

Item No	Ref	Description	Unit	Quantity	Rate	Amount
	SANS 1200AA	<p>SECTION 1 : PRELIMINARY AND GENERAL</p> <p><u>The following notes apply to the full BOQ:</u></p> <p>The BOQ is fully re-measurable</p> <p>Tenderers are to price this Schedule strictly in accordance with the Specifications and SANS 1200, where a conflict arises between these two documents the Specifications shall take precedence. Where a conflict arises between this Schedule and the Specifications, the Specifications shall take precedence. Tenderers shall study the Drawings before pricing this Schedule and the Schedule shall be priced to provide the complete Works</p> <p>All budgetary allowances shall only be used at the discretion of the Engineer, should these allowances not be required at the discretion of the Engineer, the full amounts shall be omitted</p> <p>No excavated material, loose materials, equipment, tools etc. may be left on any airside area's unless a work team is present and using the material, equipment, tools etc. for the specific tasks the work team is undertaking while on airside. Material, equipment, tools etc. must be removed to the specified site camp should the work team leave the relevant work area</p> <p>Haulage of materials excavated or supplied between the specified work areas and the site camp will be deemed to be free-haul</p>				
	PSAA-8.3	<u>FIXED CHARGE ITEMS</u>				
	AA-8.3.1	<u>Contractual requirements</u>				
1.1	AA-8.3.1	Contractual requirements	Sum	1		
	AA-8.3.2	<u>Establishment of facilities on the site</u>				
1.2	AA-8.3.2.b	Facilities required by Contractor	Sum	1		
	AA-8.3.3	<u>General responsibilities and other fixed-charge obligations</u>				
1.3	AA-8.3.3	Health and Safety Risk Management (Required as per Construction Regulations and must be registered as a Safety Officer with SACPCMP)	Sum	1		
1.4	AA-8.3.3	Environmental Management	Sum	1		
1.5	AA-8.3.3	Quality Assurance Requirements	Sum	1		
1.6	AA-8.3.3	Programming & Progress Reporting	Sum	1		
1.7	AA-8.3.3	Inductions, Permits, PARTAC Certification Etc.	Sum	1		
1.8	AA-8.3.3	Other	Sum	1		
	AA-8.3.4	<u>Removal of site establishment</u>				
1.9	AA-8.3.4	Removal of site establishment	Sum	1		
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
	AA-8.4	<u>TIME-RELATED ITEMS</u>				
	AA-8.4.1	<u>Contractual requirements</u>				
1.10	AA-8.4.1	Contractual requirements	Month	6		
	AA-8.4.2	<u>Operation and maintenance of facilities on the site</u>				
1.11	AA-8.4.2.b	Facilities required by Contractor	Month	6		
	AA-8.4.3	<u>General responsibilities and other time-related obligations</u>				
1.12	AA-8.4.3	Health and Safety Risk Management (Required as per Construction Regulations and must be registered as a Safety Officer with SACPCMP)	Month	6		
1.13	AA-8.4.3	Environmental Management	Month	6		
1.14	AA-8.4.3	Quality Assurance Requirements	Month	6		
1.15	AA-8.4.3	Programming & Progress Reporting	Month	6		
1.16	AA-8.4.3	Documentation Control	Month	6		
1.17	AA-8.4.3	Management Meetings	Month	6		
1.18	AA-8.4.3	Monitoring, Reporting, Training & Supervision of SME's	Month	6		
1.19	AA-8.4.3	PARTAC Personnel, Vehicles Etc.	Month	6		
1.20	AA-8.4.3	Other	Month	6		
	PSAA-8.7	<u>DAYWORKS</u>				
	PSAA-8.7.a	<u>Labour</u>				
1.21	AA-8.7.a.i	i. Unskilled labour	Hrs	10		
1.22	AA-8.7.a.ii	ii. Skilled labour	Hrs	10		
1.23	AA-8.7.a.iii	iii. Artisan	Hrs	5		
1.24	AA-8.7.a.iv	iv. Supervisor	Hrs	5		
	PSAA-8.7.b	<u>Plant</u>				
1.25	AA-8.7.b.i	i. Generator	Hrs	5		
1.26	AA-8.7.b.ii	ii. Compressor	Hrs	5		
1.27	AA-8.7.b.iii	iii. Jackhammer	Hrs	5		
1.28	AA-8.7.b.iv	iv. LDV	Hrs	5		
1.29	AA-8.7.b.iv	v. De-Watering Pump (50mm Diesel Centrifugal)	Hrs	5		
1.30	AA-8.7.b.iv	vi. De-Watering Pump (100mm Diesel Centrifugal)	Hrs	5		
		SECTION 1 TO SUMMARY				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		SECTION 2 : FORWARD FUEL DEPOT - RELOCATION OF STORMWATER GRID INLET				
	SANS 1200C	<u>SITE CLEARANCE</u>				
	PSC 8.2.11	<u>Remove and Dispose of existing Surfacing, Layerworks and Manholes</u>				
2.1		i. Saw cut concrete pavement to 100mm min depth	m	12		
2.2		ii. Saw cut segmental pavers to 80mm max depth	m	15		
2.3		iii. Break out and dispose of 230 mm concrete pavement	m ³	2		
2.4		iv. Lift and dispose of 80mm segmental pavers and bedding sand	m ²	2		
2.5		vi. Remove and dispose of 150mm C3 stabilised layer	m ³	2		
2.6		vii. Demolish and dispose of Stormwater Manhole at Fuel Forward Depot	No	1		
	SANS 1200DB	<u>EARTHWORKS (PIPE TRENCHES)</u>				
	DB-8.3.2	<u>Excavate in all materials for trenches, backfill, compact and dispose of surplus material:</u>				
		<u>300mm Diameter 75D concrete pipe for depths:</u>				
2.7		i. Up to 2.0m to invert	m	10		
	SANS 1200LB	<u>BEDDING (PIPES)</u>				
	PSLB 8.2.2	<u>Supply and Placement of Bedding by Importation</u>				
2.8		From commercial sources	m ³	6		
