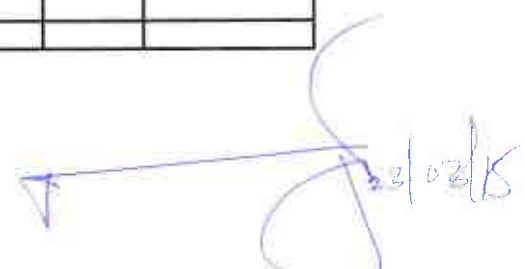


No.	Description	Unit	Qty	Rate	Amount
A	<p>BILL NO.1 PRELIMINARIES</p> <p>General Description of the Works</p> <p>The Works in this contract comprise the erection and completion of:</p> <p>(a) New Control Building comprising of the following:-</p> <p>(i) 11KV switchboard room : 93 M2</p> <p>(ii) Panel room : 49 M2</p> <p>(iii) Battery Room : 10 M2</p> <p>(iv) Charger room : 12 M2</p> <p>(v) Communication Room : 12 M2</p> <p>(vi) Kitchen : 8 M2</p> <p>(vii) Toilets : 8M2</p> <p>(viii) Contoller room : 11 M2</p> <p style="text-align: right;">Total = 195 M2</p> <p>(b) Ancillary Out buildings:-</p> <p>(i) Gate House & Toilets : 11 M2</p> <p>(c) Site Works</p> <p>The General Construction description is as follows:-</p> <ul style="list-style-type: none"> • Reinforced concrete foundations and stone foundation walls • Reinforces concrete framed superstructure • Machine dressed stone walls • Steel roof construction and Box profile 28gauge roofing shhets • Aluminium and steel fabricaded doors • Aluminium windows • Ceramic tiles and terrazzo floor finishes • Plaster and paint to all internal walls • Gypsum ceilings and cement/sand soffit finishes <p>Site Works consisting of the following</p> <ul style="list-style-type: none"> • General Landscaping • Driveways, Parking and Walkways <p>Switchyard comprising of:</p> <ul style="list-style-type: none"> • Reinforced concrete switchgear foundations • Reinforced concrete Transformer plinths • Reinforced concrete cable trenches • Water Reticulation • Storm water Drainage & Foul Drainage • General Landscaping <p>The Main Buiding Services comprises of-</p> <ul style="list-style-type: none"> • Electrical and related Installations • Plumbing, Drainage, smoke detectors and Fire Figing Installations <p>The approximate overall floor area of the buildings is 240SM</p>				
B	<p>ABBREVIATIONS</p> <p>CM shall mean cubic meter.</p> <p>SM shall mean square meter</p> <p>LM shall mean linear meter</p> <p>MM shall mean milunetre</p> <p>KG shall mean kilogramme.</p> <p>NO shall mean number.</p> <p>PRS shall mean pairs</p> <p>BS shall mean the current British Standard Specification published by the British Standards Institution, 2 Park street, London W1,</p> <p>DITTO shall mean the whole preceding description except as qualified in the description in which it occurs.</p> <p>MS shall mean measured separately.</p> <p>BSM shall mean both sides measured.</p> <p>QTY shall mean quantity.</p>				
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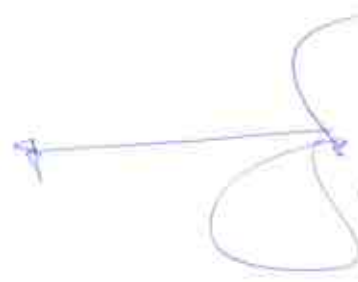
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No.	Description	Unit	Qty	Rate	Amount
A	DRAWING The drawing used in the preparation of these bills of quantities are listed in the appendix to the bill of quantities				
B	Programme for Completion of the Works (a) The works must be completed as early as possible and be carried out in accordance with the Client preferred and approved programme of works prepared by the contractor.				
C	General Specifications The general specifications for reference in this contract are as follows: 1. Attached specifications 2. Kenya Bureau of Standard Specifications. 3. Any other relevant specification material issued by the Client or his representative to amplify, compliment or clarify the primary specification material. The Contractor will be required to maintain a set of the specification documents on Site for ease of reference by the management team and consultants. All material and workmanship used in the execution of the works shall be of the best quality and specification unless otherwise described.				
D	Visitor's Book and Site Diary The Contractor shall keep on the Site a visitors' book for recording the names of all persons who visit the site for the purpose of the project. He shall also maintain on the Site a diary in which he shall record site activities on a daily basis and particularly any occurrence which bears on the progress of the Works in any way. The visitors' book and the diary shall be surrendered to the Client at the completion of the project or at any other time that he may be directed.				
E	Signboard The Contractor shall allow for providing erect publicity, directional, safety, etc sign boards, maintaining and later clearing away on completion a site sign board. The positioning, the size, type of construction and lettering shall be to the attached sample and to client's approval.	ITEM	1		
F	The Contractor must arrange for and provide a prompt communication to client supervision team throughout the contract period	ITEM	1		
G	Hoarding The Contractor shall allow for providing approximately 85m along the frontage side of the main road, maintaining and later clearing away completion such as hoarding, gates and the like as may be required for the security of the site and as instructed by the Client.	ITEM	1		
F	Security of Works The Contractor shall be entirely responsible for the security of all the Works, stores, materials, plant, personnel, etc, both his own and sub-contractors' and must provide all necessary watching, lighting and other precautions as necessary to ensure security against theft, loss or damage and the protection of the public.	ITEM	1		
G	Site Offices The Contractor shall allow for providing, maintaining and later clearing away on completion adequate (about 12m) site offices with standard furniture for the use of the Project Manager and site meetings.	ITEM	1		
II	Storage of Materials The Contractor shall provide at his own risk and cost where directed on the site weatherproof lockup sheds for the safe storage and custody of material for the Works and for the use of workmen engaged thereon and shall remove such sheds and make good damaged or disrupted surfaces upon completion to the satisfaction of the Project Manager.	ITEM	1		
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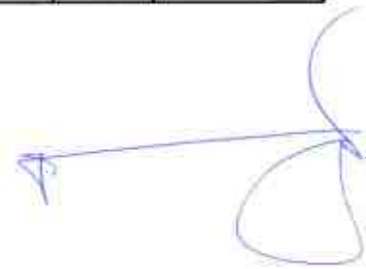
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No.	Description	Unit	Qty	Rate	Amount
A	<p>Tests</p> <p>The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called by the Client for his approval or rejection and any other samples in the case of rejection until such samples are approved by the Client and the Client may reject any materials or workmanship not in his opinion up to to the approved samples.</p>	ITEM	1		
B	<p>Existing Property</p> <p>The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains and other services, and he will be held responsible for and shall make good all such damage arising from the execution of this contract at his own expense to the satisfaction of the Client.</p>	ITEM	1		
C	<p>Water and Electricity for the Works</p> <p>The Contractor shall provide, at his own risk and cost, all necessary water, electric light and power required for use on the Works. hence transfer the particulars to Kenya Power after the completion of the works</p>	ITEM	1		
D	<p>In liason with M/S KAKUZI LTD, Contractor shall allow for supply and connection of metered water to the substation, maintain and pay all the connection and running costs for the entire contract period</p>	ITEM	2		
E	<p>Safety</p> <p>Contractor should allow for a qualified/Competent safety officer conversant with Kenya Power safety regulations for the entire contract period who will be responsible for receiving Electrical to work permits in daily basis The working hours shall be those generally given by the client in accordance with the safety regulations of substation. No work shall start in the absence of the safety person having received permit to work from the Client authorizing officer. All workmen must be provided with safety boots/shoes, branded overall and helmets, safety gloves, masks etc</p>	ITEM	1		
F	<p>National Construction Authority</p> <p>The National Construction Authority is a state corporation established under the National Construction Authority Act No.14 of 2011. The broad Mandate of the Authority is to oversee the construction industry and coordinate its development.</p>				
G	<p>The National Construction Authority Regulations must be adhered to and relevant permits obtained, supervision team and labourers be accredited and maintained at all times.</p>	ITEM	1		
H	<p>Allow for establishment of survey beacons and confirmation certificate issued handed to Client prior to the commencement of the contract works. Contractor shall engage a licensed surveyor to establish the land beacons and in liason with KENHA and any other relevant statutory authority establish the building line along the main Highway.</p>	ITEM	1		
I	<p>Allow for providing the entire land spot heights and the contour profiles for establishment of the working levels.</p>	ITEM	1		
J	<p>Allow for all the necessary statutory approvals for the drawings for the proposed works from relevant authorities Including replication to required formats and necessary stamps approval for Engineer & Achitect and handover copy of drawing to client.</p>	ITEM	1		
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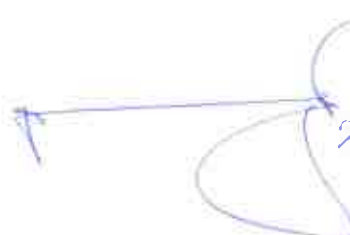
No.	Description	Unit	Qty	Rate	Amount
BILL NO. 2: SWITCHYARD LEVELLING					
A	Cut trees and uproot stumps of up to 1.0m and average diameter 300mm and cart away the wood as directed by client.	NO	20		
B	Excavate oversite to remove top vegetable soil average 200mm thick and cart away.	SM	4640		
C	Bulk excavation to reduce levels commencing from stripped level not exceeding 1.50m deep.	CM	2320		
D	Fill in with approved material on embakments to make up levels and compact to 95% MDD (AASHTO T99) in layers of 150mm	CM	1879		
E	Apply suitable weed killer, herbicide to surfaces of blinding as per the Manufacture's written instructions	SM	3900		
F	1000 gauge polythene or other equal and approved membrane laid on compacted and treated quarry dust with welcted laps of 200mm wide.	SM	3900		
G	Supply and spread uniformly 150mm thick (1") ballast in switch yard-singly graded	SM	3900		
BILL NO. 3: ACCESS ROAD, DRIVEWAY & PARKING					
H	Mass excavation to reduce levels not exceeding 1.50m deep commencing from stripped level average 300mm deep.	SM	630		
I	Load and cart away excavated material from site.	CM	189		
J	Ram and compact sub-grade ready to receive sub-base	SM	630		
Filling					
K	Imported filling material to make up levels	CM	284		
L	300mm Thick handpacked hardcore, filling leveled, well rammed and consolidated in 150mm thick layers	SM	630		
M	50mm Thick quarry dust blinding	SM	465		
N	100mm Thick murrn filling well compacted.	SM	150		
O	250 x 125mm High pre-cast concrete kerb bedded and jointed in cement and sand (1:4) mortar including 325x100mm thick mass concrete class 20/20 in foundation and haunching at the back, all necessary formwork and excavations.	LM	180		
P	Extra-over ditto for curved on plan to various radii	LM	25		
Q	250 x 125mm High pre-cast concrete channels	LM	110		
R	Heavy duty industrial concrete paving blocks size (210x105x80mm) minimum strength 49N/mm square laid in herringbone pattern laid to slope on quarry dust (measured separately) and compacted	SM	465		
BILL NO. 4: CULVERTS AND DRAINAGE WORKS					
S	Note: In Liaison with KENHA the contractor shall set the exact position of the entrance culvert, acceleration and deceleration lanes as approved.				
