



Item	Description	Unit	Qty	Material price	Install price	Amount
	Bill No.					
	Wiring and Conduits					
	The rates for cable trays shall include for hangers, splices, jointing, drilling; Conduit includes all bends, tee-pieces, joints, locknuts etc.					
7.1	Cabling					
7.1.1	2.5mm <sup>2</sup> Bare Copper Earth Wire	m	20000			
7.1.2	2.5mm <sup>2</sup> PVC SWA Cable	m	20000			
7.1.3	4mm <sup>2</sup> Bare Copper Earth Wire	m	12600			
7.1.4	4mm <sup>2</sup> PVC SWA Cable	m	12600			
7.1.5	6mm <sup>2</sup> Bare Copper Earth Wire	m	1000			
7.1.6	6mm <sup>2</sup> PVC SWA Cable	m	1000			
7.1.8	10mm <sup>2</sup> Bare Copper Earth Wire	m	1000			
7.1.9	10mm <sup>2</sup> PVC SWA Cable	m	1000			
7.1.10	16mm <sup>2</sup> Bare Copper Earth Wire	m	1000			
7.1.11	35mm <sup>2</sup> PVC SWA Cable	m	1000			
7.2	Cable Terminations					
7.2.1	2.5mm <sup>2</sup> PVC SWA Cable + 2.5mm <sup>2</sup> Bare Copper Earth Wire per 100	set	4			
7.2.2	4mm <sup>2</sup> PVC SWA Cable + 4mm <sup>2</sup> Bare Copper Earth Wire per 100	set	4			
7.2.3	6mm <sup>2</sup> PVC SWA Cable + 6mm <sup>2</sup> Bare Copper Earth Wire per 100	set	4			
7.2.4	10mm <sup>2</sup> PVC insulated cu cable per 100	set	4			
7.3	Conduits and Accessories					
	Galvanized					
7.3.1	25mm diameter	m	70			
7.3.2	20mm diameter Steel Conduit Pipe	m	250			
7.3.3	20mm diameter Steel Couplings per 100	set	10			
7.3.4	20mm diameter Steel Adaptors per 100	set	10			
7.3.5	20mm diameter Steel Saddles per 100	set	5			
7.3.6	25mm diameter round galvanized conduit box per 100	set	5			
7.3.7	20mm diameter round galvanized conduit box per 100	set	10			
7.3.8	100 x 50 x 50mm deep wall box per 100	set	2			
7.3.9	100 x 100 x 50mm deep wall box per 100	set	5			
7.3.10	White steel cover plate 100 x 50 x 50mm deep wall box per 100	set	2			
7.3.11	White steel cover plate 100 x 100 x 50mm deep wall box per 100	set	2			
7.3.12	White steel cover plate for 25mm round conduit box per 100	set	2			
7.3.13	White steel cover plate for 20mm round conduit box per 100	set	2			
	PVC					
7.3.14	32mm diameter PVC conduit chased in brickwork	m	Rate only			
7.3.15	25mm diameter PVC conduit chased in brickwork	m	1500			
7.3.16	20mm diameter PVC conduit chased in brickwork	m	1800			
7.3.17	25mm Diameters x 300mm long complete with connectors at both ends	Set	4			
7.3.18	20mm Diameters x 300mm long complete with connectors at both ends	Set	10			
7.3.19	Round conduit box for 25mm diameter conduit	Set	5			
7.3.20	Round conduit box for 20mm diameter conduit	Set	20			
7.4	Power Skirting					
7.4.1	Three Compartment PVC straight length power skirting complete with cover surface mounted to brickwork or concrete (Grey)	m	700			
7.4.2	Three Compartment PVC 90deg vertical bend ( Grey)	Item	18			
7.4.3	Three Compartment PVC 90deg grey internal/external bend	Item	50			
7.4.4	Three Compartment PVC grey vertical tee-piece	Item	20			
7.4.5	Three Compartment PVC grey end cap	Item	64			
7.5	Wiring Channels for Lighting					
	Hot dipped galvanised steel channel complete with galvanised cover fixed/suspended from steel trusses or concrete slab with and including hangers, etc.exceeding 3000 mm above floor level					
7.5.1	P8300 channel (0.8 mm thick) straight sections	m	240			
7.5.2	90-degree horizontal bends; P8300	Item	20			
7.5.3	90-degree external/internal bends; P8300	Item	10			
7.5.4	3-way tee; P8300	Item	10			
7.5.5	End Cap; P8300	Item	10			
7.6	Cable Trays					
	Hot dipped galvanised steel cable tray suspended from steel trusses or concrete slab, including hangers, etc., not exceeding 3000 mm above floor level					
7.6.1	228 mm medium duty cable tray	m	15			
7.6.2	90-degree horizontal bend: 228 mm medium duty cable tray	Item	Rate only			
7.6.3	90-degree internal/external bend: 228 mm medium duty cable tray	Item	Rate only			
7.7	Electrical Junction Boxes					
	Surface-mount electrical junction box, IP67 complete with earth terminal, cable glands and inner seals					
7.7.1	3-way electrical junction box for 4mm <sup>2</sup> 4C PVC SWA Cable	Item	52			
7.8	Test and Commissioning					
7.8.1	Test and Commissioning	Sum	1			
	TOTAL (Excluding VAT)					



