

DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
<ul style="list-style-type: none"> <li>The bidder must support their bid offer price with a detailed bill of quantities for ease of evaluation, and work management. The attached bill of quantities is for information purposes only. It is the bidder's responsibility to verify the information included in the bill of quantities supplied and inform the DBSA if they detect discrepancies.</li> </ul>				
<b>SECTION NO. 1: PRELIMINARIES</b>	H1			-
<b>BILL NO. 1: PROFESSIONAL SERVICE PROVIDERS</b>				-
1.1 Project Manager (Team Leader) Services Fees	Lsum	1,0		-
1.2 Architect Services Fees	Lsum	1,0		-
1.3 ICT Networking Infrastructure & Business Continuity Specialist Services Fees	Lsum	1,0		-
1.4 Quantity Surveyor Services Fees	Lsum	1,0		-
1.5 Civil Engineer Services Fees	Lsum	1,0		-
1.6 Structural Engineer Services Fees	Lsum	1,0		-
1.7 Electrical & Electronics Engineer Services Fees	Lsum	1,0		-
1.8 Mechanical & Fire Engineer Services Fees	Lsum	1,0		-
1.9 Construction Health and Safety Agent Services Fees	Lsum	1,0		-
1.10 Professional Town Planner Services Fees	Lsum	1,0		-
1.11 Social Development Facilitator Services Fees	Lsum	1,0		-
<b>Subtotal: Professional Fees</b>				-
Disbursements	Lsum	1,0		-
<b>Subtotal: Professional Fees including disbursements</b>				-
<b>BILL NO. 2: PRELIMINARIES</b>	H1			-
<b>2.1 Preliminary and General Items</b>				-
2.1 Fixed Category	Lsum	1,0		-
2.2 Value-related Category	Lsum	1,0		-
2.3 Time-related Category	Lsum	1,0		-
2.2 Allowance for implementation of CIDB Build Program requirements	Lsum	1,0		-
2.3 Allowance for Implementation of contract Health and Safety Specifications	Lsum	1,0		-
<b>SECTION NO. 2 : BUILDERS WORK</b>	H1			-
<b>BILL NO. 1: ALTERATIONS</b>	H1			-
<b>ALTERATIONS (PROVISIONAL) (CPAP WORK GROUP NO. 102 UNLESS OTHERWISE STATED)</b>	H1			
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)				
<b>SUPPLEMENTARY PREAMBLES</b>	H2			
<b>View site</b>	H3			
Before submitting his tender the contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained				
<b>Explosives</b>	H3			
No explosives whatsoever may be used for demolition purposes unless otherwise stated				
<b>General</b>	H3			
Prices are to include for carting away from site all materials not specifically mentioned as being stored on site for re-use or handed over to the Employer, and all rubbish, debris, etc., arising from the works.				
Items described as to be re-used or to be handed over to the Employer are to be carefully dismantled where necessary and stacked on site where directed, and the Contractor will be responsible for their removal and storage until required, and shall make good all items missing, damaged or broken at his own expense. Unless otherwise described, no materials from the alterations shall be re-used in any new work without the written approval by the principal agent.				
The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent				
Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the principal agent				
Doors, fanlights, fittings, frames, linings, etc which are to be re-used shall be thoroughly overhauled before refixing including taking off, easing and rehangng, cramping up, re-wedging as required and making good cramps, dowels, etc, and easing, oiling, adjusting and repairing ironmongery as necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber, unless otherwise described. Re-painting or re-varnishing is given separately				
Prices for taking out of doors, windows, etc shall include for removal of all beads, architraves, ironmongery, etc				
Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc and making good floor and wall finishes to match existing				
With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, tops of walls, etc, shall be levelled and prepared for raising of brickwork				
Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary				
The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc)				

Items described as to be re-used or to be handed over to the Client are to be carefully dismantled where necessary and stacked on site where directed, and the Contractor will be responsible for their removal and storage until required, and shall make good all items missing, damaged or broken at his own expense  
 Unless otherwise described, no materials from the alterations shall be re-used in any new work without the written approval of the client  
 Prices are to include for carting away from site all materials not specifically mentioned as being stored on site for re-use or handed over to the client and all rubbish, debris, etc., arising from the alterations, etc., and for making good all work damaged or disturbed to the approval of the client

**GENERAL**

Allow for protecting all existing work liable to suffer damage (i.e. walls, finishes, floors, windows, etc.) during the building operations, alterations, etc., and make good all work damaged with new material to match existing to the approval of the principal agent

**TEMPORARY BARRIERS, SCREENS, ETC.**

**Temporary barriers, screens, etc. including removal**

Dust screen 2000mm high, of suitable timber framing with HDPE knitted shade cloth stapled on one side, including corners, ends, etc.

**REMOVAL OF EXISTING WORK**

**Breaking up and removing reinforced concrete, including cutting off and removing reinforcement**

150mm Thick surface beds

**Breaking down and removing brickwork etc**

Half brick walls

One brick walls

**Taking out/off and removing sundry metalwork**

Steel palisade fence 2800mm high

Steel ramp size 5580 x 1200mm wide, fixed to concrete or brickwork

Motorized steel entrance gate complete, overall size 4800 x 3000mm high

Steel gate overall size 1500 x 2700mm high bolted to brickwork

Steel gate overall size 5600 x 2600mm high bolted to brickwork

Steel cage overall size 1350 x 2600mm high bolted to brickwork

Steel cage overall size 3100 x 2100mm high bolted to brickwork

Steel cage overall size 6400 x 1300mm high bolted to brickwork

Steel shelves overall size 3500 x 2100mm high bolted to brickwork

Steel shelves overall size 6500 x 2100mm high bolted to brickwork

Vault door overall size 1000 x 1900mm high

Cash deposit box overall size 1200 x 2200mm high bolted to brickwork

Disconnect and remove industrial extractor, overall size 5000 x 1200mm wide

**Hacking up/off and removing granolithic, screeds, plaster, etc from concrete or brickwork and preparing surfaces for new screed, plaster, tile finishes, etc**

35mm Screed from floors

Internal plaster from walls and columns

**Taking out and removing piping, sanitary fittings, etc, including cutting off as necessary, disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere measured)**

PVC/copper/steel/cast iron piping not exceeding 50mm external girth diameter

PVC/copper/steel/cast iron piping exceeding 50mm and not exceeding 100mm external girth diameter

PVC/copper/steel/cast iron piping exceeding 100mm and not exceeding 150mm external girth diameter

**PREPARATORY WORK TO EXISTING SURFACES**

Scabble existing concrete floor with a heavy duty floor scabbler, to remove all adhesive from concrete and preparing surfaces to receive new screed

**MAKING GOOD EXISTING FINISHES, ETC.**

**Making good cement screed**

25mm Thick on floors in patches

**Making good internal cement plaster**

Walls in patches

Concrete ceilings in patches

**CLEANING OF EXISTING SURFACES**

**Cleaning down existing face brick with a high pressure jet/detergent water spray system**

External facebrick walls

**OPENINGS THROUGH EXISTING WALLS ETC**

**Breaking out for and forming plain openings through brick walls, including prestressed concrete lintels, making good cement plaster on both sides and into reveals and with 20 MPa concrete thresholds with steel trowelled finish (making good paintwork elsewhere)**

Opening 2760 x 2600mm high through one brick wall

**SECTION NO. 2**

**BILL NO. 2: EARTHWORKS**

**EARTHWORKS (PROVISIONAL) (CPAP WORK GROUP NO. 104 UNLESS OTHERWISE STATED)**

The Tenderer is referred to the relevant Clauses in the separate document General

Preambles for Trades (2017)

**SUPPLEMENTARY PREAMBLES**

**Nature of ground**

The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "soft rock" or "hard rock"

**Subterranean water**

	H2		
Item		1,00	-
	H2		
	H3		
m		165	-
	H2		
	H3		
m3		18	-
	H3		
m2		125	-
m2		535	-
	H3		
m		39	-
No		1	-
No		2	-
No		1	-
No		1	-
No		2	-
No		5	-
No		1	-
	H3		
m2		4900	-
m2		6230	-
	H3		
m		100	-
m		100	-
m		50	-
	H2		
m2		1886	-
	H2		
	H3		
m2		10	-
	H3		
m2		52	-
m2		82	-
	H2		
	H3		
m2		0	-
	H2		
	H3		
	H3		
	H3		
No		1	-
	H1		
	H1		
	H1		
	H2		
	H3		
	H3		

No subterranean water is expected. The removal of subterranean water is given separately				
<b>Working space</b>	H3			
Working space for formwork will only be paid for where specifically required and instructed in writing by the Engineer.				
No separate item for working space is provided or will be considered where the face of the measured excavation is 750mm or more away from the finished face of the structure.				
Separate items for working space for the building of brick foundation walls on ordinary concrete wall footings will not be considered.				
<b>Carting away of excavated material</b>	H3			
Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site				
<b>Filling</b>	H3			
References such as "G1", "G2", etc and "C1", "C2", etc in descriptions of filling and layer work materials refer to corresponding references in the document "Guidelines for Road Construction Materials. TRH 14 : 1985" compiled by the Committee of State Road Authorities and the properties set out therein for each kind shall be applicable to the respective materials described hereinafter				
<b>Testing</b>	H3			
Prices for filling are to include for all necessary density and other tests				
<b>EXCAVATION, FILLING, ETC OTHER THAN BULK EXCAVATIONS, ETC</b>	H2			
<b>Excavation in earth not exceeding 2m deep</b>	H3			
Holes	m3	3		-
Trenches	m3	6		-
<b>Back excavation of vertical sides of excavations in earth for working space including backfilling compacted to 98% Mod AASHTO density</b>	H3			
Exceeding 500m and not exceeding 1500m deep for placing and removing formwork to walls etc, against excavated face	m2	26		-
<b>Extra over all excavations for carting away</b>	H3			
Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m3	7		-
<b>Risk of collapse of excavations</b>	H3			
Sides of trench and hole excavations not exceeding 1,5m deep	m2	24		-
<b>Keeping excavations free of water</b>	H3			
Keeping excavations free of all water other than subterranean water	Item	1,00		-
<b>FILLING ETC</b>	H2			
<b>G2 Earth filling supplied by the contractor, compacted to 98% Mod AASHTO density</b>	H3			
Backfilling to trenches, holes, etc	m3	13		-
<b>G7 Earth filling supplied by the contractor, compacted to 98% Mod AASHTO density</b>	H3			
Backfilling to trenches, holes, etc	m3	4		-
<b>Filling of coarse river sand supplied by the contractor, consolidated</b>	H3			
Under floors etc	m3	11		-
<b>Compaction of ground surfaces</b>	H3			
Compaction of natural or excavated ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 98% Mod AASHTO density	m2	81		-
<b>WEED KILLERS, INSECTICIDES, ETC</b>	H2			
<b>Soil insecticide in accordance with SANS 5859</b>	H3			
To bottoms and sides of trenches etc	m2	68		-
<b>TESTS</b>	H2			
<b>Prescribed tests to determine degree of compaction or other properties of ground or filling</b>	H3			
"Modified AASHTO Density" test	No	8		-
<b>SECTION NO. 2</b>	H1			
<b>BILL NO. 3: CONCRETE, FORMWORK AND REINFORCEMENT</b>	H1			-
<b>CONCRETE, FORMWORK AND REINFORCEMENT (PROVISIONAL) (CPAP WORK GROUP NO. 110 UNLESS OTHERWISE STATED)</b>	H1			
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)				
<b>SUPPLEMENTARY PREAMBLES</b>	H2			
<b>Cost of tests</b>	H3			
The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the principal agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the project manager. (Test cubes are measured separately)				
<b>Formwork</b>	H3			
Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use				
The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself				
Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described				
<b>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</b>	H2			
<b>15MPa/19mm concrete</b>	H3			
Surface blinding under footings and bases	m3	2		-
<b>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</b>	H2			

25MPa/19mm concrete	H3		
Strip footings	m3	2	-
Bases	m3	1	-
<b>REINFORCED CONCRETE CAST ON/IN FORMWORK</b>	H2		
<b>30MPa/19mm concrete</b>	H3		
Surface beds	m3	1	-
<b>30MPa/19mm concrete</b>	H3		
Ramps	m3	6	-
Machine bases	m3	1	-
Isolated beams	m3	1	-
Columns	m3	1	-
<b>TEST CUBES</b>	H2		
Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	12	-
<b>CONCRETE SUNDRIES</b>	H2		
<b>Finishing top surfaces of concrete smooth with a steel trowel</b>	H3		
Surface beds, slabs, etc	m2	26	-
Tops of beams, walls, etc	m2	1	-
<b>"Prostruct 616" or other equal and approved wet to dry concrete adhesive</b>	H3		
Prepare existing concrete surface and apply two-component, solvent-free modified epoxy	m2	9	-
<b>ROUGH FORMWORK (DEGREE OF ACCURACY III) (CPAP WORK GROUP NO. 111 UNLESS OTHERWISE STATED)</b>	H2		
<b>Rough formwork to sides</b>	H3		
Strip footings (Provisional)	m2	7	-
<b>SMOOTH FORMWORK (DEGREE OF ACCURACY II) (CPAP WORK GROUP NO. 111 UNLESS OTHERWISE STATED)</b>	H2		
<b>Smooth formwork to sides</b>	H3		
Rectangular columns	m2	10	-
Edges not exceeding 300mm high	m	37	-
<b>Smooth formwork to sides and soffits</b>	H3		
Isolated beams propped up exceeding 1.5m and not exceeding 3.5m high	m2	10	-
<b>Boxing in smooth formwork to form</b>	H3		
25mm Vertical chamfers at corners	m	55	-
<b>MOVEMENT JOINTS ETC (CPAP WORK GROUP NO. 110 UNLESS OTHERWISE STATED)</b>	H2		
<b>Expansion joints with 10mm polystyrene backing between vertical concrete surfaces, including necessary formwork</b>	H3		
Not exceeding 300mm high to edges of surfaces beds	m	22	-
<b>Saw-cut joints</b>	H3		
6 x 10mm Saw-cut joints in top of concrete	m	35	-
<b>REINFORCEMENT (PROVISIONAL) (CPAP WORK GROUP NO. 114 UNLESS OTHERWISE STATED)</b>	H2		
<b>High tensile steel reinforcement to structural concrete work</b>	H3		
Bars in various diameters	t	1,50	-
<b>Fabric reinforcement</b>	H3		
Type 193 fabric reinforcement in concrete surface beds etc	m2	82	-
Type 245 fabric reinforcement in concrete slabs etc	m2	10	-
<b>SECTION NO. 2</b>	H1		
<b>BILL NO. 4: MASONRY</b>	H1		
<b>MASONRY (PROVISIONAL) (CPAP WORK GROUP NO. 116 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
<b>Sizes in descriptions</b>	H3		
Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
<b>BRICKWORK</b>	H2		
<b>FOUNDATIONS (PROVISIONAL)</b>	H2		
<b>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar</b>	H3		
One brick walls	m2	4	-
<b>SUPERSTRUCTURE</b>	H2		
<b>Brickwork of NFP bricks in class II mortar</b>	H3		
Half brick wall	m2	185	-
One brick walls	m2	228	-
230mm Hollow walls of two half brick skins	m2	165	-
<b>BRICKWORK SUNDRIES</b>	H2		
Forming toothings and bonding new brickwork to existing	m2	25	-
Closing 230mm cavities of hollow walls horizontally with one course of brickwork	m	57	-
<b>Bagging of 1:3 cement and sand mixture</b>	H3		
On brick walls, piers, etc	m2	11	-
<b>Joint forming material in movement joints</b>	H3		
10mm Expanded polystyrene built in vertically between brick skins	m2	6	-
10mm Expanded polystyrene built in vertically between brick and concrete surfaces	m2	2	-
<b>2,5mm Galvanised brick reinforcement</b>	H3		
75mm Wide reinforcement built in horizontally	m	741	-
150mm Wide reinforcement built in horizontally	m	1587	-
<b>Prestressed fabricated concrete lintels including necessary temporary supports</b>	H3		
100 x 75mm Lintels in lengths not exceeding 3m	m	127	-
<b>Galvanised hoop iron cramps, ties, etc</b>	H3		
30 x 1,2mm Wall tie 800mm long with both ends built into brickwork	No	247	-
30 x 1,2mm Wall tie 800mm long with one end shot pinned to concrete and other end built into brickwork	No	146	-
<b>SECTION NO. 2</b>	H1		
<b>BILL NO. 5: WATERPROOFING</b>	H1		

<b>WATERPROOFING (CPAP WORK GROUP NO. 120 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
<b>Waterproofing</b>	H3		
Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee.			
Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs			
<b>DAMPPROOFING OF WALLS AND FLOORS</b>	H2		
<b>One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B)</b>	H3		
In walls	m2	33	-
<b>One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape</b>	H3		
Under surface beds	m2	61	-
<b>WATERPROOFING TO ROOFS, ETC,</b>	H2		
<b>PROTECTIVE ROOFING PAINT</b>	H2		
<b>Two coats bituminous aluminium paint</b>	H3		
On waterproofing to roofs	m2	1278	-
<b>WATERSTOPS, SEALING STRIPS, JOINT SEALANTS, ETC</b>	H2		
<b>Polyurethane sealing compound including backing cord, bond breaker, primer, etc</b>	H3		
10 x 10mm In expansion joints on walls	m	222	-
10 x 10mm In expansion joints on floors	m	22	-
<b>SECTION NO. 2</b>	H1		
<b>BILL NO. 6: ROOF COVERINGS, ETC.</b>	H1		-
<b>ROOF COVERINGS, ETC. (PROVISIONAL) (CPAP WORK GROUP NO. 125 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
<b>Corrugated metal sheeting and accessories</b>	H3		
Roof sheeting systems are to be Manufactured in strict accordance with the Supplier's specifications.			
Fixing of all roof sheeting is to be in accordance with the Manufacturer's approved Instruction Book.			
The Manufacturer shall comply with ISO9002 Quality Management System.			
<b>PROFILED METAL SHEETING AND ACCESSORIES</b>	H2		
<b>"Safintra" or other equal and approved 0,80mm thick 410mm cover Saflok 410® Hazy Grey G4 COLORTECH ALUMINIUM interlocking roof covering, fixed to steel purlins at approximately 1290mm centres and end-span purlins at 1118mm centres (final spacing to be confirmed on site) using SL 410® clips secured to purlins with Stainless Steel or "Safintra" or other equal and approved wafer head self-tapping fasteners, all in accordance with the manufacturer's recommendations.</b>	H3		
Roof covering with pitch not exceeding 25 degrees	m2	960	-
Extra over on roof covering for positive fixing of ends of roof with S-5-K Grip clips	No	50	-
<b>SHEET METAL FLASHINGS, LININGS, COPINGS, ETC.</b>	H2		
<b>0,6mm Aluminium cover flashings</b>	H3		
Cover flashings 600mm girth	m	170	-
Head / side wall flashings 600mm girth	m	170	-
<b>SECTION NO. 2</b>	H1		
<b>BILL NO. 7: CARPENTRY AND JOINERY</b>	H1		-
<b>CARPENTRY AND JOINERY (PROVISIONAL) (CPAP WORK GROUP NO. 126 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
<b>Fixing</b>	H3		
Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete			
Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given elsewhere			
<b>Joinery</b>	H3		
Descriptions of frames shall be deemed to include frames, transomes, rails, etc			
Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts			
<b>SKIRTINGS</b>	H2		
<b>Wrought meranti</b>	H3		
19 x 100mm Bullnose skirtings, plugged	m	2274	-
<b>DOORS ETC</b>	H2		
<b>Meranti hardwood doors hung to timber frames</b>	H3		
40mm Door 762 x 2032mm high	No	14	-
40mm Door 813 x 2032mm high	No	5	-
Extra over for 500 x 300mm framed opening for metal louvre unit (louvre unit elsewhere)	No	15	-
<b>Semi-solid hardwood doors with 3.2mm plain hardboard covering on both sides, hung to timber frames</b>	H3		
40mm Door 624 x 2032mm high	No	10	-
40mm Door 762 x 2032mm high	No	9	-
40mm Door 813 x 2032mm high	No	7	-
40mm Duct door 1230 x 2032mm high	No	20	-

Extra over for 500 x 300mm framed opening for metal louvre unit (louvre unit elsewhere)	No	3	-
<b>Fire doors</b>	H3		
<b>"Bitcon" or other equal and approved fire doors hung to steel frames</b>	H3		
Class B fire double door 813 x 2032mm high, with 100 x 300mm clear fire rated glass, including preparing frame for door closers	No	14	-
Class B fire double door 1511 x 2400mm high, each leaf with 100 x 300mm opening with clear fire rated glass, including pressed steel frame for 270mm brick wall and preparing frame for door closers	No	8	-
<b>FRAMED FRAMES ETC</b>	H2		
<b>Meranti hardwood timber</b>	H3		
38 x 76mm Rebated frames	m	200	-
53 x 86mm Rebated frames	m	45	-
<b>BEADS, ARCHITRAVES, SILLS, ETC</b>	H2		
<b>Meranti hardwood timber</b>	H3		
19mm Quadrant beads	m	830	-
<b>PANELLING</b>	H2		
<b>References given in descriptions refer to the respective types of fittings detailed on the architect's drawings numbered 610-04 accompanying these bills of quantities for tender purposes</b>	H4		
Formica laminated boxed slat 100 x 34mm (Colour: Saxon Oak) installed seamlessly onto a 120 x 55mm steel channel parallel flange fixed with ceiling straps onto bulkhead on one side and fixed with chemical anchor onto brickwork on the other side	m	15	-
<b>Supa-wood timber</b>	H3		
78 x 36.5mm Thick supa-wood or other equal and approved timber spacer block fixed to steel lipped channel with an approved adhesive	m	471	-
53 x 10mm Thick supa-wood or other equal and approved timber spacer fixed to existing concrete with an approved adhesive	m	212	-
53 x 8mm Thick supa-wood or other equal and approved timber spacer fixed to steel channel with an approved adhesive	m	630	-
<b>FITTINGS</b>	H2		
<b>CUPBOARDS TO KITCHENS, OFFICES, ETC</b>	H2		
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
<b>General</b>	H3		
The following cupboard fittings have been given as complete units i.e. the components of the units have not been given separately. Descriptions of such units shall, therefore, be deemed to include all components, assembling, housing, notching, glueing, blocking, planting-on and screwing with countersunk screws, edge strips, thermosetting plastic laminate, glass, ironmongery, metalwork, paint or varnish finishes, etc. Prices are to include for all necessary filler pieces against walls etc			
<b>References</b>	H3		
<b>References given in descriptions refer to the respective types of fittings detailed on the architect's drawings numbered 610-01 to 610-03 accompanying these bills of quantities for tender purposes</b>	H4		
<b>Reception counters, etc</b>	H3		
12mm "Dupont Corian" or other equal and approved desk counter overall size 3301 x 800 x 740mm high, colour: Glacier white installed seamlessly on a rubber layer with appropriate adhesive on 50 x 50mm steel support frame. Formica laminate desk apron, overall size 3050 x 1100mm high, colour texture: Saxon Oak laminate installed seamlessly on 16mm superwood on 50 x 50mm steel support frame. Fixing to manufacturer's specification	No	1	-
12mm L- Shaped "Dupont Corian" or other equal and approved desk counter overall size 3900 x 600 x 1000mm high, colour: Glacier white installed seamlessly on a rubber layer with appropriate adhesive on 50 x 50mm steel support frame. Formica laminate desk apron, overall size 4158 x 1100mm high, colour texture: Saxon Oak laminate installed seamlessly on 16mm superwood on 50 x 50mm steel support frame. Fixing to manufacturer's specification	No	1	-
<b>Kitchen cupboards etc</b>	H3		
<b>Supa-wood with triple Duco gloss finish with "Caesarstone" or other equal and approved counter tops, colour: Raven</b>	H4		
Wall cupboard overall size 900 x 1800mm high with top, sides, bottom, division, shelf, back and one double hinged door	No	5	-
Floor cupboard overall size 3234 x 1000mm high with 30mm "caesarstone" or other equal and approved counter top, sides, bottom, division, shelf, back and one single and one double hinged door, four telescopic pull doors, one lift door and two open shelves	No	5	-
Sink cupboard overall size 2542 x 900mm high with 30mm "caesarstone" or other equal and approved counter top, sides, bottom, divisions, shelf, back and one single, one double hinged doors, four telescopic pull doors and one lift door (sink elsewhere measured)	No	5	-
Sink cupboard overall size 3010 x 900mm high with 30mm "caesarstone" or other equal and approved counter top, sides, bottom, divisions, shelf, back and one single, one double hinged doors, four telescopic pull doors and one lift door (sink elsewhere measured)	No	5	-
Sink cupboard overall size 3024 x 900mm high with 30mm "caesarstone" or other equal and approved counter top, sides, bottom, divisions, shelf, back and one single, one double hinged doors, four telescopic pull doors and one lift door (sink elsewhere measured)	No	1	-
<b>"Caesarstone" or other equal and approved counter, colour: Raven</b>	H4		
Kitchen counter overall size 1640 x 800 x 1100mm high	No	10	-
Kitchen counter overall size 2308 x 525 x 900mm high	No	1	-
Kitchen counter overall size 2310 x 525 x 1100mm high	No	5	-
<b>SECTION NO. 2</b>	H1		
<b>BILL NO. 8: CEILINGS, PARTITIONS AND ACCESS FLOORING</b>	H1		

