

## SCHEDULE No. A3: INSTALLATION C2: KOSI BAY: PLUMBING, DRAINAGE AND WET SERVICES

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT		
Brought forward								
PAA.15	302.13	.03 15 mm ø CP wall-mounted taps	No.	2				
		.04 20 mm ø CP wall-mounted taps	No.	2				
		.05 20 mm ø brass hose bib taps	No.	2				
		.06 15 mm CP sink mixers	No.	2				
		.07 22mm exposed junior flush valve	No.	3				
		.08 22mm under wall stop taps	No.	2				
		.09 22mm basin mixer	No.	4				
		.10 25 mm Junior flush master, including replacing flush master kits	No.	3				
		PAA.15	302.14	<b>Supply and installation of Drainage Piping installation</b>				
				.01 PVC soil and waste pipes:				
.01 40 mm dia pipe fixed to walls and soffits	m			11				
.02 50 mm dia pipe fixed to walls and soffits	m			8				
.03 110 mm dia pipe fixed to walls and soffits	m			9				
PAA.15	.02			PVC soil and waste pipe fittings:				
				.01 40 mm dia elbows	No.	4		
				.02 50 mm dia elbows	No.	4		
				.03 110 mm dia elbows	No.	4		
				.04 40 mm dia junction	No.	5		
		.05 50 mm dia junction	No.	12				
.03		Pipe trench excavations, bedding and backfilling:						
		.01 Excavate in all materials for pipe trenches	m³	6				
		.02 Supply and installation of pipe bedding 50 mm thick river sand	m³	2				
		.03 Backfilling and compacting to 93% modified AASHTO density with selected material	m³	6				
.04		Supply and installation of piping including jointing and testing:						
		.01 110mm PVC	m	15				
Carried forward								

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PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
PAA.15	302.14	.05 PVC couplings:				
		.01 100 mm dia 45° bend with IE	No.	15		
		.02 50 mm dia 45° junction	No.	6		
		.03 100 mm dia 45° junction IE	No.	14		
		.06 PVC soil and waste pipe fittings				
		.01 110 mm dia elbows	No.	8		
		.02 110 mm dia junction	No.	5		
PAA.16	302.15	.07 Cleaning eyes:				
		.01 100 mm dia inline cleaning eye constructed complete with ABC and lamphole cover and frame and concrete encasement	No.	6		
		<b>Servicing, cleaning and repair of domestic water and drainage pipe installations:</b>				
		.01 Servicing and repair of drainage installations:				
		.01 Unblock and clean pipe work including fittings, 50 mm ø pipe	m	45		
		.02 Unblock and clean pipe work including fittings 100 mm ø pipe	m	35		
		.03 Replace damaged gully with pre-cast concrete gully	No.	2		
		.04 Replace broken or damaged gully P-traps	No.	2		
		.05 Replace missing or broken round cast iron gully gratings 100mm - 300mm diameter	No.	2		
		.06 Replace missing or broken square cast iron gully gratings 250mm x 250mm wide	No.	1		
		.07 Replace missing or broken vent valve for 50mm air vent	No.	2		
		.08 Replace missing or broken vent valve for 110mm air vent	No.	1		
		.09 Replace missing or broken cast iron inspection eye cover and frame only SANS 558 Type 14A in 500 x 500 mm x 75 mm thick concrete encasement	No.	1		
.10 Replace missing or broken round cast iron gully grating 100mm-300mm diameter	No.	1				
Carried forward						

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PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
PAA.16	302.16	<b>Servicing, cleaning and repair of sanitary ware:</b>				
		.01 Water closets:				
		.01 Destaining of WC pan	No.	3		
		.02 Chip repair of WC pan	No.	1		
		.03 Repair WC cistern flushing mechanism with repair kit	No.	6		
		.04 Replace broken or missing seat and covers	No.	4		
		.02 Urinals:				
		.01 Destaining of urinal bowl	No.	2		
		.02 Chip repair of urinal bowl	No.	1		
		.03 Washhand basins:				
		.01 Destaining of basin	No.	2		
		.02 Chip repair of basin	No.	1		
		.03 Remove and replace silicone sealant for wall mounted basins	No.	2		
		.04 Sinks:				
		.01 Destaining of sinks	No.	2		
PAA.16	302.17	<b>Servicing, cleaning and repair of domestic water and drainage pipe installations:</b>				
		.01 Water pipe installation:				
		.01 Pressure test existing water installation	item	1		
		.02 Taking of water pipe samples including cutting out, repairing existing piping, and analysing of pipe sample for 15 mm dia to 32 mm dia piping	No.	2		
		.03 Taking of water pipe samples including cutting out, repairing existing piping, and analysing of pipe sample for 40 mm dia to 50 mm dia piping	No.	1		
		.04 Taking of water pipe samples including cutting out, repairing existing piping, and analysing of pipe sample for 80 mm dia to 100 mm dia piping	No.	1		
		.05 Preparation and painting of pipework for 15 mm dia to 32 mm dia piping	m	8		
Carried forward						

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PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT		
Brought forward								
PAA.16	302.17	.06 Preparation and painting of pipework for 40 mm dia to 50 mm dia piping	m	15				
		.07 Preparation and painting of pipework for 80 mm dia to 100 mm dia piping	m	35				
		.08 Preparation and painting of pipework for 15mm dia to 32mm dia piping	m	6				
		.09 Preparation and painting of pipework for 40mm dia to 50mm dia piping	m	2				
		.10 Unblock and clean pipework including fittings, 150 mm dia pipe	m	25				
		.11 Unblock and clean gullies	No.	1				
		.12 Repair damaged gullies	No.	2				
		.13 Replace missing or broken gully gratings	No.	5				
		.14 Replace missing or broken cleaning eye cover, ABC cast-iron cleaning eye	No.	3				
		.15 Replace missing vent pipes, 100 mm dia cast-iron pipe and fittings	m	4				
		PAA.16	.03	Servicing and repair of brassware, including gaskets, gland packings , seals, and handles:				
				.01 Brass gate valves	No.	6		
				.02 20 mm dia stop-cocks	No.	4		
		PAA.17	302.18	<b>Servicing, cleaning and repair of domestic geysers, including replacement of element, thermostat, safety valve and vacuum breakers and rectifying of pipe work where necessary:</b>				
				.01 150 litre electric geyser	No.	1		
PAA.18	302.19	<b>Servicing, cleaning and repair of industrial geysers</b>	No.	1				
PAA.19	302.20	<b>Servicing and repair of fire water piped reticulation network</b>	m	8				
SABS 1200 DA 8.3	303.00	<b><u>EARTHWORKS (SMALL WORKS)</u></b>						
	303.01	<b>Scheduled Items</b>						
	8.3.2	.01 Excavate trenches in all materials and use for backfill or embankment or dispose.	m <sup>3</sup>	2				
Carried forward								

## SCHEDULE No. A3: INSTALLATION C2: KOSI BAY: PLUMBING, DRAINAGE AND WET SERVICES

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
SABS 1200 DA 8.3	303.01	.02 Extra over item 01 above for				
		0.1 Intermediate excavation	m <sup>3</sup>	2		
8.3.2		0.2 Hard rock excavation	m <sup>3</sup>	1		
		.03 Importing and placing of approved 65-125mm rock fill from commercial sources or from borrow pits to 95% MOD AASHTO	m <sup>3</sup>	2		
		.04 PVC-U Slotted subsoil drainage pipes complete with integral sockets				
		.01 110 mm dia	m <sup>3</sup>	3		
		.05 Megaflex DHD 60 industrial garden hose with 10 years design life, 4000kPa max pressure, blue stripe, according to SABS 645-1970 type 2, per 30 metre roll	No.	1		
	302.00	<b><u>MISCELLANEOUS ITMES</u></b>				
PAA.07	302.01	<b>Scheduled Items</b>				
		.01 20 mm 0 pressure-reducing valve, including two gate vales and non-return valve set at 400 kPa	No.	1		
		.02 Brass vacuum breaker	No.	1		
		.03 Safety valve	No.	1		
<b>TOTAL - CARRIED TO REPAIR SUMMARY: SCHEDULE No. A3: INSTALLATION C2: KOSI BAY: PLUMBING, DRAINAGE AND WET SERVICES</b>						



Department  
Public Works and Infrastructure  
REPUBLIC OF SOUTH AFRICA

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

## BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. A4: INSTALLATION C3: KOSI BAY: FENCING, CLEANING OF BUILDINGS, SITE KEEPING AND PEST CONTROL

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	400.00	<b><u>FENCING AND GATES</u></b>				
CC.08.01.0	400.01	Clearing the fence route				
	.01	Beginning of contract Clearing the fence 2.5m wide strip and keep area clean on both sides	m	550		
CC.02	401.00	<b><u>RESIDENTIAL FENCE - 1.2 m DIAMOND MESH. TUBULAR STEEL POSTS AND STANDARDS</u></b>				
	401.01	Supply and erection of new fencing material to replace old material:				
	.01	Diamond mesh:				
	.01	1,2 m diamond mesh fence	m	50		
	.02	110 mm tubular post with concrete footing for 1.2 m high fence	No.	4		
	.03	65 mm dia. Stay for 1,2 m post	No.	5		
	.04	Y-standards for 1,2 m high fence	No.	15		
	.05	4 mm thick fully galvanized straining wire	m	200		
	.06	Gates:				
	.01	In 1,2 m high fences:				
	.01	single and double gates less than 1,5 m wide	No.	1		
	.02	single and double gates between 1,5 m and 5,0 m wide	No.	1		
Carried forward						

SCHEDULE No. A4: INSTALLATION C3: KOSI BAY: FENCING, CLEANING OF BUILDINGS, SITE  
KEEPING AND PEST CONTROL

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
CC.02	402.00	<b>2.0 m HIGH SECURITY FENCE (Galfan Class A coated to SANS 10224-2: 2003 min 240g/m<sup>2</sup>)</b>				
	402.01	<b>Supply and erection of new fencing material to replace old material</b>				
	.01	Posts:				
	.01	70 x 70 x 6mm Angle Iron Posts with 450mm security extension, Predrilled holes for fixing panels and Hot dipped Galvanised in accordance with ISO 1461 (Min. 70 microns)	No.	3		
	.02	70 x 70 x 6mm Angle Iron Corner Posts with 450mm security extension, Predrilled holes for fixing panels and Hot dipped Galvanised in accordance with ISO 1461 (Min. 70 microns)	No.	2		
	.02	Covering plate				
	.01	70 x 6mm Flatiron section, Predrilled countersunk holes for fixing mesh to posts. Hot dipped Galvanised in accordance with ISO 1461 (Min. 70 microns)	No.	3		
	.03	Toprails				
	.01	40mm x 40mm x 3mm Angled Iron, predrilled holes for fixing rails to posts and for fixing top section of mesh to rail. Top rail to be fitted with 32mm high x 2mm thick serrated comb. Razor combs to be fillet welded 10mm at every 100mm centres Hot dipped Galvanised in accordance with ISO 1461 Minimum coating of top rail: 55 microns Minimum coating of serrated comb: 55 microns	No.	3		
	.04	Bottomrails				
	.01	40mm x 40mm x 3mm Angled Iron, predrilled holes for fixing rails to posts and for fixing bottom section of mesh to rail. Hot dipped Galvanised in accordance with ISO 1461. Minimum coating of bottom rail: 55 microns	No.	3		
	.05	Panels . 358 Double Line Wire Single Skin™ Mesh				
	.01	Heavy high security welded panel fence, with rectangular mesh Inner Apertures: 72.2mm x 8.7mm Wire diameter: 4mm Vertical wires are welded on both sides of the horizontal wires Width of panel: 2515mm Height of panel 1 969m Tensile strength: 600 - 900N/mm <sup>2</sup> Weld strength: 60 - 80% Weight: 9 . 34kg/m <sup>2</sup> Coating: Galfan Class A Coated in accordance with SANS 10244-2:2003	No.	3		
Carried forward						

SCHEDULE No. A4: INSTALLATION C3: KOSI BAY: FENCING, CLEANING OF BUILDINGS, SITE  
KEEPING AND PEST CONTROL

CIVIL  
REPAIR WORK

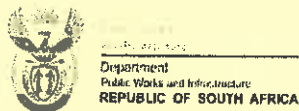
PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT		
Brought forward								
CC.08.02	403.00	.06 Overhanging Extensions						
		.01 450mm overhang extension with 3 strands of Motto 2.5mm double stranded Aluzinc Barbed Wire and 450mm diameter galvanised Barbed Tape Concertina razor Coil	m	10				
		.07 Concrete footing	m <sup>2</sup>	3				
		.01 Supply and install a 20Mpa/19mm 8.4.3 stone concrete footing: Size 400mm wide x 200mm deep complete with formwork						
		.08 Supply and install 6m wide and 2m high sliding gate manufactured from high security welded panel mesh complete with rail. Coating: Galvan Class A Coated in accordance with SANS 10244-2:2003	No.	2				
		<b><u>Supply and erection of new fencing material to replace old material</u></b>						
		403.01	<b>Material to replace old material:</b>					
			.01 Smooth wire	m	50			
			.02 Diamond mesh 1.8m high	m <sup>2</sup>	100			
			.03 Welded Mesh	m <sup>2</sup>	20			
			.04 Timber Poles	No.	2			
			.05 Barbed tape "flatwrap", 700mm diam	m	50			
			.06 Steel rail way beam dor 2.1m high fence	No.	2			
.07 Steel stys for 2.1m high fence	No.		2					
.08 Tubular posts for 1.8m high fence	No.		6					
.09 Steel stays for 1.8m high fence	No.		15					
CC.08.02	.10	Tubular posts for 1,2m high fence	No.	5				
		.11 Steel stays for 1.2m high fence	No.	12				
		.12 Heavy Duty Galvanised wheels with ball bearings and axle with lubrication point	No.	4				
		.13 Gates						
		.01 In fences less than 1,3m high						
	.01	single and double gates less than 1,5m wide	No.	1				
		single and double gates between 1,5m and 5,0m wide	No.	1				
Carried forward								



SCHEDULE No. A4: INSTALLATION C3: KOSI BAY: FENCING, CLEANING OF BUILDINGS, SITE KEEPING AND PEST CONTROL

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
		.02 In fences between 1,3m and 2,4m high				
		.01 single and double gates less than 1,5m wide	No.	1		
		.02 single and double gates between 1,5m and 5,0m wide	No.	1		
CC.08.04	403.02	Redress, treat and painting of fences				
		.01 Redress, treat and painting of fences more than 2,0m high	m	100		
	404.00	<b>SOLID WASTE MANAGEMENT</b>				
	404.01	Cleaning of site as detailed in table CC 07/01	m <sup>2</sup>	8 500		
CG.06.03	404.02	Waste collection- Bins				
		.01 Supply 80l heavy duty PVC dustbins to houses and offices	No.	2		
		.02 105 litre swing steel bin size 475mm Ø x 800mm high	No.	1		
		.03 240 litre square black bin including wheels	No.	1		
CG.06.01	404.03	Disposal of litter	m <sup>3</sup>	110		
CG.06.02	404.04	Waste collection skip	No.	1		
CJ.05	405.00	<b>SUPPLY OF EQUIPMENT FOR ABLUTIONS AS DESCRIBED IN ITEM CJ 03 OF THE TECHNICAL SPECIFICATION</b>				
CJ.05.01		.01 Stainless steel hand dryer unit with blower output of 450 watt @ 20 000 rpm similar or equal to accelerator	No.	1		
CJ.05.02		.02 Auto digital aerosol dispenser with stainless steel cover	No.	2		
CJ.05.03		.03 Stainless steel toilet paper dispensing units, capable of holding two toilet paper rolls per unit	No.	2		
CJ.05.04		.04 Stainless steel shoe bins	No.	2		
CJ.05.05		.05 Stainless steel hand soap dispenser	No.	2		
CJ.05.06		.06 Stainless steel urinal sanitizer	No.	2		
	406.00	<b>OTHER EQUIPMENT</b>				
		.01 Eagle eye wind driven bird control unit	No.	1		
<b>TOTAL - CARRIED TO REPAIR SUMMARY: SCHEDULE No. A4: INSTALLATION C3: KOSI BAY: FENCING, CLEANING, SITE KEEPING AND PEST CONTROL</b>						



## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

## BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. A5: **INSTALLATION C4: KOSI BAY: BULK WATER SUPPLY SYSTEM AND EXTERNAL WATER NETWORKS**

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	500.00	<b><u>BOREHOLE:</u></b>				
DA	500.01	Testing borehole capacity:				
DA.01		.01 Pump testing of borehole	No.	1		
DA.01.01		.02 Extra over for item 500.01.01				
		.01 Permanent removal of existing pumping equipment	No.	1		
		.02 Recovery of lost equipment	No.	1		
		.03 Installation of temporary pumps	No.	1		
		.04 Ground water sampling	No.	2		
		.05 Compilation of borehole report	No.	2		
		.06 Standing time - Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	Day	-	-2 000	Rate Only
		.07 Removal of existing pumping equipment prior to testing	No.	1		
		.08 Reinstallation of existing pumping equipment	No.	1		
Carried forward						

SCHEDULE No. A5: INSTALLATION C4: KOSI BAY: BULK WATER SUPPLY SYSTEM AND  
EXTERNAL WATER NETWORKS

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
DA.03	500.02	<b>Repair/replacement of equipment</b>				
DA 03.01	.01	Detailed inspection and testing of components				
	.01	Borehole submersible pump and pipe work	No.	1		
DA 03.02	.02	Commissioning of submersible pumping equipment:				
	.01	Borehole submersible pump and pipe work	No.	1		
DA 03.03	.03	Reconditioning of pumping equipment:				
	.01	Borehole submersible pump and pipe work	No.	1		
DA 03.04	.04	Repair of pumping equipment				
	.01	Borehole submersible pump and pipe work	No.	1		
DA 03.05	.05	Decommissioning and removal of submersible pumping equipment:				
	.01	Borehole submersible pump and pipe work	No.	1		
DA 03.06	.06	Servicing of submersible borehole pumps				
	.01	Borehole submersible pump and pipe work	No.	1		
DA 04	500.03	<b>Supply and delivery of submersible centrifugal borehole pumps:</b>				
DA 04.01	.01	Borehole submersible pump with duty points:				
	.01	Borehole submersible pump capable of pumping 5l/second and maximum 140m total head	No.	1		
DA 04.02	.02	Installation of submersible, borehole pumps:				
	.01	Borehole submersible pump capable of pumping 5l/second and maximum 140m total head	No.	1		
DA 04.03	.03	Supply, deliver and install rising pipe (75 mm diameter and pressure class 16)	No.	1		
DA 04.04	.04	Remove existing equipment from borehole and store on site as directed by the Engineer	No.	1		
Carried forward						

SCHEDULE No. A5: INSTALLATION C4: KOSI BAY: BULK WATER SUPPLY SYSTEM AND  
EXTERNAL WATER NETWORKS

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
DA.06	500.04	<b>Borehole structures</b>				
DA 06.01	.01	Clear area around borehole	m <sup>2</sup>	30		
DA 06.02	.02	Removal of concrete base slab	m <sup>3</sup>	2		
DA 06.03	.03	Laying of concrete base slabs	m <sup>3</sup>	2		
DA 06.04	.04	Brickwork	m <sup>2</sup>	5		
DA 06.05	.05	Repair of existing steel cover	No.	1		
DA 06.06	.06	Supply, deliver and install new borehole enclosure complete with roof and floor	No.	1		
DA 06.07	.07	Painting of exposed pipe work	m	50		
DB.01	500.05	<b>Drilling of borehole</b>	m	25		
DB.02	500.06	<b>Borehole casing</b>				
DB 02.01	.01	Supply and install steel casing 165mm dia.	m	12		
DB 02.02	.02	Supply and install casing shoe	Item	2		
DB 02.03	.03	Supply and install uPVC casing	m	12		
DB 02.04	.04	* Supply and install perforated casing 165mm dia.	m	12		
DB.03	.05	Recovery of steel casing	m	10		
	500.07	<b>Corrective maintenance to existing boreholes:</b>				
DC.02	.01	Rehabilitation of existing boreholes	m	12		
DC 03.01	.02	Supply and install steel casing 165mm dia.	No.	1		
DC 03.02	.03	Supply and install casing shoe	No.	1		
DC 03.03	.04	Supply and install uPVC casing	m	5		
DC 03.04	.05	Supply and install perforated casing 165mm dia.	No.	1		
Carried forward						

SCHEDULE No. A5: INSTALLATION C4: KOSI BAY: BULK WATER SUPPLY SYSTEM AND EXTERNAL WATER NETWORKS

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
	501.00	<b>BOREHOLE PIPE WORK</b>				
SANS 1200 L 8.2.5	501.01	<b>Supply and install pipes, valves, fittings and specials:</b>				
	.01	25mm ball valve with plastic coated plated steel lever and 2" (50 mm) female connections	No.	1		
	.02	25mm double orifice air valve / pump protector with bias mechanism	No.	1		
	.03	20mm ball valve with plastic coated plated steel lever and 2" (50 mm) female connections	No.	1		
	.04	20mm pressure gauge 0-1000 kPa with large scale and stainless steel housing	No.	1		
	.05	80mm dia. flanged bulk water meter, flow rates between 0.15 m <sup>3</sup> /h and 100 m <sup>3</sup> /h, 6 figure display and epoxy powder coated body and cover for sizes 40mm to 125mm, pressure of 16 bar	No.	1		
	.06	80mm dia. flanged resilient seal gate valve with wheel handle	No.	1		
	.07	80mm dia. standard cast iron flange adaptor from 80mm GMS to 75mm HDPE	No.	1		
SANS 1200 L 8.2.5	501.02	<b>Supply and install pipes, valves, fittings and specials as per borehole pipe and fittings schedule:</b>				
	.01	Pipe fitting 1: Borehole base plate	No.	1		
	.02	Pipe fitting 2: Flanged T with couplings	No.	2		
	.03	Pipe fitting 3: Flanged 1m section	No.	2		
	.04	Pipe fitting 4: Flanged elbow	No.	2		
SANS 1200 L 8.2.1	501.03	<b>Supply, lay and bed pipes complete with couplings, including testing:</b>				
	.01	32mm dia. HDPE PE100 Class 10 pipe, jointed with Plasson high compression fittings	m	12		
	.02	75mm dia. HDPE PE100 Class 10 pipe, jointed with Plasson high compression fittings	m	12		
Carried forward						