T	Excavate in any material in trench to a depth not exceeding 2.0m. Rate to include shaping and carting away of surplus material to	M3	33		
U	Excavate into any material for headwalls and wingwalls cart away to tips excess material.	M3	6		
V	Provide, lay and joint 900mm diameter pipes for service ducts as Engineer directs. The rate to include backfilling and compaction to drain formation level.	m	15		
W	Provide, place and compact 150mm class 15 (1:3:6) concrete bed and surround to 900mm diameter pipes (0.8118 M3/m).	M3	12		
X	Excavate, cut and shape in a V formation an earth drain into any material and cart away to tips excess material as directed by the Client.	M3	270		
Y	Provide all materials and construct standard headwalls conforming to Standards Specifications as directed by the client. Use natural blue stone with a 1:3 cement mortar and key finish.	No.	4		
Z	Provide, lay and joint 450mm x 225mm PCC invert block drains with two (2) courses side slabs on both sides laid on a 100mm thick murrn	LM	150		
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MAKUYU 33/11KV SUBSTATION

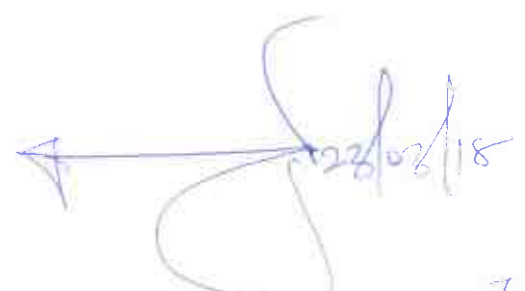
No.	Description	Unit	Qty	Rate	Amount
A	Provide all materials lay and joint shallow IBD as directed by the client to form mitre drains. Rate to include provision of 100mm well compacted murrum bed and jointing with 1:3 cement mortar.	LM	30		
B	Provide all materials, prepare and construct 200mm thick grouted stone pitching laid on 100mm well compacted murrum bed to inlets, outlets, slopes and drains. Rate to include 1:3 cement mortar.	M2	60		
C	300mm wide x 200mm deep (average) open stormwater concrete class 20 - 20 channel including all necessary excavations, 100mm murrum bed and haunch all round, reinforcement, plaster in waterproof, with 350mm wide heavy duty grating made of 20mm diameter square twisted mild steel bars welded at 50mm centres to 25 x 25 x 3mm mild steel angle frame resting on 30 x 30 x 3mm angle frame fixed in concrete channel with fish tailed lugs.	6	LM		
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No.	Description	Unit	Qty	Rate	Amount
BILL NO 5: SWITCHGEAR FOUNDATIONS					
<u>The following Switchgear Foundation plinthes for structures steel as per the General arrangement drawing(GA) and all to structural engineers</u>					
A	Excavate pit foundatins commencing from ground level but not exceeding 1.50 metres deep	CM	130		
B	Ditto over 1.5m but not exceeding 3.0m deep	CM	4		
C	Return fill and ram selected excavated material	CM	66		
D	Cart away from site surplus excavated materilas to designated county dumping site.	CM	68		
E	Disposal of water				
F	Keep excavations free from all water by baling, pumping or otherwise	Item	1		
Planking and strutting					
G	Planking and strutting to sides of all excavations ; keep excavation free from all fallen materials	Item	1		
Plain concrete blinding 1:3:6					
H	50mm thick Vibrated Reinforced Concrete Class 25/20 mm Aggregate in:-	SM	87		
I	Foundation bases	CM	23		
J	Stub columns	CM	41		
High yied Steel Reinforcement Deformed bar BS 44461					
M	D10	KG	752		
N	D12	KG	2114		
Sawn formwork 225- 300mm high to:-					
O	Sides of bases	SM	65		
P	Vertical sides of footing	SM	207		
FINISHES					
Q	13mm thick cement/sand steel float finish to stub column top surface to receive steel strucure base plate measured separately.	SM	100		
R	Allow fo KPLC attendance for earthing anding supervision	ITEM	1		
BILL NO. 6: .TRANSFORMER PLINTH					
S	Excavate transformer pitcommencing from reduced level but not exceeding 1.5 metres deep	CM	120		
T	Return fill and ram selected excavated material to the sides of the plinths	CM	64		
U	Cart away from site surplus excavated materials to designate County dumping site.	CM	56		
V	Plain concrete 50mm thick blinding 1:4:8 to footing Vibrated Reinforced Concrete Class 25/20 mm Aggregate in:-	SM	80		
W	Base	CM	24		
X	Pedestalls	CM	9		
Y	Cover slab	CM	9		
Z	Sump walling	CM	9		
High Yield deformed Reinforcement Bars, to BS 4449 including cutting, bending, tying, fixing, and spacer blocks.					
A1	D 8	KG	308		
	D 12	KG	2862		
Hardcore filling					
B2	Approved hardcore filling compacted to Engineer's approval	CM	32		
C2	50mm thick blinding to surface of hardcore with lean concrete	SM	30		
D2	1000 gauge polythene sheet	SM	30		
Formwork					
E2	Vertical sides of base	SM	8		
F2	Vertical sides of pedestal walling	SM	72		
H2	Vertical sides of sump walling	SM	105		
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No.	Description	Unit	Qty	Rate	Amount
	Supply and fix fabricated grating, of 40x40x4mm SHS framing spaced at 50mm centres, as described:				
A	Fabricated grating size, 1.2x1.0m	NO	14		
B	Ditto but 1.0 x 1.0m	NO	2		
C	Ditto but 0.6x1.0m	NO	2		
D	50x50x4mm angle line embedded in concrete sump walling to receive grating	LM	80		
E	Provide galvanized 125 x 75mm U Channels welded to triangular shape (1.5x1.2x1.9metres); placed in reinforced concrete size, 1.0x1.0metres, with approx. of the tip exposed above the concrete, including 50mm diameter hole drilled on exposed section.	NO	2		
	BILL NO. 7 : OIL INTERCEPTOR				
F	Excavate pit for oil interceptor depth not exceeding 1.50 metres deep commencing from reduced level	CM	17		
G	Ditto between 1.50m-3.00m deep	CM	3		
G	Extra-over ditto for excavating in rock	CM	1		
I	Remove surplus excavated material from site	CM	21		
	Concrete Work:-				
	Mass concrete mix (1:3:6) class 10-15mm aggregate in;				
J	50mm Thick blinding laid to slope not exceeding 15 degrees from horizontal	SM	11		
	Guaranteed strength vibrated reinforced concrete mix (1:11/2:3) class 25/20mm aggregate in:-				
K	200mm Thick base	CM	2		
L	150mm Suspended slabs	SM	11		
	Machine dressed quarry stone walling bedded in cement and sand (1:4) mortar in:-				
M	200mm Thick walls	SM	28		
	Reinforcement				
	High yield deformed reinforcement bars to B.S. 44461				
N	Assorted bars	KG.	120		
	BRC Ref. type A193 including 200mm laps in:-				
O	Floor bed	SM	11		
	Sawn formwork to:-				
P	Horizontal soffits of suspended slabs	SM	11		
Q	Edges of suspended slab 75-150 mm high	LM	14		
R	Vertical edges of beds over 75-150mm high.	LM	14		
S	Extra-over boxing size 600 x 450mm to form opening through 150mm thick reinforced concrete slab	NO.	2		
	12mm Water proofed cement and sand (1:3) plaster				
T	Base	SM	11		
U	Suspended slab	SM	11		
V	Walls	SM	28		
	Manhole Covers				
W	Cast iron medium duty manhole cover and frame size 600 x 450mm to B.S 497: frame set into cement and sand ((1:4) mortar: cover set in grease	NO.	2		
	Step Irons				
X	200mm Wide galvanised step iron: twice bent and morticed into concrete walls	NO.	4		
	Class 41 PVC soil water vent pipes built into concrete				
W	100mm Diameter pipes 7500mm long.	NO.	1		
Z	Extra for bend	NO.	2		
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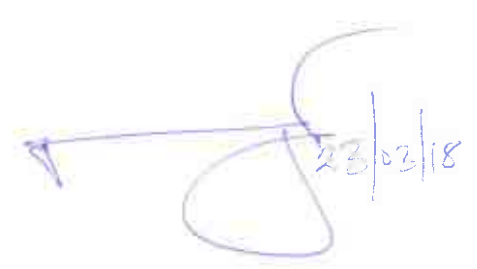
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No.	Description	Unit	Qty	Rate	Amount
	BILL NO. 8 : SOAK PIT: 2NO.				