<b>CEILINGS, PARTITIONS AND ACCESS FLOORING (PROVISIONAL) (CPAP WORK GROUP NO. 129 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
<b>Fixing</b>	H3		
Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete			
Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given elsewhere			
<b>Ceilings</b>	H3		
Unless otherwise described ceilings shall be deemed to be horizontal			
<b>Bulkheads</b>	H3		
Bulkheads are defined as those portions of ceilings which are stepped down from the general ceiling level in a particular room or area and which generally occur along the perimeter. Their purpose is either to conceal services or to create architectural features Bulkheads have only been described as such where they conform to the above definition and where the horizontal or vertical dimensions do not exceed 900mm. Where these dimensions are more than 900mm such portions of ceilings have been included in the appropriate general items of ceilings Unless otherwise described bulkheads shall be deemed to be horizontal along the length			
<b>Steel components</b>	H3		
All steel components for ceilings, partitions, etc are to be galvanised in accordance with SANS 121			
<b>SUSPENDED CEILINGS</b>	H2		
<b>Proprietary suspended ceilings</b>	H3		
Hangers, suspension grids, "lay-in" panels, etc are to be in accordance with the manufacturers' recommendations Electrical light fittings, diffusers, panels etc are generally "lay-in" units of the same dimensions as the suspension grid described and allowance must be made in the rates accordingly for their support inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof)			
<b>Flush plastered skim ceilings</b>	H3		
Ceilings shall comprise 12mm gypsum plasterboard boards screwed to and including screw-up suspension grid consisting of main tees at 1 200mm centres and galvanised steel capped cross tees at 400mm centres and with tape fixed over joints and the whole finished with gypsum plaster trowelled to a smooth polished surface The grid shall be suspended by means of galvanised steel L-section hangers at suitable centres, securely shot-pinned or screwed to concrete, steel or wood			
<b>Flush plastered gypsum plasterboard suspended bulkheads</b>	H3		
Bulkheads shall comprise galvanised steel studding of 63,5mm top and bottom tracks with vertical studs at maximum 400mm centres, pop-riveted to the top and bottom tracks with similar additional vertical studs as necessary at abutments, ends, etc and covered as described with plasterboard screwed to studding with drywall screws at maximum 300mm centres. Boards shall be butt jointed and finished with tape and jointing compound and the whole finished with gypsum plaster trowelled to a smooth polished surface to the thickness recommended by the manufacturer			
Descriptions shall be deemed to include any additional studs at ends and intersections, corner beads, cornices at junctions with ceilings, jointing compound, tape, etc <b>"Knauf AMF" or other equal and approved 60 minute fire rated Thermatex Fine Stratos square edge white ceiling tiles, size 600 x 600 x 19mm, laid on exposed Ventatec grid system comprising main tees at 1200mm centres and cross tees at 600mm centres at right angles to main tees with 600mm cross tees spaced between 1200mm cross tees at 600mm centres. Main tees suspended by means of butterfly hangers with hooks at 1200mm using approved fixings. Ceilings to be installed by an approved specialist and in accordance with the manufacturer's recommendations</b>	H3		
Ceilings suspended not exceeding 1m below concrete soffits	m2	3375	-
Extra over ceiling for opening for 100mm diameter downlighter	No	68	-
Extra over ceiling for opening for 600 x 600mm light fitting	No	745	-
Extra over ceiling for opening for 600 x 1200mm light fitting	No	4	-
Extra over ceiling for 600 x 600mm opening for ventilation grille/air conditioning diffuser	No	210	-
<b>"Knauf AMF" or other equal and approved 60 minute fire rated Thermatex Acoustic square edge white ceiling tiles, size 600 x 600 x 19mm, laid on exposed Ventatec grid system comprising main tees at 1200mm centres and cross tees at 600mm centres at right angles to main tees with 600mm cross tees spaced between 1200mm cross tees at 600mm centres. Main tees suspended by means of butterfly hangers with hooks at 1200mm using approved fixings. Ceilings to be installed by an approved specialist and in accordance with the manufacturer's recommendations</b>	H3		
Ceilings suspended not exceeding 1m below concrete soffits	m2	1075	-
Extra over ceiling for opening for 100mm diameter downlighter	No	29	-
Extra over ceiling for opening for 600 x 600mm light fitting	No	318	-
Extra over ceiling for opening for 600 x 1200mm light fitting	No	4	-
Extra over ceiling for 600 x 600mm opening for ventilation grille/air conditioning diffuser	No	90	-

<b>"Pelican Systems" or other equal and approved JUMBO skimmed ceiling system with 12mm thick JUMBO plasterboard fixed at right angles using 25mm Jumbo drywall screws at 150mm centres to JUMBO grid system comprising JUMBO screw up ceiling grid including galvanised main tees at 1200mm centres and cross tees at 600mm centres, all suspended with 25x25mm galvanised angles not exceeding 1200mm centres. Main tees suspended at 1200mm centres by means of 25 x 25 x 0,6mm galvanised steel angle. All joints to be covered with JUMBO fiba tape and the entire surface plastered with 3mm to 6mm thick JUMBO skimming plaster.</b>	H3		
Ceilings suspended not exceeding 1m below concrete soffits	m2	976	-
Horizontal portion of bulkheads 225mm wide, suspended not exceeding 1m below concrete soffits	m	21	-
Horizontal portion of bulkheads 300mm wide, suspended not exceeding 1m below concrete soffits	m	183	-
Horizontal portion of bulkheads 325mm wide, suspended not exceeding 1m below concrete soffits	m	5	-
Horizontal portion of bulkheads 380mm wide, suspended not exceeding 1m below concrete soffits	m	8	-
Horizontal portion of bulkheads 400mm wide, suspended not exceeding 1m below concrete soffits	m	120	-
Horizontal portion of bulkheads 420mm wide, suspended not exceeding 1m below concrete soffits	m	25	-
Horizontal portion of bulkheads 435mm wide, suspended not exceeding 1m below concrete soffits	m	9	-
Horizontal portion of bulkheads 460mm wide, suspended not exceeding 1m below concrete soffits	m	33	-
Horizontal portion of bulkheads 480mm wide, suspended not exceeding 1m below concrete soffits	m	18	-
Horizontal portion of bulkheads 550mm wide, suspended not exceeding 1m below concrete soffits	m	81	-
Horizontal portion of bulkheads 564mm wide, suspended not exceeding 1m below concrete soffits	m	5	-
Horizontal portion of bulkheads 600mm wide, suspended not exceeding 1m below concrete soffits	m	35	-
Horizontal portion of bulkheads 611mm wide, suspended not exceeding 1m below concrete soffits	m	28	-
Horizontal portion of bulkheads 618mm wide, suspended not exceeding 1m below concrete soffits	m	5	-
Horizontal portion of bulkheads 700mm wide, suspended not exceeding 1m below concrete soffits	m	36	-
Horizontal portion of bulkheads 760mm wide, suspended not exceeding 1m below concrete soffits	m	30	-
Horizontal portion of bulkheads 800mm wide, suspended not exceeding 1m below concrete soffits	m	9	-
Horizontal portion of bulkheads 810mm wide, suspended not exceeding 1m below concrete soffits	m	5	-
Horizontal portion of bulkheads 820mm wide, suspended not exceeding 1m below concrete soffits	m	5	-
Horizontal portion of bulkheads 830mm wide, suspended not exceeding 1m below concrete soffits	m	3	-
Horizontal portion of bulkheads 859mm wide, suspended not exceeding 1m below concrete soffits	m	18	-
Horizontal portion of bulkheads 895mm wide, suspended not exceeding 1m below concrete soffits	m	14	-
Horizontal portion of bulkheads 900mm wide, suspended not exceeding 1m below concrete soffits	m	27	-
Horizontal portion of bulkheads 957mm wide, suspended not exceeding 1m below concrete soffits	m	4	-
Vertical portion of bulkheads 100mm high, suspended not exceeding 1m below concrete soffits	m	765	-
Extra over ceiling for opening for 100mm diameter downlighter	No	220	-
Extra over ceiling for opening for 600 x 1200mm light fitting	No	10	-
Extra over ceiling for opening for 200 x 1400mm light fitting	No	10	-
Extra over ceiling for 300 x 300mm opening for ventilation grille/air conditioning diffuser	No	5	-
Extra over ceiling for 250mm diameter opening for ventilation grille/air conditioning diffuser	No	30	-
Extra over ceiling for 600 x 600mm opening for ventilation grille/air conditioning diffuser	No	15	-
<b>Cornices, perimeter trims, etc to suspended ceiling</b>	H3		
"Knauf AMF" or other equal and approved shadow line (Code: C-SRW 25)	m	3051	-
Pre-painted shadow line wall trim, pre-drilled 25 x 25mm	m	403	-
<b>FIRE BARRIERS ABOVE CEILINGS</b>	H2		
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
Construction The type and thickness of boards, the number of layers and the insulation (if necessary) is to be such as to produce the specified fire rating all in accordance with the manufacturer's recommendation. Top and bottom edges, abutments, openings, etc., are to be sealed to maintain the fire rating specified.			
<b>Fire barriers above ceilings with one hour fire rating</b>	H3		
Barriers 1000mm high between suspended ceiling and soffit of concrete slab	m	710	-
<b>PARTITIONS, ETC (CPAP WORK GROUP NO. 138 UNLESS OTHERWISE STATED)</b>	H2		
<b>DRYWALL PARTITIONS</b>	H2		
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
<b>"Pelican Systems" or other equal and approved partition systems</b>	H3		

Partitions consisting of 63mm "Ultra Drywall" steel studs inserted at 600mm centres into 63mm "Ultrasteel Drywall" steel track at top and bottom clad on both sides as described, including additional studs as necessary at abutments, ends, etc. Boards shall be fixed in strict accordance with the manufacturer's instructions and all joints shall be taped and jointed Unless otherwise described rates for partitions shall be deemed to include for standard flat section aluminium skirtings on both sides  
Wall paper and/or paint and varnish finishes are given elsewhere

**"Pelican Systems" or other equal and approved, Drywall partitioning system with overall thickness of 89mm comprising internal framing formed of 63mm galvanised steel studs fixed at 600mm centres to galvanised steel top and bottom track with 63mm thick fibreglass insulation in cavity of partition, including any additional steel studding necessary at door openings, glazed or other apertures, abutments, ends, corners, etc. and covered with 12mm thick JUMBO Plasterboard in single lengths to suit height, butt jointed and secured to studding with 25mm drywall screws at maximum 300mm centres, the joints taped over and flushed over with jointing compound prepared for painting**  
Partitions 2600mm high with bottom track plugged and top track fixed to suspended ceiling tees  
Extra over partition 2600mm high for vertical abutment  
Extra over partition 2600mm high for corner  
Extra over partition 2600mm high for T-intersection  
Extra over partition 2600mm high for fair end

H3			
m	510	-	
No	224	-	
No	110	-	
No	69	-	
No	9	-	

**"Pelican Systems" or other equal and approved, Drywall partitioning system with overall thickness of 89mm comprising internal framing formed of 63mm galvanised steel studs fixed at 600mm centres to galvanised steel top and bottom track with 63mm thick fibreglass insulation in cavity of partition, including any additional steel studding necessary at door openings, glazed or other apertures, abutments, ends, corners, etc. and covered with 12mm thick JUMBO Plasterboard in single lengths to suit height, butt jointed and secured to studding with 25mm drywall screws at maximum 300mm centres, the joints taped over and flushed over with jointing compound prepared for painting**  
Partitions 2600mm high overall with JUMBO Plasterboard 2520mm high on one side and 2600mm high on the reverse side, additional 80mm high portion fixed to timber spacer and aluminium end trim (elsewhere measured) including all additional jointing and support material as necessary, with bottom track plugged and top track fixed to suspended ceiling tees (Refer drawing no. 600-03)

H3			
m	432	-	

**Extra over partitions for 40mm semi-solid flush doors with 3.2mm plain hardboard covering on both sides and hardwood edge strips to vertical edges, hung to and including standard pressed steel door frame including additional studding, trimming, etc. to partitions**  
Door 813 x 2032mm (ironmongery elsewhere measured)

H3			
No	5	-	

**"Pelican Systems" or other equal and approved, Drywall partitioning system with overall thickness of 89mm comprising internal framing formed of 63mm galvanised steel studs fixed at 600mm centres to galvanised steel top and bottom track, including any additional steel studding necessary at door openings, glazed or other apertures, abutments, ends, corners, etc. and covered with 12mm thick JUMBO Plasterboard in single lengths to suit height, butt jointed and secured to studding with 25mm drywall screws at maximum 300mm centres, the joints taped over and flushed over with jointing compound prepared for painting**

H3			
m	30	-	
No	20	-	
No	10	-	

Partitions 3305mm high with bottom and top tracks plugged  
Extra over partition 3305mm high for vertical abutment  
Extra over partition 3305mm high for corner

**"Pelican Systems" or other equal and approved, acoustic drywall system with thickness of 89mm, comprising internal framing formed of 63mm galvanised steel studs fixed at 600mm centres to galvanised steel top and bottom track with 63mm thick fibreglass insulation in cavity of partition, including any additional steel studding necessary at door openings, glazed or other apertures, abutments, ends, corners, etc. and covered with 12mm thick JUMBO Plasterboard in single lengths to suit height, butt jointed and secured to studding with 25mm drywall screws at maximum 220mm centres, the joints taped over and flushed over with jointing compound prepared for painting**

H3			
m	40	-	
No	3	-	

Partitions 705mm high above shopfronts with bottom and top tracks plugged  
Extra over partition 705mm high for corner

**"Pelican Systems" or other equal and approved, acoustic drywall system with thickness of 89mm, comprising internal framing formed of 63mm galvanised steel studs fixed at 600mm centres to galvanised steel top and bottom track with 63mm thick fibreglass insulation in cavity of partition, including any additional steel studding necessary at door openings, glazed or other apertures, abutments, ends, corners, etc. and covered with 12mm thick JUMBO Plasterboard in single lengths to suit height, butt jointed and secured to studding with 25mm drywall screws at maximum 220mm centres, the joints taped over and flushed over with jointing compound prepared for painting**

H3			
m	96	-	
No	35	-	
No	9	-	
No	3	-	

Partitions 3305mm high with bottom and top tracks plugged  
Extra over partition 3305mm high for vertical abutment  
Extra over partition 3305mm high for corner  
Extra over partition 3305mm high for T-intersection

"Pelican Systems" or other equal and approved, acoustic drywall system with thickness of 89mm, comprising internal framing formed of 63mm galvanised steel studs fixed at 600mm centres to galvanised steel top and bottom track with 63mm thick fibreglass insulation in cavity of partition, including any additional steel studding necessary at door openings, glazed or other apertures, abutments, ends, corners, etc. and covered with 12mm thick JUMBO Plasterboard in single lengths to suit height, butt jointed and secured to studding with 25mm drywall screws at maximum 220mm centres, the joints taped over and flushed over with jointing compound prepared for painting	H3		
Partitions 3305mm high overall with JUMBO Plasterboard 3225mm high on one side and 3305mm high on the reverse side, additional 80mm high portion fixed to timber spacer and aluminium end trim (elsewhere measured) including all additional jointing and support material as necessary, with bottom track plugged and top track fixed to suspended ceiling tees (Refer drawing no. 600-03)	m	39	-
"Pelican Systems" or other equal and approved, 2 hour Fire Rated Jumbo Firewall with thickness of 124mm, with 63x35mm jumbo studs at 600mm centres, friction fitted into head track and floor track and clad on both sides with a double layer of 15mm thick fire resistant jumbo plasterboard fixed at 200mm centres using 25mm jumbo screws on the base layer and 42mm jumbo screws on the face layer, all plasterboard joints must overlap. all exterior joints to be covered with jumbo tape and finished with two layers of jumbo jointing plaster applied and lightly sanded down, leaving wall surface prepared for painting, all in accordance with supplier's recommendations and standards of SANS 10400	H3		
Partitions 3305mm high with bottom and top tracks plugged	m	25	-
Extra over partition 3305mm high for vertical abutment	No	10	-
Extra over partition 3305mm high for corner	No	5	-
Extra over partitions for 40mm semi-solid flush doors with 3.2mm plain hardboard covering on both sides and hardwood edge strips to vertical edges, hung to and including standard pressed steel door frame including additional studding, trimming, etc. to partitions	H3		
Door 813 x 2032mm (ironmongery elsewhere measured)	No	2	-
Extra over partitions for aluminium end trim fixed to steel channel and aluminium track/timber spacers	H3		
Aluminium end trim (Refer drawing no. 600-03)	m	1100	-
<b>TOILET CUBICLES</b>	H2		
"Vitraflex" or other equal and approved toilet cubicles consisting of 20mm thick partitions, doors and stiles of laminated construction with outer skins of vitreous enamelled steel sheets bonded to wood particle board, all framed in natural anodised aluminium channel section beading, top rails and fixing components and fitted with all necessary ironmongery comprising standard indicating bolts, combined coat hooks and door stops, toilet roll holders and rubber buffers	H3		
Partition 4500 x 2200mm high	No	10	-
Partition 1650 x 2200mm high	No	30	-
Partition 900 x 2200mm high	No	2	-
Partition 1800 x 2200mm high	No	6	-
Partition 2600 x 2200mm high	No	2	-
Door PD-01, overall size 910 x 2200mm high	No	47	-
Full stile 210 x 2200mm high	No	41	-
End stile 145 x 2200mm high	No	61	-
Wall stile 105 x 2200mm high	No	33	-
<b>SECTION NO. 2</b>	H1		
<b>BILL NO. 9: FLOOR COVERINGS, WALL LININGS, ETC</b>	H1		-
<b>FLOOR COVERINGS, WALL LININGS, ETC (PROVISIONAL) (CPAP WORK GROUP NO. 130 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
<b>Fixing</b>	H3		
Floor coverings, wall linings, etc shall, where applicable, be fixed with adhesive as recommended by the manufacturers of the flooring, linings, etc			
<b>FLOOR COVERINGS</b>	H2		
"FloorworX" or other equal and approved superflex fully flexible vinyl floor tiles colour Charcoal (Colour code: MS113), size 300 x 300 x 2.0mm thick, manufactured in accordance with SANS 786:2000, laid in FloorworX No. 62 acrylic adhesive spread with a trowel fitted with an A2 notched blade at a rate of between 5.5m <sup>2</sup> and 6.5m <sup>2</sup> per litre on suitably prepared subfloor (elsewhere specified) in accordance with SANS 10070, using FloorworX Self Leveller when required and rolled with 68kg three section metal roller on completion	H3		
On floors	m2	109	-
"Bervik" or other equal and approved fully adjustable raised access flooring tiles colour Granite (Colour code: M335), size 600 x 600mm x 38mm thick	H3		
On floors	m2	43	-
"FloorworX" or other equal and approved primo SD non-directional static dissipative vinyl sheeting colour Dark Cool Grey (Colour code: FSD563), size 2m wide x 2.0mm thick, manufactured in accordance with EN 649 laid in FloorworX No. 27 antistatic/conductive adhesive spread with a trowel fitted with an A2 notched blade at a rate of between 5.5m <sup>2</sup> and 6.5m <sup>2</sup> per litre on suitably prepared subfloor (elsewhere specified) in accordance with SANS 10070, using FloorworX Self Leveller when required, rolled with 68kg three section metal roller, with joints welded with a fully flexible coloured 'FloorworX Welding Rod' to provide a smooth, hygienic sealed finish	H3		
On floors	m2	121	-

"Belgotex" or other equal and approved floors Atlantis colour Cyclone Mist Stainproof SDX (solution dyed nylon) Tufted Multi-Scroll Loop Pile Nexbac SABS Class 2 fire rating grade heavy commercial carpet tiles, size 500 x 500 x 8mm thick, all installed by approved installer in accordance with SANS 10186:2010, the code of practice for textile floor coverings	H3			
On floors	m2	2430		-
"Belgotex" or other equal and approved floors Berber Point 920 colour Charcoal Stainproof Miracle Fibre (Polypropylene) structured needlepunch Nexbac SABS Class 3 fire rating grade heavy commercial carpet tiles, size 500 x 500 x 8,5mm thick, all installed by approved installer in accordance with SANS 10186:2010, the code of practice for textile floor coverings	H3			
On floors	m2	2186		-
"Belgotex" or other equal and approved floors Westminster colour Zimmer, heavy commercial (SABS location grade: 5) Stainproof SDX (solution dyed nylon), plain cut pile FusionBac SABS Class 2 fire rating broadloom carpet sheeting laid on and including Orange under cushion	H3			
On floors	m2	350		-
<b>SKIRTINGS, NOSINGS, ETC</b>	H2			
<b>Skirtings, nosings, etc</b>	H3			
9.72mm Aluminium carpet trim colour Matt Black fixed to existing concrete with an approved adhesive	m	835		-
60 x 32mm Heavy duty aluminium natural anodised aluminium nosings, colour Red, with plastic external infill colour White, on resin stair covering, fixed with contact adhesive, plugged and screwed to tread	m	364		-
<b>POLISH, SEALERS, ETC</b>	H2			
3 coats silk matt finished sealer on vinyl flooring	m2	230		-
<b>SCREEDS</b>	H2			
"Tal Screedmaster" or other equal and approved	H3			
5mm thick self levelling screed on floors and landings	m2	5719		-
<b>CLEANING OF EXISTING SURFACES, ETC..</b>	H2			
Strip and seal existing vinyl floor tiles in accordance with the 3 step process: Step 1 - Dilute "FloorworX" or other equal and approved stripper 1:5 parts clean water and spread onto floor surface, leave for few minutes and scrub floor by manual or mechanical means. Rinse well and remove residue with a wet/dry vacuum cleaner, all in accordance with the manufacturers recommendations. Step 2 - Dilute "FloorworX" or other equal and approved, rinse 1:10 parts clean water and spray onto floor surface and rinse with water, all in accordance with the manufacturers recommendations. Step 3 - "FloorworX Silk Matt Sealer" or other equal and approved, remove all polishes, oil, dirt and marks Apply three coats Silk Matt Sealer onto floor surface and allow to dry between applications, all in accordance with the manufacturers recommendations.	m2	245		-
<b>SECTION NO. 2</b>	H1			
<b>BILL NO. 10: IRONMONGERY</b>	H1			-
<b>IRONMONGERY (PROVISIONAL) (CPAP WORK GROUP NO. 132 UNLESS OTHERWISE STATED)</b>	H1			
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)				
<b>SUPPLEMENTARY PREAMBLES</b>	H2			
<b>Proprietary items</b>	H3			
Where applicable the manufacturers' names or product catalogue titles are given in sub-headings preceding the items Prices are to be based on the specific products/articles specified. If tenderers wish to offer alternative products/articles for certain items, these items are to be clearly marked and the alternative specification given with supporting brochures etc clarifying the features of the products/articles offered On request returnable samples are to be provided to the principal agent for consideration				
<b>IRONMONGERY TO TIMBER DOORS</b>	H2			
<b>HINGES, BOLTS, ETC</b>	H2			
"Dormakaba" or other equal and approved	H3			
Two Ball Bearing Butt hinge (Code: DBB-SS-009) with Stainless Steel finish	No	145		-
Flush bolt with heel (Code: DFB-SC-180), size 48 x 19 x 153mm with Satin Chrome finish	No	78		-
Adjustable roller bolt (Code: DBC-SS-022), size 40 x 22 x 76mm with Stainless Steel finish	No	2		-
Square bathroom WC indicator set (Code: DWC-005) with Stainless Steel finish	No	2		-
Square bathroom WC bolt set (Code: DWC-006), overall size 52 x 52mm with Stainless Steel finish	No	1		-
<b>CATCHES, CABIN HOOKS, ETC</b>	H2			
"Dormakaba" or other equal and approved	H3			
Cabin hooks	No	1		-
<b>LOCKS</b>	H2			
"Dormakaba" or other equal and approved	H3			
Cylinder deadlock (Code: D037D) with 57mm backset with Stainless Steel finish	No	86		-
Cylinder sash lock (Code: D036S) with 57mm backset with Stainless Steel finish	No	25		-
Bathroom deadlock (Code: D032D) with 55mm backset with Stainless Steel finish	No	3		-
Bathroom sash lock (Code: D035S) with 57mm backset with Stainless Steel finish	No	1		-
43mm keyed to differ single cylinder (Code: DSC054201) with Satin Nickel finish	No	36		-
45mm keyed alike single cylinder (Code: DSC054501-KA) with Satin Nickel finish	No	5		-
66mm keyed to differ double cylinder (Code: DDC056601) with Satin Nickel finish	No	6		-
65mm keyed to differ double cylinder (Code: DDC056501) with Satin Nickel finish	No	32		-
66mm privacy cylinder (Code: DBC006601) with Satin Nickel finish	No	1		-
80mm keyed to differ double cylinder (Code: DDC058001) with Satin Nickel finish	No	10		-
80mm keyed alike knob cylinder (Code: DKC0580001) with Satin Nickel finish	No	3		-
80mm keyed to differ knob cylinder (Code: DKC058001) with Nickel finish	No	12		-
52mm diameter cylinder escutcheon set (Code: DCE-002) with Stainless Steel finish	No	89		-

52mm diameter cylinder escutcheon set (Code: DCE-002) with Stainless Steel finish	Pairs	74	-
Rebate conversion kit (Code: D038R NP)	No	31	-
<b>HANDLES</b>	H2		
<b>"Dormakaba" or other equal and approved</b>	H3		
Ring flush pull handle (Code: DRP-SS-023), size 44mm x 62mm with Stainless Steel finish	No	48	-
139mm long spring loaded lever handle in Stainless Steel finish (Code: SH815 cylinder) with Stainless Steel finish	No	25	-
139mm long spring loaded lever handle in Stainless Steel finish (Code: SH815 bathroom WC) with Stainless Steel finish	No	1	-
Tubular straight bolt through pull handle (Code: DPH205BT), size 30mm diameter x 400mm long with Stainless Steel finish	No	43	-
Tubular straight bolt through pull handle (Code: DPH205BTB), size 30mm diameter x 400mm long with Stainless Steel finish	Pairs	14	-
Tubular straight bolt through pull handle (Code: DPH301BBT), size 25mm diameter x 325mm long with Stainless Steel finish	No	2	-
Exterior access lock with lever handle (cylinder not included) (Code: PHT3901)	No	5	-
<b>PUSH PLATES AND KICK PLATES</b>	H2		
<b>3mm Thick anodised aluminium plates countersunk screwed along edges not exceeding 200mm centres</b>	H3		
400 x 150mm Push plate	No	57	-
<b>3mm Thick anodised aluminium plates countersunk screwed along edges not exceeding 200mm centres</b>	H3		
800 x 250mm Kick plate	No	30	-
<b>3mm Thick anodised aluminium plates countersunk screwed along edges not exceeding 200mm centres</b>	H3		
400 x 75mm Back plate	No	68	-
<b>DOOR CLOSERS</b>	H2		
<b>"Dormakaba" or other equal and approved</b>	H3		
Non hold open G-SR slide channel door coordinator (Code: TS92B G-SR) with a closing force of EN 2-4 for maximum 1100mm wide door	No	49	-
Non hold open G-SR slide channel door coordinator (Code: TS93B G-SR) with a closing force of EN 2-5 for maximum 1250mm wide door	No	8	-
Non hold open G-SR slide channel door coordinator (Code: TS93G) with a closing force of EN 2-5 for maximum 1250mm wide door	No	4	-
Mechanical hold open G-SR slide channel door coordinator (Code: TS93B G-SR RF 1) with a closing force of EN 2-5 for maximum 1250mm wide door	No	3	-
<b>LETTERS, NAMEPLATES, ETC</b>	H2		
<b>"Dormakaba" or other equal and approved</b>	H3		
Electrical engraved grade 304 Stainless Steel sign (Code: DSS-136), size 150 x 150 x 1,2mm with counter-sunk fixing holes plugged and screwed with aluminium screws	No	23	-
Fire hose reel engraved grade 304 Stainless Steel sign (Code: DSS-145), size 150 x 150 x 1,2mm with counter-sunk fixing holes plugged and screwed with aluminium screws	No	1	-
Fire extinguisher engraved grade 304 Stainless Steel sign (Code: DSS-146), size 150 x 150 x 1,2mm with counter-sunk fixing holes plugged and screwed with aluminium screws	No	1	-
Female engraved grade 304 Stainless Steel sign (Code: DSS-131), size 150 x 150 x 1,2mm with counter-sunk fixing holes plugged and screwed with aluminium screws	No	8	-
Male engraved grade 304 Stainless Steel sign (Code: DSS-130), size 150 x 150 x 1,2mm with counter-sunk fixing holes plugged and screwed with aluminium screws	No	8	-
Disabled engraved grade 304 Stainless Steel sign (Code: DSS-133), size 150 x 150 x 1,2mm with counter-sunk fixing holes plugged and screwed with aluminium screws	No	1	-
<b>SUNDRIES</b>	H2		
<b>"Dormakaba" or other equal and approved</b>	H3		
Floor mounted door stop with rubber buffer (Code: DDS-SS-021), size 40 x 38mm with Stainless Steel finish	No	84	-
Hat and coat hook with rubber buffer (Code: DHC-SS-031), size 70 x 25 x 80mm with Stainless Steel finish	No	3	-
Dust proof strike (Code: DPS-SS-032), size 38 x 19mm with Stainless Steel finish	No	8	-
Touch bar panic hardware components for single door with one point locking (Code: PHB1/S)	No	6	-
Touch bar panic hardware components for single door with two point locking (Code: PHB2/W)	No	1	-
<b>BATHROOM FITTINGS</b>	H2		
<b>"Vaal" or other equal and approved</b>	H3		
Flush valve back rail (Code: 8940Z000), size 750 x 250 x 32mm with Stainless Steel finish, plugged and screwed to wall with stainless steel screws	No	1	-
Side grab rail (Code: 8939Z000), size 300 x 300 x 32mm with Stainless Steel finish, plugged and screwed to wall with stainless steel screws	No	1	-
Urinal division (Code: 705228), size 140 x 310 x 610mm high complete with fixing screws and hanger brackets	No	14	-
<b>IRONMONGERY TO ALUMINIUM DOORS</b>	H2		
<b>HINGES, BOLTS, ETC</b>	H2		
<b>"Dormakaba" or other equal and approved</b>	H3		
Heavy duty continuous geared hinge 2400mm (Code: DCH-AL-H24) with natural anodized finish	No	1	-
Two Ball Bearing Butt hinge (Code: DBB-SS-009) with Stainless Steel finish	No	18	-
Adjustable roller bolt (Code: DBC-SS-022), size 40 x 22 x 76mm with Stainless Steel finish	No	15	-
"Dormakaba" or other equal and approved stainless steel automatic flush bolt (Code: HZ 43-F22 R), size 55 x 20 x 147mm fixed in accordance with the manufacturer`s recommendations	No	2	-