	SANS 1200LE	<u>STORMWATER DRAINAGE</u>				
	LE-8.2.1	<u>Supply, lay on class B bed, joint and test, spigot and socket precast concrete pipes complete with Neoprene O-rings</u>				
2.9	LE-8.2.1	300mm Diameter Class 75 D	m	10		
	LE-8.2.8	<u>Supply and Install Manholes, Catchpits and the Like.</u>				
2.10		Manhole, complete with Cast Iron Grid Inlet as shown on Dwg No 60486428-ACM-FD-XX-DR-CE-00100, to 1,5m depth	No	1		
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
	SANS 1200MF	<u>BASE (ROADS)</u>				
	PSMF-8.3.2	<u>Construct base with material from designated excavations</u>				
2.11		i. Rip in-situ granular material to 150mm, stabilize with 2.5% cement and recompact to 95% Mod AASHTO	m ³	3		
	PSMF-8.3.3	<u>Construct base with material from commercial sources or designated borrow areas</u>				
2.12		i. Import, place, stabilize with 2.5% cement and compact new C3 layer	m ³	2		
	MF-8.3.12	<u>Material added to filler</u>				
2.13		a) Cement	ton	0.3		
	SANS 1200G	<u>CONCRETE (STRUCTURAL)</u>				
		<u>New Concrete Pavements at Fuel Loading Area</u>				
	G-8.3	<u>Scheduled Reinforcement Items</u>				
2.14	PSG 8.3.1	Steel Bars : Y10 Tie Bars : 400mm length	No	60		
	G-8.4	<u>Scheduled Concrete Items</u>				
2.15		Class 30/19 to Concrete Pavement	m ³	7		
	G-8.4.4	<u>Unformed Surface Finishes</u>				
2.16		a) Wood floated finish to Concrete Pavement	m ²	30		
	PSG-8.5	<u>Joints</u>				
2.17		iii. Ream and seal transverse and longitudinal joints to concrete pavements	m	35		
2.18		Budgetary allowance for miscellaneous works (if required by the Engineer)	PS	1	3 000.00	3 000.00
		SECTION 2 TO SUMMARY				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		SECTION 3 : FORWARD FIELD DEPOT : OWN USE FACILITY : CONCRETE PAVING TO WALKWAYS				
	SANS 1200C	<u>SITE CLEARANCE</u>				
	PSC 8.2.11	<u>Remove and Dispose of existing Surfacing, Layerworks and Manholes</u>				
3.1		ii. Saw cut segmental pavers to 80mm max depth	m	20		
3.2		v. Lift and dispose of 80mm segmental pavers and bedding sand	m ²	36		
	PSMF 8.3.2	<u>Construct base with material from designated excavations</u>				
3.3		i. Rip in-situ granular material to 150mm, stabilize with 2.5% cement and recompact to 95% Mod AASHTO	m ³	6		
	MF-8.3.12	<u>Material added to filler</u>				
3.4		a) Cement	ton	0.3		
	SANS 1200G	<u>CONCRETE (STRUCTURAL)</u>				
		<u>Scheduled Reinforcement Items</u>				
3.5		i. High Tensile Weld Mesh : Ref 319	m ²	36		
	G-8.4	<u>Scheduled Concrete Items</u>				
3.6		i. Class 30/19 to Concrete Pavement	m ³	4		
3.7		Budgetary allowance for miscellaneous works (if required by the Engineer)	PS	1	1 000.00	1 000.00
		SECTION 3 TO SUMMARY				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		SECTION 4 : FUEL STORAGE FACILITY - EXTENSION OF CONCRETE PAVEMENT				
	SANS 1200C	<u>SITE CLEARANCE</u>				
	PSC 8.2.11	<u>Remove and Dispose of existing Surfacing, Layerworks and Manholes</u>				
4.1		ii. Saw cut segmental pavers to 80mm max depth	m	35		
4.2		v. Lift and dispose of 80mm segmental pavers and bedding sand	m ²	120		
4.3		vi. Remove and dispose of 150mm C3 stabilised layer	m ³	20		
	SANS 1200MF	<u>BASE (ROADS)</u>				
	PSMF 8.3.2	<u>Construct base with material from designated excavations</u>				
4.4		i. Rip in-situ granular material to 150mm, stabilize with 2.5% cement and recompact to 95% Mod AASHTO	m ³	20		
	MF-8.3.12	<u>Material added to filler</u>				
4.5		a) Cement	ton	1.0		
	SANS 1200G	<u>CONCRETE (STRUCTURAL)</u>				
	G-8.2	<u>Scheduled Formwork Items</u>				
4.6		Smooth, to concrete drains	m ²	100		
	G-8.3	<u>Scheduled Reinforcement Items</u>				
4.7	PSG 8.3.1	Y10 Tie bars : 200mm Length	No	180		
4.8	G-8.3.2	High-Tensile Weld Mesh : Ref 319	m ²	10		
	G-8.4	<u>Scheduled Concrete Items</u>				
4.9		i. Class 10/19 Blinding Layer to Concrete Drain	m ³	1		
4.10		ii. Class 25/13 Screed to New Concrete Drain	m ³	2		
4.11		iii. Class 30/19 to Concrete Pavement	m ³	25		
4.12		iv. Class 30/19 to Concrete Drain	m ³	13		
	PSG-8.14	<u>Joints</u>				
4.13		ii. Joint between concrete drains and new pavement at Fuel Storage Facility	m	50		
4.14		iii. Saw cutting of transverse joints to concrete pavements	m	30		
4.15		iv. Ream and seal transverse and longitudinal joints to concrete pavements	m	80		
		BROUGHT FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		CARRIED FORWARD				
	SANS 1200H	<u>STRUCTURAL STEEL</u>				
4.16	PSH-8.3.14	Supply and install "Mentis" or similar approved grating to open concrete drain	m	25		
4.17		Budgetary allowance for miscellaneous works (if required by the Engineer)	PS	1	12 000.00	12 000.00
		SECTION 4 TO SUMMARY				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		SECTION 5 : NEW DISABLED ACCESS RAMPS AT ADMIN BUILDINGS AT FUEL STORAGE FACILITY AND FUEL FORWARD DEPOT				
	SANS 1200C	<u>SITE CLEARANCE</u>				