Item	Description	Unit	Qty	Material price	Install price	Amount
<b>Bill No. 9</b>						
<b>Fire Detection</b>						
9.1.1	4 Loop analogue addressable, 16 zone fire panel. Must be EN54 and EN54-4 certified. Minimum three level menu with password protection. Up to 48 hours standby time on batteries	Item	1			
9.1.2	Status unit to connect to analogue addressable fire panel	Item	1			
9.1.3	28Ah, 12V sealed lead acid batteries, compliant with fire panel	Item	2			
9.1.4	Addressable optical smoke detector	Item	32			
9.1.5	Addressable heat detector	Item	8			
9.1.6	Addressable sounder/beacon detector base	Item	25			
9.1.7	Addressable detector base	Item	12			
9.1.8	Fire extinguisher	Item	12			
9.1.9	Statutory Signage	Item	12			
9.1.10	Addressable manual call point with back box, resettable element and clear hinged flap	Item	12			
9.1.11	15mm, 1Pr, Screened, PH120 Fire rated cable	m	2500			
9.1.12	26mm Galvanised conduit, includes all fixings, fillings, back boxes, draw boxes etc	m	900			
9.1.13	Door interface junction box with addressable relay to open door on a fire signal	Item	1			
9.1.14	As-Built drawings, line diagrams etc	Sum	1			
9.1.15	User and Maintenance	Sum	1			
9.1.16	End user training	People	8			
9.2	<b>Test and Commissioning</b>					
9.2.1	Test and Commissioning	Sum	1			
<b>TOTAL (Excluding VAT)</b>						

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Item	Description	Unit	Qty	Material price	Install price	Amount
	<b>Bill No. 10</b>					
	<b>BMS</b>					
10.1	<b>CCTV</b>					
10.1.1	NV11-5231 - 2MP Fixed Vandal Proof Dome camera H 265 (IMX290-H3516D) with IntelliVision Standard VCA (Intelligent Motion / Intrusion / Tampering), 1/2.8" CMOS 2MP@30fps, Quad streaming, D/N(ICR), True WDR, 2D/3DNR, Smart codec with dynamic ROI (Hi-Stream), 3.7mm Lens, 24IR LEDs, Alarm In/Out (1/1), Audio In/Out (1/1), 12VDC/PoE	Item	20			
10.1.2	NV11-6431 - 4MP MVF IR Bullet camera H 265 (OV4689-H3516A) with IntelliVision Professional VCA (Intelligent Motion / Intrusion / Tampering / Line Detector (Counting) / Loitering / Human Detect), 1/3" CMOS 4MP@30fps, Quad streaming, D/N(ICR), True WDR, 2D/3DNR, Smart Focus (P-Iris), Smart codec with dynamic ROI (Hi-Stream), Motorized Varifocal 2.8-12mm Lens, 34IR LEDs, Alarm In/Out (1/1), Audio In/Out (1/1), 12VDC/PoE	Item	16			
10.1.3	1TB External Hard Drive	Item	1			
10.1.4	Poax (coax+power) Cable	m	1000			
10.1.5	12VDC Power Cables To Connect The Cameras To RG-59	Set	2			
10.1.6	BNC Connectors and Lugs/50	Set	2			
10.1.7	25mm <sup>2</sup> Steel Conduit pa	m	1000			
10.1.8	25mm <sup>2</sup> Conduits Joints	Set	5			
10.1.9	12VDC Power Supply Unit with Switch Mode For Cameras (optional)	Item	1			
10.1.10	42"42" LCD Screen	Item	1			
10.1.11	24"24" LCD Screen	Item	4			
10.1.11	24 Channels DVR	Item	1			
10.2	<b>Access Control</b>					
10.2.1	D10 Centurion Sliding Gate motor complete with rack and baseplate and remote control transmitter 4Button with batteries	Item	1			
10.2.2	Magnetic Lock Complete with Card Reader and Push Button	Item	5			
10.2.3	Remote controller circuit board	Item	10			
10.3	<b>Cable Baskets</b>					
	The rate for cables baskets shall include for hangers, splices, jointing, drilling etc.					
	Hot dipped galvanised steel cable basket suspended from steel trusses or concrete slab, including hangers,etc, not exceeding 3000mm above floor level					
10.3.1	50 mm medium duty cable basket	m	320			
10.3.2	150 mm medium duty cable basket	m	160			
10.3.3	300 mm medium duty cable basket	m	18			
10.3.4	90-degree horizontal bend: 50mm medium duty cable basket	Item	22			
10.3.5	90-degree horizontal bend: 150mm medium duty cable basket	Item	11			
10.3.6	90-degree horizontal bend: 300mm medium duty cable basket	Item	Rate only			
10.3.7	3-way tee: 50 mm medium duty cable	Item	6			
10.3.8	3-way tee: 150 mm medium duty cable	Item	4			
10.3.9	3-way tee: 300 mm medium duty cable	Item	1			
10.5	<b>PVC Conduit</b>					
	Conduit includes all bonds, tee-pieces, joints, locknuts etc.,					
	Chased and/or fixed in brickwork/drywall or cast in concrete not exceeding 3000mm above floor level					
10.5.1	25mm diameter	m	190			
10.6	<b>Conduit boxes and fittings</b>					
10.6.1	100 x 100 x 50 mm deep wall box	Set	2			
10.6.2	White steel cover plate for 100 x 100 x 50 mm deep well	Set	2			
10.7	<b>Test and Commissioning</b>					
10.7.1	Test and Commissioning	Sum	1			
	<b>TOTAL (Excluding VAT)</b>					