SCHEDULE No. A5: INSTALLATION C4: KOSI BAY: BULK WATER SUPPLY SYSTEM AND EXTERNAL WATER NETWORKS

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
Brought forward						
SANS 1200DB	502.00	<b><u>EXCAVATIONS</u></b>				
8.3.2(a)	502.01	Excavate in all materials for trenches, backfill, compact, and dispose of surplus/unsuitable material, for the following pipe diameters for total trench depths:				
		.01 Not exceeding 1m deep x 600mm wide	m	12		
8.3.2(b)		.02 Extra-over item 502.01.01 for:				
		.01 Intermediate excavation	m <sup>3</sup>	4		
SANS 1200LB	502.02	<b>Provision of bedding from trench excavations:</b>				
8.2.1		.01 300mm x 600mm bedding of selected granular material	m <sup>3</sup>	5		
SANS 1200LB	502.03	<b>Supply only of bedding from borrow pits:</b>				
8.2.2.2		.01 300mm x 600mm bedding of selected granular material	m <sup>3</sup>	5		
	503.00	<b><u>DOSING EQUIPMENT</u></b>				
DF 06.01		.01 Decommissioning and removal of dosing equipment	No.	1		
DF 06.02		.02 Service dosing equipment	No.	1		
DF 06.03		.03 Installation, testing and commissioning of dosing equipment	No.	1		
DH 09.06		.04 Supply of chemicals	l	20		
DL 08.02	503.01	<b>Installation, testing and commissioning of chlorination systems:</b>				
		.01 Complete system with dosing pump, tank and all fittings and accessories	Sum	1		
		.02 Signal cable with plug for connecting into pump from water meter and electrical wiring with reed switch pulse sensor	Sum	1		
	504.00	<b><u>BULK WATER SUPPLY</u></b>				
EK 07.01	504.01	<b>Supply and delivery of water meters, gate valves, air release valves, non-return valves and sluice gates:</b>				
		.01 50mm double orifice air release valve	No.	1		
		.02 50mm non-return valve	No.	1		
		.03 50mm flanged resilient seal gate valve	No.	1		
		.04 110mm water meter	No.	1		
Carried forward						

SCHEDULE No. A5: INSTALLATION C4: KOSI BAY: BULK WATER SUPPLY SYSTEM AND EXTERNAL WATER NETWORKS

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
EK 07.02	504.02	<b>Installation, testing and commissioning of water meters, gate valves, air-release valves, non-return valves and sluice gates:</b>				
		.01 50mm double orifice air release valve	No.	1		
		.02 50mm non-return valve	No.	1		
		.03 80mm non-return valve	No.	1		
		.04 110mm hydraulic float control valve	No.	1		
		.05 110mm water meter	No.	1		
		.06 50mm gate valve	No.	1		
		.07 80mm gate valve	No.	1		
		.08 100mm gate valve	No.	1		
		.09 150mm gate valve	No.	1		
EK 07.03	504.03	<b>Service and reconditioning of water meters, gate valves, air-release valves, non-return valves and sluice gates:</b>				
		.01 50mm double orifice air release valve	No.	2		
		.02 50mm non-return valve	No.	2		
		.03 80mm non-return valve	No.	1		
		.04 110mm hydraulic float control valve	No.	1		
		.05 110mm water meter	No.	1		
		.06 50mm gate valve	No.	2		
		.07 80mm gate valve	No.	1		
		.08 100mm gate valve	No.	1		
	505.00	<b><u>WATER DISTRIBUTION NETWORKS</u></b>				
CE.01	505.01	<b>Water distribution pipelines:</b>				
CE.01.01		.01 Repair of existing pipelines:				
		.01 Distribution pipes	m	10		
		.02 House connections	m	12		
		.03 Irrigation pipes	m	10		
Carried forward						

SCHEDULE No. A5: INSTALLATION C4: KOSI BAY: BULK WATER SUPPLY SYSTEM AND  
EXTERNAL WATER NETWORKS

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT	
Brought forward							
CE.01.02	505.01	.02 Provision of materials for repair of existing:					
		.01 uPVC class 12 pressure pipes to SANS 966 with integral "LYNG" mechanical rubber ring joints:					
		.01 75 mm dia.	m	50			
		.02 110 mm dia.	m	50			
		.03 160 mm dia.	m	20			
		.02 Galvanised mild steel (GMS) medium duty quality pipes to SANS 62 with flanged couplings. Normalised pipes:					
		.01 20 mm dia.	m	50			
		.02 50 mm dia.	m	50			
		.03 80 mm dia.	m	20			
		.03 HDPE - PE100 Class 10 pressure pipes, ISO 4427:					
		.01 32 mm dia.	m	50			
		.02 50 mm dia.	m	20			
		.04 Saddles with standard drilling and 25 mm BSP tapping for connections to supply lines:					
		.01 110 mm dia.	No.	4			
		.02 160 mm dia.	No.	1			
		.05 Standard bends of all degrees and all types completely fitted in pipes of all types with inside diameters of:					
		.01 between 39 mm and 55 mm	No.	1			
		.02 between 55 mm and 76 mm	No.	1			
		.03 between 76 mm and 99 mm	No.	1			
		.04 between 99 mm and 130 mm	No.	1			
.05 between 130 mm and 180 mm	No.	1					
CE.01.02		.06 Standard equal tees, reducing tees (largest connection pipe determine payment classification) and cross pieces of all types completely fitted in pipes of all types with inside diameters of:					
		.01 between 39 mm and 55 mm	No.	1			
		.02 between 55 mm and 76 mm	No.	1			
		.03 between 76 mm and 99 mm	No.	1			
		.04 between 99 mm and 130 mm	No.	1			
Carried forward							



## SCHEDULE No. A6: INSTALLATION C5: KOSI BAY: SEPTIC TANKS AND SEWER NETWORKS

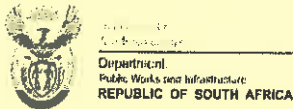
CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
CF.02.02	601.06	.02 Chemical cleaning of sewer pipes and structures with internal diameters of:				
		.01 Up to and including 150 mm	m	80		
CF.02.06		.03 Demolition and removal of damaged existing structures:				
		.01 Plain concrete	m <sup>3</sup>	3		
		.02 Reinforced concrete	m <sup>3</sup>	2		
		.03 Kerbing and channelling	m	15		
		.04 Pipework	m	25		
CF.03	601.07	<b>Tests and inspections</b>				
		.01 Pressure testing of pipelines	m	50		
		.02 Testing of manholes	No.	3		
	601.08	<b>French drains constructed according to SANS 10400-PP10:</b>				
EG 07.04		.01 Soak-away test	No.	2		
	601.09	<b>Supply and install a prefabricated septic tank approved according to SANS 0400 - PP10 &amp; 52566. Including excavation and backfilling with selected material and all necessary soil pipe connections</b>				
		.01 3600 liters septic tank system	No.	1		
		.02 Construction of new french drain, with dimensions of 10,0 m long x 1.2 m wide x 1,5 m deep below the invert of the inlet pipe	No.	1		
		.03 Perforated 110mm PVC pipe	m	40		
		.04 Geo fabric, knittex 80 or similar approved. Colour to be approved by Engineer:	m <sup>2</sup>	50		
		.05 Stone 19mm for soak-away	m <sup>3</sup>	15		
SABS 1200 DA 8.3 8.3.2	602.00	<b><u>EXCAVATION AND MATERIAL</u></b>				
	602.01	<b>Repair existing french drain installations:</b>				
		.01 Excavate trenches in all materials and use for backfill or embankment or dispose	m <sup>3</sup>	4		
		.02 Extra over item .01 above for				
		.01 Intermediate excavation	m <sup>3</sup>	4		
		.02 Hard rock excavation	m <sup>3</sup>	2		
		.03 Importing and placing of 65-125mm rock fill from commercial sources	m <sup>3</sup>	3		
Carried forward						

## SCHEDULE No. A6: INSTALLATION C5: KOSI BAY: SEPTIC TANKS AND SEWER NETWORKS

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
	602.01	.03 UPVC fittings and pipes:				
		.01 110 mm $\emptyset$ plain bend 87.5°	No.	3		
		.02 110 mm $\emptyset$ plain 4 way T-junction 45°	No.	4		
		.03 110 mm $\emptyset$ square double junction	No.	12		
		.04 110 mm $\emptyset$ 135° junction	No.	3		
		.05 110 mm $\emptyset$ 90° junction	No.	3		
		.06 110 mm $\emptyset$ 90° junction	No.	3		
		.07 110 mm $\emptyset$ UPVC pipe	m	12		
	603.00	<u>REGISTRATION OF A WATER USE</u>				
EN.01	603.01	Obtain all relevant information from different authorities, complete and dispatch the application forms, and ensure that registration is completed on behalf of the Department of Public Works and Infrastructure	Sum	1		
<b>TOTAL - CARRIED TO REPAIR SUMMARY: SCHEDULE No. A6: INSTALLATION C5: KOSI BAY: SEPTIC TANKS AND SEWER NETWORKS</b>						



## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

## BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. A7: INSTALLATION C6: KOSI BAY: ROADS AND STORM WATER DRAINAGE

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	700.00	<b><u>GRAVEL SHOULDERS AND WEARING COURSE</u></b>				
CA.01.02	700.01	Gravel shoulders constructed from gravel from commercial sources:				
	.01	Compacted to 93% of modified AASHTO density (150 mm compacted layer thickness)	m <sup>3</sup>	3		
CA.01.03 COLTO CA.02	.02	Overhaul on material hauled in excess of 1,0 km (ordinary overhaul)	m <sup>3</sup> -km	4		
	701.00	<b><u>SURFACE REPAIRS OF CONCRETE PAVEMENTS</u></b>				
CA.02.01	701.01	Preparation and sealing or resealing of old joints and cracks in existing concrete pavements				
	.01	Expansion joints	m	30		
	.02	Construction joints and weakened plane joints	m	30		
	.03	Cracks	m	30		
CA.02.02	701.02	Patching of concrete	m <sup>2</sup>	6		
CA.04	702.00	<b><u>SURFACE TREATMENT OF SURFACED ROADS</u></b>				
CA.04.01	702.01	Trimming the edges and edge breaks of the existing surfacing	m	45		
CA.04.05	702.02	Mechanical brooming of road surfaces	m <sup>2</sup>	45		
CA.04.06	702.03	Cleaning of cracks with compressed air	km	1		
CA.05	703.00	<b><u>REPAIR OF SEGMENTED PAVING</u></b>				
CA.05.01	703.01	Remove concrete paving blocks:				
	.01	Discard paving blocks	m <sup>2</sup>	80		
	.02	Stockpile and re-use paving blocks	m <sup>2</sup>	180		
Carried forward						

## SCHEDULE No. A7: INSTALLATION C6: KOSI BAY: ROADS AND STORM WATER DRAINAGE

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
Brought forward						
CA.05.02	703.02	<b>Excavation for repair of segmented paving:</b>				
		.01 Discard paving blocks	m <sup>3</sup>	12		
		.02 Stockpile and re-use paving blocks	m <sup>3</sup>	5		
CA.05.03	703.03	<b>Backfilling and reinstatement of pavement layers:</b>				
		.01 Selected layers compacted to 93% of modified AASHTO density	m <sup>3</sup>	120		
		.02 Cement stabilized subbase layers compacted to 95% of modified AASHTO density	m <sup>3</sup>	12		
		.03 Cement stabilized base layers compacted to 97% modified AASHTO density	m <sup>3</sup>	16		
CA.05.04	703.04	<b>Cast in situ concrete and formwork in edge beams, intermediate beams and kerbing:</b>				
		.01 Class 20 concrete	m <sup>3</sup>	5		
CA.05.05	703.05	<b>Breaking up and removing concrete edge beams, intermediate beams, etc.</b>	m <sup>3</sup>	5		
CA.05.06	703.06	<b>Steel reinforcement in edge beams, intermediate beams and kerbing:</b>				
		.01 Mild steel bars	kg	250		
		.02 High-tensile steel bars	kg	250		
		.03 Welded steel mesh	kg	100		
CA.05.07	703.07	<b>Concrete block paving:</b>				
		.01 Class, type and thickness similar to existing pavement for areas carrying vehicular traffic (80 mm interlocking paving blocks (grey) on 25 mm bedding sand)	m <sup>2</sup>	420		
		.02 Re-use stockpiled block paving (80 mm interlocking paving blocks on 25 mm bedding sand)	m <sup>2</sup>	40		
		.03 60 mm interlocking paving blocks on 25 mm bedding sand for pedestrian and light vehicle traffic	m <sup>2</sup>	45		
CA.05.08	703.08	<b>Replacement of jointing sand</b>	m	30		
Carried forward						

## SCHEDULE No. A7: INSTALLATION C6: KOSI BAY: ROADS AND STORM WATER DRAINAGE

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
CA.06	704.00	<u>REPAIR OF KERBING</u>				
CA.06.01	704.01	Patching of kerbs	m	4		
CA.06.02	704.02	Reinstalling pre-cast kerbs	m	15		
CA.06.03	704.03	Replacing of kerbing:				
		.01 Barrier kerbs similar to existing undamaged barrier kerbs	m	12		
		.02 Semi-mountable kerbs similar to existing undamaged semi-mountable kerbs	m	12		
		.03 Mountable kerbs similar to existing undamaged mountable kerbs	m	12		
	705.00	<u>ROAD TRAFFIC SIGNS AND ROAD MARKINGS</u>				
CA.07	705.01	Erection and repair of road traffic signs and traffic-control devices:				
CA.07.01	.01	Erection or reinstatement of road sign boards:				
		.01 Area not exceeding 2 m <sup>2</sup>	m <sup>2</sup>	2		
CA.07.02	.02	Supply and installation of sign boards:				
		.01 1.2mm thick non reflective, full colour, signs with baked silicone polyester enamel paint consisting 4 - 6 micron (DFT) primer and 18 - 22 micron (DFT) final coat mounted in buildings or to entrances of buildings	m	2		
		.02 1.4mm thick non reflective, full colour, signs with baked silicone polyester enamel paint consisting 4 - 6 micron (DFT) primer and 18 - 22 micron (DFT) final coat mounted on frames in open areas	m	2		
		.03 1.4mm thick pre-painted galvanised steel road signs less than 1.5m <sup>2</sup>	m	2		
	.03	Road sign supports (overhead road sign structures excluded):				
CA.07.03	.01	Steel tubing of 76 mm diameter and 3 mm wall thickness	m	2		
CA.07.04	.02	Hazard plates (600 x 150 mm)	No.	2		
CA.07.05	.03	Repair of road sign faces	m <sup>2</sup>	2		
CA.07.06	.04	Excavation and backfilling for road sign supports	m <sup>3</sup>	2		
Carried forward						

## SCHEDULE No. A7: INSTALLATION C6: KOSI BAY: ROADS AND STORM WATER DRAINAGE

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
CA.07.07	705.01	.05 Extra over item 705.01.04 for cement-treated soil backfill	m <sup>3</sup>	2		
CA.07.08		.06 Extra over item 705.01.04 for rock excavation	m <sup>3</sup>	1		
CA.07.09		.07 Gravel drainage layer below road sign footings	m <sup>3</sup>	2		
CA.08	705.02	<b>Road markings:</b>				
CA.08.01		.01 Retro-reflective road-marking paint:				
		.01 Longitudinal lines:				
		.01 100 mm wide broken or unbroken lines, white, yellow or red	m	240		
		.02 150 mm wide broken or unbroken lines, white, yellow or red	m	45		
		.02 Transverse lines and other markings:				
		.01 Broken or unbroken lines, white, red or yellow	m <sup>2</sup>	8		
		.02 Lettering and symbols, white, red or yellow, repainting existing markings	m <sup>2</sup>	8		
		.03 Traffic island markings, white or yellow repainting existing markings	m <sup>2</sup>	5		
CA.08.03		.02 Removal of road markings				
		.01 Removal of markings by means of grit-blasting	m <sup>2</sup>	16		
		.02 Removal of markings by other mechanical methods	m <sup>2</sup>	12		
	706.00	<b><u>CHEMICAL CONTROL OF VEGETATION AND ERADICATION OF UNDESIRABLE VEGETATION</u></b>				
CA.09.01	706.01	Chemical control of vegetation	m <sup>2</sup>	45		
CA.09.02	706.02	Eradication of undesirable vegetation	m <sup>2</sup>	45		
	707.00	<b><u>STORM WATER DRAINAGE</u></b>				
CB.01.01	707.01	Excavation in:				
		.01 Soft Material	m <sup>3</sup>	2		
		.02 Hand Material	m <sup>3</sup>	2		
CB.01.02	707.02	Backfilling and reinstatement of pavement layers:	m <sup>3</sup>	2		
CB.01.03	707.03	Prefabricated culverts:	m	6		
Carried forward						

## SCHEDULE No. A7: INSTALLATION C6: KOSI BAY: ROADS AND STORM WATER DRAINAGE

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
CB.01.04	707.04	Cast <i>in situ</i> concrete and formwork in stormwater structures:				
		.01 Class 20 concrete	m <sup>3</sup>	2		
		.02 Class 25 concrete	m <sup>3</sup>	2		
CB.01.05		.03 Replacement of manhole cover, grid inlets, etc.				
		.01 SABS 558 Type 4 - covers, grids etc.				
		.01 Maximum dimension up to including 300mm	No.	1		
		.02 Maximum dimension 300 mm to 600 mm	No.	1		
		.02 SABS 558 Type 4 - frames only for cover, grids etc.				
		.01 Maximum dimension up to including 300mm	No.	1		
		.02 Maximum dimension 300 mm to 600 mm	No.	1		
		.03 SABS 558 Type 2A - covers, grids, etc.				
		.01 Maximum demension up to including 300mm	No.	1		
		.02 Maximum demnsion 301 mm to 600 mm	No.	1		
		.04 SABS 558 Type 2A - frames only for covers, grids, etc.				
		.01 Maximum demension up to including 300mm	No.	1		
		.02 Maximum demension 301 mm to 600 mm	No.	1		
CB.03	708.00	<b>CONCRETE CONSTRUCTION AND REPAIR</b>				
CB.03.01		.01 Excavation in:				
		.01 Soft Material	m <sup>3</sup>	8		
		.02 Hand Material	m <sup>3</sup>	6		
CB.03.02		.02 Cast in situ concrete				
		.01 Class 20 concrete	m <sup>3</sup>	2		
		.02 Class 30 concrete	m <sup>3</sup>	2		
Carried forward						

## SCHEDULE No. A7: INSTALLATION C6: KOSI BAY: ROADS AND STORM WATER DRAINAGE

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
CB.03.03	708.00	.03 Backfill below channels	m <sup>3</sup>	3		
CB.03.04		.04 Steel reinforcement				
		.01 Welded steel mesh ref. 193	kg	350		
CB.03.05		.05 Precast concrete kerbing:	m	15		
CB.03.06		.06 Sealed joints in concrete lining open drains	m	20		
CB.03.07		.07 Demolition and removal of damaged existing structures				
		.01 Plain concrete	m <sup>3</sup>	2		
		.02 Reinforced concrete	m <sup>3</sup>	3		
CB.03.08		.08 Concrete side beams	m <sup>3</sup>	2		
CB.03.09		.09 Overhaul on material for haul in excess of 1,0 km				
		.01 Excavated material to spoil	m <sup>3</sup> .km	3		
		.02 Existing structures demolished	m <sup>3</sup> .km	3		
CB .04	709.00	<b><u>CLEANING OF CONCRETE DRAINS AND CHANNELS</u></b>				
CB.04.01		.01 Remove of dispose of material from				
		.01 Drains and channels within the following invert with ranges				
		.01 Less than 1,0 m	m	12		
		.02 1,0 m up to and including 2,0 m	m	12		
CB.04.02		.02 Overhaul on material for haul in excess of 1.0 km	m <sup>3</sup> .km	2		
CB 08	710.00	<b><u>Cleaning of pipelines</u></b>				
CK .06	711.00	<b><u>PATENTED EARTH RETAINING STRUCTURES</u></b>				
	711.01	<b>Repair work to exsiting structure</b>				
		.01 Repairs to exsiting precast concrete block retaining walls	m <sup>2</sup>	4		
SANS 1200CK 8.2.5	711.02	<b>Stone-pitching</b>				
		.01 Pitching (light)	m <sup>2</sup>	5		
Carried forward						



## SCHEDULE No. A7: INSTALLATION C6: KOSI BAY: ROADS AND STORM WATER DRAINAGE

CIVIL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
CA	712.00	<b>TRAFFIC MANAGEMENT DEVICES</b>				
	712.01	High security traffic barrier consisting of extruded aluminium tubing powder coated in white with red reflective tape including boom break away system and lockable cabinet powder coated in white with red reflective tape capable of opening during power failures:				
	.01	Up to 7 m in width	No.	1		
	.02	5 - 6 m aluminum boom pole	No.	1		
	.03	3 -5 m aluminum boom pole	No.	1		
	712.02	<b>Retractable spike barrier strip</b>				
	.01	3.5m retractable spike barrier strip, complete with detection sensors, mechanical motors and emergency override switch	No.	1		
	.02	4.0m retractable spike barrier strip, complete with detection sensors, mechanical motors and emergency override switch	No.	1		
	712.03	<b>Traffic robot</b>				
	.01	Robot head red and green led with mounting brackets complete with wiring harness and control	No.	1		
	712.04	<b>Impact Crash Cushions</b>				
	.01	Crash cushions complete with mounting rails, guard rails, reflectors and impact cushions. Barrier to withstand speeds from 40km/h up to 120km/h	No.	1		
CA.07.10	712.05	<b>Concrete traffic barrier structure:</b>				
	.01	Supply, deliver and install 3 m Jersey barrier complete with fastening bolts and plates	No.	5		
	712.06	<b>Speed reducing structure:</b>				
	.01	Supply, deliver and install Flat-topped solid rubber/steel speed bumps, installed complete	No.	10		
	712.07	<b>Guardrails on timber posts:</b>				
	.01	New galvanised sections	m	10		
	.02	Extra over Item 705.02 for horizontally curved guardrails factory bent to a radius of less than 150 m	m	10		
	.03	End Units: End Wings	No.	4		
	.04	Reflector Plates	No.	15		
<b>TOTAL - CARRIED TO REPAIR SUMMARY: SCHEDULE No. A7: INSTALLATION C6: KOSI BAY: ROADS AND STORM WATER DRAINAGE</b>						



DEPARTMENT  
Public Works and Infrastructure  
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 A1

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

BILL OF QUANTITIES

NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK

SUMMARY OF SCHEDULE OF QUANTITIES: ELECTRICAL REPAIR WORK

Total

SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

R \_\_\_\_\_

SCHEDULE No. A9: INSTALLATION E2: KOSI BAY: EXTERNAL LIGHTING

R \_\_\_\_\_

SCHEDULE No. A10: INSTALLATION E3: KOSI BAY: STANDBY POWER SYSTEMS

R \_\_\_\_\_

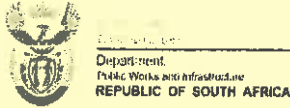
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TOTAL OF SCHEDULE OF QUANTITIES - ELECTRICAL REPAIR WORK  
CARRIED TO CALCULATION OF TENDER SUM

R \_\_\_\_\_

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SIGNED ON BEHALF OF TENDERER: \_\_\_\_\_



Department  
Public Works and Infrastructure  
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 A1

