

SENTECH LIMITED  
PE OC MAST REPLACEMENT  
SCHEDULE OF QUANTITIES  
SCHEDULE 1

DATE: 2023.09.27  
REVISION: 1

ITEM	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (R)
		<b><u>SCHEDULE 1 : GENERAL</u></b>				
	SANS 1200A	<b>FIXED CHARGE AND VALUE RELATED ITEMS</b>				
1001	8.3.1	Contractual Requirements.	Sum			
1002		OHS File submission.				
1003		General responsibilities and other fixed charge obligations	Sum			
		<b>TIME RELATED ITEMS</b>				
1004		(a) Contractual Requirements	Sum			
1005		(b) General responsibilities and other time related obligations	Sum			
<b>TOTAL SCHEDULE 1 CARRIED TO SUMMARY</b>						

ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (R)
		<b><u>SCHEDULE 2 : CONCRETE</u></b>				
	SANS 1200 G	<b>CONCRETE (STRUCTURAL)</b>				
	<b>8.4</b>	<b>CONCRETE</b>				
		Scabble and clean (free of dust and debris) top of existing concrete foundation. Seal existing pipe sleeves with end caps.	m <sup>2</sup>	19.2		
2000	8.4.3	30 MPa/19mm Concrete for 1m high base to be cast onto existing concrete base.	m <sup>3</sup>	20.0		
	<b>8.2</b>	<b>FORMWORK</b>				
	<b>8.2.2</b>	<b>Smooth</b>				
2001	8.2.2	Vertical formwork for base	m <sup>2</sup>	19.1		
	<b>8.3</b>	<b>REINFORCEMNT</b>				
	8.3.1	High tensile ribbed steel rods				
2002		Y10	kg	16		
2003		Y20	kg	1360		
	<b>8.4.4</b>	<b>UNFORMED SURFACE FINISHES</b>				
2004		Wood floated finish to mast foundation	m <sup>2</sup>	19.2		
	<b>8.7</b>	<b>GROUTING</b>				
2005		Non-shrink grout below mast base plates.	dm <sup>3</sup>	6.1		
		<b>CHEMICAL ANCHORS</b>				
2006		Anchor 1m long Y20 bars 300mm deep into existing concrete foundation using Hilti HIT-RE 500 V3 adhesive. Installation to be in accordance with specifications on Drg. 201176-100-01. Y20 Bars are included under item 2003.	No.	33		
2007		Handrail stanchion mounting. Anchor 80mm Long Dia. 16mm Threaded Rods 50mm deep into concrete . Threaded rods to be supplied with 1 nuts and 1 washer each. Threaded rods, nuts and washers to be Hot Dip Galvanized Class 4.8. Adhesive to be Hilti HIT-RE 500 V3 .	No.	19		

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (R)
2008	8.8	Climbing ladder mounting. Anchor 80mm Long Dia. 16mm Threaded Rods 50mm deep into concrete . Threaded rods to be supplied with 1 nuts and 1 washer each. Threaded rods, nuts and washers to be Hot Dip Galvanized Class 4.8. Adhesive to be Hilti HIT-RE 500 V3 .	No.	2		
		<b>HD BOLTS</b>				
2009		Diameter 24mm HD bolts. 900mm Long and Class 8.8. Each HD bolt to be supplied complete with an anchor plate 4 no. off nuts as detailed on drg 201776-100-01. All material to be HD galvanized.	No.	16		
		<b>MISCELLANEOUS</b>				
2010		Expose the 3 existing ø150mm PVC cable sleeves (approx. 300mm below the pavement) next to the foundation. Cut the sleeves and install slow bend sleeves so that the cables can run up the vertical face of the new foundation. Sleeves to be secured to the foundation with galvanized steel straps/clamps.	m	5		
2011		Backfill and compact the excavations (item 2010) and reinstate the bitumen pavement.	Sum	1		
2012		10% Contingency for final quantities (10% of sum of 2001 to 2011)	Sum	1		
<b>SCHEDULE 2 TOTAL CARRIED TO SUMMARY</b>						

