

BILL OF QUANTITIES

**SECTION A1-A3: PRELIMINARY & GENERAL: TIME/VALUE/FIXED CHARGE RELATED ITEMS**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
<b>A1-A3</b>	<b>PRELIMINARY AND GENERAL</b>					
<b>A1</b>	<b>TIME RELATED</b>					
	Allow for all TIME related items of the Principal Building Agreement as well as any special requirements relating to this sub-contract					
A1.1	List all TIME related items as required - specify					
	a)	Item	1			
	b)	Item	1			
	c)	Item	1			
	d)	Item	1			
<b>A2</b>	<b>FIXED CHARGE RELATED</b>					
	Allow for all FIXED charge related items in terms of the Principal Building Agreement as well as any special requirements relating to this sub-contract					
A2.1	List all FIXED charge related items as required - specify					
	a)	Item	1			
	b)	Item	1			
	c)	Item	1			
	d)	Item	1			
<b>A3</b>	<b>VALUE RELATED</b>					
	Allow for all VALUE related items in terms of the Principal Building Agreement as well as any special requirements relating to this sub-contract					
A3.1	List all VALUE related items as required - specify					
	a)	Item	1			
	b)	Item	1			
	c)	Item	1			
	d)	Item	1			
Total Carried Forward To Summary						

BILL OF QUANTITIES

**SECTION B1: SUB-DISTRIBUTION BOARDS**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
B1	<b>EXISTING ELECTRICAL SERVICES</b>					
B1.1	Strip electrical cables and wiring in ceiling space area and make safe.					
	<b>SUB-DISTRIBUTION BOARDS</b>					
	Quote for supply and installation of the distribution board for SDB: UPS complete with frame achitrave, panels, 50% spare capacity, wiring and equipment. DB Equipment as follows: 40A TP Main C/B 2x 20A SP C/B on Red Phase 2x 20A SP C/B on White Phase 2x 20A SP C/B on Blue Phase.					
B1.1.1	Supply	No	1			
B1.1.2	Install	No	1			
	<b>DISTRIBUTION BOARDS</b>					
	Refurbishment to existing DB					
	150A T/P C/B samite					
B1.1.3	Supply	No				
B1.1.4	Install	No				
	100A T/P C/B samite					
B1.1.5	Supply	No				
B1.1.6	Install	No				
	60A T/P C/B samite					
B1.1.7	Supply	No				
B1.1.8	Install	No				
	Surge protection 3 phase - samite					
B1.1.9	Supply	No				
B1.1.10	Install	No				
	60A earth leakage unit D/P samite					
B1.1.11	Supply	No				
B1.1.12	Install	No				
	60A S/P C/B samite					
Total Carried Forward						

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**SECTION B1: SUB-DISTRIBUTION BOARDS**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
Brought Forward						
B1.1.13	Supply	No				
B1.1.14	Install 30A S/P C/B D'curve samite	No				
B1.1.15	Supply	No				
B1.1.16	Install 20A S/P C/B D'curve samite	No				
B1.1.17	Supply	No				
B1.1.18	Install 20A S/P C/B samite	No				
B1.1.19	Supply	No				
B1.1.20	Install 15A S/P C/B samite	No				
B1.1.21	Supply	No				
B1.1.22	Install Samite rail	No				
B1.1.23	Supply	No				
B1.1.24	Install Blanks samite	No				
B1.1.25	Supply	No				
B1.1.26	Install Extract air fan enclosure in ceiling space. The enclosure shall include isolator, contactor, thermal overload relay, control relay and all accessories. IP66 rated. Thermal overload relay rated at 0.4kW.	No				
B1.1.27	Supply	No	3			
B1.1.28	Install	No	3			
Total Carried Forward To Summary						

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**SECTION B2: CABLES, WIRING AND EARTHWIRE**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
B2	<b>CABLES, WIRING AND EARTHWIRE</b>					
B2.1	<b>UNARMoured CABLES</b>  Supply and install the following unarmoured PVC sheathed copper LT cables including clamping, supports and accessories. NOTE: For ordering of cables, measurement shall NOT be taken from this bill. Actual cable lengths shall be measured on site for ordering and installation purposes.					
	10mm <sup>2</sup> x 4 core cable					
B2.1.1	Supply	m				Rate Only
B2.1.2	Install	m				Rate Only
	6mm <sup>2</sup> x 4 core cable					
B2.1.3	Supply	m				Rate Only
B2.1.4	Install	m				Rate Only
	4mm <sup>2</sup> x 4 core cable					
B2.1.5	Supply	m	40			
B2.1.6	Install	m	40			
	2.5mm <sup>2</sup> x 4 core cable					
B2.1.7	Supply	m	60			
B2.1.8	Install	m	60			
B2.2	<b>WIRING</b>  Supply and install conductors in wire ways (including off-cuts and wastes).  PVC insulated conductors installed in conduits or wire trunking.					
	6mm <sup>2</sup>					
B2.2.1	Supply	m				Rate Only
B2.2.2	Install	m				Rate Only
	4mm <sup>2</sup>					
B2.2.3	Supply	m	100			
B2.2.4	Install	m	100			
Total Carried Forward						

