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	TWIN RCC chanel 600mm deep 250mm wide ;200mm thick walls with 12mm steel bars at 150mm spacing with 8mm binders at 150mm ;overlying a concrete base 150mm thick with smooth finishes;groove 50mmwith angle edge nosing with grating heavy duty made of 25mm twisted bar on a 50x50 angle franming perfectly fitting the groove	LM	8		
	150mm Thick P.V.C HD Stormwater drainage pipe : including excavation not exceeding 500mm deep (average 4500mm) and backfilling to approval. Starting and terminating at manhole chambers to all switchyard manhole drain pits	LM	100		
E	SOAKPIT-DIAMETER 1200mm				
a	Excavation and cart away 0-3m	LM	3		
b	Excavation and cart away 3-6m	LM	3		
c	Excavation and cart away 6-9m	LM	3		
d	Excavation and cart away 9-12m	LM	3		
e	Excavation and cart away 12-17m	LM	5		
	Allow for construction of masonry blocks minimum 1.2m top depth and covering with RCC slab 150mm thick with 12 mm steel at 150mm spacing including all provisions for concrete ,steel and builders work	ITEM	1		
	Connection and termination of all incomming strom water with ogees and drain pipes.	ITEM	1		
	REHABILITATION WORKS				
	Rehabilitate existing trenches by hacking all edges ,making 150x300mm grooves at 500m spacing,and casting lean concrete in 1/2" Inch concrete class 20 and raise level by average 300mm;including all formwork and steel anchoring	LM	250		
	Rehabilitate existing Transformer fouindation and oil containment and this to include 600mm deep 150mm RCC wall at the perimeter not exeeding 50lm with 10mm steel at 200c/c including concrete floor 150mm with NIRU finish all excavations,formwork and building works; with main block extension to 5m x3.5m for new TX(INCLUDING ALL CONCRETE UPGRADE WORKS)	ITEM	1		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CABLE TRENCH				
	Trench 600mm wide x600mm deep-length260 Metre various locations				
A	BULK excavation for trench 1.8m wide from reduced level not exceeding 1.2 m deep.	CM	600		
B	Load, cart away from site excavated materials and dispose at areas designated by local authority.	CM	500		
C	Fill in and ram selected backfill materials around trench.	CM	100		
	Trench bed				
D	50mm plain concrete(1:4:8) blinding on cable trench bed 1.5m wide	SM	260		
	Vibrated reinforced concrete class 20/20 1:2:4/20 as described in:				
E	In 150mm thick trench base with smooth steel finish	CM	40		
F	In 150mm thick vertical walls	CM	50		
	fairface form work to				
G	Sides of trench wall	SM	650		
	Steel reinforcement bars including tying bending spacer blocks tying wires and fixing high tensile bars to BS 4461				
I	Y 8mm in cable trench	KG	2,800		
	Precast concrete trench covers (external cable trenches)				
K	Provide and put in place (1000x300x75mm) thick precast concrete trench covers reinforced Y8 bars spaced at 100mm both ways with handles for lifting;with all edges protected with angle section 25x25mmx3mm	NO	900		
	Ditto for existing trenches	ITEM	1		
	Demolish and cart away existing damaged covers	ITEM	1		
	Cable trays				
	Fabricate and fix cable trays,in 50x50x6mm thick RHS frame WITH 50x50x4mm RHS ties at 300mm c/c welded in the main frame and raised 200mm above the cable trench floor with same size supports,ALL steel work PAINTED to clients approval with 2 coats and undercoat primer	LM	300		
L	Allow for grooves 300x300mmx600mm deep at 800mm spacing besides the cable trench edge A MAX OF 15	ITEM	1		
	TOTAL THIS PAGE				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	ELEMENT NO.3				
	OIL sump chamber 6m x 5m x 3m deep; perimeter 200mm thick block walling; internal plaster complete with niru finish; with ring beam at every 2m interval 250x200mm with 4 nos.12mm bars and 8mm shear links at 200mm spacing; cover slab with manhole opening 150mm reinforced with 8mm steel bothways at 150mm spacing; heavy duty steel cover; including pvc pipe 4"connecting with the main transformer pit not exceeding 6m away.-in two compartments	ITEM	1		