	Excavate and Earthworks				
A	Excavate Pit for soakpit not exceeding 1.50 metres deep	CM	6		
B	Ditto between 1.50m-3.00m deep	CM	6		
C	Excavate Pit for soakpit between 3m-4.5m deep	CM	6		
D	Ditto between 4.50m-6.00m deep	CM	6		
E	Remove surplus excavated material from site	CM	48		
F	Return fill and well ram selected excavated materials around foundations	SM	6		
	Concrete work:-				
	Mass concrete mix (1:3:6) class 10-15mm aggregates in:-				
G	Foundation	CM	2		
	Guaranteed strength vibrated reinforced concrete mix (1-11/2:3) class 25-20mm aggregate in:-				
H	150mm Suspended slabs	SM	10		
	Reinforcements				
	High yield square twisted bars to B.S. 4461				
I	8mm Diameter bars	KG.	160		
	Formwork				
	Sawn Formwork to:-				
J	Curved horizontal soffits of suspended slab	SM	10		
K	Curved edges of suspended slab 75-150mm high	LM	12		
L	Ditto to bed	LM	24		
M	Extra-over for boxing size 600 x 450mm to form opening through 150mm concrete slab.	NO.	2		
	Stone Walling				
	Machine dressed quarry stone walling bedded in cement and sand (1:4) mortar in:-				
N	200mm Thick curved walls	SM	20		
O	Form hole through 200mm stone walls for extra large pipes	NO.	2		
	12mm Water proofed cement and sand (1:3) render steel trowelled smooth to:-				
P	Suspended slab	SM	10		
Q	Walls	SM	20		
	Manhole Covers:				
R	Cast iron medium duty manhole cover and frame size 600 x 450mm to B.S. 497; frame set into cement and sand (1:4) mortar; cover set in grease	NO.	2		
	Fillings to Soakpit				
S	Approved hardcore of 100-200mm diameter fillings	CM	44		
T	Excavate trench for 100mm diameter foul water drain pipes not exceeding 1.50 metres deep, part return, fill in and ram and cart away surplus excavated material	LM	50		
U	Allow for maintaining and upholding sides of excavations and keep free from fallen materials.	ITEM	1		
V	Allow for keeping excavations free from water by means of pumping, bailing or any other approved method.	ITEM	1		
	Underground class 41 PVC soil water pipes				
W	100mm. Diameter and laying in trenches.	LM	50		
	Beds and Surrounds				
X	150mm Thick concrete (1:3:6) bed and surround to, 150mm diameter pipe, allowing for all necessary formwork.	LM	50		
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No.	Description	Unit	Qty	Rate	Amount
	Manholes:-				
A	Prices shall include for all necessary excavations, part return, fill in and ram and remainder cart away. Prices shall also include for all necessary machine cut stones, reinforcement, formwork, plaster in waterproof cement and sand, heavy duty manhole covers and step irons as necessary				
	Standard rectangular manhole consisting of 150mm concrete (1:3:6) bed and 250mm benching; 150mm solid concrete blocks; cement and sand (1:4) water proof rendering internally; standard heavy duty cover and frames to B.S. 497; holes for and disposal from site; formwork:- extra large pipes; channels and beds; excavations				
B	Manhole size 1000 x 900 x 750mm deep to invert level	NO.	4		
C	300mm wide x 200mm deep (average) open stormwater concrete class 20 - 20 channel including all necessary excavations, 100mm murrum bed and haunch all round, reinforcement, plaster in waterproof, with 350mm wide heavy duty grating made of 20mm diameter square twisted mild steel bars welded at 50mm centres to 25 x 25 x 3mm mild steel angle frame resting on 30 x 30 x 3mm angle frame fixed in concrete channel with fish tailed lugs.	LM	6		
	BILL NO 9: CABLE TRENCHES; 1200x				
	1500mm deep, 900x900mm deep & 600x600mm deep				
D	Excavate for trench from reduced level not exceeding 1.5 metres deep and cart away	CM	288		
	Concrete work				
E	50mm thick plain concrete(1:4:8) blinding on cable trench bed	SM	255		
	Vibrated reinforced concrete class 20/20 1:2:4 as described in:				
F	100mm thick trench bed	SM	270		
G	150mm thick trench walls with fair face finish	SM	450		
	Wrot formwork to				
H	Sides of trench wall	SM	1069		
	High Steel reinforcement bars including tying bending spacer blocks tying wires and fixing high tensile bars to BS 4461				
I	D 8 at 150 centres in cable trench	KG	3680		
	Precast concrete trench covers				
J	Provide and put in place (1200x300x75mm) thick precast concrete trench covers reinforced with Y8 bars spaced at 100mm both ways with fair face finish on both side; with all edges protected with 25x25x 3mm angle iron and lifting handles.	NO	170		
K	Ditto but 1800x300x75mm thick	NO	270		
L	Ditto but 900x300x75mm thick	NO	335		
M	Prepare and apply undercoat zinc chromate primer to all general metal surfaces.	SM	260		
N	Ditto but two coats of gloss aluminium paint.	SM	260		
	Cable trays				
O	Supply and fix steel fabricated cable trays of 50x50x4mm thick SHS frame, jointed together with 50x50 x4mm thick cross bar for 900mm wide trench and spaced at 400 centres to form cable tray and arised 200mm above trench bed with adequate support.	LM	50		
P	Ditto but for 1200mm wide trench	LM	50		
Q	Ditto but for 600mm wide trench	LM	100		
R	Prepare and apply undercoat of zinc chromate primer to all general metal surfaces.	SM	348		
S	Ditto but two coats of gloss aluminium paint.	SM	348		
	Cable Hangers				
T	Supply and fix steel fabricated cable hangers of 50x50x5mm thick and 1400mm long, fixed with rowl bolts or welded on 150mm long M.S. inserts in the vertical sides of concrete cable trench wall at 900mm centres. (see attached)	NO	180		
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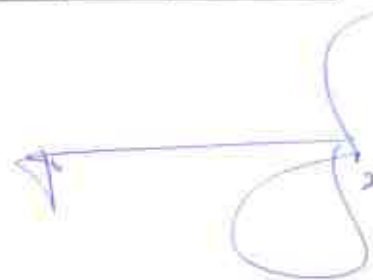
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MAKUYU 33/11KV SUBSTATION

No.	Description	Unit	Qty	Rate	Amount
A	Prepare and apply zinc chromate undercoat primer to all general metal surfaces.	SM	99		
B	Ditto but two coats of gloss aluminium paint.	SM	99		
Cable Ducts					
C	Supply and lay 150mm diameter heavy duty PVC ducts as cable ducts	LM	80		
D	Ditto but 90° and 45° bends	NO	12		
E	Ditto but Tees	NO	12		
F	100mm thick concrete (1:3:6) bed and surround to, 200mm diameter pipe, allowing for all necessary excavations and formwork.	LM	80		
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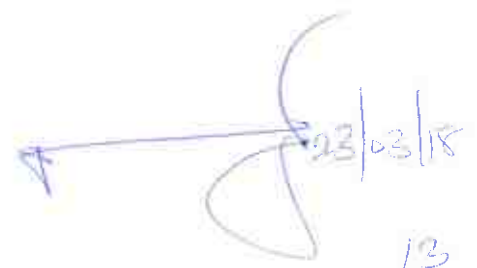
No.	Description	Unit	Qty	Rate	Amount
	<u>BILL NO.10: CONTROL BUILDING</u>				
	<u>ELEMENT NO 1: SUBSTRUCTURES</u>				
	<u>Excavations</u>				
	<u>General excavations to include excavating in loam, clay, Black cotton soil, red soil or any soil which does not require ripping or use of compressor tools</u>				
A	Excavate average 200mm deep to remove top soil and dispose.	M2	262		
B	Excavate trenches for wall foundations: commencing from reduced level and not exceeding 1.5 metres deep.	M3	55		
C	Ditto over 1.5m deep but not exceeding 3.0m deep	M3	13		
D	Excavate pits for column bases	M3	38		
E	Ditto over 1.5m deep but not exceeding 3.0m deep	M3	15		
F	Ditto but cable trenches	M3	77		
G	Extra over excavation for excavating in hardrock all classes.	M3	5		
	<u>Backfilling around Foundations</u>				
H	Backfill around foundation : selected excavated material : placed 'n 200mm thick layers : well watered and compacted to 98% MDD	M3	59		
	<u>Disposal of Excavated Material</u>				
I	Surplus excavated material : remove and deposit in spoil heaps on site	M3	203		
	<u>Disposal of water</u>				
J	Keep excavations free from all water by baling, pumping or otherwise	ITEM	1		
	<u>Planking and strutting</u>				
K	Planking and strutting to sides of all excavations : keep excavation free from all fallen materials	ITEM	1		
	<u>Imported Hardcore</u>				
L	Approved quarry stone hardcore : 450mm thick (overall) : hand packed and well compacted in 150mm thick layers	M3	93		
	<u>Murram Blinding</u>				
M	50mm Murram blinding to surface of hardcore	M2	185		