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FINAL SUMMARY		Page No	Amount
Section No			
1	PRELIMINARIES AND GENERAL		
2	MAIN SUPPLY		
3	LOW VOLTAGE		
4	SOCKET OUTLET		
5	LIGHTING		
6	LIGHTNING PROTECTION		
7	CABLING&CONDUIT		
8	BACKUP SUPPLY		
9	FIRE DETECTION		
10	BMS		
	SUB-TOTAL		
	CARRIED TO FINAL SUMMARY		

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## MECHANICAL BILLS OF QUANTITIES



## HUKU POLICE STATION - MECHANICAL ENGINEERING SERVICES

## BILL OF QUANTITIES


ITEM	DESCRIPTION	UNIT	QTY	RATE LABOUR	RATE MATERIAL	TOTAL
.01	Testing and Commissioning of the entire installation	sum	1			
.02	Guarantee and Maintenance					
.01	1 Year maintenance & guarantee on the entire installation.	sum	1			
.02	24 Month extended maintenance & guarantee.	sum	1			
.03	Rigging/Hoisting of Units and Ducting Including all costs related to the transport, hire and usage of the equipment for all rigging relevant to the installation.	sum	1			
.04	Ducting Including all accessories, fittings, installation, etc to ensure a fully functioning system as per the specifications and relevant standards.					
.01	Rectangular ducting					
.01	Category 1 - 200 x 200mm	m	10			
.02	Category 2 - 125 x 125mm	m	25			
.02	Round ducting					
.01	Category 6 - Ø100mm	m	10			
.02	Category 6 - Ø200mm	m	1			
.03	Category 6 - Ø300mm	m	1			
.05	Duct Fittings Including all accessories, fittings, installation, etc to ensure a fully functioning system as per the specifications and relevant standards.					
.01	Category 1					
.01	Rectangular stop end	No	12			
.02	Square to round transformation	No	12			
.03	Rectangular shoe	No	6			
.04	Rectangular transformation	No	1			
.05	Rectangular bend	No	1			
.06	double rectangular bend	No	1			
.02	Spigot					
.01	Category 6 - Ø100mm	No	22			
.02	Category 6 - Ø200mm	No	1			
.03	Category 6 - Ø300mm	No	1			
	Amount Carried Forward				R	