	Allow for connection to soak pit	ITEM	1		
	ROAD REHABILITATION				
	ACCESS ROAD				
	2 Paving blocks (Access road)				
A	Excavate for 5m wide access road depth not exceeding 750mm and cart away the spoil	CM	800		
B	Average 300mm thick selected well compacted hardcore fill, compacted in layers of 150mm thick using 10 tonne vibrating roller to receive paving blocks	CM	800		
C	300mm approved compacted murram fill in 150mm layers	CM	350		
D	50mm thick approved and well compacted quarry dust blinding on hardcore	SM	1,100		
E	Heavy duty industrial concrete paving blocks size (210x105x80mm) minimum strength 49N/mm square laid to slope on quarry dust and compacted	SM	1,100		
F	125 x 250mm splayed kerb to BS 340 including 125 x 100mm channel ; on and including concrete Class "E" foundation and 100mm haunching to back of kerb including all necessary excavation, formwork and disposal	LM	500		
G	Ditto but curved	M	70		
	3 Painting				
A	Prepare and apply approved gloss paint to kerblines; 125mm girth; colour to engineer's approval	LM	570		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	GATE				
	Fabricate and fix a primary substation gate as per DRAWING the consisting of 75x50x8mm mainframes and 50x50x3mm intermediate members and bracings with small wicket openable door 1m wide with closing latches 14 gauge plate; including gate columns ,fastening,assembly and all works 6mx2.0m	NO	1		
	Extra over for painting with cooperate colours and logo	ITEM	1		
	Rehabilitate existing gate by checking all connections,bushes and priming with 3 coats of paint and hand over to client for re use	ITEM	1		
	ELEMENT NO.4				
	CONTROL BUILDING				
1	Substructure				
a	Excavate oversite vegetable soil average depth 150mm and cart away	SM	170		
b	Excavate for foundation trench 1m wide commencing at reduced level and not exceeding 1.5m deep.	CM	100		
c	Diffo exceeding 1.5m but n.e 3m.	CM	100		
d	Excavations for column base size	CM	40		
e	Diffo exceeding 1.5m but n.e 3m.	CM	40		
f	Extra over excavation for excavating in hard rock.	CM	5		
h	Allow for keeping all excavations water free by pumping, bailing or otherwise.	ITEM	1		
i	Fill in and ram selected imported materials around foudations and column bases.	CM	335		
j	Load, cart away from site surplus excavated materials and dispose at areas designated by local authority.	CM	80		
k	300mm thick bed of selected hard-core well-compacted in layers n.e. 150mm thick blinded with fine material 50mm thick to receive damp proof membrane (m.s)	CM	50		
l	150mm thick approved murram blinding well compacted, watered and rolled to satisfaction	SM	160		
m	Gradiator 4TC or equal and approved insecticide treatment to hardcore blinded surface and around entire building	SM	160		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
n	1000 gauge polythene or other equal and approved mebrane as damp proof laid on blinded hardcore.(m.s) with welted laps of 200mm wide.	SM	160		
o	50mm thick plain concrete(1:4:8) blinding under strip and columns foundations.	SM	148		
	Vibrated reinforced concrete class 20/25 1:2:4/25 as described in:				
p	Strip foundation (600x250)mm	CM	15		
q	Column bases size (1250x1250x250)mm	CM	10		
r	Columns size (250X250)mm	CM	9		
s	plinth beam 300 x 200	CM	5		
t	150mm thick concrete slab on damp proof membrane (m.s)	CM	25		
	Steel reinforcement bars including tying bending spacer blocks tyina wires and fixing high tensile bars to BS 4461 to strips.columns and bases				
u	Y8-16mm	KG	2600		
y	Steel wire fabric mesh reinforcement to B.S.4483 Ref BRC No.A142 in concrete bed (M.S) including 200mm laps, all necessary tying wire and supporting as required.	SM	160		
	Sawn formworks to				
aa	Sides of column size 250 x 250 mm	SM	50		
bb	Sides of floor slab 150-200mm girth.	LM	55		
