### **PART 4: BILLS OF QUANTITIES**

## BERGVILLE JUSTICE DEPARTMENT BILL OF QUANTITIES LIST 1: PRELIMINARY AND GENERAL

				Unit	Price	
Item	Description	Unit	Qty	Unit Labour	Unit Material	Total
				Rate	Rate	
1.	PRELIMINARY AND GENERAL		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
	Amount allowed for all expenses, regarding the following					
1.1	PROJECT RELATED COST					
1.1.1	Nett price for the fulfilment of the Tender Requirements, Conditions of Contract regarding all Insuranc cost and indemnification, etc	Sum	1			
	cost and indefinitional ec	Suili	1			
1.1.2	Determining and locating of existing services	Sum	1			
***************************************	S		***************************************			
1.1.3	Allowance to work in close proximity to existing services eg main gas pipes, water lines and					
	electric cables.	Sum	1			
1.1.4	Notice board.	Sum	1		***************************************	
1.1.5	Submit annual of all annual for annual	Sum	1			
1.1.3	Submit samples of all equipment for approva	Sum	1			
1.1.6	As built drawings & manuals.	Sum	1			
	To cuit diamings & minimus					
1.1.7	Cleaning of the site, removal of all refuge, rubble, rock etc prior to handing over	Sum	1			
***************************************						
2.	TIME RELATED COST					
2.1		~				
2.1	Performance Bonds	Sum	l			
2.2	Machinery-hire purchase cost, transport cost to and from site, depreciation	Sum	1			
۷.۷	iviacimiety-inie putchase cost, transport cost to and from site, depreciation	Sum	1			
2.3	Material-store cost and special delivery cost	Sum	1			
	The state of the s		-			
2.4	Subcontractors cost.	Sum	1			
2.5	Complying with Occupational Health and Safety Act, 85, 1993 (OHSA).					
2.6.1			,			
2.6.1	Appointment of Safety Officer	Sum			***************************************	
2.6.2	Adherence to Construction Regulations of the OHSA	Sum	1			
2.0.2	Adherence to Construction Regulations of the Orion	Suili	1			
2.6.3	Compile a Health and Safety Plan (H & S Plan)	Sum	1			
2.6.4	Compile a Risk Assessment for activities (RA)	Sum	1			
		3000000		4999999	0000	
2.6.5	Periodically reviewing of H & S Plan and RA	Sum	1			

## BERGVILLE JUSTICE DEPARTMENT BILL OF QUANTITIES LIST 1: PRELIMINARY AND GENERAL

					Price	
Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
.6	Submit proof of calibration of equipment eg, Crimper, HV test apparatus etc	Sum	1			
.7	Submit proof of Workmans Compensatior	Sum	1			
.8	Comply with Environmental Management Program EMI	Sum	1			
	BULK CONNECTION COST Supply upgrade from Eskom					
	Supply upgrade from Eskom					
1	Upgrade of the supply from Eskom from a 25kVA to 100kVA connection	Sum	1			
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	TOTAL CARRIED FORWARD TO SUMMARY OF BILL OF QUANTITIES		1	I		

#### BERGVILLE JUSTICE DEPARTMENT BILL OF QUANTITIES LIST 2: LV NETWORK

				Unit Price		
Item	Description	Unit	Qty	Unit Labour	Unit Material	Total
				Rate	Rate	
1.	LV CABLES					
	Supply, delivery, installation and commissioning of the following LV cable with Cu conductor			44 AM AN		
1 1	as specified in Clause 18 of Document 12.		110			
1.1	95 mm², 4 core PVC cable	m	110			
1.2	25 mm², 4 core PVC cable	m	70			
1.3	16 mm², 4 core PVC cable	m	330			
1.4	10 mm², 4 core PVC cable	m	150			
1.5	6 mm <sup>2</sup> , 4 core PVC cable	m	102			
1.6	70 mm <sup>2</sup> BCEW	m	110			
1.7	16 mm² BCEW	m	70			
1.8	10 mm² BCEW	m	330			
1.9	6 mm <sup>2</sup> BCEW	m	150			
1.10	4 mm <sup>2</sup> BCEW	m	102			
2.	LV CABLE ENDS					
	Supply, delivery, making off and commissioning of LV cable ends. Measured per set					
2.1	95 mm², 4 core PVC cable	No	4			
2.2	25 mm², 4 core PVC cable	No	2			
2.3	16 mm², 4 core PVC cable	No	12			
2.4	10 mm², 4 core PVC cable	No	4			
2.5	6 mm <sup>2</sup> , 4 core PVC cable	No	8			
2.6	70 mm <sup>2</sup> BCEW	No	4			
2.7	16 mm² BCEW	No	2			
2.8	10 mm² BCEW	No	12			