  
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ITEM	DESCRIPTION	UNIT	QTY	RATE LABOUR	RATE MATERIAL	TOTAL
	Amount Brought Forward				R	
06	<b>Duct Accessories</b> Including all accessories, fittings, installation, etc to ensure a fully functioning system as per the specifications and relevant standards.					
	.01 1500mm long accoustic flexible ducting including two clamps					
	.01 Ø100	No	25			
	.02 Ø200	No	1			
.07	<b>Air Terminals</b> Including all accessories, fittings, installation, etc to ensure a fully functioning system as per the specifications and relevant standards. Colour as per architect.					
	.01 Weather louvres					
	.01 300 x 300 (WL01)	No	5			
	.02 200 x 200 (WL02)	No	1			
	.03 400 x 300 (WL03)	No	1			
	.02 Disk valve					
	.01 150 dia (DV01)	No	20			
	.02 200 dia (DV02)	No	1			
	.03 Security transfer air grill					
	.01 150 x 150(TG01) - Mutual and Austen or similarly approved by Mechanical Engineer	No	16			
	.04 Door grille					
	.01 400 x 400 (DG1)	No	19			
.08	<b>Fans</b>					
	.01 Axial flow Fan, C/W intake, discharge cowl, WMS, flexible connections, mounting feet, spring mounts and flanges as specified, suitable electrical connection wiring (3m long) between isolator and fan terminals, tested, installed and commissioned in position as per specification.					
	.01 250 l/s @ 240 E.S.P (EF 1)	No	1			
	.02 100 l/s @ 240 E.S.P (EF 2)	No	4			
	.04 1680 l/s @ 235 E.S.P (EF 4)	No	1			
	Amount Carried Forward				R	

  
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ITEM	DESCRIPTION	UNIT	QTY	RATE LABOUR	RATE MATERIAL	TOTAL
	<b>Amount Brought Forward</b>				R	
.02	Wall Fan, C/W outdoor louver sized to suite fan, all required accessories to ensure a fully functional installation and suitable electrical connection wiring (3m long) between isolator and fan terminals, tested, installed and commissioned in position as per specification.					
.01	300 x 300 - 60l/s @ 100 E.S.P (EF3)	No	10			
.09	<b>Direct extract system</b> Hygizone(or equally approved) including builders work coordination, Installation, Testing, Commissioning. All					
.01	5l/s @ 125Pa Standard flush master system (DE)	No	1			
.02	5l/s @ 125Pa Urinal chrome system (DE)	No	1			
.10	<b>AC UNITS</b> Air cooled console and split air-conditioning units Inverter heat pump type, R410 refrigerant, to specification, tested and installed. Including all necessary refrigerant, refrigerant piping, condensate piping, trunking, electrical connections, control wiring, HARD WIRED REMOTE CONTROLLER, unit strut brackets, mounting accessories etc to ensure a fully functioning system as per the standards and specification.					
.01	<b>Office Midwall split Units:</b>					
.02	<b>C1</b> 8 kW (Nominal Cooling capacity) including all accessories	No	19			
.02	<b>Midwall split Units:</b>					
.01	<b>Telephone/ Server Room - (C2)</b> 8 kW (Nominal Cooling capacity) including all accessories	No	5			
.03	<b>Cassette Split Units - (C3)</b>					
.01	8 kW (Nominal Cooling capacity) including all accessories	No	3			
	<b>Amount Carried Forward</b>				R	

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ITEM	DESCRIPTION	UNIT	QTY	RATE LABOUR	RATE MATERIAL	TOTAL
	Amount Brought Forward				R	
.04	Mid-Wall Split Units - (C4)					
.01	10 kW (Nominal Cooling capacity) including all accessories	No	1			
.11	Condensate piping Including all accessories, fittings, installation, etc to ensure a fully functioning system as per the specifications and relevant standards.					
.01	uPVC piping and fittings (Insulated)					
.01	Ø12 mm	m	280			
.02	Ø25 mm	m	20			
.12	Refrigerant piping For rate purposes only, actual refrigerant piping to be included in AC unit Price as per item No 11 (AC unit)					
.01	3.5 kW Cassette unit	m	1			
.02	5 kW Cassette unit	m	19			
.03	6 kW Cassette unit	m	1			
.04	7.1 kW Cassette unit	m	3			
.05	10 kW Cassette unit	m	1			
.06	7 kW Midwall unit	m	5			
.13	Dehumidifiers Mechanical dehumidifier including installation, electrical termination, condensate piping and all accessories required to ensure a fully functioning system					
.01	10 l/day @ 30°C and 80%RH - (DH)	No	2			
	DOMESTIC HOT WATER EQUIPMENT					
.14	Heat Pumps Including electrical termination, Installation, Connection of water pipes, Sheet metal cover as per drawing detail. And all accessories required to ensure a fully functioning					
.01	200 litre Alliance ALWH 5.0kW Vertical integrated heat pump unit complete with matching 170L geyser	No	4			
	Amount Carried Forward				R	