	Sides of plinth beam 300x200	SM	36		
	Foundation walling		0		
cc	225mm thick approved natural stone walling bedded and jointed in mortar (1:3) UP TO 1m above ground	SM	245		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	ELEMENT NO. 7				
	ROOF CONSTRUCTION AND COVERING				
	The following in 7 no trusses spanning 11.00m and hoisted 4m high above finished floor level				
a	100x50x6mm rolled steel RHS in rafters	LM	160		
b	Ditto 50x50mm in struts	LM	180		
c	Supply and fix in concrete ring beam 28no. 16mm bolts	ITEM	1		
d	(200x200x6mm thick M.S plate cleats with 2no. holes welded to truss.	NO	14		
e	Supply and erect MS purlin cleats welded to truss at 1800 cc	NO	14		
f	Supply and erect 150x51x2mm Z purlins bolted to rafters primed with one coat of red oxide	LM	170		
g	Gauge 26 pre-painted IT 5 roof covering sheet including for 2no. side corrugations and 300mm long end laps	SM	196		
h	Ditto for side cladding AND UNDERSIDE AND GABLES GIRTH not less than 2m with 600mm eaves	SM	150		
i	26gauge matching ridge cap.	LM	35		
j	50x50x6mm RHS fascia support	LM	78		
k	50x50x6mm angle iron fascia support	LM	150		
l	Supply and fix cleats welded to fascia support	NO	33		
m	26 gauge 100x100mm corner edging	LM	112		
n	14 gauge galvanised M.s in gutters	lm	54		
o	Extra over for stopped ends	NO	4		
p	Ditto for 100mm outlet	NO	6		
q	50x50mm thick timber bearers	LM	65		
r	100x50mm thick timber cornice	LM	65		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Down pipes				
s	100mm down pipes 24 gauge secured to wall with brackets at 900mm c/c	LM	48		
t	E.O for swan neck	NO	12		
u	Prepare surfaces , prime and apply two coats of first quality aluminium panit to all rainwater goods	ITEM	1		
	ELEMENT NO.8				
1	Windows				
	Composite purpose made powder coated alluminium windows off white arey to client's approval.				
a	ALLUMINIUM SLIDING size (1200 x 1500mm) high overall	NO	10		
c	Window size (450 x 600mm) high overall-top hung	NO	6		
	Doors				
	Purpose made steel casement double leaf door divided into equal leafs made out of 75x50mm frame with four permanent louvred ventilation made from (25x3mm) flat bars whole door hinged to and including (100x100x6mm) angle lline built to wall with brackets in sizes				
	NOTE: All external doors to be as per provided drawing SK No. 06249 Sheet 1-all steel galvanized to 85 micron				
h	Door size (1800x3000mm) double leaf	NO	2		
i	Door size (1000x2500mm) single leaf leaf	NO	2		
j	alluminium intenal doorsDoor size (900x2500mm)single leaf with fan light	NO	6		
v	Allow for priming all metal and flash doors surfaces and apply two coats of 1st quality paint to all doors and frames	SM	173		
	FINISHES				
1	Floor finishes				
a	25mm thick cement sand screed prepared to receive granolithic paving.	SM	120		
b	Ditto for ceramic tiles	SM	58		
c	terazo paving to wood floated floor screed including all the necessary strips	SM	150		
d	100mm skirting ditto	LM	90		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
e	12mm thick internal quality lime plaster finished smooth with steel trowel to all walls and suspended slab	SM	920		
f	External plaster with 12mm render including profile pointing on stone jopint	SM	250		
g	Prepare surface and apply undercoat and 3 coats of 1st quality silk vinyl emulsion paint to plastered walls internally and externally.	SM	1300		
h	12mm plaster to window and door head, cill and jambs 200-300mm girth	LM	88		
j	Prepare surface, apply undercoat and 2 coats of 1st quality silk vinyl emulsion paint to plastered surfaces 200-300mm girth	LM	1300		
k	200X250mm wall tiles bedded in cement grout pointed in colour cement to match colour of tiles	SM	65		
l	Ditto 300x300mm floor tiles	SM	69		
2	Kitchen				
a	100mm thick 1:2:4 concrete in kitchen work top	SM	6		
b	Y 10 reinforcement bars at 200 C/C	KG	230		
c	150mm block wall	SM	23		
d	12mm 1:3 cement sand plaster	SM	69		
