                   |          |            |        |
| 1.2.1 | 20A Double2 Pole Flush waterproof Isolator for Pumps  | Supply<br>Install | 3<br>3   | No.<br>No. |        |
| 1.2.3 | 20A 4 Pole Flush waterproof Isolator _ Fire Jockey Pump   | Supply<br>Install | 1<br>1   | No.<br>No. |        |
| 2.    | <b>Cables</b><br><br>Supply, delivery and laying of PVC/SWA/PVC ECC Aluminium cables as specified, excluding terminations and cable supports. Lengths given shall be taken as measured lengths to cable runs from terminal to terminal and rates quoted shall include for off-cuts.   |                   |          |            |        |
| 2.1   | 70 mm <sup>2</sup> 4 core Al PVC 400V from the Main Kiosk to the pump DB  | Supply<br>Install | 50<br>50 | m<br>m     |        |
| 2.2   | 16 mm <sup>2</sup> 4 core Al PVC 400V from the Pump DB to the Isolators   | Supply<br>Install | 20<br>20 | m<br>m     |        |
|       | <b>Cable Terminations</b><br><br>Including the supply and fitting of Pratley Cable gland, shroud, making off the cable and fitting the gland to gland plates, switchgear or equipment including final connections of cable tails with lugs onto board terminals and including earth in ECC cable.   |                   |          |            |        |
| 2.3   | 70 mm <sup>2</sup> 4 core Al PVC 400V   | Supply<br>Install | 2<br>2   | No.<br>No. |        |
| 2.4   | 16 mm <sup>2</sup> 4 core Al PVC 400V   | Supply<br>Install | 8<br>8   | No.<br>No. |        |
| 2.5   | <b>Wireway Installation (for Electrical Supply Cables)</b><br><br>114mm Wide Medium Duty Galvanized Return Flange Cable Tray. Mounted Underside of Ceiling Complete with all Accessories. Covers, 90° Bends, T-Junctions and rnd Caps etc.  | Supply<br>Install | 20<br>20 | m<br>m     |        |

|  |  |     |                |  |  |
|--|--|-----|----------------|--|--|
| 3.   | <b>EXCAVATIONS</b>   |     |                |  |  |
| 3.1  | Excavations other than bulk in soft excavation not exceeding 2m deep for:<br><br>Allowance is to be made for the installation of cable markers and warning sheets  |     |                |  |  |
| 3.2  | In trenches for cables and sleeves   | 100 | m <sup>3</sup> |  |  |
| 3.3  | Extra over "soft excavation" for excavation in intermediate excavations  | 20  | m <sup>3</sup> |  |  |
| 3.4  | Extra over "soft excavation" for excavation in hard rock excavations   | 20  | m <sup>3</sup> |  |  |
| 3.5  | Filling obtained from excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density  |     |                |  |  |
| 3.6  | Backfilling of trenches<br><br>Risk of collapse of excavations other than bulk   | 100 | m <sup>3</sup> |  |  |
| 3.7  | Sides of trenches and hole excavations not exceeding 0.8m deep<br><br>Manholes<br>Supply and installation of manholes as shown on the drawings. Refer to Clause B6 | 100 | m <sup>3</sup> |  |  |
| 3.8  | 600 x 600mm Concrete Manholes<br><br>Cable Markers<br>Allow to supply and install cable markers  | 2   | No.            |  |  |
| 3.9  | PVC warning marking tape   | 100 | m              |  |  |
| 3.9.1  | Concrete cable route markers   | 2   | No.            |  |  |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |     |                |  |  |

**ELECTRICAL INSTALLATION EXTERNAL WORKS**

**BILLS OF QUANTITIES**

**SECTION A**

| Item  | Description  | Qty | Unit | Rate           | Amount         |
|-------|--|-----|------|----------------|----------------|
| 1.1   | <b>ELECTRICAL WORK</b><br><b>CPAP WORKGROUP NO 160 UNLESS OTHERWISE STATED</b><br><b>PREAMBLES</b><br><br>Refer to the attached Specifications for the Electrical Installation. The Tenderer must at all times read the Bills of Quantities in conjunction with the specification and drawings prior to pricing this section. Items 1-4 below applies to the entire electrical installation for the Clinic.  |     |      |                |                |
| 1.1.1 | <b>General Earthing</b><br>Earthing and bonding of cold and hot water pipes and all other metal to comply with regulations.  | 1   | Item |                |                |
| 1.2   | <b>Commissioning and Testing</b><br>Allow for testing, balancing and commissioning the whole of the electrical installation as laid down in the specification and for re-testing as may be required after the making good of all defective work to the satisfaction of the Department and the Engineer.  | 1   | Item |                |                |
| 1.5   | <b>As Built Drawings</b><br>Provision for the drawings showing all site cable routes, conduit routes, draw boxes and positions of outlets, etc.  | 1   | Item |                |                |
| 1.6   | <b>Labelling and Marking</b><br>Allow for marking and labelling of all equipment, cables, plugs, light switches etc.   | 1   | Item |                |                |
| 1.7   | <b>Diesel Generator</b><br>Allow for the supply and Connection with a Back-up Generator of 200KVA with ATS and Circuit breaker. Tank capacity of greater than 600l to provide for 72 hours<br><br>Maximum 200kVA standby power at 230/400v @ 50Hz 1500rpm High quality and reliable six-cylinder Scania/ Volvo turbodiesel engine, Silent canopy which can stand outside with lockable doors. Fuel tank to be built into the unit base to include enough of fuel for 72 hour operation (600l). Automatic changeover (ATS) to include mains/solar/diesel generator inputs. Maintenance free batteries and trickle charger included. Four-way protection system included, H-specification insulation, brushless alternator with AVR provides stable output, digital controller with auto and manual start options. All sets must undergo a comprehensive testing/pre delivery inspection, prior to delivery and include one year/1000 hour warranty. Including first fuel fill, oil filters, fuel filters and all other consumables necessary for operation. To provide all associated civil works including a plinth with corresponding cable trays and exits ducts into the ground for cables.<br>Allowance for Profit.....% | 1   | Item |                |                |
|       | Allowance for Attendance.....%   |     |      | 5%             |                |
| 1.7.1 | <b>Solar Plant</b><br>Design, solar modelling and installation of solar plant by engineer approved and accredited solar contractor to tie into the grid and diesel generator plant. Supply, deliver, accept and store solar panels and associated equipment including inverters, DC Cables, Earthing, Switchgear, grid tie system, Protection and Metering equipment which are to be as specified or otherwise approved. The rooftop solar system is to be sized to supply a minimum of 150kW. Alternative designs to supply the required energy value will be considered. The rooftops to be utilised is the clinic areas and must be designed to suit the panel weight by the Contractors structural engineer and well as all waterproofing and sealing for cable ways must be done. A model design must included in the tender. Erect, fix, connect and commission the following solar panels and equipment, including any galvanised additional supports and brackets which may be required. All equipment to be rated for outdoor, coastal conditions. Inverters and batteries will be stored in the pump room.<br><br>Allow for a 150kw Solar System<br>Allowance for Profit.....%                                     | 1   | SUM  | R 2 500 000.00 | R 2 500 000.00 |
|       |  | 5%  |      |                | R 125 000.00   |