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**SECTION B2: CABLES, WIRING AND EARTHWIRE**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
Brought Forward						
B2.2.5	2,5mm <sup>2</sup> Supply	m	600			
B2.2.6	Install	m	600			
B2.2.7	1,5mm <sup>2</sup> Supply	m	400			
B2.2.8	Install	m	400			
B2.3	<b>EARTHWIRE</b> Supply and install insulated earth wire in conduit or wiring. The earth conductors shall be green PVC insulated					
B2.3.1	10mm <sup>2</sup> Supply	m				Rate Only
B2.3.2	Install	m				Rate Only
B2.3.3	6mm <sup>2</sup> Supply	m				Rate Only
B2.3.4	Install	m				Rate Only
B2.3.5	4mm <sup>2</sup> Supply	m	30			
B2.3.6	Install	m	30			
B2.3.7	2.5mm <sup>2</sup> Supply	m	200			
B2.3.8	Install	m	200			
B2.3.9	1.5mm <sup>2</sup> Supply	m	120			
B2.3.10	Install	m	120			
B2.4	<b>TWIN &amp; EARTH CABLE</b> Supply and install the following twin & earth cable in the ceiling space area:					
B2.4.1	1.5mm <sup>2</sup> Supply	m	260			
Total Carried Forward						

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**SECTION B2: CABLES, WIRING AND EARTHWIRE**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
Brought Forward						
B2.4.2	Install 2.5mm <sup>2</sup>	m	260			
B2.4.3	Supply	m	100			
B2.4.4	Install	m	100			
Total Carried Forward To Summary						

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**SECTION B3: WIREWAYS, CONDUIT AND ACCESSORIES**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
B3	<b>CONDUIT AND ACCESSORIES</b>					
B3.1	<b>CONDUIT</b> Supply and install PVC type conduits, including bends, saddles and all accessories  PVC type:  25mm diameter conduit					
B3.1.1	Supply	m	200			
B3.1.2	Install  20mm diameter conduit	m	200			
B3.1.3	Supply	m	300			
B3.1.4	Install	m	300			
B3.2	<b>CONDUIT BOXES</b> Supply and install the following PVC type conduit boxes  PVC type:  100m x 50mm x 50mm					
B3.2.1	Supply	No	15			
B3.2.2	Install  50mmØ Round 25mm deep conduit box fitted with 5 Amp sockets	No	15			
B3.2.3	Supply	No	250			
B3.2.4	Install	No	250			
B3.3	<b>POWER SKIRTING AND ACCESSORIES</b> PVC powerskirting, fixed on surface of brick walls, including cutting, fitting with PVC cover plates  Rectangular two compartment complete with bends and end caps					
B3.3.1	Supply	m	240			
B3.3.2	Install  Powerskirting white - Internal bend	m	240			
Total Carried Forward						

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**SECTION B3: WIREWAYS, CONDUIT AND ACCESSORIES**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
Brought Forward						
B3.3.3	Supply	No				
B3.3.4	Install Powerskirting white - Flat bend	No				
B3.3.5	Supply	No				
B3.3.6	Install Powerskirting white - Plug cover	No				
B3.3.7	Supply	No				
B3.3.8	Install Powerskirting white - Euro/USB cover	No				
B3.3.9	Supply	No				
B3.3.10	Install Powerskirting white - Data cover	No				
B3.3.11	Supply	No				
B3.3.12	Install Powerskirting white - End cap	No				
B3.3.13	Supply	No				
B3.3.14	Install	No				
B3.4	<b>WELDED WIRE MESH CABLE TRAY</b>  Hot dipped galvanised welded wire mesh cable tray complete with all accessories, T-pieces, bends and reduction pieces as per specifications  200mm wide medium duty cable tray					
B3.4.1	Supply	m	100			
B3.4.2	Install 150mm wide medium duty cable tray	m	100			
B3.4.3	Supply	m	100			
B3.4.4	Install	m	100			
B3.5	<b>CABLE DUCTING</b>					
Total Carried Forward						