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
AB	800.00	<b><u>REPAIR AND SERVICE ELECTRICAL INSTALLATIONS AT KOSI BAY PORT OF ENTRY</u></b>				
	800.01	<b>Repair/service/replace parts of distribution boards:</b>  <b>PLEASE NOTE THAT THE PRICE IS NOT FOR THE COMPLETE REPLACEMENT OF THE BOARDS/BOXES UNLESS SPECIFICALLY INDICATED</b>				
	.01	Repair and service the floor standing three phase three division distribution board for Normal and emergency power inside the Generator room and all the contactors, earth leakage relays, switches, circuit breakers and metering equipment and cables inside	No.	1		
	.02	Repair and service the wall mounted, two division three phase four section, distribution board inside the Immigration/SAPS Office including all (circuit breakers and isolating switches), the earth leakage relays, switches, circuit breakers, contactors, surge arrestors and cables	No.	1		
	.03	Repair and service wall mounted, (Normal, and UPS) phase distribution board in the Agriculture office including all the earth leakage relays, switches, circuit breakers, contactors, surge arrestors, wires and cables	No.	1		
	.04	Repair and service wall mounted, (Normal, and UPS) phase distribution board in the 2x SAPS Parkhomes office including all the earth leakage relays, switches, circuit breakers, contactors, surge arrestors, wires and cables	No.	2		
	.05	Repair and service wall mounted, (Normal, and UPS) phase distribution board in the Port Health office including all the earth leakage relays, switches, circuit breakers, contactors, surge arrestors, wires and cables	No.	1		
Carried forward						

## SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
AB	800.01	.06 Repair and service the flush/surface mounted distribution boards all the earth leakage relays, switches, circuit breakers, surge arrestors, wires and cables (Ablutions)	No.	1		
		.07 Repair and service the flush/surface mounted distribution boards all the earth leakage relays, switches, circuit breakers, surge arrestors, wires and cables (Mobile Office)	No.	1		
		.08 Repair and service the flush/surface mounted distribution boards all the earth leakage relays, switches, circuit breakers, surge arrestors, wires and cables (Lapa)	No.	1		
AB.01.20	800.02	Supply Marker Kit and labelling of all distribution boards, electrical equipment, cables and wiring, with the required information, including face plates on bodies of light switches, socket outlets and isolators by means of engraved or embossed labelling as well as typed legend cards showing all the equipment inside distribution boards / boxes.	Sum	1		
AB.01.13A	800.03	<b>Service and repair of moulded case circuit breaker (to SANS 156):</b>				
		.01 10-20A, 6kA single pole 240V	No.	30		
		.02 25-80A, 6kA single pole 240V	No.	15		
		.03 40-80A, 6kA triple pole 600V	No.	5		
		.04 100-160A, 6kA triple pole 600V	No.	5		
		.05 180-350A, 6kA triple pole 600V	No.	1		
Carried forward						

## SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
AB.01.13B	800.04	<b>Supply and installation of moulded case circuit breaker and linked isolating switches (to SANS 156):</b>				
		.01 10-60A, 6kA single pole 240V	No.	5		
		.02 80-100A, 6kA single pole 240V	No.	3		
		.03 40-80A, 6kA four pole 600V	No.	5		
		.04 100-160A, 6kA four pole 600V	No.	3		
AB.01.15	800.05	<b>Supply and replace faulty contactors:</b>				
		.01 20-100A, double pole 250V	No.	4		
		.02 30-60A, 3 pole 600V	No.	3		
AB.01.16	800.06	<b>Supply and replace faulty switching timers:</b>				
		.01 Electronic QAT-R-type time switch with 24hr time reserve 20A - 240V	No.	3		
		.02 Electronic QAT-R-type time switch with 24hr time reserve 60A - 240V	No.	2		
AB.01.17	800.07	<b>Supply and replace faulty earth leakage units (SANS approved):</b>				
		.01 60-80A, 6kA double pole - 25mA - 240V	No.	15		
AB.01.18	800.08	<b>Supply and install fuses for lightning protection for electronic equipment (SANS approved):</b>				
		.01 Fuse holder DF PMF type 10x38, 32A, 690V or equivalent	No.	4		
		.02 Fuses to fit in the fuse holders, 15A - 125A 1.5kV	No.	4		
AB.01.19	800.09	<b>Supply and install faulty surge arrestors - Din Rail Mount Surge Protection Devices:</b>				
		.01 3 Pole and Neutral 275V 15kA with indication	No.	12		
		.02 1 Pole and Neutral 275V 15kA with indication	No.	20		
AB.01.11	800.10	<b>Supply and install earth continuity conductor:</b>				
		.01 70 mm <sup>2</sup> BCEW	m	20		
		.02 70 mm <sup>2</sup> copper clad earthing conductor	m	20		
Carried forward						

## SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
AB.01.12	800.11	<b>Terminate earth continuity conductors:</b>				
	.01	70 mm <sup>2</sup> BCEW	No.	5		
	.02	70 mm <sup>2</sup> copper clad earthing conductor	No.	5		
	801.00	<b><u>ENERGY MANAGEMENT</u></b>				
AB.01.21	801.01	<b>Supply and install rail mounted kWh meters in distribution boards and kiosks:</b>				
	.01	Single phase DIN rail mounted kWh energy meter	No.	13		
	.02	Three phase DIN rail mounted kWh energy meters	No.	3		
	802.00	<b><u>LIGHTING INSTALLATION</u></b>				
AB.02.01	802.01	<b>Re-lamp and clean diffuser of luminaire:</b>				
	.01	58W Fluorescent single	No.	20		
	.02	58W Fluorescent double	No.	25		
	.03	18W CFL lamp	No.	21		
	.04	70W HPS Lamp	No.	19		
	.05	PL9 W	No.	20		
AB.02.02	802.02	<b>Service Luminaire:</b>				
	.01	2 x 58W SABS open channel fluorescent luminaire - similar to Voltex lighting type : R1/T-258 SS	No.	20		
	.02	1 x 58W SABS open channel fluorescent luminaire - similar to Voltex lighting type : R1/t-158 SS	No.	15		
	.03	2 x 58W SABS IP 55 fluorescent luminaire - similar to Voltex lighting type : c2-258ss with watertight diffuser	No.	4		
	.04	70W HPS B40. Britelite wall mounted bulkhead luminaire : similar to Voltex lighting type B40-70W HPS	No.	10		
	.05	Bulkhead luminaire - similar to Voltex lighting type: B10 with 2XPL9 lamps	No.	20		
Carried forward						

## SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
AB.02.02	802.02	.06 Decorative round bulkhead – radiant type: WT2A	No.	20		
		.07 Bowl type IP55 bathroom fitting with ceramic lamp holder with similar to Dulux ef eco 21w/e27 lamp	No.	10		
		.08 Wall/ceiling mounted décor spot light ILM type : ACC/spt/100	No.	15		
		.09 Ceiling mounted 2 light decorative luminaire décor spot light ILM type : ACC/spt/100 21w/e27 lamps	No.	4		
		.10 Ceiling mounted 3 light decorative luminaire décor spot light ILM type : ACC/spt/100 21w/e27 lamps	No.	4		
		.11 2 x 58W SABS open channel fluorescent luminaire – similar to Voltex lighting type : R1/T-258 SS	No.	4		
AB.02.03	802.03	<b>Repair/replace luminaire:</b>				
		.01 1 x 55W LED SABS open channel fluorescent luminaire - similar to Voltex lighting type : LP1-55W-LED-HO	No.	10		
		.02 2 x 55W LED SABS IP 65 fluorescent luminaire - similar to Voltex lighting type : C10-HO-55W-LED with diffuser	No.	10		
		.03 2 x 55W LED SABS IP 65 fluorescent luminaire - similar to Beka vapour line LED lighting type : VLN 2, 58W ECG with watertight diffuser	No.	8		
		.04 34W LED B40. Britelite wall mounted bulkhead luminaire : similar to Voltex lighting type B40-34W LED	No.	10		
		.05 Bulkhead luminaire - similar to Voltex lighting type: B10 with 10W LED	No.	10		
		.06 Decorative round bulkhead – radiant type: WT2A	No.	10		
		.07 Décor round cheese bulkhead 250 mm glass bowl-ilm type: similar to Voltex lighting type: ROMA-21W-LED	No.	10		
		.08 14W LED Emergency light fitting with rechargeable batteries with watertight diffuser connected to 240V power supply	No.	2		
Carried forward						

## SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
AB.02.06	802.04	<b>Replace luminaire diffuser, lens or glass bowls:</b>				
	.01	34W LED B40. Britelite wall mounted bulkhead luminaire : similar to Voltex lighting type B40-34W LED	No.	5		
	.02	Bowl type IP55 bathroom fitting with ceramic lamp holder with similar to Dulux el eco 21w/e27 lamp	No.	5		
	.03	Décor round cheese bulkhead 250 mm glass bowl-ilm type: Dec/rnd/chs/250 with 21W similar to Dulux el eco lamp	No.	5		
AB.02.10	802.05	<b>Replace luminaire internal components :</b>				
	.01	Choke and capacitor for 58W Fluorescent	No.	10		
	.02	Choke and capacitor for 18W Fluorescent	No.	5		
	.03	Fluorescent lamp starter	No.	10		
	.04	Control gear for 70W HPS B40. Britelite wall mounted bulkhead luminaire : Similar to Voltex lighting type B40-70W HPS	No.	10		
AB.02.08	802.06	<b>Strengthening the roof beam structure to carry the load of luminaires/fan lights</b>	No.	5		
AB.02.09	802.07	<b>Replace lamp holder (Ceramic)</b>	No.	10		
AB.02.07	802.08	<b>Service light switches (all types)</b>	No.	50		
AB.02.04	802.09	<b>Replace faulty light switch:</b>				
	.01	16A, one lever, one way	No.	20		
	.02	16A, two lever, one way	No.	10		
	.03	16A, three lever, one way	No.	3		
	.04	16A, water tight, robust	No.	5		
	.05	16A, single lever, one way IP55 rotary type	No.	2		
AB.02.05	802.10	<b>Replace Photo-electric switch:</b>				
	.01	16A unit with bracket and mounted on meter/distribution box	No.	1		
	.02	16A unit with bracket and mounted inside bulkhead fitting on outside wall of building	No.	4		
Carried forward						



## SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
	<b>803.00</b>	<b><u>WIRING</u></b>				
<b>AB.01.04</b>	<b>803.01</b>	<b>Install/remove/replace wiring :</b>				
	.01	2,5 mm <sup>2</sup> PVC insulated	m	200		
	.02	4 mm <sup>2</sup> PVC insulated	m	250		
	.03	6 mm <sup>2</sup> PVC insulated	m	20		
	.04	10 mm <sup>2</sup> PVC insulated	m	10		
	.05	2,5 mm <sup>2</sup> BCEW	m	175		
	.06	4 mm <sup>2</sup> BCEW	m	175		
	.07	6mm <sup>2</sup> BCEW	m	175		
	<b>804.00</b>	<b><u>WIRE WAYS CONDUITS AND ACCESSORIES</u></b>				
<b>AB.03.04</b>	<b>804.01</b>	<b>Supply, replace/install conduit and with the correct saddles :</b>				
	.01	20 mm dia. Galvanised Steel	m	150		
	.02	25 mm dia. Galvanised Steel	m	20		
	.03	32 mm dia. Galvanised Steel	m	10		
	.04	20mm galv. Steel Saddles	No.	50		
	.05	25mm galv. Steel Saddles	No.	30		
	.06	32mm galv. Steel Saddles	No.	10		
<b>AB.03.11</b>	<b>804.02</b>	<b>Supply and install outlet (draw) boxes, bends and cover plates:</b>				
	.01	100 x 50 Galvanised Steel	No.	10		
	.02	100 x 100 Galvanised Steel	No.	10		
	.03	50 x 100 mm white enamel extension box	m	11		
	.04	100 x 100 mm white enamel surface box	m	12		
	.05	Circular 75mm Galvanised Steel	m	25		
Carried forward						

## SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
AB.03.09	804.03	<b>Replace power skirting:</b>				
	.01	2-tier powder-coated galvanised steel	m	30		
	.02	3-tier powder-coated galvanised steel	m	30		
	.03	2-tier PVC	m	6		
	.04	3-tier PVC	m	7		
AB.03.05	804.04	<b>Replace wiring channel:</b>				
	.01	OL 2000, 41.3 x 41.3 mm	m	10		
	.02	OL 9000, 127 x 76 mm	m	10		
	.03	White PVC 100 x 76 mm	m	10		
	.04	White PVC 40 x 40 mm	m	10		
AB.03.10	804.05	<b>Supply and install junction boxes:</b>				
	.01	83 mm $\varnothing$ - double entry	m	10		
	.02	127 mm $\varnothing$ - 3 way	m	10		
	805.00	<b><u>SWITCH SOCKET OUTLETS (SSO)</u></b>				
AB.03.07	805.01	<b>Service switch socket outlet mounted in/on wall or in power trunking:</b>				
	.01	16A, single SSO	No.	100		
	.02	16A, double SSO	No.	30		
	.03	16A, dedicated SSO	No.	30		
AB.03.01	805.02	<b>Replace/install socket outlet:</b>				
	.01	16A, single 3 pin SSO	No.	15		
	.02	16A, double 3 pin SSO	No.	15		
	.03	16A, dedicated SSO	No.	10		
	.04	16A, single SSO power skirting mounted	No.	10		
Carried forward						

## SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
	806.00	<b><u>FIXED APPLIANCE AND COMPONENTS</u></b>				
AB.03.19	806.01	<b>Replace geyser components:</b>				
	.01	Replace domestic geyser element 2kW, 3kW and 4kW	No.	5		
	.02	Replace geyser thermostat and set to 55° celcius	No.	5		
AB.03.18	806.02	<b>Replace domestic stove components :</b>				
	.01	150 - 160 dia. solid plate	No.	8		
	.02	170 - 190 dia. solid plate	No.	8		
	.03	Five / six heat switch	No.	4		
	.04	Oven bottom element	No.	5		
	.05	Oven top element	No.	5		
AB.03.20	806.03	<b>Supply and install 4 plate stove with oven and warm drawer similar or equal to existing</b>	No.	3		
	806.04	<b>Supply and install new Stainless Steel Hand Dryer, 2,2/2,4kW Hands Free operation.</b>	No.	2		
AB.03.06	806.05	<b>Replace connection from Isolator to fixed appliance, with flexible copex (Sprague) conduit and conductors, e.g. stove, hand dryers or geyser, etc:</b>				
	.01	Stove : 2 x 6 mm <sup>2</sup> PVC and 2,5 mm <sup>2</sup> BCEW conductors	No.	5		
	.02	Geyser : 2 x 4 mm <sup>2</sup> PVC and 2,5 mm <sup>2</sup> BCEW conductors	No.	5		
	.03	Air conditioners: 2 x 6 mm <sup>2</sup> PVC and 2,5 mm <sup>2</sup> BCEW conductors	No.	5		
	.04	Hand dryers: 2 x 6 mm <sup>2</sup> PVC and 2,5 mm <sup>2</sup> BCEW conductors	No.	2		
AB.03.08	806.06	<b>Service isolating switches next to stoves, geysers, hand dryers and air-conditioners:</b>				
	.01	20 A, 2 pole 275V	No.	13		
	.02	40A - 80A, 2 pole 275V	No.	10		
	.03	80 - 160A, 3 pole 600V	No.	4		
Carried forward						

## SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
AB.03.02	806.07	Repair/replace/install isolating switches next to stoves, geysers, hand dryers and air-conditioners:				
	.01	20 - 60 A, 2 pole 275V	No.	30		
	.02	40A - 80A, 2 pole 275V	No.	10		
	.03	80 - 100A, 2pole	No.	3		
	.04	60 - 100A, 4 pole 600V	No.	2		
AB.03.03	806.08	Replace plug tops:				
	.01	3-pin 16A	No.	6		
	807.00	<u>EARTHING AND BONDING OF WATER PIPES</u>				
AB.04.01	807.01	Supply and install earthing and bonding of metallic water pipes for the whole installation	m	75		
	808.00	<u>LIGHTNING PROTECTION</u>				
AB.04.03	808.01	Supply and install earth electrodes:				
	.01	16 mm dia. 1.2 m long Cu rod and clamp	No.	5		
AB.04.04	808.02	Provide Cad weld joint on 70 mm <sup>2</sup> cable	No.	5		
AB.04.05	808.03	Earth building metal roof, gutters and downpipes	No.	3		
AB.04.02	808.04	Testing of lightning earthing by a specialist contractor	No.	3		
AB 01.11	808.05	Supply and installation of bare copper earth conductor:				
	.01	70 mm <sup>2</sup>	m	50		
	.02	35 mm <sup>2</sup>	m	60		
	.03	10 mm <sup>2</sup>	m	60		
AB.01.12	808.06	Termination and connect earth continuity conductor:				
	.01	70 mm <sup>2</sup>	No.	10		
	.02	35 mm <sup>2</sup>	No.	10		
	.03	10 mm <sup>2</sup>	No.	10		
Carried forward						

## SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
	809.00	<u>Excavate in all materials for trenches, backfill, compact and dispose of surplus material and dispose of surplus material</u>				
AB.01.07	809.01	Excavate in all materials for trenches, backfill, compact and dispose of surplus material	m <sup>3</sup>	2		
AB.01.07	809.02	Extra over item above for excavating in hard materials as approved by the engineer	m <sup>3</sup>	2		
AB.01.07	809.03	Extra over item above for the removal and reinstating of all types of paving	m <sup>2</sup>	2		
AB.01.09	809.04	Supply and install plastic warning tape	m	7		
AB.01.08	809.05	Supply and install uPVC cable sleeves:				
	.01	110 mm diameter	m	50		
	.02	76mm diameter	m	20		
	.03	50 mm diameter uPVC	m	10		
	810.00	<u>REPAIR/REPLACE CABLING</u>				
AB 01.03	810.01	Supply, delivery and installation of PVC/SWA/PVC Cu low-voltage cable:				
	.01	120 mm <sup>2</sup> , 4-core	m	30		
	.02	95 mm <sup>2</sup> , 4-core	m	30		
	.03	70 mm <sup>2</sup> , 4-core	m	10		
	.04	35 mm <sup>2</sup> , 4-core	m	20		
	.05	25 mm <sup>2</sup> , 4-core	m	30		
	.06	16 mm <sup>2</sup> , 4-core	m	30		
	.07	16 mm <sup>2</sup> , 2-core ECC	m	30		
Carried forward						

## SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
AB 01.05	810.02	Termination of PVC/SWA/PVC Cu LV cable including lugs, tape etc:				
	.01	120 mm <sup>2</sup> , 4-core	No.	5		
	.02	95 mm <sup>2</sup> , 4-core	No.	5		
	.03	70 mm <sup>2</sup> , 4-core	No.	5		
	.04	35 mm <sup>2</sup> , 4-core	No.	5		
	.05	25 mm <sup>2</sup> , 4-core	No.	5		
	.06	16 mm <sup>2</sup> , 4-core	No.	5		
	.07	16 mm <sup>2</sup> , 2-core ECC	No.	5		
AB 01.05	810.03	Jointing of low voltage cable including lugs, etc:				
	.01	120 mm <sup>2</sup> , 4-core	No.	6		
	.02	95 mm <sup>2</sup> , 4-core	No.	5		
	.03	70 mm <sup>2</sup> , 4-core	No.	5		
	.04	35 mm <sup>2</sup> , 4-core	No.	5		
	.05	25 mm <sup>2</sup> , 4-core	No.	5		
	.06	16 mm <sup>2</sup> , 4-core	No.	10		
	.07	16 mm <sup>2</sup> , 2-core ECC	No.	10		
	811.00	<b><u>DISTRIBUTION KIOSKS</u></b>				
HC 12.03	811.01	Service distribution kiosk	No.	2		
HC 12.03	811.02	Remove rust and paint kiosks	No.	2		
HC 12.03	811.03	Label kiosks, electrical equipment, circuit breakers, switches, meters, cables and wiring, with the required information as well as providing typed legend cards inside the door/s, showing all the equipment inside the kiosk/box.	No.	2		
HC 12.03	811.04	Supply and install key-alike padlocks	No.	5		
HC 12.03 (f)	811.05	Replace door hinges on meter and distribution kiosks	No.	1		
HC 12.03	811.06	Supply and install door handles	No.	1		
Carried forward						

## SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
HC 12.03	811.07	Repair/Replace distribution kiosk (6 way) excluding circuit breakers, switches, meters and labelling:	No.	2		
	.01	Erection on site: Concrete foundation with 4x holding down (HD) bolts, imbedded 500mm deep into concrete	No.	2		
	811.08	Repair two electrical operated boom controllers at entrance and exit	Sum	2		
AB.06.04	811.09	Supply the following tools and spares:				
	.01	18W Compact fluorescent globes	No.	5		
	.02	PL9W lamps	No.	5		
	.03	58W Fluorescent lamps	No.	10		
	.04	125W Sodium vapour lamps	No.	3		
	.05	Stove type fuses various types and sizes	No.	4		
	.06	150mm Solid Stove Plate	No.	1		
	.07	190mm Solid Stove Plate	No.	1		
	.08	Stove oven top elements	No.	1		
	.09	Stove oven bottom elements	No.	1		
	.10	Geysers elements	No.	1		
	.11	Geysers thermostats	No.	1		
	.12	Distribution Kiosk combination key (2x square, triangular and round hole with stubs)	No.	1		
SABS 1200 A SI.01 AB.03.21	812.00	<u>Certificates of Compliance</u>				
	812.01	<u>OCCUPATIONAL HEALTH AND SAFETY ACT</u>				
	.01	Provide Certificates of Compliance for the ELECTRICAL installations in all buildings within one month of the completion date of the project (Approx. 20 Structures)	PC Sum	-		R 40 000.00
	.02	Charge required by Contractor on sub item .01 above	%	40 000.00		
	.03	Provide Certificates of Compliance for the LIGHTNING PROTECTION installations in all buildings within one month of the completion date of the project (Approx. 20 Structures)	PC Sum	-		R 40 000.00
	.04	Charge required by Contractor on sub item .01 above	%	40 000.00		
<b>TOTAL - CARRIED TO REPAIR SUMMARY: SCHEDULE No. A8: INSTALLATION E1: KOSI BAY: BUILDING AND SITE ELECTRICAL</b>						