	PSC 8.2.11	<u>Remove and Dispose of existing Surfacing, Layerworks and Manholes</u>				
5.1		ii. Saw cut segmental pavers to 80mm max depth	m	15		
5.2		iv. Lift and dispose of 80mm segmental pavers and bedding sand	m ²	12		
	SANS 1200MF	<u>BASE (ROADS)</u>				
	PSMF-8.3.2	<u>Construct base with material from designated excavations</u>				
5.3		i. Rip in-situ granular material to 150mm, stabilize with 2.5% cement and recompact to 95% Mod AASHTO	m ³	2		
	MF-8.3.12	<u>Material added to filler</u>				
5.4		a) Cement	ton	0.1		
	SANS 1200G	<u>CONCRETE (STRUCTURAL)</u>				
	G-8.2	<u>SCHEDULED FORMWORK ITEMS</u>				
	G-8.2.5	Narrow Widths (up to 300mm wide)				
	G-8.2.5.1	<u>Different widths in the following ranges:</u>				
5.5		Over 100 mm and up to 200 mm	m	10		
	G-8.2.5.2	<u>Grooves, chases and splays in the following ranges:</u>				
5.6		Over 20 mm x 20 mm and up to 100 mm x 100 mm	m	10		
	G-8.3	<u>SCHEDULED REINFORCEMENT ITEMS</u>				
	G-8.3.2	High Tensile Welded Mesh				
5.7		Type Reference 311	m ²	12		
	G-8.4	<u>SCHEDULED CONCRETE ITEMS</u>				
	G-8.4.3	Strength concrete				
5.8	PSG-8.12	Concrete 30MPa/19mm to Ramps	m ³	2		
5.9	PSG-8.13	Steel floated granolithic finish to ramps	m ²	12		
5.10		Budgetary allowance for balustrades (if required by the Engineer)	PS	1	15 000.00	15 000.00
5.11		Budgetary allowance for panic-bars to existing doors (if required by the Engineer)	PS	1	5 000.00	5 000.00
5.12		Budgetary allowance for miscellaneous works (if required by the Engineer)	PS	1	1 500.00	1 500.00
		SECTION 5 TO SUMMARY				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		SECTION 6 : FUEL STORAGE FACILITY : NEW GUTTER AND DOWNPIPES				
	PSO-4.3.1	Rainwater Disposal				
6.1		220 mm wide x 200 mm deep seamless aluminium gutters	m	27		
6.2		Purpose made aluminium 200x200mm RWDP and header box	No	1		
6.3		Budgetary allowance for miscellaneous works (if required by the Engineer)	PS	1	1 000.00	1 000.00
		SECTION 6 TO SUMMARY				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		SECTION 7 : NEW CONCRETE STAIRS AND CAT LADDERS AT SEPARATOR TANK				
	PSAA-8.8	<u>GENERAL</u>				
		<u>Draining and cleaning of separator tank where cat-ladders are to be installed</u>				
7.1		i. Drain, clean and dispose of oily contaminated effluent upon commencement of works	Sum	1		
7.2		ii. Keep tank free of effluent during execution of works	Sum	1		
	PSC 8.2.11	<u>Remove and Dispose of existing Surfacing, Layerworks and Manholes</u>				
7.3		ii. Saw cut segmental pavers to 80mm max depth	m	8		
7.4		iv. Lift and dispose of 80mm segmental pavers and bedding sand	m ²	2		
	SANS 1200MF	<u>BASE (ROADS)</u>				
	PSMF-8.3.2	<u>Construct base with material from designated excavations</u>				
7.5		i. Rip in-situ granular material to 150mm, stabilize with 2.5% cement and recompact to 95% Mod AASHTO	m ³	0.5		
	MF-8.3.12	<u>Material added to filler</u>				
7.6		a) Cement	ton	0.05		
	SANS 1200G	<u>CONCRETE (STRUCTURAL)</u>				
	G-8.2	<u>SCHEDULED FORMWORK ITEMS</u>				
	8.2.1	Rough				
		<u>Vertical formwork to:</u>				
7.7		Sides of steps	m ²	1		
	G-8.2.5	Narrow Widths (up to 300mm wide)				
		<u>Different widths in the following ranges:</u>				
7.8		Over 100 mm and up to 200 mm	m	2		
	G-8.4	<u>SCHEDULED CONCRETE ITEMS</u>				
		Strength concrete				
		<u>Concrete 30MPa/19mm</u>				
7.9	G-8.4.3.2a	Steps	m ³	0.2		
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
	PSG-8.5	Joints				
7.10		i. Joint between new concrete steps and existing wall at separator tank	m	3		
7.11	PSG-8.13	Steel floated granolithic finish to ramps	m ²	1		
	SANS 1200 H	<u>STRUCTURAL STEELWORK</u>				
	H-8.3.8	<u>LADDERS, COMPLETE & INSTALLED</u>				
	H-8.3.8	<u>Ladders, complete & installed</u>				
7.12	H-8.3.8.1	Stainless steel cat ladder complete 0.6 x 0.3 x 4.1m Overall, including ladder, fall protection cage and all other necessary stainless steelwork, base plates, fixings etc. as per drawing number FSD-ENE-SE-GL-DE-0001-00-00	No	3		
7.13		Budgetary allowance for miscellaneous works (if required by the Engineer)	PS	1	3 000.00	3 000.00
		SECTION 7 TO SUMMARY				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		SECTION 8 : NEW STEEL PLATFORMS AT BRIDGER RECEIPT FACILITY				
	SANS 1200 H	<u>STRUCTURAL STEELWORK</u>				
	H-8.3.1.1	<u>PREPARATION OF SHOP DETAIL DRAWINGS</u>				
8.1	H-8.3.1.1	Preparation of shop detail drawings	t	0.13		
	H-8.3.1.2	<u>SUPPLY AND FABRICATION OF STRUCTURAL STEELWORK IN GRADE S355-JR, S355-JO-AR, S335-JR-AR HOT ROLLED STEEL</u>				
8.2	H-8.3.1.2	Light steelwork (0-25kg/m)				
8.3	H-8.3.1.2	180 x 70 PFC (22 kg/m)	t	0.13		
	H-8.3.4	Erection Bolts				
8.6	PSH-8.3.4	i. M12 HAS Anchors	No	8		
8.7	H-8.3.4	Grade 8.8 bolts (irrespective of diameter)	t	0.01		
8.8	H-8.3.4	Plates (Irrespective of Thickness)	t	0.01		
	H-8.3.2	<u>DELIVERY</u>				
