



Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
		<b>BILL NO 7.1</b>				
		<b>SWITCHING STATION SS 1A4</b>				
		<b>CIVIL WORKS</b>				
7.1.1		(a) Make provision for temporary works to accommodate existing cables during extension of the switching station building	Sum	1		
		<b>BUILDINGS</b>				
		<u>Extension to existing control building</u>				
		Construct an extension to the switching room building inclusive of all required foundations, brickwork, roof & tiles, gutters, down-pipes, plumbing, electrical works, earth bonding to main earthgrid, carpentry, plastering, painting, doors, air ventilation, concrete ramp/porch and control cable trench entry into building. All accessories such as nuts, bolts, brackets, supports, etc. included				
7.1.2		.1 Supply	m²	25		
7.1.3		.2 Install	m²	25		
		<u>Demolish existing wall 5m long and 3 meter high</u>				
7.1.4		.1 Supply	ea	-		
7.1.5		.2 Install	ea	1		
		<u>Wall mounted cable rack (flush to wall) - heavy duty</u>				
7.1.6		.1 Supply	m	10		
7.1.7		.2 Install	m	10		
		<u>Overhead mounted cable rack - heavy duty</u>				
7.1.8		.1 Supply	m	10		
7.1.9		.2 Install	m	10		
		<u>Safety signs/Danger labels</u>				
7.1.10		.1 Supply	ea	2		
7.1.11		.2 Install	ea	2		
		<u>Hardwood wall mounted drawing frame to house drawings</u>				
7.1.12		.1 Supply	ea	1		
7.1.13		.2 Install	ea	1		
		<u>6m 300mm PE sleeves for power cable entry</u>				
7.1.14		.1 Supply	ea	7		
7.1.15		.2 Install	ea	7		
		<u>Lock and keys for doors and gates</u>				
7.1.16		.1 Supply	ea	2		
7.1.17		.2 Install	ea	2		
Carried Forward						

			Brought Forward		
		<b><u>EARTHING</u></b>			
		<u>Main Earthgrid</u>			
		Extend the existing switching station's earthgrid to cover the switching staion building's extension			
		(a) Trenching			
7.1.18	.1	Supply	m³	-	
7.1.19	.2	Install	m³	18	
		<u>Install Horizontal Grid (10mm2 annealed round copper - 0.7kg/m)</u>			
7.1.20	.1	Supply	m	50	
7.1.21	.2	Install	m	50	
		<u>Equipment Earth Tails (50x3mm - 1.38kg/m)</u>			
7.1.22	.1	Supply	m	21	
7.1.23	.2	Install	m	21	
		<u>Vertical 16mm2 rods</u>			
7.1.24	.1	Supply	m	8	
7.1.25	.2	Install	m	8	
		<u>Bentonite (conductive concrete)</u>			
7.1.26	.1	Supply	m³	1	
7.1.27	.2	Install	m³	1	
		<u>Exo-welding (bonding)</u>			
7.1.28	.1	Supply	ea	4	
7.1.29	.2	Install	ea	4	
		<u>Backfill and compaction</u>			
7.1.30	.1	Supply	m³	10	
7.1.31	.2	Install	m³	10	
		<u>Indoor Equipment earthing</u>			
		<u>11 kV Switchgear panels</u>			
7.1.32	.1	Supply	ea	7	
7.1.33	.2	Install	ea	7	
		<u>Earthing accessories (1000x100x50 earth bar, down conductor, BCEW) for extension</u>			
7.1.34	.1	Supply	Lot	1	
7.1.35	.2	Install	Lot	1	
		<u>Measure Earthgrid Resistance (Soil resistivity testing to be included.</u>			
7.1.36	.1	Supply	ea	1	
7.1.37	.2	Install	ea	1	
			Carried Forward		

				Brought Forward	
		<b><u>PRIMARY PLANT - OUTDOOR</u></b>			
		Allow for all costs which the Contractor may incur in terms of any or all of descriptions the drawings which costs are not specifically covered in the Schedule hereafter.			
		<u>Install 11 kV Cables</u>			
		Complete installation of two 11kV three core cables per between Leaches Bay MV panel (switchgear) and and SS 1A4 11kV switchgear including all indoor terminations and connections. Complete installation of wooden cable supports in the Switching Station cable trenches and sealing off of cable ducts/sleeves across road. Rearrange panels such that power is balanced as much as possible on the MV board's busbar			
		<u>Trenching (Note existing services. Any damage will be to the contractor's cost)</u>			
7.1.38	.1 Supply	m³	-		
7.1.39	.2 Install	m³	1600		
		<u>11 kV 240mm² three core Cu XLPE SWA cable</u>			
7.1.40	.1 Supply	m	8000		
7.1.41	.2 Install	m	8000		
		<u>Backfill and compaction and test</u>			
7.1.42	.1 Supply	m³	1280		
7.1.43	.2 Install	m³	1280		
		<u>Install 160mm dia. Class 6 sleeves</u>			
7.1.44	.1 Supply	m	500		
7.1.45	.2 Install	m	500		
		<u>Install 110mm dia. Class 6 sleeves</u>			
7.1.46	.1 Supply	m	180		
7.1.47	.2 Install	m	180		
		<u>Make-off 11 kV 240mm² three core Cu XLPE cable indoor shrouded termination</u>			
7.1.48	.1 Supply	ea	4		
7.1.49	.2 Install	ea	4		
		<u>Make-off 11 kV 240mm² three core Cu XLPE SWA cold shrink cable joint</u>			
7.1.50	.1 Supply	ea	27		
7.1.51	.2 Install	ea	27		
		<u>Install 2 x 70mm² BCEW ECC including joints, termination and other accessories</u>			
7.1.52	.1 Supply	m	16000		
7.1.53	.2 Install	m	16000		
		<u>Install 120mm² BCEW ECC including joints, termination and other accessories</u>			
7.1.54	.1 Supply	m	1		
7.1.55	.2 Install	m	1		
		<u>Concrete Cable Route Markers</u>			
7.1.56	.1 Supply	no	54		
7.1.57	.2 Install	no	54		
		<u>Danger Tape: Orange/Yellow PVC material (300mm above cable)</u>			
7.1.58	.1 Supply	m	8000		
7.1.59	.2 Install	m	8000		
		<u>Built of a complete 800 x 800 mm brick manhole with concrete lid as indicated on the drawing</u>			
7.1.60	.1 Supply	no	4		
7.1.61	.2 Install	no	4		
				Carried Forward	



