

	BILL OF QUANTITIES FOR REHABILITATION & SUBSTATION BALASTING LOT-2 COAST				
ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
	Preliminaries-For All substation sites in the Lot				
A	Allow for a temporary site office preferably portable that can be shifted to multiple site or external arrangement as per contractor convinience(Works lasting only 4 months)	ITEM	1		
B	Ditto but 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		
C	Allow for clean water for the works	ITEM	1		
D	Allow for all the necessary statutory approvals for the works	ITEM	1		
E	Allow for temporary sign post for the proposed works	ITEM	1		
F	The Contractor shall allow and 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	Allow for Insurance Cover for the proposed works and workers.				
H	Allow for a qualified personel conservant with Kenya Power safety regulations for the entire contract period	ITEM	1		
J	Allow for supply of power or provide for an adequate Capacity Generator on site for the supply of power and water for use for the works	ITEM	1		
K	Allow for demobilization and relocation to different site	ITEM	1		
L	Allow for samples testing in accedited labaratories all material as per engineer request	ITEM	1		
	TOTAL TO SUMMARY PAGE 1				

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
	KOKOTONI 133KV METERING SUBSTATION				
1	Excavate oversite vegetable soil /existing ballast average depth 150mm and cart way to Municipal Council designated damping site	SM	1600		
2	Average 0.2mm thick selected well compacted imported and approved murram fill, compacted in layers of 150mm thick using a plate compactor to receive ballast to gradual slope terminating at sorm drain	CM	320		
3	Apply suitable and approved weed killer, herbicide to surfaces of backfill as per the Manufacture's written instructions and a 12 month guarrantee and provide a copy to client.	SM	1600		
4	1000 gauge polythene or other equal and approved mebrane laid on compacted and treated surface with weltd laps of 200mm wide.	SM	1600		
5	Supply and spread uniformly 150mm thick (30-40mm) crushed Agregates/ ballast in switchyard. (machine crushed)	Tons	180		
6	Provide 150mm precast concrete or insitu channe 250mm above switchyard level along the edges of invert drain block,road edges to secure from falling ballast.	LM	200		
7	Allow cleaning and re use of existing ballast to appointed areas in the yard	SM	1600		
	CABLE TRENCHES & DUCTS				
1	Refurbish existig cable trenches by hacking 150mm tongue and grove and extension to 300mm above ground by lean concrete on the 150mm walls- Provisional length	LM	70		
2	Provide and put in place (900x300x70mm) thick precast concrete trench covers reinfoced with Y8 bars spaced at 100mm both ways with fair face finish on both side; concrete to class 20	NO	175		
3	Refurbish existing chainlink where ddeilapilated by replacing broken poles ,struts ,allow for betetr tensioning and coating poles with slurry to make good	ITEM	1		
	CONTORL BUILDING				
1	ALLOW for External and internal painting control building including making good spash aprons and skirting with black bituminous	SM	150		
	TOTAL TO SUMMARY PAGE 1				

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
2	Allow replacement of doors and priming,painting with 2 coats existing,and reapiir to functionality all lighting,fixtures ,remove all rusted metal parts ,Splash aprons ,all builders work to make good Provisional 200,000	ITEM	1		
3	Supply and lay 110mm diameter class 41 UPVC ducts to receive control cables running on the surface; and crossing the access road, including excavation of trench, backfilling and 100mm thick houching on ducts sorrounds.	LM	60		
4	allow for checker plates 600mm wide for 600mm cable trench complete with colapsible handles .allow for nosing angle edge protector.	LM	25		
5	Allow painting with cement slurry existing switchgear plinths	ITEM	1		
6	Allow for perimeter wall refurbishment with bagwash and gate repair and painting -wall 200lm	ITEM	1		
7	Allow for IDB 300mm dia drain on one side complete with side slabs and all works and include channelling all storm water to drain and exit	LM	100		
8	Allow for general clearance of vegetation ,shrubs and the like	ITEM	1		