"Dormakaba" or other equal and approved stainless steel automatic flush bolt (Code: HZ 43-F22 L), size 55 x 20 x 147mm fixed in accordance with the manufacturer's recommendations	No	2	-
"Dormakaba" or other equal and approved stainless steel floor keep (Code: PHA 2122-0)	No	2	-
<b>LOCKS</b>	H2		
<b>"Dormakaba" or other equal and approved</b>	H3		
Narrow stile heavy duty roller deadlock (Code: D07735) with 35mm backset with Stainless Steel finish	No	18	-
Cylinder sash lock (Code: D0365) with 57mm backset with Stainless Steel finish	No	129	-
65mm keyed to differ double cylinder (Code: DDC056501) with Satin Nickel finish	No	147	-
30 x 64mm Stainless Steel narrow style cylinder escutcheon set (Code: DCE-105).	Pairs	18	-
<b>HANDLES</b>	H2		
<b>"Dormakaba" or other equal and approved</b>	H3		
Ring flush pull handle (Code: DRP-SS-023), size 44mm x 62mm with Stainless Steel finish	No	5	-
139mm long spring loaded lever handle in Stainless Steel finish (Code: SH815 cylinder) with Stainless Steel finish	No	129	-
Rectangular straight flush pull handle (Code: DFP-SS-025), size 40mm x 120mm long with Stainless Steel finish	No	12	-
Tubular offset Stainless Steel back-to-back pull handle (Code: DPH206BTB), size 30mm diameter x 400mm long.	No	69	-
<b>DOOR CLOSERS</b>	H2		
<b>"Dormakaba" or other equal and approved</b>	H3		
Non hold open TS 93G EN5-7-AB-SL cam action slide channel door closer (Code: TS 93G EN5-7-AB-SL) with a closing force of EN 5-7V for maximum 1600mm wide door	No	1	-
Non hold open G-SR slide channel door coordinator (Code: TS92B G-SR) with a closing force of EN 2-4 for maximum 1100mm wide door	No	11	-
Non hold open concealed cam-action door closer system (Code: ITS96 2-4) with a closing force of EN 2-4V for maximum 1100mm wide door	No	42	-
Hold open concealed cam-action door closer system (Code: ITS96 2-4) with a closing force of EN 2-4V for maximum 1100mm wide door	No	16	-
Non hold open TS 93G-AB-SL cam action slide channel door closer (Code: TS 93G-AB-SL) with a closing force of EN 2-5V for maximum 1250mm wide door	No	1	-
Mechanical hold open TS 92B cam action slide channel door closer (Code: TS 92B HO) with a closing force of EN 2-4V for maximum 1100mm wide door	No	2	-
Mechanical hold open TS 93B HO-SL cam action slide channel door closer (Code: TS 93B HO-SL) with a closing force of EN 2-5V for maximum 1250mm wide door	No	1	-
<b>LETTERS, NAMEPLATES, ETC</b>	H2		
<b>"Dormakaba" or other equal and approved</b>	H3		
"Tea Cup" engraved grade 304 Stainless Steel sign (Code: DSS-135), size 150 x 150 x 1,2mm with counter-sunk fixing holes plugged and screwed with aluminium screws	No	2	-
<b>SUNDRIES</b>	H2		
<b>"Dormakaba" or other equal and approved</b>	H3		
Floor mounted door stop with rubber buffer (Code: DDS-SS-021), size 40 x 38mm with Stainless Steel finish	No	207	-
Dust proof strike (Code: DPS-SS-032), size 38 x 19mm with Stainless Steel finish	No	8	-
Touch bar panic hardware components for double door with three point locking (Code: PHB3 WL DD)	No	1	-
ES200 Heavy duty sliding door operator complete for automatic double sliding door size 1828 x 2570mm high (Code: EN200)	Sets	3,0	-
<b>SECTION NO. 2</b>	H1		
<b>BILL NO. 11: STRUCTURAL STEELWORK</b>	H1		-
<b>STRUCTURAL STEELWORK (PROVISIONAL) (CPAP WORK GROUP NO. 134 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
All work to be in accordance with SANS 1200 H All Structural steelwork to be Grade S355JR galvanised in accordance with SANS 4998/ISO 4998:1996 for 'Structural Quality'. All bolts to be Grade 8.8 bolts and to be hot dipped galvanised to SANS 121:2011 (ISO 1461:2009(E)). Contractor is to refer to Engineer's notes for details of all fixing, welding, etc			
<b>Descriptions</b>	H3		
Descriptions of bolts shall be deemed to include nuts and washers			
Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete			
Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete			
<b>GALVANISED STEEL PURLINS, GIRTS, BRACING, ETC</b>	H2		
<b>Purlins, girts, channels, etc., bolted to concrete</b>	H3		
178 x 54mm U-channel securely fastened to concrete slab	t	9,12	-
100 x 50 x 20 x 2.5mm Thick cold-formed lipped channel	t	2,03	-
M12 Chemical anchor bolts	No	250	-
<b>SECTION NO. 2</b>	H1		
<b>BILL NO. 12: METALWORK</b>	H1		-
<b>METALWORK (PROVISIONAL) (CPAP WORK GROUP NO. 136 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
<b>Descriptions of bolts, anchors, etc</b>	H3		
Descriptions of bolts shall be deemed to include nuts and washers			

Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete  
Items described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described

Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres

**Aluminium doors, windows, etc**

H3

Doors and windows shall comply with AAAMSA design criteria

Glazing shall comply with SAGGA regulations. Glass shall be laminated performance glass as shown on the window schedules/drawings appended to these bills of quantities. Glass thickness shall comply with SAGGA regulations irrespective of thicknesses shown on the schedules /drawings

Doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed

Tenderers are to note that should there be any doubt or obscurity as to the meaning and intent of any descriptions, the Contractor must have the same rectified and allow for same accordingly in his tender. The Contractor is to include in his rates for all that he considers necessary for the proper construction of the windows and doors. No claims whatsoever will be afterwards admitted due to the Contractor having failed to comply with these conditions  
The following certificates shall be provided prior to commencement of site work:

1. A copy of the relevant AAAMSA Performance Test Certificate from the manufacturer/contractor supplying the architectural aluminium product
2. A Certificate of Conformance confirming that anodising or powder coating has been processed in accordance with SANS 999 and SANS 1796 respectively

3. A powder guarantee of not less than 15 years issued by the powder manufacturer. The specific conditions contained in this guarantee shall form part of the powder coating process

4. A Certificate of Conformance confirming that glazing has been installed in accordance with SANS 0137, ensuring that safety glazing materials have been installed in the mandatory areas and that each individual pane of safety glazing materials has been permanently marked

5. A warranty from the manufacturer of the laminated safety glass and/or hermetically sealed glazing units guaranteeing the products against delamination and colour degradation for a period of not less than five years

Rates shall include for the following:

1. All opening and fixed lights, coupling mullions and transoms, support steelwork, fittings, ironmongery, etc., as required and specified.

2. Complete glazing as described, with and including matching aluminium glazing beads and gaskets and glazed in accordance with the manufacturer's written instructions

3. Building in and fixing into preformed openings. Window opening sizes to be verified on site before windows can be manufactured. Shop drawings to be submitted for approval

4. Silicone pointing with a silicone sealant recommended by AAAMSA on all door / window and structure junctions

**GALVANISED STEEL GATES, SCREENS, ETC**

H2

**Welded screens and gates to brickwork as per Architect's drawing number 500-44**

H3

Steel motorized sliding gate overall size 8000 x 2100mm high as per door type AG-01-Option 2

No

1

-

**GALVANISED PRESSED STEEL DOOR FRAMES**

H2

**1,6mm Double rebated frames suitable for one brick walls**

H3

Frame for door 813 x 2032mm high

No

29

-

Frame for door 813 x 2053mm high

No

14

-

Frame for double door 1511 x 2400mm high

No

8

-

Frame for double door 1830 x 2440mm high

No

2

-

**GALVANISED PRESSED STEEL TRANSFORMER ROOM DOORS AND FRAMES**

H2

**"Bitcon" or equally approved steel door (Refer to 500 Door Schedules)**

H3

Door overall size 813 x 2032mm high (Type SD-01)

No

5

-

Double door overall size 1830 x 2440mm high (Type SD-02)

No

2

-

**STEEL ROLLER SHUTTERS ETC**

H2

**"Xpanda" or equally approved galvanised steel roller shutters with 76mm slats (18kg/m<sup>2</sup>), fixed to brickwork or concrete**

H3

Chain operated slatted roller shutter for 3600 x 2600mm high opening

No

2

-

**ALUMINIUM WORK (CPAP WORK GROUP NO. 140 UNLESS OTHERWISE STATED)**

H2

**ALUMINIUM WINDOWS**

H2

Refer to attached window schedules for details of windows (Refer to 520 Window Schedules)

H4

**Powder coated casement window units complete with subframes, ironmongery, glass, sealing, etc and fixing to brickwork or concrete**

H3

Window overall size 1000mm wide x 1250mm high extreme including all framing, glazing beads, glazing, and necessary glass fins, etc., complete (Type W01)

No

12

-

Window overall size 1200mm wide x 680mm high extreme including all framing, glazing beads, glazing, and necessary glass fins, etc., complete (Type W02)

No

2

-

Window overall size 1320mm wide x 2220mm high extreme including all framing, glazing beads, glazing, and necessary glass fins, etc., complete (Type W05)

No

8

-

Window overall size 1445mm wide x 1020mm high extreme including all framing, glazing beads, glazing, and necessary glass fins, etc., complete (Type W04)

No

1

-

Window overall size 2200mm wide x 1200mm high extreme including all framing, glazing beads, glazing, and necessary glass fins, etc., complete (Type W03)

No

1

-

**ALUMINIUM SLIDING DOORS**

H2

**Automatic powder coated sliding doors complete with subframes, ironmongery, glass, sealing, etc and fixing to brickwork as per Architect's drawing number 500-47**

H3

Double door, 1828 x 2570mm high (Type ASD-02)

No

1

-

<b>ALUMINIUM DOORS</b>	H2		
<b>Natural anodised doors or equally approved complete with subframes, ironmongery (elsewhere measured), glass, sealing, etc and fixing to brickwork or concrete (Refer to 500 Door Schedules)</b>	H3		
Door overall size 1450mm wide x 2300mm high aluminium 1.5 door (Type AD-07)	No	1	-
<b>Powder coated doors, colour AP39005 matt jet black or equally approved, complete with subframes, ironmongery (elsewhere measured), glass, sealing, etc and fixing to brickwork, concrete or partitions (Refer to 500 Door Schedules)</b>	H3		
Door overall size 900mm wide x 2600mm high aluminium single door (Type AD-04)	No	6	-
Door overall size 900mm wide x 2600mm high aluminium single door (Type AD-05)	No	1	-
Door overall size 1600mm wide x 2600mm high aluminium double door (Type AD-02)	No	17	-
<b>ALUMINIUM SLIDING FOLDING DOORS</b>	H2		
<b>Composite panel sliding folding doors complete with subframes, ironmongery, glass, sealing, etc and fixing to brickwork or concrete</b>	H3		
Sliding door overall size 6194mm wide x 2600mm high	No	1	-
<b>ALUMINIUM LOUVRE UNITS</b>	H2		
<b>NATURAL ANODISED HORIZONTAL ALUMINIUM LOUVRE UNITS</b>	H2		
<b>Fixed louvre units screwed into timber frames</b>	H3		
Louvre unit 500 x 300mm high	m2	3	-
<b>ALUMINIUM SHOPFRONTS, DOORS ETC.</b>	H2		
<b>Powder coated shopfronts, colour AP39005 Matt Jet Black or equally approved complete with subframes, ironmongery (elsewhere measured), glass, vinyl sandblasting, sealing, etc and fixing to brickwork, concrete or partitions (Refer to 510 Shopfront Schedules)</b>	H3		
Shopfront overall size 1130 x 6013mm high (Shopfront Type SF-11)	No	1	-
Shopfront overall size 1260 x 6013mm high (Shopfront Type SF-09/10)	No	2	-
Shopfront overall size 2200 x 2600mm high (Shopfront Type SF-14) with one single door 900 x 2600mm (Door Type: AD05)	No	5	-
Shopfront overall size 2404 x 2600mm high (Shopfront Type SF-49) with one single door 900 x 2600mm (Door Type: AD05)	No	5	-
Shopfront overall size 2640 x 6013mm high (Shopfront Type SF-08)	No	1	-
Shopfront overall size 3104 x 2990mm high (Shopfront Type SF-52) with one single paraplegic door 1200 x 2400mm (Door Type: SF-02)	No	1	-
Shopfront overall size 4083 x 2300mm high (Shopfront Type SF-50) with one and a half leaf door 1450 x 2300mm (Door Type: AD07)	No	1	-
Shopfront overall size 4480 x 2600mm high (Shopfront Type SF-16) with one single door 900 x 2600mm (Door Type: AD04)	No	4	-
Shopfront overall size 4513 x 2600mm high (Shopfront Type SF-41) with one double door 1600 x 2600mm (Door Type: AD03)	No	1	-
Shopfront overall size 4631 x 2600mm high (Shopfront Type SF-48) with one double door 1600 x 2600mm (Door Type: AD03)	No	1	-
Shopfront overall size 4715 x 2600mm high (Shopfront Type SF-15) with one single door 900 x 2600mm (Door Type: AD04)	No	4	-
Shopfront overall size 4715 x 2600mm high (Shopfront Type SF-34) with one double door 1540 x 2560mm (Door Type: AD02)	No	1	-
Shopfront overall size 4730 x 2600mm high (Shopfront Type SF-30) with one single door 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 5314 x 2600mm high (Shopfront Type SF-37) with one single door 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 5456 x 2600mm high and 6003 x 2600mm high (Shopfront Type SF-40) with two single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 5480 x 2600mm high (Shopfront Type SF-13) with two single doors 900 x 2600mm (Door Type: AD04)	No	5	-
Shopfront overall size 5624 x 2600mm high (Shopfront Type SF-36) with two single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 5809 x 2600mm high and 14301 x 2600mm high (Shopfront Type SF-45) with five single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 5820 x 2600mm high (Shopfront Type SF-05) with one double door 1540 x 2560mm (Door Type: AD03)	No	1	-
Shopfront overall size 5070 x 3305mm high with side panels at 45 degrees (Shopfront Type SF-07) with one double automatic sliding door 1828 x 2570mm (Door Type: ASD01)	No	1	-
Shopfront overall size 6510 x 2600mm high (Shopfront Type SF-22) with two double doors 1600 x 2600mm (Door Type: AD03)	No	1	-
Shopfront overall size 6560 x 2600mm high (Shopfront Type SF-21) with two single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 7810 x 2600mm high (Shopfront Type SF-26) with three single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 10230 x 2600mm high (Shopfront Type SF-27) with two single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 10280 x 2600mm high (Shopfront Type SF-28) with three single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 10282 x 2600mm high (Shopfront Type SF-35) with four single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 10290 x 2600mm high (Shopfront Type SF-06) with one single door 900 x 2600mm (Door Type: AD04) and one double door 1600 x 2600 (Door Type AD03)	No	1	-
Shopfront overall size 10300 x 2600mm high (Shopfront Type SF-19) with three single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 10785 x 2600mm high (Shopfront Type SF-18) with two single doors 900 x 2600mm (Door Type: AD04 and AD05)	No	1	-
Shopfront overall size 10900 x 2600mm high (Shopfront Type SF-46) with two single doors 900 x 2600mm (Door Type: AD04)	No	1	-

Shopfront overall size 11076 x 2600mm high (Shopfront Type SF-43) with two double doors 1600 x 2600mm (Door Type: AD03)	No	1	-
Shopfront overall size 11170 x 2600mm high (Shopfront Type SF-47) with two single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 11935 x 2600mm high (Shopfront Type SF-23) with two single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 12050 x 2600mm high (Shopfront Type SF-04) with three single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 12641 x 2600mm high (Shopfront Type SF-32) with three single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 11750 x 2990mm high (Shopfront Type SF-51) with one double automatic sliding door 1828 x 2570mm (Door Type: ASD01)	No	1	-
Shopfront overall size 13010 x 2600mm high (Shopfront Type SF-29) with two single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 13841 x 2600mm high (Shopfront Type SF-44) with four single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 13860 x 2600mm high (Shopfront Type SF-01) with four single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 14930 x 2600mm high (Shopfront Type SF-03) with four single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 15530 x 2600mm high (Shopfront Type SF-20) with two single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 18182 x 2600mm high (Shopfront Type SF-33) with five single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 20915 x 2600mm high (Shopfront Type SF-17) with six single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 20930 x 2600mm high (Shopfront Type SF-39) with six single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 21924 x 2600mm high (Shopfront Type SF-31) with six single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 22200 x 2600mm high (Shopfront Type SF-38) with six single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 22260 x 2600mm high (Shopfront Type SF-12) with seven single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 22315 x 2600mm high (Shopfront Type SF-25) with six single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 22320 x 2600mm high (Shopfront Type SF-24) with six single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 22356 x 2600mm high (Shopfront Type SF-42) with six single doors 900 x 2600mm (Door Type: AD04)	No	1	-
Shopfront overall size 25102 x 2600mm high (Shopfront Type SF-02) with seven single doors 900 x 2600mm (Door Type: AD04)	No	1	-
<b>SECTION NO. 2</b>	H1		
<b>BILL NO. 13: PLASTERING</b>	H1		
<b>PLASTERING (PROVISIONAL) (CPAP WORK GROUP NO. 142 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>SCREEDS</b>	H2		
<b>Screeds wood floated, on concrete</b>	H3		
25mm Thick on floors and landings	m2	6586	-
25mm Thick on ramps	m2	21	-
<b>Apply "Isocrete K-Screed" or other equal and approved to a minimum 20mm thickness. Applied in accordance with approved manufacturer's specifications by approved applicators</b>	H3		
Minimum 20mm thick on treads and risers of stairs	m2	382	-
Minimum 20mm thick on walls	m2	275	-
<b>Apply one coat "Flowscreed Industrial Top" or other equal and approved (spread rate - 17kg/m<sup>2</sup>) to a minimum 5mm thickness with a maximum overcoating time of 48 hours. Applied in accordance with manufacturer's specifications by approved applicators</b>	H3		
Minimum 5mm thick on treads and risers of stairs	m2	382	-
Minimum 5mm thick on walls	m2	275	-
<b>INTERNAL PLASTER</b>	H2		
<b>Cement plaster steel trowelled, on brickwork</b>	H3		
On walls	m2	7199	-
On narrow widths	m2	59	-
<b>Cement plaster rendering coat with gypsum skim plaster finishing coat, on brickwork</b>	H3		
On walls	m2	112	-
<b>EXTERNAL PLASTER</b>	H2		
<b>Cement plaster steel trowelled, on brickwork</b>	H3		
On walls	m2	100	-
On narrow widths	m2	42	-
<b>CORNER PROTECTORS, DIVIDING STRIPS, ETC (CPAP WORK GROUP NO. 140 UNLESS OTHERWISE STATED)</b>	H2		
"Genesis" or other equal and approved, interior aluminium formable shopfront trim fixed to substrate with general-purpose metal adhesive	m	460	-
"Genesis" or other equal and approved, interior aluminium formable transition colour Bright Silver (Code: TAF106.91), size 17 x 10mm x 2,5m long on laminate floor covering, fixed to substrate with general-purpose metal adhesive	m	200	-
"Genesis" or other equal and approved, interior tile-in ramp colour Matt Silver (Code: RSA104.81), size 20 x 9mm x 2,5m long on tile floor covering, fixed to substrate with tile adhesive	m	55	-
<b>SECTION NO. 2</b>	H1		

<b>BILL NO. 14: TILING</b>	H1			
<b>TILING (PROVISIONAL) (CPAP WORK GROUP NO. 144 UNLESS OTHERWISE STATED)</b>	H1			
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)				
<b>SUPPLEMENTARY PREAMBLES</b>	H2			
Prime Cost amounts for tiles are NET Rates for tiling, in addition to the PC amount, must include for fixing, adhesive, grout, wastage, profit, etc				
<b>Fixing</b>	H3			
Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding Tiling described as "fixed with adhesive on power floated concrete" shall be deemed to include for approved tiling key-coat				
Ceramic, porcelain, marble and granite tiles are to be fixed and grouted with suitable adhesives and grouts from the "Tal Professional" range of products as recommended by the manufacturer of the tiles				
<b>WALL TILING</b>	H2			
<b>Supply and install 150 x 600mm Porcelain wall tiles (P.C. Amount R350 /m2) fixed with adhesive to plaster (plastered elsewhere) and flush pointed with tinted grout</b>	H3			
On walls	m2	938		-
<b>Supply and install 600 x 600mm Porcelain wall tiles (P.C. Amount R350 /m2) fixed with adhesive to plaster (plastered elsewhere) and flush pointed with tinted grout</b>	H3			
On walls	m2	798		-
<b>FLOOR TILING</b>	H2			
<b>Supply and install 600 x 600mm Porcelain floor tiles (P.C. Amount R350 /m2) fixed with adhesive to screed (screed elsewhere) and flush pointed with 2mm tinted grouting</b>	H3			
On floors and landings	m2	824		-
Skirting 100mm high	m	860		-
<b>SUNDRIES</b>	H2			
<b>Aluminium corner protectors, stair nosings, edge trims, division strips etc.</b>	H3			
"Genesis" or other equal and approved, interior aluminium straight edge trim in Bright Silver (Code: ESA080.91), size 21 x 8mm on tile surfaces, securely bedded in adhesive	m	675		-
"Genesis" or other equal and approved, interior tile-in ramp colour Matt Silver (Code: RSA104.81), size 20 x 9mm on tile floor covering, fixed to substrate with tile adhesive	m	15		-
"Genesis" or other equal and approved, edge strip Matt Silver fixed to substrate with tile adhesive	m	125		-
<b>SECTION NO. 2</b>	H1			
<b>BILL NO. 15: PLUMBING AND DRAINAGE</b>	H1			
<b>PLUMBING AND DRAINAGE (PROVISIONAL) (CPAP WORK GROUP NO. 148 UNLESS OTHERWISE STATED)</b>	H1			
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)				
<b>SUPPLEMENTARY PREAMBLES</b>	H2			
<b>Stainless steel basins, sinks, wash troughs, urinals, etc</b>	H3			
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				
<b>Sealing of edges</b>	H3			
Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone				
<b>uPVC pipes and fittings</b>	H3			
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				
<b>uPVC pressure pipes and fittings</b>	H3			
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				
<b>High density polyethylene (HDPE) pipes and fittings</b>	H3			
Pipes shall be type IV and of the class specified with "Plasson" or "Alprene" compression fittings				
<b>"Polycop" polypropylene pipes</b>	H3			
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				
<b>Copper pipes</b>	H3			
Pipes shall be hard drawn and half hard "Maksal" 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 syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" or other equally and 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				
<b>Reducing fittings</b>	H3			
Where fittings have reducing ends or branches they are described as "reducing" and only the largest end or branch size is given				
<b>Fixing of pipes</b>	H3			
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				
<b>Paper wrapping to pipes</b>	H3			
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				
<b>Disinfection of water pipework</b>	H3			
Water pipework is to be disinfected at completion in accordance with SABS 1200L (provision for disinfection elsewhere)				
<b>General</b>	H3			
Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc are given separately)				
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 on site				
Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc and to steel pipes (adaptors for connections to copper pipes, etc are given separately)				
Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured)				
Prices for installation of all taps, valves, etc, shall in all cases be deemed to include for the necessary couplings required for connecting to pipework whether specifically described or not				
<b>As built drawings</b>	H3			
Where required, 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)				
<b>SANITARY FITTINGS</b>	H2			
<b>"Franke" or other equal and approved</b>	H3			
Projectline Model PLN611 Grade 304 18/10 polished stainless steel single end bowl inset sink (Code: 1990030), overall size 800 x 460mm with one 340 x 370 x 140mm deep bowl, fitted onto cupboard (elsewhere specified) including PVC trap (trap elsewhere specified) with 38mm waste fitting	No	11		-
Rondo Model RDX610-45 Grade 304 18/10 polished stainless steel single prep bowl (Code: 1990012), overall size 450mm diameter with one 380mm diameter x 161mm deep bowl, fitted onto cupboard (elsewhere specified) including PVC trap (trap elsewhere specified) with 90mm waste fitting without overflow	No	5		-
<b>"Vaal" or other equal and approved</b>	H3			
Amber Classic vitreous china wall hung basin colour White (Code: 700303WH), overall size 510 x 440 x 195mm with three tapholes including integrated overflow and chainstay hole, bolted to wall with 2No.10mm bolts (Code: 8448Z000) and sealed with silicone sealant where basin meets wall	No	4		-
Azalea 510 vitreous china semi-recessed basin colour White (Code: 705800WH), overall size 510 x 500 x 160mm with one taphole with integrated overflow, fitted onto vanity top (elsewhere specified)	No	37		-
Midi Weaver vitreous china countertop vanity basin colour White (Code: 706601WH), overall size 450 x 350 x 130 mm without tapholes with integrated overflow, fitted onto vanity top (elsewhere specified) including 2No.10mm bolts (Code: 8448Z000) and sealed with silicone sealant where basin meets wall and vanity top	No	1		-
Urban Life 90° outlet back inlet closed rim wall hung pan, with quality soft-close seat (Code: 439300WH)	No	4		-
Urban Compact CC vitreous china close coupled suite colour White (Code: 772562WH), overall size 608 x 358 x 806mm high with Thermoset Soft-Close seat (Code: 8535Z0), comprising 90° outlet closed rim washdown pan (Code: 772500WH) with matching 6 litre cistern top dual flush cistern including fitments	No	3		-
Entice vitreous china 90° outlet back inlet wall hung closed rim pan colour White (Code: 439600WH), overall size 568 x 363 x 435mm high with Entice Thermoset seat (Code: 8854Z000), fixed on and including bolt-through-the-wall bracket (Code: 8084Z0) with concealed back inlet flushvalve (elsewhere specified)	No	48		-
Pearl Paraplegic vitreous china floor mounted paraplegic washdown suite colour White (Code: 7300SCWH), comprising semi close couple 90° outlet open rim washdown pan and matching 9 litre cistern complete with lid, fitments and purpose made side-flush lever	No	1		-
565 x 275 x 310mm Sweetpea back inlet white vitreous china wall mounted urinal (Code: 705127WH) including 38mm chromium plated domical grating (Code: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) and urinal division (Code: 705200WH) fixed with and including fixing screws and hanger bracket	No	19		-
<b>WASTE UNIONS, ETC.</b>	H2			
<b>"Cobra Watertech" or other equal and approved</b>	H3			
32mm Chrome plated basin waste (Code: 308) with 62mm diameter flange, 80mm long shank and plug	No	3		-