Department  
Public Works and Infrastructure  
REPUBLIC OF SOUTH AFRICA

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

## BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. A9: INSTALLATION E2: KOSI BAY: EXTERNAL LIGHTING

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	<b>900.00</b>	<b><u>EXTERNAL LIGHTING: REPAIR INSTALLATION</u></b>				
		<b><u>GENERAL REPAIR</u></b>				
	<b>900.01</b>	<b>Excavations</b>				
HE 08.06(a)	.01	Excavate in all materials for trenches, backfill, compact and dispose of surplus material	m <sup>3</sup>	10		
HE 08.06(b)	.02	Extra over item .01 for excavating in hard material	m <sup>3</sup>	5		
	.03	Extra over item .01 for excavating by hand in all material	m <sup>3</sup>	10		
HE 08.06(d)	.04	Extra over item .01 for using backfill material obtained from sources provided by the Contractor	m <sup>3</sup>	5		
HE 08.06(e)	<b>900.02</b>	<b>Supply and install uPVC sleeves:</b>				
	.01	110mm diameter	m	12		
	.02	76mm diameter	m	6		
	.03	50mm diameter	m	6		
HE 08.06(f)	<b>900.03</b>	<b>Supply and install cable warning tape</b>	m	50		
HE 08.06(h)	<b>900.04</b>	<b>Supply and install PVC/SWA/PVC Cu LV cable:</b>				
	.01	16mm <sup>2</sup> , 4-core	m	10		
	.02	10mm <sup>2</sup> , 4-core	m	10		
HE 08.06(i)	<b>900.05</b>	<b>Termination of PVC/SWA/PVC Cu LV cable:</b>				
	.01	16mm <sup>2</sup> , 4-core	No.	3		
	.02	10mm <sup>2</sup> , 4-core	No.	3		
Carried forward						



## SCHEDULE No. A9: INSTALLATION E2: KOSI BAY: EXTERNAL LIGHTING

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
HE 08.06(j)	900.06	Supply and Installation of bare copper earth conductors:				
	.01	10mm <sup>2</sup>	m	10		
	.02	6mm <sup>2</sup>	m	10		
HE 08.06(i)	900.07	Termination of bare copper earth conductors:				
	.01	10mm <sup>2</sup>	No.	3		
	.02	6mm <sup>2</sup>	No.	3		
HE 08.06(n) (i)	900.08	Re-lamp luminaire:				
	.01	70W HPS street light	No.	5		
	.02	250W HPS street light	No.	5		
	.03	125W HP MV street light	No.	5		
	.04	26W CF lamp	No.	5		
HE	900.09	Service luminaire:				
	.01	70W HPS street light	No.	2		
	.02	250W HPS street light	No.	7		
	.03	125W MV street light	No.	2		
HE	900.10	Replace luminaire:				
	.01	53W LED street light	No.	2		
	.02	136W LED street light	No.	2		
	.03	279W LED street light	No.	2		
	.04	57W LED Post Top	No.	2		
	.05	213W Floodlight luminaire	No.	2		
	.06	143W LED Canopy luminaire	No.	2		
	.07	476W High Bay floodlight luminaire	No.	2		
Carried forward						

## SCHEDULE No. A9: INSTALLATION E2: KOSI BAY: EXTERNAL LIGHTING

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
HE 08.06(o)	900.11	Supply and installation of internal luminaire components:				
	.01	GES porcelain lamp holder	No.	3		
	.02	Balast for up to 125W MV/HPS	No.	3		
	.03	Ignitor for up to 125W MV	No.	3		
	.04	Capacitor for up to 125W MV/HPS	No.	3		
	.05	Balast for 250W MV/HPS	No.	3		
	.06	Ignitor for 250W MV/HPS	No.	3		
HE 08.06(z)	900.12	Replace Luminaire diffuser:				
	.01	250W Floodlight	No.	3		
	.02	125W Posttop luminaire	No.	3		
HE 08.06(u)	900.13	Supply and install photocell (plug-in type)	No.	5		
HE 08.06(s)	900.14	Supply and install contactors 40A/240V	No.	4		
HE 08.06(x)	900.15	Supply and install end connectors and insulating sleeves	No.	10		
HE 08.06(ac)	900.16	Supply and install junction box including pole mount brackets (3 way parallel entry cable boxes):				
	.01	300mm x 200mm x 150mm - Junction boxes IP65 (Enclosure) 2mm thick galvanised steel boxes complete with cable entry gland plates, mounting plates and pole mounting brackets complete	No.	2		
HE	900.17	Replace pole cover for clip-on tray and circuit breaker	No.	5		
HE	900.18	Repair clip-on tray and circuit breaker inside pole	No.	15		
HE	900.19	Supply and install junction boxes including mount brackets	No.	3		
HE	900.20	Remove rust, treat and paint junction boxes mounted on poles	No.	10		
HE	900.21	Label and number poles and cables inside poles, and junction boxes and cables mounted on poles	No.	40		
HE 08.06(af)	900.22	Supply and install padlocks	No.	15		
Carried forward						

## SCHEDULE No. A9: INSTALLATION E2: KOSI BAY: EXTERNAL LIGHTING

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
HE 08.06	900.23	Replace fibre glass poles with lamp mounting stub/arm:				
		.01 9m fibre glass poles	No.	2		
		.02 5m fibre glass poles replace with galvanised steel	No.	2		
		.03 Access door pole cover	No	4		
HE 08.06	900.24	Service and straighten steel, fibre glass or wooden poles with lamp mounting stub/arm:				
		.01 4m fibre glass poles	No.	2		
		.02 9.5m fibre glass poles	No.	7		
		.03 9m galvanised steel poles	No.	1		
<b>TOTAL - CARRIED TO REPAIR SUMMARY: SCHEDULE No. A9: INSTALLATION E2: KOSI BAY: EXTERNAL LIGHTING</b>						



## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

## BILL OF QUANTITIES

**NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK**

SCHEDULE No. A10: INSTALLATION E3: KOSI BAY: STANDBY POWER SYSTEMS

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA 02.09	1000.00	<b><u>STANDBY POWER INSTALLATIONS:</u></b>  Note: This section of the BOQ provides for initial reinstatement of all standby power installations, equipment facilities, to its optimal functioning status/condition, reliability and compliance with relevant safety and environmental legislation. Note that the maintenance phase commences concurrently with the commencement of the repair phase. Maintenance activities scheduled to take place during the repair phase can only be omitted/rescheduled with the written instruction of the Engineer in consultation with the Project Manager.				
HB.05		All work, spares, consumable and installation material necessary to rectify any malfunction of the machines or any part thereof which is to be carried out or supplied under the repair, restoration and legislated compliance part of the contract will be applicable to One John Deere diesel engine, Model CD4036B030661. Coupled to a 57kVA Marathon Electric Alternator				
SB.01	1001.00	<b><u>MANUALS</u></b>  Compile and supply a complete set of Operating and Maintenance Manuals for the standby power installation specified:	Sum	1		
SD	1002.00	<b><u>TRAINING:</u></b>				
SD.04	.01	Training of own staff	Sum	1		
SD.03	.02	Training of Client staff on site	Sum	1		
Carried forward						

## SCHEDULE No. A10: INSTALLATION E3: KOSI BAY: STANDBY POWER SYSTEMS

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
SA.01	1003.00	Repair and servicing of the standby power installation at Kosi bay Port of Entry				
		<b>PLEASE Note: All items must include the cost of labour, all consumable and installation materials:</b>				
HB	.01	Supply and install new starter battery when tests prove that the battery has reached the end of it's useful life	No.	2		
HB 10.03.05	.02	Removal and recondition and installation of the starter motor including all replacement parts	No.	1		
HB	.03	Remove supply and replace the fuel injector set	Set	1		
HB	.04	Refurbish, including parts, calibrate and install the fuel injector pump	No.	1		
HB	.05	Do a compression test on all cylinders; and providing test equipment	No.	1		
HB	.06	Set the valve/tappet clearance; replace all damaged seals and all gaskets between parted surfaces	Set	1		
HB	.07	Change the V-belts, multi V-groove drive belts, toothed belts (all belts) if conditions justify and adjust belt tension and report	Set	1		
	.08	If conditions justify it, change V-belt pulleys, multi V-groove pulleys, toothed pulleys and tensioners / idler pulleys and set pulley alignment and drive belt tension	Set	1		
HB	.09	Check cooling system for leaks: Drain, and flush if necessary; Supply coolant additive in accordance with manufactures specification and refill cooling system	No.	1		
HB	.10	Supply, replace engine coolant hoses, clamps, fittings and radiator cap ; supply coolant additive and replace coolant, do pressure test and report	No.	1		
HB	.11	Radiator service / repair and replace engine thermostat	No.	1		
HB	.12	Supply and replace the heater element and thermostat of the water jacket heater	No.	1		
Carried forward						

## SCHEDULE No. A10: INSTALLATION E3: KOSI BAY: STANDBY POWER SYSTEMS

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
HB	1003.00	.13 Reconditioning of the alternator and charging regulator: (secondary/engine mounted unit) for recharging engine starting battery	No.	1		
HB		.14 Check, test and clean alternator/ generator, regulator and exciter, do minor adjustments and repairs. Check drive shaft coupling. Test and record output parameters under simulated load or actual load	No.	1		
HB10.03.29		.15 Service change-over switchgear	No.	1		
HB10.03.30		.16 Service/overhaul the control panel including cleaning and repairing switch gear parts, such as emergency stop, circuit breakers, relays, bobbins, controllers, replacing unserviceable cables lugs glands, repainting panel enclosure and supply, fit and commission 12 Volt and 24 Volt LED emergency lights operated by a built in run down timer	No.	1		
		.17 Commissioning of system and furnish a Certificate of Compliance for the primary alternator system	No.	1		
HB 06.03	1003.01	<b>Supply and keep on site the followings tools and spares for the power generator sets</b>				
HB 06.03		.01 Distribution board key	No.	1		
HB 06.03		.02 Distribution board face plate square key	No.	1		
HB 06.03		.03 Remote alarm panel key	No.	1		
HB HB 06.03		.04 HD diesel engine lubricating oil	ℓ	20		
HB 06.03		.05 Fuel, oil, air-filters	Set	1		
HB 06.03		.06 Oil funnel	No.	1		
HB 06.03		.07 Sump plug gasket	No.	1		
HB 06.03		.08 Set of fuel injectors	Set	1		
HB 06.03		.09 Coolant additive (antifreeze)	ℓ	10		
HB 06.03		.10 Pressure cap for radiators (correctly rated)	No.	1		
		.11 Set of V-belts,; Multi V-belts or toothed drive belts	Set	1		
HB 06.03		.12 Battery electrolyte hydrometer	No.	1		
HB 06.03		.13 Distilled water (25 litres)	ℓ	25		
		.14 Jockey pump, hand cranked	No.	1		
Carried forward						

## SCHEDULE No. A10: INSTALLATION E3: KOSI BAY: STANDBY POWER SYSTEMS

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
HB 06.03	1003.01	.15 Provide plantroom log books, files, copies of manuals, copies of Acts and statutory notifications and regulations	Set	1		
HB 06.03		.16 Supply and keep stocked of a First Aid Kit (FAK 02A) with the regulation minimum content in a suitable sized first aid box or bag. Refer to HB 03.06.18 for content	No.	1		
HB		.17 Supply plantroom door padlock	No.	1		
HB 10,03,12		.18 Supply and install fuel water separator with automatic water dump	No.	1		
SA.01	1004.00	<b><u>STANDBY POWER REPLACEMENT COST ITEMS</u></b>				
		It provides for the repair and maintenance of the emergency/standby power generation installations by way of replacement of costly items or entire installations. It is important to note that these items will only be acquired if no feasible alternative can be found and funds can be made available. Only if special approval has been obtained through the relevant Departmental Project Manager, may the Engineer issue an instruction to proceed with the procurement of the relevant item. For appropriate tender adjudication the values of these items have to be taken into consideration during tender evaluation by way of suitable comparative calculations				
		<b>PLEASE NOTE: All items must include the cost of all consumable and installation materials!</b>				
		<b>The maintenance scope is described in technical specifications HB:</b>				
HB 01.01		All work, spares, consumable and installation material necessary to rectify any malfunction of the machines or any part thereof which is to be carried out or supplied under the repair, restoration and legislated compliance part of the contract will be applicable to One John Deere diesel engine, Model CD4036B030661. Coupled to a 57kVA Marathon Electric Alternator				
Carried forward						

## SCHEDULE No. A10: INSTALLATION E3: KOSI BAY: STANDBY POWER SYSTEMS

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
SA.01 HB 01.01	1004.01	.01 Remove, supply and replacement of starter motor	No.	1		
HB		.02 Supply, install and adjust new fuel injector set, including removal of old one	Set	1		
HB		.03 Supply and install new fuel injector pump	No.	1		
HB10.02.02		.04 Supply, installation and commissioning and testing of Duvalco Modular Fuel Management System (DMFMS) for clearing bulk tank stored diesel fuel of particulate matter and water contamination	No.	1		
HB10.02.02		.05 Supply, installation and commissioning and testing of Duvalco Inline Fuel Filter and Automatically Discharging Water Separation Unit for engine mounting	No.	1		
HB		.06 Supply, install, commission, test and provide official Calibration Certificate of each of the positive displacement dual register mechanical display diesel fuel flow meter: Maximum flow rate not less than 45l/min	No.	1		
HB		.07 Supply/construct, install, commissioning and testing of fusible link fuel cut-off systems, on power generator installation	No.	1		
HB 10.03.08 (a)		.08 Supply and replace all V-belts, multi V-groove drive belts, toothed belts, adjusting belt tension of all drive belts and report	Set	1		
HB		.09 Pulley system; supply, install and set pulley alignment and drive belt tension for all V-belt pulleys, multi V-groove pulleys, toothed pulleys and tensioners / idler pulleys	Set	1		
HB		.10 Supply and replacement cooling fan including drive train and coolant pump	No.	1		
HB		.11 Remove, recore and refit radiator	No.	1		
HB		.12 Supply and replace radiator and water hoses	No.	1		
HB		.13 Supply and replacement of the water jacket heater, including: mould (if required), element, thermostat, connecting hoses and fittings, insulation, etc.	No.	1		
Carried forward						



## SCHEDULE No. A10: INSTALLATION E3: KOSI BAY: STANDBY POWER SYSTEMS

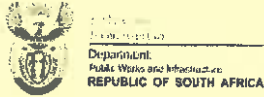
ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
Brought forward						
SA.01 HB	1004.01	.14 Supply and replacement of the alternator and charging regulator unit (secondary/engine mounted unit) for charging engine starting battery	No.	1		
HB		.15 Supply, install the repair kit, including exciter service kit, automatic Voltage Regulator, etc. and commission to overhaul the alternator	No.	1		
HB		.16 Supply and replacement including connection of the 57kVA alternator (Primary unit) and directly coupled ancillary system (eg. automatic voltage regulator and /or exciter unit), to match existing	No.	1		
HB		.17 Supply, install and commission the control panel including all new switch gear parts, such as circuit breakers, relays, bobbins, controllers, cables lugs glands, panel enclosure, emergence stop, 12 Volt and 24 Volt LED emergency lights and run down timer switch.	No.	1		
HB		.18 Replace the complete generator set, consisting of a John Deere diesel engine, Model CD4036B030661. Coupled to a 57kVA Marathon Electric Alternator with a generator set which is complete and functional in every respect and is of same performance rating as the unit it is intended to replace, and has a superior efficiency rating and has proven carbon emission and other exhaust gas properties which falls comfortably within the parameter limits currently accepted by local and international standard bodies in every respect  Note: The standby generator set/unit will only be replaced if it is proven beyond doubt that its repair is Not economically viable	No.	1		
		.19 Commissioning of system and furnishing of a Certificate of Compliance of the Primary Alternator system	No.	2		
	1004.02	<b>SUPPLY OF EMERGENCY DIESEL</b>				
		<b>Provision of diesel over the three year period</b>				
HB 10.03.08		.01 Supply of emergency diesel fuel over the three year period (Rate shall include all costs incl, delivery cost)	PC Sum	-		R 400 000.00
		.02 Charge required by Contractor on sub item .01 above	%	400 000.00		
Carried forward						

## SCHEDULE No. A10: INSTALLATION E3: KOSI BAY: STANDBY POWER SYSTEMS

ELECTRICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
	1005.00	<b><u>STANDBY UPS SYSTEMS</u></b>				
		<b><u>GENERAL</u></b>				
SB .02	1005.01	Compile and supply a complete set of operating and Maintenance Manuals for all installations specified				
	.01	UPS System	Sum	1		
SC.12.03	1005.02	Commissioning and testing of the installation				
	.01	UPS System	Sum	1		
SD.06.01	1005.03	Training on operation of installation and equipment as specified				
	.01	UPS System	Sum	1		
	1006.00	<b><u>UPS</u></b>				
HB	1006.01	<b>Service UPS Units</b>				
	.01	15kVA Unit	No.	3		
HB 11.01	1006.02	<b>Supply and Install new UPS Units</b>				
	.01	15kVA Unit complete with 30 Min backup	Sum	1		
HB	.02	Execute dummy load test	No.	2		
HB	1006.02	<b>Replace UPS batteries</b>				
	.01	15kVA Unit	No.	2		
	.02	Replace UPS battery charger card	No.	2		
	.03	Replace UPS Control card	No.	2		
	.04	Replace UPS Power Supply card	No.	2		
<b>TOTAL - CARRIED TO REPAIR SUMMARY: SCHEDULE No. A10: INSTALLATION E3: KOSI BAY: STANDBY POWER SYSTEMS</b>						



**DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE**

**TENDER NO: H23/007 AI**

**WCS 055330**

**LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36**

**BILL OF QUANTITIES**

**NB TENDERERS MUST COMPLETE THE SCHEDULE OF QUANTITIES IN BLACK INK**

**SUMMARY OF SCHEDULE OF QUANTITIES:MECHANICAL REPAIR WORK**

**Total**

SCHEDULE No. A11: INSTALLATION M1.M: KOSI BAY: HEATING, VENTILATION AND AIR-CONDITIONING

R \_\_\_\_\_

SCHEDULE No. A12: INSTALLATION M2.M: KOSI BAY: CONVENTIONAL FIREFIGHTING EQUIPMENT

R \_\_\_\_\_

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**TOTAL OF SCHEDULE OF QUANTITIES - MECHANICAL REPAIR WORK  
CARRIED TO CALCULATION OF TENDER SUM**

R \_\_\_\_\_

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**SIGNED ON BEHALF OF TENDERER:**

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Department  
Public Works and Infrastructure  
REPUBLIC OF SOUTH AFRICA

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

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LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE,  
SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE  
AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

## BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. A11: INSTALLATION M1: KOSI BAY: AIR-CONDITIONING SYSTEMS

MECHANICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
FD PFD	1100.00	<u>GENERAL</u>				
	1101.00	<u>AS-BUILT INFORMATION AND OPERATING AND MAINTENANCE MANUALS.</u>				
SB 05.01 FD 04	.01	Obtaining of all available information, compiling, reproducing and finalising three sets of "as-built" and Operating and Maintenance Manuals and handing over to the Engineer for approval	Sum	1		
FD 05	1102.00	<u>TRAINING</u>				
	.01	Maintenance staff for HVAC	Sum	1		
	.02	Development of syllabus for training operators	Sum	1		
SD 06.02	.03	Presenting a training course for operators	Sum	1		
FD 06	1103.00	<u>LOGGING AND RECORDING</u>				
	.01	HVAC Installation	Sum	1		
PFD 04.01	1104.00	<u>INSPECTION AND REPORT ON THE FOLLOWING ITEMS</u>				
PFD - 04.01.01(a)	.01	Split air-conditioning installation:				
	.01	Inspect and report on the condition of the unit for any defects, failures, etc.	No.	8		
PFD - 04.01.01(a)	.02	Wall mounted unit air-conditioning installation:				
	.01	Inspect and report on the condition of the unit for any defects, failures, etc.	No.	7		
Carried forward						

## SCHEDULE No. A11: INSTALLATION M1: KOSI BAY: AIR-CONDITIONING SYSTEMS

MECHANICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
	1105.00	<b><u>OPERATING AND MAINTENANCE MANUALS</u></b>				
		.01 Compile and supply a complete set of operating and maintenance manuals	Set	3		
PFD 05.01.01	1106.00	<b><u>SERVICE OF HVAC UNITS</u></b>				
		.01 <b>Midwall Split Type Air-Conditioning Units</b>				
		.01 Repair outdoor unit fins	No.	4		
		.02 Check settings and operation of all pressure switches and reset if necessary	No.	4		
		.03 Check settings and operation of thermostat	No.	5		
		.04 Repair refrigerant pipe insulation	m	3		
		.05 De-rust, neutralize and touch up paint	No.	5		
		.06 Replace filters	No.	4		
		.07 Carry out a leak test on refrigeration piping and components inclusive of evaporator and condenser	No.	3		
		.08 Clean evaporator and condenser fan blades and check unbalance	No.	3		
		.09 Supply and install condensate drain pipe (25mm diameter)	m	14		
		.10 Repair indoor air guide vents	No.	2		
		.11 Replace compressor vibration mountings	No.	3		
		.12 Supply Infrared Remote Controllers	No.	4		
Carried forward						

## SCHEDULE No. A11: INSTALLATION M1: KOSI BAY: AIR-CONDITIONING SYSTEMS

MECHANICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
PFD 05.01.01	1106.00	.02 <b>Self-contained Air-conditioning Units</b>				
		.01 De-rust, neutralize and touch up paint	No.	6		
		.02 Supply and install condensate drain pipe (25mm diameter)	m	15		
		.03 Repair air guide vents	No.	6		
		.04 Repair controls	No.	6		
		.05 Replace compressor vibration mountings	No.	6		
		.06 Repair outdoor unit fins	No.	6		
		.07 Re-gasing of regrigerant	No.	6		
		.03 <b>Service of air-curtains</b>				
		.01 Repair or replace fan and fan motor	No.	1		
		.02 Repair mounting brackets and supports	No.	1		
		.03 Repair/replace controller	No.	1		
PFD 05.02.03	1107.00	<b>REPLACE AIR-CONDITIONING UNIT</b>				
		.01 <b>Midwall Split Type Air-conditioning Units</b>				
		.01 9000 btu, high wall split unit	No.	2		
		.02 12000 Btu high wall split unit	No.	2		
		.02 <b>Self Contained Type Air-conditioning Units</b>				
		.01 9000btu, window unit	No.	2		
		.02 12000btu, window unit	No.	2		
		.03 26000btu, window unit	No.	2		
		.03 <b>Air-curtains</b>				
		.01 Air-curtains (1500)	No.	1		
Carried forward						

## SCHEDULE No. A11: INSTALLATION M1: KOSI BAY: AIR-CONDITIONING SYSTEMS

MECHANICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
FD PFD	1108.00	Replace temperature control unit (remote)	No.	5		
	1109.00	Regas AC unit	No.	5		
	1110.00	Replace 25mm Thermaflex isolation	m	15		
	1111.00	<u>REPLACE CONTROL (PC) Board:</u>				
		.01 High wall units	No.	3		
		.02 Windowunit	No.	2		
FD PFD	1112.00	<u>REPLACE COMPRESSOR</u>				
		.01 High wall units	No.	2		
		.02 Window Unit	No.	2		
FD PFD	1113.00	<u>REPLACE CAPACITOR</u>				
		.01 High wall units	No.	5		
		.02 Window Unit	No.	5		
FD PFD	1114.00	Remove and re-install air-conditioner	No.	3		
	1115.00	<u>EXTRACTOR FAN</u>				
		.01 Wall Fan, C/W outdoor louver sized to suite fan, all required accessories to ensure a fully functional installation and suitable electrical connection wiring (3m long) between isolator and fan terminals, tested, installed and commissioned in position as per specification. 150 x 150 - 35-40l/s @ 50Pa E.S.P	No.	2		
<b>TOTAL - CARRIED TO REPAIR SUMMARY: SCHEDULE No. A11: INSTALLATION M1: KOSI BAY: HEATING, VENTILATION AND AIR-CONDITIONING SYSTEMS</b>						