9	Alow entry Road potion by cart away unsuitable and roll compact and do 150mm well graded maruum and 50mm quarry chips surfacing,kerbs,channels,compaction to std.	SM	300		
	TOTAL TO SUMMARY PAGE 2				
	SUMMAY PAGE			AMOUNT	
	TOTAL FROM PAGE -PRELIMINARIES ALL LOTS				
	TOTAL FROM PAGE 1				
	TOTAL FROM PAGE 2				
	SUB-TOTAL SRM KOKOTONI 132KV METERING				

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
	MOMBASA CEMENT 133KV METERING SUBSTATION				
	<u>SWITCHYARD</u>				
1	Excavate oversite vegetable soil /existing ballast average depth 150mm and cart way to Municipal Council designated damping site	SM	2400		
2	Average 150mm thick selected well compacted imported and approved murram fill, compacted in layers of 150mm thick using a plate compactor to receive ballast to gradual slope terminating at storm drain	CM	360		
3	Apply suitable and approved weed killer, herbicide to surfaces of backfill as per the Manufacturer's written instructions and a 12 month guarantee and provide a copy to client.	SM	2400		
4	1000 gauge polythene or other equal and approved mebrane laid on compacted and treated surface with weltd laps of 200mm wide.	SM	2000		
5	Supply and spread uniformly 150mm thick (30-40mm) crushed Agregates/ ballast in switchyard. (machine crushed)-top up with existing and furnish client with weighbill tickets	Tons	300		
6	Provide 150mm precast concrete or insitu channe 250mm above switchyard level along the edges of invert drain block,road edges to secure from falling ballast.	LM	200		
7	Allow cleaning and re use of existing ballast to appointed areas in the yard	ITEM	1		
	CABLE TRENCHES & DUCTS				
1	Provide and put in place (900x300x70mm) thick precast concrete trench covers reinforced with Y8 bars spaced at 100mm both ways with fair face finish on both side; concrete to class 20	NO	50		
2	Make good entry Road portion by cart away unsuitable and roll compact and do 150mm well graded maruum and 50mm quarry chips surfacing,kerbs,channels,compaction to std.	SM	300		
	REFURBISHMENTS				
1	ALLOW for internal painting control building including making good splash aprons and skirting with black bituminous	SM	200		
2	allow for checker plates 600mm wide for 600mm cable trench complete with colapsible handles .allow for nosing angle edge protector.	LM	20		
	TOTAL TO SUMMARY PAGE 1				

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	<u>RABAI 132/ 33 KV SUBSTATION</u>				
ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
	<u>SWITCHYARD</u>				
1	Excavate oversite vegetable soil average depth 150mm and cart way to Municipal Council designated damping site	SM	2300		
2	ALLOW for oversite removal By scooping existing ballast and and clean and stock in piles	ITEM	1		
3	Average 0.2mm thick selected well compacted imported and approved murram fill, compacted in layers of 150mm thick using a plate compactor to receive ballast to gradual slope terminating at srom drain	CM	450		
4	Apply suitable and approved weed killer, herbicide to surfaces of backfill as per the Manufacture's written instructions and a 12 month guarrantee and provide a copy to client.	SM	2300		
5	1000 gauge polythene or other equal and approved mebrane laid on compacted and treated surface with weltd laps of 200mm wide.	SM	2300		
6	Supply and spread uniformly 150mm thick (30-40mm) crushed Agregates/ ballast in switchyard. (machine crushed)	Tons	300		
7	Provide 150mm precast concrete or CAST insitu channe 300mm above switchyard level along the edges of invert drain block,road edges etc to secure from falling ballast.	LM	200		
	<u>CABLE TRENCHES & DUCTS</u>				
1	Refurbish existig cable trenches by hacking 150mm tongue and grove and extension to 300mm above ground by lean concrete on the 150mm walls- Provisional length	LM	300		
2	Provide and put in place (900x300x70mm) thick precast concrete trench covers reinfoced with Y8 bars spaced at 100mm both ways with fair face finish on both side; concrete to class 20	NO	900		
3	Allow for repair and reinforce existing access road by recompaction and removal of weeds and re pave using existing and paint red yellow in all kerbs and allow replacement of damaged pavings and like aprox 450sqm	Item	1		
4	cart away and demolish by crushing qall failed cable covers and cart away	Item	1		
5	re-spread uniformly existing 150mm thick (30-40mm) crushed Agregates/ ballast in switchyard. (machine crushed)	SM	2300		
	TOTAL TO SUMMARY PAGE 1				