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**SECTION B3: WIREWAYS, CONDUIT AND ACCESSORIES**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
Brought Forward						
	Galvanised wiring ducting complete with all joints, accessories, T-pieces, bends, stops and end caps as specified, excluding wiring and as per specifications					
	76mm x 76mm wiring ducting with cover plates.					
B3.5.1	Supply	m	200			
B3.5.2	Install	m	200			
	41mm x 41mm wiring ducting with cover plates.					
B3.5.3	Supply	m	30			
B3.5.4	Install	m	30			
Total Carried Forward To Summary						

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**SECTION B4: LIGHTING INSTALLATION AND LIGHT FITTINGS**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
B4	<b>LIGHTING INSTALLATION AND LIGHT FITTINGS</b>					
B4.1	<b>LIGHT FITTINGS</b>  Supply and install, including all switchgear, starters, ballasts, etc. All fittings is to bare the SANS mark or SANS mark of compliance.  Type C1: 600mm x 600mm Recessed 40W LED panel luminaire with translucent diffuser and aluminium frame. Minimum specification: System lumen = 4000, LED life rated at 55 000 hours at 1050mA. Colour rendering: 4000K. Colour: White. Light fitting to include all accessories.					
B4.1.1	Supply	No	76			
B4.1.2	Install	No	76			
B4.1.3	Supply	No	4			
B4.1.4	Install	No	4			
B4.1.5	Supply	No	40			
B4.1.6	Install	No	40			
B4.1.7	Supply	No	8			
B4.1.8	Install	No	8			
	Type H1: Surface mount round 29W LED luminaire. Minimum specification: System lumen = 1714. Rated at 700mA. Colour rendering: 4000K. Colour: White. Light fitting to include all accessories. IP64 Rated.					
	Type H2: Surface mount rectangular 14W LED luminaire with eyelid. Minimum specification: System lumen = 1914. Rated at 700mA. Colour rendering: 4000K. Colour: Black. Light fitting to include all accessories. IP64 Rated.					
	Type 6: Surface/Ceiling mounted emergency signage luminaire with "EXIT" wording. Fitting to be complete with emergency battery of 3 hours duration, LED and complete with all accessories.					
Total Carried Forward						

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**SECTION B4: LIGHTING INSTALLATION AND LIGHT FITTINGS**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
Brought Forward						
B4.1.9	Supply	No	4			
B4.1.10	Install  Type 8: Directional emergency exit sign luminaire. Fitting to be complete with emergency battery of 3 hours duration, LED and complete with all accessories.	No	4			
B4.1.11	Supply	No	4			
B4.1.12	Install	No	4			
B4.2	<b>LIGHT SWITCHES AND ACCESSORIES</b>  Supply and install light switches complete with cover plates connecting to wiring and fitted in switch box. Each light switch installation shall be conduited  Occupation Sensor - Dual type					
B4.2.1	Supply	No	32			
B4.2.2	Install  16A one lever one way switch inside 100mm x 50mm x 50mm PVC box	No	32			
B4.2.3	Supply	No	6			
B4.2.4	Install  16A one lever two way switch inside 100mm x 50mm x 50mm PVC box	No	6			
B4.2.5	Supply	No	4			
B4.2.6	Install	No	4			
Total Carried Forward To Summary						

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**SECTION B5: POWER OUTLET POINTS**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
B5	<b>POWER POINT OUTLETS</b>					
B5.1	Supply and install switched socket outlets complete with cover plates connecting to wiring and installed in 4x4 boxes  Double "Essential" 16A 3-pin combination switched socket outlets installed in 4x4 box. (SANS 164-1 and SANS 164-2 outlets).					
B5.1.1	Supply	No	25			
B5.1.2	Install	No	25			
B5.1.3	Supply and install switched socket outlets complete with cover plates connecting to wiring and installed in PVC powerskirting  Single "Essential" 16A 3-pin switched socket outlet on powerskirting, (SANS 164-1).	No	84			
B5.1.4	Install	No	84			
B5.1.5	Supply and install switched socket outlets complete with cover plates connecting to wiring and installed in PVC powerskirting  Single "UPS" (Red) 16A 3-pin switched socket outlet on powerskirting, (SANS 164-1).	No	42			
B5.1.6	Install	No	42			
B5.1.7	Supply and install switched socket outlets complete with cover plates connecting to wiring and installed in PVC powerskirting  Single "Essential" 10A 3-pin socket outlet on powerskirting, (SANS 164-2).	No	68			
B5.1.8	Install	No	68			
B5.1.9	O-Line Power Pole 94/08810 c/w switching accessories & boxes for: 4x Crabtree 16A SSO 4x Crabtree 16A Ded- SSO 4x Crabtree 3 pin SSO 4x RJ45 Date outlet box.	No	4			
B5.1.10	Install	No	4			
	O-Line Floorbox DU6025 c/w switches & accessories consists of: 1x 16A SSO 1x 16A Ded SSO 1x 16A 3 pin Euro SSO 1x RJ45 Date outlet.					
Total Carried Forward						

