

ITEM	REFERENCE	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		<p>Supply, delivery and installation of Substation Fencing and associated Services</p> <p><u>Notes to Tenderers:</u></p> <p>- All galvanized bolts to include for "re-threading".</p> <p>All fencing wire to comply to SABS 675:2011.</p>				
	D-DT-5237	SAFETY FENCING				
1		1,83m High galvanized wire fence, comprising 64mm x 64mm x 2,5mm diameter diamond mesh supported on and including 3 no. x 4mm diameter horizontal straining wires, mesh strained with 10mm diameter galvanized hook bolts, straining wires strained with 100mm long x 10mm diameter straining bolts, including all necessary hot dipped galvanized steel angle section, corner, intermediate, gate posts and stays, base plates, etc., casting posts in and including 20MPa/19mm concrete bases (refer detail on drawings), including excavation, backfilling and disposing of surplus excavated material, concrete, formwork, etc., all as per required layout (no overhang required):	m	13524.00		
2		Extra over 1,83m high fencing for 90 degree bend	No	134.40		
3		Extra over 1,83m high fencing for intersection.	No	84.00		
4		Extra over 1,83m high fencing for 995mm wide single-leaf Pedestrian gate type 'A' including 40mm diameter hot dipped galvanized steel tube framing, diamond mesh covering bound on with 2,5mm diameter galvanized wire, locking mechanism.	No	100.80		

5		Extra over 1,83m high fencing for 6m wide double-leaf Vehicular access gate type 'B' including 40mm diameter hot dipped galvanized steel tube framing and cross bracing, diamond mesh covering bound on with 2,5mm diameter galvanized wire, 460mm long x 8mm diameter chain link welded on (padlock to be provided by Eskom), 3 no. hinges per leaf, 280mm long tower bolt and 100mm long x 20mm diameter steel slot cast flush in top surface of concrete (elsewhere measured), etc., complete.	No	117.60		
6		Extra over 1,83m high fencing for 6m wide removable panel, including 40mm diameter hot dipped galvanized steel tube framing and cross bracing, diamond mesh covering bound on with 2,5mm diameter galvanized wire, hinges, locking mechanisms, etc., complete (provisional).	No	84.00		
		<u>Sundries:</u>				
7		Earthing clamp bolted to gate upright and steel fence post, including drilling of holes, etc., complete	No	268.80		
	D-DT-5237	SECURITY FENCING				
		<u>Supply, deliver and install new 2,4m high weldmesh barrier 'security fence' complete</u>				
8		2,4m High galvanised weldmesh fence with 730mm long angle section as overhang set to 45 degrees, comprising 50mm x 50mm x 3,1mm diameter high tensile steel weldmesh covering fixed to and including 5 no. x 4mm diameter horizontal straining wires, mesh strained with 10mm galvanized hook bolts, straining wires strained with 100mm long x 10mm diameter straining bolts, including all necessary hot dipped galvanized steel angle section posts, corner posts, stays, top and bottom rails, including all cover plates, base plates, casting posts into and including concrete bases, including excavations, backfilling, carting away excess excavated material, 4 no. straining wires to overhang, etc., complete (INNER FENCE)	m	18480.00		
		<u>Extra Over:</u>				
9		Extra over 2,4m high barrier security fencing with overhang, for bend greater than or equal to 90 degrees.	No	285.60		