e	Single drain single bowl stainless sink	NO	1		
f	Bricon or approved kitchen mixer	NO	1		
g	400mm wide 25mm thick block veneered offwhite cream board shelves fixed with brackets to wall	LM	35		
h	Ditto in locable cupboards including hinges, fasteners and locks.-colour scheme subject to eng approval to blend with off white grey terazzo	LM	35		
	600x600mm PCC paving slabs along control room perimeter and splash aprons and all other areas stipulated by eng ,including bedding and jointing with 1:3 mortar	SM	100		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SOAKPIT				
	Excavate soakpit 1800mm dia to seepage depth min 1.5m, equip and construct protective wall and cover including all builders work, concrete and steel work-TYP	ITEM			
	SEPTIC TANK				
	Septic tank 3.6m x 2.1m x 3m deep; perimeter 200mm thick block walling; internal plaster complete with niru finish; with ring beam at every 2m interval 250x200mm with 4 nos. 12mm bars and 8mm shear links at 200mm spacing; cover slab with manhole opening 150mm reinforced with 8mm steel bothways at 150mm spacing; heavy duty steel cover; including pvc pipe 4" connecting with the sewerage and foul drainage-in two compartments	ITEM			
	WATER SUPPLY SYSTEM				
	Connect piped water using 1"G.I. class B pipe to the substation by liaising with the relevant water body; including excavation of water pipe water trench, backfilling, all connections and accessories.	ITEM			
	Supply and install 6000 litres an approved plastic water tank, approved 3/4" watertap and concrete platform including all necessary required fittings and connections-GROUND MOUNTED -extra over to include roof water harvesting system with gutters ,PVC downpipes and BENDS	ITEM			
	supply and install 2000lt rectangular tank on top of control building including all float valves, connectolons and maintainance access provision on facia cladding; connect to piped mains and sanitary units	ITEM			
	ELECTRICAL INSTALLATIONS WORKS				
A	Electrical builders work to power supply points and distribution board lighting ponts; sockets; incuding chasing and making good all works as described	ITEM	1	45,000	
B	Electrical distribution board, Electrical lighting work and accessories, flourescent bulbs, socket outlets, swithes AS Follows 12nos 4feet flourescent lamps; 4 nos ball fittings, 16nos 13 amp sockets, cooker unit sockets 1 noo.; provision for data and TV cable in all operator room, CCTV with 6 no cameras and VDU in controller room	ITEM	1	65,000	
	Supply and install 110volts DC distribution board with technical specifications as attached in the technical spec document	ITEM	1		
	TOTAL THIS PAGE				



ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SUBSTATION LIGHTING				
C	Supply 240 watt AC (LIGHT DEPENDENT TYPE) bucky head floodlight with energy saver 100 watts sodium metal halide lamps to be hoisted on mast supplied by kplc including all connections	ITEM	4		
	supply and fix emergency chargeable lights in the control room to client approval.	NO	2		
	ELEMENT NO. 7- SMOKE DETECTORS				
	Allow for Hardwired Smoke detectors installations; including a battery back up; to be carried out by a nominated sub-contractor-menvier OR approved type	Item	1		
	Allow for general attendance on specialist contractor	Item	1		
	Builder's work in connection with Smoke detector installations; cut away for and attend in all trades on the sub-contractor installing the following points in a mainly concealed system; including chases, holes and recess notching in timber etc; and making good all finishes for cut in boxes, electrical wiring, mounting brackets, smoke detector feeds, fire alarm points etc	Item	1		
	ELEMENT NO. 8 - AIR CONDITIONING				
	Air conditioning				
	Supply and fix air conditioners complete with all fixing accesories to control room temperartures from approved suppliers				
	24000 BTU	3			