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (R)
		<b><u>SCHEDULE 3 : SUPPLY AND FABRICATION OF STRUCTURAL STEEL</u></b>				
	SANS 1200H	<b>SUPPLY AND FABRICATE STEELWORK IN ACCORDANCE WITH SANS 2001-CSI.</b>				
3000	8.3.1.1	Prepare shop detail drawings and material lists. The Detailer shall supply the Engineer a 3D model in IFC format for approval before drawings are generated.		4.72		
3001	8.3.1.2	L100x100x8 S355JR	kg	439.2		
3002	8.3.1.2	L100x65x8 S355JR	kg	545.2		
3003	8.3.1.2	L90x90x6 S355JR	kg	667.4		
3004	8.3.1.2	L80x80x6 S355JR	kg	1129.3		
3005	8.3.1.2	L60x60x6 S355JR	kg	461.5		
3006	8.3.1.2	L50x50x6 Commercial Quality	kg	114.5		
3007	8.3.1.2	L40x40x5 Commercial Quality	kg	344.5		
3008	8.3.1.2	CHS 76x4 S355JR	kg	170.9		
3009	8.3.1.2	PFC 100X50 S355JR	kg	60.6		
3010	8.3.1.2	Plate 20 Thick S355JR	kg	31.8		
3011	8.3.1.2	Plate 12 Thick S355JR	kg	38.0		
3012	8.3.1.2	Plate 10 Thick S355JR (cranked gusset plates)	kg	388.6		
3013	8.3.1.2	Plate 8 Thick S355JR	kg	104.3		
3014	8.3.1.2	Plate 10 Thick Commercial Quality	kg	5.4		
3015	8.3.1.2	Plate 6 Thick Commercial Quality	kg	108.9		
3016	8.3.1.2	Plate 5 Thick Commercial Quality	kg	48.7		
3017	8.3.1.2	Ø16 SR Commercial Quality	kg	63.6		
3018	8.3.1.2	Ø6 SR Commercial Quality(Sharpened ends)	kg	0.1		
3019	8.3.1.2	Ø6 SR Commercial Quality(Sharpened ends)	kg	0.1		

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (R)
3019	8.3.1.2	Antenna brackets	Prov	na		15 000.00

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (R)
3020	8.3.2.1	Delivery of steelwork from workshop to site. All material must be protected against coating damage during transportation and storage on site using dunnage or any other appropriate measures. Rate shall include the use of these protection measures . Dunnage shall be removed from site once the tower has been erected.	t	4.72		
	SANS 1200HC	<b>HOT DIP GALVANISING</b>				
3021	8.2.1	Repairs at place of fabrication.	t	4.72		
3022	8.2.2	Transport to and from coating site.	t	4.72		
3023	8.2.3	Hot Dip Galvanize all fabricated steelwork in accordance with SANS 121. The unit rate shall include the issuing of a Certificate of Compliance to SANS 121 for all galvanized steelwork.	t	4.72		
	SANS 1200HC	<b>SHOP PAINTING AND PRIMING</b>  All shop painting and priming shall be done in accordance with one of the paint systems prescribed in section 6 of CS097. All mating surface to be masked off prior to painting. Mating surfaces includes contact surface between the steel section/plate and the bolt heads and washers.				
3024		Sweep blast and clean all fabricated steelwork (except nuts, bolts and washers) - CS097/01  Shop Painting of all fabricated steelwork (except nuts, bolts and washers).	t	4.72		
3025		Supply and apply Prime Coat	t	4.72		
3026		Supply and apply Intermediate Coat	t	4.72		
3027		Supply and apply Final Coat	t	4.72		
		<b>SITE PAINTING AND REPAIR ON SITE</b>				
3028		Site paint in accordance CS097 all previously masked off surfaces and all bolts and nuts after the mast is erected.	Sum	1		
3029		Repair to CS097 all damaged coatings	Sum	1		
	SANS 1200H	<b>ERECTION BOLTS</b>				

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (R)
3030	8.3.4	HD Galvanised Grade 8.8 bolts, nuts and washers	kg	236		