10		Extra over 2,4m high barrier security fencing with overhang, for intersection with existing barrier security fencing.	No	50.40		
11		Extra over 2,4m high INNER barrier security fencing for 3m wide single-leaf vehicular access gate, including additional posts, etc., complete.	No	84.00		
12		Extra over 2,4m high INNER barrier security fencing for the Supply and installation of a 7m sliding gate comprising of two sections with a removable pillar between the gates	No	33.60		
	D-DT-5237	NON-LETHAL FENCING				
		<u>Supply, deliver and install new Non-Lethal Security Fencing and Gates, including all excavations, mass concrete, backfilling, compacting, etc., complete</u>				
13		60 x 60 x 6mm Galvanized mild steel angle section corner post 3000mm long, including concrete base, 25 non lethal insulators, 170 x 75 x 6mm flat welded to top and drilling 18mm diameter holes for and fit earthtail clamp plate.	No	218.40		
14		60 x 60 x 6mm Galvanized mild steel angle section corner post strut 3280mm long, including concrete base, 170 x 60 x 6mm flat welded on at top and 100 x 100 x 6mm flat welded on at bottom.	No	84.00		
15		60 x 60 x 6mm Galvanized mild steel angle section corner post strut 3360mm long, including concrete base, 170 x 60 x 6mm flat welded on at top and 100 x 100 x 6mm flat welded on at bottom.	No	151.20		
16		60 x 60 x 6mm Galvanized mild steel angle section corner post strut 3700mm long, including concrete base, 170 x 60 x 6mm flat welded on at top and 100 x 100 x 6mm flat welded on at bottom.	No	84.00		
17		60 x 60 x 6mm Galvanized mild steel angle section corner post strut 3930mm long, including concrete base, 170 x 60 x 6mm flat welded on at top and 100 x 100 x 6mm flat welded on at bottom.	No	151.20		
18		60 x 60 x 6mm Galvanized mild steel angle section strain post 3000mm long, including concrete base, 25 non lethal insulators, drilling 18mm diameter holes for and fit earthtail clamp plate.	No	285.60		

19		60 x 60 x 6mm Galvanized mild steel angle section strain post strut 3360mm long, including concrete base, 170 x 60 x 6mm flat welded on at top and 100 x 100 x 6mm flat welded on at bottom.	No	285.60		
20		60 x 60 x 6mm Galvanized mild steel angle section strain post strut 3700mm long, including concrete base, 170 x 60 x 6mm flat welded on at top and 100 x 100 x 6mm flat welded on at bottom.	No	285.60		
21		40 x 40 x 3mm Galvanized mild steel angle section intermediate post 3000mm long, including concrete base, 25 non lethal insulators and drilling 18mm diameter holes for and fit earthtail clamp plate.	No	3864.00		
22		Extra over non-lethal electric fencing for the supply and installation of 7.8m sliding gate comprising of two sections	No	33.60		
23		25 No off Conductors, including earthing	m	18816.00		
24		25MPa concrete anti-tunnelling vertical panels size 100mm wide x 600mm deep cast in ground to underside fence, including excavations, backfilling, compacting, formwork, expansion joints, mesh ref 245 reinforcement, etc., complete	m	18816.00		
25		25MPa vegetation control concrete slab 200mm wide x 75mm thick to underside fencing, including preparation of ground, floating top surface of concrete, formwork, expansion joints, mesh ref 245 reinforcement, etc., complete.	m	18816.00		
26		6mm stranded copper earthing under concrete slab	m	18816.00		
27		Allow for testing and commissioning of the complete non-lethal fencing. PROVISIONAL SUM	Sum	16.80		
	D-DT-5237	HIGH SECURITY FENCING				
		<u>Supply, deliver and install new 2.4m high 'security mesh fencing' complete</u>				