32mm Chrome plated Aqua slotted basin click waste (Code: 302-32) with 62mm diameter flange and 80mm long shank	No	1	-
40mm Chrome plated slotted basin waste (Code: P-303) with plug, includes 62mm diameter flange, 77mm long shank, and 1¼" BSP male outlet connection	No	38	-
<b>TRAPS, ETC.</b>	H2		
<b>"Cobra Watertech" or other equal and approved</b>	H3		
40mm Chrome plated bottle trap (Code: 345/40) with 75mm deep re-seal, adjustable telescopic pipe, and 1 ½" female inlet 40mm outlet	No	5	-
<b>"Franke" or other equal and approved</b>	H3		
Spazi F/1 plumbing kit (Code: 1120008)	No	16	-
<b>"Isca" or other equal and approved</b>	H3		
Chrome Plated bottle trap (Code: 618CH), overall size 32 x 32mm, connected to 40mm waste outlet	No	37	-
<b>TAPS, ETC.</b>	H2		
<b>"Cobra Watertech" or other equal and approved</b>	H3		
15mm Chrome Noka deck mounted basin mixer with 6L/min flow rate (Code: NA-951), installed in accordance with the manufacturers recommendations	No	7	-
15mm Chrome Medical Elbow Action wall mountedbasin mixer (Code: 503-21B), manufactured in accordance with SANS 226 Type 2, installed in accordance with the manufacturers recommendations Medical elbow-action wall-type basin mixer chrome	No	1	-
Includes ¼" turn ceramic disc ½" BSP male inlet re-inforcing back plate and aerated fixed straight outlet			
15mm Chrome Metering deck mounted metering tap (Code: KM2-301), manufactured in accordance with SANS 1808-9, installed in accordance with the manufacturers recommendations. Metering stop tap chrome. Includes self-closing non-hold open flow controller with a flow cycle of 1-20 seconds ½" male inlet and stainless steel flange. Excellent water-saving product and can be easily installed. SANS 1808-9	No	19	-
<b>"Isca" or other equal and approved</b>	H3		
15mm Chrome Chloe sink mixer (Code: EX7003CH), manufactured in accordance with SANS 1480:2005 and SANS 226:2004	No	16	-
15mm Chrome Bordo Square basin mixer (Code: 5919CH), manufactured in accordance with SANS 1480:2005 and SANS 226:2004	No	34	-
<b>VALVES, ETC.</b>	H2		
<b>"Cobra Watertech" or other equal and approved</b>	H3		
15mm Chrome ball type angle valve (Code: 832/350F)	No	180	-
25mm Nickle plated brass isolating lever ball valve	No	25	-
32mm Nickle plated brass isolating lever ball valve	No	10	-
40mm Nickle plated brass isolating lever ball valve	No	12	-
50mm Nickle plated brass isolating lever ball valve	No	22	-
63mm Nickle plated brass isolating lever ball valve	No	2	-
76mm Nickle plated brass isolating lever ball valve	No	8	-
80mm Nickle plated brass isolating lever ball valve	No	7	-
40mm Brass spring type check valve	No	5	-
50mm Brass spring type check valve	No	5	-
80mm Brass spring type check valve	No	5	-
20mm Brass F x F line strainer	No	1	-
25mm Brass F x F line strainer	No	9	-
40mm Brass F x F line strainer	No	1	-
50mm Brass F x F line strainer	No	6	-
63mm Brass F x F line strainer	No	1	-
76mm Brass F x F line strainer	No	4	-
80mm Brass F x F line strainer	No	2	-
15mm Non-Return valve	No	12	-
25mm Non-Return valve	No	17	-
32mm Non-Return valve	No	10	-
35mm Non-Return valve	No	10	-
40mm Non-Return valve	No	11	-
50mm Non-Return valve	No	16	-
63mm Non-Return valve	No	1	-
76mm Non-Return valve	No	14	-
25mm Pressure reducing valve	No	5	-
40mm Pressure reducing valve	No	1	-
50mm Pressure reducing valve	No	6	-
63mm Pressure reducing valve	No	1	-
76mm Pressure reducing valve	No	2	-
Masterflow pressure control valve 400kpa (SKU: PA3-132)	No	1	-
<b>"Grohe" or other equal and approved</b>	H3		
Uniset for WC with 1000mm high installation height (Code: 38643001) with Chrome Skate Cosmopolitan dual flush actuator (Code: 38732000) including water supply connection with angle stop valve, protection cover for service opening and protection cover for flush pipe, all in accordance with the manufacturers recommendations	No	48	-
<b>"Kwikot" or other equal and approved</b>	H3		
400kPa Multi pressure control valve 22mm CxC with integral isolating and expansion relief valve (Code: KHN3.214)	No	6	-
<b>SANITARY PLUMBING</b>	H2		
<b>HDPE soil and vent pipes</b>	H3		
50mm Pipes	m	103	-
63mm Pipes	m	16	-
75mm Pipes	m	78	-
110mm Pipes	m	619	-
125mm Pipes	m	110	-
<b>Extra over HDPE soil and vent pipes for fittings</b>	H3		
50mm Adaptor coupling	No	11	-

63mm Adaptor coupling	No	1	-
75mm Adaptor coupling	No	8	-
110mm Adaptor coupling	No	61	-
125mm Adaptor coupling	No	11	-
75mm Expansion coupling with double flange including ring seals, etc	No	8	-
110mm Expansion coupling with double flange including ring seals, etc	No	61	-
125mm Expansion coupling with double flange including ring seals, etc	No	11	-
50mm Bend	No	107	-
63mm Bend	No	19	-
75mm Bend	No	15	-
110mm Bend	No	106	-
125mm Bend	No	10	-
50mm Junction	No	41	-
63mm Junction	No	1	-
75mm Junction	No	14	-
110mm Junction	No	143	-
125mm Junction	No	18	-
75 x 50 x 75mm Reducing junction	No	10	-
110 x 50 x 110mm Reducing junction	No	37	-
110 x 75 x 110mm Reducing junction	No	10	-
125 x 50 x 125mm Reducing junction	No	11	-
125 x 110 x 110mm Reducing junction	No	5	-
125 x 110 x 125mm Reducing junction	No	10	-
110mm Pan connector	No	52	-
75mm Rodding eye	No	9	-
110mm Rodding eye	No	40	-
125mm Rodding eye	No	12	-
<b>Testing</b>	H3		
Testing waste pipe system	Item	1	-
<b>WATER SUPPLIES</b>	H2		
<b>"Geberit Mepla" or other equal and approved pipes with capillary couplings</b>	H3		
16mm Pipes	m	872	-
20mm Pipes	m	589	-
22mm Pipes	m	15	-
26mm Pipes	m	151	-
32mm Pipes	m	76	-
40mm Pipes	m	80	-
50mm Pipes	m	85	-
63mm Pipes	m	5	-
76mm Pipes	m	167	-
<b>Extra over "Geberit Mepla" or other equal and approved pipes for capillary fittings</b>	H3		
16mm Fittings	No	337	-
20mm Fittings	No	242	-
22mm Fittings	No	8	-
26mm Fittings	No	130	-
32mm Fittings	No	65	-
40mm Fittings	No	46	-
50mm Fittings	No	53	-
63mm Fittings	No	2	-
76mm Fittings	No	57	-
<b>PUMPS ETC</b>	H2		
"Grundfos" or other equal and approved Pump Set 1 as per specification on drawing no. P-4007 "Roof Plumbing Layout"	No	1	-
"Grundfos" or other equal and approved Pump Set 2 as per specification on drawing no. P-4007 "Roof Plumbing Layout"	No	1	-
"Grundfos" or other equal and approved Self Contained Waste Water Pump and Station complete as per specification on drawing no. P-4000 "Lower Ground Floor Plumbing and Drainage Layout"	No	1	-
"Kwikot" or other equal and approved Heat Pump as per specification on drawing no. P-4007 "Roof Plumbing Layout"	No	1	-
Circulating Pump as per specification on drawing no. P-4007 "Roof Plumbing Layout"	No	1	-
<b>ELECTRIC WATER HEATERS</b>	H2		
"Kwikot" or other equal and approved 15 litre KwikBoil water boiler colour White Epoxy (Code: KWIKBOIL-15), size 370 x 230 x 513mm high with Stainless Steel tank, steam free boiling water, electronic controls, 15mm overflow, connected to 15mm cold water supply including isolating valve and 230 volt 2400 watt electrical power supply, plugged and screwed to wall and fitted under 1 year warranty	No	17	-
<b>DRIP TRAYS, TANKS, ETC</b>	H2		
"Grundfos" or other equal and approved 450L Vertical pressure tank	No	1	-
"Kwikot" or other equal and approved 450L Megaflow tank	No	1	-
<b>PIPE INSULATION</b>	H2		
<b>20mm Think "Thermaflex" or other equal and approved pipe insulation with plain covering</b>	H3		
Insulation to 16mmØ internal diameter pipes including couplings	m	275	-
Insulation to 20mmØ internal diameter pipes including couplings	m	250	-
Insulation to 22mmØ internal diameter pipes including couplings	m	15	-
Insulation to 26mmØ internal diameter pipes including couplings	m	87	-
Insulation to 32mmØ internal diameter pipes including couplings	m	13	-
Insulation to 40mmØ internal diameter pipes including couplings	m	59	-
Insulation to 50mmØ internal diameter pipes including couplings	m	32	-
<b>Extra over "Thermaflex" or other equal and approved pipe insulation for insulation around</b>	H3		
16mm Fittings, valves, etc	No	83	-

20mm Fittings, valves, etc	No	75	-
22mm Fittings, valves, etc	No	8	-
26mm Fittings, valves, etc	No	26	-
32mm Fittings, valves, etc	No	4	-
40mm Fittings, valves, etc	No	18	-
50mm Fittings, valves, etc	No	10	-
<b>HOLES ETC</b>	H2		
<b>Core drilling hole not exceeding 50mm diameter including all fire stopping/sealing material as per Engineer's approval</b>	H3		
300mm Thick reinforced concrete slab, beam, wall, etc	No	25	-
<b>Core drilling hole exceeding 50mm and not exceeding 100mm diameter including all fire stopping/sealing material as per Engineer's approval</b>	H3		
300mm Thick reinforced concrete slab, beam, wall, etc	No	17	-
<b>Core drilling hole exceeding 100mm and not exceeding 150mm diameter including all fire stopping/sealing material as per Engineer's approval</b>	H3		
300mm Thick reinforced concrete slab, beam, wall, etc	No	38	-
<b>SECTION NO. 2</b>	H1		
<b>BILL NO. 16: PAINTWORK</b>	H1		
<b>PAINTWORK (PROVISIONAL) (CPAP WORK GROUP NO. 152 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
<b>PREPARATORY WORK TO EXISTING WORK</b>	H2		
<b>Previously painted plastered surfaces</b>	H3		
Surfaces shall be thoroughly washed down with a "Sugar Soap Solution" 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			
<b>Previously painted metal surfaces</b>	H3		
Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal			
<b>Previously painted wood surfaces</b>	H3		
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			
<b>PAINTWORK ETC TO NEW WORK</b>	H2		
<b>ON INTERNAL FLOATED PLASTER SURFACES</b>	H2		
<b>"DULUX" or other equal and approved</b>	H3		
<b>One coat "Dulux trade" alkali resistant plaster primer and two coats "Dulux low sheen wash and ware" paint for interior use</b>	H3		
Walls	m2	5447	-
<b>"FLOWCRETE" or other equal and approved</b>	H3		
<b>Prime surface with "Flowseal EPW" clear primer (spread rate - 6m<sup>2</sup>/litre). Apply three coats "Flowseal EPW" with a minimum dry film thickness of 60 microns thick per coat with a maximum overcoating time of 12 hours. Applied in accordance with approved manufacturer's specifications by approved applicators</b>	H3		
Walls	m2	275	-
<b>ON EXTERNAL FLOATED PLASTER</b>	H2		
<b>"DULUX" or other equal and approved</b>	H3		
<b>One coat "Dulux trade" alkali resistant plaster primer and two coats "Dulux low sheen wash and ware" paint for exterior use</b>	H3		
Walls	m2	143	-
<b>ON PLASTERBOARD SURFACES</b>	H2		
<b>"DULUX" or other equal and approved</b>	H3		
<b>One coat "Dulux trade" alkali resistant plaster primer and two coats "Dulux trade 65" matt PVA</b>	H3		
Ceilings	m2	1423	-
<b>One coat "Dulux trade" alkali resistant plaster primer and two coats "Dulux low sheen wash and ware" paint for interior use</b>	H3		
Partitions	m2	4632	-
<b>ON SMOOTH CONCRETE SURFACES</b>	H2		
<b>"DULUX" or other equal and approved</b>	H3		
<b>One coat "Dulux trade" alkali resistant plaster primer and two coats "Dulux low sheen wash and ware" paint for interior use</b>	H3		
Walls and columns	m2	10	-
Ceilings and beams	m2	10	-
<b>ON METAL SURFACES</b>	H2		
<b>"DULUX" or other equal and approved</b>	H3		
<b>One coat "Dulux" primer for steel, one coat trade universal undercoat and two coats "Dulux Pearlgló" waterbased enamel</b>	H3		
Doors	m2	200	-
Door frames etc	m2	100	-
Members of lattice columns, beams and roof trusses	m2	1515	-
<b>ON WOOD SURFACES</b>	H2		
<b>Two coats oil wood primer</b>	H3		
Backs of frames, linings, etc not exceeding 300mm wide	m	2175	-
<b>"DULUX" or other equal and approved</b>	H3		
<b>One coat "Dulux" primer for wood, one coat "Dulux trade" universal undercoat and two coats "Dulux Pearlgló" waterbased enamel</b>	H3		
Doors	m2	356	-
Door frames etc	m2	54	-
Skirtings, rails, etc not exceeding 300mm girth	m	1980	-

<b>PAINTWORK, ETC TO PREVIOUSLY PAINTED WORK</b>	H2		
<b>ON INTERNAL FLOATED PLASTER SURFACES</b>	H2		
"DULUX" or other equal and approved	H3		
One coat "Dulux trade" alkali resistant plaster primer and two coats "Dulux low sheen wash and ware" paint for interior use	H3		
Walls	m2	20	-
<b>ON EXTERNAL FLOATED PLASTER</b>	H2		
"DULUX" or other equal and approved	H3		
One coat "Dulux trade" alkali resistant plaster primer and two coats "Dulux low sheen wash and ware" paint for exterior use	H3		
Walls	m2	949	-
<b>ON SMOOTH CONCRETE SURFACES</b>	H2		
"DULUX" or other equal and approved	H3		
One coat "Dulux trade" alkali resistant plaster primer and two coats "Dulux low sheen wash and ware" paint for interior use	H3		
Walls and columns	m2	594	-
One coat "Dulux trade" alkali resistant plaster primer and two coats "Dulux low sheen wash and ware" paint for interior use	H3		
Ceilings and beams	m2	2	-
Coffered ceilings (total girth measured)	m2	1579	-
One coat "Dulux trade" alkali resistant concrete primer and two coats "Dulux trade" hi-chem epoxy enamel paint for interior use	H3		
Concrete floors	m2	523	-
"FLOWCRETE" or other equal and approved	H3		
Prime surface with "Flowseal EPW" clear primer (spread rate - 6m <sup>2</sup> /litre). Apply three coats "Flowseal EPW" with a minimum dry film thickness of 60 microns thick per coat with a maximum overcoating time of 12 hours. Applied in accordance with approved manufacturer's specifications by approved applicators	H3		
On treads and risers of stairs	m2	382	-
<b>ON METAL SURFACES</b>	H2		
"DULUX" or other equal and approved	H3		
One coat "Dulux" primer for steel, one coat trade universal undercoat and two coats "Dulux Pearlgo" waterbased enamel	H3		
Doors	m2	160	-
Louvres	m2	200	-
Door frames etc	m2	20	-
Recordroom and strongroom doors and frames	m2	28	-
Rails, bars, pipes, etc not exceeding 300mm girth	m	930	-
<b>ON WOOD SURFACES</b>	H2		
"DULUX" or other equal and approved	H3		
One coat "Dulux" primer for wood, one coat "Dulux trade" universal undercoat and two coats "Dulux Pearlgo" waterbased enamel	H3		
Doors	m2	287	-
Door frames etc	m2	57	-
Timber panels	m2	400	-
Timber panels under windows	m2	275	-
<b>SIGNWRITING</b>	H2		
Etching primer and two coats reflective road marking paint on concrete	H3		
Line 100mm wide	m	315	-
Numeral or letter 70mm high	No	60	-
Traffic arrow 160 x 70mm wide extreme	No	9	-
Traffic arrow 120 x 80mm wide extreme	No	2	-
Traffic arrow 160 x 120mm wide extreme	No	1	-
Paraplegic parking motif 3000 x 1500mm extreme	No	2	-
<b>Brick dressing to external Façade</b>	m2	1300	-
<b>SECTION NO. 2</b>	H1		
<b>BILL NO. 17: PAPERHANGING</b>	H1		
<b>PAPERHANGING (PROVISIONAL) (CPAP WORK GROUP NO. 152 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>PAPERHANGING TO NEW WORK</b>	H2		
Textured and paintable paper backed vinyl wallpaper (PC R595 per roll 520mm wide x 10m long), including one coat preparatory emulsion paint	H3		
On one coat plastered walls and columns including narrow widths	m2	112	-
On drywall partitions including narrow widths	m2	210	-
<b>SECTION NO. 2</b>	H1		
<b>BILL NO. 18: EXTERNAL WORKS</b>	H1		
<b>EXTERNAL WORKS (PROVISIONAL) (CPAP WORK GROUP NO. 104 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>ROADWORK, PARKING AREAS AND PAVING</b>	H2		
<b>Testing of material and filling</b>	H3		
Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series			
<b>Site clearance</b>	H3		
Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 85mm girth, bush, etc	m2	300	-
<b>Excavation in earth</b>	H3		
Not exceeding 2m deep to reduce levels and dispose in prescribed stock piles on site	m3	60	-
<b>Extra over bulk excavation in earth for excavation in</b>	H3		
Soft rock	m3	6	-

Hard rock	m3	6	-
<b>Extra over all excavations for carting away</b>	H3		
Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	60	-
<b>Keeping excavations free of water</b>	H3		
Keeping excavations free of water other than subterranean water	Item	1,00	-
<b>Compaction of surfaces</b>	H3		
Compaction of ground surfaces 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	300	-
<b>Soil insecticide in accordance with SANS 5859</b>	H3		
Under floors, etc. including forming and poisoning shallow furrows against foundation walls, etc., filling in furrows and ramming	m2	300	-
<b>LAYER WORKS</b>	H3		
<b>Filling supplied by the contractor under parking areas, roadways, etc</b>	H3		
150mm high Base course of G2 natural gravel material, compacted to 98% Mod AASHTO density	m2	300	-
Extra over subbase or base course of natural gravel material for stabilisation with cement at the rate of 3% per m3	m2	300	-
<b>Prescribed density tests on filling</b>	H3		
"Modified AASHTO Density" test	No	6	-
<b>Corobrik 52MPa Burgundy clay paving bricks, size 200 x 98.5 x 65mm thick laid in Herringbone Bond pattern with a Cedarberg Boarder and a minimum longitudinal fall of 1% on a transverse fall of at least 2% on 25mm compacted sand bed with fine jointing sand swept and vibrated into joints, all laid on subgrade conforming to SANS 1200 D Degree Of Accuracy I. Paving to be inspected and re-sanded after three months</b>	H3		
Paving to sidewalks etc to falls, including necessary straight edge blocks	m2	300	-
<b>Precast concrete finished smooth on exposed surfaces, including bedding, jointing and pointing</b>	H3		
75 x 110mm High mini kerbs continuous unreinforced concrete haunching at back of each joint, laid on 15MPa concrete, including excavation backfilling, etc	m	144	-
<b>SECTION NO. 2</b>	H1		
<b>BILL NO. 19: BUDGETARY ALLOWANCES</b>	H1		
<b>BUDGETARY ALLOWANCES (PROVISIONAL)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>The following budgetary allowances are for work to be executed either by a nominated / selected sub-contractor as instructed by the principal agent. Tenderers are to allow in their overall Preliminaries costs for this scope of work as no additional Preliminaries will be entertained should this work proceed. The Employer reserves the right to execute this work in part or in whole or omit the entire scope.</b>	H3		
<b>BUDGETARY ALLOWANCES</b>	H2		
<b>Furniture and Fittings</b>	H3		
Provide the amount of R10 000 000.00 (Ten Million Rand) for Furniture and Fittings	Item	1,00	-
Profit	Item	1,00	-
Attendance	Item	1,00	-
<b>Sanitary Accessories Including Vanity Tops, etc</b>	H3		
Provide the amount of R600 000.00 (Six Hundred Thousand Rand) for Sanitary Accessories Including Vanity Tops, etc	Item	1,00	-
Profit	Item	1,00	-
Attendance	Item	1,00	-
<b>Purpose Made Security Fencing</b>	H3		
Provide the amount of R600 000.00 (Six Hundred Thousand Rand) for Purpose Made Security Fencing	Item	1,00	-
Profit	Item	1,00	-
Attendance	Item	1,00	-
<b>Window Blinds</b>	H3		
Provide the amount of R500 000.00 (Five Hundred Thousand Rand) for Window Blinds	Item	1,00	-
Profit	Item	1,00	-
Attendance	Item	1,00	-
<b>Landscaping</b>	H3		
Provide the amount of R350 000.00 (Three Hundred and Fifty Thousand Rand) for Landscaping	Item	1,00	-
Profit	Item	1,00	-
Attendance	Item	1,00	-
<b>Signage</b>	H3		
Provide the amount of R300 000.00 (Three Hundred Thousand Rand) for Signage	Item	1,00	-
Profit	Item	1,00	-
Attendance	Item	1,00	-
<b>Repairs to the Existing Façade</b>	H3		
Provide the amount of R300,000.00 (Three Hundred Thousand Rand) for Repairs to the Existing Façade	Item	1,00	-
Profit	Item	1,00	-
Attendance	Item	1,00	-
<b>Roof Feature</b>	H3		
Provide the amount of R300 000.00 (Three Hundred Thousand Rands) for the Roof Feature	Item	1,00	-
Profit	Item	1,00	-
Attendance	Item	1,00	-
<b>Servicing Roller Shutter Doors, Gate Motors, Vault Doors, Aluminium Doors and Windows, including Ironmongery</b>	H3		

Provide the amount of R200,000.00 (Two Hundred Thousand Rand) for Servicing Roller Shutter Doors, Gate Motors, Vault Doors, Aluminium Doors and Windows, including Ironmongery	Item	1,00	-
Profit	Item	1,00	-
Attendance	Item	1,00	-
<b>Salary of Client Liaison Officer (CLO)</b>	H3		
Provide the amount of R200,000.00 (Two Hundred Thousand Rand) for the Salary of Client Liaison Officer (CLO)	Item	1,00	-
Profit	Item	1,00	-
Attendance	Item	1,00	-
<b>Servicing and Sanitising of Break Pressure Tank and Roof Water Storage Tank Including Refurbishment of all Seals, etc</b>	H3		
Provide the amount of R50,000.00 (Fifty Thousand Rand) for the Servicing and Sanitising of Break Pressure Tank and Roof Water Storage Tank Including Refurbishment of all Seals, etc	Item	1,00	-
Profit	Item	1,00	-
Attendance	Item	1,00	-
<b>Sundry Builders Work</b>	H3		
Provide the amount of R750,000.00 (Seven Hundred and Fifty Thousand Rand) for Sundry Builders Work	Item	1,00	-
<b>SECTION NO. 3 : FIRE PROTECTION</b>	H1		-
<b>BILL NO. 1 PRELIMINARIES</b>	H1		-
<b>PRELIMINARIES (CPAP WORK GROUP NO. 190 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>PRELIMINARIES</b>	H2		
The costs for the following items shall not be included in the cost rates for work listed in the rest of the Bill of Quantities.			
Preliminaries including compliance with the occupational health and safety, transport and equipment rigging	Item	1,00	-
Maintenance and guarantee of the complete installation for a period of twelve (12) months from the date of completion and handover	Item	1,00	-
4No. sets of as-built drawings and O&M manuals c/w CD's including certificates issued on completion, such as electrical compliance, etc	Item	1,00	-
Shop and builder's work drawings as specified (Contractor to do detailed site measurements to produce drawings)	Item	1,00	-
Testing, commissioning, training and hand over of the entire fire system, in accordance with the specifications	Item	1,00	-
Other items not included in the foregoing and required by the Tenderer. Full detailed schedule to be attached	Item	1,00	-
<b>SECTION NO. 3</b>	H1		
<b>BILL NO. 2 FIRE PROTECTION</b>	H1		-
<b>FIRE PROTECTION (PROVISIONAL) (CPAP WORK GROUP NO. 148 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>FIRE PROTECTION (FIRE HYDRANTS, FIRE HOSE REELS, FIRE EXTINGUISHERS AND SPRINKLERS) AND FIRE DOORS</b>	H2		
<b>Pumps and pumphouse pipework</b>	H3		
<b>Supply, install and commission:</b>	H3		
Jockey pump	SUM	1	-
Pump test start arrangement	SUM	1	-
Pump interconnecting piping and valves	SUM	1	-
<b>Fire extinguishers</b>	H3		
Supply and install new fire extinguishers (4.5Kg) (works to ensure compliance)	No	42	-
<b>Fire hose reels</b>	H3		
Service existing fire hose reels	No	18	-
<b>Fire hydrants</b>	H3		
Service existing fire hydrants	No	16	-
<b>Automatic sprinkler installation</b>	H3		
De-commission sprinkler system	SUM	1	-
Remove existing sprinkler heads and install new sprinkler heads	No	140	-
Re-commission sprinkler system	SUM	1	-
<b>General</b>	H3		
Allow for new life safety valve arrangement per floor (schematic to comply with statutory requirements)	SUM	1	-
Inspect existing valve station and allow for full service (works to ensure compliance)	SUM	1	-
<b>Provisional sums</b>	H3		
Fire signage allowance (photo luminescent)	Item	1,00	-
Repair rusted damaged pipes	Item	1,00	-
Contingency	Item	1,00	-
<b>SECTION NO. 4 : ELECTRICAL INSTALLATION</b>	H1		-
<b>BILL NO. 1 PRELIMINARIES</b>	H1		-
<b>PRELIMINARIES (CPAP WORK GROUP NO. 190 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
This Bill of Quantities must be read together with the specification.			

Tenderers must complete the Bill of Quantities and detail the unit rate and total amount of each item. The "Total" shall constitute the tender price for adjudication. Tenderers are advised to check their item extension and total additions as arithmetical errors occurring in the priced Bill of Quantities cannot be considered as having an effect on the tender amount.

No alteration, erasure or addition is to be made in the text of the Bill of Quantities. Should any alteration, erasure or addition be made it will not be recognised but the original wording of the Bill of Quantities will be adhered to. The Engineer will check the completed Bill of Quantities and reserves the right to adjust any individual price and to rectify any discrepancy whilst the total tender price as quoted remains unaltered.