|       |   |                   |            |            |   |            |              |
|-------|---|-------------------|------------|------------|---|------------|--------------|
|       | Allowance for Attendance.....%  |                   | 5%         |            |   | R          | 125 000.00   |
| 1.8   | <b>New Kiosk</b><br>Supply and Installation and commissioning of the Kiosk, including making off all wire connections (external wiring, conduit, armoured cable and terminations given elsewhere). Inclusive of all Main Circuit Breakers<br>Kiosk, Coastal   | Supply<br>Install | 1<br>1     | No.<br>No. |   |            |              |
| 1.9   | <b>Guarantee and Maintenance</b><br>Guarantee and maintenance for the complete installation of Electrical Installation including fittings, materials and workmanship for a period of <b>TWELVE MONTHS</b> after date of completion and handover.  |                   | 1          | Item       |   |            |              |
| 1.9.1 | Payment of <b>200kVA Eskom/Municipality Connection</b> . (Inclusive of Transformer & Main Kiosk)<br>Plus Profit and Attendance .....  |                   | 1          | Sum        | R | 250 000.00 | R 250 000.00 |
|       |   |                   | 5%         |            |   |            | R 12 500.00  |
| 1.10  | <b>CERTIFICATE OF COMPLIANCE</b><br>Provision for the Certificate of Compliance to be issued on completion of the project.  |                   | 4          | Item       |   |            |              |
| 2.    | <b>Cables</b><br>Supply, delivery and laying of PVC/SWA/PVC ECC Aluminium cables as specified, excluding terminations and cable supports. Lengths given shall be taken as measured lengths to cable runs from terminal to terminal and rates quoted shall include for off-cuts.   |                   |            |            |   |            |              |
| 2.1   | 240 mm <sup>2</sup> 4 core Al PVC 400V from the TRF to Generator  | Supply<br>Install | 100<br>100 | m<br>m     |   |            |              |
| 2.2   | 240 mm <sup>2</sup> 4 core Al PVC 400V from the Generator to the LV Kiosk   | Supply<br>Install | 25<br>25   | m<br>m     |   |            |              |
| 2.3   | 16 mm <sup>2</sup> 4 core Al PVC 400V for external lights   | Supply<br>Install | 140<br>140 | m<br>m     |   |            |              |
|       | <b>Cable Terminations</b><br>Including the supply and fitting of Pratley Cable gland, shroud, making off the cable and fitting the gland to gland plates, switchgear or equipment including final connections of cable tails with lugs onto board terminals and including earth in ECC cable.   |                   |            |            |   |            |              |
| 2.3   | 240 mm <sup>2</sup> 4 core Al PVC 400V from the TRF   | Supply<br>Install | 4<br>4     | No.<br>No. |   |            |              |
| 2.4   | 240 mm <sup>2</sup> 4 core Al PVC 400V from the Generator   | Supply<br>Install | 4<br>4     | No.<br>No. |   |            |              |
| 2.5   | <b>Wireway Installation (for Electrical Supply Cables)</b><br>114mm Wide Medium Duty Galvanized Return Flange Cable Tray. Mounted Underside of Ceiling Complete with all Accessories. Covers, 90° Bends, T-Junctions and end Caps etc. Allowances has been made for IT & Power  | Supply<br>Install | 380<br>380 | m<br>m     |   |            |              |
| 2.6   | <b>Server ( Telecommunication Network)</b><br>Supply, install of Fibre Optic cable (Fibrework/Krone/Legrand or other Approved) in wire way & CAT6A. 1-off 24 Port Internet Switches (3-Corn or Other Approved) Housed a 15U Cabinet. 1-off 24 Port Internet Switches (Krone/Legrand or Other Approved) Housed a 15U Cabinet. Multi-Mode Fibre optic cable to 24- port Switch in offices and one to 24-Port Switch in Security room. The Termination of the fibre optic cables in the 15U Cabinets |                   |            |            |   |            |              |
| 2.6.1 | Fibre Network Installation  | Sum               | 1          | Item       | R | 15 000.00  | R 15 000.00  |
| 2.6.2 | Supply and Install of <b>Data Equipment</b><br>Plus Profit and Attendance .....   |                   | 1          | Sum        | R | 125 000.00 | R 125 000.00 |
|       |   |                   | 5%         |            |   |            |              |
| 2.6.3 | Supply and Install of CAT6A cable Krone/Legrand for cameras, IT network & Telephones  |                   | 1200       | m          |   |            |              |