ITEM	DESCRIPTION	UNIT	QTY	RATE LABOUR	RATE MATERIAL	TOTAL
	Amount Brought Forward				R	
.15	<b>Hydroboil Units</b> Including electrical termination, Installation, Connection of water pipes, to ensure commissioning and all accessories required to ensure a fully functioning system. .01 10Litre Kwikot FPRX-10-OB or similar approved by Mechanical Engineer .02 30Litre Kwikot FPRX-30-OB or similar approved by Mechanical Engineer  <b>KITCHEN EQUIPMENT</b>	No	4			
.16	<b>Stove</b> Including electrical termination, Installation And all accessories required to ensure a fully functioning system .01 1000 x 850mm VULCAN R-E3- T	No	1			
.17	<b>Pot</b> Including electrical termination, Installation And all accessories required to ensure a fully functioning system .01 ø 1000mm VULCAN BP225	No	1			
.18	<b>Extraction Canopy</b> Including electrical termination, installation, ducting, fan and all accessories required to ensure a fully functioning system .01 2500 x 1450mm canopy	No	1			
	<b>FIRE PROTECTION EQUIPMENT</b>					
.19	<b>Fire Booster Pump</b> Including electrical termination, installation and all accessories required to ensure a fully functioning system as per the relevant SANS standards .01 5l/s @ 500kPa	No	1			
.20	<b>Fire Extinguishers</b> Including testing, certification, installation as per the relevant SANS standards .01 4.5kg Dry Chemical powder extinguisher .02 10kg Carbon Dioxide extinguisher .03 5kg Carbon Dioxide extinguisher	No	8			
	Amount Carried Forward				R	

ITEM	DESCRIPTION	UNIT	QTY	RATE LABOUR	RATE MATERIAL	TOTAL
	Amount Brought Forward				R	
.21	<b>Fire Hose Reel</b> Including testing, certification, installation as per the relevant SANS standards					
	.01 30m Ø25 Hosereel	No	4			
.22	<b>Fire Blanket</b>	No	1			
.23	<b>Fire water piping</b> Including all accessories, fittings, installation, etc to ensure a fully functioning system as per the specifications and relevant standards.					
	.01 uPVC class 6 piping and fittings					
	.01 Ø75 mm	m	400			
	.02 Ø50 mm	m	150			
.24	<b>Fire Hydrant</b> Including all accessories, fittings, installation, etc to ensure a fully functioning system as per the specifications and relevant standards.					
	.01 65mm Fire Hydrant Valve with Stand pipe and anchor	No	5			
.25	<b>DOMESTIC SOLAR &amp; ELECTRICAL BOOSTER AND SOLAR &amp; ELECTRICAL BOREHOLE PUMP SERVICES</b>					
1	<u>For the complete supply, delivery and installation of the hot and cold water pipe service system, cutting and making good hangers, etc. valves, fittings, pipe joining and painting, insulation, etc as specified on drawings.</u>					
1.1	For the complete supply, delivery and installation of the pressure reducing station of the cold water supply, including all fittings and necessary accessories as specified.					
1.1.1	50mm diameter					
1.1.2	pressure reducing valve set @ 400[kPa]	no	1			
1.1.3	strainer	no	1			
1.1.4	non-return valve	no	1			
1.1.5	Ball valve	no	1			
	Amount Carried Forward				R	

ITEM	DESCRIPTION	UNIT	QTY	RATE LABOUR	RATE MATERIAL	TOTAL
	Amount Brought Forward				R	
2	<b><u>DOMESTIC BOOSTER PUMPS:</u></b>					
2.1	Solar powered Grundfos Multi-E 2 CRE 3-5 centrifugal multistage package pump driven by two (2) 1,2 kW motors, stainless steel housed compact, robust, easy installed booster pump system comprising one duty and one standby pump featuring constant pressure solar panel with pole, integrated speed control, pressure sensor monitoring to adapt performance according to demand, dry-run protection, integrated frequency converters, 5-way valve, expansion tank, pressure gauge, manometer, thermal protection against slow over loading and blocking, pump speed of 3480 rpm, actual calculated flow of 7.2 m <sup>3</sup> /h (2 l/s) @ 30m head, maximum current consumption of 7,8 to 6,6 A (amps), rated power of 1,2 -1,5 kW, mains frequency of 50 Hz and rated voltage of 220V, with control panel, software and all accessories and brackets to deem installation complete.	No	1			
2.2	<b><u>STRAINERS</u></b> <u>For the supply, delivery and installation of the strainers in accordance with the project specification. Complete with</u>					
2.2.1	50 mm dia epoxy coated and lined strainer with element	No	2			
3	<b><u>VALVES</u></b>					
3.1	<b><u>RELUX (NON-RETURN) VALVES</u></b> For the supply, delivery and installation of the relux valves					
3.3.1	50mm dia brass (SANS approved)	No	2			
3.2	<b><u>GATE VALVES :</u></b> For the supply, delivery and installation of the gate valves					
3.2.1	50mm dia (SANS approved)	No	2			
4	<b><u>BOREHOLE PUMP:</u></b>					
4.1	The Drilled Borehole must meet the following minimum					
	a) The drilling diameter will be a minimum of 6.5 inches.	Note				
	b) Contractor will install plain and screen casings of minimum 103 mm inside diameter, DIN 4925 trapezoidal threads, and flush joints.	Note				
	Amount Carried Forward				R	