	<u>Antitermite Treatment</u>				
N	Chemical antitermite treatment to murram filling ; Dragnet 30% EC or equal and approved ; provide 10 year guarantee	M2	185		
	<u>In situ Concrete : Class 15/25mm</u>				
O	50 mm Blinding layer: under wall foundations.	M2	40		
P	Ditto : under column bases.	M2	25		
Q	Ditto : under cable trenches/channel;	M2	62		
	<u>In situ concrete : class 25/20 : vibrated : reinforced</u>				
R	Strip foundations trenches	M3	8		
S	Column bases.	M3	8		
T	Column stubs.	M3	3		
U	Cable trenches	M3	15		
V	Bed to cable channel/trenches ; laid to falls	M3	7		
W	150mm thick floor bed	M2	185		
X	Ramp	M3	2		
Y	11kv switchboard panel pad supports	M3	2		
	<u>Mesh fabric reinforcement to BS 4483 : 200mm laps</u>				
Z	Fabric mesh reference A142 weighing 2.22kg per square metre : in floor beds	M2	185		
	<u>High yield steel bar reinforcement to BS 44461</u>				
A1	D 8	KG	1198		
B1	D 10	KG	202		
C1	D 12	KG	261		
D1	D 16	KG	1207		
	TOTAL CARRIED TO SUMMARY PAGE				



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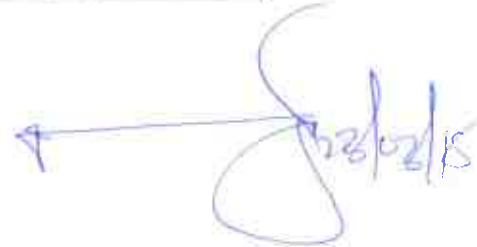
No.	Description	Unit	Qty	Rate	Amount
	Wrot formwork : to				
A	Vertical sides : column bases	M2	40		
B	Vertical sides : column stubs	M2	65		
C	Ditto : strip foundations	M2	21		
D	Ditto : sides of channel/trench walls	M2	191		
E	Vertical edge of floor bed	m	65		
F	Extra-over for boxing size 400 x 400x600mm deep to form control panel grooves on 150mm thick concrete slab.	No	8		
G	Vertical sides of ground beam	M2	40		
	Quarry natural stone bedded and jointed in cement and sand (1:3)mortar : 20 gauge x 25mm hoop iron in every alternate course				
H	200mm Walling	M2	120		
I	One layer 1000 gauge polythene sheet damp proof membrane : under beds : 300mm laps.	M2	185		
J	Makes 200mm diameter holes on walling	No	30		
K	Ditto but concrete 200mm cable trench	No	30		
L	Supply and lay 200mm diameter heavy duty PVC ducts as cable sleeves	LM	90		
M	100mm Thick concrete (1:3:6) bed and surround to; 200mm diameter pipe, allowing for all necessary formwork,	LM	90		
N	6mm Chequer plate trench cover to 600x600mm trench of average size 700x800mm : comprising 25 x 25 x 3mm RHS cross members : welded to and including 25 x 25 x 3mm RHS as edge frame : in 750mm lengths,	M2	40		
O	Ditto but 1000x1200mm trench of average size, 700x800mm	M2	9		
P	Ditto but 1000x1200mm trench of average size,400x800mm	M2	5		
Q	Ditto but 400x400mm control panel groove of average size,450x400mm	M2	2		
R	40x40x 3mm Angle frame set in fillet in concrete sides of open channel : 50x3mm lugs at 1000mm centres with fish tail ends cast into concrete	LM	144		
S	Prepare and apply undercoat of zinc chromate primer to all general metal surfaces,	SM	160		
T	Ditto but two coats of gloss aluminium paint,	SM	160		
	Cable trays				
U	Fabricate and fix steel cable trays frame for 900 x900mm cable trench, comprising of 50x50x4mm thick SHS frame, weld together with 900mm wide 50x50x4mm struts, spaced at 400mm C/C to horizontal ; to form cable tray and rised 200mm above the trench floor,	LM	15		
V	Ditto but for 600 x 600mm cable trench.	LM	53		
W	Supply and fix 150x50x6mm thick RHS anchored on concrete pads (measured separately) to client satisfactory	LM	15		
	ELEMENT NO.2: CONCRETE SUPERSTRUCTURE				
	Insitu concrete: class 25/20 : vibrated reinforced in;				
X	Columns	M3	6		
Y	Ring beams	M3	5		
Z	Ditto : intermediate beams	M3	8		
A1	Ditto : Lintels	M3	1		
B1	Ditto but 150 mm thick suspended slab	M2	229		
	High yield deformed bar reinforcement in beams and suspended slab to BS 44461, including, cutting, bending,tying wire and spacer blocks;				
C1	D 8	KG	429		
D1	D 10	KG	2451		
E1	D 12	KG	270		
F1	D 16	KG	501		
	TOTAL CARRIED TO SUMMARY PAGE				

No.	Description	Unit	Qty	Rate	Amount
	Wrot formwork : to				
	Vertical sides of columns	M2	100		
A	Sides and soffits of Ring beams	M2	93		
B	Ditto : intermediate beams	M2	71		
C	Ditto : lintels	M2	14		
D	Ditto: soffits suspended slab	M2	204		
E	Ditto: sides of suspended slab	M	65		
	<u>ELEMENT NO.3: WALLING</u>				
	<u>Machine cut natural stone blocks or other equal and approved building blocks: minimum compressive strength 7N/mM2 : regular coursed walling of uniform colour : bedded and jointed in cement and sand (1:3) mortar : 20 gauge x 25mm hoop iron in every alternate course</u>				
F	200mm Walling - external	M2	171		
G	200mm Walling - internal	M2	315		
	<u>Damp proof courses : bituminous felt : hedded in cement mortar (1:4) : 300mm laps</u>				
H	Horizontal : 200mm wide	m	73		
	<u>Precast concrete units : Class 20/20 : reinforced as necessary for handling : fair face finished on all exposed faces</u>				
I	250 x 75mm Cill : once weathered and throated : bedded in cement mortar 1:4)	m	25		
	<u>ELEMENT NO 4: WINDOWS</u>				
	<u>Aluminium</u>				
	<u>Mediam duty anodized aluminium windows complete with all necessary framing, million, transome, mosquito, roofed hooded permanent vents, all necessary pegs, prime, quality handle, pointing with approved mastic sealant all round, 6mm thick laminated glass</u>				
J	Window overall size 1800 x 1500 mm high; 2No. Sliding leaves	NO	14		
K	Ditto but size 1.0 x 1.5m high	NO	2		
L	Ditto but size, 1.0 x 1.0m high	No	1		
M	Ditto but size, 0.5 x 1.0.m high	NO	2		
	<u>Burglar proofing</u>				
N	12mm Diameter round mild bars welded to each other at 150mm centres both ways with every alternate bars welded to window frames (m.s)	M2	30		
	<u>Window Cills</u>				
O	200 x 150 x 30 mm thick concrete window cill with one curved edge including bedding and pointing in cement and sand mortar (1:3) mortar	LM	25		
P	Prepare and apply two coats of brick red paint	SM	6		
	<u>ELEMENT NO.5: DOORS</u>				
	<u>Steel Doors</u>				
	<u>Supply and fix the following purpose -made steel doors, including fixing lugs, once shop primed with one coat red oxide primer before delivery to site, complete with frames and including all ironmongery to Client approval and as per Door drawing: SK NO. 06449</u>				
	<u>BAT AND INSECT PROOFING</u>				
	<u>Mild steel Bat and insect proofing screens panels in lourver opening, including 13 x13 x 3mm flat frame in panels; welded one face with and including coffee tray gauge wire mesh: one shop coat red oxide primer : to</u>				
Q	Double leaf door overall size 2000 x 3000mm high	NO	2		
R	Ditto but Single leaf door overall size, 1500 x 2500mm high	NO	6		
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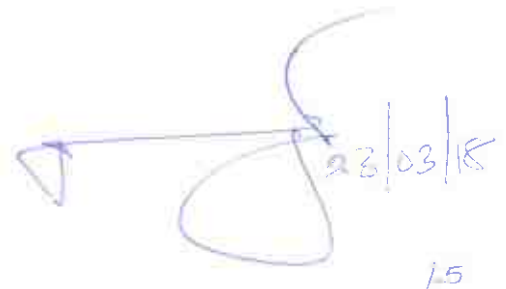
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No.	Description	Unit	Qty	Rate	Amount
	Aluminium Door				
A	Medium duty aluminium door overall size 1000 x 2500mm high complete with locking devices and housing on top all to Client's approval.	No	7		
B	Supply and fix first grade emergency panic lock on the 1500mm wide doors to client approval.	NO	3		
C	Prepare and apply gloss paint to general surfaces ; steel doors; both sides measured	M2	66		
	ELEMENT NO.6: FLOOR FINISHES				
	Cement and sand (1:4) trowelled screeds : on concrete : to				
D	25mm Floor screed to receive terrazzo including plastic diving strips	M2	185		
	Polished Terrazzo Floor Finishes on concrete				
E	30mm thick terrazzo floor finish	SM	185		
F	Ditto 25mm thick Skirting 150mm high:	m	115		
	Non-Slip Ceramic Tiles				
G	300 x 300 x 6mm Thick ceramic floor tiles approved bedded and jointed in cement and sand (1:4) mortar and pointed with neat coloured cement.	M2	8		
H	100 x 6mm High ceramic tiles skirting bedded and jointed in cement and sand mortar (1:4) and pointed with neat coloured cement	m	12		
	Skirting				
I	20 x 100mm High cement and sand skirting with rounded top and curved junction with floor finish	m	12		