|        |  |         |     |                |  |
|--------|--|---------|-----|----------------|--|
| 3.     | <b>EXCAVATIONS</b><br><b>CPAP WORKGROUP NO 104 UNLESS OTHERWISE</b>  |         |     |                |  |
| 3.1    | Excavations other than bulk in soft excavation not exceeding 2m deep for:<br>Allowance is to be made for the installation of cable markers and warning sheets        |         |     |                |  |
| 3.2    | In trenches for cables and sleeves   |         | 100 | m <sup>3</sup> |  |
| 3.3    | Extra over "soft excavation" for excavation in intermediate excavations  |         | 100 | m <sup>3</sup> |  |
| 3.4    | Extra over "soft excavation" for excavation in hard rock excavations   |         | 100 | m <sup>3</sup> |  |
| 3.5    | Filling obtained from excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density  |         |     |                |  |
| 3.6    | Backfilling of trenches<br>Risk of collapse of excavations other than bulk   |         | 100 | m <sup>3</sup> |  |
| 3.7    | Sides of trenches and hole excavations not exceeding 1.5m deep   |         | 100 | m <sup>3</sup> |  |
|        | <b>Manholes</b><br>Supply and installation of manholes as shown on the drawings. Refer to Clause B6  |         |     |                |  |
| 3.8    | 600 x 600mm Concrete Manholes  |         | 2   | No.            |  |
|        | Cable Markers<br>Allow to supply and install cable markers   |         |     |                |  |
| 3.9    | PVC warning marking tape   |         | 100 | m              |  |
| 3.9.1  | Concrete cable route markers   |         | 5   | No.            |  |
| 3.10   | <b>Security System</b><br>Installation of Camera System equipment and All Access Control Systems as specified of the Detailed Specification.                         |         |     |                |  |
|        | 360 Degree resolution CCTV Camera  | Supply  | 2   | No.            |  |
|        |  | Install | 2   | No.            |  |
| 3.11   | <b>Luminaires</b><br>Supply and install and electrically connecting the following luminaires, complete with lamps. Parking areas & In front of residences            |         |     |                |  |
| 3.11.1 | Type B1.1<br>2 x 36w LED Fitting   | Supply  | 17  | No.            |  |
|        |  | Install | 17  | No.            |  |
| 3.11.2 | Streetlight, Type P1.1<br>LED Post top Luminaire Manufactured from Powder coated die - cats, 36w Pending Height. Lumen variance, 4000lm plus, 4000K, Beka, Regent or | Supply  | 5   | No.            |  |
|        |  | Install | 5   | No.            |  |
| 3.11.3 | 7m Pole for P1.1   | Supply  | 5   | No.            |  |
|        |  | Install | 5   | No.            |  |
| 3.11.4 | Boilards, Type BO1<br>18w or 25w, LM 6 Die cast Aluminium / Plastic, Beka, Regent or Rubicon   | Supply  | 6   | No.            |  |
|        |  | Install | 6   | No.            |  |
| 3.11.5 | Type A1+<br>2 x 18 w Vapor Proof Double Tube LED Fitting, IP65, Beka, Regent or Rubicon  | Supply  | 4   | No.            |  |
|        |  | Install | 4   | No.            |  |
| 4      | <b>Daylight Switch</b><br>Supply and installation of approved daylight switch.   |         |     |                |  |
|        | Daylight Switch  | Supply  | 3   | No.            |  |
|        |  | Install | 3   | No.            |  |
| 5      | 20A 4 Pole Flush waterproof Isolator for Boom Gate   | Supply  | 1   | No.            |  |
|        |  | Install | 1   | No.            |  |
| 6      | Loud Speaker   | Supply  | 2   | No.            |  |
|        |  | Install | 2   | No.            |  |
|        | Total for Bill No. 1 : Carried Forward to Summary Page   |         |     |                |  |

**RESIDENCES****ELECTRICAL INSTALLATION****PROVISIONAL BILLS OF QUANTITIES****SECTION B**

| Item   | Description   | Qty               | Unit            | Rate           | Amount |
|--|---|-------------------|-----------------|----------------|--------|
| 1.1  | <b>Distribution Boards</b><br>Supply, installation and commissioning of Kiosk, Distribution Boards, including all circuit breakers (as per load schedule), earthing straps, labels the making off of wire connections (external wiring, conduit, armoured cable and terminations given elsewhere). All DB's are to be equipped with a three phase or single phase surge arrestor. Special note, the accessories are inclusive on the quoted price |                   |                 |                |        |
| 1.1.1  | Distribution Board  | Supply<br>Install | 6<br>6          | No.<br>No.     |        |
| 1.2  | <b>Cables</b><br>Supply, delivery and laying of PVC/SWA/PVC ECC Aluminium cables as specified, excluding terminations and cable supports. Lengths given shall be taken as measured lengths to cable runs from terminal to terminal and rates quoted shall include for off-cuts.   |                   |                 |                |        |
| 1.2.1  | 25mm <sup>2</sup> 4C Aluminium Cable PVC Mains 600/1000V  | Supply<br>Install | 480<br>480      | m<br>m         |        |
| 1.3  | <b>Cable Terminations</b><br>Including the supply and fitting of Pratley Cable gland, shroud, making off the cable and fitting the gland to gland plates, switchgear or equipment including final connections of cable tails with lugs onto board terminals and including earth in ECC cable.   |                   |                 |                |        |
| 1.3.1  | 25mm <sup>2</sup> 4C Aluminium Cable PVC Mains 600/1000V  | Supply<br>Install | 12<br>12        | No.<br>No.     |        |
| 1.4  | <b>Cable Sleeves</b><br>Supply and Installation of Cable Sleeves as specified, in trenches  |                   |                 |                |        |
| 1.4.1  | 110mm Ø Flexible Cable Sleeve   | Supply<br>Install | 180<br>180      | m<br>m         |        |
|  | <b>EXTRA ON upvc piping for:</b><br>100mm Diameter long radius bend   |                   | 180             | m3             |        |
| 1.5  | <b>EXCAVATIONS</b><br>In trenches for cables and sleeves<br>extra over soft excavation intermediate<br>extra over soft excavation in hard rock  |                   | 180<br>15<br>15 | m3<br>m3<br>m3 |        |
| 1.6  | <b>Conduit</b><br>Supply and installation of PVC conduit. Lengths given shall be taken as measured horizontal and vertical runs between conduit terminations. Rates quoted shall allow for wastage, offcuts, couplings, cuttings, bending, jointing socket and tees.  |                   |                 |                |        |
| 1.6.1  | 25mm Conduit  | Supply<br>Install | 2760<br>2760    | m<br>m         |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |                   |                 |                | R -    |