ITEM	DESCRIPTION	UNIT	QTY	RATE LABOUR	RATE MATERIAL	TOTAL
	Amount Brought Forward				R	
	<p>c) The contractor will install gravel packs of approved quality collected from river beds and will not use laterite. The quantity of gravel pack will be selected and approved in accordance with the aquifers' requirements.</p>	Note				
	<p>d) Boreholes must be developed after completion of drilling, after casing, screen, and filter packs are installed. The boreholes will be developed by airlifting for a minimum of 3 hours and until satisfactory yield is reached, stabilized and turbidity is less than 5 NTU. During development, contractors will proceed with static water level measurement.</p>	Note				
	<p>e) A minimum 4 hour pump-test and 2 hour recovery test will be conducted after development of each borehole. The pump-test will be conducted with a submersible pump capable of delivering at least 3000 liters per hour at the foreseen depth of the solar power driven submersible pump installation.</p>	Note				
	<p>f) The borehole is considered productive, positive or successful if a minimum yield of 2,500 litres per hour is measured during the 4 hour pump test. UNDP will only pay for successful boreholes.</p>	Note				
	<p>g) The apron of the platform is the standard design used in Southern Sudan. A welded mesh should be cast with C-20 concrete of standard thickness.</p>	Note				
	<p>h) Boreholes must be disinfected using the required calculated amount of chlorine solution.</p>	Note				
	<p>i) Boreholes will be guaranteed for one year after completion.</p>	Note				
4.2	<p><b>Drilling and Installation of Bore hole</b></p> <p>Drilling with minimum 6.5 Inches bit up to a depth of 70 metres from the existing ground level, Supply and install steel casing 4" in diameter ( external diameter) with minimum thickness of 3mm; Supply and install filter pack. Note that the borehole should have a daily minimum output of 15,000liters.</p>	item	1			
	Amount Carried Forward				R	




ITEM	DESCRIPTION	UNIT	QTY	RATE LABOUR	RATE MATERIAL	TOTAL
	Amount Brought Forward				R	
4.3	<b>Bore Hole development</b>  Allow for the development of the well using air or water jetting method as recommended by the hydrologist	item	1			
	Allow for the disinfection of the bore hole , and carrying out a water chemical analysis comprising of chemical tests, bacterial and trubidity tests on 2No. Samples, and analyse the mineral composition of the water and check whether the water is safe for drinking and other human uses from the concerened government organization.	item	1			
4.4	<b>Submersible Solar Pump Installation</b> Supply and install a submersible solar & electrical water pump that can pump out water at least from 100m deep well, and pumps up the same into a water tank at a level 10.0m higher than the ground level where the pump. The discharge should not be less than 1500 liters per hour ;	item	1			
4.4.1	Note that the pump shall be make GRUNDFOS SQF2.5-2 or SQF3A-10 or SQF5A-7(pump selection shall depend on performance pump test results after well cleaning).					
4.5	<b>Solar Power For the pump above(4.4.1)</b>  Supply and install a solar power system that can run the submersible pump mentioned above up to its maximum output. The rate shall include supply and installation of supporting structures, fencing by chain link, if required, connecting with the pump and other related activities, if any that will make the pump function well. The solar panel support stand shall be angle bars with sise 50*50*3mm coat finished , or aluminium. Foundation should be reinforced concrete. The design shall be presented to the engineer for approval prior to implementation. Note that the solar power does not need any backup.	item	1			
4.5.1						
	Amount Carried Forward				R	