The quantities given in the Bill for cable, cable markers, earth wire laid with cable, overhead conductors, overhead earth wire and excavations cannot be regarded as exact and are subject to measurement on site after completion of the service and adjustments will be made according to the unit rates given in the Bill.

The Bill of Quantities is to be used for pricing and financial purposes only. The drawings take precedence over the particular (project) specification but should be used in conjunction with these specifications. The project specification takes precedence over quality specifications and the Bill of Quantities.

Checking of Cable and Overhead Conductor Lengths. Notwithstanding the fact that lengths of cables and overhead conductors, as given in the Bill of Quantities, have been measured from scaled drawings, the Contractor shall check such lengths on site before ordering the cable as he will not be paid for excess cable after the completion of the service. Any allowance for off-cuts shall be made in the unit rates. The final measurements shall be based on the nett route length of the cables and overhead lines concerned, installed in accordance with the specification. However, the onus is on the Contractor to prove compliance with the specification.

The unit prices quoted in the Bill of Quantities shall include for such small materials as are required for the complete installation in accordance with the specification.

Bill No. 1 is to be regarded as fixed and will not be adjusted for variations in the final contract value or contract period.

NOTE: Tenderers may not include the costs of the items of Bill No. 1 in the unit rates for items in the remainder of the Bill of Quantities. Bill No. 1 is to be completed as indicated. Failure to comply will result in the Engineer arbitrarily adjusting rates to exclude Preliminary and General costs.

Unit prices for the same items in different Bills shall in all cases be the same, and in the case of differences, the Engineer reserves the right to change such unit prices when the completed list is checked, without adjusting the tender price.

The total for each page of each Bill is to be carried forward to the collection page at the end of each Bill.

P.C., Provisional and Contingency allowances, items and sums shall be expended as directed by the Engineer, and any balance remaining shall be deducted from the amount of the contract sum. Tenderers may not regard any unspent moneys as forming part of the final contract value. Variation Instruction No. 1 will be issued after award of the contract to omit all P.C., Provisional and Contingency sums/allowances from the contract and authorized contract value.

Variation work, as well as the items described above, shall be measured as executed, and paid for according to unit prices in the Bill of Quantities. Where unit prices are not available, the work shall be priced, in conjunction with the Engineer, at current rates.

Unless otherwise specified in the Bill of Quantities, all items are to be priced on the basis of supply, delivery, offload, installation, connection, testing and commissioning. All prices are to be EXCLUSIVE OF V.A.T but inclusive of import duties, surcharges, commissions to third parties, etc., where applicable. The foregoing items, as well as the Contractor's handling, financing and profit mark-up, is not to be separately detailed, and must be included in the cost rates.

Unless otherwise stated, all measurements are net, in accordance with the drawings, and no allowance has been made for wastage.

The Employer reserves the right to increase or decrease the extent of the contract works, without restraint, on total value of variations issued relevant to any particular item in the Bill of Quantities, by issuing written variation instructions to omit or add, as may be required, the supply and/or installation of any item of equipment or work, whether listed in the Bill of Quantities or not, and without affecting the unit cost rates indicated in the Bill of Quantities or Preliminary and General items.

In the event that tenderers disagree with the measured quantities the tender should be qualified accordingly, listing the items and quantities in question.

The unit prices quoted in the Bill of Quantities must include for small installation materials such as nuts, bolts, nails, saddles, screws etc., as are required for the satisfactory complete installation in accordance with the specification.

Unless otherwise stated in the Bill, the unit cost rates shall be based on the following: The rate for conduit boxes and for outlet boxes up to and including 100 x 100mm shall be the same regardless of the number of entries. The rate for conduit and outlet boxes shall include for fixing to the conduit with lock and bushnuts as may be required and for fixing to the building structure. The rate for outlet boxes shall be without covers and draw boxes shall be complete with covers and screws. The rate for industrial switch and plug units shall include for the relevant enclosure and fixing to conduit and building structure. The rate for light switches, switch plugs, dimmer units, etc., shall include for screws, cover plates and fuses/breakers where applicable and for connection of wiring thereto. The rate for conduit up to and including 25 mm diameter shall include all couplings, bends, boxes etc. as may be required. The rate for luminaires and accessories shall include for connection of the wiring thereto.

All measurements are based on the most economical route lengths without any allowance for wastage, threading, jointing or slack.

In the case of wiring in conduit, an allowance of 300mm per wire outlet box position has been made and in the case of cables and wiring entering switchboards, an allowance of 1000 and 2000mm has been made for termination purposes in sub-distribution and main distribution boards respectively.



16mm <sup>2</sup> 4 core	m	246	-
10mm <sup>2</sup> 4 core	m	631	-
10mm <sup>2</sup> 2 core	m	97	-
6mm <sup>2</sup> 4 core	m	86	-
25mm <sup>2</sup> earth wire	m	212	-
10mm <sup>2</sup> earth wire	m	113	-
<b>Extra on last to install on cable ladder or trench</b>	H3		
185mm <sup>2</sup> 4 core	m	312	-
150mm <sup>2</sup> 4 core	m	180	-
120mm <sup>2</sup> 4 core	m	14	-
95mm <sup>2</sup> 4 core	m	112	-
70mm <sup>2</sup> 4 core	m	31	-
50mm <sup>2</sup> 4 core	m	78	-
35mm <sup>2</sup> 4 core	m	194	-
25mm <sup>2</sup> 4 core	m	432	-
16mm <sup>2</sup> 4 core	m	246	-
10mm <sup>2</sup> 4 core	m	631	-
10mm <sup>2</sup> 2 core	m	97	-
6mm <sup>2</sup> 4 core	m	86	-
25mm <sup>2</sup> earth wire	m	212	-
10mm <sup>2</sup> earth wire	m	113	-
<b>Termination inclusive of cable glands, lugs etc.</b>	H3		
185mm <sup>2</sup> 4 core	No	10	-
150mm <sup>2</sup> 4 core	No	6	-
120mm <sup>2</sup> 4 core	No	8	-
95mm <sup>2</sup> 4 core	No	6	-
70mm <sup>2</sup> 4 core	No	4	-
50mm <sup>2</sup> 4 core	No	12	-
35mm <sup>2</sup> 4 core	No	16	-
25mm <sup>2</sup> 4 core	No	24	-
16mm <sup>2</sup> 4 core	No	14	-
10mm <sup>2</sup> 4 core	No	28	-
10mm <sup>2</sup> 2 core	No	8	-
6mm <sup>2</sup> 4 core	No	8	-
<b>AIR CONDITIONING INSTALLATION</b>	H2		
Supply and Install 4mm <sup>2</sup> 3 core surfix cable on existing AC cable tray from internal AC units to DBs	m	2114	-
<b>SECTION NO. 4</b>	H1		
<b>BILL NO. 4 WIRE-WAYS</b>	H1		
<b>WIRE-WAYS (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>WIRE-WAYS</b>	H2		
<b>CABLE LADDERS</b>	H2		
<b>The complete supply, transport to site, and storage of hot dipped galvanised heavy duty cable ladder and offsets as required below:</b>	H3		
150mm wide	m	44	-
150mm 90 degree bend	No	3	-
150mm Tee piece	No	2	-
150mm 4-way piece	No	1	-
150mm riser piece	No	1	-
300mm wide	m	25	-
300mm 90 degree bend	No	1	-
300mm Tee piece	No	2	-
300mm 4-way piece	No	1	-
300mm riser piece	No	1	-
500mm wide	m	59	-
500mm 90 degree bend	No	2	-
500mm Tee piece	No	2	-
500mm 4-way piece	No	1	-
500mm riser piece	No	1	-
<b>Extra on last to install horizontally (trapeze) or vertically (P1000 unistrut). Fixings at 1000mm. Installation is to include for all joiner splices, raw bolts and fixing cable ladder to unistrut with bolt fasteners complete with spring washer, fixing bolts etc.</b>	H3		
150mm wide	m	44	-
150mm 90 degree bend	No	3	-
150mm Tee piece	No	2	-
150mm 4-way piece	No	1	-
150mm riser piece	No	1	-
300mm wide	m	25	-
300mm 90 degree bend	No	1	-
300mm Tee piece	No	2	-
300mm 4-way piece	No	1	-
300mm riser piece	No	1	-
500mm wide	m	59	-
500mm 90 degree bend	No	2	-
500mm Tee piece	No	1	-
500mm 4-way piece	No	1	-
500mm riser piece	No	1	-
<b>CABLE TRAYS</b>	H2		
<b>The complete supply, transport to site, and storage of hot dipped galvanised heavy duty cable tray and offsets as required below:</b>	H3		

150mm wide	m	258	-
150mm 90 degree bend	No	19	-
150mm Tee piece	No	14	-
150mm 4-way piece	No	3	-
150mm riser piece	No	2	-
300mm wide	m	54	-
300mm 90 degree bend	No	6	-
300mm Tee piece	No	4	-
300mm 4-way piece	No	1	-
300mm riser piece	No	1	-
500mm wide	m	21	-
500mm 90 degree bend	No	4	-
500mm Tee piece	No	2	-
500mm 4-way piece	No	2	-
500mm riser piece	No	2	-
<b>Extra on last to install horizontally (trapeeze) or vertically (P1000 unistrut). Fixings at 1000mm. Installation is to include for all joiner splices, raw bolts and fixing cable tray to unistrut with bolt fasteners complete with spring washer, fixing bolts etc.</b>	H3		
150mm wide	m	258	-
150mm 90 degree bend	No	19	-
150mm Tee piece	No	14	-
150mm 4-way piece	No	3	-
150mm riser piece	No	2	-
300mm wide	m	54	-
300mm 90 degree bend	No	6	-
300mm Tee piece	No	4	-
300mm 4-way piece	No	1	-
300mm riser piece	No	1	-
500mm wide	m	21	-
500mm 90 degree bend	No	4	-
500mm Tee piece	No	2	-
500mm 4-way piece	No	2	-
500mm riser piece	No	2	-
<b>CABLE BASKETS</b>	H2		
<b>The complete supply, transport to site, and storage of hot dipped galvanised medium duty cable basket and offsets as required below:</b>	H3		
150mm wide	m	54	-
150mm 90 degree bend	No	3	-
150mm Tee piece	No	2	-
150mm 4-way piece	No	1	-
150mm riser piece	No	1	-
300mm wide	m	726	-
300mm 90 degree bend	No	48	-
300mm Tee piece	No	30	-
300mm 4-way piece	No	4	-
300mm riser piece	No	4	-
<b>Extra on last to install horizontally (trapeeze) or vertically (P1000 unistrut). Fixings at 1000mm. Installation is to include for all joiner splices, raw bolts and fixing cable basket to unistrut with bolt fasteners complete with spring washer, fixing bolts etc.</b>	H3		
150mm wide	m	54	-
150mm 90 degree bend	No	3	-
150mm Tee piece	No	2	-
150mm 4-way piece	No	1	-
150mm riser piece	No	1	-
300mm wide	m	726	-
300mm 90 degree bend	No	48	-
300mm Tee piece	No	30	-
300mm 4-way piece	No	4	-
300mm riser piece	No	4	-
<b>SLEEVES</b>	H2		
<b>Supply the following cable sleeves:</b>	H3		
160mm hard PVC sleeves	m	14	-
110mm hard PVC sleeves	m	17	-
75mm hard PVC sleeves	m	12	-
50mm hard PVC sleeves	m	13	-
Slow radius bend for 160mm PVC sleeve	No	2	-
Slow radius bend for 110mm PVC sleeve	No	3	-
Slow radius bend for 75mm PVC sleeve	No	2	-
Slow radius bend for 50mm PVC sleeve	No	4	-
<b>Extra on last to install the following in trech (trenching measured elsewhere)</b>	H3		
160mm hard PVC sleeves	m	14	-
110mm hard PVC sleeves	m	17	-
75mm hard PVC sleeves	m	12	-
50mm hard PVC sleeves	m	13	-
Slow radius bend for 160mm PVC sleeve	No	2	-
Slow radius bend for 110mm PVC sleeve	No	3	-
Slow radius bend for 75mm PVC sleeve	No	2	-
Slow radius bend for 50mm PVC sleeve	No	4	-
<b>SECTION NO. 4</b>	H1		
<b>BILL NO. 5 MV INSTALLATION</b>	H1		
<b>MV INSTALLATION (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)</b>	H1		

The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)

**MV INSTALLATION**

The complete supply, transport to site, storage, installation, testing and commissioning in accordance with the specification

**RING MAIN UNITS**

11 kV RM6 non extensible 3 way ring main unit complete as specified in drawing No. 17052\_605\_A

Mild steel box stand for 3 way RM6 complete with raised box to accommodate floor cable entry

Disconnect and remove from site and deliver within 50 km of site the existing ring main unit  
Credit / scrap value for the existing ring main unit (rate only)

**TRANSFORMER**

1250 kVA 11kV/400V Dyn11 complete as specified in schedule No. 17052\_604\_A

Disconnect and remove from site and deliver within 50 km of Site the existing 1000 KVA Transformer

Credit / scrap value for the existing transformer (rate only)

**TESTING OF EXISTING TRANSFORMER**

Budgetary allowance for on site testing of the existing transformer by specialist including quote to refurbish

Mark up and attendance on the above item

**MV CABLING - 6.35/11 kV**

Supply the following continuous lengths (i.e. no joints) of 6.35/11 kV 95 mm 3 core XLPE cable to SABS Table A, manufactured in South Africa

95mm<sup>2</sup> 3 core

Extra on last to install

On cable ladder

95mm<sup>2</sup> 3 core 11 kV termination

95mm<sup>2</sup> 3 core Cu straight through 11 kV joint complete

70mm<sup>2</sup> copper PVC insulated earth wire

70mm<sup>2</sup> earth wire termination

**LV BUSBARS**

The supply and complete installation, testing, commissioning of resin encapsulated 1000 Volts 70 kA, IP54, 3 phase and full neutral Cu busbar with external earth unit

1800 A straight section

1800 A elbow (over and above cost)

1800 A panel/transformer flange

1800 A set of flexibles

**SUPPLY UPGRADE**

Budgetary Allowance for council requirements for supply reinstatement

Mark up and attendance on the above item

Supply and install WW28 chromodeck black writing on yellow background (450mm x 450mm) "UNAUTHORISED ENTRANCE PROHIBITED" with brass wood screws to outside of substation doors

Supply and install '11 000 VOLTS' danger stickers (50mm x 100mm) to equipment as indicated by the Engineer on site

Supply and install 400 VOLT danger sticker Supply and install 400 VOLT danger sticker Engineer on site

Supply and install noise level danger signs in generator rooms

Allow for laminating and framing AO drawing for wall mounting in substations

Budgetary allowance sum for substations mimic panel

Supply steel tool cabinet 1 200mm wide x 2 100 high x 600 deep with 4 No. adjustable shelves and two lockable swing doors

Supply a 900mm high, 1 000 wide x 800 deep painted supawood desk on castors

Supply 1 200mm x 800mm x 5mm thick rubber mat

Budgetary allowance for substation temperature and door status monitoring

Budgetary allowance for penetration flanges

Budgetary allowance for MV cable protection

**TICO PADS (High density rubber)**

Supply 150mm x 1200mm x 12.5mm thick Tico pads installation as an insulator between the equipment and floor as shown on layout drawings (High density rubber)

**PADLOCKS**

Supply and install a painted supawood wooden key cabinet 400 x 400 x 100 deep with 50 hooks and hinged door fixed to brick wall in Main Substation

Supply 30mm Viro padlock complete with 3 keys with (correctly labelled) keyed alike keys

**PAINTING**

Arrange for builder to touch up substations damaged floor paint once all equipment is installed

**SIGNAGE**

Supply and install FB36 5 in 1 chromodeck black writing on yellow background sign (925mm x 925mm) fixed to brick wall in substations

**SECTION NO. 4**

**BILL NO. 6 BASEMENT AND ROOF LEVEL**

**BASEMENT AND ROOF LEVEL (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)**

The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)

**BASEMENT AND ROOF LEVEL**

**SMALL POWER**

25mm PVC conduit surface or chased into brickwork (patching by others)

Extra on last to install

	H2		
	H3		
	H2		
	No	1	-
	H2		
	No	1	-
	No	1	-
	Item	1,00	-
	H2		
	Item	1,00	-
	%	0,10	-
	H2		
	H3		
	m	97	-
	H3		
	m	97	-
	No	4	-
	No	2	-
	m	120	-
	No	6	-
	H2		
	H3		
	m	15	-
	No	4	-
	No	2	-
	No	4	-
	H2		
	Item	1,00	-
	%	0,10	-
	No	4	-
	No	20	-
	No	15	-
	No	4	-
	No	4	-
	Item	1,00	-
	No	2	-
	No	2	-
	Item	1,00	-
	Item	1,00	-
	Item	1,00	-
	H2		
	No	16	-
	H2		
	No	1	-
	No	12	-
	H2		
	Item	1,00	-
	H2		
	Item	1,00	-
	H1		
	H1		
	H1		
	H2		
	H2		
	m	164	-
	m	164	-

<b>Supply the following Crabtree outlets complete with cover, clips mounting brackets on power skirting:</b>	H3		
1 x Normal S.S.O (SANS 164-1)	No	12	-
Extra on last to install	No	12	-
1 x Euro S.S.O (SANS 164-2)	No	12	-
Extra on last to install	No	12	-
1 x Dedicated S.S.O (SANS 164-4)	No	10	-
Extra on last to install	No	10	-
1 x RJ45 Blank	No	6	-
Extra on last to install	No	6	-
16 amp UPS (BLUE) Crabtree S.S.O. complete with cover, clips and mounting brackets on power skirting	No	5	-
Extra on last to install	No	5	-
<b>PVC insulated 1 000 V grade hard drawn copper wire drawn into trunking and conduit and coloured as required</b>	H3		
4mm <sup>2</sup>	m	3911	-
Extra on last to install	m	3911	-
100 x 100 galvanised box flush in dry walling	No	11	-
Extra on last to install	No	11	-
16 amp UPS (Blue) S.S.O. in 100 x 100 box including cover plate and electrical connections	No	5	-
Extra on last to install	No	5	-
16 amp 3 pin Sans 164 - 1 and Sans 164-2 combination SSO in 100x100 box complete with coverplate	No	25	-
Extra on last to install	No	25	-
<b>BASEMENT AND ROOF LEVEL</b>	H2		
20A single phase surface mounted isolator for AC / roller shutter doors / extraction	No	8	-
Extra on last to install	No	8	-
20A single phase flush mounted isolator for hand dryer	No	1	-
Extra on last to install	No	1	-
30A single phase flush mounted isolator	No	1	-
Extra on last to install	No	1	-
10A three phase weather proof isolator	No	2	-
Extra on last to install	No	2	-
20A three phase weather proof isolator	No	1	-
Extra on last to install	No	1	-
30A three phase weather proof isolator	No	2	-
Extra on last to install	No	2	-
800A three phase weather proof isolator for HVAC equipment	No	1	-
Extra on last to install	No	1	-
Install 3 compartment 2 cover epoxy powder coated power skirting complete with covers and support brackets every 1 m spacing	m	21	-
Extra on last to install 90° bends for 3 compartment bends	No	5	-
Extra on last to install end caps for 3 compartment power skirting	No	5	-
<b>LIGHTING</b>	H2		
25mm PVC conduit fixed to soffit and or hangers	m	891	-
Extra on last to install	m	891	-
25mm Bosal conduit	m	95	-
Extra on last to install	m	95	-
<b>PVC insulated 1 000 V grade hard drawn copper wire drawn into trunking and conduit and coloured as required</b>	H3		
2.5mm <sup>2</sup>	m	4542	-
Extra on last to install	m	4542	-
2,5mm <sup>2</sup> PVC insulated twin and earth cable lay in ceiling	m	212	-
Extra on last to install	m	212	-
Extra on last for glands, termination and connection	No	60	-
P9000 trunking suspended from soffit complete with cover	m	114	-
Extra on last to install	m	114	-
1 lever 1 way 16 amp light switch Crabtree or other approved in 100 x 50 galvanised box inclusive of cover	No	18	-
Extra on last to install	No	18	-
65mm dia. round conduit box	No	74	-
Extra on last to install	No	74	-
3 way PVC round draw box	No	23	-
Extra on last to install	No	23	-
6 amp unswitched socket outlet	No	81	-
Extra on last to install	No	81	-
2 way 1 lever light switch	No	4	-
Extra on last to install	No	4	-
<b>Extra on last to install the following luminaires</b>	H3		
Type A1	No	30	-
Type A1e	No	11	-
Type A2	No	4	-
Type A2e	No	1	-
Type E1	No	6	-
Type E1e	No	5	-
Type E2	No	8	-
Type E2e	No	3	-
Type F1e	No	4	-
Type Je	No	4	-
Type H	No	4	-
<b>TELEPHONE/DATA</b>	H2		

Telephone/data cover complete with RJ 45 data socket and grommets in power skirting	No	55	-
Extra on last to install	No	55	-
P9000 trunking suspended from soffit complete with cover	m	30	-
Extra on last to install	m	30	-
<b>FIRE AND SECURITY</b>	H2		
25mm PVC conduit fixed on surface to concrete or brickwork	m	342	-
Extra on last to install	m	342	-
25mm two entry round conduit box in ceiling void mounted surface to concrete	No	44	-
Extra on last to install	No	44	-
P9000 trunking suspended from soffit complete with cover	m	118	-
Extra on last to install	m	118	-
25mm flexible conduit	m	30	-
Extra on last to install	m	30	-
65mm round boxes	No	20	-
Extra on last to install	No	20	-
<b>GENERAL ITEMS</b>	H2		
Earthing and bonding	Item	1,00	-
Testing and commissioning inclusive of completing Ibuya Consulting Engineers test sheets, compliance certificate and circuit cards as specified	Item	1,00	-
<b>SECTION NO. 4</b>	H1		
<b>BILL NO. 7 TYPICAL FLOORS GROUND TO FIFTH</b>	H1		-
<b>TYPICAL FLOORS GROUND TO FIFTH - 6NO. FLOORS (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>TYPICAL FLOORS GROUND TO FIFTH - 6NO. FLOORS</b>	H2		
<b>SMALL POWER</b>	H2		
25mm PVC conduit surface or chased into brickwork (patching by others)	m	1884	-
Extra on last to install	m	1884	-
<b>Supply the following Crabtree outlets complete with cover, clips mounting brackets on power skirting</b>	H3		
1 x Normal S.S.O (SANS 164-1)	No	270	-
Extra on last to install	No	270	-
1 x Euro S.S.O (SANS 164-2)	No	270	-
Extra on last to install	No	270	-
1 x Dedicated S.S.O (SANS 164-4)	No	270	-
Extra on last to install	No	270	-
1 x RJ45 Blank	No	270	-
Extra on last to install	No	270	-
16 amp UPS (BLUE) Crabtree S.S.O. complete with cover, clips and mounting brackets on power skirting	No	48	-
Extra on last to install	No	48	-
<b>PVC insulated 1 000 V grade hard drawn copper wire drawn into trunking and conduit and coloured as required</b>	H3		
4mm <sup>2</sup>	m	28890	-
Extra on last to install	m	28890	-
100 x 100 galvanised box flush in dry walling	No	162	-
Extra on last to install	No	162	-
60A three phase weather proof isolator	No	30	-
Extra on last to install	No	30	-
30A three phase weather proof isolator	No	12	-
Extra on last to install	No	12	-
20A three phase weather proof isolator	No	24	-
Extra on last to install	No	24	-
60A single phase surface mounted isolator	No	12	-
Extra on last to install	No	12	-
30A single phase surface mounted isolator	No	12	-
Extra on last to install	No	12	-
20A single phase surface mounted isolator	No	24	-
Extra on last to install	No	24	-
Install 3 compartment 2 cover power skirting complete with covers and support brackets every 1 m spacing	m	1404	-
Extra on last to install 90° bends for 3 compartment power skirting	No	132	-
Extra on last to install end caps for 3 compartment power skirting	No	312	-
Supply corporate connection (Alpha 4) unit comprising of: 2 x end caps 1 x Normal S.S.O (SANS 164-1) 1 x Euro S.S.O (SANS 164-2) 1 x Dedicated S.S.O (SANS 164-4) 2 x Blank RJ45 outlets	No	144	-
Interconnecting power cable - 3 M SA dedicated connection Input power cable - 3 M SA normal	No		
Extra on last to install	No	144	-
20mm Flexible PVC Conduit	m	570	-
Extra on last to install saddled at 250mm under desk top	m	570	-
Supply Crabtree Powercomm 9 way cluster box complete with: 1 x Normal S.S.O (SANS 164-1) 1 x Euro S.S.O (SANS 164-2) 1 x Dedicated S.S.O (SANS 164-4) 2 x Blank RJ45 outlets	No	72	-
Extra on last to install	No	72	-
Supply 9 way flush plastic divider box	No	72	-
Extra on last to install	No	72	-
Supply Cabstrut Access floor conduit box system (205 x 287 x 79) complete with: 1 x Normal S.S.O (SANS 164-1) 1 x Euro S.S.O (SANS 164-2) 1 x Dedicated S.S.O (SANS 164-4) 2 x Blank RJ45 outlets	No	18	-
Extra on last to install	No	18	-

16 amp 3 pin Sans 164 - 1 and Sans 164-2 combination SSO in 100 x 100 box complete with cover plate	No	252	-
Extra on last to install	No	252	-
250 x 250 PVC junction box	No	12	-
Extra on last to install	No	12	-
4m Pole comprising of the following: 2 x Normal S.S.O (SANS 164-1) 2 x Euro S.S.O (SANS 164-2) 2 x Dedicated S.S.O (SANS 164-4) 4 x Blank RJ45 outlets	No	42	-
Extra on last to install	No	42	-
<b>LIGHTING</b>	H2		
25mm PVC conduit fixed to soffit and or hangers	m	5886	-
Extra on last to install	m	5886	-
<b>PVC insulated 1 000 V grade hard drawn copper wire drawn into trunking and conduit and coloured as required</b>	H3		
2.5mm <sup>2</sup>	m	30726	-
Extra on last to install	m	30726	-
2.5mm <sup>2</sup> PVC insulated twin and earth cable lay in ceiling	m	1914	-
Extra on last to install	m	1914	-
Extra on last for glands, termination and connection	No	210	-
P9000 trunking suspended from soffit complete with cover	m	1506	-
Extra on last to install	m	1506	-
1 lever 1 way 16 amp light switch Crabtree or other approved in 100 x 50 galvanised box inclusive of cover	No	228	-
Extra on last to install	No	228	-
65mm Dia. round conduit box	No	1242	-
Extra on last to install	No	1242	-
3 way PVC round draw box	No	246	-
Extra on last to install	No	246	-
6 amp unswitched socket outlet	No	1446	-
Extra on last to install	No	1446	-
2 way 1 lever light switch	No	36	-
Extra on last to install	No	36	-
1000 W dimmer	No	12	-
Extra on last to install	No	12	-
Occupancy sensor - Provnice Lighting (PS-PIR3) flush mounted, white with 360 degree detection angle	No	132	-
Extra on last to install	No	132	-
<b>Extra on last to install the following luminaries</b>	H3		
Type A1	No	36	-
Type A1e	No	18	-
Type B1	No	984	-
Type B1e	No	126	-
Type E1	No	168	-
Type E1e	No	36	-
Type E2	No	30	-
Type E2e	No	6	-
Type C	No	18	-
Type D	No	18	-
Type F1	No	12	-
Type F1e	No	12	-
Type G	No	60	-
Type Je	No	24	-
Type T1	No	12	-
Type T2	No	12	-
<b>TELEPHONE/DATA</b>	H2		
Telephone/data cover complete with RJ 45 data socket and grommets in power skirting	No	252	-
Extra on last to install	No	252	-
<b>FIRE AND SECURITY</b>	H2		
25mm PVC conduit fixed on surface to concrete or brickwork	m	2052	-
Extra on last to install	m	2052	-
25mm two entry round conduit box in ceiling void mounted surface to concrete	No	264	-
Extra on last to install	No	264	-
25mm flexible conduit	m	180	-
Extra on last to install	m	180	-
65mm round boxes	No	240	-
Extra on last to install	No	240	-
<b>GENERAL ITEMS</b>	H2		
Earthing and bonding	Item	6,00	-
Testing and commissioning inclusive of completing Ibuya Consulting Engineers test sheets, compliance certificate and circuit cards as specified	Item	6,00	-
<b>SECTION NO. 4</b>	H1		
<b>BILL NO. 8 EARTHING AND LIGHTNING PROTECTION</b>	H1		
<b>EARTHING AND LIGHTNING PROTECTION (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>EARTHING AND LIGHTNING PROTECTION</b>	H2		
<b>SOIL RESISTIVITY SURVEY</b>	H2		
Allow to survey the site to establish any prevailing conditions and carry out soil resistivity testing in the locations adjacent to each Sub Station. A detailed report indicating test results and requirements to achieve the necessary earth resistance for each area is to be submitted to the Electrical Engineer			
Resistivity Test survey in earth	No	1	-