#### BERGVILLE JUSTICE DEPARTMENT BILL OF QUANTITIES LIST 2: LV NETWORK

				Unit		
Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
2.9	6 mm <sup>2</sup> BCEW	No	4			
2.)	O IIIII DCLW	140				
2.10	4 mm <sup>2</sup> BCEW	No	8			
3.	LV CABLE JOINTS Supply, delivery, making off and commissioning of LV cable joints as specified in Clause 18 of Document 12					
3.1	95 mm², 4 core PVC cable	No	1			
3.2	25 mm², 4 core PVC cable	No	1			
3.3	16 mm², 4 core PVC cable	No	1			
3.4	10 mm², 4 core PVC cable	No	1			
3.5	6 mm <sup>2</sup> , 4 core PVC cable	No	1			
3.6	4 mm², 4 core PVC cable	No	1			
3.7	95 mm² BCEW	No	1			
3.8	25 mm <sup>2</sup> BCEW	No	1			
3.9	16 mm² BCEW	No	1			
3.10	10 mm² BCEW	No	1			
3.11	6 mm <sup>2</sup> BCEW	No	1			
3.12	4 mm <sup>2</sup> BCEW	No	1			
4	DANGER TAPE Supply and installation of danger tape to a depth of 300 mm	m	200			
5	SLEEVES		**************			
5.1	Supply and install 110 mm dia PVC sleeves as per drawings and as entry to distribution boards	m	350			
5.2	Supply and install 110 mm diameter slow bend as entry to distribution boards	No	6			

#### BERGVILLE JUSTICE DEPARTMENT BILL OF QUANTITIES LIST 2: LV NETWORK

	Description			Unit	Price	
Item		Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
	GENERATOR					
	Supply, install and commision 100kVA, three phase, diesel generator in a sound damping box/ silent canopy/structur					
	Complete with an automatic changeover switch (ATS), maintenance free batteries and trickle charge	No	1			
	Generator to have integrated fuel tank, lockable doors, automatic and manual start options	-	***************************************			
	MANHOLES					
	Supply and installation of 600 x 600 x 600 mm manhole with checker cover plates and appropriate handles					
1	Electrical service including 600 x 600mm heavy duty cast iron lid	No	2			
	COMMISSIONING					
	Commission of LV Network and issuing of a Certificate of Compliance according to SANS 10142-1:2017	Sum	1			
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	TOTAL CARRIED FORWARD TO SUMMARY OF BILL OF QUANTITIES					