	ELEMENT NO. 9 - FIRE EXTINGUISHERS				
	Supply and fix controlled discharge 9 litre carbon dioxide gas fire extinguisher manufactured to BS EN 3-9:2006, Bs 7863:2009, BS 5306-4:2001 and the cylinder manufactured to BS 5045 complete with the following:	No	6		
	Charge and fixing bracket,Pictorial instructions,Colour code,Servicable on site, discharge horn and hose,Brass hot stamping ,Operating valve,Local Fire Brigade approval				
	Ditto but DRY powder fire extinguishers	No	6		
	Ditto fire blanket 6' x 4' container	no	2		
	Total this page				
	allow for fume extractor with opening diameter not les sthan 500x500mm including supply of extractor and fix in battery room	no	1		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	PERIMETER WALLING -300LM				
	(Substructures)				
L	Excavate for foundation trench 600mm wide commencing at reduced level and not exceeding 1.5m deep.	CM	250		
M	extra Excavations for widening column bases size (1.0x1.0)m	CM	70		
N	Ditto exceeding 1.5m but n.e 3.0m	CM	23		
O	Extra over for excavation in all classes of rock at any depth.	CM	3		
P	Load, cart away from site surplus excavated materials and dispose at areas designated by local authority.	CM	97		
Q	Fill in and ram selected imported materials around foundation and columns.	CM	173		
R	Provide all the necessary planking and strutting to uphold sides of trenches.	ITEM			
S	Allow for keeping all excavations water free by pumping, bailing or otherwise.	ITEM			
T	50mm thick (1:4:8) mass concrete blinding to walling and column bases	SM	240		
	Vibrated reinforced concrete class 20/25 1:2:4/25 as described in:				
U	Foundation strip size (200x600)mm	CM	180		
V	Column bases (1000x1000x300)mm	CM	31		
W	Columns (200x300)mm	CM	25		
X	Plinth beam 300x200mm	CM	20		
	Sawn/Steel form work to				
A	Vertical sides of column	SM	400		
B	Vertical sides of ground beam	SM	180		
	Steel reinforcement bars including tying bending spacer blocks tying wires and fixing high tensile bars to BS 4461				
C	Y 8-16MM	KG	6500		
	225mm thick natural stone substructure walling in cement sand mortar (1:3) including and reinforced with 20 SWG hoop iron in every two alternating course.				
F	225mm thick natural stone wall	SM	450		
G	25mm thick cement/sand (1:4) rendering on plinth area finished smooth to receive bituminous paint-400mm high	SM	120		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4	23 MVA TRANSFORMER PLINTH				
E	Excavate pit foundations not exceeding 1.5 metres deep from reduced levels	CM	70		
F	Return fill and ram suitable excavated material to the sides of the plinths	CM	15		
G	Cart away from site surplus excavated materials	CM	39		
H	Plain concrete 50mm thick blinding 1:4:8 to footing	SM	50		
	<u>Vibrated Reinforced Concrete Class 25/20 mm Aggregate in:-</u>				
I	Base	CM	16		
J	PEDESTALS	CM	10		
K	COVER SLAB-300mm thick	CM	9		
	<u>High Tensile Steel Reinforcement Bars; Cold Worked to BS 4461 (Provisional)</u>				
L	8 mm-16MM diameter	KG	1800		
	<u>Fairface Formwork to:-</u>				
N	Sides of base 225-300mm wide	LM	28		
O	Ditto slab	LM	17		
P	Vertical sides of footing	SM	51		
	<u>Hardcore filling</u>				
A	Approved hardcore filling compacted to Engineer's approval AND MARRUUM layer 300mm	CM	36		
B	Blind surface of hardcore with lean concrete	SM	18		
C	1000 gauge polythene sheet laid over hardcore	SM	24		
	Total this page and Carried to Summary Page				
	<u>SUMP RCC WALLING</u>				
	<u>Mass insitu concrete (1:4:8) in:-</u>				
D	Strip footing	SM	28		
	<u>Vibrated Reinforced Concrete Class 25/20 mm Aggregate in:-</u>				
	<u>Base</u>	CM	6		
E	Walling finished fair face	CM	6		
	<u>Formwork</u>				
F	Vertical sides of base	SM	50		
G	Vertical sides of walling	LM	56		
	<u>High Tensile Steel Reinforcement Bars; Cold Worked to BS 4461 (Provisional)</u>				
H	8-12 mm diameter	KG	1000		
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