	ELEMENT NO.7: WALL FINISHES				
	12mm lime plaster in two coats : steel trowelled finish : on				
	concrete or blockwork : to				
J	Walls and columns	M2	510		
	Prepare and apply three coats PVA matt vinyl emulsion paint : on				
K	Plastered walls, columns and beams.	M2	650		
L	Ditto but soffit of suspended slab	M2	220		
M	200 x 300 x 4mm Thick glazed ceramic wall tiles : fixed with approved quality adhesive in accordance with the manufacturers instructions : on and including 12mm thick cement and sand screed backing : jointed, pointed and grouted in matching colour coloured cement grout and Plastic corner strips to edges of tiled surfaces	SM	15		
N	Key pointing in cement sand (1:3) in horizontal joints.	M2	171		
O	Plinth walls and edges of floor bed	M2	26		
	Prepare and apply three coats first grade external quality				
	paint : to				
P	Columns and beams	M2	128		
	Prepare and apply three coats bituminous paint : to				
Q	Plinth area and edges of floor bed	M2	26		
	ELEMENT NO.8: KITCHEN				
R	100mm thick 1:2:4 concrete in kitchen work top	SM	2		
S	Y 10 reinforcement bars at 150 centres	KG	17		
T	150mm block wall	SM	2		
U	12mm thick mix 1:3 cement sand plaster	SM	5		
V	Single drain single bowl stainless approved kitchen sink	NO	1		
W	Bricon or approved kitchen mixer tap	NO	1		
X	900x600mm wide 20mm thick MDF board bottom cabinets comprising of 2No. Cabinets, 4No. Drawers including fixing, mouver hinges, rails, handles and approved finishes.	ITEM	1		
W	Ditto in locable overhed cabinets but with 3No. open shelves	ITEM	1		
	TOTAL CARRIED TO SUMMARY PAGE				



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No.	Description	Unit	Qty	Rate	Amount
A	10mm thick granito tiles finishes on the kitchen work top fixed with approved quality adhesive in accordance with the manufacturers instructions on and including 12mm thick cement and sand screed backing jointed, pointed and grouted in matching colour coloured cement grout and aluminium corner strips to edges of tiled surfaces	SM	2		
ELEMENT NO.9: DRAINAGE AND PLUMBING WORKS					
To supply and install the following Sanitary fittings including all the necessary joints to service overflow and waste pipes, jointings and motices, plugs, screws bolts and making good. Sanitary Fittings will be to Client's approval of the relevant samples					
B	Approved Standard white countertop wash hand basin size: 585x430mm on with one center tap hole and a 2 nd RHS tap hole for Basin top mounted under counter soap dispenser Cobra single lever mixer tap with pop up waste and plastic bottle trap 32mm dia with seal.	NO	2		
C	Approved standard WC white wall concealed cistern white seat & cover unit to have short siphon internal overflow and wide mouth WC P-trap waste outlet.	NO	2		
D	Stainless steel toilet roll holder with top flap cover.	NO	2		
E	Stainless Steel basket soap dish size 200x150mm.	NO	1		
F	Approved standard hand drier with infrared sensor and DP Switch with wiring	NO	1		
G	Aluminium coat/towel hook complete with screw to wall fixtures and rubber door stopper	NO	2		
H	Approved standard basin mounted push action stainless steel liquid soap dispenser with 0.5 litre under counter soap holder	NO	2		
I	"Bevelled" Mirror to Client's approval fixed on wall with chrome plated dome headed screws. Mirror size 600 x 800mm high	NO	1		
Internal Plumbing Water Suddlv					
J	To supply & install PP-R (PN 20) stable tubing (pipes) of various size a necessary and tenderer must allow for jointing, clipping reducers' couolina, bends, reducers, tees, sockets, approved gate valves, flexible connectors floor traps, angle valves etc, necessary for the proper and satisfactory functioning of the installation when pricing.	ITEM	1		
ELEMENT NO.8: PAVING					
K	150mm thick Hardcore bed deposited, spread, levelled and compacted to receive sand bed	M2	82		
L	50mm Sand bed levelled and compacted to receive paving	M2	82		
M	50x 600 x 600mm precast concrete (class 20) paving slabs laid on sand	M2	82		
ELEMENT NO. 9: FIRE FIGHTING EQUIPMENT					
Supply and fix controlled 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: Charge and fixing bracket, Pictorial instructions, Colour code, Servicable on site, Brass hot stamping and Operating valve as described					
N	9 litre carbon dioxide fire extinguisher complete with re-fills, discharge horn and fittings to wall bracket, as manufactured by Angus or equal and approved.	No.	4		
O	9Kg dry powder multi-purposed fire class A B and C as manufactured by Angus Fire Armour ABC multi-purpose model AP 9 K or equal and approved.	No.	4		
P	Fire blanket in canvas as Angus Fire Armour	No.	2		
Q	4.5Kg Co2 Powder Fire Extinguisher as Angus Fire Armour.	No.	4		
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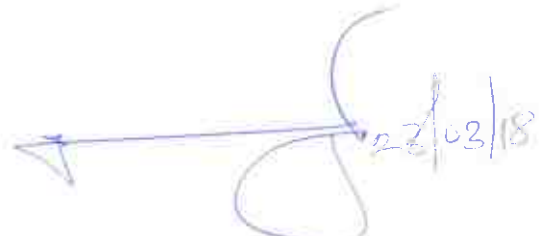


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No.	Description	Unit	Qty	Rate	Amount
ELEMENT NO. 10: SMOKE DETECTORS					
A	Allow for Hardwired Smoke detectors installations; including a battery back up; to be carried out by a nominated sub-contractor	ITEM	1		
B	Allow for general attendance on specialist contractor	ITEM	1		
C	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.11: ELECTRICAL INSTALLATIONS WORKS					
D	Allow for electrical installations to be carried out by a nominated sub-contractor as per electrical Drawing No SK No. 08280/B Sheet 1C - lumpsum and to comprising the following ,1No. 12 way 3-phase 415V distribution board rated 100Amps complete with 3 phase MCBS, 32Amps -2set and six 1Phase way MCBS 16Amps.	ITEM	1		
E	Ditto 1No. Consumer unit rated 60Amps , 6 ways each MCBS rated 32 and 16Amps.	ITEM	1		
ELEMENT NO.12: SUBSTATION LIGHTING					
F	Supply 6 No. approved standard street light steel posts,100W, LED Floodlights fittings complete with control gear and lamps complete with wiring in twin with earth 1.5mM2 wiring to each lamp including post foundations, 1No. 6 ways consumer unit, 1No. 1No. 40A doublr pole contactor, 3No.15A miniature circuit breakers, 1No, 40A current operated earth leakage circuit breaker with rated leakage current of 0.5A, 2No. dawn to dusk timer switch with manual overriding switch for the street lights	Item	1		
G	Earthing comprising of 6.0mM2 earth lead and 1800mm long by 15mm diameter copper earth electrode with driving tip and clamp in a 300mm by 300mm concrete manhole with removable cover, 1No. 63A MCB with enclosure,	No.	2		
H	10.0mM2 x 2core PVC/SWA/PVC copper cable to connect power from the gate house to the respective lighting posts including cable glands to terminate the underground cable	LM	150		
I	Trenching, cable laying, ducting and back filling	LM	150		
J	Ditto but at the gate pillars approved standard.	NO	2		
K	Supply and fix emergency chargeable lights in the control room to client approval.	NO	2		
AC Auto changeover Distribution Panel					
L	AC Auto changeover Distribution Panel as attached <u>specification document No. KP1/6C.1/13/TSP/09/092</u>	NO	1		
Fumes Extractor Fan					
M	Supply and fix 450x450mm extractor fan in the battery room including the wiring accessories.	NO	1		
Door Bell					
N	Supply, install, test and commission door bell between the controller room and gate house including all the necessary wiring accessories.	ITEM	1		
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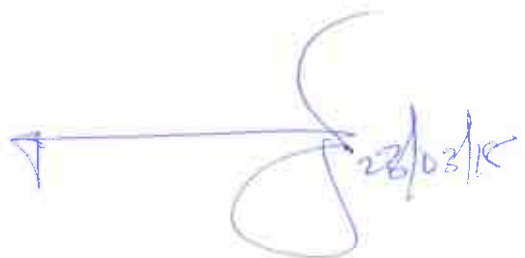
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No.	Description	Unit	Qty	Rate	Amount
	ELEMENT NO 13				
	<u>ROOFING & RAINWATER DISPOSAL</u>				
	<u>Structural Steel work</u>				
	<u>The following in framed structural steelwork : complete with and including all welded and bolted connections : delivery to site and erection with and including one shop coat of zinc plumbate primer</u>				