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (R)
	SANS 1200H	<b>FLOORING</b>				
	8.3.9a	Supply and installation of Fibergrate melded grating panels in accordance with specifications of Drg 201776-200-02 and 201776-200-02.				
3031		Platform at Lvl 5m. Overall width x length 1.72m x 1.94m	m <sup>2</sup>	3.2		
3032		Platform at Lvl 5m. Overall width x length 1.32m x 1.4m	m <sup>2</sup>	1.8		
3033		Platform at Lvl 5m. Overall width x length 0.99m x 1.39m	m <sup>2</sup>	1.4		
3034		Supply and installation of Hilti X-BT-GR M8/7 SN 8 direct fastening studs and Hilti X-FCM-R (HL) 35/40 grating discs.	No.	30		
		<b>MISCELLANEOUS ITEMS</b>				
3035		Pre-assembled each mast module complete with ladder and grating panels before galvanising for inspection by the engineer.	Sum	1		
		<b>QUALITY CONTROL BY INDEPENDENT THIRD PARTY</b>				
		(The Contractor is responsible for his own in-house Quality Control in accordance with SANS 2001-CSI and must include this in his fabrication rates)				
3036		Surface flaw detection test (MPI or Dye penetrant) on mast legs to baseplate welds	No.	3		
3037		10% Contingency for final quantities (10% of sum of 3001 to 3029)	Sum	1		
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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (R)
		<b><u>SCHEDULE 4 : MAST ERECTION AND ANTENNA WORK</u></b>				
	SANS 1200H	<b>MAST ERECTION</b>				
4000		Remove all antennas, feeders and electrical cables from existing mast. The height, tilt and azimuth of each antenna must be recorded prior to its removal from the mast to ensure that it is installed at the same height, tilt and azimuth on the new mast. All antennas to be stored on site for reinstallation on the new mast. All feeders and electrical cables must be neatly stored on site at a dedicated area specified by the client.	Sum	1		
4001		De-rig existing 30m lattice tower (refer to drawing PORT ELIZ/100) including climbing ladders, feeder trays, antenna mounting poles and platforms. All material to be neatly stored on site at a dedicated area specified by the client. All material to be stored on dunnage. Material shall not obstruct access.	Sum	1		
4002		Supply and install a temporary steady burning low intensity, type A (minimum of 10 candela) aviation warning light that shall remain operational on the existing and new mast during the de-rigging and erection process.	Sum	1		
4002		Supply and installation of dunnage required for item 4001.	Sum	1		
4003	8.3.5	Erect the new 29m mast complete with climbing ladder, feeder ladder and platforms in accordance with the Project Specifications and mast erection specifications on Drg. 201776-200-001 .	Sum	1		
4004		Supply and install a 25x3 copper tape running from the earthing spike on top of the mast to the base of the mast. The earthing tail must be connected to the building earthing using appropriate earthing connectors or welding methods. Rate shall include clamps to secure the strap to the feeder support ladder at max 1.8m intervals.	m	40		
4005		Supply and install a 3m long O-line PT76 (304 wide) heavy duty hot dip galvanised cable tray with covers or similar approved to secure and protect feeder running along the top and side of the foundation.	No.	2		

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (R)
4006		Supply and install to the top of the mast a new steady burning low intensity, type A (minimum of 10 candela) AWL system complete with circuit breaker, photo cell switch, junction box, 3 core 2.5 mm2 shielded cable, mounting brackets and stainless steel cable ties. System must be configured for redundancy operation. Sytem to be fed from the building to the junction box to the light. Contractor shall supply Sentech with a Electrical Certificate Of Conformance after installation of the light.	No.	1		
		<b>TRANSPORT</b>				
4007		Deliver to site all material required for the completion of the works.	Sum	1		
		<b>ANTENNA WORK</b>				
4008		Transfer all existing antennas as listed in the project specification to the new mast.	Sum	1		
		Supply and install new antenna feeders and electrical cables for all antennas. Note that from the base of the mast to the transmitter building all the existing cables run in buried pipe sleeves approx. 300mm below ground. All the existing cables must be removed from the sleeves and replaced with new cables. Rate shall include cable ladder cable clamps (hot dip galvanised) and stainless steel cable strapping where needed. Cable sleeves are capped during construction but cable sleeves are to be fully sealed against the ingress of water once cables have been pulled through. Power cables and electronic services to be separated from each other( .i.e., to be on separate wireways/cable routes)				
4009		Hubber+ Suhner sufornfeed ½ inch	m	60		
4010		Hubber + Suhner sufornfeed ½ inch	m	80		
4011		RFS CELLFLEX 1,2mm	m	300		
4012		RG214	m	300		
4013		Electrical cables 6mm2 PVC SWA 4 cores plus earth 2,5mm	m	60		