8.9	H-8.3.2.1	Normal delivery to site of all new structural steelwork and platework (as listed)	t	0.13		
	H-8.3.3	<u>ERECTION ON SITE</u>				
8.10	H-8.3.3	Erection on site of all new structural steelwork and platework (as listed)	t	0.13		
	H-8.3.7	<u>HANDRAILS</u>				
	H-8.3.7	Handrails				
	H-8.3.7.2	<u>Handrail assembly complete</u>				
8.11	H-8.3.7.2a	Maclock Stanchion Tubular or similar approved horizontal balustrade complete (including hot dip galvanising)	m	5		
8.12	H-8.3.7.2c	Maclock Stanchion Tubular or similar approved shaped ends of balustrades complete (including hot dip galvanising)	No	2		
	H-8.3.8	<u>FLOORING, COMPLETE & INSTALLED WITH FRAMES</u>				
	H-8.3.8	Flooring, Complete & Installed with frames				
8.13	H-8.3.8.1	Mentis Rectagrid RS80-30 x 3.0 or similar approved steel flooring	m ²	2		
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
	H-8.3.13	<u>CORROSION PROTECTION OF STRUCTURAL STEEL</u>				
	H-8.3.13	Surface preparation and coating application				
8.14	H-8.2.3.a	In shop (Hot Dip Galvanised)	t	0.13		
8.15	PSH-8.3.15	Taking out/off and remove existing steel balustrade	m	5		
	SANS 1200G	<u>CONCRETE (STRUCTURAL)</u>				
8.16	PSG-8.10	Grouting under base plates	dm ³	64		
8.17		Budgetary allowance for miscellaneous works (if required by the Engineer)	PS	1	1 250.00	1 250.00
		SECTION 8 TO SUMMARY				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		SECTION 9 : REPAIR OF EXISTING STRUCTURES				
	SANS 1200G	<u>CONCRETE (STRUCTURAL)</u>				
	PSG-8.9	Concrete repairs to Tank at Fuel Storage Facility				
9.1	PSG-8.9	i. Remedial Method 1 : Crack Repairs	m	916		
9.2	PSG-8.10	ii. Remedial Method 2 : Corroded Bolt Repair	No	30		
9.3	PSG-8.11	iii. Remedial Method 3 : External Joint Repair	m	69		
9.4	PSG-8.11	Repair of grouting under bases (or beds)	dm ³	80		
	SANS 1200 H	<u>STRUCTURAL STEELWORK</u>				
	PSH-8.3.16	Remove and Replace Bolts, plates, ties, etc.				
9.5		i. Grade 8.8 bolts (irrespective of diameter)	t	0.24		
9.6		Budgetary allowance for miscellaneous works (if required by the Engineer)	PS	1	10 000.00	10 000.00
		SECTION 9 TO SUMMARY				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		SECTION 10 : BARRIER RAILS IN VARIOUS LOCATIONS (3NO. AIRSIDE, 3NO. NON-AIRSIDE)				
	H-8.3.1.2	<u>SUPPLY AND FABRICATION OF STRUCTURAL STEELWORK IN GRADE S355-JR, S355-JO-AR, S335-JR-AR HOT ROLLED STEEL</u>				
	SANS 1200 H	<u>STRUCTURAL STEELWORK</u>				
	H-8.3.1.1	<u>PREPARATION OF SHOP DETAIL DRAWINGS</u>				
10.1	H-8.3.1.1	Preparation of shop detail drawings	t	0.96		
	H-8.3.1.2	Light steelwork (0-25kg/m)				
10.2	H-8.3.1.2	89 x 3.0 CHS (6.36kg/m)	t	0.96		
10.3	H-8.3.1.2	Extra over 89 x 3.0 CHS (6.36kg/m) for curved angles	No	48		
	H-8.3.4	Erection Bolts				
10.4	PSH-8.3.4	M12 HAS or similar approved threaded rod embedded in existing concrete with a minimum depth of 80mm, with and including making holes in existing concrete floor and grouting with "Hilti HY 200" or similar approved grouting	No	192		
10.5	H-8.3.4	Plates (Irrespective of Thickness)	t	0.18		
	H-8.3.2	<u>DELIVERY</u>				
10.6	H-8.3.2.1	Normal delivery to site of all new structural steelwork and platework (as listed)	t	0.96		
	H-8.3.3	<u>ERECTION ON SITE</u>				
10.7	H-8.3.3	Erection on site of all new structural steelwork and platework (as listed)	t	0.96		
	H-8.3.13	<u>CORROSION PROTECTION OF STRUCTURAL STEEL</u>				
	H-8.3.13	Surface preparation and coating application				
10.8	H-8.2.3.a	In shop (Hot Dip Galvanised)	t	0.96		
	SANS 1200G	<u>CONCRETE (STRUCTURAL)</u>				
10.9	PSG-8.10	Grouting under base plates	dm ³	48		
10.10		Budgetary allowance for miscellaneous works (if required by the Engineer)	PS	1	4 000.00	4 000.00
		SECTION 10 TO SUMMARY				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		SECTION 11 : ELECTRICAL				
		<u>Electrical cables : installation of the cable in sleeves (new and existing)</u>				
		<u>2 pair x1.5 mm2 PVC/ECC/PVC. (ESB Buttons)</u>				
11.1		Supply	m	8 364		
11.2		Install	m	8 364		
		<u>Gland and Terminate 2 pair x 1.5 mm2 PVC/ECC/PVC with CCG BW (CCG Corrosion Guard Ex e IIC) with Schroud and Cable Number and lugs (ESB Buttons) Cu/PVC/Overall Shield/Dekabon</u>				
11.3		Supply	each	30		
11.4		Install	each	30		
	SANS 1200DB	<u>EARTHWORKS (PIPE TRENCHES)</u>				
	DB-8.3.2.a	<u>Excavate in all materials for trenches, backfill, compact and dispose of surplus material:</u>				
11.5	DB-8.3.2.a	Up to 1.0m depth	m ³	1 164		
11.6	DB-8.3.2.a	Over 1.0m and up to 2.0m depth	m ³			Rate only
	DB-8.3.2.b	<u>Extra-over trench excavations for:</u>				
11.7	DB-8.3.2.b	Intermediate excavation	m ³	1 164		
		<u>Road Crossings</u>				
11.8		Cut, trench and re-instate road crossing (for road not exceeding 7m wide) to original state complete	No.	5		
		<u>Electrical cable sleeves</u>				
		<u>80mm Kabelflex electrical sleeves and draw wire installed in trench</u>				