Test report indicating electrode requirements etc. to achieve 1 ohm or less	No	1	-
<b>TRENCHING</b>	H2		
<b>Excavate by hand for cable trench or earth mats including backfill with sifted sand, cable trench 350 mm wide x 600 mm deep x 1 500 mm long</b>	H3		
In earth	No	20	-
In shale	No	1	-
In hard rock	No	1	-
<b>BONDING TO EARTH ELECTRODES</b>	H2		
Supply and install 20mm lengths of 95mm <sup>2</sup> Green PVC insulated copper conductors fitted into sleeves and trench complete with lugs, ferrules and termination clamps between substation earth bar and earth electrode	No	2	-
<b>EARTH MATS</b>	H2		
Supply and install 1,600mm copper clad Earth Electrodes driven into ground at 1,500mm by 1,500 mm spacing including brass termination clamps and 50mm <sup>2</sup> bare copper conductor interlinking to 2 No. earth grid adjacent earth spike to form an earth grid	No	20	-
<b>EARTH ELECTRODES</b>	H2		
Supply and install additional 1,600 mm copper clad earth electrode driven into the ground including the ferrel	No	8	-
Supply and install 450mm long x 50mm high x 6mm thick copper earth bar with test link predrilled with 10mm diameter holes and secured to wall concrete on PVC insulated spacers including all necessary material to form substation earth bar	No	1	-
<b>TESTING AND CERTIFICATE OF COMPLIANCE</b>	H2		
Allow for testing of the complete substation installation to be witnessed by the Electrical Engineer, including the issue of SABS Certificate of Compliance of Earthing Systems, Annexures of recorded test results and "As Built" drawings as specified	No	1	-
<b>MV RING EARTHS</b>	H2		
<b>The complete supply and installation of 120mm<sup>2</sup> Cu PVC (Black) earth wire (SANS 1507-3) in continuous lengths as follows</b>	H3		
Sub 1 to RMU	m	80	-
Extra on last to terminate	No	2	-
Extra on last to supply and install 100 mm green heat shrink over end of each earth wire	No	2	-
<b>SUBSTATION EARTHING INSTALLATION</b>	H2		
<b>Substation bonding and earthing system as per earthing diagram and the specification, including earth wire, terminal connectors up to the main earth bar (As per drawing 17052_607_0)</b>	H3		
Substation 1 bonding and earthing (as per drawing 17052_607_0)	Item	1,00	-
<b>EARTHING INSTALLATION TESTS</b>	H2		
The testing and recoding in suitable format of the following;			
<b>Substation earth resistance test immediately upon completion of the earthing installation before substation equipment is installed</b>	H3		
Substation 1	Item	1,00	-
<b>Final earth resistance reading with substation equipment installed, but M.V. supply cables/earth disconnected</b>	H3		
Substation 1	Item	1,00	-
<b>LIGHTNING PROTECTION BY SPECIALIST CONTRACTOR</b>	H2		
Undertake survey of existing lightning protection and provide comprehensive report on statue	Item	1,00	-
Budgetary amount for repairs to existing installation	Item	1,00	-
Contractor's attendance and mark up	%	0,10	-
<b>SECTION NO. 4</b>	H1		
<b>BILL NO. 9 LUMINAIRES</b>	H1		
<b>LUMINAIRES (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>LUMINAIRES</b>	H2		
<b>Supply the following luminaires: As per drawing No. 17052_601_A</b>	H3		
Type A1	No	84	-
Type A1e	No	38	-
Type A2	No	12	-
Type A2e	No	8	-
Type B1	No	982	-
Type B1e	No	131	-
Type C	No	27	-
Type D	No	14	-
Type E1	No	184	-
Type E1e	No	48	-
Type E2	No	51	-
Type E2e	No	14	-
Type F1	No	18	-
Type F1e	No	16	-
Type G	No	81	-
Type H	No	8	-
Type Je	No	28	-
Type T1	No	12	-
Type T2	No	12	-
<b>SECTION NO. 4</b>	H1		
<b>BILL NO. 10 DISTRIBUTION BOARDS</b>	H1		
<b>DISTRIBUTION BOARDS (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)</b>	H1		

The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)

**DISTRIBUTION BOARDS**

**Supply / deliver the following distribution boards;**

Main LV Panel as per single line diagram drawing No. 17052_401_A	No	1	-
Install and connect the above DB	No	1	-
Basement DB-B1E as per single line diagram drawing No. 17052_402_A	No	1	-
Install and connect the above DB	No	1	-
Office DB-G1/G1E as per single line diagram drawing No. 17052_403_A	No	1	-
Install and connect the above DB	No	1	-
Office UPS DB - UPS-G1 and UPS-02 as per single line diagram drawing No. 17052_404_A	No	1	-
Install and connect the above DB	No	1	-
Main UPS Panel - UPS-DB as per single line diagram drawing No. 17052_405_A	No	1	-
Install and connect the above DB	No	1	-
Roof DB as per single line diagram drawing No. 17052_406_A	No	1	-
Install and connect the above DB	No	1	-
Basement DB - AC as per single line diagram drawing No. 17052_407_0	No	1	-
Install and connect the above DB	No	1	-
Typical Office UPS as per single line diagram drawing No. 17052_408_0	No	4	-
Install and connect the above DB	No	4	-
Office DB - DB-01/01E as per single line diagram drawing No. 17052_409_0	No	1	-
Install and connect the above DB	No	1	-
Office DB - DB-02/02E as per single line diagram drawing No. 17052_410_0	No	1	-
Install and connect the above DB	No	1	-
Office DB - DB-03/03E as per single line diagram drawing No. 17052_411_0	No	1	-
Install and connect the above DB	No	1	-
Office DB - DB-04/04E as per single line diagram drawing No. 17052_412_0	No	1	-
Install and connect the above DB	No	1	-
Office DB - DB-05/05E as per single line diagram drawing No. 17052_413_0	No	1	-
Install and connect the above DB	No	1	-

**SECTION NO. 4**

**BILL NO. 11 POWER SKIRTING**

**POWER SKIRTING (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)**

The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)

**POWER SKIRTING**

**Supply the following**

Cabstrut P801 Expony powder coated 3 compartment 2 cover power skirting inclusive of cover	m	1404	-
90° power skirting bends	No	132	-
End caps for power skirting	No	348	-

**SECTION NO. 4**

**BILL NO. 12 UPS**

**UPS (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)**

The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)

**UPS**

Supply, deliver, install, test and commission UPS System as per drawing no. 17052_602_A	No	1	-
Allowance to supply and install remote UPS's alarm panel	Item	1,00	-
Contractor's attendance and mark up	%	0,10	-
Supply 80A Bypass switch	No	1	-
1 No. UPS full service within the 1st year of UPS handover at 6 months and 12 months	Item	1,00	-

**SECTION NO. 4**

**BILL NO. 13 EXISTING INSTALLATION**

**EXISTING INSTALLATION (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)**

The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)

**EXISTING INSTALLATION**

**TYPICAL FLOOR**

**Disconnect, make safe and remove the following equipment from site (Not undertaken by main contractor)**

2 x 58 Watt surface mounted light fitting	No	140	-
2 x 28 Watt recess mounted light fitting	No	500	-
Bulkhead light fitting	No	10	-
2 x 58 Watt open tube light fitting	No	4	-
Allow to disconnect, make safe and remove existing distribution board	No	1	-
Allow to remove surface mounted conduit	m	262	-
Allow to remove wiring	m	8000	-
Allow to remove surface mounted switch socket outlets	No	20	-
Allow to remove recess mounted switch socket outlets and install blank cover plates	No	20	-
Allow to remove light switches outlets and install cover plates	No	20	-
Allow to remove power skirting	m	30	-
Allow to remove 25mm conduit	m	250	-
Allow to remove telephone conduiting	m	250	-
Allow to remove telephone jack point and install cover plate	No	60	-
Allow to strip out telephone and IT cabling after consultation with client	m	3000	-

**SECTION NO. 4**

**BILL NO. 14 STANDBY GENERATOR**

<b>STANDBY GENERATOR (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>STANDBY GENERATOR</b>	H2		
<b>The complete supply, transport to site, install, test and commission</b>	H3		
Standby generator as per drawing no. 17052_603_A	No	1	-
Connection of all generator control and protection, AMF and communication information wired to terminals within the Main LV Panel for changeover requirements	Item	1,00	-
The complete supply and installation of Generator Earthing as specified, including testing and commissioning the entire earthing installation as per I.E.C. standards, including re-testing as may be required after making good, and typed test certificates,	Item	1,00	-
Ear muffs	No	5	-
Allowance to fill/re-fill diesel tanks after testing - Low sulphur diesel to manufacturers specification.	ltr	2000	-
Provisional Sum for Allowance for additional Diesel Tank	Item	1,00	-
4 No. generator services to be conducted at 6, 12, 18 and 24 months from hand over.	Item	1,00	-
Disconnect and remove from site and deliver within 50 km of Site the existing 150 kVA standby generator	No	1	-
Credit / scrap value for the existing standby generator (rate only)	Item	1,00	-
Budgetary allowance for special rigging if required	Item	1,00	-
<b>SECTION NO. 5 : ELECTRONIC INSTALLATION</b>	H1		-
<b>BILL NO. 1 PRELIMINARIES</b>	H1		-
<b>PRELIMINARIES (CPAP WORK GROUP NO. 190 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>SUPPLEMENTARY PREAMBLES</b>	H2		
This Bill of Quantities must be read together with the specification.			

Tenderers must complete the Bill of Quantities and detail the unit rate and total amount of each item. The "Total" shall constitute the tender price for adjudication. Tenderers are advised to check their item extension and total additions as arithmetical errors occurring in the priced Bill of Quantities cannot be considered as having an effect on the tender amount.

No alteration, erasure or addition is to be made in the text of the Bill of Quantities. Should any alteration, erasure or addition be made it will not be recognised but the original wording of the Bill of Quantities will be adhered to. The Engineer will check the completed Bill of Quantities and reserves the right to adjust any individual price and to rectify any discrepancy whilst the total tender price as quoted remains unaltered.

The quantities given in the Bill for cable, cable markers, earth wire laid with cable, overhead conductors, overhead earth wire and excavations cannot be regarded as exact and are subject to measurement on site after completion of the service and adjustments will be made according to the unit rates given in the Bill.

The Bill of Quantities is to be used for pricing and financial purposes only. The drawings take precedence over the particular (project) specification but should be used in conjunction with these specifications. The project specification takes precedence over quality specifications and the Bill of Quantities.

Checking of Cable and Overhead Conductor Lengths. Notwithstanding the fact that lengths of cables and overhead conductors, as given in the Bill of Quantities, have been measured from scaled drawings, the Contractor shall check such lengths on site before ordering the cable as he will not be paid for excess cable after the completion of the service. Any allowance for off-cuts shall be made in the unit rates. The final measurements shall be based on the nett route length of the cables and overhead lines concerned, installed in accordance with the specification. However, the onus is on the Contractor to prove compliance with the specification.

The unit prices quoted in the Bill of Quantities shall include for such small materials as are required for the complete installation in accordance with the specification.

Bill No. 1 is to be regarded as fixed and will not be adjusted for variations in the final contract value or contract period.

NOTE: Tenderers may not include the costs of the items of Bill No. 1 in the unit rates for items in the remainder of the Bill of Quantities. Bill No. 1 is to be completed as indicated. Failure to comply will result in the Engineer arbitrarily adjusting rates to exclude Preliminary and General costs.

Unit prices for the same items in different Bills shall in all cases be the same, and in the case of differences, the Engineer reserves the right to change such unit prices when the completed list is checked, without adjusting the tender price.

The total for each page of each Bill is to be carried forward to the collection page at the end of each Bill.

P.C., Provisional and Contingency allowances, items and sums shall be expended as directed by the Engineer, and any balance remaining shall be deducted from the amount of the contract sum. Tenderers may not regard any unspent moneys as forming part of the final contract value. Variation Instruction No. 1 will be issued after award of the contract to omit all P.C., Provisional and Contingency sums/allowances from the contract and authorized contract value.

Variation work, as well as the items described above, shall be measured as executed, and paid for according to unit prices in the Bill of Quantities. Where unit prices are not available, the work shall be priced, in conjunction with the Engineer, at current rates.

Unless otherwise specified in the Bill of Quantities, all items are to be priced on the basis of supply, delivery, offload, installation, connection, testing and commissioning. All prices are to be EXCLUSIVE OF V.A.T but inclusive of import duties, surcharges, commissions to third parties, etc., where applicable. The foregoing items, as well as the Contractor's handling, financing and profit mark-up, is not to be separately detailed, and must be included in the cost rates.



Provide As Built drawings, Operation and Maintenance Manuals and wiring diagrams (3 sets hardcopy, 1 electronic)	Item	1,00	-
<b>BUDGETARY ALLOWANCE</b>	H2		
Budgetary allowance for X-RAY machines and metal detectors	Item	1,00	-
<b>EXISTING INSTALLATIONS</b>	H2		
Strip out existing smoke detection and PA installation	Item	1,00	-
<b>SECTION NO. 5</b>	H1		
<b>BILL NO. 3 SMOKE DETECTION AND ALARM</b>	H1		-
<b>SMOKE DETECTION AND ALARM (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>SMOKE DETECTION AND ALARM</b>	H2		
<b>Supply, install, test and commission smoke detection and fire alarm system complete with all hardware, software, terminations, fixings etc.</b>	H3		
<b>Ziton zp2 or equal approved smoke detection system</b>	H3		
<b>CENTRAL EQUIPMENT</b>	H2		
Addressable analogue fire panel complete with batteries (4 - loop)	No	2	-
Additional Proprietary Comms Network cards for above panels	No	2	-
Additional Internet Protocol (RJ45) communication cards for above panels	No	1	-
Programming of fire panels as specified including graphics, to include all devices, zoning, loops and fire condition sequencing, based on 700 devices	Item	1,00	-
Allowance to upload Autocad (dwg) drawings as backgrounds for the graphic displays. This includes "cleaning up" of the drawings	No	10	-
<b>FIELD EQUIPMENT</b>	H2		
Addressable optical detector complete with base on ceiling (white)	No	270	-
Addressable optical detector complete with base in ceiling void (white)	No	170	-
Addressable heat detector complete with base on concrete soffit below 4 m (white)	No	45	-
Addressable rate of rise heat detector complete with base mounted under raised floor	No	5	-
Addressable combination smoke and thermal detector complete with base on ceiling (white)	No	2	-
Addressable pre-set heat detector complete with base on ceiling	No	2	-
Addressable line isolator	No	30	-
Addressable line I/O relay complete in junction box	No	91	-
Allowance to connect line relays to override access control mag locks on escape doors, air handling units, elevators, smoke extraction fans etc.	No	91	-
Addressable surface mounted call point with resettable element (red)	No	36	-
Addressable sounder base complete with cap ceiling (white)	No	20	-
Addressable sounder with visual indicator complete with base on ceiling (white/red)	No	20	-
Addressable sounder with visual indicator complete with base on concrete soffit (white/red)	No	1	-
Door hold-open surface mount magnet complete with stainless steel wall mount universable adjustable brackets and emergency release button and door anchor plate (400 N)	No	4	-
24 V AC/DC 250 mA power supply unit connected to main and door magnet located in ceiling void	No	4	-
Addressable beam detector mounted at 12 000 m AFFL complete with reflector	No	1	-
Beam detector/reflector bracket made of 300 mm long and 50 mm wide and 8 mm thick 304 stainless steel bar sheeting rails by means of clamps	No	1	-
Budgetary allowance for stainless steel conduit box cover plates as per Architect's detail	Item	1,00	-
<b>FIRE INTERCOM SYSTEM (SUPPLY AND INSTALL)</b>	H2		
Master Station installed at reception	No	1	-
2 hours fire rated phones installed in refuge area	No	12	-
<b>CABLING</b>	H2		
Loop cable 1.5 mm <sup>2</sup> 2 core fire resistant (red) cable (PH 120)	m	150	-
Terminate the above cable	No	20	-
Loop cable 2.5 mm <sup>2</sup> 2 core fire resistant cable (PH 120)	m	4500	-
Terminate the above cable	No	200	-
Networking cable (fire resistant) Master Controller to sub controllers and remote display panels (PH 120)	m	250	-
Terminate the above cable	No	5	-
Connectors, adapters, power sockets, cables, consumables and other material to complete the installation as required.	Item	1,00	-
System training with staff	Item	1,00	-
<b>SECTION NO. 5</b>	H1		
<b>BILL NO. 4 PUBLIC ADDRESS AND VOICE EVACUATION</b>	H1		-
<b>PUBLIC ADDRESS AND VOICE EVACUATION (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>PUBLIC ADDRESS AND VOICE EVACUATION</b>	H2		
<b>Supply, install, test and commission Bosch Paviro (or equal and approved) public address and voice evacuation system complete with connectors, adapters, fixings, power sockets, cables, consumables and all material to complete the installation as required.</b>	H3		
<b>Control Room equipment, complete with power supplies and mounting equipment</b>	H3		
PVA-4CR12 controller (12 zone)	No	1	-
PVA-2P500 power amplifier (500W)	No	3	-
PVA-4R24 Router (24 zone)	No	2	-
PVA-15CST call station	No	2	-
PLN-24CH12 power management / battery charger	No	1	-
Batteries for complete system above	Item	1,00	-

<b>Loudspeakers, complete with fixings for ceiling, soffit/structure or wall mounting, and terminations.</b>	H3		
LC3-UC06E Ceiling Loudspeaker (6W).	No	85	-
LC3-CBB back box for above	No	85	-
LC3-UC06E Box Loudspeaker (6W).	No	10	-
LH1-10M10E Horn Loudspeaker (10W).	No	10	-
Tuner BGM source - PLE-SDT	No	1	-
Call station extension	No	1	-
<b>Supply and installation of cable (red) on cable basket in ceiling void or drawn into conduit as specified, including all lables and terminations at both ends.</b>	H3		
PH120 2 core, 2.5mm <sup>2</sup> stranded fire rated cable (red)	m	3815	-
Connectors, adapters, power sockets, cables, consumables and other material to complete the installation as required.	Item	1,00	-
Configure and document the complete system.	Item	1,00	-
2 way intercom system from Control room to Security room at parking entrance including 100m of wiring (Wireway by others)	Item	1,00	-
<b>SECTION NO. 5</b>	H1		
<b>BILL NO. 5 CCTV</b>	H1		-
<b>CCTV (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>CCTV</b>	H2		
<b>Supply, install, test and commission cctv system (HIK Vision or equal and approved) complete with all hardware, software, connectors, adapters, fixings, power supplier, cables, consumables and all materials to complete the installation:</b>	H3		
Network Video Recorder (128 channel) - DS-96128NI-I24	No	1	-
8TB SATA 6Gb/s hard drive - WD4NPURX	No	8	-
Video Management System Software and licences for 128 cameras	No	1	-
Video and audio decoder for up to 4 monitors - 6904UDI	No	1	-
46" control room monitor suitable for 24 hour, 7 days a week operation complete with universal wall brackets	No	4	-
Desktop PC with i7 processor, 16GB RAM, 1TB SSD storage, 4TB SATA storage, GTX 1070 graphics card, 24" monitor, wireless mouse and keyboard, complete with Windows 10 ect	No	2	-
CAT 6 - HDMI to RJ45 and R45 to HDMI network extender converter	No	10	-
<b>Cameras complete with all mounting equipment etc.</b>	H3		
Camera Type A - 4 MP PTZ - DS-2DE5225IW-AE	No	7	-
Camera Type B - 4 MP Bullet - DS-2CD2645FWD-IZS	No	5	-
'Camera Type C - 4 MP surface dome - DS-2CD2754FWD-IZS	No	88	-
<b>Supply and installation of cable and wiring on cable basket/trunking in ceiling void or drawn into conduit as specified, including labels at both ends. Cabling from switch to field devices</b>	H3		
Krone Category 6 UTP - Blue in colour	m	3558	-
Termination of Krone UTP CAT 6 onto patch panels	No	99	-
Termination of Krone UTP CAT 6 onto RJ45 at camera end	No	99	-
<b>SECTION NO. 5</b>	H1		
<b>BILL NO. 6 IT NETWORK</b>	H1		-
<b>IT NETWORK (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>IT NETWORK</b>	H2		
<b>Supply, install, test and commission CCTV IT Network complete with all hardware, software, connectors, adapters, fixings, power supplies, cables, consumables and all material to complete the installation as intended</b>	H3		
19 inch 42 U Cabinet - 1000mm deep - painted mild steel floor standing cabinet with glass front door, steel rear door, rear ventilation, adjustable feet, bottom and top cable entry, fixed shelf, 12 No. 1U blanking panels, 9 No. 1U brush panels, 2 No. 10 way power adaptors, 2 No. vertical cable management trays, fan tray 'with 4 fans, ground bonding kit and door locks.	No	6	-
Cisco Catalyst 9300 24 Port 10/100/1000 POE Switch, 2 x SFP Gbps uplink ports. 56GBps	No	1	-
24 Way modular (populated) UTP Cat 6 patch panel. Complete with mimic labels	No	6	-
Universal 1U filler panels	No	20	-
Universal 1U short base brush panel	No	15	-
Krone Cat 6 UTP cable (Blue) jumpers up to 2m, complete with terminations both ends (RJ45 - RJ45)	No	220	-
Fibre splice panel sliding tray (empty)	No	16	-
Cisco IE 1000 10 Port 10/100/1000 POE Switch, 2 x SFP Gbps uplink ports. 20 Gbps	No	2	-
Aruba 2530 24G POE switch	No	12	-
1Gig SM SFP (<500m)	No	28	-
Rack mounted server with SQL database similar to Dell poweredge R430	No	1	-
<b>Supply and Install the following complete with terminations, fixings etc</b>	H3		
Single mode Optic Fibre Communication Cable 9/125nm in-door installation type LSZH outer sheath, gel filled tubes, non metallic strength member 6 pair (12 core)	m	321	-
Single mode fibre termination - Per pair: Termination of fibres at both ends using LC connectors	No	42	-
Single mode fibre splicing - Per pair:	No	42	-
Midcoupler module - LC DX 6 port - OM3 10 APPL	No	42	-
Unjacked pigtails - Duplex LC - Single Mode	No	42	-
OTDR Test & Certificate	SUM	1	-
Label backbone cable (heat shrink lables on each end)	SUM	1	-
<b>SECTION NO. 5</b>	H1		

<b>BILL NO. 7 ACCESS CONTROL</b>	H1			-
<b>ACCESS CONTROL (PROVISIONAL) (CPAP WORK GROUP NO. 160 UNLESS OTHERWISE STATED)</b>	H1			
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)				
<b>ACCESS CONTROL</b>	H2			
<b>Supply, install, test and commission Impro Access Portal Pro (or equal and approved) access control and intercom system complete with connectors, adapters, fixings, power sockets, cables, consumables and all material to complete required</b>	H3			
<b>Control room equipment complete with all power supplies and mounting equipment</b>	H3			
Programming and enrolment station, PC (I7 processor, 8 Gb RAM 500 Gb SSD storage, Windows 10, Office and Acrobat) with 21" monitor, mouse, keyboard etc.	No	1		-
Setup and program access control software for 500 users and 57 No. doors (Impro Portal Pro Software)	Item	1,00		-
<b>Door / cluster controller complete with all mounting equipment to be located in the IT Riser , inclusive of junction boxes</b>	H3			
Cluster Controller with 4 No. Wiegand reader modules connected on the cluster bus, complete with battery backup power supply	No	15		-
Cluster Controller with 2 No. Wiegand reader modules connected on the cluster bus, complete with battery backup power supply	No	10		-
Wiegand reader module for use in IPS housing	No	15		-
IDEMIA Vision Pass Facial Recognition Reader	No	73		-
600kg surface mounted monitored maglock with LED	No	59		-
ZL bracket for maglock	No	59		-
No touch exit sensor	No	34		-
Green breakglass unit (re-settable), connected to mag lock	No	59		-
<b>Supply and installation of cable and wiring on cable basket in ceiling void or drawn into conduit as specified, including all labels and terminations at both ends</b>	H3			
Krone Category 6 UTP - green in colour	m	3554		-
Krone termination of UTP Cat 6	No	150		-
8 Twisted pair PVC insulated mylar cable. 0.22mm <sup>2</sup> stranded tinned copper cores.	m	2994		-
Aluminium polyester shield and drain				
Termination of above cable	No	150		-
2 Core PVC insulated cable. 1mm <sup>2</sup> stranded copper cores	m	504		-
Termination of above cable	No	45		-
24V power supply complete complete with 2 hour battery back up	No	59		-
Budgetary allowance for time and attendance software and setup	Item	1,00		-
Budgetary allowance for custom mounting brackets at turnstiles	Item	1,00		-
<b>SECTION NO. 6 : MECHANICAL INSTALLATION</b>	H1			<b>7 870 000,00</b>
<b>BILL NO. 1 PRELIMINARIES</b>	H1			-
<b>PRELIMINARIES (CPAP WORK GROUP NO. 190 UNLESS OTHERWISE STATED)</b>	H1			
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)				
<b>PRELIMINARIES</b>	H2			
The costs for the following items shall not be included in the cost rates for work listed in the rest of the Bill of Quantities.				
Contractual requirements as specified, i.e. guarantees, insurance, sureties, company's overheads administration etc	Item	1,00		-
Contract engineer, administration, supervision, programming and management	Item	1,00		-
Establish site accommodation, storage etc	Item	1,00		-
Maintain and operate site establishment	Item	1,00		-
Remove site establishment on completion and remove all rubbish, foundations, concrete bases, dirt oil spillage, etc., and leave site in condition as found	Item	1,00		-
Tools, equipment, plant hire and testing gear/meters as necessary	Item	1,00		-
Maintenance and guarantee of the complete installation for a period of twelve months from date of completion and handover	Item	1,00		-
Certificate to be issued on completion of the project in addition to detailed testing as specified - electrical compliances etc	Item	1,00		-
Shop drawings	Item	1,00		-
4 Sets of as-built drawings and manuals	Item	1,00		-
Compliance with the OHS Act	Item	1,00		-
Craneage and rigging equipment to put ac plant in place - including roof	Item	1,00		-
Budgetary Allowance	Item	1,00		-
Removal of all ducting, diffusers and controls on all levels	SUM	1		-
Removal of all AC Equipment and piping on all floors including roof	SUM	1		-
Other items not included in the foregoing and required by the Contractor are to be listed and priced below	Item	1,00		-
<b>SECTION NO. 6</b>	H1			
<b>BILL NO. 2 AIR CONDITIONING AND VENTILATION</b>	H1			-
<b>AIR CONDITIONING AND VENTILATION INSTALLATION (PROVISIONAL) (CPAP WORK GROUP NO. 170 UNLESS OTHERWISE STATED)</b>	H1			
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)				
<b>AIR CONDITIONING AND VENTILATION INSTALLATION</b>	H2			
<b>CHILLED WATER PIPING</b>	H2			
<b>Piping including all valves &amp; fittings etc. as per specification. Connections to units including control valves, valves fittings, etc.</b>	H3			
ø200 Pipe	m	44,00		-
ø200 Flanges (blank)	No	4		-
ø200 Flanges	No	20		-
ø200 Equal Tees	No	11		-
ø200 90deg Elbows	No	14		-
ø200 - ø100 Reducers	No	2		-