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 Department  
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 REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. A12: INSTALLATION M2: KOSI BAY: CONVENTIONAL FIREFIGHTING EQUIPMENT

MECHANICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	1200.00	<u>CONVENTIONAL FIREFIGHTING EQUIPMENT</u>				
PJC 06.01	1201.00	<u>GENERAL</u>				
	1201.01	Logging and recording of operating conditions, maintenance visits, samples, inspections, surveys, tests etc: as per technical specification JC05				
	.01	Conventional firefighting equipment	Sum	1		
PJC 03	1201.02	Operating And Maintenance Manuals				
	.01	Compile and supply a complete set of operating and maintenance manuals (3 copies required)	Set	3		
	1201.03	Inspection and report on existing installations				
	.01	Fire hose reels	No.	5		
	.02	Fire extinguisher	No.	11		
	1201.04	Testing of fire protection system				
	.01	Water flow test fire hose reels	PC Sum	-		5 000.00
	.02	Vessel pressure test on extinguishers	PC Sum	-		5 000.00
	.03	Charge required by Contractor on sub item .01 to .02 above	%	10000		
Carried forward						



## SCHEDULE No. A12: INSTALLATION M2: KOSI BAY: CONVENTIONAL FIREFIGHTING EQUIPMENT

MECHANICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
PJC.05	1201.05	Labelling of all conventional firefighting equipment with identifying tags and recording of details:				
	.01	Fire hose reels	No.	5		
	.02	Fire extinguishers	No.	11		
PJC 13	1201.06	Signage for firefighting equipment				
	.01	Photoluminescent Escape and Firefighting equipment signs installed complete with aluminium frame, mountings, brackets, etc.				
	.01	190mm x 190mm	No.	4		
	.02	190mm x 384mm	No.	1		
	.03	190mm x 578mm	No.	2		
	.02	Silk-screened Escape and Firefighting equipment signs installed complete with aluminium frame, mountings, brackets, etc.				
	.01	190mm x 190mm	No.	2		
	.02	190mm x 384mm	No.	3		
	.03	190mm x 578mm	No.	1		
	.03	Silk-screened Firefighting equipment signs installed behind backboards				
	.01	400mm x 666mm	No.	2		
	1202.00	<u>DETAILS OF REPAIR WORK TO EQUIPMENT</u>				
PJC 06.04	1202.01	Supply and Installation of fire extinguisher equipment:				
	.01	2kg CO <sub>2</sub> fire extinguisher	No.	1		
	.02	Supply and installation of DCP 9kg fire extinguishers	No.	2		
	.03	Supply and installation of DCP 4,5kg fire extinguishers	No.	2		
	.04	Supply and installation of DCP 1,5kg fire extinguishers	No.	1		
Carried forward						

## SCHEDULE No. A12: INSTALLATION M2: KOSI BAY: CONVENTIONAL FIREFIGHTING EQUIPMENT

MECHANICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
PJC 07.02.02	1202.01	.05 314 Stainless steel lockable, metal cabinet for fire extinguisher	No.	1		
		.06 SABS Approved, Lockable, LLDPE polyethylene cabinet to house a fire extinguisher	No.	2		
	1202.02	<b>Supply and installation of fire hose reel:</b>				
		.01 Fire hose reels with 30m hoses	No.	2		
		.02 Shut-off valve	No.	2		
		.03 314 Stainless steel lockable, metal cabinet for fire hose reel	No.	1		
		.04 Replace hose drum seal	No.	2		
		.05 Replace gland packing and gasket of shut-off valve	No.	2		
		.06 Repaint equipment	No.	5		
		.07 SABS Approved, Lockable, LLDPE polyethylene cabinet to hose a hose reel	No.	2		
	1202.03	<b>Servicing, cleaning, recharging and repair of fire epuiment:</b>				
		.01 Dry chemical powder (DCP) fire extinguisher:				
		.01 Replace 9kg fire extinguishers charge	No.	5		
		.02 Replace 4,5kg fire extinguishers charge	No.	1		
		.03 Replace 1,5kg fire extinguishers charge	No.	1		
		.04 Replace discharge hose and nozzle	No.	7		
		.05 Replace gauge and bottle	No.	2		
		.06 Check, service and repair activation mechansm	No.	5		
		.07 Recharge discharge mechanism	No.	5		
		.08 Replace instructions on fire extinguishers	No.	5		
		.09 Replace wall-mounting polished hardwood	No.	2		
		.10 Repaint equipment	item	5		
	Carried forward					

## SCHEDULE No. A12: INSTALLATION M2: KOSI BAY: CONVENTIONAL FIREFIGHTING EQUIPMENT

MECHANICAL  
REPAIR WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
	1202.03	.02 Carbon dioxide (CO <sub>2</sub> ) fire extinguisher:				
		.01 Replace 2kg fire extinguishers charge	No.	1		
		.02 Replace discharge hose and Nozzle	No.	1		
		.03 Replace gauge and bottle	No.	1		
		.04 Check, service and repair activation mechanism	No.	1		
		.05 Reseal discharge mechanism	No.	1		
		.06 Replace instructions on fire extinguishers	No.	1		
		.07 Compilation of a fire evacuation plan for buildings	No.	10		
	1203.00	<b><u>FIRE BOOSTER PUMP</u></b>				
PJC 06.04	1203.01	<b><u>Supply and Installation</u></b>				
		.01 Decommissioning and removal of electrical pumping equipment	No.	1		
		.02 Supply and delivery of electrical pumping equipment (to match existing)	No.	1		
		.03 Installation, testing and commissioning of electrical pumping equipment	No.	1		
		.04 Compile and supply a complete set of Operating and Maintenance Manuals	No.	1		
<b>TOTAL - CARRIED TO REPAIR SUMMARY: SCHEDULE No. A12: INSTALLATION M2: KOSI BAY: CONVENTIONAL FIREFIGHTING EQUIPMENT</b>						



Department of Public Works and Infrastructure  
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

BILL OF QUANTITIES

NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SUMMARY OF BILL OF QUANTITIES: CIVIL MAINTENANCE AND OPERATIONAL WORK

Total

SCHEDULE No. B.1: INSTALLATION C1.M: KOSI BAY: STRUCTURAL AND BUILDING R \_\_\_\_\_

SCHEDULE No. B.2: INSTALLATION C2.M: KOSI BAY: PLUMBING, DRAINAGE AND WET SERVICES R \_\_\_\_\_

SCHEDULE No. B.3: INSTALLATION C3.M: KOSI BAY: FENCING, CLEANING OF BUILDINGS AND SITE KEEPING R \_\_\_\_\_

SCHEDULE No. B.4: INSTALLATION C4.M: KOSI BAY: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS R \_\_\_\_\_

SCHEDULE No. B.5: INSTALLATION C5.M: KOSI BAY: SEPTIC TANKS AND SEWER NETWORKS R \_\_\_\_\_

SCHEDULE No. B.6: INSTALLATION C6.M: KOSI BAY: ROADS AND STORM WATER DRAINAGE R \_\_\_\_\_

TOTAL OF BILL OF QUANTITIES - CIVIL MAINTENANCE WORK - CARRIED TO CALCULATION OF TENDER SUM R \_\_\_\_\_

.....  
SIGNED ON BEHALF OF TENDERER:



Department  
Public Works and Infrastructure  
REPUBLIC OF SOUTH AFRICA

**DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE**

**TENDER NO: H23/007 AI**

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**BILL OF QUANTITIES**

**NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK**

	<u>Total</u>
<b><u>SUMMARY OF SCHEDULE OF QUANTITIES: ELECTRICAL MAINTENANCE WORK</u></b>	
SCHEDULE No. B.7: INSTALLATION E1.M: KOSI BAY: BUILDING AND SITE ELECTRICAL	R _____
SCHEDULE No. B.8: INSTALLATION E2.M: KOSI BAY: EXTERNAL LIGHTING INSTALLATION	R _____
SCHEDULE No. B.9: INSTALLATION E3.M: KOSI BAY: STANDBY POWER SYSTEM	R _____
<b>TOTAL OF BILL OF QUANTITIES -ELECTRICAL MAINTENANCE WORK - CARRIED TO CALCULATION OF TENDER SUM</b>	
	R _____
<b><u>SUMMARY OF SCHEDULE OF QUANTITIES: MECHANICAL MAINTENANCE WORK</u></b>	
SCHEDULE No. B.10: INSTALLATION M1.M: KOSI BAY: HEATING, VENTILATION AND AIR-CONDITIONING SYSTEMS	R _____
SCHEDULE No. B.11: INSTALLATION M2.M: KOSI BAY: CONVENTIONAL FIREFIGHTING	R _____
<b>TOTAL OF BILL OF QUANTITIES - MECHANICAL MAINTENANCE WORK - CARRIED TO CALCULATION OF TENDER SUM</b>	
	R _____

.....  
SIGNED ON BEHALF OF TENDERER:



Department  
Public Works and Infrastructure  
REPUBLIC OF SOUTH AFRICA

**DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE**

**TENDER NO: H23/007 AI**

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**BILL OF QUANTITIES**

**NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK**

**SCHEDULE No. B.1: INSTALLATION C1.M: KOSI BAY: STRUCTURAL AND BUILDING**

**CIVIL  
MAINTENANCE WORK**

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA.01	1300.00  1300.01	<p><b><u>MAINTENANCE OF STRUCTURAL AND BUILDING RELATED WORK</u></b></p> <p><b>Maintenance of a complete installation:</b></p> <p>The Contractor shall attend to the following during daily inspections of all structural components and elements of buildings and facilities:</p> <p>Preventative maintenance work and minor corrections of all structural and building related facilities, including components and elements such as, but not limited to:</p> <ul style="list-style-type: none"> <li>• Doors (hinges, locksets, strike plates, indicator locks)</li> <li>• Windows (pegs, stays, etc.)</li> <li>• Pull handles</li> <li>• Glass putty</li> <li>• Fascia and barge boards</li> <li>• Roof cladding and sheeting</li> <li>• Cornices</li> <li>• Ceiling boards and jointing strips</li> <li>• Sealant</li> <li>• Skirtings, etc.</li> </ul> <p>.01 KOSI BAY: Proper maintenance of Structural and Building related work of operational area, residential area and Mobile Homes. Maintenance is not limited to the above-mentioned</p>	points	360		
		Carried forward				

SCHEDULE No. B.1: INSTALLATION C1.M: KOSI BAY: STRUCTURAL AND BUILDING

CIVIL MAINTENANCE WORK

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
SA.01	1300.02	<p><b>Maintenance report</b></p> <p>The Contractor shall compile and submit a monthly facilities inspection report, in which damaged structural components and elements of buildings and facilities ("damages") shall be listed and quantified, only if such components and elements could not be maintained or corrected at the time of inspections, due to the nature of the damage, or the need for replacement of such components and elements</p> <p>.01 KOSI BAY: Comprehensive monthly facilities inspection report</p> <p>Breakdown maintenance: Repair of damages is remunerated for from the payment items, within the maximum allowable downtime:</p>	points	360		
SA.03 SA.04 SA.05 SA.06	1300.03	<p><b>Payment reduction:</b></p> <p>.01 Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown</p> <p>.02 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown</p> <p>.03 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown</p> <p>.04 Payment reduction due to exceeding of maximum down-time during malicious damage repair</p>	Hour Day Day Day	-R -R -R -R	1 000.00 2 000.00 500.00 500.00	rate only rate only rate only rate only
SA.01 PS 5.1	1301.00	<p><b><u>MAINTENANCE TOOLS AND EQUIPMENT</u></b></p> <p>The Contractor shall carry out his inspections with the necessary tools and consumables required for on-the-spot maintenance and corrections of all structural elements and components. An updated asset register shall be provided:</p> <p>.01 Maintenance: Designated lockable store room, tools/equipment and consumables for proper maintenance on-the-spot/on-site. Lockable cabinet with duplicate keys and updated register for port of entry</p>	points	360		
		Carried forward				

SCHEDULE No. B.1: INSTALLATION C1.M: KOSI BAY: STRUCTURAL AND BUILDING

CIVIL  
MAINTENANCE WORK

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		Brought forward				
SA.01 PS 4	1302.00	<b><u>PROGRAMME OF THE WORKS (CONSTRUCTION PROGRAMME)</u></b> The Contractor shall compile and submit a complete and accurate Programme of the Works <u>21 days after site handover</u> and updated monthly which is linked to the expenditure and project cash flow				
		.01 KOSI BAY: Programme of the Works	points	360		
		<b><u>LATE SUBMISSION OF ACCEPTABLE PROGRAMME OF THE WORKS</u></b>				
SA.04 PS 4	1302.01	<b>Payment reduction:</b> .01 KOSI BAY: Payment reduction due to late submission of an adequate/ acceptable Programme of the Works	days	-	-500.00	rate only
SA 03 SA.04	1303.00	<b><u>MAINTENANCE CONTROL PLAN</u></b> The Contractor shall compile and submit a complete and accurate monthly Maintenance Control Plan (see Additional Specification SA), which shall be utilised to log and record all faults, system checks, breakdowns and site inspections				
		.01 KOSI BAY: Maintenance Control Plan	points	360		
		Payment reduction for late submission of the Maintenance Control Plan: <b><u>LATE SUBMISSION OF ACCEPTABLE MAINTENANCE CONTROL PLAN</u></b>				
SA.04	1303.01	<b>Payment Reduction</b> .01 KOSI BAY: Payment reduction due to late submission of an adequate/ acceptable Maintenance Control Plan	days	-	-500.00	rate only
<b>TOTAL - CARRIED TO MAINTENANCE SUMMARY: SCHEDULE No. B.1: INSTALLATION C1.M: KOSI BAY: STRUCTURAL AND BUILDING</b>						





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**LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS**

**BILL OF QUANTITIES**

**NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK**

**SCHEDULE No. B.2: INSTALLATION C2.M: KOSI BAY: PLUMBING, DRAINAGE AND WET SERVICES**

**CIVIL  
MAINTENANCE WORK**

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA.01	1400.00	<u>MAINTENANCE OF PLUMBING, DRAINAGE, WET SERVICES AND SEWER NETWORKS AT OPERATIONAL AND RESIDENTIAL BUILDINGS AND MOBILE HOMES</u>				
	1400.01	<p><b>Maintenance of a complete installation:</b></p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance as per Technical Specification AA Plumbing and Drainage Installations:</p> <p>Table AA 10.02/1 - Rainwater Disposal System, Table AA 10.02/2 - Soil and Wastewater Drainage System, Table AA 10.02/3 - Domestic Water Distribution and Reticulation Systems, Table AA 10.02/4 - Sanitary and Brassware Equipment, shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> <li>• Checking, inspecting, cleaning, unblocking, re-adjusting, painting, fixing, repairing or replacing, inclusive of appurtenances of all drains and sewers including:                             <ul style="list-style-type: none"> <li>- Pipes</li> <li>- Gutters</li> <li>- Catch pits</li> <li>- Channel drains</li> <li>- Floor outlets</li> <li>- Gullies</li> <li>- Manhole covers and frames</li> <li>- Brackets</li> <li>- Grease traps, oil separators, etc.</li> <li>- Plumbing</li> </ul> </li> </ul>				
	Carried forward					

SCHEDULE No. B.2: INSTALLATION C2.M: KOSI BAY: PLUMBING, DRAINAGE AND WET SERVICES

CIVIL MAINTENANCE WORK

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
		<p>The Contractor shall attend to preventative maintenance and breakdown maintenance as per Technical Specification AA Plumbing and Drainage Installations:                      Table AA 10.02/1 - Rainwater Disposal System, Table AA 10.02/2 - Soil and Wastewater Drainage System, Table AA 10.02/3 - Domestic Water Distribution and Reticulation Systems, Table AA 10.02/4 - Sanitary and Brassware Equipment, shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> <li>• Checking, inspecting, cleaning, unblocking, re-adjusting, painting, fixing, repairing or replacing, inclusive of appurtenances of all drains and sewers including:                             <ul style="list-style-type: none"> <li>- Water distribution including:                                     <ul style="list-style-type: none"> <li>• Pipes</li> <li>• Isolation</li> <li>• Non-return valves</li> <li>• Control valves</li> <li>• Air-release valves</li> <li>• Other valves</li> <li>• Strainers</li> </ul> </li> </ul> </li> <li>• Water closets (WC):                             <ul style="list-style-type: none"> <li>- Seats and covers</li> <li>- Cisterns</li> <li>- Sanitary ware mountings, etc.</li> </ul> </li> <li>• Fixing of leaks and replacing of materials and components, etc:</li> </ul>				
		<p>.01                      KOSI BAY: Maintenance work: Plumbing, drainage, wet services and drainage of operational and residential areas and Mobile Homes. Maintenance is not limited to the above-mentioned</p>	point	360		
Carried forward						

SCHEDULE No. B.2: INSTALLATION C2.M: KOSI BAY: PLUMBING, DRAINAGE AND WET SERVICES

CIVIL  
MAINTENACE WORK

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT	
	Brought forward						
SA.03 SA.04 SA.05  SA.06	1400.02	<b><u>Payment reduction:</u></b>  .01 Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown  .02 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown  .03 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown  .04 Payment reduction due to exceeding of maximum down-time during malicious damage repair	Hour  Day  Day  Day	-  -  -  -	-R  -R  -R  -R	1 000.00  2 000.00  500.00  500.00	rate only  rate only  rate only  rate only
SF.01	1401.00	<b><u>OPERATION OF A COMPLETE INSTALLATION:</u></b>  Water demand management, data logging and recording, as per: Technical Specification KA Water Audit (KA.04.01). Comprising of: <ul style="list-style-type: none"> <li>• Checking operation of water meters</li> <li>• Cleaning strainer units at water meters</li> <li>• Read water meters</li> <li>• Verification of sample meter readings</li> <li>• Updating of water demand database (spreadsheet)</li> <li>• Analysis of data and identification of water</li> <li>• Adjust operation of pressure-reducing valves</li> <li>• Compilation of monthly water balance on volume and costs and issue of consumer accounts, etc:</li> </ul>					
	1401.01	.01 KOSI BAY: Operation work: Operational area, residential area and Mobile Homes  Payment reduction due to exceeding of maximum allowable down-time during breakdown:	point	360			
	Carried forward						

SCHEDULE No. B.2: INSTALLATION C2.M: KOSI BAY: PLUMBING, DRAINAGE AND WET SERVICES

CIVIL  
MAINTENANCE WORK

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
SA.03	1401.02	<u>Payment Reduction</u>				
SA.04		.01 Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	Hour	-	-R 1 000.00	rate only
SA.05		.02 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	Day	-	-R 2 000.00	rate only
SA.06		.03 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-R 500.00	rate only
		.04 Payment reduction due to exceeding of	Day	-	-R 500.00	rate only
<b>TOTAL - CARRIED TO MAINTENANCE SUMMARY: SCHEDULE No. B.2:                  INSTALLATION C2.M: KOSI BAY: PLUMBING, DRAINAGE AND WET SERVICES</b>						



## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER:  
MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND  
ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36  
MONTHS

## BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. B.3: INSTALLATION C3.M: KOSI BAY: FENCING, CLEANING OF  
BUILDINGS AND SITE KEEPING

CIVIL  
MAINTENANCE WORK

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA.01 SN 01	1500.00	<b><u>MAINTENANCE OF FENCING AND GATES</u></b>				
	1500.01	<p><b>Maintenance of a complete installation:</b></p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CC: Fencing and Gates, shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> <li>• Clearing 2.5 m wide of fence lines (both side)</li> <li>• Cleaning fire break areas</li> <li>• Inspection and repair of damages</li> <li>• Corrosion protection on fencing, gates and tubular posts</li> <li>• Inspection of fence for tightness to straining wire and redress or repair where required</li> <li>• Inspection of gate hinges and repair or replace if necessary, ensuring alignment of gates</li> <li>• Painting of previously painted posts, stays, gates, fences, etc. at:</li> </ul> <p>.01 KOSI BAY: Maintenance work: Perimeter fence line, at operational area and at residential area. Maintenance is not limited to the above-mentioned</p>	point	360		
	Carried forward					

SCHEDULE No. B.3: INSTALLATION C3.M: KOSI BAY: FENCING, CLEANING OF BUILDINGS AND SITE KEEPING

CIVIL MAINTENANCE WORK

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
SA.03 SA.04 SA.05	1500.02	<b>Payment reduction:</b>				
SA.06		.01 Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	Hour	-	-R 1 000.00	rate only
		.02 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	Day	-	-R 2 000.00	rate only
		.03 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-R 500.00	rate only
		.04 Payment reduction due to exceeding of maximum down-time during malicious damage repair	Day	-	-R 500.00	rate only
	1501.00	<b><u>MAINTENANCE OF SITE KEEPING INSTALLATION</u></b>				
SA.01 SN 01	1501.01	<b>Maintenance of a complete installation:</b> The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CJ: Site Keeping and Cleaning (CJ.01.01 and CJ.04.02.01), shall consist of at least, but not limited to: <ul style="list-style-type: none"> <li>• Cleaning out of and supply of black refuse bags to all waste bins in public areas</li> <li>• Watering of plants, shrubs, grass and trees upon strict instruction from the Engineer (in line with water restrictions)</li> <li>• Removal of weeds, clearing of weeds and grass along the edges of paved areas</li> <li>• Cutting of grass</li> <li>• Trimming of dense shrubs</li> <li>• Fertilisation of lawns, fertilisation of flower beds and trees</li> <li>• Removal of undesirable shrubs</li> <li>• Trimming of trees</li> <li>• Collecting of litter and foreign objects, removal of waste, etc. at:</li> </ul>				
	Carried forward					

SCHEDULE No. B.3: **INSTALLATION C3.M: KOSI BAY: FENCING, CLEANING OF BUILDINGS AND SITE KEEPING**

**CIVIL  
MAINTENANCE WORK**

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT	
Brought forward							
SA.03 SA.04 SA.05  SA.06	1501.02	.01 KOSI BAY: Maintenance work: All areas included within the perimeter fence of the port of entry which includes the operational area and the residential area as well as site keeping 20m around the outside of the perimeter fence line	point	360			
		Payment reduction:					
		.01 Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	Hour	-	-R	1 000.00	rate only
		.02 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	Day	-	-R	2 000.00	rate only
		.03 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-R	500.00	rate only
.04 Payment reduction due to exceeding of maximum down-time during malicious damage repair	Day	-	-R	500.00	rate only		
Carried forward							