			Brought Forward		
		<u>Earth continuity test between structure and earthgrid</u>			
7.1.79	.1	Supply	Item	-	
7.1.80	.2	Install	Item	7	
		<u>Resistance test of Switching Station earthgrid with report</u>			
7.1.81	.1	Supply	Item	-	
7.1.82	.2	Install	Item	1	
		<u>Signs/Notices</u>			
		Station labels (safety/danger/access/medical/identification)			
7.1.83	.1	Supply	Lot	2	
7.1.84	.2	Install	Lot	2	
		<u>Equipment labels</u>			
7.1.85	.1	Supply	Lot	14	
7.1.86	.2	Install	Lot	14	
		<u>Excavations</u>			
		Excavations - pickable soil			
7.1.87	.1	Supply	m³	-	
7.1.88	.2	Install	m³	7040	
		<u>Excavations - Intermediate soil</u>			
7.1.89	.1	Supply	m³	-	
7.1.90	.2	Install	m³	4224	
		<u>Excavations - soft rock (machine)</u>			
7.1.91	.1	Supply	m³	-	
7.1.92	.2	Install	m³	1408	
		<u>Excavations - hard rock (machine)</u>			
7.1.93	.1	Supply	m³	-	
7.1.94	.2	Install	m³	1408	
		<u>Side wall protection of 1.2m to 2m deep trenches</u>			
7.1.95	.1	Supply	m²	1	
7.1.96	.2	Install	m²	1	
		<u>Imported bedding sand/ riversand for bedding &amp; backfilling materials</u>			
7.1.97	.1	Supply	m³	160	
7.1.98	.2	Install	m³	160	
		<u>Removal of excavated material (rock, etc.) and spoil not suitable for backfilling and transport</u>			
7.1.99	.1	Supply	m³	160	
7.1.100	.2	Install	m³	160	
		<u>Drill pit (For drilling underneath road)</u>			
7.1.101	.1	Supply	m³	12	
7.1.102	.2	Install	m³	12	
		<u>Horizontal drilling (soft soil)</u>			
7.1.103	.1	Supply	m³	2.9	
7.1.104	.2	Install	m³	2.9	
			Carried Forward		

			Brought Forward		
		<u>Horizontal drilling (hard rock)</u>			
7.1.105	.1	Supply	m³	2.9	
7.1.106	.2	Install	m³	2.9	
		<u>Boulders – Class A</u>			
7.1.107	.1	Supply	m³	3	
7.1.108	.2	Install	m³	3	
		<u>Concrete works</u>			
		Stone (19mm stone size)			
7.1.109	.1	Supply	m³	5	
7.1.110	.2	Install	m³	5	
		Sand			
7.1.111	.1	Supply	m³	5	
7.1.112	.2	Install	m³	5	
		50kg pockets of 25MPa cement			
7.1.113	.1	Supply	ea	25	
7.1.114	.2	Install	ea	25	
		<u>Building services</u>			
		Bricks			
7.1.115	.1	Supply	m²	45	
7.1.116	.2	Install	m²	45	
		Brickforce			
7.1.117	.1	Supply	m	36	
7.1.118	.2	Install	m	36	
		Concrete Lintol (1,2m)			
7.1.119	.1	Supply	m	2	
7.1.120	.2	Install	m	2	
		Concrete Lintol (2,4m)			
7.1.121	.1	Supply	m	1	
7.1.122	.2	Install	m	1	
		Paint (20 litre)			
7.1.123	.1	Supply	ea	5	
7.1.124	.2	Install	ea	5	
		Tools (brick laying, shovels/marking/waterpas/mixer)			
7.1.125	.1	Supply	Lot	1	
7.1.126	.2	Install	Lot	1	
		Truck (1 Ton)	km	300	
		4 x 4 LDV	km	300	
		Other please specify:	Item	1	
		Make provision for the architectural design of the switching station extension	Sum	1	
		Make provision for the civil design of the switching station extension	Sum	1	
			Carried Forward		

		Brought Forward	
	Install OPTEX (purpose designed) duct system for 7 cores optic fibre		
7.1.119	.1 Supply	m	2000
7.1.120	.2 Install	m	2000
	Install 7 Core 2.5mm2 Cu PVCPCSWASWA Pilot Cable		
7.1.121	.1 Supply	m	4000
7.1.122	.2 Install	m	4000
	(a) Make provision for the decommissioning of the old switch - board and commissioning of the new switch-board	item	1
<b>BILL NO 7.1</b> <b>SWITCHING STATION SS 1A4</b>			
Carried forward to Summary of Bills		Total	