### BERGVILLE JUSTICE DEPARTMENT BILL OF QUANTITIES LIST 3: AREA LIGHTING

as specifications as specifications. It is supply, or supply, or supply, or supply as a supply, or supply as a supply, or supply as a supply, or supply as a supply as a supply, or supply as a supply	Description			Unit Price		
Supply, c as specifi 10 mm², LV CAB Supply, c .1 10 mm², .1 10 mm², .1 LV CAB Supply, c .1 10 mm², .2 LV CAB Supply a .1 Supply a .2 Cut surfa according .3 Remove .4 Supply a .4 Supply a .5 Supply a .6 Supply a .7 Supply a .8 Supply a .9 Supply a .1 Supply a .1 Supply a		Unit	Qty	Unit Labour	Unit Material	Total
Supply, c as specifi 10 mm², LV CAB Supply, c 1 10 mm², LV CAB Supply, c 1 10 mm², DANGE Supply a SLEEVI 1 Supply a 2 Cut surfa according 3 Remove 4 Supply a AREA I Supply, c				Rate	Rate	
as specifications as specifications. It is supply, or supply, or supply, or supply as a supply, or supply as a supply, or supply as a supply, or supply as a supply as a supply, or supply as a supply						
.1 10 mm²,  LV CAB Supply, c  .1 10 mm²,  LV CAB Supply, c  .1 10 mm²,  .1 LV CAB Supply, c  .1 Supply a  SLEEVI Supply a  .2 Cut surfa according  .3 Remove  .4 Supply a  .4 Supply a	oply, delivery, installation and commissioning of the following LV cable with Cu conductor					
2. LV CAB Supply, of 2.1 10 mm², 3. LV CAB Supply, of 3.1 10 mm², 4 DANGE Supply a 5.1 Supply a 5.2 Cut surfa according 5.3 Remove 5.4 Supply a 6 AREA I Supply, of 5.1 Type PT:	mm², 4 core PVC cable		270			
Supply, c  2.1 10 mm²,  3. LV CAB Supply, c  3.1 10 mm²,  4 DANGE Supply a  5 SLEEVI 5.1 Supply a  6.2 Cut surfa according  6.3 Remove  6.4 Supply a  6 AREA I  Supply, c	illir, 4 core FVC capie	m	270			
Supply, c  2.1 10 mm²,  3. LV CAB Supply, c  3.1 10 mm²,  4 DANGE Supply a  5 SLEEVI 5.1 Supply a  6.2 Cut surfa according  6.3 Remove  6.4 Supply a  6 AREA I  Supply, c	CABLE ENDS					***************************************
2.1 10 mm²,  3. LV CAB Supply, c  3.1 10 mm²,  4 DANGE Supply a  5 SLEEVI 5.1 Supply a  5.2 Cut surfa according  5.3 Remove  5.4 Supply a  6 AREA I  Supply, c  5.1 Type PT:	oply, delivery, making off and commissioning of LV cable ends as specified					
3.1 LV CAB Supply, G 3.1 10 mm²,  4 DANGE Supply a 5 SLEEVI 5.1 Supply a 6.2 Cut surfa according 6.3 Remove 6.4 Supply a 6 AREA I Supply, G 6.1 Type PT	p.), seri. to), maning on the community of 2 - once on the operation					
Supply, of the state of the sta	mm², 4 core PVC cable	No	72			
Supply, of the state of the sta						
3.1 10 mm²,  4 DANGE Supply a  5 SLEEVI 5.1 Supply a  5.2 Cut surfa according  5.3 Remove  5.4 Supply a  6 AREA I Supply, c  6.1 Type PT:	CABLE JOINTS					
DANGE Supply a  SLEEVI 5.1 Supply a  5.2 Cut surfa according 5.3 Remove 5.4 Supply a  AREA I Supply, c	oply, delivery, making off and commissioning of LV cable joints as specified		*****	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~~~~~~
DANGE Supply a  SLEEVI 5.1 Supply a  5.2 Cut surfa according 5.3 Remove 5.4 Supply a  AREA I Supply, c						
Supply a  Supply a  SLEEVI  Supply a  Cut surfa according  Supply a  Supply a  AREA I  Supply, c  Supply, c	mm², 4 core PVC cable	No	1			
Supply a  Supply a  SLEEVI  Supply a  Cut surfa according  Supply a  Supply a  AREA I  Supply, c  Supply, c		***************************************		***************************************		
5.1 Supply a 5.2 Cut surfa according 5.3 Remove 5.4 Supply a 6 AREA I Supply, o 6.1 Type PT:	NGER TAPE		210			
5.1 Supply a 5.2 Cut surfa according 5.3 Remove 5.4 Supply a 6 AREA I Supply, c 6.1 Type PT	oply and installation of danger tape to a depth of 300 mm	m	210			***************************************
5.1 Supply a 5.2 Cut surfa according 5.3 Remove 5.4 Supply a 6 AREA I Supply, c 6.1 Type PT	FRVEC					
5.2 Cut surfa according 5.3 Remove 5.4 Supply a 6 AREA I Supply, c 6.1 Type PT:	oply and install 110 mm dia PVC sleeves at all road crossings	m	100			
according 5.3 Remove 5.4 Supply a 6 AREA I Supply, c 6.1 Type PT:	ply and instant 110 min da 1 v C siccves at an road crossings	111	100			
according 5.3 Remove 5.4 Supply a 6 AREA I Supply, c 6.1 Type PT:	t surface with angle grinder, backfill with soilcrete and repair surface with tarmacadam/cemen					
5.3 Remove 5.4 Supply a 6 AREA I Supply, c 6.1 Type PT:	ording to clients specifications	m	0			
5.4 Supply a  6 AREA I  Supply, c  6.1 Type PT:	8					
5.4 Supply a  6 AREA I  Supply, c  6.1 Type PT:	move paving, backfill with soilcrete and reinstate paving according to the clients specification	m	0	***************************************		
5 AREA L Supply, 6	<u> </u>					
Supply, of Type PT:	oply and install 110 mm diameter slow bend as entry to distribution boards	No	5			
Supply, of Type PT						
5.1 Type PT:	REA LIGHTING					
5.1 Type PT	oply, delivery, installation and commissioning of the following area lights					
5.1 Type P1:	DT ANNUED DI M. A DOCCO. ALL IN CLASS CO. AN					
4000 T	pe PT: 40W LED Pole Mount, IP66 Street Light with Die-Cast Housing 00 Lumen, with SABS/SANS mark of compliance, installed on a 3.6m fibreglass pole complying to					
	NS 1749, Mounting Height 3m above Natural Ground Level	No	43			
SANS I	NS 1/49, Mounting Height Sin above Natural Ground Level	INO	43			
COMMI	OMMISSIONING					
	mmission of LV Network and issuing of a Certificate of Compliance according to SANS 10142-1:2017	Sum	1			
Commiss	annual of 2 . Territa and mosting of a continuous of companions according to Diffic 19142 1.2017	Sum	1			***************************************

## BERGVILLE JUSTICE DEPARTMENT BILL OF QUANTITIES LIST 4: DISTRIBUTION BOARDS

				Unit		
Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
1.	ELECTRICAL DISTRIBUTION BOARDS					
	Supply, installation and commissioning of complete distribution board with architrave and equipment in the			No. 400, 400, 400, 400, 400, 400, 400, 400		
	positions as indicated on the drawings, including the connection of all conduiting and termination of al					
*******************	wiring to necessary equipment. Drawings of distribution boards to be submitted for approval		************	***************************************		
1.1	DB-MAIN (IP65, Outdoor, Floor standing)	No	1			
1.2	DB-A (flush mounted)	No	1			
1.3	DB-B (flush mounted)	No	1			
1.4	DB-C (flush mounted)	No	1			
***************************************	DD C (Hash invalice)		<u> </u>			
1.5	DB-D (flush mounted)	No	1			
1.6	DB-E (flush mounted)	No	1			
1.7	DB-G (flush mounted)	No	1			
1.8	DB-U1 (flush mounted)	No	1			
1.9	DB-U2 (flush mounted)	No	1			
2.	ELECTRICAL DISTRIBUTION BOARDS					
	Supply and install warnings, notices and labelling in accordance with SANS 10142-1	No	9			
3.	FACTORY ACCEPTANCE TESTS (FAT)					
	Provision for three (3) Engineers, three (3) Employer Representatives and one (1) Contractors					
	Representative to witness FAT at manufacturer as specified					
3.1	All DB's as specified in Item 1.	Sum	1			
4.	ELECTRONIC DISTRIBUTION BOARDS					
	Supply, installation and commissioning of complete distribution board with architrave and equipment in the					
	positions as indicated on the drawings, including the connection of all conduiting and termination of al					
	wiring to necessary equipment. Drawings of distribution boards to be submitted for approval					
4.1	DB (600 x 600 Flush Mounted with door).	No	3			
5	ELECTRONIC DISTRIBUTION BOARDS	***************************************				
	Supply and install warnings, notices and labelling as specified	No	3			