SCHEDULE No. B.3: INSTALLATION C3.M: KOSI BAY: FENCING, CLEANING OF BUILDINGS AND SITE KEEPING

CIVIL  
MAINTENACE WORK

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
SA.01 CJ 05 SN 01	1502.00	<u>MAINTENANCE AND CLEANING OF BUILDINGS</u>				
	1502.01	<p><b>Maintenance of a complete installation:</b></p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CJ: Site Keeping and Cleaning (CJ.01.02 and CJ.01.03), shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> <li>• Dusting/wet wiping of counter tops</li> <li>• Dusting under counter shelves and floors in public areas and open plan offices (daily, before opening of port of entry)</li> <li>• Sweeping/washing and polishing office floors</li> <li>• Vacuum cleaning carpets</li> <li>• Emptying and cleaning of waste baskets in offices</li> <li>• Service and polishing fittings</li> <li>• Washing interior and exterior walls</li> <li>• Cleaning and maintaining ablution facilities in a sanitary condition</li> <li>• Emptying and cleaning of all waste receptacles</li> <li>• Cleaning of all bowls, basins and urinals</li> <li>• Cleaning and polishing of all fittings and mirrors</li> <li>• Washing and cleaning out of She-bins</li> <li>• Washing of windows</li> <li>• Dusting of window sills, ledges, pipes and fittings</li> <li>• Dusting of buildings interiors</li> <li>• Deep cleansing of toilets and ablution blocks every six months, etc. at:</li> </ul> <p>.01 KOSI BAY: Maintenance work: Operational buildings, ablution blocks, public areas, paving areas, concrete screeds, etc.</p>	point	360		
Carried forward						



SCHEDULE No. B.3: INSTALLATION C3.M: KOSI BAY: FENCING, CLEANING OF BUILDINGS AND SITE KEEPING

CIVIL  
MAINTENANCE WORK

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
SA.03 SA.04 SA.05  SA.06	1502.02	<b>Payment Reduction</b>  .01 Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown  .02 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown  .03 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown  .04 Payment reduction due to exceeding of maximum down-time during malicious damage repair	Hour  Day  Day  Day	-  -  -  -	-R  -R  -R  -R	1 000.00  2 000.00  500.00  500.00  rate only  rate only  rate only  rate only
	1503.00	<b><u>PEST CONTOL:</u></b>				
SA.03 SA.04 SA.05  SA.06	1503.01	<b>Payment Reduction</b>  .01 Kosi Bay Port of Entry rodent control bait station stations including poison and information signage  .01 Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown  .02 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown  .03 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown  .04 Payment reduction due to exceeding of maximum down-time during malicious damage repair	No.  Hour  Day  Day  Day	36  -  -  -  -	-R  -R  -R  -R	  1 000.00  2 000.00  500.00  500.00  rate only  rate only  rate only  rate only
<b>TOTAL - CARRIED TO MAINTENANCE SUMMARY: SCHEDULE No. B.3: INSTALLATION C3.M: KOSI BAY: FENCING, CLEANING OF BUILDINGS AND SITE KEEPING</b>						



DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER:  
MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND  
ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36  
MONTHS

BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. B.4: INSTALLATION C4.M: KOSI BAY: BULK WATER SUPPLY  
SYSTEMS AND EXTERNAL WATER NETWORKS

CIVIL  
MAINTENANCE WORK

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA.01	1600.00	<u>MAINTENANCE OF BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS</u>				
	1600.01	<p><b>Maintenance of a complete installation:</b></p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance as per Technical Specifications CE: Water Distribution Networks, DA: Borehole Pump Systems, and DL: Chlorination Systems for the Disinfection of Drinking Water, shall consist of at least, but not limited to:</p> <ul style="list-style-type: none"> <li>• Routine checking, inspection, and repair of leaks/replacement of corroded pipes</li> <li>• Clean out all strainers</li> <li>• Fix and maintain all bracketing systems</li> <li>• Paint repairs to piping, fittings and equipment</li> <li>• Scour reservoirs and pipes to remove silt and deposits, empty and clean bulk water reservoirs</li> <li>• Check, test, service, re-adjust, repair or replace all types of valves and vacuum breakers, inclusive of gaskets, gland packings, seals, etc.</li> </ul>				
	Carried forward					

**SCHEDULE No. B.4: INSTALLATION C4.M: KOSI BAY: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS**

**CIVIL  
MAINTENANCE WORK**

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	Brought forward					
		The Contractor shall attend to preventative maintenance and breakdown maintenance as per Technical Specifications CE: Water Distribution Networks, DA: Borehole Pump Systems, and DL: Chlorination Systems for the Disinfection of Drinking Water, shall consist of at least, but not limited to: <ul style="list-style-type: none"> <li>• Check V-belts, MCC panels with level sensing devices and electric motors where applicable</li> <li>• Remove, inspect and service repair or replace submersible pumps</li> <li>• Service re-adjust and calibrate pressure gauges and water meters</li> <li>• Service, repair and clean chlorine dosing apparatus from blockages</li> <li>• Monthly visual inspection and report on pressed steel water tanks</li> <li>• Monthly check for and repair leaks</li> <li>• Bi-annually corrosion protection</li> <li>• Bi-annually clean and sterilise pressed steel tank, etc. at:</li> </ul>				
		.01 KOSI BAY: Maintenance work: Bulk water supply systems and external water networks	point	360		
SA.03 SA.04 SA.05	1600.02	<b>Payment reduction:</b>				
SA.06		.01 Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	Hour	-	-R 1 000.00	rate only
		.02 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	Day	-	-R 2 000.00	rate only
		.03 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-R 500.00	rate only
		.04 Payment reduction due to exceeding of maximum down-time during malicious damage repair	Day	-	-R 500.00	rate only
	Carried forward					

SCHEDULE No. B.4: INSTALLATION C4.M: KOSI BAY: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS

CIVIL  
MAINTENANCE WORK

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT	
	Brought forward						
SF.01 DH.09.05	1601.00	<b><u>OPERATING OF BULK WATER SUPPLY SYSTEM</u></b>					
	1601.01	<p><b>Operating of installation:</b></p> <p>Operation as per Technical Specification                      DH: Operation of Potable Water Works, DA:                      Borehole Pump Systems, and DL:                      Chlorination Systems for the Disinfection of                      Drinking Water, shall consist of at least, but                      not limited to:</p> <ul style="list-style-type: none"> <li>• Logging and recording of all pressure gauges, water meters, water level in reservoir, borehole water levels at start and stop of pump, amperes, volts and hour meter readings of borehole pumps (and calculate kW-hours)</li> <li>• Drafting of a water balance of the bulk water system (spread sheet based), as well as measuring and recording residual chlorine in the drinking water system at reservoir and furthest distribution point user</li> <li>• Recording of rainfall (date, precipitation and duration per event)</li> <li>• Checking integrity of power supply at MCC and verify correct switching of pumps</li> </ul> <p>* MCC: <i>Motor control centre</i></p> <p>Operating of installations continued:</p>					
	Carried forward						

**SCHEDULE No. B.4: INSTALLATION C4.M: KOSI BAY: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS**

**CIVIL  
MAINTENACE WORK**

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
		Operating of installations continued: <ul style="list-style-type: none"> <li>• Logging of all failures, malfunctions, spills, pollution events, power failures and detail of corrective measures implemented, ensuring correct borehole pump flow rate by adjusting control valve</li> <li>• Visual inspection daily, clean installation weekly, check dosing room weekly, check and repair leaks</li> <li>• Supply chemicals and make-up chlorine solution, ensuring the correct chlorine dosing rate and re-adjustment proportional to pump rate and on-site residual chlorine measurements, keeping facilities neat, controlling access to the site</li> <li>• Report in electronic format of: Turbidity (cloudiness or haziness) readings of raw and purified water, concentration of chemical solutions, percentage setting on dosing pumps, actual volume of chemicals consumed and monthly water analysis</li> <li>• Maintaining safety conditions on site, etc. at:</li> </ul>				
		.01 KOSI BAY: Operating work: Bulk water supply systems and external networks	point	360		
SA.03 SA.04 SA.05	1601.02	<b>Payment Reduction</b>				
SA.06		.01 Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	Hour	-R	1 000.00	rate only
		.02 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	Day	-R	2 000.00	rate only
		.03 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-R	500.00	rate only
		.04 Payment reduction due to exceeding of maximum down-time during malicious damage repair	Day	-R	500.00	rate only
<b>TOTAL - CARRIED TO MAINTENANCE SUMMARY: SCHEDULE No. B.4: INSTALLATION C4.M: KOSI BAY: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS</b>						



Department  
Public Works and Infrastructure  
REPUBLIC OF SOUTH AFRICA

**DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE**

**TENDER NO: H23/007 AI**

**WCS 055330**

**LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS**

**BILL OF QUANTITIES**

**NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK**

**SCHEDULE No. B.5: INSTALLATION C5.M: KOSI BAY: SEPTIC TANKS AND SEWER NETWORKS**

**CIVIL  
MAINTENANCE WORK**

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA.01	1700.00  1700.01	<p><b><u>MAINTENANCE OF SEPTIC TANKS AND SEWER NETWORKS AT KOSI BAY:</u></b></p> <p><b>Maintenance of a complete installation:</b></p> <p>The Contractor shall attend to preventative maintenance and breakdown maintenance as per Technical Specifications EG, which consist of, but not limited to:</p> <ul style="list-style-type: none"> <li>• Routine inspection of septic tanks</li> <li>• Inspection chambers covers and frames</li> <li>• Necessary cleaning and rodding</li> <li>• Unblocking of the sewer network</li> <li>• Repair of manhole benching</li> <li>• Fixing of leaks</li> <li>• Removal of invasive plants, trees and bushes around septic tanks, ect. at:</li> </ul> <p>.01 KOSI BAY: Maintenance work: Septic tanks and sewer networks</p>	point	360		
	Carried forward					

SCHEDULE No. B.5: INSTALLATION C5.M: KOSI BAY: SEPTIC TANKS AND SEWER NETWORKS

CIVIL MAINTENANCE WORK

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
	Brought forward						
SA.03 SA.04 SA.05 SA.06	1700.02	<b>Payment Reduction</b> .01 Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown .02 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown .03 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown .04 Payment reduction due to exceeding of maximum down-time during malicious damage repair	Hour Day Day Day	- - - -	-R -R -R -R	1 000.00 2 000.00 500.00 500.00	rate only rate only rate only rate only
	1701.00	<b>SEPTIC TANKS</b>					
SF.01 EG 01 EG 06	1701.01	<b>Desludge septic tanks:</b> The Contractor shall attend to preventative maintenance, which consist of, but not limited to: • Check and log scum, water and sludge depths in septic tank. If sludge depth exceeds 50% of tank depth, desludge the tank. Desludge tank at least once per year. Inspection is monthly and recorded • Dispose the sludge at the nearest Wastewater treatment Works. Contractor pay all fees and charges. A certificate and proof of disposing sludge at Wastewater Works must be provided for record purposes • Monitor pollution risk of septic tanks close to borehole, etc. at:  .01 KOSI BAY: Septic tanks: Check, desludge, cleaning out and dispose of contents off-site. Fill septic tank with water just above inlet pipe (T-piece)					
SA.03	1701.02	<b>Payment reduction:</b> .01 Payment reduction due to exceeding of maximum allowable sludge build-up in septic tanks	point day	60 -		-2 000.00	rate only
	Carried forward						

**SCHEDULE No. B.5: INSTALLATION C5.M: KOSI BAY: SEPTIC TANKS AND SEWER NETWORKS**

**CIVIL  
MAINTENACE WORK**

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
Brought forward						
EG 07.01	1702.00	<b><u>SLUDGE DISPOSAL</u></b>				
		.01 Pumping out of septic tank sludge into a suitable waste containment vehicle for transportation on the instruction of the Engineer/Department's representatives	m <sup>3</sup>	42		
EG 07.01		.02 Disposal of septic tank sludge at a certified and approved Municipal Wastewater Treatment Works and submitting a certificate to detail and verify the safe disposal 25 km away	m <sup>3</sup> .km	245		
<b>TOTAL - CARRIED TO MAINTENANCE SUMMARY: SCHEDULE No. B.5: INSTALLATION C5.M: KOSI BAY: SEPTIC TANKS AND SEWER NETWORKS</b>						





**DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE**

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**BILL OF QUANTITIES**

**NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK**

**SCHEDULE No. B.6: INSTALLATION C6.M: KOSI BAY: ROADS AND STORM WATER DRAINAGE**

**CIVIL  
MAINTENANCE WORK**

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
SA.01	1800.00	<b>MAINTENANCE OF ROADS AND STORM WATER DRAINAGE</b>				
	1800.01	<b>Maintenance of a complete installation:</b> The Contractor shall attend to preventative maintenance and breakdown maintenance, as per Technical Specification CA and CB: Roads, and shall consist of at least, but not limited to: <ul style="list-style-type: none"> <li>• Routine inspection of roads, gravel shoulders, pavements, road signs and road markings</li> <li>• Blading all gravel roads and parking areas</li> <li>• Removing loose material from road surfaces and the surface of parking areas by means of mechanical brooming</li> <li>• Repair of all surfaces, road pavements, kerbs, road markings and signs, as well as:                          Technical Specification CB: Storm water drainage, shall consist of at least, but not limited to:                     </li> <li>• Inspection, cleaning, unblocking and repair of all storm water infrastructure components such as:                             <ul style="list-style-type: none"> <li>– Culverts</li> <li>– Drains</li> <li>– Manholes</li> <li>– Inlet covers</li> <li>– Inlet benching, grids and frames, etc. at:</li> </ul> </li> </ul>				
	Carried forward					

SCHEDULE No. B.6: INSTALLATION C6.M: KOSI BAY: ROADS AND STORM WATER DRAINAGE

CIVIL MAINTENANCE WORK

PAYMENT REFERS TO	ITEM No.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
SA.03 SA.04 SA.05 SA.06	1800.02	<p>.01 KOSI BAY: Maintenance work: Roads and storm water drainage at Operational area and Residential area</p> <p><u>Payment Reduction</u></p> <p>.01 Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown</p> <p>.02 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown</p> <p>.03 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown</p> <p>.04 Payment reduction due to exceeding of maximum down-time during malicious damage repair</p>	point  Hour  Day  Day  Day	360  -R  -R  -R  -R	1 000.00  2 000.00  500.00  500.00	rate only  rate only  rate only  rate only
TOTAL - CARRIED TO MAINTENANCE SUMMARY: SCHEDULE No. B.6: INSTALLATION C6.M: KOSI BAY: ROADS AND STORM WATER DRAINAGE						



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DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

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LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. B.7: INSTALLATION E1.M: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
MAINTENANCE WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	1900.00	MAINTENANCE OF BUILDING AND SITE ELECTRICAL				
SA.01	1900.01	<u>Maintenance Of a Complete Installation:</u>				
SA 02.10.01 - 10.03 & AB 11		Scheduled and non-scheduled preventative maintenance and breakdown maintenance of the complete electrical installation by a competent person as per Technical Specification AB: Building Electrical Installations (AB.11 Maintenance of the Installation) comprising inter alia:				
		(1) checking operation, servicing, testing and measuring, repair or replacement of all (a) lamps and luminaires and lamp holders, (b) switching elements devices, (c) meters and metering equipment, (d) protective and monitoring devices, (e) earthing, bonding and lightning protection, (f) switch socket outlets, (g) distribution boards, (h) isolators and , light switches, lamp holders and (i) control devices, (j) cables, overhead mains (k) appliances, (l) wiring of all equipment and appliances;				
		(2) measuring, logging and recording of phase voltages and currents and kWh energy usage of all buildings and installations, separately;				
		(3) drafting and updating keep of all new and existing electrical system diagrams, cable route plans, including schematic diagrams, operational instructions;				
		(4) engraved or embossed labelling of all distribution boards, electrical equipment, cables and wiring, lighting poles, with the required information, and such similar information, including engraved labelling on face plates or bodies of light switches, socket outlets and isolators and legend cards showing all the equipment inside distribution kiosks/boxes/boards;				
		(5) witnessed testing of all earth leakage protection units on all socket outlet units, at the following installations:				
		Carried forward				

## SCHEDULE No. B.7: INSTALLATION E1.M: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
MAINTENANCE WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN- TITY	RATE	AMOUNT
	Brought forward					
	1900.01	<p>01. Operational Area (items below is not limited to):</p> <ul style="list-style-type: none"> <li>- Buildings and structures</li> <li>- Earthing and bonding</li> <li>- Distribution boards</li> <li>- Main switches (DP IS)</li> <li>- Eath leakage protection</li> <li>- Lightning protection &amp; L/A Fuses in DBs</li> <li>- 3 phase contactors( 20 - 100A) &amp; Timer switches</li>   <li>- 3 phase circuit breakers</li> <li>- Single phase circuit breakers</li> <li>- Power skirting(m)</li> <li>- Swich socket outlets (16A)</li> <li>- Isolating switches</li> <li>- Uniteruptable power supplies (UPS)</li> <li>- Hand dryers</li> <li>- Air-conditioners</li> <li>- Geysers and Instant water heaters</li> <li>- Stoves</li> <li>- Light switches</li> <li>- Light fittings</li> <li>- Photocell switches</li> <li>- Standby power sets</li> <li>- Mains failure panel complete</li> <li>- Extractor fans</li> <li>- Including all the low voltage underground cable, poles, stays and stay wires and overhead mains, interior and exterior wiring of buildings.</li> </ul> <p>The maintenance scope is described in Technical Specifications: AB</p>	Points	360		
	Carried forward					

## SCHEDULE No. B.7: INSTALLATION E1.M: KOSI BAY: BUILDING AND SITE ELECTRICAL

ELECTRICAL  
MAINTENANCE WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		Brought forward				
	1900.01	02. Housing Area (items below is not limited to):  <ul style="list-style-type: none"> <li>- Buildings and structures</li> <li>- Earthing and bonding</li> <li>- Distribution boards</li> <li>- Main switches (DP IS)</li> <li>- Eath leakage protection</li> <li>- Lightning protection &amp; L/A Fuses in DBs</li> <li>- 3 phase contactors( 20 - 100A) &amp; Timer switches</li>   <li>- 3 phase circuit breakers</li> <li>- Single phase circuit breakers</li> <li>- Power skirting</li> <li>- Swich socket outlets (16A)</li> <li>- Isolating switches</li> <li>- Uniteruptable power supplies (UPS)</li> <li>- Hand dryers</li> <li>- Air-conditioners</li> <li>- Geysers and Instant water heaters</li> <li>- Stoves</li> <li>- Light switches</li> <li>- Light fittings</li> <li>- Photocell switches</li> <li>- Standby power sets</li> <li>- Mains failure panel complete</li> <li>- Extractor fans</li> <li>- Including all the low voltage underground cable, poles, stays and stay wires and overhead mains, interior and exterior wiring of buildings.</li> </ul>	Points	360		
		The maintenance scope is described in Technical Specifications: AB				
SA.03 SA.04 SA.05 SA.06	1901.00	<u>Payment Reduction</u>				
		.01 Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	Hour	-	-R 1 000.00	rate only
		.02 Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	Day	-	-R 2 000.00	rate only
		.03 Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-R 500.00	rate only
		.04 Payment reduction due to exceeding of maximum down-time during malicious damage repair	Day	-	-R 500.00	rate only
SA.07		.05 Call-out for repair of Emergency Breakdown (24 hours) response	No.	3		
<b>TOTAL - CARRIED TO MAINTENANCE SUMMARY: SCHEDULE No. B.7: INSTALLATION E1.M: KOSI BAY: BUILDING AND SITE ELECTRICAL</b>						



Department:  
Public Works and Infrastructure  
REPUBLIC OF SOUTH AFRICA

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

## BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. B.8: INSTALLATION E2.M: KOSI BAY: EXTERNAL LIGHTING INSTALLATION

ELECTRICAL  
MAINTENANCE WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	2000.00	MAINTENANCE OF EXTERNAL LIGHTING				
SA.01	2000.01	<u>Maintenance Of A Completed Installation</u>				
SA 02.10.01 - 10.03		Scheduled and unscheduled preventative maintenance and breakdown maintenance by a competent person, as per Technical Specification HE: Exterior Lighting Systems, comprising at least:				
		(1) Verify operation of switching elements and all internal components of the luminaires and replace non functional items,				
		(2) check and inspect and where necessary replace deteriorated luminaires, internal components and lamps,				
		(3) ensure steel poles connection box cover plates are weather proof, seal in good condition, ensure that all pole covers are secure,				
		(4) ensure proper earthing of all steel lighting poles, scissor masts at all times, maintain earth connection at footing, record values annually.				
		(5) apply vermin proofing,				
		(6) inspect and service junction boxes, circuit breakers, wiring and connections and ensure correct phase voltages and currents				
		(7) Ensure that all lighting poles, scissor and high masts are straight, at Pafuri's external lighting installations comprising:				
		4 Fibre glass security light poles, internal junction boxes and luminaires				
		2 Post top street lights mounted on fibre glass poles internal junction box and luminaires				
		Carried forward				



Department  
Public Works and Infrastructure  
REPUBLIC OF SOUTH AFRICA

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

## BILL OF QUANTITIES

NB TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. B.9: INSTALLATION E3.M: KOSI BAY: STANDBY POWER SYSTEM

ELECTRICAL  
MAINTENANCE WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA.01	2100.00	MAINTENANCE OF STANDBY POWER SYSTEMS				
	2101.00	<p><u>MAINTENANCE OF A COMPLETED INSTALLATION</u></p> <p>Scheduled and unscheduled preventative maintenance and breakdown maintenance, as per Technical Specification HB: Standby Power Systems, comprising at least of: Checking, recording and resetting as necessary of oil level; oil viscosity for dilution by water or fuel; starter battery terminals and apply contact grease; battery cables for damage and secure terminations; battery electrolyte; battery voltage, battery voltage drop during engine cranking, battery charger operation after cranking test; starter motor for abnormal noise; diesel engine while running for noise, vibration or loose components; flexible hoses for leaks, corrosion and ageing; engine V-belts; engine alternator coupling for noise; alternator for accumulation of dust on the regulator and for any loose components, as well as testing on load for recording of volt, ampere and frequency readings, recording running hours, diesel consumption, and verification of all alarm functions, i.e. low oil pressure, high engine temperature, low engine coolant level, abnormal speed, synchronising failure, cooling water pump failure, cooling tower fan failure, low battery voltage, low fuel day tank, fuel pump failure and low fuel bulk tank, and all work necessary to rectify malfunction. Engines Description: One John Deere diesel engine, Model CD4036B030661. Coupled to a 57kVA Marathon Electric Alternator, maintenance is not limited to the above-mentioned</p> <p>.01 KOSI BAY: Standby Power System</p> <p>The maintenance scope is described in Technical Specifications: HB</p>	Point	360		
Carried forward						