| Item   | Description  |         | Qty | Unit | Amount |
|--|--|---------|-----|------|--------|
| 1.7  | <b><u>Conduit Boxes and Ends</u></b><br>Terminate and connect one pair of conduit ends including supply and installation of 1, 2, 3 or 4 way box on surface or in brickwork. (excluding coverplates), including holes for conduit. |         |     |      |        |
| 1.7.1  | 25mm Conduit (100 x 100mm) Galvanized Box  | Supply  | 20  | No.  |        |
|  |  | Install | 20  | No.  |        |
| 1.8  | <b><u>Conductors</u></b><br>Supply and installation of PVC insulated copper conductors drawn into conduit or wiring channel in groups of 2, 3, 4, etc. with the required colour coding, but excluding any wiring connections.      |         |     |      |        |
| 1.8.1  | 2,5 mm <sup>2</sup> PVC Conductors Red   | Supply  | 800 | m    |        |
|  |  | Install | 800 | m    |        |
|  | 2,5 mm <sup>2</sup> PVC Conductors Black   | Supply  | 800 | m    |        |
|  |  | Install | 800 | m    |        |
|  | 4 x 2 PVC Wall Box   | Supply  | 11  | No.  |        |
|  |  | Install | 11  | No.  |        |
|  | 4-Way Box PVC  | Supply  | 15  | No.  |        |
|  |  | Install | 15  | No.  |        |
| 1.8.2  | 4 mm <sup>2</sup> PVC Conductors Blue  | Supply  | 600 | m    |        |
|  |  | Install | 600 | m    |        |
|  | 4 mm <sup>2</sup> PVC Conductors Brown   | Supply  | 600 | m    |        |
|  |  | Install | 600 | m    |        |
|  | 4 mm <sup>2</sup> PVC Conductors Earth   | Supply  | 600 | m    |        |
|  |  | Install | 600 | m    |        |
|  | Adaptors 25mm  | Supply  | 20  | No.  |        |
|  |  | Install | 20  | No.  |        |
|  | 4 x 4 PVC Wall Box   | Supply  | 72  | No.  |        |
|  |  | Install | 72  | No.  |        |
|  | Coupling 25mm  | Supply  | 15  | No.  |        |
|  |  | Install | 15  | No.  |        |
| 1.9  | <b><u>Light Switches</u></b><br>Supply, fitting and electrical connection of a Legrand type flush or surface mounted 16A switch in 100 x 50 excluding box (for flush type) and conduit connections, but including cover plates.    |         |     |      |        |
| 1.9.1  | 16A 1 Lever 1 Way  | Supply  | 36  | No.  |        |
|  |  | Install | 36  | No.  |        |
| 1.9.2  | 16A 1 Lever 2 Way  | Supply  | 12  | No.  |        |
|  |  | Install | 12  | No.  |        |
| 1.1  | <b><u>Luminaires</u></b><br>Mounting, fixing and electrically connecting the following luminaires, complete with lamps as specified in Section E of the Detailed Specification.  |         |     |      |        |
| 1.10.1   | Type R1<br>18w Ceiling recessed LED Non-Dimmable, 5000K, as per Regent Luxon, Beka, Rubicon  | Supply  | 84  | No.  |        |
|  |  | Install | 84  | No.  |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |  |         |     |      |        |



| Item   | Description   |         | Qty | Unit | Amount |
|--|---|---------|-----|------|--------|
| 1.10.2   | Type J1.1<br>Round LED recessed Bulkhead Light, 18w, 220-240v ac, IP54,<br>Regent Odin, Beka, Rubicon   | Supply  | 26  | No.  |        |
|  |   | Install | 26  | No.  |        |
| 1.11   | <b>Daylight Switch</b><br>Supply and installation of approved daylight switch.  |         |     |      |        |
| 1.11.1   | Daylight Switch   | Supply  | 6   | No.  |        |
|  |   | Install | 6   | No.  |        |
| 1.12   | <b>Socket Outlets</b><br>Supply, fitting and electrical connection of flush or surface<br>mounted Legrand type switched socket in either 100 x 100, 100 x<br>50, round box or wiring channel, <u>excluding</u> box (for flush type)<br>and conduit connections, but including cover plate.  |         |     |      |        |
| 1.12.1   | 16A Double SSO c/w coverplate. Legrand type.  | Supply  | 54  | No.  |        |
|  |   | Install | 54  | No.  |        |
| 1.12.2   | RJ11 Connector with cradle/ cover and mod blank   | Supply  | 6   | No.  |        |
|  |   | Install | 6   | No.  |        |
| 1.12.3   | RJ45 Connector with cradle/ cover mod blank   | Supply  | 6   | No.  |        |
|  |   | Install | 6   | No.  |        |
| 1.12.4   | RJ45 Connector with cradle/ cover mod blank   | Supply  | 6   | No.  |        |
|  |   | Install | 6   | No.  |        |
| 1.13   | <b>Isolators</b><br>Supply, fitting and electrical connection of flush or surface<br>mounted Metal Clad Isolators in either 100 x 100, 100 x 50, round<br>box or wiring channel, <u>excluding</u> box (for flush type) and conduit<br>connections, but including cover plate. For more details please<br>refer to the specific drawings |         |     |      |        |
| 1.13.1   | 5A 2 Pole Flush waterproof Isolator   | Supply  | 1   | No.  |        |
|  |   | Install | 1   | No.  |        |
| 1.13.2   | 20A 2 Pole Flush waterproof Isolator - Geyser   | Supply  | 6   | No.  |        |
|  |   | Install | 6   | No.  |        |
| 1.13.4   | 20A Double Pole Flush Mounted Stove Isolator, Legrand   | Supply  | 6   | No.  |        |
|  |   | Install | 6   | No.  |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |         |     |      |        |