## BERGVILLE JUSTICE DEPARTMENT BILL OF QUANTITIES LIST 4: DISTRIBUTION BOARDS

				Unit		
Item	Description	Unit	Qty	Unit Labour	Unit Material	Total
				Rate	Rate	
	FACTORY ACCEPTANCE TESTS (FAT) Provision for three (3) Engineers, three (3) Employer Representatives and one (1) Contractors Representative to witness FAT at manufacturer as specified All DB's as specified in Item 4.1					
	Provision for three (3) Engineers, three (3) Employer Representatives and one (1) Contractors			NA AND AND AND AND AND AND AND AND AND A	A A A A A A A A A A A A A A A A A A A	
	Representative to witness FAT at manufacturer as specified					
1	All DB's as specified in Item 4.1	Sum	1			
		00. AND		40 AM	44 AND	
		***************************************	*************			
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				***************************************		
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			<u> </u>	<u> </u>	1	
	TOTAL CARRIED FORWARD TO SUMMARY OF BILL OF QUANTITIES					
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				Unit	Price	
Item	Description	Unit	Qty	Unit Labour	Unit Material	Total
				Rate	Rate	
1.	CONDUITING AND TRUNKING	*****				
	The supply and installation of conduiting for lighting and power circuits, including ends, joints, ferrules, locknut					
	cutting, threading reaming, bending and setting, where required		255			
1.1	20 mm dia PVC (installed in ceiling).	m	375			
1.3	20 mm dia PVC (chased in wall).	m	300			
1.3	20 film dia PVC (chased in wair).	111	300			
2.	POWER SKIRTING AND ACCESSORIES		********************			
	The supply, delivery, installation and connecting of 3 channel / compartment steel power skirting complet					
	with all accessories to Cabstrut P803 type as specified in Clause 21.7 of Document 12.					
2.1	3 Compartment steel power skirting complete with covers	m	130			
2.2	3 Compartment steel end cap.	No	40			
2.3	3 Compartment steel flat elbow.	No	20			
2.4	20 4 4 10 4	NT-				
2.4	3 Compartment steel flat tee.	No	0	C AND		400 AN
2.5	3 Compartment steel internal elbow.	No	18			
2.3	5 Compartment steet internal citow.	110	10			
2.6	3 Compartment steel external elbow.	No	4			
2.7	3 Compartment steel standard tee.	No	0			
4.	CABLE TRAY AND ACCESSORIES					***************************************
	The supply, delivery, installation and connecting of cable trays complete with all accessories fo					
	suspension from concrete slabs, against walls, against roof trusses where required and supported as per					
	manufacturers specifications including cable clamps			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
4.1	Medium duty cable tray, welded wire mesh, 200mm x 50mm (Pitch 100 x 50mm) complete with all accessories and mounting brackets		80	C AND		400 AN
	accessories and mounting trackets	m	00			
4.2	Medium duty cable tray, welded wire mesh, 200mm x 50mm (Pitch 100 x 50mm) horizontal bend 90°	No	12			
	including day cache day, we deed wife inesti, 200min A 30min (Field 100 A 30min) notizonal bend 70					
4.3	Medium duty cable tray, welded wire mesh, 200mm x 50mm (Pitch 100 x 50mm) internal elbow	No	2			
	,					
4.4	Medium duty cable tray, welded wire mesh, 200mm x 50mm (Pitch 100 x 50mm) external elbow (dropper)	No	2			
4.5	Medium duty cable tray, welded wire mesh, 200mm x 50mm (Pitch 100 x 50mm) tee.	No	6			
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4.6	Medium duty cable tray, welded wire mesh, 200mm x 50mm (Pitch 100 x 50mm) 4 way crossover.	No	2			