## SCHEDULE No. B.9: INSTALLATION E3.M: KOSI BAY: STANDBY POWER SYSTEM

ELECTRICAL  
MAINTENANCE WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
	Brought forward					
	2102.00	<b><u>MANDATORY PERIODICAL SERVICES NOT INCLUDED IN PREVENTATIVE MAINTENANCE ITEMS LISTED ABOVE</u></b>				
HB 10.03.01	.01	Clean and repair genset plant room	No.	3		
HB 10.03.02	.02	Service 60kVA genset	No.	3		
HB 10.03.03	.03	Service Deutz diesel engine	No.	3		
HB 10.03.08	.04	Supply diesel fuel	Litre	10000		
	.05	Flow Meters	No.	3		
HB 10.03.05	.06	Dummy Load Test	No.	3		
HB 10.03.12	.07	Fuel water separator	No.	3		
	2 103.00	<b><u>CONTINGENCY ALLOWANCE FOR MOBILE RENTAL UNIT (SIMILAR TO EXISTING 60KVA UNIT) DURING EMERGENCY REPAIRS</u></b>				
	.01	Kosi Bay Port of Entry	PC Sum	-	-	R 20 000.00
	.02	Charge required by Contractor on subitem .01 above	%	20 000.00	%	
SA.03 SA.04 SA.05 SA.06	2104.00	<b><u>Payment Reduction</u></b>				
	.01	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	Hour	-	-R 1 000.00	rate only
	.02	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	Day	-	-R 2 000.00	rate only
	.03	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-R 500.00	rate only
	.04	Payment reduction due to exceeding of maximum down-time during malicious damage repair	Day	-	-R 500.00	rate only
SA.07	2105.00	<b><u>Call-out for repair of Emergency Breakdown:</u></b>				
	.01	Call-out for repair of Emergency Breakdown (24 hours) response	No.	3		
<b>TOTAL - CARRIED TO MAINTENANCE SUMMARY: SCHEDULE No. B.9: INSTALLATION E3.M: KOSI BAY: STANDBY POWER SYSTEM</b>						





Department:  
Public Works and Infrastructure  
REPUBLIC OF SOUTH AFRICA

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 AI

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

## BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. B.10: INSTALLATION M1.M: KOSI BAY: HEATING, VENTILATION AND AIR-CONDITIONING SYSTEMS

MECHANICAL  
MAINTENANCE WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA.01	2200.00	MAINTENANCE OF HEATING, VENTILATION AND AIRCONDITIONING				
	2201.00	<p><u>MAINTENANCE OF A COMPLETE INSTALLATION</u></p> <p>Scheduled and unscheduled maintenance and breakdown maintenance, as per Technical Specification FD: Heating, Ventilation and Air conditioning Sstems and Particular Specification PFD: Heating, Ventilation and Air Conditioning Systems, comprising inspection of air intake and discharge for blockages, cleaning of filters and replacement when required, checking all refrigerant, drainage pipes for damages and leaks, inspection of condenser coil for blockages and ensuring correct operation of fans, inspection of sight glass and clearing or flashing of gas, inspection of evaporator coil for blockages and correct operation of supply fan, checking enclosure for damage, electric motor running temperatures, electric connections for tightness, thermostat and control operation, cleaning of condensate tray and ensuring proper operation of drain system, as well as maintaining cooling and heating cycle, etc. (maintenance is not limited to above-mentioned) at:</p> <p>.01 KOSI BAY: Heating, Ventilation and Air-conditioning</p> <p>The maintenance scope is described in technical specifications FD, PFD</p>	Point	360		
Carried forward						



Department  
Public Works and Infrastructure  
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

TENDER NO: H23/007 A1

WCS 055330

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER: MAINTENANCE, SERVICING, AND REPAIR OF BUILDINGS, MECHANICAL AND ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS

BILL OF QUANTITIES

**NB** TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE No. B.11: INSTALLATION M2.M: KOSI BAY: CONVENTIONAL FIREFIGHTING EQUIPMENT

MECHANICAL

MAINTENANCE WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
SA.01	2300.00	<b>MAINTENANCE OF CONVENTIONAL FIREFIGHTING EQUIPMENT</b>				
	2301.00	<p><b>Maintenance of a completed Installation</b> Scheduled and unscheduled maintenance and breakdown maintenance, as per Technical Specification JC: Conventional Fire Fighting Equipment and Particular Specification PJC: Conventional Fire Fighting Equipment and Particular Specification PJC: Conventional Fire Fighting Equipment, comprising (i) maintenance related to fire hose reels, including routine inspections of drain seal, rolled down hose for cracks or perishing, checking operation of PWD type nozzle, fire hose reel valve, pressure and flow rate of fire hose reel and piping for leaks or damage, and lubrication of moving parts of hose reel drum, (ii) maintenance of related fire extinguishers, including routine inspection of background mounting and bracket, checking condition of the charge and discharge, checking the discharge hose mechanism, and replace powder/foam/CO<sub>2</sub> at prescribed intervals, repair and replacement of all parts, and logging and recording of the maintenance schedule for all types of firefighting equipment, (maintenance is not limited to the above-mentioned) at:</p> <p>.01 Fire Fighting Equipment, Fire Detection System, Fire Pump System and Fire Tank System</p> <p>The maintenance scope is described in technical specifications: JC, PJC, IG</p>	Point	360		
Carried forward						

SCHEDULE No. B.11: INSTALLATION M2.M: KOSI BAY: CONVENTIONAL FIREFIGHTING EQUIPMENT

MECHANICAL

MAINTENANCE WORK

PAYMENT REFERS TO	ITEM NO.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
Brought forward						
SA.03 SA.04 SA.05 SA.06	2302.00	<b>Payment reduction:</b>				
	.01	Payment reduction due to exceeding of maximum allowable down-time during fatal breakdown	Hour	-	-R 1 000.00	rate only
	.02	Payment reduction due to exceeding of maximum allowable down-time during emergency breakdown	Day	-	-R 2 000.00	rate only
	.03	Payment reduction due to exceeding of maximum allowable down-time during ordinary breakdown	Day	-	-R 500.00	rate only
	.04	Payment reduction due to exceeding of maximum down-time during malicious damage repair	Day	-	-R 500.00	rate only
SA.07	.05	Call-out for repair of Emergency Breakdown (24 hours) response	No.	3		
	2303.00	<b><u>MANDATORY PERIODICAL SERVICING AND CLEANING NOT INCLUDED IN PREVENTATIVE MAINTENANCE ITEMS LISTED ABOVE</u></b>				
PJC.09	.01	Statutory annual servicing of 4.5kg DCP fire extinguishers, approximately three (3) units but not limited to	No.	3		
PJC.09	.02	Statutory annual servicing of 9kg DCP fire extinguishers, approximately six (6) units but not limited to	No.	3		
PJC.09	.03	Statutory annual servicing of 2kg CO <sub>2</sub> fire extinguishers, approximately two (2) units but not limited to	No.	3		
PJC.08	.03	Statutory annual servicing of 30m long, 25mm diameter Fire hose-reels, approximately five (5) units but not limited to	No.	3		
PJC.12	.04	Statutory annual servicing and testing of Fire booster pump system, approximately one (1) unit but not limited to	No.	3		
PJC.04	.05	Annual Firefighting Training	No.	3		
<b>TOTAL - CARRIED TO MAINTENANCE SUMMARY: SCHEDULE No. B.11: INSTALLATION M2.M: KOSI BAY: CONVENTIONAL FIREFIGHTING EQUIPMENT</b>						

REPAIR, MAINTENANCE AND SERVICING CONTRACT

LAND PORT OF ENTRY: KOSI BAY: APPOINTMENT OF A SERVICE PROVIDER(S) FOR  
THE MAINTENANCE AND REPAIRS OF BUILDING, CIVIL, MECHANICAL AND  
ELECTRICAL INFRASTRUCTURE AND INSTALLATIONS FOR A PERIOD OF 36 MONTHS.



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## ***PART C3: SCOPE OF WORK***



## PG-01.1 (EC) SCOPE OF WORKS – (GCC (2010) 2<sup>nd</sup> EDITION: 2010)

Project title:	<i>Kosi bay Land Port of entry: 36 Months: Repair, Maintenance and Servicing of Buildings, Civil, Electrical and Mechanical Infrastructure and Installations (Appointment of a contractor)</i>		
Tender no:	H23/007AI	Reference no:	N/A

### C3. Scope of Works

#### CONTENTS

#### C3.1 STANDARD SPECIFICATIONS

#### C3.2 PROJECT SPECIFICATIONS

##### A: GENERAL

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- PS 2 DESCRIPTION OF SITE AND ACCESS
- PS 3 DETAILS OF CONTRACT
- PS 4 CONSTRUCTION PROGRAMME
- PS 5 SITE FACILITIES AVAILABLE
- PS 6 SITE FACILITIES REQUIRED FOR THE ENGINEER
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##### B: AMENDMENTS TO THE PARTICULAR SPECIFICATIONS TECHNICAL SPECIFICATIONS

- AA Plumbing and drainage Installations
- AB Building electrical installations
- BA Roof coverings
- BB Carpentry joinery for roofs and ceilings
- BC Waterproofing of concrete roofs
- BD Walls
- BE Floors
- BF Pest Control
- BH Fittings
- BJ Paintwork
- BK Structural Concrete
- CA Roads



CB	Stormwater drainage
CC	Fencing and gates
CE	Water distribution networks
CF	Sewerage networks
CG	Solid waste management
CI	Pressed Steel Tanks
CJ	Site keeping and cleaning
DA	Borehole pump systems
DB	Borehole drilling and equipment
DC	Borehole siting and drilling
DF	Potable water disinfection and sedimentation units
DH	Operation of potable water works
DL	Chlorination systems for the disinfection of drinking water at remote borehole installations
DN	Dosing Systems
DW	Water supply
EG	Septic tank and conservancy tanks and disposal fields
EJ	Water quality testing
FD	Heating ventilation and air-conditioning systems
HB	Standby power systems
HC	Low voltage reticulation
HD	Transformers
HE	Exterior lighting installations
JC	Conventional fire-fighting equipment
KA	Water audit

### C3.3 PARTICULAR SPECIFICATIONS

#### List particular specifications

PAA	Plumbing and Drainage Installations
PAM	Mobile Structures
PBF	Pest Control
PFD	Heating Ventilation and Air-Conditioning Systems
PJC	Conventional Fire Fighting Equipment

### C3.4 STANDARD SPECIFICATIONS:

SA	General Maintenance
SB	Operating and Maintenance Manuals
SC	General Decommissioning, Testing and Commissioning Procedures
SD	General Training
SF	General Operation
SH	HIV / AIDS Requirements
SI	Occupational Health and Safety
SJ	Covid-19 Compliance
SN	Implementation of Labour-intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP)

The standard specifications on which this contract is based are the **South African Bureau of Standards Standardized Specifications for Civil Engineering Construction SABS 1200**. (Note to compiler. "SABS"



has been changed to "SANS"; the SABS 1200 specifications are due to be replaced in the foreseeable future by SANS 2100)

Although not bound in nor issued with this Document, the following Sections of the Standardized Specifications of SABS 1200 shall form part of this Contract:

- o A - 1986 - GENERAL / D – (etc, to be provide by compiler)
- o SANS 1200 Standardised Specifications for Civil Engineering Construction\*
- o SANS Standard Specifications\*
- o PW 371- A & B -Specification of Materials and Methods to be used. Fourth revision, October 1993.\*\*
- o Guide for architects concerning drainage, water supply and stormwater drainage\*\*
- o PW343- Building specifications for Regional Offices\*\*
- o Standard Specification for the Electrical Installations and Equipment pertaining to Mechanical Services\*\*
- o Standard Electrical Specifications, January 1984, GPS 24-0367\*\*
- o SANS 10400 The application of the National Building Regulations\*
- o Department of Public Works - Standard Electrical Specifications\*\*
- o Standard Specification for Air Conditioning and Ventilation Installations – issue XI, 1998.
- o Standard Specification for Refrigeration Services – Issue VIII, 1998
- o FPO/G61/3E Guide for Architects\*\*
- o Department of Water Affairs - Green Drop & Blue Drop Requirements (Version 1.0 - 2010)\*\*\*
- o Guidelines for the Implementation of Labour-Intensive Infrastructure Projects under Expanded Public Works Programme\*\*
- o \* Not issued with this document, but available at the Contractor's expense from the SA Bureau of Standards, Private Bag X191, PRETORIA, 0001.
- o \*\* Not issued with this document but available from the Director General, Department of Public Works, Private Bag X65, PRETORIA 0001, or any office of the Regional Representative of this Department.
- o \*\*\* Not issued with this document but available from the Department of Water Affairs ([www.dwa.gov.za](http://www.dwa.gov.za)).

### 3.5 PROJECT SPECIFICATIONS:

#### Status

The Project Specification, consisting of two parts, forms an integral part of the contract and supplements the Standard Specifications.

Part1 A contains a general description of the works, the site and the requirements to be met.

Part B contains variations, amendments and additions to the Standardized Specifications and, if applicable, the Particular Specifications.

In the event of any discrepancy between a part or parts of the Standardised of Particular Specifications and the Project Specification, the Project Specification shall take precedence. In the event of a discrepancy between the specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Engineer before the execution of the work under the relevant item.

#### 3.5.1 GENERAL

##### PS-1 PROJECT DESCRIPTION:

Each installation requires work that may include any one or more of the activities as set out in below, i.e. decommissioning, repair, reconditioning, testing, re-commissioning during the Contract period. The consultants and the contractor will compile a set of operating and maintenance manuals. The work also includes compilation/updating of operating and maintenance manuals as well as training of User Department operators and all maintenance personnel.

NOTE: Repair work will be carried out within facilities that are occupied by User Department's personnel and associates.



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## **PS 1 GENERAL DESCRIPTION**

Each installation requires work that may include any one or more of the activities as set out in below, i.e. decommissioning, repair, reconditioning, testing, re-commissioning during the Contract period. The consultants and the contractor will compile a set of operating and maintenance manuals. The work also includes compilation/updating of operating and maintenance manuals as well as training of User Department operators and all maintenance personnel.

NOTE: Repair work will be carried out within facilities that are occupied by User Department's personnel and associates.

## **PS 2 DESCRIPTION OF SITE AND ACCESS**

Kosibay Port of Entry is the property of the Department of Public Works and Infrastructure, and is situated near Manguzi in the Kwazulu-Natal Province. A map of the site is part of the drawings.

The Contractor will be granted access to all the installations at the date of Site Handover. Access will also be given to completed installations that were kept in a working condition during a previous similar Contract.

## **PS 3 DETAILS OF CONTRACT**

All work forming part of this Contract is divided into installations. The repair and maintenance work to be performed as part of an installation under this Contract mainly consists of the following:

- a. The various installations at the Port of Entry form part of an existing Repair and Maintenance Programme. As such the various installations were repaired and maintained under the contract and are in perfect working order which places the emphasis of this contract on maintenance.
- b. No distinction will be made between prior to practical completion and completed installations for the purpose of maintenance.
- c. The Contractor will have the opportunity at the start of the contract to point out items which are not in perfect working order which in turn will be repaired as per the relevant tendered repair rates.
- d. The Contractor will further more at the start of the contract perform annual maintenance on all the installations as per the items listed in the different Technical and Particular Specifications as part of the Contractor's maintenance obligation.



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- e. Maintenance of each of these installations will be the responsibility of the Contractor and will be evaluated on a monthly basis by the Engineer. The remuneration for maintenance work and responsibilities will be certified accordingly.

The Contractor will have the opportunity at the start of the contract to point out items which are not in a perfect working order by means of an Assessment and Verification report. Typically, the following installation, but not limited to, shall be assessed:

- Structural and buildings related works
- Plumbing, drainage and wet services
- Fencing, cleaning and site keeping
- Bulk water and external water reticulation and water purification works
- Wastewater network and Septic Tanks
- Roads and storm water drainage
- Building electrical
- External lighting
- Standby power generators
- Heating, ventilation and air-conditioning systems
- Conventional fire-fighting equipment, etc.

These items will be serviced and repaired as per the relevant tendered repair rates. The detail Assessment and Verification report shall provide an overview of problem areas at the beginning of the contract period, just after site handover. This shall include the testing of all equipment (pumps, etc.) as well as all civil, electrical and mechanical services. The detail Assessment and Verification report shall include photos (presented as a photo report) with a description and orientation/location of problem areas. The final detail Assessment and Verification report must be submitted one calendar month after site handover. A penalty of R500 per day shall be imposed for late submission.

Payment for the Assessment and Verification report shall be included in the fixed preliminary and general charges.

The description of the Works given is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract.

#### ASSET REGISTER: KOSI BAY

No.	Installation	Number off	Description
1	Structural and building	2	Residential buildings 840m <sup>2</sup>
		4	Operational buildings 720 m <sup>2</sup>
		4	Operational Park Homes 115m <sup>2</sup>
2	Sanitary and brassware	63	Taps/Valves
		16	Water closets (WC) and cisterns
		5	Urinals including flush masters
		13	Wash hand basins



No.	Installation	Number off	Description
		4	Kitchen Sinks
		2	Wash troughs
		3	Baths
		3	Showers
		4	Septic tanks (2x at operational area )
		6	Geysers
3	Fencing	400m of perimeter fence with gates consisting of 2m high security 340m 1.2m and 1.8 m diamond mesh (Housing area)	
4	Site keeping	Site keeping area 7 500m <sup>2</sup>	
5	Toilet equipment	4	Air fresheners
		2	Hand dryers
		4	SHE bins (sanitary disposal bin)
		4	Soap dispensers
		8	Toilet roll holders
		5	Urinal sanitizers
6	Bulk water supply: Plant, reservoir, network	The one borehole is capable of delivering 4 l/s (±115k l p/d)	
		Water is pumped 250m from the borehole to a 1x 10k/l sectional steel elevated tank 1x 5 k/l elevated Jojo tank not in use	
7	Roads and storm water drainage	3 200m <sup>2</sup> paved surface road in operational areas with concrete edge beams	
		40m concrete storm water channels	
		500m <sup>2</sup> gravel road for residential areas	



8	Standby Power Generators	Standby power generator	
		Automatic Mains Failure Panel	
		15 KVA UPS Units 2x	
9	Electrical Equipment	35	Light switches
		45	Socket outlets
		50	Light Fittings
		25	Isolators
		21	Distribution boards
		4	Stoves
10	External Lights	9	Perimeter lights (Bulk heads)
		4	Pole mounted lights
11	HVAC Equipment	17	Mid-wall A/C Split Unit
		5	Self-contained A/C Split Unit
		2	Air Curtain
12	Fire Protection Equipment	5	Fire Hose Reel
		15	Portable Fire Extinguishers
		70	Fire Signage
		1	Fire Booster Pump

### **PS 3.1 CORRECTIVE MAINTENANCE WORK**

#### **CIVIL REPAIR WORK**

##### *SCHEDULE No. A1: GENERAL*

##### *SCHEDULE No. A2: INSTALLATION C1: KOSIBAY: STRUCTURAL AND BUILDING*

- General structural repair work such as paintwork, replacement of damaged items, e.g. doors, locks, windows, etc. on all buildings
- Apply varnish to all exterior timber doors
- Do waterproofing on concrete roof at Kosi Bay
- Replace damaged sun louvres at Kosi Bay
- Painting of rafters and fascia boards
- Replace damaged roof sheeting at Kosi Bay
- Replace damaged flashings at Kosi Bay

##### *SCHEDULE No. A3: INSTALLATION C2: KOSIBAY: PLUMBING, DRAINAGE AND WET SERVICES*

- Replacement of damaged toilette seats
- Replacement of damaged toilette pans
- Service of cisterns and flush masters



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- Servicing of taps, valves, etc.
- Servicing and cleaning of geysers
- Cleaning and de-sludge of septic tanks
- Replace bottle traps at urinals and wash hand basins
- Provide drinking fountains for travellers at Kosi Bay port of entry
- Provide water meters at operational buildings at Kosi Bay

**SCHEDULE No. A4: INSTALLATION C3: KOSIBAY: FENCING, CLEANING, SITE  
KEEPING AND PEST CONTROL**

- Installation of ablution block equipment
- Damage repair to fences and gates
- Painting of palisade fence at the operational area of Kosi Bay
- Provide swing bins in operational area of Kosi Bay
- Provide additional dustbins for operational area of Kosi Bay
- Provide wall bins for ablutions at Kosi Bay
- Replacement of defective ablution block equipment
- Check and maintain gate motors

**SCHEDULE No. A5: INSTALLATION C4: KOSIBAY: BULK WATER SUPPLY SYSTEMS  
AND EXTERNAL WATER NETWORKS**

- Registration and licensing of Water Works at Kosi Bay
- Provide special pipe fittings at the elevated storage tank at Kosi Bay for connection to the services
- Service pumps and equipment
- Replace dosing unit
- Clean and sterilize tanks

**SCHEDULE No. A6: INSTALLATION C5: KOSIBAY: WASTEWATER AND SEWER  
NETWORKS**

- Rehabilitation of soak away
- Desludging of septic tanks
- Servicing \ repair of the waste and sewer network

**SCHEDULE No. A7: INSTALLATION C6: KOSIBAY: ROADS AND STORM WATER  
DRAINAGE**

- Road marking and maintenance of road signs
- Replacement of damaged paving in the commercial area of Kosi Bay
- Replacement of damaged concrete at control area
- Provide rubber speed humps at control area





**Tender no: H23/007AI**

- Provide stone pitching next to fence to eliminate erosion
- Repairs to storm water installation

#### **CIVIL MAINTENANCE WORK**

*SCHEDULE No. B.1: INSTALLATION C1.M: KOSIBAY: STRUCTURAL AND BUILDING*

*SCHEDULE No. B.2: INSTALLATION C2.M: KOSIBAY: PLUMBING, DRAINAGE AND WET SERVICES*

*SCHEDULE No. B.3: INSTALLATION C3.M: KOSIBAY: FENCING, CLEANING OF BUILDINGS AND SITE KEEPING*

*SCHEDULE No. B.4: INSTALLATION C4.M: KOSIBAY: BULK WATER SUPPLY SYSTEMS AND EXTERNAL WATER NETWORKS*

*SCHEDULE No. B.5: INSTALLATION C5.M: KOSIBAY: SEPTIC TANKS AND SEWER NETWORKS*

*SCHEDULE No. B.6: INSTALLATION C6.M: KOSIBAY: ROADS AND STORM WATER DRAINAGE*

#### **ELECTRICAL REPAIR WORK**

*SCHEDULE No. A8: INSTALLATION E1: KOSIBAY: BUILDING AND SITE ELECTRICAL*

- Servicing of the existing lights
- Bulk Lamp replacement
- Service distribution kiosks
- Lamp replacements
- Service distribution boards
- Replacement of faulty/damaged lights, light switches and socket outlets

*SCHEDULE No. A9: INSTALLATION E2: KOSIBAY: EXTERNAL LIGHTING*

- Servicing of the existing perimeter, street and area lights
- Bulk Lamp replacement
- Service distribution kiosks
- Lamp replacements
- Service distribution boards

*SCHEDULE No. A10: INSTALLATION E3: KOSIBAY: STANDBY POWER SYSTEMS*

- General servicing of the existing Standby Generators
- Provide diesel for the standby generators for the duration of the contract
- Provide electrical/mechanical fuel water separators for diesel tanks in order to remove moisture from diesel
- Provide emergency lights and first aid kits for plant rooms
- Replace starter batteries that is at the end of their life cycle



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**ELECTRICAL MAINTENANCE WORK**

*SCHEDULE No. B.7: INSTALLATION E1: KOSIBAY: BUILDING AND SITE ELECTRICAL*

*SCHEDULE No. B.8: INSTALLATION E2: KOSIBAY: EXTERNAL LIGHTING  
INSTALLATION*

*SCHEDULE No. B.9: INSTALLATION E3: KOSIBAY: STANDBY POWER GENERATOR  
INSTALLATION*

**MECHANICAL REPAIR WORK**

*SCHEDULE No. A11: INSTALLATION M1: KOSIBAY: HEATING, VENTILATION AND  
AIRCONDITIONING SYSTEMS*

- Servicing of all the existing air conditioners in the various buildings and houses
- Replacement of defective parts and equipment on air conditioners

*SCHEDULE No. A12: INSTALLATION M2: KOSIBAY: FIRE FIGHTING EQUIPMENT*

- Servicing of all firefighting equipment
- Servicing of fire detection system
- Provide firefighting and escape signage
- Compile fire plans for operational buildings

**MECHANICAL MAINTENANCE WORK**

*SCHEDULE No. B.10: INSTALLATION M1: KOSIBAY: HEATING, VENTILATION AND  
AIRCONDITIONING SYSTEMS*

*SCHEDULE No. B.11: INSTALLATION M2: KOSIBAY: FIRE FIGHTING EQUIPMENT*

The description of the Works given above is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract. All work will be performed according to the relevant specifications forming part of this Contract.