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ITEM	DESCRIPTION	UNIT	QTY	RATE LABOUR	RATE MATERIAL	TOTAL
	Amount Brought Forward				R	
4.6	<b>UPVC PIPING</b> For the supply, delivery and installation of Class 16 UPVC piping (Measured as provisional) SANS approved in accordance with the project specification. Including all pipe supports as specified in the General Mechanical Specification:					
4.6.1	50mm dia (SANS approved) set 2 off	m	20			
4.6.2	32mm dia (SANS approved) set 2 off	m	20			
4.7	<b>UPVC FITTING FOR PIPING</b> For the supply, delivery and installation of Class 16 UPVC pipe fittings SANS approved in accordance with the project specification.					
4.7.1	50mm dia equal T	No	10			
4.7.2	50mm dia 90 degree bends	No	12			
4.7.3	50mm to 50mm dia reducing T	No	3			
4.7.4	50mm to 32mm dia reducing T	No	2			
4.7.5	50mm connection to 50mm dia HDPE piping	No	1			
4.7.6	32mm dia equal T	No	10			
4.7.7	32mm dia 90 degree bends	No	13			
4.7.8	50mm connection to 32mm dia HDPE piping	No	6			
4.8	<b>GALVANISED PIPING</b> For the complete supply, delivery and installation of galvanised medium class piping (conform to SANS 10400) including all valves, fittings, hangers, brackets & supports, pipe sleeves, insulation and cladding, wrapping in brown paper and necessary accessories as specified.					
4.8.1	50mm dia	m	30			
4.8.2	50mm dia wrapped in protective bituminous coating/tape, laid under ground in accordance with manufacturer's recommendations.	m	30			
4.9	<b>GALVANISED FITTING FOR PIPING</b>					
4.9.1	50mm dia outlet union with connection for galvanised steel pipe including hole through the water sectional tank.	No	5			
4.9.2	50mm dia 90 degree bends	No	12			
4.9.3	50mm dia connection to dia 50 uPVC piping	No	2			
	Amount Carried Forward				R	

*[Signature]*  
Col Mahumede H 22.10.20

ITEM	DESCRIPTION	UNIT	QTY	RATE LABOUR	RATE MATERIAL	TOTAL
	Amount Brought Forward				R	
5	<b>ELECTRICAL</b>					
5.1	For the supply, delivery and installation of all electrical requirements in accordance with the project specification and SANS 1042.	No	1			
5.2	Motor Control Centre Panel For Domestic Booster pumps	No	1			
5.3	Cabling to connect from electrical isolator to Domestic	Sum	1			
5.4	Emergency stops with wiring at each pump	No	3			
5.5	Galvanised conduit to run cabling in	Sum	1			
5.6	Labelling of all equipment as specified.	Sum	1			
5.7	Earthing of all equipment in pump room to earth to clean	Sum	1			
.26	<b>GENERAL ITEMS</b>					
1	Allow for builders work, drilling and making good of holes through slabs or walls including sleeves.	Item	1			
2	Allow for Commissioning and testing the complete installation as specified.	Item	1			
3	Allow for three sets of maintenance and operation manuals, including wiring diagrams, test certificates, spare part lists as specified.	Item	1			
4	Mark and number valves, equipment and pipe work according to operating instructions and specification.	Item	1			
5	Allow for twelve months free maintenance and guarantee.	Item	1			
6	Allow for preparation of workshop drawings and printing.	no	3			
7	Allow for instructing the clients staff in the correct operation of the installation.	Item	1			
	<b>TOTAL EXCLUDING VAT</b>					
	Total transferred to the Final Summary of the Bills of Quantities				R	

  
Col Mabo-mbo

*CONSTRUCTION OF HUKU NEW POLICE STATION: EASTERN CAPE  
PROVINCE*

*BID: 19/1/9/1/49 TB (23)*

**PART C:**

**CONTRACT**

**Part C 3**

**Scope of Work**

**PLEASE TAKE NOTE THAT THE DRAWINGS AND SPECIFICATIONS  
ARE ON THE (CD) THAT WAS ISSUED WITH THIS BID DOCUMENT.**

# APPOINTMENT OF A CONTRACTOR: CONSTRUCTION OF A NEW POLICE STATION; HUKU: EASTERN CAPE PROVINCE

July 2023

## SCOPE OF THE WORKS

The construction of the proposed new police station works includes:

- Community service Centre
- Single storey cell block
- Public administration block/offices
- General stores
- Crime investigation offices
- Car wash bay and covered parking
- Generator yard with ancillary site works