ø200 - ø125 Reducers	No	10	-
ø125 Pipe	m	115	-
ø125 Flanges	No	40	-
ø125 Equal Tees	No	8	-
ø125 90deg Elbows	No	22	-
ø125 - ø100 Reducers	No	4	-
ø100 Pipe	m	48	-
ø100 Flanges	No	8	-
ø100 90deg Elbows	No	2	-
ø100 - ø80 Reducers	No	4	-
ø80 Piping	m	36	-
ø80 Equal Tees	No	4	-
ø80 90deg Elbows	No	8	-
ø80 - ø65 Reducers	No	8	-
ø65 Piping	m	170	-
ø65 90deg Elbows	No	90	-
ø200 Butterfly Shut-off Valves	No	4	-
ø200 Strainers with ø 32 drain	No	1	-
ø200 Flexible Coupling	No	2	-
ø125 Butterfly Shut-off Valves	No	6	-
ø125 Non- Return Valves	No	3	-
ø125 Strainers with ø 32 drain	No	3	-
ø125 Flexible Coupling	No	6	-
ø100 Flow Control Meter	No	1	-
ø100 Butterfly Shut-off Valves	No	2	-
ø80 Shut-off Valves	No	2	-
ø65 Shut-off Valves	No	20	-
ø20 Drain Valves	No	24	-
ø15 BMS Test Point	No	1	-
ø10 Binder Test Point	No	54	-
Pressure Gauge with shut off valve	No	6	-
ø40 Galv Drain Piping	No	4	-
Flowcon Valve _ 4,75 l/s	No	1	-
Flowcon Valve _ 3,45 l/s	No	10	-
Two Way Control Valve _ 4,75 l/s	No	1	-
Two Way Control Valve _ 3,45 l/s	No	10	-
Feed and Expansion Tank c/w Shut-off valves	Item	1,00	-
Buffer Tank - Complete	No	1	-
<b>CHILLED WATER PIPE INSULATION as per specification</b>	H2		
ø200 Pipe	m	44	-
ø200 Flanges (blank)	No	4	-
ø200 Flanges	No	20	-
ø200 Equal Tees	No	11	-
ø200 90deg Elbows	No	12	-
ø200 - ø100 Reducers	No	2	-
ø200 - ø125 Reducers	No	10	-
ø125 Pipe	m	115	-
ø125 Flanges	No	40	-
ø125 Equal Tees	No	8	-
ø125 90deg Elbows	No	22	-
ø125 - ø100 Reducers	No	4	-
ø100 Pipe	m	48	-
ø100 Flanges	No	8	-
ø100 90deg Elbows	No	2	-
ø100 - ø80 Reducers	No	4	-
ø80 Piping	m	36	-
ø80 Equal Tees	No	4	-
ø80 90deg Elbows	No	8	-
ø80 - ø65 Reducers	No	8	-
ø65 Piping	m	170	-
ø65 90deg Elbows	No	90	-
ø200 Butterfly Shut-off Valves	No	4	-
ø200 Strainers with ø 32 drain	No	1	-
ø200 Flexible Coupling	No	2	-
ø125 Butterfly Shut-off Valves	No	6	-
ø125 Non- Return Valves	No	3	-
ø125 Strainers with ø 32 drain	No	3	-
ø125 Flexible Coupling	No	6	-
ø100 Flow Control Meter	No	1	-
ø100 Butterfly Shut-off Valves	No	2	-
ø80 Shut-off Valves	No	2	-
ø65 Shut-off Valves	No	20	-
ø20 Drain Valves	m	24	-
ø15 BMS Test Point	No	1	-
ø10 Binder Test Point	No	54	-
Pressure Gauge with shut off valve	No	6	-
Flowcon Valve _ 4,75 l/s	No	1	-
Flowcon Valve _ 3,45 l/s	No	10	-
Two Way Control Valve _ 4,75 l/s	No	1	-
Two Way Control Valve _ 3,45 l/s	No	10	-
Buffer Tank	No	1	-
<b>HOT WATER PIPING</b>	H2		

**Piping excluding all valves & fittings etc. as per specification. Connections to Units including control valves, valves fittings, etc.**

	H3		
ø150 Pipe	m	44	-
ø150 90deg Elbows	No	14	-
ø150 Equal Tees	No	10	-
ø150 Flanges	No	20	-
ø150 Flanges (blank)	No	2	-
ø150 - ø125 Reducers	No	8	-
ø150 - ø100 Reducers	No	4	-
ø125 Pipe	m	74	-
ø125 90deg Elbows	No	10	-
ø125 Flanges	No	44	-
ø125 - ø100 Reducers	No	2	-
ø100 Pipe	m	72	-
ø100 90deg Elbows	No	12	-
ø100 Equal Tees	No	8	-
ø100 - ø80 Reducers	No	4	-
ø80 Piping	m	36	-
ø80 - ø65 Reducers	No	2	-
ø80 - ø50 Reducers	No	2	-
ø65 Piping	No	24	-
ø65 90deg Elbows	m	8	-
ø50 Piping	No	160	-
ø50 90deg Elbows	No	86	-
ø150 Butterfly Shut-off Valves	No	4	-
ø150 Strainers with ø 32 drain	No	1	-
ø150 Flexible Coupling	No	2	-
ø125 Butterfly Shut-off Valves	No	6	-
ø125 Non-Return Valves	No	3	-
ø125 Strainers with ø 32 drain	No	3	-
ø125 Flexible Coupling	No	6	-
ø100 Flow Control Meter	No	1	-
ø100 Butterfly Shut-off Valves	No	2	-
ø65 Shut-off Valves	No	2	-
ø50 Shut-off Valves	No	20	-
ø20 Drain Valves	No	24	-
ø15 BMS Test Point	No	1	-
ø10 Binder Test Point	No	52	-
Pressure Gauge with shut off valve	No	6	-
ø40 Galv Drain Piping	No	4	-
Flowcon Valve _ 3,86 l/s	No	1	-
Flowcon Valve _ 2,89 l/s	No	10	-
Two Way Control Valve _ 3.86 l/s	No	1	-
Two Way Control Valve _ 2,89 l/s	No	10	-
Feed and Expansion Tank c/w Shut-off valves	Item	1,00	-
Buffer Tank - complete	Item	1,00	-
Budgetary Allowance	Item	1,00	-
<b>HOT WATER PIPE INSULATION as per specification</b>	<b>H2</b>		
ø150 Pipe	m	44	-
ø150 90deg Elbows	No	14	-
ø150 Equal Tees	No	10	-
ø150 Flanges	No	20	-
ø150 Flanges (blank)	No	2	-
ø150 - ø125 Reducers	No	8	-
ø150 - ø100 Reducers	No	4	-
ø125 Pipe	m	74	-
ø125 90deg Elbows	No	10	-
ø125 Flanges	No	44	-
ø125 - ø100 Reducers	No	2	-
ø100 Pipe	m	72	-
ø100 90deg Elbows	No	12	-
ø100 Equal Tees	No	8	-
ø100 - ø80 Reducers	No	4	-
ø80 Piping	m	36	-
ø80 - ø65 Reducers	No	2	-
ø80 - ø50 Reducers	No	2	-
ø65 Piping	No	24	-
ø65 90deg Elbows	m	8	-
ø50 Piping	No	160	-
ø50 90deg Elbows	No	86	-
ø150 Butterfly Shut-off Valves	No	4	-
ø150 Strainers with ø 32 drain	No	1	-
ø150 Flexible Coupling	No	2	-
ø125 Butterfly Shut-off Valves	No	6	-
ø125 Non- Return Valves	No	3	-
ø125 Strainers with ø 32 drain	No	3	-
ø125 Flexible Coupling	No	6	-
ø100 Flow Control Meter	No	1	-
ø100 Butterfly Shut-off Valves	No	2	-
ø65 Shut-off Valves	No	2	-
ø50 Shut-off Valves	No	20	-
ø20 Drain Valves	No	24	-
ø15 BMS Test Point	No	1	-

ø10 Binder Test Point	No	52	-
Pressure Gauge with shut off valve	No	6	-
Flowcon Valve _ 3,86 l/s	No	1	-
Flowcon Valve _ 2,89 l/s	No	10	-
Two Way Control Valve _ 3.86 l/s	No	1	-
Two Way Control Valve _ 2,89 l/s	No	10	-
Buffer Tank - complete	Item	1,00	-
<b>CHILLED AND HEATING WATER GENERATION PLANT</b>	H2		
<b>CHILLERS</b>	H2		
<b>Air cooled complete with building primary pumps, etc., including anti-vibration mountings, plinth formers, etc.</b>	H3		
CWG 1 (Energy Raiser)	No	1	-
<b>PUMPS</b>	H2		
<b>Secondary chilled/heating water circulating pumps complete with coupling, seals, mountings, etc., as per the specification (drains elsewhere measured) complete with premium efficiency motors, anti-vibration mounts and plinth formers</b>	H3		
SCHWP 1 Secondary Chilled Water	No	1	-
SCHWP 2 Secondary Chilled Water	No	1	-
SCHWP 3 Secondary Chilled Water	No	1	-
SHWP 1 Heating Water	No	1	-
SHWP 2 Heating Water	No	1	-
SHWP 3 Heating Water	No	1	-
Budgetary Allowance	Item	1,00	-
Lower Ground Floor Drawing No. M-1000:			
<b>SYSTEM - EAF - 15 (Basement extract)</b>	H2		
<b>Fan system - EAF - 15 duty: 8,00m<sup>3</sup>/s</b>	H3		
Fan	No	1	-
Attenuators	No	1	-
Supports	Sets	1,0	-
AVM's	Sets	1,0	-
Flexible Canvas Collars	Sets	1,0	-
<b>SYSTEM - EAF - 16 (Transformer and LV Room Extract)</b>	H2		
<b>Fan system - EAF - 16 duty: 1,6m<sup>3</sup>/s</b>	H3		
Fan	No	1	-
Attenuators	No	2	-
Supports	Sets	1,0	-
AVM's	Sets	1,0	-
Flexible Canvas Collars	Sets	1,0	-
Exhaust Cowl	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 500	m	1	-
Dia 450	m	8	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 450	No	2	-
<b>EXHAUST AIR GRILLES - FIXED BLADE with OBD</b>	H2		
700 x 300	No	4	-
<b>EXTRACT AIR WEATHER LOUVRES</b>	H2		
800 x 800	No	1	-
<b>FAN SYSTEM - EAF - 17 DUTY: 0,0150m<sup>3</sup>/s</b>	H2		
Fan	No	1	-
<b>FAN SYSTEM - EAF - 18 DUTY: 0,82m<sup>3</sup>/s</b>	H2		
Fan	No	1	-
<b>SPLIT AIR CONDITIONING UNITS</b>	H2		
<b>MWSU.13 &amp; 14 - Lower Ground Floor UPS Room</b>	H3		
Wall Mounted inverter unit - 7 kW	No	2	-
Insulated drip tray	No	2	-
Refrig. Piping - including insulation and cable tray support	m	6	-
Drain Piping	Sets	2,0	-
<b>CWU-01 - Lower Ground Floor Security Green Room</b>	H3		
Through wall console unit c/w aluminium external louvers - 4.1kw	No	1	-
<b>CDU.01 - Lower Ground Floor Security Lobby</b>	H3		
In-ceiling Ducted inverter unit - 10 kW, c/w hardwired controller	No	1	-
Refrig. Piping - including insulation and cable tray support / trunking	m	12	-
Drain Piping	Sets	1,0	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 200	m	3	-
<b>CIRCULAR 90° BENDS</b>	H2		
Dia 200	No	1	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 200	No	6	-
<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.60mm sheetmetal	m <sup>2</sup>	15	-
<b>RECTANGULAR DUCT FITTINGS</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.60mm sheetmetal	No	3	-
<b>DUCT INSULATION</b>	H2		
FRK 25mm thick	m <sup>2</sup>	16	-
<b>595 x 595 DCV DIFFUSERS</b>	H2		
Dia 200	No	3	-
<b>INSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 200	No	5	-
<b>R/A GRILLES - FIXED BLADE</b>	H2		

600 x 600 c/w plenum and 200 dia spigot	No	2	-
<b>Balancing Dampers</b>	H3		
200 Dia	No	1	-
<b>Filters</b>	H3		
Removable slide type filter - 300 x 250 x 100 thick	No	1	-
<b>F/A GRILLES - FIXED BLADE</b>	H2		
300 x 250 fresh air grille	No	1	-
Budgetary Allowance	Item	1,00	-
Ground Floor Drawing No. M-1001:			
<b>SYSTEM - AHU-1 - TOTAL COOLING 120kw, 6000 l/s</b>	H2		
Chilled Water Unit complete with fan, coil, filters, etc. - to be assembled on site in plantroom	No	1	-
Sheetmetal Plinthformer	No	1	-
Tico Pads	Sets	1,0	-
Drain Piping	Sets	1,0	-
<b>SOUND ATTENUATORS</b>	H2		
<b>Complete as per specification</b>	H3		
Supply Air 1500 W x 500 D x 1200 L	No	1	-
Return Air 1500 W x 500 D x 1200 L	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 250	m	11	-
<b>CIRCULAR 90° BENDS</b>	H2		
Dia 250	No	4	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 250	No	35	-
<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
1.00mm sheetmetal	m2	60	-
0.80mm sheetmetal	m2	32	-
0.60mm sheetmetal	m2	201	-
<b>RECTANGULAR DUCT FITTINGS</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
1.00mm sheetmetal	No	6	-
0.80mm sheetmetal	No	2	-
0.60mm sheetmetal	No	15	-
<b>DUCT INSULATION</b>	H2		
FRK 25mm thick	m2	293	-
<b>595 x 595 DCV DIFFUSERS</b>	H2		
Dia 250	No	7	-
<b>595 x 595 DVV DIFFUSERS c/w 1kW REHEATERS</b>	H2		
Dia 250 Master c/w Wall Mounted Controller	No	18	-
Dia 250 Slaves	No	3	-
<b>RCV DIFFUSERS</b>	H2		
Dia 250	No	7	-
<b>INSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 250	No	35	-
<b>WIRE MESH SCREENS</b>	H2		
1500 x 500	No	1	-
<b>R/A GRILLES - FIXED BLADE</b>	H2		
600 x 600	No	9	-
300 x 300	No	4	-
<b>SYSTEM - EAF - 2 (GROUND FLOOR TOILETS)</b>	H2		
<b>Fan System - EAF - 2 Duty: 1,00m3/s</b>	H3		
Fan	No	1	-
Attenuators	No	1	-
Supports	Sets	1,0	-
AVM's	Sets	1,0	-
Flexible Canvas Collars	Sets	1,0	-
Exhaust Cowl	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 450	m	3	-
Dia 350	m	2	-
Dia 200	m	5	-
Dia 150	m	21	-
<b>CIRCULAR 45° BENDS</b>	H2		
Dia 200	No	2	-
Dia 150	No	6	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 200	No	1	-
Dia 150	No	14	-
<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.6mm Sheetmetal	m2	50	-
<b>DISC VALVES</b>	H2		
Dia 200	No	1	-
Dia 150	No	14	-
<b>UNINSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS.</b>	H2		
Dia 200	No	1	-
Dia 150	No	14	-
<b>Fan System - EAF - 9 Duty: 0,150m3/s</b>	H3		
Fan	No	1	-
<b>Fan System - EAF - 10 Duty: 0,0150m3/s</b>	H3		
Fan	No	1	-

<b>Fan System - EAF - 11 Duty: 0,0150m3/s</b>	H3		
Fan	No	1	-
<b>Fan System - EAF - 12 Duty: 0,0150m3/s</b>	H3		
Fan	No	1	-
<b>Fan System - EAF - 13 Duty: 0,0150m3/s</b>	H3		
Fan	No	1	-
<b>TRANSFER AIR GRILLES - with expanded mesh behind</b>	H2		
600 x 200	No	10	-
<b>SPLIT AIR CONDITIONING UNITS</b>	H2		
<b>MWSU.1 &amp; 2 - Ground Floor Patch Room</b>	H3		
Wall Mounted inverter unit - 5,2 kW	No	2	-
Insulated drip tray	No	2	-
Refrig. Piping - including insulation and cable tray support	m	18	-
Drain Piping	Sets	2,0	-
<b>CCU.1 - Ground Floor Security Monitoring Room</b>	H3		
Ceiling Cassette inverter unit - 7 kW	No	1	-
Refrig. Piping - including insulating and cable tray support	m	12	-
Drain Piping	Sets	1,0	-
<b>FIRE DAMPERS</b>	H2		
500 x 300	No	3	-
Dia 250	No	1	-
<b>Volume Control Dampers</b>	H3		
Manual balancing damper - 250 Dia	No	35	-
Manual balancing damper - 150 Dia	No	1	-
Budgetary Allowance	Item	1,00	-
First Floor Drawing No. M-1002:			
<b>SYSTEM - AHU-2 - TOTAL COOLING 80kw, 4000 l/s</b>	H2		
Chilled Water Unit complete with fan, coil, filters, etc. - to be assembled on site in plantroom	No	1	-
Sheetmetal Plinthformer	No	1	-
Tico Pads	Sets	1,0	-
Drain Piping	Sets	1,0	-
<b>SOUND ATTENUATORS</b>	H2		
<b>Complete as per specification</b>	H3		
Supply Air 1100 W x 450 D x 1200 L	No	1	-
Return Air 1100 W x 450 D x 1200 L	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 250	m	18	-
<b>CIRCULAR 90° BENDS</b>	H2		
Dia 250	No	16	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 250	No	22	-
<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	m2	92	-
0.60mm sheetmetal	m2	80	-
<b>RECTANGULAR DUCT FITTINGS</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	No	9	-
0.60mm sheetmetal	No	6	-
<b>DUCT INSULATION</b>	H2		
FRK 25mm thick	m2	172	-
<b>595 x 595 DCV DIFFUSERS</b>	H2		
Dia 250	No	7	-
<b>595 x 595 DVV DIFFUSERS c/w 1kW REHEATERS</b>	H2		
Dia 250 Master c/w Wall Mounted Controller	No	11	-
Dia 250 Slaves	No	2	-
<b>RCV DIFFUSERS</b>	H2		
Dia 250	No	2	-
<b>INSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 250	No	22	-
<b>WIRE MESH SCREENS</b>	H2		
1100 x 450	No	1	-
<b>R/A GRILLES - FIXED BLADE</b>	H2		
600 x 600	No	6	-
<b>SYSTEM - AHU-3 - TOTAL COOLING 80kw, 4000 l/s</b>	H2		
Chilled Water Unit complete with fan, coil, filters, etc. - to be assembled on site in plantroom	No	1	-
Sheetmetal Plinthformer	No	1	-
Tico Pads	Sets	1,0	-
Drain Piping	Sets	1,0	-
<b>SOUND ATTENUATORS</b>	H2		
<b>Complete as per specification</b>	H3		
Supply Air 1100 W x 450 D x 1200 L	No	1	-
Return Air 1100 W x 450 D x 1200 L	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 250	m	9	-
<b>CIRCULAR 90° BENDS</b>	H2		
Dia 250	No	14	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 250	No	24	-
<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		

0.80mm sheetmetal	m2	61	-
0.60mm sheetmetal	m2	115	-
<b>RECTANGULAR DUCT FITTINGS</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	No	5	-
0.60mm sheetmetal	No	10	-
<b>DUCT INSULATION</b>	H2		
FRK 25mm thick	m2	176	-
<b>595 x 595 DCV DIFFUSERS</b>	H2		
Dia 250	No	1	-
<b>595 x 595 DVV DIFFUSERS c/w 1kW REHEATERS</b>	H2		
Dia 250 Master c/w Wall Mounted Controller	No	14	-
Dia 250 Slaves	No	2	-
<b>595 x 595 DVV DIFFUSERS c/w 0,5kW REHEATERS</b>	H2		
Dia 250 Master c/w Wall Mounted Controller	No	5	-
<b>RCV DIFFUSERS</b>	H2		
Dia 250	No	2	-
<b>INSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 250	No	24	-
<b>WIRE MESH SCREENS</b>	H2		
1100 x 450	No	1	-
<b>R/A GRILLES - FIXED BLADE</b>	H2		
600 x 600	No	6	-
<b>SYSTEM - EAF - 1 (FLOORS 1-5 TOILETS)</b>	H2		
<b>Fan measured elsewhere</b>	H3		
<b>CIRCULAR DUCTING</b>	H2		
Dia 450	m	4	-
Dia 300	m	7	-
Dia 250	m	5	-
Dia 150	m	5	-
<b>CIRCULAR 45° BENDS</b>	H2		
Dia 150	No	1	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 300	No	1	-
Dia 250	No	1	-
Dia 200	No	1	-
Dia 150	No	13	-
<b>DISC VALVES</b>	H2		
Dia 200	No	1	-
Dia 150	No	13	-
<b>UNINSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 200	No	1	-
Dia 150	No	13	-
<b>Fan System - EAF - 8 Duty: 0,0150m3/s</b>	H3		
Fan	No	1	-
<b>SPLIT AIR CONDITIONING UNITS</b>	H2		
<b>MWSU.3 &amp; 4 - First Floor Patch Room</b>	H3		
Wall Mounted inverter unit - 5,2 kW	No	2	-
Insulated drip tray	No	2	-
Refrig. Piping - including insulation and cable tray support	m	12	-
Drain Piping	Sets	2,0	-
Manual balancing damper - 250 Dia	No	46	-
Budgetary Allowance	Item	1,00	-
Second Floor Drawing No. M-1003			
<b>SYSTEM - AHU-4 - TOTAL COOLING 80kw, 4000 l/s</b>	H2		
Chilled Water Unit complete with fan, coil, filters, etc. - to be assembled on site in plantroom.	No	1	-
Sheetmetal Plinthformer	No	1	-
Tico Pads	Sets	1,0	-
Drain Piping	Sets	1,0	-
<b>SOUND ATTENUATORS</b>	H2		
<b>Complete as per specification</b>	H3		
Supply Air 1100 W x 450 D x 1200 L	No	1	-
Return Air 1100 W x 450 D x 1200 L	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 250	m	17	-
<b>CIRCULAR 90° BENDS</b>	H2		
Dia 250	No	10	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 250	No	22	-
<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	m2	81	-
0.60mm sheetmetal	m2	66	-
<b>RECTANGULAR DUCT FITTINGS</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	No	8	-
0.60mm sheetmetal	No	5	-
<b>DUCT INSULATION</b>	H2		
FRK 25mm thick	m2	147	-
<b>595 x 595 DCV DIFFUSERS</b>	H2		
Dia 250	No	6	-
<b>595 x 595 DVV DIFFUSERS c/w 1kW REHEATERS</b>	H2		

Dia 250 Master c/w Wall Mounted Controller	No	12	-
Dia 250 Slaves	No	2	-
<b>RCV DIFFUSERS</b>	H2		
Dia 250	No	2	-
<b>INSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 250	No	22	-
<b>WIRE MESH SCREENS</b>	H2		
1100 x 450	No	1	-
<b>R/A GRILLES - FIXED BLADE</b>	H2		
600 x 600	No	7	-
<b>SYSTEM - AHU-5 - TOTAL COOLING 80kw, 4000 l/s</b>	H2		
Chilled Water Unit complete with fan, coil, filters, etc. - to be assembled on site in plantroom	No	1	-
Sheetmetal Plinthformer	No	1	-
Tico Pads	Sets	1,0	-
Drain Piping	Sets	1,0	-
<b>SOUND ATTENUATORS</b>	H2		
<b>Complete as per specification</b>	H3		
Supply Air 1100 W x 450 D x 1200 L	No	1	-
Return Air 1100 W x 450 D x 1200 L	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 250	m	18	-
<b>CIRCULAR 90° BENDS</b>	H2		
Dia 250	No	11	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 250	No	23	-
<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	m2	59	-
0.60mm sheetmetal	m2	115	-
<b>RECTANGULAR DUCT FITTINGS</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	No	5	-
0.60mm sheetmetal	No	10	-
<b>DUCT INSULATION</b>	H2		
FRK 25mm thick	m2	174	-
<b>595 x 595 DCV DIFFUSERS</b>	H2		
Dia 250	No	5	-
<b>595 x 595 DVV DIFFUSERS c/w 1kW REHEATERS</b>	H2		
Dia 250 Master c/w Wall Mounted Controller	No	14	-
<b>RVV DIFFUSERS c/w 1kW REHEATERS</b>	H2		
Dia 250 Master c/w Wall Mounted Controller	No	1	-
Dia 250 Slaves	No	1	-
<b>RCV DIFFUSERS</b>	H2		
Dia 250	No	2	-
<b>INSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 250	No	23	-
<b>WIRE MESH SCREENS</b>	H2		
1100 x 450	No	1	-
<b>R/A GRILLES - FIXED BLADE</b>	H2		
600 x 600	No	5	-
<b>FIRE DAMPERS</b>	H2		
1000 x 400	No	2	-
750 x 350	No	1	-
<b>SYSTEM - EAF - 1 (FLOORS 1-5 TOILETS)</b>	H2		
<b>Fan measured elsewhere</b>	H3		
<b>CIRCULAR DUCTING</b>	H2		
Dia 450	m	4	-
Dia 300	m	7	-
Dia 250	m	5	-
Dia 150	m	5	-
<b>CIRCULAR 45° BENDS</b>	H2		
Dia 150	No	1	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 300	No	1	-
Dia 250	No	1	-
Dia 200	No	1	-
Dia 150	No	13	-
<b>DISC VALVES</b>	H2		
Dia 200	No	1	-
Dia 150	No	13	-
<b>UNINSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS.</b>	H2		
Dia 200	No	1	-
Dia 150	No	13	-
<b>SPLIT AIR CONDITIONING UNITS</b>	H2		
<b>MWSU.5 &amp; 6 - Second Floor Patch Room</b>	H3		
Wall Mounted inverter unit - 5,2 kW	No	2	-
Insulated drip tray	No	2	-
Refrig. Piping - including insulation and cable tray support	m	12	-
Drain Piping	Sets	2,0	-
Manual balancing damper - 250 Dia	No	46	-
Budgetary Allowance	Item	1,00	-
Third Floor Drawing No. M-1004			