11.9		Supply	m	2328		
11.10		Install	m	2328		
		<u>Cable Route Markers</u>				
11.11		Supply	each	32		
11.12		install	each	32		
		<u>PLC panel wire with all associated terminals,boot lace ferrules and core markers</u>				
11.13		Supply	m	100		
11.14		Install	m	100		
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
		<u>Fibre Optic Cables (In new trenches)</u>				
		<u>Fiber Optic Splicing</u>				
11.15		Splicing of fibre optic cable rate provide is for the splicing of each individual fiber optic core	each	108		
11.16		Install fibreNet dome enclosure FNA-2EDH04 or similar approved	each	12		
		<u>Multimode mode Fibre Optic cables (refer to specification documentation for description)</u>				
11.17		Supply	m	1950		
11.18		Install	m	1950		
		<u>Fibre Optic Terminations</u>				
		<u>LCSimplex connector</u>				
11.19		Supply	each	16		
11.20		Install	each	16		
		<u>Fibre Optic splice panel</u>				
		<u>Fibre optic splice panel (3m 2552SA series or similar approved with all associated fittings)</u>				
11.21		Supply	each	3		
11.22		Install	each	3		
		<u>Fibre optic testing Certificate</u>				
11.23		Provide test certification for the newly installed fibre optic cables	Sum	1		
	SANS 1200DB	<u>EARTHWORKS (PIPE TRENCHES)</u>				
	DB-8.3.2.a	<u>Excavate in all materials for trenches, backfill, compact and dispose of surplus material:</u>				
11.24	DB-8.3.2.a	Up to 1.0m depth	m ³	975		
11.25	DB-8.3.2.a	Over 1.0m and up to 2.0m depth	m ³			Rate only
	DB-8.3.2.b	<u>Extra-over trench excavations for:</u>				
11.26	DB-8.3.2.b	Intermediate excavation	m ³	975		
		<u>Road Crossings</u>				
11.27		Cut, trench and re-instate road crossing (for road not exceeding 7m wide) to original state complete	No.	5		
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
		<u>Electrical cable sleeves</u>				
		<u>80mm Kabelflex electrical sleeves and draw wire installed in trench</u>				
11.28		Supply	m	1950		
11.29		Install	m	1950		
		<u>Cable Route Markers</u>				
11.30		Supply	each	32		
11.31		Install	each	32		
		<u>Fibre optic manhole (750mm dia x 600mm depth with concrete Lid) inclusive of excavation, compacting of the ground and waterproofing of the manhole</u>				
11.32		Supply	each	25		
11.33		Install	each	25		
		<u>Valve Chambers (allow for inspection of all valve chambers lights and switches, replace non compliant or defective fittings/switches after approval from Engineer)</u>				
		<u>Exd Light fittings (Orlando 2 x 36 reference ine-236 or similar approved)</u>				
11.34		Inspection	each	30		
11.35		Supply	each	30		
11.36		Install	each	30		
		<u>Exd light switches</u>				
11.37		Supply	each	30		
11.38		Install	each	30		
11.39		COC certification	Sum	1		
		<u>Valve Chamber Glands (remove existing glands and replace with correct size glands for Zone 1 area)</u>				
11.40		Supply	each	90		
11.41		Install	each	90		
		<u>Continuity testing</u>				
11.42		Perform testing across flanges as per specification	Sum	1		
11.43		Report and BOQ to be produced to identify all requirements and material required to ensure continuity across flanges	Sum	1		
		<u>Continuity Bonding cable (1000m x 6mm bare wire copper conductor across flanges)</u>				
11.44		Supply	m	1750		
11.45		Install	m	1750		
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
		<u>8kVA un-interrupted power supply</u>				
		<u>Install , test and commission 8kVA UPS with 30min Back-up-time, note installation cost shall include the programing of the status signals to the PLC</u>				
11.46		Supply	each	1		
11.47		Install	each	1		
		<u>Pratley junction boxes or similar for hazardous area</u>				
		<u>4 way No 0 CCG junction box for electrical installtions (1x valve chamber), including glands</u>				
11.48		Supply	each	16		
11.49		Install	each	16		
		<u>4 way junction box for electrical installtions (for 2 pair 1.5mm2 at cable joints), including glands</u>				
11.50		Supply	each	20		
11.51		Install	each	20		
		<u>PLC airconditioning unit</u>				
		<u>Supply and install S/S Cosmotec Protherm Outdoor panel airconditioner (21kW,230Vac,50Hz) or similar approved unit: note the cost of the installation shall include all required materials ie , cable terminations,terminals , note the airconditoner unit shall be installed in the following panels:</u>				
		<u>1> Delta PLC panel</u>				
		<u>2> Bravo PLC panel</u>				
		<u>3> Alpha PLC panel</u>				
		<u>4> FFD PLC panel</u>				
		<u>5> FSD Spill panel</u>				
		<u>6> WO Panel</u>				
		<u>7> SO panel</u>				
11.52		Supply	each	7		
11.53		Install	each	7		
		<u>Rotark actuator: IQ 20 note cost to include the installation and programming of the unit onto the exisiting SCADA system</u>				
11.54		Supply	each	2		
11.55		Install	each	2		
		<u>Foam Fill, hydrocarbon resistant (to be used to seal sleeves/conduits where electrical cable exits), Surface and in Chambers</u>				