## BERGVILLE JUSTICE DEPARTMENT BILL OF QUANTITIES

LIST 5: ELECTRICAL SERVICES

		Unit		Unit		
Item	Description		Qty	Unit Labour Rate	Unit Material Rate	Total
5.	UNDER SCREED FLOOR DUCT					
	Supply, installation and commissioning of the following floor duct complete with all accessories to fix it t					
	the floor where required					
5.1	3F Floor Duct.	m	5			
5.2	FD3 Pedestal including all accessories and blanking plates	No	4			
6.	DRAW BOXES					
	The supply and installation of flush mounted, multi-way draw boxes, including the termination of conduit with ferrules and locknuts to same:					
6.1	60 mm dia PVC 20 mm, round, multi-way for electrical service.	No	40			
6.2	60 mm dia Steel 20 mm, round, multi-way for electrical service.	No	0			
6.6	60 mm dia PVC blank cover plate.	No	40			
6.7	60 mm dia Steel blank cover plate.	No	0			
6.8	100 x 50 blank cover plate.	No	5			
6.9	100 x 100 blank cover plate.	No	5			
6.10	200 x 200 blank cover plate.	No	0			
7.	CONDUCTORS					
	The supply, delivery, installation in conduit and connecting up to equipment of stranded copper conductors as specified.					
7.7	2,5 mm² PVC insulated for electrical service	m	3000			
7.8	1,5 mm² Bare or Green/Yellow for electrical service	m	3000			
7.13	4 mm² PVC insulated for electrical service.	m	442			
7.14	2.5 mm <sup>2</sup> Bare or Green/Yellow for electrical service	m	442			

## BERGVILLE JUSTICE DEPARTMENT BILL OF QUANTITIES

LIST 5: ELECTRICAL SERVICES

	Description	Unit		Unit		
Item			Qty	Unit Labour Rate	Unit Material Rate	Total
8.	SWITCHES			1	11	
	Supply, delivery, installation and connecting of flush mounted switches complete with switch modules					
	yokes and white cover plates to Crabtree Classic Range (Steel)		4.0			
3.1	20 A, single lever, one-way (100 x 50 mm Draw Box)	No	10			
3.2	20 A, single level, two-way (100 x 50 mm Draw Box)	No	3			
3.3	20 A, single lever, intermediate (100 x 50 mm Draw Box)	No	0			
3.4	20 A, two lever, one-way (100 x 50 mm Draw Box)	No	2			
5.5	20 A, two level, one-way (x1) & two-way (x1) (100 x 50 mm Draw Box)	No	0			
3.6	20 A, two level, two-way (x2) (100 x 50 mm Draw Box)	No	2			
	ISOLATORS					
	Supply, delivery, installation and connecting of isolator complete with isolator modules, yokes and satir					
	white cover plates to Crabtree Classic Range (Steel)					
9.1	30 A, double pole flush mounted	No	2			
9.2	30 A, double pole surface mounted including surface mounted box	No	0			
9.3	30 A, double pole surface mounted including surface mounted box (IP65)	No	21			
9.4	60 A, triple pole surface mounted including surface mounted box (IP65)	No	0			
9.5	200 A, triple pole surface mounted including surface mounted box	No	0			
10.	SOCKET OUTLETS					
	The supply, delivery, installation and connecting of socket outlets complete with white cover plat					
	to Crabtree Classic Range (Steel).					
0.1	1 x 16A 3 pin flush mounted switched socket outlet (100 x 100)	No	0			
0.2	1 x 16A 3 pin & 1 x Euro Socket flush mounted switched socket outlet (100 x 100)	No	4			
0.3	2 x 16A 3 pin flush mounted switched socket outlet (100 x 100)	No	8			
0.4	1 x 16A 3 pin flush mounted dedicated switched socket outlet (Red - 100 x 100)	No	0			
0.5	1 x 5A 3 pin 60mm round with cover plate	No				

	Description			Unit		
Item		Unit	Qty	Unit Labour	Unit Material	Total
				Rate	Rate	
10.6	1 x 16A 3 pin & 1 x Euro Socket switched socket outlet (Power Skirting)	No	38			
10.7	1 x 16A 3 pin & 1 x Euro Socket dedicated switched socket outlet (Power Skirting)	No	26			
10.7	1 x 10A 3 pin & 1 x Euro Socket dedicated switched socket outlet (1 ower Skirting)	110	20			
0.8	1 x 16A 3 pin & 1 x Euro Socket dedicated switched socket outlet (Red - in Power Skirting)	No	37			
12.	OCCUPANCY CEILING SENSORS					
	The supply, delivery, installation and connecting of ceiling mounted sensors complete with all the fitting	~~~~~~~~			***************************************	
	to Clipsal 752 Series range Dual technology Ultrasonic and passive infrared ceiling sensor with intellidat	No	47			
13.	PHOTO CELL					
	Supply, delivery, installation and connecting of 16A Photo cell mounted in well glas	No	7			
14.	PROVISIONAL COST AMOUNTS					
	Provisional cost amount allowed for Lightning design and installation by specialis	PC	1			
5.	GENERAL					
LJ.	Supply, installation and commissioning of the following ancillary equipment				***************************************	
15.1	Bonding of electrical system	Sum	1			
10.1	Bonding of electrical system	Sum	-			
15.2	Supply and install traffolite labels on all light switches, plugs etc with approved letterin	Sum	1			
5.3	Testing which includes insulation resistance, earth continuity test, balancing of the load of the electric					
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5.4	Stainless steel Hand dryers	No	5			
3.4	Stanliess steel frank dryers	INO	J			
5.5	Supply and installation of a readily accessible earthing terminal for electronic service	No	2			
		***************************************				
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	TOTAL CARRIED FORWARD TO SUMMARY OF BILL OF QUANTITIES					
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## BERGVILLE JUSTICE DEPARTMENT BILL OF QUANTITIES