| Item   | Description   |         | Qty | Unit | Amount |
|--|---|---------|-----|------|--------|
| 1.14   | <b>TELEPHONE INSTALLATION</b><br>Supply and installation of the following items for the Telephone Installation  |         |     |      |        |
| 1.14.1   | 25mm PVC Conduit  | Supply  | 36  | m    |        |
|  |   | Install | 36  | m    |        |
| 1.14.2   | 25mm PVC Conduit end  | Supply  | 3   | No.  |        |
|  |   | Install | 3   | No.  |        |
| 1.14.3   | 25mm PVC Conduit box  | Supply  | 5   | No.  |        |
|  |   | Install | 5   | No.  |        |
| 1.15   | <b>DATA INSTALLATION</b><br>Supply and installation of the following items for the Data installation  |         |     |      |        |
| 1.15.1   | 25mm PVC Conduit  | Supply  | 36  | m    |        |
|  |   | Install | 36  | m    |        |
| 1.15.2   | 25mm PVC Conduit end  | Supply  | 8   | No.  |        |
|  |   | Install | 8   | No.  |        |
| 1.15.3   | 25mm PVC Conduit box  | Supply  | 5   | No.  |        |
|  |   | Install | 5   | No.  |        |
| 1.16   | <b><u>Solar Plant (Panels) with Batteries</u></b><br><br>Allow for a Connection with the 5KVA Solar System complete with DC cables, earthing, hybrid inverter and Batteries for 4 hour backup and required communication modules and software. Protection, Metering and monitoring equipment to be included. Erect, fix, connect and commission the following solar panels and equipment, including any galvanised additional supports and brackets which may be required. All equipment to be rated for outdoor, coastal conditions. IP65 Enclosure suitable for mounting on wall in the patio will be included. |         | 6   | Item |        |
| Total for Bill No. 1 : Carried Forward to Summary Page |   |         |     |      |        |

**ELECTRICAL INSTALLATION**

**SUMMARY PAGE**

| <b>BILL NO.</b> | <b>Amounts brought forward from:</b>                                      | <b>Amounts (R)</b> |
|-----------------|---|--------------------|
|                 |   |                    |
| 1               | Adminstration, Main Central Area & Phamarcy                               |                    |
|                 |   |                    |
| 2               | Block G - Chronic Care  |                    |
|                 |   |                    |
| 3               | Block F - Acute care  |                    |
|                 |   |                    |
| 4               | Block A - Guard House & public Ablutions                                  |                    |
|                 |   |                    |
| 5               | Block E - Preventive & Promotive  |                    |
|                 |   |                    |
| 6               | Block D - Service Access, Block C - Emergency & Support Services          |                    |
|                 |   |                    |
| 7               | Block H - Youth & Outreach Center   |                    |
|                 |   |                    |
| 8               | Lightning Protection  |                    |
|                 |   |                    |
| 9               | External Works  |                    |
|                 |   |                    |
| 10              | Mechanical Works  |                    |
|                 |   |                    |
| 11              | Residence   |                    |
|                 |   |                    |
|                 | <b>TOTAL CARRIED FORWARD TO FINAL SUMMARY OF MAIN BILLS OF QUANTITIES</b> |                    |

- A This Bill needs to be read in conjunction with HVAC Layout for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-HVAC-TD-00.
- C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- D The installation of all supplied materials must be in accordance with the OEM requirements and the installer must be accredited by the OEM to conduct such installation.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H All Pricing to include for all copper tubing & trunking, housing, bracket connections, condensate drainage and electrical supply from socket point.
- I All compressor units to be installed with anti-vibration mountings.
- J Condenser units to be positioned as per the layout drawing.
- K Product offering for AC units must be Carrier or equivalent.
- L Energy Efficiency Ratings will be taken into account.
- M All units to be single phase, 220V.
- N Corrosion protection must be suitable to the proximity of the site. It must include for appropriately galvanised structural components. Details must be provided.
- O Cooling systems, materials, components and refrigerant type must comply with SANS 10147:2014.
- P All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).
- Q All AC condensate drain piping to be chased into wall and discharged at a low level to the outside.
- R All AC condensate drain piping to be thermally insulated.

| NO. | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|-----|---|------|-----|------|--------|
| 1   | 12000 BTU (QH012DS) - Invertor Type (ERR & COP Ratings to be "Carrier" or Equivalent) | No.  | 28  |      |        |
|     |   |      |     |      |        |
|     |   |      |     |      |        |

BILL 2 - MECHANICAL VENTILATION

- A This Bill needs to be read in conjunction with HVAC Layout for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-HVAC-TD-00.
- C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- D The installation of all supplied materials must be in accordance with the OEM requirements.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H All wall mounted fans to be single phase, 220V.
- I All wall mounted extraction fans to have back to back grills included.
- J Supply and Extraction Fans to be AMS or equivalent.
- K Grills and Weather Louvres to be AMS or equivalent.
- L Corrosion protection must be suitable to the proximity of the site. It must include for appropriately galvanised structural components. Details must be provided.
- M All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

| NO. | DESCRIPTION                      | UNIT | QTY | RATE | AMOUNT |
|-----|----------------------------------|------|-----|------|--------|
| 1   | Extraction Fans                  |      |     |      |        |
|     | HV-150AE                         | No.  | 1   |      |        |
|     | HIT-200                          | No.  | 2   |      |        |
|     | HIT-125                          | No.  | 1   |      |        |
| 2   | Fresh Air Fans                   |      |     |      |        |
|     | HV-150AE                         | No.  | 2   |      |        |
|     | HIT-125                          | No.  | 1   |      |        |
| 3   | Ducting (Galvanised sheet metal) |      |     |      |        |
|     | 110mm Diameter                   | m    | 30  |      |        |
|     | 150mm Diameter                   | m    | 4   |      |        |
|     | 150mmx180mm                      | m    | 5   |      |        |
|     | 200mmx180mm                      | m    | 8   |      |        |
|     | 220mmx200mm                      | m    | 4   |      |        |
|     | 300mmx200mm                      | m    | 5   |      |        |

BILL 2 - MECHANICAL VENTILATION

|   |                   |                                     |     |    |  |
|---|-------------------|-------------------------------------|-----|----|--|
| 4 | Flexible Ducting  | 110mm Diameter                      | m   | 21 |  |
|   |                   | 150mm Diameter                      | m   | 3  |  |
| 5 | Grilles/Diffusers | PVC Ventilex Extraction Valve 100mm | No. | 12 |  |
|   |                   | PVC Ventilex Extraction Valve 150mm | No. | 2  |  |
|   |                   | VST Supply Valve 100mm              | No. | 2  |  |
| 6 | Weather Louvres   | SA Wall Terminal - 150              | No. | 3  |  |
|   |                   | SA Wall Terminal - 200              | No. | 1  |  |
|   |                   | SA Wall Terminal - 300              | No. | 1  |  |
|   |                   |                                     |     |    |  |
|   |                   |                                     |     |    |  |
|   |                   |                                     |     |    |  |
|   |                   |                                     |     |    |  |
|   |                   |                                     |     |    |  |
|   |                   |                                     |     |    |  |