28		2,4m High galvanised security mesh fence with two 730mm long angle sections as 'V' shaped overhang both set to 45 degrees, comprising 76.2mm x 12.7mm x 4mm electrician resistance welded mesh, strain wire:4mm class 'A' heavy galvanised, eye bolts to be stainless steel or galvanised according to SANS 121. Razor coil as standard, fencing wire to confirm with SANS 675. including all necessary hot dipped galvanized steel angle section posts, corner posts, stays, top and bottom rails, including all cover plates to posts, base plates, casting posts into and including concrete foundations, including excavations, backfilling, carting away excess excavated material, straining wires to each double overhang, etc., complete (OUTER FENCE)	m	20160.00		
29		Extra over 2,4m high barrier security fencing with double overhang, for 90 degree bend	No	218.40		
30		Extra over 2,4m high OUTER barrier security fencing for the Supply and installation of a 7m sliding gate comprising of two sections with a removable pillar between the gates	No	33.60		
		THE FOLLOWING IN SECURITY LIGHTING ALONGSIDE 2,4m HIGH 'SECURITY FENCING'				
		LUMINAIRE POLES:				
31		<u>Supply, deliver and install luminaire pole, provided with access opening, cable entry, gland plate, 5A SP 2.5kA circuit breaker, base plate welded to pole and embedded in ground, including single side entry spigot and pole to be painted colour 'Grey,'</u>				
31a		Fibreglass pole 4,6m long ('Genlux 28144') embedded 600mm deep in ground , including excavations, mass concrete base, backfilling and compacting of in-situ material.	No	1108.80		
31b		Supply deliver and install luminaire galvanised steel pole 5m, 4m MH above ground level, provided with access opening cable entry and gland plate with %A MCB A base plate shall be provided for direct embedment ground complete with excavation, concrete, etc (Genlux 28144 or equal approved)	No	1108.80		
		LUMINAIRES AND EQUIPMENT				

		<u>Security luminaires complete with lamps, connections, etc. mounted in exact position, with and including 85 to 60mm adaptor mounting brackets:</u>				
32		60W LED high performance luminaire, including bottom entry spigot and 85 to 60mm adaptor for luminaire, suitably mounted to and fixed to fibreglass pole (elsewhere measured).	No	1108.80		
		LOW VOLTAGE DISTRIBUTION BOARDS				
		<u>The following in new 500 x 700mm surface mounted security lighting distribution board FLDB, complete with door/s, sub-frames, fixtures, internal wiring, signage, connected and installed:</u>				
33		400 / 230 AC Main LV Distribution board	No	33.60		
34		60A TP 10kA circuit breaker.	No	33.60		
35		63A TP switch disconnecter.	No	33.60		
		<u>The following in weatherproof sub-distribution board box, complete with hinged door and pad lockable lever lock, hot-dipped galvanized sheet metal, frames, sub-frames, fixtures, fittings, busbars, internal wiring, spare space for future devices, labels, etc. connected and installed complete:</u>				
36		Supply, deliver and install surface mounted weatherproof box on and including 1m high steel pole, suitably anchored in ground, including excavations, backfilling and compacting of in-situ material (Provisional).	No	134.40		
37		10A TP 5kA circuit breaker.	No	134.40		
38		10A TP Contactor.	No	134.40		
39		5A SP 5kA circuit breaker.	No	100.80		
40		50V Relay	No	100.80		
41		15A TP 5kA circuit breaker.	No	100.80		

42		5A SP 2.5kA circuit breaker.	No	1108.80		
43		16A SP Switch disconnecter / Control switch	No	100.80		
44		Day / Night switch mounted in exact position on outside surface of Control Building, as determined by Eskom Project Manager	No	101		
D-DT-5237		SUBSTATION ELECTRIC FENCING				
		Supply, transport to site, excavate into all material, backfill, compact and install				
45		Supply, Transport to site and Install a new 2.4m Steel Palisade Electric Fence (Top of Palisade)	m	8064.00		
46		Supply, Transport to site and Install double leaf gates (5m)	each	100.80		
47		Supply, Transport to site and Install removable panel gates (5m)	each	67.20		
48		Supply, Transport to site and Install a personnel gate	each	67.20		
D-DT-5237		BOUNDARY FENCE				
49		Boundary fence 1.55m high vertically consisting of 9 runs of 2.24m single high tensile steel strand campeon, galvanised class A barbed wire. (as per drawing no. 0.54/398 Sheet 2 of 2)	m	19320.00		
50		76mm diameter x 3mm thick galvanised circular hollow section corner posts, 2.59 long, including site preparation and all necessary excavation, compaction, 600 x 600 x 1000mm concrete base.	No	537.60		
51		76mm diameter x 3mm thick galvanised circular hollow section strain posts, 2.59 long, including site preparation and all necessary excavation, compaction, 600 x 600 x 1000mm concrete base.	No	1108.80		
52		Y standard intermediate posts (2.5kg/m), 2.15 m long, including site preparation, all necessary excavations, compaction, etc.	No	1108.80		
53		76mm diameter x 2.5mm thick galvanised stays, 2.15 m long with m.s plate, including site preparation, all necessary excavations,	No	2352.00		