LIST 6: LUMINAIRES

	Description			Unit		
Item		Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
,	LUMINAIRES					
	Supplying, installation and commissioning of the following luminaires complete with lam					
.1	TYPE A: 16W LED SURFACE MOUNT, IP54 ROUND BULKHEAD WITH BLACK DIE-CAST BASE					**************************
	BASE AND HIGH IMPACT ACRYLIC DIFFUSER WITH TAMPER PROOF TORX SCREWS					
	WIRED ECG COMPLETE WITH 3 PIN STUCCHI CONNECTOR AND 4m, 3 CORE CABTYRE					
	1400 Lumen	No	41			
.2	TYPE B: 40W CFL SURFACE MOUNT, IP65 DECORATIVE OUTDOOR EYELID BULKHEAD		********************			
	WITH BLK DIE-CAST BASE AND HIGH IMPACT ACRYLIC DIFFUSER WITH TAMPE					
	PROOF TORX SCREWS. WIRED ECG COMPLETE WITH 3 PIN STUCCHI CONNECTOR					
nenenenenenenenenenenenenen	AND 4m, 3 CORE CABTYRE - 3500 Lumen	No	14			
.3	VANDAL PROOF SURFACE MOUNT LUMINAIRE BATTEN TYPE, SUITABLE FOF					
	MAXIMUM SECURITY APPLICATIONS, WITH 2 x 20W LED LAMPS, WITH CORROSION					
	RESISTANT HIGH PRESSURE DIE CAST ALUMINIUM BODY, ONE PIECE INJECTION		***********			
	MOULDED CLEAR POLYCARBONATE DIFFUSER, PROTECTION CLASS IP65, WITH					
	SABS MARK OR SANS MARK OF COMPLIANCE - 5500 Lumei	No	18			
.5	TYPE C: 2 X 23W LED 1500MM SURFACE MOUNTED IP65 VAPOR PROOF WITH POLY-					
	CARBONATE UV STABALIZED BASE AND DIFFUSER WITH 305 STAINLESS STEEL					
	CLIPS. WIRED ECG COMPLETE WITH 4M 3 CORE CABTYRE.	No	67			
.6	TYPE C: 64W LED FLUSH MOUNT HONEYCOMB PANEL, WIRED ECG COMPLETE WITH					
	3 PIN STUCCHI ADAPTOR & 4M 3 CORE CABTYRE - 6000 LUMEN, DRIVER LIFETIME		***************		n en	
	30000HRS, CCT 4000K, CRI 80	No	66			
	TYPE ED. 1 V 40W I ED ELOODI JOHT INCC COT 4000V DIE CACT ALLIMINIUM		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			nenenenenenenenenenenenenenenenenenene
.7	TYPE FD: 1 X 40W LED FLOODLIGHT, IP65, CCT 4000K, DIE-CAST ALUMINIUM HOUSING, 4M 3 CORE CABTYRE, 90LM/WATT, DRIVER LIFETIME 30000HRS	No	68			
	HOUSING, 4M 3 CORE CABITRE, 90LW WATT, DRIVER LIFETHME 30000HRS	INO	00			
	EMERGENCY LUMINAIRS					
	Supplying, installation and commissioning of the following luminaires complete with lamps specified					
.1	Type EX: Surface mount LED Exit light. Complete with NiMH battery with no memory effect	***************************************				
	suitable for operation of at least 2 hours and a lifespan of 7 years equal Cosine Developments LE					
ennennenenenenenen	Single-sided Emergency Exit Sign	No	7			
	TOTAL CARRIED FORWARD TO SUMMARY OF BILL OF QUANTITIES					

## BERGVILLE JUSTICE DEPARTMENT BILL OF QUANTITIES

	Description			Unit Price		
Item		Unit	Qty	Unit Labour	Unit Material	Total
-	CONTRACTOR AND EDVINANCE			Rate	Rate	
1	CONDUITING AND TRUNKING	******************************				
	The supply and installation of conduiting for lighting and power circuits, including ends, joints, ferrules, locknut cutting, threading reaming, bending and setting, where required					
	euting, unearing realing, bending and setting, where required					
1.1	25 mm dia PVC for access control/security services (installed in ceiling)	m	0			R -
	, i					
1.2	25 mm dia PVC for access control/security services (chased in wall)	m	42			
1.3	25 mm dia STEEL for fire servics (installed in ceiling)	m	150			
1.4	25 mm dia STEEL for fire services (chased in wall).	m	20			
1.7	25 Hilli dia 5 l LLL for the services (chased in wan).	111	20			
2.	WIRING DUCT					
	The supply, delivery, installation and connecting of wiring channel complete with all accessories for					
	suspension from concrete slabs, against walls, against roof trusses where required and supported as per					
	manufacturers specifications					
2.1	P9810 Wiring channel with covers and all fixing accessories		80			
Z.1	P9810 Wiring channel with covers and all fixing accessories	m	80			
2.2	P9810 Wiring channel end cap.	No	8			
		***************************************				
2.3	P9810 Wiring channel radiused internal elbow.	No	2			
2.4	P9810 Wiring channel radiused external elbow.	No	2			
2.5	P9810 Wiring channel radiused horizontal elbow	No	12			
2.3	1 7610 Willing challifer fautused horizontal cloow	110	12			
2.6	P9810 Wiring channel radiused 3 way tee.	No	6			
2.7	P9810 Wiring channel radiused 4 way crossover.	No	2			
2.8	Doctory, and the state of the	No	5			
2.8	P9810 Wiring channel radiused internal elbow	INO	3			
2.9	P9810 Wiring channel radiused external elbow	No	5			
	- Secondary States of Control of	1,0				
2.10	P9810 Wiring channel radiused horisontal elbow	No	5			
	20040-2011					
2.11	P9810 Wiring channel radiused 3 way tee	No	4			
2.12	P9810 Wiring channel radiused 4 way crossover	No	2			
2.12	179610 Willing Channel radiused 4 way crossover	110	<u> </u>			
			ı	I		I