A	7 No. structural steel roof trusses spanning 10750 mm girth : hoisting and fixing approximate 4.5 M above ground level :				
B	100 x 50 x 4 mm thick RHS rafters	LM	85		
C	50 x 50 x 3 mm SHS struts and ties	LM	145		
D	50 x 50 x 3 mm SHS tie beam	LM	55		
E	100 x 100 x 6 mm thick base plate welded to truss & drilled with 4No. holes for 12 mm diameter bolts	No	14		
F	Supply and fix 150x51x2mm 'Z' - purlins with welded cleats and bolted to rafters primed	LM	224		
G	Fabricate steel framework comprising of SHS 40x40x4mm thick to form vertical fascia cladding, comprising of vertical and horizontal members, bracings, struts runners all adequately and including fixing into position in to client satisfaction.	LM	590		
H	Supply and fix BP760 box profile factory pre-painted gauge 28 full length roofing sheets to an approved colour laid with 94mm side laps and fixed to steel 'Z' purlin (m/s) including self tapping screws/bolts as necessary.	SM	270		
I	Ditto but vertical sides of fascia cladding framework and gable sides	SM	85		
J	Ditto but eave covering	SM	40		
K	Supply and fix 28Gx320mm with stiffed ridge caps	LM	23		
	<u>Rainwater Goods</u>				
L	Supply and fix 14 gauge Mild steel sheet purpose made box water gutter, 1200mm girth; to sit and fixed on eave cover framework as described (ms) and to rafters	LM	46		
M	<u>Extra over for stopped ends.</u>	NO	4		
N	Ditto 100mm diameter holes in gutter	NO	2		
O	100mm diameter down pipe	LM	12		
P	Extra-over down pipe for 900mm girth swanek including, tightly secured with sandle clips at 750mm centres.	NO	2		
Q	Extra over downpipe for 300m shoe	NO	2		
	<u>Painting generally.</u>				
R	Prepare and apply 2 coats of red oxide primer and apply 2 coats of alluminium finish on rainwater goods	SM	1		
	Prepare and apply two coats black bituminous paint in rainwater gutters internally.	SM	55		
	<u>EXTERNAL WORKS</u>				
	<u>BILL NO.11: Gound Mounted Water Tank Plinth</u>				
S	Excavate Pit for water tank not exceeding 1.50 metres deep	8	CM		
T	Remove surplus excavated material from site	7	CM		
U	Return fill and well ram selected excavated materials around foundations	1	CM		
	<u>Concrete work:-</u>				
	<u>50mm thick plain blinding concrete mix (1:4:8) class 10-15mm</u>				
	<u>aggregates in:-</u>				
V	Foundations	10	SM		
	<u>Guaranteed strength vibrated reinforced concrete mix (1:11/2:3) class 25-20mm aggregate in:-</u>				
	Base.	3	CM		
W	Ditto but curved 250mm thick walling	2	CM		
X	Ditto but curved 300mm thick top cover	2	CM		
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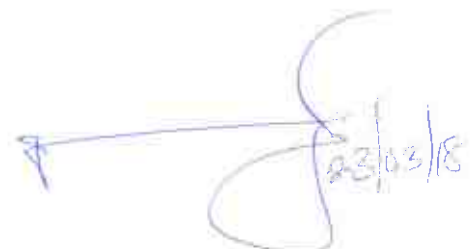
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No.	Description	Unit	Qty	Rate	Amount
	Reinforcements				
	High yield deformed bars to B.S. 4461				
	D 8	31	KG.		
	D 12	635	KG.		
	Wrot Formwork to:-				
A	Curved base 225-300mm high	11	SM		
B	Curved edges of walling	18	SM		
	Fillings				
C	Approved hardcore of 100-200mm diameter fillings	4	CM		
	<u>BILL NO.12: ELEVATED WATER STORAGE TANK STEEL TOWER</u>				
D	Excavate for column pits 1.5m deep commencing from stripped level but not exceeding 1.5 m deep.	CM	6		
E	Extra over excavation in rock of all classes.	CM	2		
F	Remove surplus excavated material from site	CM	4		
G	Return fill and well ram selected excavated materials around foundations	CM	2		
H	50mm thick 1:4:8 blinding to column bases	SM	4		
	<u>Vibrated reinforced concrete class 20/20 1:2:4 as described in:</u>				
I	Column bases	CM	1		
J	Stubs	CM	1		
	<u>High Steel reinforcement bars including tying bending spacer blocks tying wires and fixing high tensile bars to BS 44461</u>				
K	D 12	KG	104		
L	D 8	KG	18		
M	Allow for accurately setting 16 No. 20mm diameter galvanised steel foundation bolts at 250mm centres on foundation column plinths.	ITEM	1		
N	Wrot formwork to sides of columns	CM	2		
O	Bases	SM	5		
P	Vertical sides of stub	SM	7		
Q	10mm thick top finish of cement/sand screed	SM	4		
	<u>The following in steel work tower 2000x2000mm wide x6000m high fixed 1500mm deep in ground including cutting and welding or bolting as necessary finished, with 3 coats of red oxide primer</u>				
R	300 x 300 x 10mm thick base plate with 4no. 18mm diameter holes spaced at 250mm centres and welded to the bottom of tower column	NO	4		
S	100x100x8mm mild steel SHS in main framework, welded to base plates and reinforced with 32No. Cleats	LM	24		
T	Ditto decking 100x50x6mm RHS	LM	11		
U	Ditto decking 100x50x4mm RHS	LM	22		
V	Ditto (50x50x6mm) in bracing and struts	LM	68		
W	Class A 42mm diameter balustradings	LM	12		
X	Ditto but handrail and cross member	LM	22		
Y	4mm thick galvanised chequered plate welded on decking	SM	8		
Z	Allow for water storage tank 6.0m high access ladder with 50x50x4mm main frame with 16mm rods spaced at 300mm c/c	ITEM	1		
A1	Apply two coats of gloss paint to tower	Item	1		
B1	Supply and install 3500 litres capacity APPROVED PLASTIC TANK including hoisting to position and applying two coats of brilliant white gloss paint on its outer surface	NO	1		
C1	Ditto but 6000 litres placed on concrete water tank plinth (separately measured)	NO	1		
D1	Allow for connecting piped water to both elevated storage and ground mounted water tanks using 25mm PN20 pipes including accessories, gate valves, foot valves, non-return valves	ITEM	1		
E1	Supply and connect water control fittings including fully installed 0.5hp booster pump.	ITEM	1		
F1	Prepare apply two coats of zinc chromate paint to general surfaces of metal	ITEM	1		
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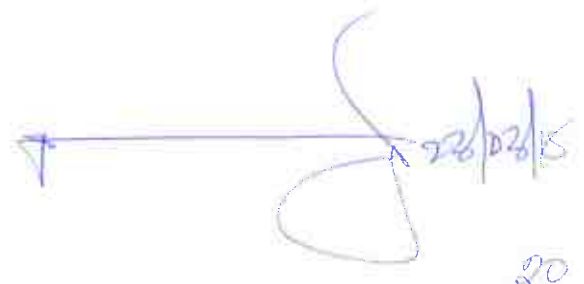
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No.	Description	Unit	Qty	Rate	Amount
	BILL NO.13: FOUL DRAINAGE				
	Septic Tank : 1No.				
	Excavation and Earthworks				
A	Excavate pit for Septic Tank depth not exceeding				
B	1.50 metres deep commencing from reduced level	26	CM		
C	Ditto between 1.50m-3.00m deep	25	CM		
D	Extra-over ditto for excavating in rock	17	CM		
E	Remove surplus excavated material from site	68	CM		
	Concrete Work:-				
	Mass concrete mix (1:3:6) class 10-15mm aggregate in:-				
F	50mm Thick blinding laid to slope not exceeding 15 degrees from horizontal	17	SM		
	Guaranteed strength vibrated reinforced concrete mix (1:1 1/2:3) class 25/20mm aggregate in:-				
G	200mm Thick base	18	SM		
H	100mm Thick baffles to walls	5	SM		
I	150mm Suspended slabs	18	SM		
J	150mm Benching to form channels	1	SM		
K	200mm Thick walls	54	SM		
	Reinforcement				
	High yield square reinforcement bars to B.S. 44461				
L	<u>Assorted bars</u>	335	KG		
	BRC Ref. type A193 including 200mm laps in:-				
M	Floor bed	18	SM		
N	Walls and baffles	6	SM		
	Wrot formwork to:-				
O	Horizontal soffits of suspended slabs	18	SM		
P	Vertical sides of baffles walls	10	SM		
Q	Edges of suspended slab 75-150 mm high	18	LM		
R	Vertical edges of beds over 75-150mm high.	20	LM		
S	Extra-over boxing size 600 x 450mm to form opening through 150mm thick reinforced concrete slab	2	NO.		
T	Ditto size 600 x 800mm ditto	2	NO.		
	12mm Water proofed cement and sand (1:3) render: steel trowelled smooth to:-				
U	Base	18	SM		
V	Suspended slab	18	SM		
W	Walls	54	SM		
	Manhole Covers				
X	Cast iron medium duty manhole cover and frame size 600 x 450mm to B.S 497; frame set into cement and sand ((1:4) mortar: cover set in grease	2	NO.		
Y	Ditto size 600 x 800mm ditto	2	NO.		
	Step Irons				
Z	200mm Wide galvanised step iron twice bent and morticed into concrete walls	8	NO.		
	Class 41 PVC soil water vent pipes built into concrete				
A1	100mm Diameter pipes 200mm long.	1	NO.		
B1	Extra for bend with mosquito gauze soldered on	2	NO.		