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
3	Supply and lay 110mm diameter class 41 UPVC ducts to receive control cables running on the surface; and crossing the access road, including excavation of trench, backfilling and 100mm thick houching on ducts sorrounds.	LM	120		
4	Rehabilitate transformer plinth and all switchgear plinths with brush and slurry coat to make good	Item	1		
	<u>RABAI 132 KV DIAMETERS YARD</u>				
	<u>SWITCHYARD</u>				
1	ALLOW for oversite removal By scooping existing ballast and and clean and stock and re use	SM	21500		
2	Excavate oversite vegetable soil/ballast average depth 100mm and cart way to Municipal Council designated damping site	CM	2150		
3	Average 0.1m thick selected well compacted imported and approved murram fill, compacted in layers of 150mm thick using a plate compactor to receive ballast to gradual slope terminating at sorm drain	CM	2150		
4	Apply suitable and approved weed killer, herbicide to surfaces of backfill as per the Manufacture's written instructions and a 12 month guarrantee and provide a copy to client.	SM	21500		
5	1000 gauge polythene or other equal and approved mebrane laid on compacted and treated surface with weltd laps of 200mm wide.	SM	21500		
6	Re-spread uniformly existing 150mm thick (30-40mm) crushed Agregates/ ballast in switchyard. (machine crushed)	SM	21500		
7	Supply and spread uniformly (30-40mm) crushed Agregates/ ballast in switchyard. (machine crushed) to. Make up low areas	Tons	1700		
8	Provide 150mm precast concrete or CAST insitu channe 200-mm above switchyard level along the edges of invert drain block,road edges to secure from falling ballast.	LM	700		
9	cart away and demolish by crushing all failed cable covers and cart away	Item	1		
10	Refurbish existig cable trenches by hacking 150mm and raise to 200mm above ground by lean concrete on the 150mm walls and clearing the debris in trenches	LM	700		
	TOTAL TO SUMMARY PAGE 2				

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT RATE	AMOUNT
12	Provide and put in place precast concrete trench covers size; 900x300x75mm thick, reinforced with T8 bars spaced at 100mm both ways with fair face finish on both side; concrete to class 25-to replace all damaged covers	NO	2000		
13	Supply and lay 110mm diameter class 41 UPVC ducts to receive control cables running on the surface; and crossing the access road, including excavation of trench, backfilling and 100mm thick houching on ducts sorrounds.	LM	350		
14					
15	Provide 150mm lean concrete or CAST insitu channe 200mm above switchyard level along the edges edges etc to secure from falling ballast.	LM	600		
	<u>STORM WATER DRAINAGE</u>				
A	Excavate on site drain trench not exceeding 1.5m deep including plucking and struting, dispoasl of soil to receive drainage channels and forming sloping sides in well compacted murram bed.	CM	700		
B	Lay (300x450mm) precast concrete invert block drains to a suitable fall with grooved edge and tounge joints filled with cement/sand mortar (1:3) and laid on 50mm thick plain concrete bed	LM	400		
C	Supply and lay on sides of sloped trench (75x230mm wide) precast concrete slabs jointed in 1:3 cement sand mortar	LM	800		
D	Fair face plain concrete strip (1:3:6)mix, size; 150x250mm high to on both side of drain including excavation and carting away the excavated materials.	CM	30		
E	Allow for directing all storm water to a soakage pit 30 Feet deep with upper block walling to surface and an RC slab 150mm thick with 12mm dia bars at 200centres .allow for all builders work ,ogee connection and the like	ITEM	1		
F	Allow for Supervision office print/data and Provide gadgets - provisional 1,200,000 -Project office and reports facilitation- CIT/PE//PM/PS-for all sites	ITEM	1		
	TOTAL TO SUMMARY PAGE 3				
	SUMMARY PAGE				
	TOTAL PAGE 1				
	TOTAL PAGE 2				
	TOTAL PAGE 3				
	SUB-TOTAL RABAI 132KV SIDE				

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