				Unit Price		
Item	Description	Unit	Qty	Unit Labour	Unit Material	Total
3	DRAW BOXES			Rate	Rate	
	The supply and installation of flush mounted, multi-way draw boxes, including the termination of conduit					
	with ferrules and locknuts to same:					
4.1	60 mm dia PVC 25 mm, round, multi-way for telecom services	No	0			
4.2	100 x 50 x 50 mm galvanised steel for telecom services	No	20			
4.3	100 x 100 x 50 mm galvanised steel for telecom services	No	0			
4.4	60 mm dia PVC 25 mm, round, multi-way for data services	No	30			
4.5	100 x 50 x 50 mm galvanised steel for data service	No	0			
4.6	100 x 100 x 50 mm galvanised steel for data service	No	0			
4.10	60 mm dia Steel 25 mm, round, multi-way for CCTV services	No	30			
4.11	100 x 50 x 50 mm galvanised steel for CCTV service	No	0			
4.12	100 x 100 x 50 mm galvanised steel for CCTV service	No	0			
4.13	60 mm dia PVC 25 mm, round, multi-way for access control/security services	No	32			
4.14	100 x 50 x 50 mm galvanised steel for access control/security servicε	No	16			
4.15	100 x 100 x 50 mm galvanised steel for access control/security service	No	0			
4.16	60 mm dia Steel 25 mm, round, multi-way for fire services	No	0			
4.17	100 x 50 x 50 mm galvanised steel for fire service	No	20			
4.18	100 x 100 x 50 mm galvanised steel for fire service	No	20			
4.19	200 x 200 x 50 mm galvanised steel for electronic services	No	1			
4.20	60 mm dia blank cover plate	No	92			
4.21	100 x 50 blank cover plate	No	56			
4.22	100 x 100 blank cover plate	No	20			

				Unit Price		
Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
				Kate	Rate	
4.23	200 x 200 blank cover plate	No	1			
4.24	60 mm dia steel blank cover plate	No	0			
4.25	100 x 50 blank steel cover plate	No	20			
4.26	100 x 100 blank steel cover plate	No	20			
5.	ELECTRONIC SERVICES CABLES The installation of electronic services cables.					
5.1	CAT 5 UTP unscreened solid conductor PVC cable (telecom services	m	950			
5.2	CAT 6 UTP unscreened solid conductor PVC cable (data services)	m	1250			
5.3	AV Cable Cable (Audio/Visual services)	m	100			
5.4	Speaker cabling (Audio/Visual services	m	100			
5.5	CAT 6 UTP unscreened solid conductor PVC cable (audio/viusal services	m	100			
5.6	Microphone Patch leads	m	60			
5.7	CAT 6 UTP Unscreened Solid Conductor PVC Cable (CCTV Services)	m	700			
5.8	3pair 0.5mm Overall Foil Screen PVC Cable (Access Control/Security	m	490			
5.9	0.5mm Ripcord (Access Control/Security Services)	m	150			
5.10	Alarm Cable (Access Control/Security Services)	m	0			
5.11	Fire Cable (Fire Alarm Services)	m	0			
5.12	Supply and install galvanised draw wire in conduit for all electronic service	m	212			
6.	SOCKET OUTLETS  The supply, delivery, installation and connecting of outlets complete with satin chrome cover plat to Crabtree Diamond Range (Steel).					
6.1	Telephone outlet point with cover (Power Skirting)	No	35			