C1	Extra for equal tee	1	NO.		
D1	Extra for nipple	2	NO.		
E1	Extra for flange	1	NO.		
F1	150mm Diameter stand pipe 800mm long	2	NO.		
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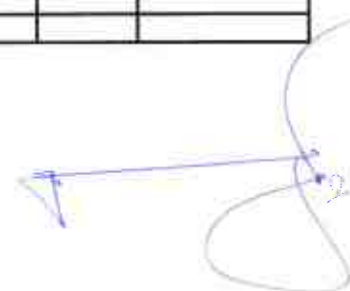
No.	Description	Unit	Qty	Rate	Amount
	BILL NO.14: BOUNDARY WALLS AND GATES				
	Excavations and Earthworks:-				
A	Excavate trench for strip foundations not exceeding 1.50 metres deep commencing from reduced level.	181	CM		
B	Ditto pits for column bases	164	CM		
C	Ditto pits for column bases over 1.5m deep but n.e. 3.0m dp.	33	CM		
D	Extra-over excavations for excavating in soft rock	27	CM		
E	Return, fill and well ram selected excavated materials around foundations.	241	CM		
F	Load and cart away surplus excavated materials.	164	CM		
G	Allow for keeping all excavations free from general water.	1	ITEM		
H	Allow for all necessary strutting and planking.	1	ITEM		
	Concrete Work:-				
	Mass concrete class 10 -15mm aggregate mix (1:3:6) in:-				
I	50mm Thick blinding under strip foundations	121	SM		
J	Ditto under column bases	109	SM		
	Reinforced Vibrated concrete Class 25-20mm aggregate mix (1:2:4) in:-				
K	Strip foundations	24	CM		
L	Column bases	26	CM		
M	Columns	27	CM		
N	Ground beam	18	CM		
	Formwork				
	Sawn formwork to:-	458			
O	Vertical sides of strip foundations.	80	SM		
P	Ditto column bases.	109	SM		
Q	Ditto columns	445	SM		
R	Ditto ground beam	186	SM		
	Reinforcement				
	High yield square twisted bars to B.S. 4461:				
S	D 8	1503	KG.		
T	D 10	461	KG.		
U	D 12	5186	KG.		
V	D 16	140	KG.		
	Quarry natural stone bedded and jointed in cement and sand (1:3)mortar : 20 gauge x 25mm hoop iron in every alternate course				
W	200mm. Thick substructure walls	432	SM		
	Machine cut natural stone blocks or other equal and approved building blocks: minimum compressive strength 7N/mM2 : regular coursed walling of uniform colour : bedded and jointed in cement and sand (1:3) mortar : 20 gauge x 25mm hoop iron in every alternate course				
X	200mm thick wall	691	SM		
	12mm lime plaster in two coats : steel trowelled finish on walls and columns				
Y	Walls and columns internally.	802	SM		
	Prepare and apply three coats PVA matt vinyl emulsion paint : on				
Z	Plastered walls, columns and beams.	849	SM		
	Fair face:-				
A1	Extra over stone walling for wire brushing and key pointing to form recessed horizontal and vertical joints on both sides.	691	SM		
	Prepare and apply three coats bituminous paint : to				
B1	Plinth area above ground and ground beam externally.	186	SM		
	TOTAL CARRIED TO SUMMARY PAGE				



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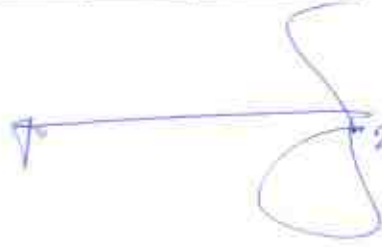
No.	Description	Unit	Qty	Rate	Amount
	Razor Wire				
A	Supply and fix Razor Wire at the top of boundary wall, Coil size; 450mm diameter, Blade profile-ripper razor wire, Stretch factor-maximum of 10m per coil and secured to wall with galvanised steel 25x25x4mm square tube bar 600mm long anchored on the wall at 1.5m centers.	310	LM		
	Precast concrete class 20/20 in-				
B	450 x 450 x 75mm. Thick coping weathered and throated all round bedded on top of columns with cement and sand (1:4) mortar.	104	NO.		
C	Ditto but 800x 450 x75mm	5	NO		
D	350 x 50mm Thick ditto bedded on top of 200mm thick walling ditto.	288	LM		
	Expansion Joint				
E	20mm thick construction joint in flex cell or equal and approved expansion joint and (25x25)mm expedite sealer	SM	10		
	GATES				
F	Fabricate and fix standard primary substation gate with 16 gauge black sheet panels welded on 50x50x4mm square tubes and 75x75x4mm frame with 50mm diameter 6No. bushes as per the drawing SK. No.07044/B including excavation for the gate columns, concrete works,erection and 3 coats of 1st grade gloss paint	2	NO		
G	Ditto but 1500x2400mm high pedestrian gates	2	NO		
	CHAINLINK FENCE				
H	2.4m high x12.5A gauge chainlink fence, complete with 4mm diameter 5 strands of galvanized plain wire pass through 3.0m high 50x50x3mm cranked SHS posts placed at 3.0m centers, 12 gauge barbed wire on 450mm cranks, including, excavation and erection works, 1:3:6 mix mass concrete surround at 600mm deep.	30	LM		
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No.	Description	Unit	Qty	Rate	Amount
	BILL NO. 15: GATE HOUSE & TOILETS				
	<u>SUBSTRUCTURES</u>				
	<u>Site Preparation</u>				
	<u>Excavations</u>				
	<u>General excavations to include excavating in loam, clay, Black cotton soil, red soil or any soil which does not require ripping or use of compressor tools</u>				
A	Excavate average 200mm deep to remove top soil: deposit heaps where directed on site for landscaping.	M2	12		
D	Excavate trenches for wall foundations: commencing from reduced level and not exceeding 1.5 metres deep	M3	16		
C	Extra over excavation for excavating in hardrock all classes.	M3	3		
	<u>Filling</u>				
D	Filling to make up levels : selected excavated material : placed in 200mm thick layers : well watered and compacted to 98% MOD	M3	5		
	<u>Backfilling around Foundations</u>				
E	Backfill around foundation : selected excavated material: placed in 200mm thick layers : well watered and compacted to 98% MDD	M3	4		
	<u>Disposal of excavated materials</u>				
F	Surplus excavated material: remove and deposit in spoil heaps on site	M3	8		
	<u>Disposal of water</u>				
G	Deep excavations free from all water by baling, pumping or otherwise	Item	1		
	<u>Planking and strutting</u>				
H	Planking and strutting to sides of all excavations: keep excavation free from all fallen materials	Item	1		
	<u>Imported Hardcore</u>				
I	Approved quarry stone hardcore : 300mm thick (overall) : hand packed and well compacted in 150mm thick layers	M3	3		
	<u>Murram Blinding</u>				
J	50mm Murram blinding to surface of hardcore	M2	9		
	<u>In situ Concrete : Class 15/25mm</u>				
K	50mm Blinding layer : under wall foundations	M2	11		
	<u>In situ concrete : class 25/20 : vibrated: reinforced</u>				
L	Foundations in trenches	M3	2		
	<u>High yield square twisted bar reinforcement to BS 4461</u>				
M	D10 bars	kg	59		
	<u>Sawn formwork : to</u>				
N	Ditto : strip foundations	M2	7		
O	Vertical edge of floor bed : over 150 but not exceeding 225mm wide	m	36		
	<u>Quarry natural stone bedded and jointed in cement and sand (1:3) mortar : 20 gauge x 25mm hoop iron in every alternate course</u>				
P	200mm thick substructure Walls	M2	27		
	<u>Labour and sundries</u>				
Q	One layer 1000 gauge polythene sheet damp proof membrane : under beds : 300mm laps	M2	9		
	CONCRETE SUPERSTRUCTURE				
	<u>In situ concrete : Class 25/20mm : vibrated : reinforced</u>				
R	Ring beams	M3	1		
	<u>High yield deformed bar reinforcement to BS 4461</u>				
S	D 12	KG	60		
T	D 8	KG	30		
	<u>Sawn formwork : to</u>				
U	Sides and soffits : beams	M2	13		
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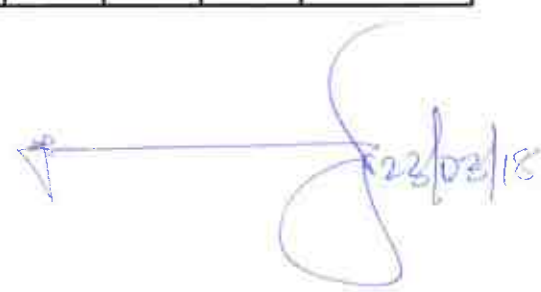
No.	Description	Unit	Qty	Rate	Amount
	WALLING				
	<u>Medium chisel dressed natural stone blocks or other equal and approved building blocks: minimum compressive strength 7N/mM2: regular coursed walling of uniform colour : bedded and jointed in cement and sand (1:3) mortar : 20 gauge x 25mm hoop iron in every alternate course</u>				
A	200mm Walling	M2	40		
	<u>Damp proof courses : bituminous felt: bedded in cement mortar (1:4) : 300mm laps</u>				
B	Horizontal: 200mm wide	Lm	14		
	ROOFING				
	Structural Steel work				
	<u>The following in framed structural steelwork : complete with and including all welded and bolted connections : delivery to site and erection with and including one shop coat of zinc plumbate primer</u>				
	<u>3No structural steel roof trusses spanning 2200 mm girth hoisting and fixing approximate 3.0 M above ground level :</u>				
C	50x 50 x 4 mm thick RHS rafters	LM	12		
D	40 x40 x 3 mm SHS struts and ties	LM	13		
E	50 x 50 x 3 mm SHS tie beam	LM	7		
F	100 x 100 x 6 mm thick base plate welded to truss : drilled with 4No. holes for 12 mm diameter bolts	No	6		
G	Supply and fix 150x51x2mm 'Z' - purlins with welded cleats and bolted to rafters primed	LM	30		
H	Fabricate steel framework comprising of SHS 40x40x4mm thick to form vertical fascia cladding, comprising of vertical and horizontal members, bracings, struts runners all adequately and including fixing into position in to client satisfaction.	LM	78		
I	Supply and fix BP760 box profile factory pre-painted gauge 28 full length roofing sheets to an approved colour laid with 94mm side laps and fixed to steel 'Z' purlin (m/s) including self tapping screws/bolts as necessary.	SM	24		
J	Ditto but vertical sides of fascia cladding framework and gable sides	SM	25		
K	Ditto but eave covering	SM	9		
L	Supply and fix 28Gx320mm with stiffed ridge caps	LM	23		
	Rainwater Goods				
M	Supply and fix 14 gauge Mild steel sheet purpose made box water gutter, 900mm girth; to sit and fixed on eave cover framework as described (ms) and to rafters	LM	12		
N	<u>Extra over for stopped ends.</u>	NO	2		
O	Ditto 100mm diameter holes in gutter	NO	2		
P	Extra-over down pipe for 900mm girth swanek including, tightly secured with sandle clips at 750mm centres.	NO	2		
Q	Extra over downpipe for 300m shoe	NO	2		
R	Painting generally.				