11.56		Supply	m2	1		
11.57		Install	m2	1		
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
		<u>Cathodic protection</u>				
		<u>Inspect and replace damaged Junction boxes</u>				
11.58		Supply	each	4		
11.59		Install	each	4		
11.60		Inspection	Sum	1		
		<u>IF Kits - Install missing IF kits</u>				
11.61		Supply	each	5		
11.62		Install	each	5		
		<u>TRU Display - Replace TRU display at TRU 4</u>				
11.63		Supply	each	1		
11.64		Install	each	1		
		<u>Spark Gaps - Install spark gaps across IF-kits</u>				
11.65		Supply	each	29		
11.66		Install	each	29		
		<u>Testing of Cathodic Protection System based on the existing system</u>				
11.67		Conduct Testing of Cathodic Protection System	each	1		
11.68		Issue Cathodic Report	each	1		
		<u>PLC Housing</u>				
		<u>Contractor shall supply housing around PLC cabinets to protect them from enviromental conditions note the enclosure shall be installed around the exisitinf PLC cabiniet and shall be suitably sized : note exact measurements will have to be obtained from the existing panels onsite</u>				
		<u>Contractor shall supply General arrangement drawings for the protective enclosure for approval by the engineer</u>				
11.69		Supply	each	7		
11.70		Install	each	7		
		<u>Install, terminate and test Emergency stop buttons and stand as shown on drawing note the installation cost must include the stand for the ESB button and the emergency stop buttons. The programming of the Emergency stop buttons onto the existing PLC and SCADA systems should also be allowed for</u>				
11.71		Supply	each	15		
11.72		Install	each	15		
11.73		PLC Programming	Sum	1		
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
		<u>Fuel Farm Electrical DB/Junction Boxes</u>				
		<u>Fuel Farm - Electrical DB's - Allowance made for the inspection of flameproof/hazardous area enclosure panels and recitification of any defects. Supply and install flameproof enclosure plugs</u>				
11.74		Site Inspection	Sum	1		
11.75		Supply Plugs	each	20		
11.76		Install Plugs	each	20		
		<u>General Repair Work as per specification section 2.12</u>				
11.77		Budgetary allowance for miscellaneous works (if required by the Engineer)	PS	1	25 000.00	25 000.00
11.78		Supply and install Store Room socket out let	each	1		
11.79		Perform Infrared Scanning on FFM LV DB and rectify hot connections (maximum of 10No.)	Sum	1		
11.80		Supply and install PLC labels	each	4		
		<u>Earthing</u>				
11.81		Perform testing of existing earthing system installed on site	Sum	1		
11.82		Report and BOQ to be produced to identify all requirements and material required to ensure that the earthing system is compliant to SANS standards	Sum	1		
11.83		<u>Earthing Budgetary Allowance (To be omitted on determination of the exact scope of the earthing system)</u>	PS	1	1 200 000.00	1 200 000.00
		<u>Note:</u>				
		The earthing specialist shall provide rates for all items listed. These rates will form the basis for the execution of the Earthing system repair and will be deemed to be to agreed contract rates, these rates will be taken into account during the evaluation of Tenders. Should the earthing specialist wish to include additional rates, these may be added in the same format as the BOQ, i.e. description, unit, rate - these items are to be split by supply and installation				
		<u>Earth Cable</u>				
		<u>a) 1 Core x 70mm² Earth Cable Yellow/Green In Colour (In existing cables sleeves, trenches, ladder)</u>				
11.84		Supply	m			Rate only
11.85		Install	m			Rate only
		<u>b) 1 Core x 35mm² Earth Cable Yellow/Green In Colour (In existing cables sleeves, trenches, ladder)</u>				
11.86		Supply	m			Rate only
11.87		Install	m			Rate only
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
		<u>c) 1 Core x 16mm² Earth Cable Yellow/Green In Colour (In existing cables sileves, trenches, ladder)</u>				
11.88		Supply	m			Rate only
11.89		Install	m			Rate only
		<u>Earth Cable Terminations with associated termination lugs and required nuts and bolts</u>				
		<u>a) 1 Core x 70mm² Earth Cable Yellow/Green In Colour</u>				
11.90		Supply	each			Rate only
11.91		Install	each			Rate only
		<u>b) 1 Core x 35mm² Earth Cable Yellow/Green In Colour</u>				
11.92		Supply	each			Rate only
11.93		Install	each			Rate only
		<u>Earth bars: cost to include all mounting accersories</u>				
		<u>Earth Bar 300mm x 40mm x 6mm</u>				
11.94		Supply	each			Rate only
11.95		Install	each			Rate only
		<u>Earth Bar 500mm x 80mm x 6mm</u>				
11.96		Supply	each			Rate only
11.97		Install	each			Rate only
		<u>Earth Bar 800mm x 80mm x 6mm</u>				
11.98		Supply	each			Rate only
11.99		Install	each			Rate only
		<u>Earth Rods and Accessories</u>				
		<u>16mm S/Steel Earth Rods (1.5m including coupler)</u>				
11.100		Supply	each			Rate only