- A This Bill needs to be read in conjunction with Potable Water Layout for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-PHW-TD-00; KZN-MR-PHW-TD-00.
- C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- D The installation of all supplied materials must be in accordance with the OEM requirements.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H Pricing to include for necessary couplings between all pipes of similar and dissimilar materials, and between taps and valves.
- I All water reticulation connective fittings to be Compression Type (Cobra) - to be included in the pricing.
- J Pricing to include for copper pipes to be chased into the walls. A suitable paper or plastic protective wrap is required around the pipes. Details must be provided.
- K All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

| NO. | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|-----|--|------|-----|------|--------|
| 1   | CuCl2 Reticulation - Diameter 15mm                 | m    | 235 |      |        |
| 2   | CuCl2 Reticulation - Diameter 22mm                 | m    | 200 |      |        |
| 3   | CuCl2 Reticulation - Diameter 28mm                 | m    | 90  |      |        |
| 4   | CuCl2 Reticulation - Diameter 35mm                 | m    | 20  |      |        |
| 5   | Cobra RB Gate Valve 1001/125 15mm SABS FXF Prestex | No.  | 36  |      |        |
| 6   | Cobra RB Gate Valve 1001/125 22mm SABS FXF Prestex | No.  | 16  |      |        |
| 7   | Cobra RB Gate Valve 1001/125 28mm SABS FXF Prestex | No.  | 7   |      |        |
| 8   | Cobra RB Gate Valve 1001/125 35mm SABS FXF Prestex | No.  | 3   |      |        |
| 9   | Pressure Relief Valve 600kpa 22mm                  | No.  | 6   |      |        |
| 10  | Water Meter and Connection Fee                     | No.  | 1   |      |        |
| 11  | Electrical Bonding of Cu Pipes                     | Sum  |     |      |        |
|     |  |      |     |      |        |
|     |  |      |     |      |        |
|     |  |      |     |      |        |
|     |  |      |     |      |        |
|     |  |      |     |      |        |
|     |  |      |     |      |        |

- A This Bill needs to be read in conjunction with Hot Water Layout for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-PHW-TD-00; KZN-MR-PHW-TD-00.
- C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- D The installation of all supplied materials must be in accordance with the OEM requirements.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H Heat Pump and Geyser sets to be supplied complete. Product offering must be Kwikot or equivalent.
- I All copper pipes to be chased into the building walls.
- J All pricing to include for 2m insulation on incoming cold water pipes and insulate all outgoing hot water pipes (including pipes chased into the walls). Product offering to be SANS 204 and XA compliant.
- K Pricing to include for necessary couplings between all pipes of similar and dissimilar materials, and between taps and valves.
- L All hot water reticulation connective fittings to be Compression Type (Cobra). To be included in the pricing.
- M Corrosion protection must be suitable to the proximity of the site. It must include for appropriately galvanised structural components. Details must be provided.
- N All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

| NO. | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|-----|--|------|-----|------|--------|
| 1   | CuCl2 Reticulation - Diameter 15mm                 | m    | 200 |      |        |
| 2   | CuCl2 Reticulation - Diameter 22mm                 | m    | 90  |      |        |
| 3   | CuCl2 Reticulation - Diameter 28mm                 | m    | 35  |      |        |
| 4   | Cobra RB Gate Valve 1001/125 15mm SABS FXF Prestex | No.  | 10  |      |        |
| 5   | Cobra RB Gate Valve 1001/125 22mm SABS FXF Prestex | No.  | 4   |      |        |
| 6   | Cobra RB Gate Valve 1001/125 28mm SABS FXF Prestex | No.  | 1   |      |        |
| 7   | DSG-050-5 - KWIKOT Superline Geyser 50L (2kW)      | No.  | 6   |      |        |
|     | KHN3-224 - 400 kpa Multi Valve                     | No.  | 6   |      |        |
|     | KHN4-200CX - 22mm Vacuum Breaker                   | No.  | 12  |      |        |
|     | DRT 600 - Drip Tray                                | No.  | 6   |      |        |



|     |  |     |   |  |
|-----|--|-----|---|--|
| 8   | DSG-150 - KWIKOT Superline Geyser 150L   | No. | 2 |  |
|     | KHN3-224 - 400 KPA Multi Valve           | No. | 2 |  |
|     | KHN4-200CX - 22mm Vacuum Breaker         | No. | 4 |  |
|     | DRT 1600 - Drip Tray                     | No. | 2 |  |
|     | HP-005 - Heat Pump (3.85 Kw)             | No. | 2 |  |
|     |  |     |   |  |
| 9   | HP-200-V - Intergraded Heat Pump (3.5kW) | No. | 3 |  |
|     |  |     |   |  |
| 10  | FPRX-10-UB - Prisma Under Counter (10L)  | No. | 3 |  |
|     |  |     |   |  |
| 1.1 | PMX 74 Under basin mixer                 | No. | 3 |  |
|     |  |     |   |  |
|     |  |     |   |  |
|     |  |     |   |  |

- A This Bill needs to be read in conjunction with Sewage Layout for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-SW-TD-00; KZN-MR-SW-TD-00
- C Product offering must be Geberit or Valsir HDPE.
- D All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H Pricing to include for necessary couplings between all pipes of similar and dissimilar materials.
- I Pricing to include for necessary ventilation and inspection requirements in accordance with SANS 10252-2.
- J All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

| NO. | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|-----|--|------|-----|------|--------|
| 1   | Diameter 50mm uPVC Reticulation  | m    | 205 |      |        |
| 2   | Diameter 100mm uPVC Reticulation   | m    | 50  |      |        |
| 3   | Diameter 50mm uPVC 45 Degree Junction (With Inspection Eye)                              | No.  | 72  |      |        |
| 4   | Diameter 50mm uPVC 90 Degree Bend (With Inspection Eye)                                  | No.  | 78  |      |        |
| 5   | Diameter 100mm uPVC 90 Degree Bend (With Inspection Eye)                                 | No.  | 20  |      |        |
| 6   | Pan Connector  | No.  | 20  |      |        |
| 7   | Geberit P-Trap for Double Sink 50mm  | No.  | 3   |      |        |
| 8   | Geberit P-Trap for Sink 50mm   | No.  | 59  |      |        |
| 9   | Geberit Urinal Trap 50mm   | No.  | 4   |      |        |
| 10  | ACO Hygenic Gully 157 Fixed Height W200 L200 D110 Vertical with FAT, FHD, EN1253, 1.4301 | No.  | 6   |      |        |
| 11  | ACO Slob Hyg Ladder Grate W168W168H25; L/C R50; SS 1.4301                                | No.  | 6   |      |        |
| 12  | ACO Slit Basket for Vertical Gully 157, EN1253, 1.4301                                   | No.  | 6   |      |        |
|     |  |      |     |      |        |
|     |  |      |     |      |        |
|     |  |      |     |      |        |