		compactions,				
54		1550 mm lonf x 0.56kg/m Ridgeback section dropper	No	2184.00		
		GATES				
55		Double leaf gate of 40mm diameter framing, 8000mm x 1240mm high vertically, with three diagonal braces, the vertical section covered with 65x 65x 2mm welded mesh, including hinges as per drawing 0.54/398 rev 9	No	33.60		
56		Double leaf gate of 40mm diameter framing, 6000mm x 1240mm high vertically, with three diagonal braces, the vertical section covered with 65x 65x 2mm welded mesh, including hinges.	No	50.40		
		PERMANENT FENCING BUS COUPLER SERIES REACTOR FENCE & GATE				
		Supply,Deliver and Install new Bus Coupler Series Reactor Fence and Gate,including all carefully removal of yard stone and spread yard stone 100 mm deep,apply excavation ,mass concrete (25,30 or 35 Mpa Concrete) backifilling ,compacting,Formwork,Finishes etc complete .				
		Excavations				
57		Carefully Remove Yard Stoning 100mm thick and set aside and protect for re-use	m ²	1400		
58		Recover Yard Stoning and spread and level 100mm deep and lightly compact to set levels.	m ²	1400		
59		Supply and Apply approved weed killer to Terrace, in strict accordance with the Manufacturer's instruction (Upon completion of the works)	m ²	1400		
60		Excavate In Pickable Material and set aside for re-use Not exceeding 1000mm deep	m ³	161		
61		Recover excavated material and place in restricted excavations in layers not exceeding 150mm deep and compact to 95% MOD AASTHO	m ³	161		

62		The Contractor is to ALLOW for all necessary dewatering for the entire duration of the contract, or as deemed necessary to complete this contract successfully. The price is to include for all piping, pumps, discharging of water into suitable outlet points, standby Generators, etc. complete.	Item	14		
		Formwork				
63		Smooth Off Shutter Formwork cut	m ²	280		
		Concrete				
64		Blinding 15MPa/19mm Concrete	m ³	70.00		
65		Concrete 30MPa / 19mm in Bottom Floor in foundation (Posts)	m ³	210.00		
66		Allow for testing of concrete Slump Value 75 mm (Tolerance: 25 mm) .	ITEM	14.00		
		Finishes				
67		Wood floated finish to floors to sides	m ²	280		
		PERMANENT FENCING				
68		Supply, deliver and install new fences are to be 1100 mm high GAVANISED FENCE AS SPECIFIED GALVANISED FENCE WIRE : 64xØ2.5mm GALVANISED DIAMOND MESH SUPPORTED ON THERE Ø 4mm GALVANISED STRAIN WIRES AND INCULDING ALL POST,STRUCTS,ANGLES,BOLTS,NUTS,HOOKS ETC.. In Making off the upper edge of the mesh .The RAG end must be turned up provding barbs as shown on the corner post detatils.Posts are provided with two sets of holes for the strain wires.The mesh to be strained by means of Ø10 mm Galv hook bolts engaged with Ø12 mm rod passed vert through the end coil of the mesh.The strain wire to be starined with Ø10 mm Galv strain bolt 100 mm long.Gradient to be constant between strain points.All post and struts to be set in concrete grade 20/19.. ALL FENCES WIRE TO COMPLY WITH S.A.B.S 675. SEE DETAILS ON DRAWING 0.84/281 SH NO 49D REV 0	m	2800		