<b>SYSTEM - AHU-6 - TOTAL COOLING 80kw, 4000 l/s</b>	H2		
Chilled Water Unit complete with fan, coil, filters, etc. - to be assembled on site in plantroom	No	1	-
Sheetmetal Plinthformer	No	1	-
Tico Pads	Sets	1,0	-
Drain Piping	Sets	1,0	-
<b>SOUND ATTENUATORS</b>	H2		
<b>Complete as per specification</b>	H3		
Supply Air 1100 W x 450 D x 1200 L	No	1	-
Return Air 1100 W x 450 D x 1200 L	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 250	m	18	-
<b>CIRCULAR 90° BENDS</b>	H2		
Dia 250	No	6	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 250	No	23	-
<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	m2	81	-
0.60mm sheetmetal	m2	68	-
<b>RECTANGULAR DUCT FITTINGS</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	No	8	-
0.60mm sheetmetal	No	6	-
<b>DUCT INSULATION</b>	H2		
FRK 25 mm thick	m2	150	-
<b>595 x 595 DCV DIFFUSERS</b>	H2		
Dia 250	No	7	-
<b>595 x 595 DVV DIFFUSERS c/w 1kW REHEATERS</b>	H2		
Dia 250 Master c/w Wall Mounted Controller	No	10	-
Dia 250 Slaves	No	4	-
<b>RCV DIFFUSERS</b>	H2		
Dia 250	No	2	-
<b>INSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 250	No	23	-
<b>WIRE MESH SCREENS</b>	H2		
1100 x 450	No	1	-
<b>R/A GRILLES - FIXED BLADE</b>	H2		
600 x 600	No	6	-
<b>SYSTEM - AHU-7 - TOTAL COOLING 80kw, 4000 l/s</b>	H2		
Chilled Water Unit complete with fan, coil, filters, etc. - to be assembled on site in plantroom	No	1	-
Sheetmetal Plinthformer	No	1	-
Tico Pads	Sets	1,0	-
Drain Piping	Sets	1,0	-
<b>SOUND ATTENUATORS</b>	H2		
<b>Complete as per specification</b>	H3		
Supply Air 1100 W x 450 D x 1200 L	No	1	-
Return Air 1100 W x 450 D x 1200 L	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 250	m	18	-
<b>CIRCULAR 90° BENDS</b>	H2		
Dia 250	No	8	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 250	No	23	-
<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	m2	59	-
0.60mm sheetmetal	m2	114	-
<b>RECTANGULAR DUCT FITTINGS</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	No	5	-
0.60mm sheetmetal	No	11	-
<b>DUCT INSULATION</b>	H2		
FRK 25mm thick	m2	173	-
<b>595 x 595 DCV DIFFUSERS</b>	H2		
Dia 250	No	6	-
<b>595 x 595 DVV DIFFUSERS c/w 1kW REHEATERS</b>	H2		
Dia 250 Master c/w Wall Mounted Controller	No	14	-
Dia 250 Slaves	No	1	-
<b>RCV DIFFUSERS</b>	H2		
Dia 250	No	2	-
<b>INSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 250	No	23	-
<b>WIRE MESH SCREENS</b>	H2		
1100 x 450	No	1	-
<b>R/A GRILLES - FIXED BLADE</b>	H2		
600 x 600	No	6	-
<b>SYSTEM - EAF - 1 (FLOORS 1-5 TOILETS)</b>	H2		
<b>Fan measured elsewhere</b>	H3		
<b>CIRCULAR DUCTING</b>	H2		
Dia 450	m	4	-
Dia 300	m	7	-

Dia 250	m	5	-
Dia 150	m	5	-
<b>CIRCULAR 45° BENDS</b>	H2		
Dia 150	No	1	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 300	No	1	-
Dia 250	No	1	-
Dia 200	No	1	-
Dia 150	No	13	-
<b>DISC VALVES</b>	H2		
Dia 200	No	1	-
Dia 150	No	13	-
<b>UNINSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 200	No	1	-
Dia 150	No	13	-
<b>Fan System - EAF - 6 Duty: 0,0150m3/s</b>	H3		
Fan	No	1	-
<b>Fan System - EAF - 7 Duty: 0,0150m3/s</b>	H3		
Fan	No	1	-
<b>SPLIT AIR CONDITIONING UNITS</b>	H2		
<b>MWSU.7 &amp; 8 - Third Floor Patch Room</b>	H3		
Wall Mounted inverter unit - 5,2 kW	No	2	-
Insulated drip tray	No	2	-
Refrig. Piping - including insulation and cable tray support	m	12	-
Drain Piping	Sets	2,0	-
Manual balancing damper - 250 Dia	No	46	-
Budgetary Allowance	Item	1,00	-
Fourth Floor Drawing No. M-1005			
<b>SYSTEM - AHU-8 - TOTAL COOLING 80kw, 4000 l/s</b>	H2		
Chilled Water Unit complete with fan, coil, filters, etc. - to be assembled on site in plantroom	No	1	-
Sheetmetal Plinthformer	No	1	-
Tico Pads	Sets	1,0	-
Drain Piping	Sets	1,0	-
<b>SOUND ATTENUATORS</b>	H2		
<b>Complete as per specification</b>	H3		
Supply Air 1100 W x 450 D x 1200 L	No	1	-
Return Air 1100 W x 450 D x 1200 L	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 250	m	18	-
<b>CIRCULAR 90° BENDS</b>	H2		
Dia 250	No	8	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 250	No	24	-
<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	m2	81	-
0.60mm sheetmetal	m2	80	-
<b>RECTANGULAR DUCT FITTINGS</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	No	9	-
0.60mm sheetmetal	No	5	-
<b>DUCT INSULATION</b>	H2		
FRK 25mm thick	m2	162	-
<b>595 x 595 DCV DIFFUSERS</b>	H2		
Dia 250	No	11	-
<b>595 x 595 DVV DIFFUSERS c/w 1kW REHEATERS</b>	H2		
Dia 250 Master c/w Wall Mounted Controller	No	9	-
Dia 250 Slaves	No	2	-
<b>RCV DIFFUSERS</b>	H2		
Dia 250	No	2	-
<b>INSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 250	No	24	-
<b>WIRE MESH SCREENS</b>	H2		
1100 x 450	No	1	-
<b>R/A GRILLES - FIXED BLADE</b>	H2		
600 x 600	No	7	-
<b>System - AHU-9 - Total cooling 80kw, 4000 l/s</b>	H2		
Chilled Water Unit complete with fan, coil, filters, etc. - to be assembled on site in plantroom	m	1	-
Sheetmetal Plinthformer	No	1	-
Tico Pads	Sets	1,0	-
Drain Piping	Sets	1,0	-
<b>SOUND ATTENUATORS</b>	H2		
<b>Complete as per specification</b>	H3		
Supply Air 1100 W x 450 D x 1200 L	No	1	-
Return Air 1100 W x 450 D x 1200 L	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 250	m	16	-
<b>CIRCULAR 90° BENDS</b>	H2		
Dia 250	No	7	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 250	No	19	-

<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	m2	58	-
0.60mm sheetmetal	m2	114	-
<b>RECTANGULAR DUCT FITTINGS</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	No	5	-
0.60mm sheetmetal	No	12	-
<b>DUCT INSULATION</b>	H2		
FRK 25mm thick	m2	174	-
<b>595 x 595 DCV DIFFUSERS</b>	H2		
Dia 250	No	7	-
<b>595 x 595 DVV DIFFUSERS c/w 1kW REHEATERS</b>	H2		
Dia 250 Master c/w Wall Mounted Controller	No	10	-
Dia 250 Slaves	No		-
<b>RCV DIFFUSERS</b>	H2		
Dia 250	No	2	-
<b>INSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 250	No	19	-
<b>WIRE MESH SCREENS</b>	H2		
1100 x 450	No	1	-
<b>R/A GRILLES - FIXED BLADE</b>	H2		
600 x 600	No	5	-
<b>SYSTEM - EAF - 1 (FLOORS 1-5 TOILETS)</b>	H2		
<b>Fan measured elsewhere</b>	H3		
<b>CIRCULAR DUCTING</b>	H2		
Dia 450	m	4	-
Dia 300	m	7	-
Dia 250	m	5	-
Dia 150	m	5	-
<b>CIRCULAR 45° BENDS</b>	H2		
Dia 150	No	1	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 300	No	1	-
Dia 250	No	1	-
Dia 200	No	1	-
Dia 150	No	13	-
<b>DISC VALVES</b>	H2		
Dia 200	No	1	-
Dia 150	No	13	-
<b>UNINSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 200	No	1	-
Dia 150	No	13	-
<b>Fan System - EAF - 3 Duty: 0,0150m3/s</b>	H3		
Fan	No	1	-
<b>Fan System - EAF - 4 Duty: 0,0150m3/s</b>	H3		
Fan	No	1	-
<b>Fan System - EAF - 5 Duty: 0,0150m3/s</b>	H3		
Fan	No	1	-
<b>SPLIT AIR CONDITIONING UNITS</b>	H2		
<b>MWSU.9 &amp; 10 - Fourth Floor Patch Room</b>	H3		
Wall Mounted inverter unit - 5,2 kW	No	2	-
Insulated drip tray	No	2	-
Refrig. Piping - including insulation and cable tray support	m	12	-
Drain Piping	Sets	2,0	-
Manual balancing damper - 250 Dia	No	46	-
Budgetary Allowance	Item	1,00	-
Fifth Floor Drawing No. M-1006			
<b>SYSTEM - AHU-10 - TOTAL COOLING 80kw, 4000 l/s</b>	H2		
Chilled Water Unit complete with fan, coil, filters, etc. - to be assembled on site in plantroom	No	1	-
Sheetmetal Plinthformer	No	1	-
Tico Pads	Sets	1,0	-
Drain Piping	Sets	1,0	-
<b>SOUND ATTENUATORS</b>	H2		
<b>Complete as per specification</b>	H3		
Supply Air 1100 W x 450 D x 1200 L	No	1	-
Return Air 1100 W x 450 D x 1200 L	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 250	m	18	-
<b>CIRCULAR 90° BENDS</b>	H2		
Dia 250	No	13	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 250	No	24	-
<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	m2	92	-
0.60mm sheetmetal	m2	72	-
<b>RECTANGULAR DUCT FITTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	No	10	-
0.60mm sheetmetal	No	7	-
<b>DUCT INSULATION</b>	H2		

FRK 25mm thick	m2	165	-
<b>595 x 595 DCV DIFFUSERS</b>	H2		
Dia 250	No	7	-
<b>595 x 595 DVV DIFFUSERS c/w 1kW REHEATERS</b>	H2		
Dia 250 Master c/w Wall Mounted Controller	No	9	-
Dia 250 Slaves	No	7	-
<b>RCV DIFFUSERS</b>	H2		
Dia 250	No	1	-
<b>INSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 250	No	24	-
<b>WIRE MESH SCREENS</b>	H2		
1100 x 450	No	1	-
<b>R/A GRILLES - FIXED BLADE</b>	H2		
600 x 600	No	7	-
<b>SYSTEM - AHU-11 - TOTAL COOLING 80kw, 4000 l/s</b>	H2		
Chilled Water Unit complete with fan, coil, filters, etc. - to be assembled on site in plantroom	No	1	-
Sheetmetal Plinthformer	No	1	-
Tico Pads	Sets	1,0	-
Drain Piping	Sets	1,0	-
<b>SOUND ATTENUATORS</b>	H2		
<b>Complete as per specification</b>	H3		
Supply Air 1100 W x 450 D x 1200 L	No	1	-
Return Air 1100 W x 450 D x 1200 L	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 250	m	20	-
<b>CIRCULAR 90° BENDS</b>	H2		
Dia 250	No	10	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 250	No	25	-
<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	m2	61	-
0.60mm sheetmetal	m2	115	-
<b>RECTANGULAR DUCT FITTINGS</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	No	6	-
0.60mm sheetmetal	No	14	-
<b>DUCT INSULATION</b>	H2		
FRK 25mm thick	m2	178	-
<b>595 x 595 DCV DIFFUSERS</b>	H2		
Dia 250	No	5	-
<b>595 x 595 DVV DIFFUSERS c/w 1kW REHEATERS</b>	H2		
Dia 250 Master c/w Wall Mounted Controller	No	14	-
Dia 250 Slaves	No		-
<b>595 x 595 DVV DIFFUSERS c/w 0,5kW REHEATERS</b>	H2		
Dia 250 Master c/w Wall Mounted Controller	No	2	-
Dia 250 Slaves	No	2	-
<b>RCV DIFFUSERS</b>	H2		
Dia 250	No	2	-
<b>INSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 250	No	25	-
<b>WIRE MESH SCREENS</b>	H2		
1100 x 450	No	1	-
<b>R/A GRILLES - FIXED BLADE</b>	H2		
600 x 600	No	6	-
<b>SYSTEM - EAF - 1 (FLOORS 1-5 TOILETS)</b>	H2		
<b>Fan System - EAF - 1 Duty: 4,00m3/s</b>	H3		
Fan	No	1	-
Attenuators	No	2	-
Supports	No	1	-
AVM's	Sets	1,0	-
Flexible Canvas Collars	Sets	1,0	-
Exhaust Cowl	No	1	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 450	m	4	-
Dia 300	m	7	-
Dia 250	m	5	-
Dia 150	m	5	-
<b>CIRCULAR 45° BENDS</b>	H2		
Dia 150	No	1	-
<b>CIRCULAR SPIGOTS</b>	H2		
Dia 300	No	1	-
Dia 250	No	1	-
Dia 200	No	1	-
Dia 150	No	13	-
<b>RECTANGULAR DUCTING</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	m2	65	-
0.60mm sheetmetal	m2	40	-
<b>RECTANGULAR DUCT FITTINGS</b>	H2		
<b>Complete with hangers, clamps etc</b>	H3		
0.80mm sheetmetal	No	7	-

0.60mm sheetmetal	No	10	-
<b>DISC VALVES</b>	H2		
Dia 200	No	1	-
Dia 150	No	13	-
<b>UNINSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 200	No	1	-
Dia 150	No	13	-
<b>Fan System - EAF - 21 Duty: 0,06m3/s</b>	H3		
Fan	No	1	-
Attenuators	No	2	-
Supports	Sets	1,0	-
AVM's	Sets	1,0	-
Flexible Canvas Collars	Sets	1,0	-
<b>CIRCULAR DUCTING</b>	H2		
Dia 150	m	5	-
<b>CIRCULAR 90° BENDS</b>	H2		
Dia 150	No	1	-
<b>DISC VALVES</b>	H2		
Dia 150	No	1	-
<b>UNINSULATED FLEXIBLE DUCTING 1.5 M LONG COMPLETE WITH JUBILEE CLAMPS</b>	H2		
Dia 150	No	1	-
<b>WEATHER LOUVER</b>	H2		
200 x 200	No	1	-
<b>SPLIT AIR CONDITIONING UNITS</b>	H2		
<b>MWSU.11 &amp; 12 - Fifth Floor Patch Room</b>	H3		
Wall Mounted inverter unit - 5,2 kW	No	2	-
Insulated drip tray	No	2	-
Refrig. Piping - including insulation and cable tray support	m	12	-
Drain Piping	Sets	2,0	-
<b>FIRE DAMPERS</b>	H2		
800 x 500	No	1	-
600 x 400	No	1	-
500 x 300	No	1	-
Manual balancing damper - 250 Dia	No	46	-
Budgetary Allowance	Item	1,00	-
<b>ELECTRICAL BOARDS</b>	H2		
<b>Main DB's:</b>	H3		
ACDB 1	Item	1,00	-
<b>AHU DB's:</b>	H3		
AHU.1	Item	1,00	-
AHU.2	Item	1,00	-
AHU.3	Item	1,00	-
AHU.4	Item	1,00	-
AHU.5	Item	1,00	-
AHU.6	Item	1,00	-
AHU.7	Item	1,00	-
AHU.8	Item	1,00	-
AHU.9	Item	1,00	-
AHU.10	Item	1,00	-
AHU.11	Item	1,00	-
<b>Fan DB's:</b>	H3		
ACDB 2	Item	1,00	-
ACDB 3	Item	1,00	-
ACDB 4	Item	1,00	-
<b>All field wiring, cabling, conduiting from distribution boards to all individual components of the air-conditioning and ventilation systems associated with the various individual distribution boards. (distribution boards elsewhere measured)</b>	H3		
<b>Chillers</b>	H3		
CWG.1 and pumps	Item	1,00	-
<b>Chilled Water Air Handling Units</b>	H3		
AHU.1	Item	1,00	-
AHU.2	Item	1,00	-
AHU.3	Item	1,00	-
AHU.4	Item	1,00	-
AHU.5	Item	1,00	-
AHU.6	Item	1,00	-
AHU.7	Item	1,00	-
AHU.8	Item	1,00	-
AHU.9	Item	1,00	-
AHU.10	Item	1,00	-
AHU.11	Item	1,00	-
<b>Mid-wall Split Units</b>	H3		
MWSU 1	Item	1,00	-
MWSU 2	Item	1,00	-
MWSU 3	Item	1,00	-
MWSU 4	Item	1,00	-
MWSU 5	Item	1,00	-
MWSU 6	Item	1,00	-
MWSU 7	Item	1,00	-
MWSU 8	Item	1,00	-
MWSU 9	Item	1,00	-
MWSU 10	Item	1,00	-
MWSU 11	Item	1,00	-

MWSU 12	Item	1,00	-
MWSU 13	Item	1,00	-
MWSU 14	Item	1,00	-
<b>Ceiling Cassette Units</b>			
CCU.1	Item	1,00	-
<b>Ventilation Fans</b>	H3		
EAF.1	Item	1,00	-
EAF.2	Item	1,00	-
EAF.3	Item	1,00	-
EAF.4	Item	1,00	-
EAF.5	Item	1,00	-
EAF.6	Item	1,00	-
EAF.7	Item	1,00	-
EAF.8	Item	1,00	-
EAF.9	Item	1,00	-
EAF.10	Item	1,00	-
EAF.11	Item	1,00	-
EAF.12	Item	1,00	-
EAF.13	Item	1,00	-
EAF.14	Item	1,00	-
EAF.15	Item	1,00	-
EAF.16	Item	1,00	-
EAF.17	Item	1,00	-
EAF.18	Item	1,00	-
EAF.19	Item	1,00	-
EAF.20	Item	1,00	-
EAF.21	Item	1,00	-
<b>Electrical Installation:</b>	H3		
Any other electrical and control wiring installation and components required to insure full functionality as per the specification	Item		
<b>AIR CONDITIONING CONTROL SYSTEM</b>	H2		
<b>BMS Software</b>	H3		
<b>BMS Programming</b>	H3		
<b>Development, writing, configuration, documentation, annotation and testing and commissioning of BMS programming (excluding A/C controls) as specified and as required to achieve full system functionality</b>	H3		
Chiller BMS panel as per Points List	No	1	-
AHU 1 BMS panel as per Points List	No	1	-
AHU 2 BMS panel as per Points List	No	1	-
AHU 3 BMS panel as per Points List	No	1	-
AHU 4 BMS panel as per Points List	No	1	-
AHU 5 BMS panel as per Points List	No	1	-
AHU 6 BMS panel as per Points List	No	1	-
AHU 7 BMS panel as per Points List	No	1	-
AHU 8 BMS panel as per Points List	No	1	-
AHU 9 BMS panel as per Points List	No	1	-
AHU 10 BMS panel as per Points List	No	1	-
AHU 11 BMS panel as per Points List	No	1	-
EAF.1 BMS panel as per Points List	No	1	-
EAF.2 BMS panel as per Points List	No	1	-
EAF.15 BMS panel as per Points List	No	1	-
EAF.16 BMS panel as per Points List	No	1	-
EAF.18 BMS panel as per Points List	No	1	-
<b>BMS Software Modules</b>	H3		
Supply, licensing, loading, setting up, testing and commissioning of BMS software modules (if required separately)	Item	1,00	-
<b>BMS Airconditioning Controls</b>	H3		
All software programming and hardware for control of airconditioning related plant as specified			
<b>HVAC Field Equipment</b>	H2		
<b>Supply, install, connect, test and commission</b>	H3		
Remote set point adjuster/sensor	No	12	-
Space temperature probe	No	12	-
Duct temperature probe	No	22	-
Air pressure switch	No	15	-
Filter dirty pressure switch	No	11	-
Differential pressure switch	No	4	-
Chilled and Heating water valves	No		-
Chilled water temperature probe	No	30	-
Heating water temperature probe	No	30	-
Duct static pressure sensor	No	11	-
Water pressure switch	No	1	-
Water pressure sensor	No	3	-
<b>Operator Interface P.C.</b>	H2		
<b>Supply and install workstation configured as specified</b>	H3		
Desktop P.C.	No	1	-
Modem	No	1	-
Software	No	1	-
UPS	No	1	-
Printers	No	2	-
Interface to BMS	No	1	-
Interface to Chiller Management System	No	1	-
Interface with Split Units	No	16	-

<b>CABLING</b>	H2		
<b>The supply and installation of twisted pair OAS cable pulled through conduit and/or trunking labelling and terminating including all accessories labelling and terminating including all accessories</b>	H3		
1 Pair 1.5mm <sup>2</sup> OAS cable	Sets	1,0	-
<b>Terminations</b>	H3		
1 Pair 1.5mm <sup>2</sup> OAS cable	Sets	1,0	-
Any other hardware, connections, plugs, cables, fittings, brackets, interfaces, drivers, power supplies, labour, etc. required to ensure full functionality as specified	Item	1,00	-
Testing and commissioning of complete HVAC installation and in accordance with specification and CIBSE/ASHRAE commissioning code	Item	1,00	-
Budgetary Allowance	Item	1,00	-
<b>SECTION NO. 6</b>	H1		
<b>BILL NO. 3 LIFT INSTALLATION</b>	H1		7 870 000,00
<b>LIFT INSTALLATION (PROVISIONAL) (CPAP WORK GROUP NO. 170 UNLESS OTHERWISE STATED)</b>	H1		
The Tenderer is referred to the relevant Clauses in the separate document General Preambles for Trades (2017)			
<b>LIFT INSTALLATION</b>	H2		
<b>General</b>	H2		
Cost for signage, hoarding, barricades, scaffolding, protection for 3-off lifts	Item	1,00	-
Health and safety	Item	1,00	-
Maintenance manuals as specified – 3 hard copies and 3 CD's per lift	Item	1,00	-
Purchase of forward cover, etc	Item	1,00	-
Miscellaneous: Lift contractor to detail any additional cost items	Item	1,00	-
<b>New Passenger Lift 1</b>	H2		
Complete removal and de-commissioning of existing lift (inclusive of all existing structural supports and rails within lift shaft, landing buttons and existing architraves)	Item	1,00	-
<b>Total manufacture, supply - c/w items specified in technical specification</b>	H3		
Complete manufacturing cost and equipment	Item	1,00	-
Transportation to site and rigging as specified	Item	1,00	-
Replace all landing call buttons (7 landings)	Item	1,00	-
Supply and install new s/s architraves (7 landings)	Item	1,00	-
Supply and install new landing doors c/w new tracks, hangers, floor sills, etc. (7 landings)	Item	1,00	-
Canvas protection in lift car (pvc protection drapes to side and rear walls fixed with turn-buckle clips, rear panel to indicate mirror behind protective cover)	Item	1,00	-
Wireless intercom (1-off) as per technical specification	Item	1,00	-
Supply and install battery back-up (A.R.D)	Item	1,00	-
Complete electrics and COC (inclusive of re-routing power supply from existing motor room to lift shaft – thereby eliminating the need for the motor room)	Item	1,00	-
Total cost for energy saving operation (ESO) as specified	Item	1,00	-
12 Months free maintenance	Item	1,00	-
Allow for lift sump pump for drainage	Item	1,00	-
<b>New Passenger Lift 2</b>	H2		
Complete removal and de-commissioning of existing lift (inclusive of all existing structural supports and rails within lift shaft, landing buttons and existing architraves)	Item	1,00	-
<b>Total manufacture, supply - c/w items specified in technical specification</b>	H3		
Complete manufacturing cost and equipment	Item	1,00	-
Transportation to site and rigging as specified	Item	1,00	-
Replace all landing call buttons (7 landings)	Item	1,00	-
Supply and install new s/s architraves (7 landings)	Item	1,00	-
Supply and install new landing doors c/w new tracks, hangers, floor sills, etc. (7 landings)	Item	1,00	-
Canvas protection in lift car (pvc protection drapes to side and rear walls fixed with turn-buckle clips, rear panel to indicate mirror behind protective cover)	Item	1,00	-
Wireless intercom (1-off) as per technical specification	Item	1,00	-
Supply and install battery back-up (A.R.D)	Item	1,00	-
Complete electrics and COC (inclusive of re-routing power supply from existing motor room to lift shaft – thereby eliminating the need for the motor room)	Item	1,00	-
Total cost for energy saving operation (ESO) as specified	Item	1,00	-
12 Months free maintenance	Item	1,00	-
Allow for lift sump pump for drainage	Item	1,00	-
<b>New Goods Lift 3</b>	H2		
Complete removal and de-commissioning of existing lift (inclusive of all existing structural supports and rails within lift shaft, landing buttons and existing architraves)	Item	1,00	-
<b>Total manufacture, supply - c/w items specified in technical specification</b>	H3		
Complete manufacturing cost and equipment	Item	1,00	-
Transportation to site and rigging as specified	Item	1,00	-
Replace all landing call buttons (7 landings)	Item	1,00	-
Supply and install new s/s architraves (7 landings)	Item	1,00	-
Supply and install new landing doors c/w new tracks, hangers, floor sills, etc. (7 landings)	Item	1,00	-
Canvas protection in lift car (pvc protection drapes to side and rear walls fixed with turn-buckle clips, rear panel to indicate mirror behind protective cover)	Item	1,00	-
Wireless intercom (1-off) as per technical specification	Item	1,00	-
Supply and install battery back-up (A.R.D)	Item	1,00	-
Complete electrics and COC (inclusive of re-routing power supply from existing motor room to lift shaft – thereby eliminating the need for the motor room)	Item	1,00	-
Total cost for energy saving operation (ESO) as specified	Item	1,00	-
12 Months free maintenance	Item	1,00	-
Allow for lift sump pump for drainage	Item	1,00	-
<b>SECTION NO. 7: BUDGETARY ALLOWANCES</b>			

Repair to fire escape handrails	Item	1,00	50 000,00
Painting of main staircase handrails	Item	1,00	20 000,00
Repair to treads & risers of all staircases	Item	1,00	50 000,00
Installation of Bird netting on Northern Façade	Item	1,00	250 000,00
Installation of structural steel pedestrian link bridge	Item	1,00	3 500 000,00
Construction of temporary car park at Minnaar street	Item	1,00	4 000 000,00
<b>SUB-TOTAL</b>	<b>ST</b>		<b>7 870 000,00</b>
ADD: PROJECT CONTINGENCIES @10%	Lsum	1,00	-
<b>SUB-TOTAL</b>	<b>ST</b>		<b>7 870 000,00</b>
ADD: VAT @ 15% OF THE SUB-TOTAL ABOVE	TAX	15,00	787 000,00
<b>TOTAL INCLUSIVE OF VAT</b>			<b>8 657 000,00</b>