BILL OF QUANTITIES

**SECTION B5: POWER OUTLET POINTS**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
Brought Forward						
B5.1.11	Supply	No	2			
B5.1.12	Install	No	2			
Total Carried Forward To Summary						

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**SECTION B6: ISOLATORS AND POWER SUPPLY**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
B6	<b>ISOLATORS AND POWER SUPPLY</b>					
B6.1	Supply and install recessed isolators as amended in the SANS 10142 specification for maintenance purposes of mechanical and other equipment  30A double pole					
B6.1.1	Supply	No	26			
B6.1.2	Install	No	26			
	60A double pole, external rotary type					
B6.1.3	Supply	No	26			
B6.1.4	Install	No	26			
Total Carried Forward To Summary						

BILL OF QUANTITIES

**SECTION B7: TELKOM, DATA AND TELEVISION**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
B7	<b>TELKOM, DATA AND TELEVISION</b>					
	Data outlet RJ45 including cover plate on powerskirting					
B7.1.1	Supply	No	68			
B7.1.2	Install	No	68			
B7.2	<b>TELEVISION</b>					
	Supply and install the following television points					
	Satellite TV (F-type connector) outlet including cover plate in 4x4 box					
B7.2.1	Supply	No	2			
B7.2.2	Install	No	2			
	Satellite TV (F-type connector) outlet including cover plate on PVC powerskirting					
B7.2.3	Supply	No	2			
B7.2.4	Install	No	2			
B7.3	<b>DRAW WIRE FOR TELKOM, DATA AND TELEVISION SYSTEMS</b>					
	Supply and install the following draw wires in conduit for the Telecommunication, Data, Television, CCTV, Access Control and Fire Detection systems.					
	1mmØ draw wire					
B7.3.1	Supply	m	220			
B7.3.2	Install	m	220			
Total Carried Forward To Summary						

BILL OF QUANTITIES

**SECTION C1: ADDITIONAL EQUIPMENT**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
C1	<b>ADDITIONAL EQUIPMENT</b>					
C1.1	<b>UPS INSTALLATION</b>  Supply install and commision a 20kVA UPS three phase IN, three phase OUT unit including all accessories as per specifications. 20 Minutes back up time on full load, including UPS and batteries.					
C1.1.1	Supply	Item	1			
C1.1.2	Install	Item	1			
C1.1.3	Commission	Item	1			
Total Carried Forward To Summary						



BILL OF QUANTITIES

**SECTION D1: COMPLETION**

ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	c
<b>D</b>	<b>COMPLETION</b>					
<b>D1</b>	<b>Test and Commission</b>					
D1.1	Test and commission entire electrical installation to adhere to the SANS: 10142 requirements and issue COC for all DB's and installation	Sum				
<b>D2</b>	<b>Maintenance</b>					
D2.1	Provision of full maintenance of electrical equipment, electronic systems and installation for the full period of 12 calendar months of the maintenance period. The maintenance period starts on the practical completion.	Sum				
<b>D3</b>	<b>Completion</b>					
D3.1	Any training to client and staff	Sum				
D3.2	Update and prepare "As Built" drawings	Item	4			
D3.3	Supply complete operating manuals of entire electrical installation	Item	4			
<b>D.4</b>	<b>Additional items</b>					
D4.1	Any additional items required by the contractor - specify					
	a)					
	b)					
	c)					
	d)					
	e)					
	f)					
	g)					
	h)					
	i)					
	j)					
	k)					
Total Carried Forward To Summary						

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SUMMARY OF SECTIONS

SECTION	DESCRIPTION	AMOUNT (RAND)
A1-A3	SECTION A1-A3: PRELIMINARY & GENERAL: TIME/VALUE/FIXED CHARGE RELATED ITEMS	.....
B1	SECTION B1: SUB-DISTRIBUTION BOARDS	.....
B2	SECTION B2: CABLES, WIRING AND EARTHWIRE	.....
B3	SECTION B3: WIREWAYS, CONDUIT AND ACCESSORIES	.....
B4	SECTION B4: LIGHTING INSTALLATION AND LIGHT FITTINGS	.....
B5	SECTION B5: POWER OUTLET POINTS	.....
B6	SECTION B6: ISOLATORS AND POWER SUPPLY	.....
B7	SECTION B7: TELKOM, DATA AND TELEVISION	.....
C1	SECTION C1: ADDITIONAL EQUIPMENT	.....
D1	SECTION D1: COMPLETION	.....
Total Carried Forward To Summary Of Schedules		_____