	Description Unit (			Unit		
Item		Qty	Unit Labour Rate	Unit Material Rate	Total	
6.2	Data outlet point with cover (Power Skirting)	No	35			
7.	ANCILLARY EQUIPMENT					
7.1	42U Server rack - floor standing with perforated front and back door, 6 fans and 2 x vertical cable managers, 600mm x 1000mm deep.	No	1			
7.2	48-Port Gigabit Network Switch - Rack mountable, including power supply	No	2			
7.3	Rack Mount Server - Dual processor support, 2 x 8 Core, 3GHz CPU's included, 32GB DRAM DDR4 memory, RAID storage controller configured for RAID 5 with 100TB of storage.	No	1			
7.1	Enclosure for Access Control	No	2			
7.2	Access Control Controller	No	2			
7.2	Power Supply (Access Control/Security)	No	2			
7.3	Card Reader (Access Control/Security)	No	30			
7.3	Keypad (Access Control/Security)	No	30			
7.4	64 Channel NVR mounted in server rack, at least 40TB internal storage. Supports PoE	No	1			
7.5	22", 1920 x 1080p monitor for CCTV and Access Control monitoring	No	3			
7.6	CCTV Camera - Bullet type, rated for outdoor use (IP 65), PoE, 6mm Lens - 50° field of view.	No	15			
7.7	CCTV Camera - Bullet type, rated for outdoor use (IP 65), PoE, 4mm Lens - 90° field of view.	No	17			
7.8	CCTV Camera, Turret Mounted, Distinct Lens & Illuminator, PoE, 2.8mm Lens - 103° field of view	No	32			
7.9	Alarm back panel (Access Control/Security)	No	1			
7.10	Column mounted speakers	No	8			
7.11	X-Ray Baggage Scanner, Tunnel Dimensions of 615mm (W) x 410mm (H). Maximum load of 160kg even distributed on conveyor. Generator voltage of 140kV, display resolution of at least 1280 x 1024, sound level < 70dBA. To be 98/37/EWG & 89/336/EWG Complaint. To include basic operator training for 3 x persons	No	1			
			•			

				Unit Price		
Item	Description	Unit	Qty	Unit Labour	Unit Material	Total
				Rate	Rate	
'.12	Walk-Through Metal Detector, Internal Dimensions 2050 (H) x 720 (W) x 630 (D) mm. 230VAC, 50Hz supply, adjustable sensitivity. Conforming to "FAA 3-GUN-TEST" & NILECJ-0601-00 Standards. Visible Multi-Zon			***************************************	***************************************	
	adjustable sensitivity. Conforming to "FAA 3-GUN-1ES1" & NILECJ-0601-00 Standards. Visible Multi-Zon	No	<u>l</u>			
	display bar with audible alarms.					
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	TOTAL CARRIED FORWARD TO SUMMARY OF BILL OF QUANTITIES					

### BERGVILLE JUSTICE DEPARTMENT

BILL OF QUANTITIES LIST 8: PV SYSTEM

Item	Description			Unit		
		Unit	Qty	Unit Labour	Unit Material	Total
				Rate	Rate	
•	SOLAR SYSTEM					
	Supply, delivery, installation and commissioning of the following Solar Panels with angle supports fc					
1	Completed Street Section and Complete Section 2011 1 200 1 1 200 1 1 200 1 1 200 1 1 200 1 1 200 1 200 1 200 1	No	40			
.1	Supply, delivery, installation and commissioning of 400W Solar Panel, ± 2m x 1m, efficiency of a least 17% with angle supports for correct mounting angle	INO	40			
***************************************	least 1770 with angle supports for correct mounting angle				***************************************	
.2	Hybrid PV Grid-Tie Inverter 20kW, 3 Phase, Dual MPP trackers, Maximum PV DC input voltage of 1000VDC					
	Rated output power of 20kW. Must be able to function as a back-up power system, grid-tie system with					
	programmable supply priority. Must be able to detect and prevent power from being fed into the upstream					
	network when operating in grid-tie mode. NRS 097-2-1 complaint and approved	No	1			
	The state of the s					
.3	Rack-mounted Lithium-Ion Battery Pack in 20U floor standing cabinet. Cabinet to have ventilated front and re-					
	panels. Battery BMS to be able to interface with Hybrid PV Grid-Tie inverter. Battery capacity of approximatel 12kWh, 48V.	No	1			
	12KWII, 40V.	INO	1			
.4	DC Combiner box, with necessary ancilliary equipment, including fuses, terminal blocks and isolators	No	1			
• • • • • • • • • • • • • • • • • • • •	Z C COMONDO COM, TOM DECOME, MICHAEL COMONDO COMONDO COMO COMO COMO COMO COMO COMO COMO CO	1,0	-			
.5	XLPO 6mm² Cu single core cable for interconnection of solar panels (Red)	m	60			
.6	XLPO 6mm <sup>2</sup> Cu single core cable for interconnection of solar panels (Black)	m	60			
.7	Ancilliary equipment ( MC4 connectors, mounting hardware, lugs etc.	C	1			
. /	Anchinary equipment ( MC4 connectors, mounting nardware, fugs etc.	Sum	1			
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	TOTAL CARRIED FORWARD TO SHMMARY OF BILL OF QUANTITIES					
	TOTAL CARRIED FORWARD TO SUMMARY OF BILL OF QUANTITIES					

# BERGVILLE JUSTICE DEPARTMENT BILL OF QUANTITIES SUMMARY

LIST	DESCRIPTION	AMOUNT
LIST 1:	PRELIMINARY AND GENERAL	
LIST 2:	LV NETWORK	
LIST 3:	AREA LIGHTING	
LIST 4:	DISTRIBUTION BOARDS	
LIST 5:	ELECTRICAL SERVICES	
LIST 6:	LUMINAIRES	
LIST 7:	ELECTRONIC SERVICES	
LIST 8:	PV SYSTEM	
SUBTOTA	L A	
Plus: Conti	ingency (10 %)	
SUBTOTA	L B	
Plus: 15 %	VAT	
TOTAL C	ONTRACT PRICE	