69		Supply, deliver and install new GATES AND PANELS are to be hot dip galvanised after fabrication in accordance with NWS 1404. DETAILS ON DRAWING 0.84/281 SH NO 49D REV 0,0.84/281 SH NO 49 D REV 0,0.84/281 SH NO 49A REV 3, SH NO 49 E REV 0	No	21		
70		Repairs to damaged galvanised and untreated steelwork to be in accordance with NWS 1404. Provisional	No	14		
		TEMPORARY FENCING				
71		Supply, deliver and install new 1,8m high galvanized diamond mesh 'safety fence' as temporary fencing, complete with earthing and including posts, corners, intersections with existing fencing, etc. (as detailed on Drawings 0.54/4963 Sheets 1 to 4 inclusive) which shall remain in place for use by the cabling and stringing Contractor	m	2800.00		
72		Supply, deliver and install new orange coloured 'sharknett' safety demarcation and self-supporting fencing, hung on and including suitable posts, etc., complete (to be taken down and handed over to Eskom grid / Project Manager when no longer required on site / contract works complete).	m	2800.00		
73		Supply, deliver and install temporary 6m double access gate 1.8m high, complete with earthing, flexible earth bonds, earth bridge connections and including posts, locks, etc. which shall remain in place for use by the cabling and stringing Contractor	No	14.00		
74		Allow for testing of temporary fence earthing.	No	14.00		
75		Take down and remove temporary 1,8m high diamond mesh 'safety fence' after re-mobilising and completion of all work following the cabling and stringing, including gates, posts, stays, etc., neatly stopping off at ends where intersecting with existing fencing, grubbing up and removing concrete bases, backfilling holes with suitable imported material from commercial sources and compacting in 150mm thick layers to a minimum of 93% Mod. AASHTO maximum density, including working in confined areas.	m	700.00		
		PERMANENT YARD FENCING				

76		Supply, deliver and install new 1,8m high galvanized diamond mesh 'safety fence', complete with earthing and including posts, corners, intersections with existing fencing, etc. (as detailed on Drawings 0.54/4963 Sheets 1 to 4 inclusive):	m	2800		
77		Supply, deliver and install 6m double access gate 1.8m high, complete including posts, earthing, flexible earth bonds, earth bridge connections, etc.	No	3		
78		Supply, deliver and install 4m double access gate 1.8m high, complete including posts, earthing, flexible earth bonds, earth bridge connections, etc.	No	14		
79		Allow for testing of permanent yard fence earthing.	No	14		
		PALISADE FENCE				
80		Supply, deliver and install/Repair existing palisade fence by fixing all lose panels and supply where missing. Re-weld the panels to the existing post and leave perfect condition	m	700		
81		Supply, deliver and install palisade panels use existing post and all other material for and erect a new 1800 mm high steel palisade fencing all as specified on drawing No 20160907_CSI_Palisade Fence	m	2800		
82		Supply, deliver and construct new foundations for new palisade gates and build a new entrance with facebricks. Manufacture a palisade sliding gate for a 4 500mm and a 1 000 mm openings all as specified on drawing No 20160907_CSI_Palisade Fence	Item	21		
83		Paint Palisade fence and gates Sand down all new and existing palisade fence and post and remove all flaking paint. Wash new untreated mild steel with aquasolve degreaser. Paint all metal surfaces of palisade posts and panels one coat calcium plumbate one universal undercoat and one coat Plascon Velvagio (green)	m	2800		
		Sub Total				
84	P&G	PRELIMINARIES AND GENERAL -10% of contract value* (P&G's capped at 10% of each PO value issued per individual site)	%	10%		

		*Includes all fixed and time related cost for complying with SHEQ, ORHVS supervision, all applicable legislation and Eskom specific requirements.				
		TOTAL EXCLUDING VAT				R -