11.101		Install	each			Rate only
		<u>Earth Bosses - Mounted onto Steel Structure</u>				
11.102		Supply	each			Rate only
11.103		Install	each			Rate only
		<u>Earth Bosses - Mounted in Concrete</u>				
11.104		Supply	each			Rate only
11.105		Install	each			Rate only
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
		<u>Earth Pot - PVC hinged lid mounted in Soil / Concrete or Paving</u>				
11.106		Install	each			Rate only
11.107		Supply	each			Rate only
		<u>Earth Continuity strap length :approximately 300mm with terminating lugs</u>				
11.108		Supply	each			Rate only
11.109		Install	each			Rate only
		<u>Denso Tape</u>				
11.110		Supply	each			Rate only
11.111		Install	each			Rate only
		<u>25mm Galvanized Conduit</u>				
11.112		Supply	each			Rate only
11.113		Install	each			Rate only
		<u>25mm PVC Conduit</u>				
11.114		Supply	each			Rate only
11.115		Install	each			Rate only
		<u>Labels : lables to be corroision resistant and strapped to earth cable</u>				
11.116		Supply	each			Rate only
11.117		Install	each			Rate only
		<u>Earth Rod Clamps</u>				
11.118		Supply	each			Rate only
11.119		Install	each			Rate only
	SANS 1200DB	EARTHWORKS (PIPE TRENCHES)				
	DB-8.3.2.a	<u>Excavate in all materials for trenches, backfill, compact and dispose of surplus material:</u>				
11.12	DB-8.3.2.a	Up to 1.0m depth	m ³			Rate only
11.121	DB-8.3.2.a	Over 1.0m and up to 2.0m depth	m ³			Rate only
	DB-8.3.2.b	<u>Extra-over trench excavations for:</u>				
11.122	DB-8.3.2.b	Intermediate excavation	m ³			Rate only
11.123	DB-8.3.2.b	Hard rock excavation	m ³			Rate only
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
		<u>Fuel Reels as part plant standard</u>				
11.124		Supply	each	6		
11.125		Install	each	6		
		<u>Testing and Commissioning</u>				
11.126		Testing, Commissioning Including the Certificate of Compliance For The Complete Electrical Installation Including Test Reports According To SANS 10142-1	Sum	1		
		<u>Site Acceptance test</u>				
11.127		Testing And Commissioning Of All Electrical Panels On Site. The Test Is To Be Carried out By The Contractor And Witnessed By The Engineer And Client Representative. The Contractor Shall Provide a Method Statement And Commissioning Plan For Approval	Sum	1		
		<u>Documentation and As-Built Drawings</u>				
11.128		Preparation Of Approved Maintenance Manuals And As Built Drawings, Including 3 Copies Of All Connection And Test Certificates Including All Documentation Required By The Client and Engineer	Sum	1		
11.129		Budgetary allowance for replacement of junction boxes (if required by the Engineer)	PS	1	16 000.00	16 000.00
		SECTION 10 TO SUMMARY				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		SECTION 12 : AUTOMATION				
		<u>Note:</u>				
		Prior providing the final price it is compulsory for the contractor to attend a site visit /inspection				
		<u>WINCC upgrade software and commissioning</u>				
		<u>Software listed below is the recommended software required to upgrade the current winCC package</u>				
		<u>(RT) Run-time V7.4 SP1 or similar</u>				
12.1		Supply	each	2		
12.2		Install	each	2		
		<u>(RC) Configuration V7.4 SP1 or similar</u>				
12.3		Supply	each	1		
12.4		Install	each	1		
		<u>Client (RT) V7.4 SP1 or similar (clients)</u>				
12.5		Supply	each	4		
12.6		Install	each	4		
		<u>Server software OS</u>				
		<u>Windows server 2012 (64bit) or similar</u>				
12.7		Supply	each	1		
12.8		Install	each	1		
		<u>Client and Engineering station os upgrade PC to be included</u>				
		<u>Windows 10 or similar</u>				
12.9		Supply	each	4		
12.10		Install	each	4		
		<u>Server Cabinet and Dell Rack Mount PC's</u>				
		<u>Note the installation component includes commissioning of the system only once completed and approved will this item be considered as complete</u>				
12.11		Supply	each	2		
12.12		Install	each	2		
		<u>UPS Installation (As per specification document)</u>				
12.13		Supply	each	4		
12.14		Install	each	4		
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
		<u>Printer Installation (As per specification)</u>				
12.15		Supply	each	1		
12.16		Install	each	1		
		<u>CAT 6 cable</u>				
12.17		Supply	m	35		
12.18		Install	m	35		
		<u>Fiber optic patch cables with connectors (3m lengths)</u>				
12.19		Supply	each	12		
12.20		Install	each	12		
		<u>Slop tank level switches</u>				
12.21		Test	each	3		
12.22		Supply	each	2		
12.23		Install	each	2		
		<u>Tank farm sniffer units</u>				
12.24		Test	each	5		
12.25		Supply	each	5		
12.26		Install	each	5		
		<u>HMI Installation</u>				
		<u>Note</u>				
		A site visit is recommended prior a price is provided as the current system is operational the contractor is to transfer graphics and existing program onto the new HMI. allowance must be for testing of the system once the upgrade has being completed.				