## EXTENT OF THE WORKS

Works included in this contract comprises of the construction and completion of a new police station with services that includes the Fire Reticulation, Electrical and Air conditioning installation to all buildings. The site works comprises of bulk earthworks, landscaping, paving, perimeter fencing with gates and carports. The total area of building is approximately 1200 m<sup>2</sup>

## LOCATION OF THE SITE

Portion 7 of the farm Mandileni No. 88 within the Umzimvubu municipality in the Eastern Cape. The site can be identified by the following Latitude and Longitude

Site Co-ordinates: S 30° 43' 19.60" E 28° 48' 21.72"

SM

# APPOINTMENT OF A CONTRACTOR: CONSTRUCTION OF A NEW POLICE STATION; HUKU: EASTERN CAPE PROVINCE

## DRAWINGS

See attached consultants drawing list for Architect, Mechanical, Electrical, and Structural & Civil Engineering.

## CONSTRUCTION

### **APPLICABLE STANDARDISED SPECIFICATIONS**

Although not bound in nor issued with this document, the latest issue of all relevant SABS specifications as well as the Model Preambles for Trades (2017 edition) as published by the association of South African Quantity Surveyors shall form part of the contract document.

### WATER SUPPLY

Water is not available for construction purposes and the Contractor must make his/her own arrangement for water supply to the site. The contractor will be responsible at his or her own cost for the supply and distribution of water for construction use.

### ELECTRICAL SUPPLY

Electrical power is not available for construction purposes and the Contractor must make his/her own arrangement for electrical power supply to the site. The contractor will be responsible at his or her own cost for the supply and distribution of electricity for construction use.

### CONSTRUCTION PROGRAMME

The successful tenderer shall submit a detailed program, within fourteen days after site handover date, showing a detailed order of procedure and methodology in which he / she proposes to carry out the Works. The program shall reflect the completion times as reflected on the tender form and the program shall include a bar chart to show the proposed scheduling and methods of execution of the works and the resources to be allocated to each item or phase of the work.

## **APPOINTMENT OF A CONTRACTOR: CONSTRUCTION OF A NEW POLICE STATION; HUKU: EASTERN CAPE PROVINCE**

### **SUPERVISION**

Work shall at all times be subject to full time supervision by a competent supervisor who must be authorized to receive instructions and take decisions on behalf of the Contractor.

### **OCCUPATIONAL HEALTH AND SAFETY ACT 1993 (Act 85 of 1993)**

The Contractor must comply with all the requirements set out in the Health and Safety Specification.

### **PAYMENTS**

All claims for interim payments must be certified by the Principal Agent. Payment for materials on site will only be allowed if documentary proof is submitted that the contractor is the lawful owner of the materials. The contractor is referred to the contract data regarding the security clause applicable to this contract.

### **INSTRUCTIONS TO THE CONTRACTOR**

Any instructions related to this contract must be given in writing and must be recorded in the site instruction book which will be available on site at all times. The site instruction book must be provided by the contractor. No alterations, variations, instructions, requests, etc. will be allowed unless authorized by the SAPS or the duly authorized representative. No claims for extra work, without written authorization and/or instructions from the SAPS will be entertained.

It should be noted that no additional work any other than that was included in the bills of quantities or any Variation Orders may be executed before an official instruction is received from the Principal Agent

### **GENERAL LABOUR**

It is an explicit condition of this tender that only persons normally residing in the locality of the works (local labour) may be employed on the contract with respect to labour intensive scope. Provided, however, that should adequate and appropriate labour not be available within the locality, other labour may be employed subject to satisfactory proof being provided that every reasonable endeavour has been made to employ labour from the immediate locality.



## **APPOINTMENT OF A CONTRACTOR: CONSTRUCTION OF A NEW POLICE STATION; HUKU: EASTERN CAPE PROVINCE**

The contractor shall identify the local community leaders with the purpose of negotiating with them regarding the utilisation of local labour in the construction process. In this regard the contractor shall furthermore give preference, wherever possible to the employment of single heads of households, women and youth. The contractor shall in general maximise the involvement of the local community.

*CONSTRUCTION OF HUKU NEW POLICE STATION: EASTERN CAPE  
PROVINCE*

**PART C:**

**CONTRACT**

**Part C4**

**Occupational Health and Safety:**

**PLEASE TAKE NOTE THAT THE OHS- SPECIFICATION IS INCLUDED  
ON THE CD THAT WAS ISSUED WITH THIS BID DOCUMENT.**