- A This Bill needs to be read in conjunction with Fire Installation Layout for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-FI-TD-00.
- C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- D The installation of all supplied materials must be in accordance with the OEM requirements.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H All pricing to include for bracket connections and hangers.
- I Class B Fire Doors to include Pregalvanised frame, Slam bars, Magnetic hold open device, Certifire Hinges, and Georgian wired vision panels. Product offering to be 'Firechief' or equivalent.
- J Fire Suppression to be Stat-X type, inclusive of a control panel, battery back-up, optical smoke detectors, manual gas release, bell, beacon, signage, commissioning, testing and training.
- K Pricing to include for necessary couplings between all pipes of similar and dissimilar materials, and between taps and valves.
- L Corrosion protection must be suitable to the proximity of the site. It must include for appropriately galvanised structural components. Details must be provided.
- M All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

| NO. | DESCRIPTION                            | UNIT | QTY | RATE | AMOUNT |
|-----|--|------|-----|------|--------|
| 1   | Fire Hose Reel (30m)                   | No.  | 7   |      |        |
| 2   | Fire Hydrant                           | No.  | 3   |      |        |
| 3   | 4,5 kg DCP Fire Extinguisher           | No.  | 16  |      |        |
| 4   | Diameter 100mm HDPE Class 16           | m    | 85  |      |        |
| 5   | Diameter 150mm HDPE Class 16           | m    | 45  |      |        |
| 6   | Diameter 25mm Mild Steel Medium Class  | m    | 60  |      |        |
| 7   | Diameter 32mm Mild Steel Medium Class  | m    | 30  |      |        |
| 8   | Diameter 100mm Mild Steel Medium Class | m    | 95  |      |        |
| 9   | 110mm 90 Degree grooved                | No.  | 24  |      |        |
| 10  | 110mm Klambons                         | No.  | 38  |      |        |
| 11  | 100mm Blank Caps                       | No.  | 5   |      |        |
| 12  | 25mm Elbows                            | No.  | 38  |      |        |
| 13  | 25mm Unions                            | No.  | 15  |      |        |



- A This Bill needs to be read in conjunction with Fire Installation Layout for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-FD-TD-00.
- C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- D The installation of all supplied materials must be in accordance with the OEM requirements.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H All Pricing to include for all tubing / trunking, housing, bracket connections / hangers and electrical supply to socket point.
- I All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

| NO. | DESCRIPTION   | UNIT | QTY  | RATE | AMOUNT |
|-----|---|------|------|------|--------|
| 1   | AE-TC5101 - 1 Loop Addressable Control Panel c/w 1; Loop Card                     | No.  | 1    |      |        |
| 2   | AE-TC5202 - 2 Loop Addressable Control Panel c/w 2; Loop Card                     | No.  | 1    |      |        |
| 3   | EL-B121 12 V DC 7.5AH Battery   | No.  | 2    |      |        |
| 4   | AP-XP-O XP95 - Optical Smoke Detector   | No.  | 70   |      |        |
| 5   | AP-XP-H XP95 - Fixed Temperature Heat Detector; Class A2/S (55°C)                 | No.  | 6    |      |        |
| 6   | AP-XP-B XP95 - Mounting Base  | No.  | 76   |      |        |
| 7   | AP-XPWDSO-SBR XP95 - Open-Area Sounder Beacon Red (Sonos)                         | No.  | 17   |      |        |
| 8   | AP-XPWD-SBRWP XP95 - Weatherproof Open-Area; Sounder Beacon, Red                  | No.  | 3    |      |        |
| 9   | AP-DIS-MCP - Discovery MCP with Isolator, Red (Surface)                           | No.  | 20   |      |        |
| 10  | KB-FLAP MCP Transparent Hinged Protective Flap                                    | No.  | 20   |      |        |
| 11  | Fire Retardant braided screened 1,5mm stranded PH 30 red cable incl. terminations | m    | 1000 |      |        |
| 12  | AP-SAI-IO Soteria/XP95 - Input / Output Unit                                      | No.  | 2    |      |        |
| 13  | TS-FDH-R Fire Document Holder, A4, Red, c/w Logbook                               | No.  | 1    |      |        |
| 14  | 6 months Defective Maintenance, 12 month Warranty Maintenance                     | Sum  | 1    |      |        |
|     |   |      |      |      |        |
|     |   |      |      |      |        |
|     |   |      |      |      |        |
|     |   |      |      |      |        |

- A This Bill needs to be read in conjunction with Signage Layout for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-FI-TD-00.
- C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- D All signage to be Aluminium Framed, Photo Illuminescent.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

| NO. | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|-----|---|------|-----|------|--------|
| 1   | Signage - E3 - Fire Escape (Green)<br>190mm X 380mm                     | No.  | 40  |      |        |
| 2   | Signage - F4 - Fire Equipment; Fire Exit; Arrow (Red).<br>190mm X 190mm | No.  | 15  |      |        |
|     | 190mm X 380mm   | No.  | 5   |      |        |
|     | 190mm X 570mm   | No.  | 10  |      |        |
|     | 190mm X 760mm   | No.  | 5   |      |        |
|     |   |      |     |      |        |
|     |   |      |     |      |        |
|     |   |      |     |      |        |
|     |   |      |     |      |        |
|     |   |      |     |      |        |

BILL 9 - STORAGE WATER TANK AND PUMP SETS

A This Bill needs to be read in conjunction with Potable Water, Fire Installation & Pump Layouts for full project descriptions and supporting information.

B Drawing Reference: KZN-MC-PT-TD-00.

C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.