		There is no available back-ups of the existing system				
		<u>SIMATIC HMI TP1500 Comfort, Comfort Panel, Touch operation, 15" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 24 MB configuration memory, WEC 2013, configurable from WinCC Comfort V14 SP1 with HSP mounted in an approved enclosure with all required components to ensure the full functionality of the system or similar</u>				
12.27		Supply	each	1		
12.28		Install	each	1		
		<u>Note instruments listed below shall be programmed as per functional description document. final payment to be once system has being tested and accepted by client</u>				
12.29		System intergration of VSD drives into PLC and SCADA	Sum	1		
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
BROUGHT FORWARD						
12.30		System intergration of ESB signals into PLC and SCADA	Sum	1		
12.31		System intergration of level switches onto PLC and SCADA	Sum	1		
12.32		System intergration of pressure transmitters onto PLC and SCADA	Sum	1		
12.33		System intergration of valves onto PLC and SCADA	Sum	1		
12.34		SCADA coding / customization due to migration of system software	Sum	1		
12.35		Handover documentation	Sum	1		
12.36		Systems Training	Sum	1		
SECTION 11 TO SUMMARY						

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		SECTION 13 : MECHANICAL & FIRE				
		<u>Fuel Forward Depot</u>				
		<u>Safety Shower at Offloading bay (New location for safety shower) (As indicated on DWG 60486428-ACM-FF-GD-DR-ME-01001)</u>				
13.1		Supply and installation of Pipe 3/4" Galvanised Sch 40 Treaded Male Ends ASTM A53, A153 ASME B1.20.1	m	18		
13.2		Supply and installation of Elbow 3/4" - 90Deg Galvanised Sch 40 Threaded Female A197, ANSI B16.3, B1.20.1	Each	8		
13.3		Supply and installation of Coupling 3/4" Galvanised Sch 40 Treaded Female	Each	6		
13.4		Supply and installation of U-Bolt Galv with 2H Nuts ASTM A563 (Anchor Bolts where applicable)	Each	12		
13.5		Decommissioning of existing safety shower	Sum	1		
13.6		Supply and installation of temporary working platform / scaffolding	Sum	1		
		<u>Entrance / exist doors of FFD (Doors to open outward)</u>				
13.7		Removal of doors and existing door hinges	Each	2		
13.8		Supply and installation new door hinges for the entrance / exist doors	Each	2		
13.9		Reinstallation of existing doors with new hinges	Each	2		
13.10		Remediation work and touch-ups	Sum	1		
		<u>Remove existing pressure gauges, supply and install new pressure gauges</u>				
13.11		Pressure Gauge (0-10 Bar) 100 Face (316SS SANS 1062)	Each	2		
13.12		Pressure Gauge (0-10 Bar) 250 Face (316SS SANS 1062)	Each	1		
13.13		Supply and installation of temporary working platform / scaffolding	Sum	1		
		<u>Fuel Forward Depot - Own Use Facility</u>				
		<u>Strapping Tables and Dip Sticks</u>				
13.14		Supply of strapping tables and dip sticks for 2 no underground fuel storage tanks. (As specified in fuel storage tank datasheets and DWG FFD-ENE-ME-GL-DE-1302)	Each	2		
		<u>Overfill protection for underground storage tanks (As specified in DWG 60486428-ACM-FF-GD-DR-ME-01004)</u>				
13.15		Supply and installation of AutoLimiter II Automatic Overfill Prevention Valve c/w filler drop tube	Each	2		
13.16		Removal of, and modification to, Filler Pipe in Tank to allow installation of overfill protection valve	Each	2		
		CARRIED FORWARD				

Item No	Ref	Description	Unit	Quantity	Rate	Amount
		BROUGHT FORWARD				
13.17		<u>Additional Fire Extinguishers (Installation of additional fire extinguishers)</u> Supply and installation of 9kg Dry Chemical Power Fire Extinguishers with housing bracket installed to face of 203x203x46 H Steel column	Each	2		
		<u>Fuel Hydrant System</u>				
13.18		<u>Entering of sumps (Replace caps)</u> Supply and install Elaflex AMB 25 SS coupling at High Point 4	Each	1		
13.19		Supply and install Elaflex AMB 25 SS coupling at Low Point 10	Each	1		
13.20		Supply and install Elaflex AMB 25 SS coupling at Valve Chamber 10	Each	1		
13.21		Supply and install Elaflex AMB 25 SS coupling at Valve Chamber 11	Each	1		
13.22		Supply and install Elaflex AMB 25 SS coupling at Valve Chamber 12	Each	1		
13.23		<u>Location of ball valves at low point flushing lines (new safety mesh covers) (As specified in DWG 60486428-ACM-HP-GD-DR-ME-01005)</u> Supply and install Fibergate 1-1/4" Deep x 1-1/2" Square Mesh Grating (incl support brackets) size approximately 700 x 550	Each	2		
		<u>Fuel Storage Depot</u>				
13.24		<u>Safety Shower at Offloading bay (New location for safety shower) (As specified in DWG 60486428-ACM-TF-GD-DR-ME-01006)</u> Supply and installation of Pipe 3/4" Galvanised Sch 40 Treaded Male Ends ASTM A53, A153 ASME B1.20.1	m	18		
13.25		Supply and installation of Elbow 3/4" - 90Deg Galvanised Sch 40 Threaded Female A197, ANSI B16.3, B1.20.1	Each	8		
13.26		Supply and installation of Coupling 3/4" Galvanised Sch 40 Treaded Female	Each	6		
13.27		Supply and installation of U-Bolt Galv with 2H Nuts ASTM A563 (Anchor Bolts where applicable)	Each	12		
13.28		Decommissioning of existing safety shower	Sum	1		
13.29		Supply and installation of temporary working platform / scaffolding	Sum	1		
13.3		Budgetary allowance for miscellaneous works (if required by the Engineer)	PS	1	7 500.00	7 500.00
		SECTION 12 TO SUMMARY				

MASTER SUMMARY

PRELIMINARY & GENERAL	
SECTION 1: PRELIMINARY & GENERAL (SMALL WORKS)	
CIVIL WORKS	
SECTION 2: FORWARD FUEL DEPOT - RELOCATION OF STORMWATER GRID INLET	
SECTION 3: FORWARD FIELD DEPOT : OWN USE FACILITY : CONCRETE PAVING TO WALKWAYS	
SECTION 4: FUEL STORAGE FACILITY - EXTENSION OF CONCRETE PAVEMENT	
STRUCTURAL & ARCHITECTURAL	
SECTION 5: NEW DISABLED ACCESS RAMPS AT ADMIN BUILDINGS AT FUEL STORAGE FACILITY & FUEL FORWARD DEPOT	
SECTION 6: FUEL STORAGE FACILITY : BARRIER RAILS, NEW GUTTER & DOWNPIPES	
SECTION 7: NEW CONCRETE STAIRS & CAT LADDERS AT SEPARATOR TANK	
SECTION 8: NEW STEEL PLATFORMS AT BRIDGER RECEIPT FACILITY	
SECTION 9: REPAIR OF EXISTING STRUCTURES	
SECTION 10: BARRIER RAILS IN VARIOUS LOCATIONS (3NO. AIRSIDE, 3NO. NON-AIRSIDE)	
ELECTRICAL	
SECTION 11: ELECTRICAL	
AUTOMATION	
SECTION 12: AUTOMATION	
MECHANICAL & FIRE	
SECTION 13: MECHANICAL & FIRE	
SUB-TOTAL : EXCL VAT	
CONTINGENCY	2 250 000.00
SUB-TOTAL : EXCL VAT	
VAT (15%)	
TOTAL INCLUDING VAT	