	Prepare and apply 2 coats of red oxide primer and apply 2 coats of alluminium finish on all general surfaces of metal	SM	1		
R	Prepare and apply two coats black bituminous paint in rainwater gutters internally.	SM	11		
	ELEMENT NO 5: WINDOWS				
	Precast concrete units : class 20/20 : reinforced as necessary for handling : fair face finished on all exposed faces				
S	250 x 75mm Cill: once weathered and throated : bedded in cement mortar (1:4)	m	4		
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No.	Description	Unit	Qty	Rate	Amount
	Steel Casement Windows Purpose made standard section steel casement windows of approved manufacture : with polished brass handles, stays and hinges; permanent vents along full length of top edge : fixed with lugs built into concrete or blockwork : pointed externally in mastic : one shop coat primer				
A	Window size 900 x 1200mm high ; One opening casements.	No	2		
B	Ditto size 450 x 600mm high ; one top opening casements and one bottom fixed panels.	No	2		
C	Ditto size 600 x 1200mm high ; one top opening casements and one bottom fixed panels.	No	1		
D	5mm thick clear sheet glass; fixed with putty to metal frames	M2	4		
	Prepare, prime and apply two undercoats and one finishing coat gloss paint: on metal				
E	Window casements (both sides measured flat overall)	M2	8		
	ELEMENT NO 6: DOORS				
F	Single leaf steel doors 900x2500mm high in two panels 450mm wide consisting of gauge 18 metal sheet welded into 40x40x3mm shutter framing; 50x50x4mm door frame with wall anchors; and fixed light panel on top, including all necessary ironmongeries.	NO	3		
G	Prepare and apply 2 coats of red oxide primer and apply 2 coats of matt finish paint on steel doors internal and externally.	SM	14		
	ELEMENT NO 7: FINISHES				
	FLOOR FINISHES				
	Cement and sand (1:3) trowelled screeds : on concrete : to				
H	32mm Floor screed to receive ceramic floor tiles (ms)	M2	7		
I	300 x 300 x 8mm thick coloured ceramic floor tiles: as selected by the Client: on screeded bed (measured separately) jointed, pointed and grouted in matching colour cement mortar)	M2	7		
	WALL FINISHES				
	Cement and sand (1:3) backing : finished to receive ceramic wall tiles :				
J	12mm thick: to walls	M2	12		
	200 x 300 x 6mm Thick glazed ceramic wall tiles : fixed with approved quality adhesive in accordance with the manufacturers instructions : on and including 12mm thick cement and sand screed backing : jointed, pointed and grouted in matching colour coloured cement grout and Plastic corner strips to edges of tiled surfaces				
	12mm Lime plaster in two coats : steel trowelled finish : on concrete or blockwork : to				
K	Walls	M2	24		
	Prepare and apply three coats 1st grade gloss oil paint: on				
L	Plastered walls	M2	24		
	Extra over walling for : horizontal recessed and flush vertical joints as work proceeds : in cement and sand (1:3) mortar				
M	Key pointing in cement sand (1:3) in horizontal joints.	M2	28		
	Cement and sand (1:3) render : wood float finish to				
N	Sides of beams	M2	4		
O	Plinth	M2	5		
	Prepare and apply three coats first grade external quality paint: to				
P	Rendered surfaces of m beams	M2	4		
	Prepare and apply three coats first grade bituminous paint: to				
Q	Rendered plinth surfaces	M2	5		
	CEILING FINISHES				
	Gypsumboard ceiling lining				
R	12mm Chipboard ceiling lining : fixed to and including aluminium gypsum rails branding at 600mm centres bothways	M2	7		
S	Extra over for forming 600 x 600mm access door trap and door catch	No	1		
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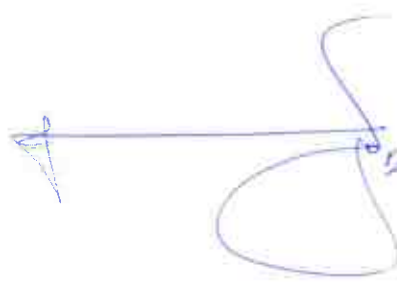
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No.	Description	Unit	Qty	Rate	Amount
A	<u>Wrot camphor : selected and kept clean</u> 100x25mm Moulded gypsum cornice : plugged and screwed <u>Prepare, prime and apply one undercoat and two finishing coats</u>	m	20		
B	<u>gloss paint: to wood</u> Cornice : not exceeding 100mm girth <u>Prepare and apply three coats 1st grade plastic emulsion paint: to,</u>	m	20		
C	Horizontal soffits : gypsum board ceiling soffits <u>ELEMENT NO 8: FITTINGS & FIXTURES</u> <u>GUARDROOM SITTING AREA AND VANITY TOP</u> <u>Counters comprising : 75mm thick concrete class 20 worktop :</u> <u>BRC A 65 reinforcement: formwork : 200 x 8mm 'Sai' Ceramics</u>	M2	7		
D	<u>tiles finish top and fascia :</u> Vanity top size 450mm wide x 600mm long 75mm thick	No	1		
E	Ditto sitting platform, size 500x1000mm	N0	1		
	External Works				
F	200mm Hardcore bed : deposited, spread levelled and compacted : to receive sand bed	M2	10		
G	50mm Sand bed : levelled and compacted to receive paving	M2	10		
H	50 x 600 x 600 mm Precast concrete (class 20) paving slabs : laid on sand bed (measured separately) : jointed and pointed in cement mortar (1:4)	M2	10		
	Sanitary Fittings To supply and install the following Sanitary fittings including all the necessary joints to service overflow and waste pipes, jointings and motices, plugs, screws bolts and making good. Sanitary Fittings will be to Client's approval of the relevant samples				
I	Approved Standard white countertop wash hand basin size: 585x430mm on with one center tap hole and a 2 nd RHS tap hole for Basin top mounted under counter soap dispenser .Cobra single lever mixer tap with pop up waste: and plastic bottle trap 32mm dia with seal.	NO	2		
J	Approved standard WC white wall concealed cistern white seat & cover unit to have short siphon internal overflow and wide mouth WC P-trap waste outlet.	NO	2		
K	Stainless steel toilet roll holder with top flap cover.	NO	2		
L	Stainless Steel basket soap dish size 200x150mm.	NO	1		
M	Approved standard hand drier with infrared sensor and DP Switch with wiring	NO	1		
N	Aluminium coat/towel hook complete with screw to wall fixtures and rubber door stopper	NO	2		
O	Approved standard basin mounted push action stainless steel liquid soap dispenser with 0.5 litre under counter soap holder.	NO	2		
P	"Bevelled" Mirror to Client's approval fixed on wall with chrome plated dome headed screws. Mirror size 600 x 800mm high	NO	1		
	Internal Plumbing Water Suddly				
Q	To supply & install PP-R (PN 20) stable tubing (pipes) of various size a necessary and tenderer must allow for jointing, clipping reducers' couolina, bends, reducers, tees, sockets, approved gate valves, flexible connectors floor traps, angle valves etc. necessary for the proper and satisfactory functioning of the installation when pricing.	ITEM	1		
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No.	Description	Unit	Qty	Rate	Amount
	SUMMARY PAGE				
	BROUGHT FORWARD FROM PAGE 1				
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	BROUGHT FORWARD FROM PAGE 3				
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	BROUGHT FORWARD FROM PAGE 25				
	SUB-TOTAL				
	ADD 16% VAT				
	GRAND TOTAL CARRIED TO FORM OF TENDER				
<p>Amount in words:</p> <p>.....</p>					
<p>Company Stamp</p>					
<p>Signed:</p>					
<p>Name:</p>					
<p>Address:</p>					
<p>Insert Contract Period: Weeks</p>					



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