D The installation of all supplied materials must be in accordance with the OEM requirements.

E Pricing of all these items must include for all transport, supply, labour and P&G's.

F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.

G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.

H Corrosion protection must be suitable to the proximity of the site. It must include for appropriately galvanised structural components. Details must be provided.

I All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

| NO. | DESCRIPTION   | UNIT | QTY | RATE | AMOUNT |
|-----|---|------|-----|------|--------|
| 1   | Potable Pump Set - Duty & Standby (Wilo or Equivalent); Inclusive of Stainless Steel Manifolds, Non Return & Butterfly Valve  | No.  | 1   |      |        |
| 2   | Potable Pump Control Panel  | No.  | 1   |      |        |
| 3   | Fire Pump Set - Jockey & Primary (Wilo or Equivalent); Inclusive of Stainless Steel Manifolds, Non Return & Butterfly Valve   | No.  | 1   |      |        |
| 4   | Fire Pump Control Panel   | No.  | 1   |      |        |
| 5   | Ablution Pump Set - Duty & Standby (Wilo or Equivalent); Inclusive of Stainless Steel Manifolds, Non Return & Butterfly Valve | No.  | 1   |      |        |
| 6   | Ablution Pump Control Panel   | No.  | 1   |      |        |
| 7   | Abeco Tank  | No.  | 1   |      |        |
| 8   | Diameter 54mm CuCl2   | m    | 15  |      |        |
| 9   | Solenoid Valves (for level control - 54mm inlet) to Abeco Tank  | No.  | 2   |      |        |
| 10  | Isolation Valves (for drain - 80mm) to Abeco Tank   | No.  | 2   |      |        |
| 11  | 80mm Overflow pipe (galvanised with welded flange)  | No.  | 2   |      |        |
| 12  | Non-return Valves (Diameter 54mm)   | No.  | 3   |      |        |
| 13  | Isolation Valves (Diameter 54mm)  | No.  | 4   |      |        |

BILL 10 - RAINWATER HARVESTING

- A This Bill needs to be read in conjunction with Rainwater Harvesting Layout for full project descriptions and supporting information.
- B All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- C The installation of all supplied materials must be in accordance with the OEM requirements.
- D Pricing of all these items must include for all transport, supply, labour and P&G's.
- E Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- F All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- G Corrosion protection must be suitable to the proximity of the site. It must include for appropriately galvanised structural components. Details must be provided.
- H Pricing to include for necessary couplings between all pipes of similar and dissimilar materials, and between taps and valves.
- I All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

| NO. | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|-----|--|------|-----|------|--------|
| 1   | Jojo Tank (5kL)  | No.  | 7   |      |        |
| 2   | Self-priming Irrigation Pump (Complete with Accessible Weatherproof Enclosure and In-Line Disc Filter) | No.  | 3   |      |        |
| 3   | Standpipe and Tap Set (22mm)   | No.  | 3   |      |        |
| 4   | Isolation Valves (Diameter 50mm)   | No.  | 13  |      |        |
| 5   | Non-return Valves (Diameter 50mm)  | No.  | 3   |      |        |
| 6   | Diameter 50mm HDPE 16  | m    | 220 |      |        |
| 7   | Diameter 80mm PVC  | m    | 21  |      |        |
| 8   | Diameter 50mm PVC  | m    | 39  |      |        |
| 9   | First Flush Diverter Valves (Diameter 80mm)  | No.  | 7   |      |        |
|     |  |      |     |      |        |
|     |  |      |     |      |        |
|     |  |      |     |      |        |
|     |  |      |     |      |        |



- A All products supplied for this installation must be SABS approved.
- B The installation of all supplied materials must be in accordance with the OEM requirements.
- C Pricing of all these items must include for all transport, supply, labour and P&G's.
- D Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- E All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- F Product offering must be Centurion D10 (industrial) or equivalent.
- G All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

| NO. | DESCRIPTION  | UNIT | QTY | RATE | AMOUNT |
|-----|--|------|-----|------|--------|
| 1   | Rack Drive Motor Set Complete (including battery & brackets) | No.  | 1   |      |        |
| 2   | Goosenecks (Galvanised Mild Steel)                           | No.  | 2   |      |        |
| 3   | Keypad   | No.  | 1   |      |        |
| 4   | Anti-knock Shields   | No.  | 2   |      |        |
| 5   | Remotes  | No.  | 4   |      |        |
|     |  |      |     |      |        |
|     |  |      |     |      |        |

MECHANICAL, WET SERVICES & FIRE

| BILL NO. | DESCRIPTION                               | TOTAL |
|----------|---|-------|
|          |   |       |
| BILL 1   | AIR CONDITIONING                          |       |
| BILL 2   | MECHANICAL VENTILATION                    |       |
| BILL 3   | POTABLE WATER                             |       |
| BILL 4   | HOT WATER                                 |       |
| BILL 5   | SEWAGE                                    |       |
| BILL 6   | FIRE INSTALLATION                         |       |
| BILL 7   | FIRE DETECTION                            |       |
| BILL 8   | SIGNAGE                                   |       |
| BILL 9   | STORAGE TANK & PUMP SETS (FIRE & POTABLE) |       |
| BILL 10  | RAINWATER HARVESTING                      |       |
| BILL 11  | GATE MOTOR                                |       |
|          |   |       |
|          |   |       |
|          |   |       |

| SECTION NO.   | FINAL SUMMARY   | AMOUNT |
|---|---|--------|
| 1   | Section No. 1<br>Preliminaries                                  |        |
| 2   | Section No. 2<br>Builders Work                                  |        |
| 3   | Section No. 3<br>External works                                 |        |
| 4   | Section No. 4<br>Electrical Works (Provisional)                 |        |
| 5   | Section No. 5<br>Mechanical, Wet services and Fire Installation |        |
| <b>Sub - total excluding VAT and contingencies</b>  |   |        |
| <b>ADD CONTINGENCIES</b>  |   |        |
| Allow 10% for contingencies which shall be applied to the work as directed by the Project Manager and deducted in whole or part if not required |   |        |
| <b>Sub - total excluding VAT</b>  |   |        |
| ADD: VAT @ 15%  |   |        |
| <b>Carried to Form of Tender</b>  |   |        |
| <b>TOTAL</b>  |   |        |
|   |   |        |