Approximate quantities of each type of work are given in the Bill of Quantities.



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### **PS 3.1.1 GENERAL ITEMS**

- Compile and supply a complete site plan of Kosibay Port of Entry Operational and Residential Area in Manguzi.
- Compliance to OHS Act Requirements and Construction Regulations 2014
- It is required of the Contractor to thoroughly study the Additional Specification SH: HIV / AIDS
- Requirements (PW 1544) of the Department that must be read together with and is deemed to be incorporated under this Section of the Bill of Quantities. Provision for pricing of HIV/AIDS awareness is made and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced, as the said items represent the only method of measurement and no additional items or extras to the Contract in this regard shall be entertained.
- Preventative Pest Control when instructed.
- Provide contingency measures during festive seasons when instructed.
- Training of EPWP Workers.

NOTE: A clear distinction will be made between the repair work to be done and the maintenance responsibilities applicable to each installation.

### **PS 3.1.3 OPERATION OF INFRASTRUCTURE FOR THE CONTRACT PERIOD**

The 36-month operation by means of routine maintenance will be as per the Port of Entry operational hours, 07:00 to 18:00, Monday to Sunday. Unless otherwise specified. Festive Season Operational hours may require additional hours not specified above.

### **PS 3.2 DEPARTMENT OF WATER AFFAIRS INCENTIVE BASED REGULATION MANAGEMENT AND ADMINISTRATION**

- Potable water quality tests to be performed by an approved SANAS laboratory on a monthly basis on the water delivered to the consumers for determinants specified.
- Potable water quality tests to be performed by an approved SANAS laboratory on a monthly basis on the water abstracted from boreholes for determinants specified.

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- Special testing required by the Engineer shall include remuneration for all water related analysis, in terms of either compliance monitoring, or required to determine risks. All operational sampling and monitoring shall be the Contractor's responsibility remunerated under Operation of an Installation.
- Full SANS 241 (Part 1) set of 34 x chemical, 8 x physical determinants and 6 x micro biological determinants for annual water quality risk assessment
- Compile and submit to the Engineer for approval a Water Safety Plan in terms of the requirements of SANS 241 (Part 2), inclusive of risk based operational - and compliance monitoring programmes. Water demand management, including loss reduction and water use efficiency business plan Compile and submit to the Engineer for approval a Wastewater Risk Abatement Plan, inclusive of risk based operational - and compliance monitoring programmes, storm/ground water ingress monitoring and control planning.
- Operation as per Technical Specification DH09 comprising Maintain spreadsheet/database with drinking water system process control and maintenance information, including but not limited to: system input volumes, individual water consumption, system pressures, compliance results, operational process control results, chemical consumption, hour meter readings, volt meter readings, ammeter readings, breakdowns, etc., for Kosibay Port of Entry and submission to the Client in a format similar to the Department of Water Affairs's incentive based regulation programmes.





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**PS 3.3 ROUTINE MAINTENANCE WORK**

Maintenance of each of the above installations will be the responsibility of the Contractor and will be evaluated on a monthly basis by the Engineer. The remuneration for maintenance work and responsibilities will be certified accordingly.

Details of the required routine- and preventative maintenance are given in the relevant technical specifications and in Additional Specification SA: General Maintenance.

**PS 4 CONSTRUCTION PROGRAMME**

When drawing up his construction programme, the Contractor shall take into account the time for completion for the repair work of each installation as indicated in Clause 42.1 as amended in Part 1 of the Contract Data.

If the programme submitted by the Contractor in terms of Clause 12 of the General Conditions of Contract, has to be revised because the Contractor is falling behind in his programme, he shall submit a revised programme of how he intends to regain lost time to ensure practical completion of repair work of each installation, and completion of the Works within the periods stipulated Part 1 of the Contract Data or within a granted extension of time and also to ensure that other contractors have access to the site to start their work on the dates as shown in the original programme. Proposals to increase the tempo of work must incorporate positive steps to increase production either by more labour and plant on the Site, or by using the available labour and plant in a more efficient manner.

Instructions by the Engineer to expedite progress shall not be the subject of additional compensation to the Contractor unless the instruction explicitly states that the Contractor is entitled to additional compensation and cites the amount of such compensation or the basis on which it is to be determined.

Failure on the part of the Contractor to submit or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps as set out in Clause 55 of the General Conditions of Contract as amended in Part 1 of the Contract Data.

The approval by the Engineer of a programme shall have no contractual significance other than that the Engineer will be satisfied if the work is carried out according to the programme. The said approval shall not limit the right of the Engineer to instruct the Contractor to vary the programme if necessary. The Contractor is also referred to Clause PS 8 and Clause PS 12 when preparing this programme.

**NOTE:** For reasons of limited access, it may not be possible to carry out the repair work on some of the installations in parallel with repair work on other installations. The repair work of some of the installations shall follow sequentially as indicated in the specifications.

The Contractor shall organise his work in such a manner as to cause the minimum inconvenience to the User Department's personnel and operations.

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**PS 5 SITE FACILITIES AVAILABLE**

**PS 5.1 CAMPSITE AND STORE ROOM**

a. Campsite

A Site Establishment area is available and will be indicated to the Contractor. An area for the campsite was developed by the previous Contractor and the infrastructure and facilities can be utilised for the new Contract but must be repaired and maintained during the Contract to ensure that the facility maintains an esthetical value for the Port of Entry.

b. Store room

None of the existing service buildings may be used for storage. The Contractor must provide his own storeroom facilities for the duration of the Contract.

The existing and new facilities must comply with the South African National Building Regulations and Standards in all aspects.

**PS 5.2 WATER, ELECTRICITY AND SEWERAGE**

a. Water supply

The Contractor must make his own arrangements for water supply. Water will be available at specific points not necessarily adjacent to working areas. Water will be available free of charge but wastage will not be tolerated. The Contractor must supply his own standard fittings to couple up at the points where water is available.

b. Electrical power supply

Electrical power supply is available on the Site and will be free of charge. The Contractor must make his own arrangements for a connection to the electrical power supply. The Contractor will be responsible, at his own cost, for the distribution of electricity for construction and domestic use.

c. Sewerage connection

Refer to Subclause PSA 4.2 in connection with toilet requirements. Chemical toilets shall be used.

**NOTE:** The Employer shall not be held responsible for any losses or inconvenience due to a disruption in the supply of water and/or electricity.

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### **PS 5.3      PARKING FACILITIES**

Parking facilities are available on the Site.

### **PS 6      SITE FACILITIES REQUIRED FOR THE ENGINEER**

#### **PS 6.1      GENERAL**

The Contractor shall provide on the Site, for the duration of the repair phase and for the exclusive use of the Engineer and/or his Representative (as applicable), the various facilities described hereunder. The duration of the repair phase is stated in Part 1 of the Contract Data. All such facilities shall be provided promptly on the commencement of the Contract and failure on the part of the Contractor to provide any facility required in terms of this specification shall constitute grounds for the Engineer to withhold payment of the Contractor's Preliminary and General items until the facility has been provided or restored, as the case may be.

#### **PS 6.2      OFFICE ACCOMMODATION**

The Contractor shall provide on Site one (1) office for the exclusive use of the Engineer. Such office(s) shall comply with and be furnished in accordance with the requirements of Subclause 3.2 of SABS 1200 AB. The Contractor shall maintain the office(s) in accordance with the requirements of Subclause 5.2 of SABS 1200 AB.

Irrespective the type of material of which an office is constructed, the Contractor shall ensure that the temperature inside the office is always between 20°C and 24°C.

Such office accommodation shall be provided within the Contractor's site establishment facilities.

#### **PS 6.3      CARPORTS**

The Contractor shall provide on Site one (1) carport for the exclusive use of the Engineer, in accordance with requirements of Subclause PSAB 3.3 of the Project Specifications.

#### **PS 6.4      SITE MEETING VENUE**

The Contractor shall provide within its own site establishment facilities (or arrange the use of the Department of Public Works facilities), a suitably furnished office or other venue capable of comfortably accommodating a minimum of six (6) persons at site meetings. The Engineer shall be allowed free use of such venue for conducting any other meetings concerning the Contract at all reasonable times.



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**PS 6.5 SURVEY EQUIPMENT AND ASSISTANTS**

- a. Survey equipment  
No survey equipment is required

**PS 6.6 TELEPHONE FACILITIES**

The Contractor shall, in accordance with the requirements of Subclause PSAB 4.1 of the Project Specifications, provide on-site, the following telephone facilities for the use of the Engineer and his Representative:

- a. Cellular telephones
- Number of cellular telephones required for a period of 36 months: two (2).
  - The average call cost at business rates (over the 36-month contract period) shall not exceed R3500,00 per month.

**PS 6.7 COMPUTER FACILITIES**

The Contractor shall provide computer facilities together with the specified software installed, for the exclusive use of the Engineer and his staff, in accordance with the requirements of SANS 1200 AB (as amended).

**PS 6.8 ELECTRICITY SUPPLY FOR THE ENGINEER**

All electricity supply to the Engineer's office, whether provided by the Contractor by way of a reticulated supply from a local authority or by way of on-site generators, shall be regulated by the Contractor to within limits such as to prevent damage occurring to any electrical plant and equipment provided by the Contractor or by the Engineer, as a result of fluctuations in the electrical current supplied.

**PS 6.9 HOUSING FOR ENGINEER'S REPRESENTATIVE**

The Engineer will provide housing for the Engineer's representative. The housing and the relevant services and local authority rates and charges shall be paid for by the Contractor on the written instruction of the Engineer, from an amount included in Section 1200 A of the Bill of Quantities for this purpose.

The Contractor is entitled to a percentage of the value of each payment to the Engineer to cover his expenses in this regard. (See payment item PSA 8.6)





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## **PS 7                    FEATURES REQUIRING SPECIAL ATTENTION**

### **PS 7.1                INSTALLATIONS AT FACILITIES**

The installations at all facilities shall be carefully checked for damage and all damages shall be listed and discussed with the Engineer before commencement of repair and maintenance work. The Contractor shall present copies of all correspondence in this regard for discussion at the following site meeting.

### **PS 7.2                SECURITY**

a.     **Restrictions on movement and limited access**

The Contractor's personnel, vehicles and equipment will be restricted to areas of construction only. The Contractor shall comply with any requirements that the Engineer may have in this regard and shall take note that for security reasons the access to some areas, may be limited.

b.     **Prohibition on taking of photographs**

The Contractor's attention is drawn to the Defence Act, 1957 (Act No 44 of 1957) and the Correctional Services Act, 1998 (Act No 111 of 1998) which clearly state that the taking of photographs is prohibited and that even the possession of a camera on Site is an offence. Permission to take photographs of damaged equipment may be arranged by the Engineer.

c.     **Security check on personnel**

The Employer may require the Contractor to have his personnel or a certain number of them security-classified, if so required by any competent authority.

In the event of the Employer or any competent authority requiring the removal of a person or persons from the site for security reasons, the Contractor shall do so forthwith and the Contractor shall thereafter ensure that such person or persons are denied access to the site and/or to any documents or information relating to the work. In such circumstances the Contractor shall indemnify the Employer and the Engineer and shall hold the Employer and the Engineer harmless against any and all claims of whatever nature arising.

d.     **Access cards to security areas**

The Contractor shall supply access cards (laminated cards containing colour photograph, name, surname, ID number etc.) for his security-cleared personnel and employees who work within such an area. The Contractor must comply with any regulations or instructions issued from time to time, concerning the safety of persons and property, by the Department of Public Works or SA Police services.

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### **PS 7.3 SITE TO BE KEPT CLEAN**

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner, and shall keep the Site free from debris and obstructions.

All redundant materials, rubbish and waste arising from the work must be removed from the Site at the Contractor's cost and the site and buildings left clean and tidy.

### **PS 7.4 FACILITIES TO OTHER CONTRACTORS**

In addition to the requirements of Clause 18 of the General Conditions of Contract the Contractor must make allowances for other Contractors on the Site. This may involve adapting his programme to accommodate the work of other contractors and ensuring access to their sites along prescribed routes over the Site of this Contract.

### **PS 7.5 SUBCONTRACTORS**

In addition to the requirements of Clause 6 of the General Conditions of Contract as amended in Part 1 of the Contract Data, the Contractor shall be responsible for work carried out by subcontractors on his behalf. The Engineer will not liaise directly with such subcontractors. Problems related to payments, programming, workmanship, etc., shall be the responsibility of the Contractor and the subcontractor, and the Engineer will not become involved.

### **PS 7.6 SANS SPECIFICATIONS AND CODES OF PRACTICE**

All reference in this document to South African National Standards specifications and codes of practice, or any other standard specifications or codes of practice, including National Building Regulations, shall be deemed to be references to the latest issues of such specifications and codes.

### **PS 7.7 MATERIALS**

The monthly payment for materials brought onto the Site will only be applicable for repair work and not for maintenance work.

Unless otherwise instructed in writing by the Engineer, all proprietary materials are to be used, mixed, applied, fixed, etc., strictly in accordance with the manufacturer's recommendations.



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**PS 7.8 BORROW PITS**

There will be no designated borrow pits. The Contractor shall utilise the material on Site or import material from commercial sources.

**PS 7.9 PROTECTION OF FURNITURE AND EQUIPMENT**

Most of the work to be done inside buildings will be carried out in places where there is furniture and other equipment.

The Contractor shall be responsible for moving the furniture and equipment in order to provide working space for his personnel. The programme shall be drawn up in such a way as to keep the movement of furniture and equipment to the very minimum and the Contractor shall be solely responsible for any damage to furniture or equipment.

**PS 7.10 TESTING AND QUALITY CONTROL**

The Contractor shall engage the services of an approved independent laboratory or other institution as applicable for quality testing, to ensure that his work complies with the Specifications.

No separate payment will be made for such testing, the cost of which will be deemed to be included in the Contractor's rates bid for the items of work that require testing in accordance with the Specifications.

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality-control system and provide experienced engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times.

The cost of supervision and process control, including testing carried out by the Contractor, will be deemed to be included in the rates bid for the related items of work.

The Contractor's attention is drawn to the provisions of the various Specifications regarding the minimum frequency of testing required. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion and submission of every part of the work to the Engineer for examination, the Contractor shall furnish the Engineer with the results of the relevant tests to indicate compliance with the Specifications.





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**PS 7.9 CALL CENTRE**

A call center has been established by the Employer to log, route and monitor incoming breakdown calls.

The call center is administered centrally and is responsible for the routing of breakdown calls on each contract at the installation. The call center is operational 24 hours per day, 365 days per year. The Contractor shall be responsible for the fixed and variable call costs incurred by the call center for a relevant contract. The Contractor shall be re-reimbursed from an amount included in the Bill of Quantities, on written instruction of the Engineer. Operating costs of the call center will be calculated, based on the number of breakdowns logged per contract, and invoiced on a monthly basis.

The Contractor is entitled to a percentage of the value of each payment in relation to the call center to cover his expenses in this regard (see payment item PSA 8.12).

**PS 8 CERTIFICATES OF PAYMENT**

The statement to be submitted by the Contractor in terms of Clause 49 of the General Conditions of Contract shall be prepared in accordance with the standard payment certificate prescribed by the Engineer and shall comprise at least two sets of A4-size paper copies.

All costs for the preparation and submission of the statements shall be borne by the Contractor.

**PS 9 CONSTRUCTION IN RESTRICTED AREAS**

Working space in certain areas may be restricted. The construction method used in these restricted areas largely depends on the Contractor's Plant. However, the Contractor must note that measurement and payment will be according to the specified cross-sections and dimensions irrespective of the method used, and that the rates and prices submitted will be deemed to include full compensation for difficulties encountered while working in restricted areas. Neither extra payment nor any claim for payment due to these difficulties will be considered.

**PS 10 DRAWINGS**

The Contractor will, in terms of Clause 13 of the General Condition of Contract, be provided free of charge with three paper prints of each drawing issued to him.

All information in the possession of the Contractor that is required by the Engineer's representative to complete the as-built drawings must be submitted to the Engineer's representative before a Certificate of Completion will be issued.

Only figured dimensions shall be used and drawings shall not be scaled unless required by the Engineer. The Engineer will provide the dimensions that may have been omitted from the Drawings.





**PS 11** LEGISLATION

a. **Changes in legislation**

Reference in the General Conditions of Contract and in any other standard document forming part of this Contract to legislation which has been amended or superseded by other legislation since the most recent publication of such standard document, shall be deemed to be a reference to the amended or replacement legislation.

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Such amended or replaced legislation shall be applicable during the Contract Period provided the amendment or replacement occurred more than 28 days before the closing date for bids in terms of Clause 46.4 of the General Conditions of Contract as amended in Part 1 of the Contract Data.

b. **The Occupational Health and Safety Act**

The Contractor shall be required to comply with the Occupational Health and Safety Act, 1993: Construction Regulations, 2003 as promulgated in Government Gazette No 25207 and Regulation Gazette No 7721 of 18 July 2003. Non-compliance with these regulations, in any way whatsoever, will be adequate reason for suspending the Works.

The proposed type of work, materials to be used and hazards likely to be encountered on this Contract are detailed in the Scope of Work, Pricing Data and Drawings. The Employers' health and safety specifications (subclause 4(1)) of the regulations will be issued separately.

The Contractor shall in terms of subclause 5(1) provide a comprehensive health and safety plan detailing his proposed compliance with the regulations, for approval by the Employer.

The Contractor shall at all times be responsible for full compliance with the approved plan as well as the Construction Regulations and no extension of time will be considered for delays due to non-compliance with the abovementioned plan or regulations.

A payment item is included in the Bill of Quantities to cover the Contractor's cost for compliance with the OHS Act and the abovementioned Construction Regulations 2003.

**PS 12 INSURANCE AMOUNTS**

The amounts for which the Contractor must insure the Works in terms of Clause 35 of Part 1 of the Contract Data are stated in the Agreement.

**PS 13 TIMES FOR COMPLETION**

Times for completion of repair work to installations as well as the maintenance down-time for different types of breakdowns are given under Clause 42.1 of Part 1 of the Contract Data. The time for completion will start on the date of access to an installation.



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**PS 14 PRACTICAL COMPLETION**

- a. The Contractor shall be entitled in terms of Clause 51.1 of the General Conditions of Contract to receive a Certificate of Practical Completion when the Works to be executed under the Contract have been completed to the stage where:
  - all materials which are required to be replaced have been replaced and installed to the satisfaction of the Engineer; and
  - all repair works have been completed.
- b. The Engineer shall issue to the Contractor and the Employer a Certificate of Completion in terms of Clause 51.4 of the General Conditions of Contract except where a thirty-day commissioning period, as stated in paragraph (c) below, is applicable.
- c. Where indicated at the end of this paragraph, the issuing of a Certificate of Practical Completion for a certain installation will be followed by a thirty-day commissioning period. The tasks of the Contractor during the thirty-day commissioning period are described in Additional specification SC: General Decommissioning, Testing and Commissioning Procedures. After the completion of the thirty-day commissioning period to the satisfaction of the Engineer, a certificate of completion will be issued to the Contractor as described in Clause 51.4 of the General Conditions of Contract.

**PS 15 PENALTIES**

Penalties in terms of Clause 43.1 of the General Conditions of Contract for late completion of repair work to different installations are given under Clause 43.1 of Part 1 of the Contract Data. Payment reductions for exceeding the maintenance down-time for different types of breakdowns are given under the applicable pay items in the Bill of Quantities for Additional specifications SA: General Maintenance. Penalties will run concurrently where applicable.

- a. Penalty for failing to meet undertakings and/or conditions pertaining to Targeted Procurement for the award of points

If the bid adjudication points awarded to the Contractor are found to be based on incorrect or false information or the conditions pertaining to the award of points are not met and the Contractor fails to substantiate that such failure is due to a reason acceptable to the Employer (as being) beyond the Contractor's control, the Contractor shall be liable for and pay to the Employer, an amount determined in accordance with clause 2 and subject to clause 1 both of the Works Information, Part 2 of the Conditions of Bid.

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b. Payment reduction for non-performance

If the Contractor shall fail to rectify a fatal breakdown, an emergency maintenance breakdown, an ordinary maintenance breakdown and damage breakdown within the time as stipulated in Additional Specifications SA: General Maintenance, the Contractor shall be liable to the Employer for the sum/sums stated in the Bill of Quantities for Additional Specification SA as a payment reduction for every hour/day down-time counting from the hour/day the breakdown was reported to the Contractor until the day it was repaired. These payment reductions will be cumulative and will run concurrently.

Where indicated above that the money will be recovered from the Contractor by means of payment reductions, the fixed negative amounts in the rate column of the Bill of Quantities will be used to reduce payments due to the Contractor.

The imposition of such payment reductions shall not relieve the Contractor from his obligation to complete the Works or from any of his obligations and liabilities under the Contract.

c. Application of penalties to be accumulative

The imposition of all penalties in terms of this clause shall be accumulative and shall not relieve the Contractor from his obligation to complete the Works or from any of his obligations and liabilities under the Contract.

**PS 16 NON-WORKING DAYS AND HOURS**

Whenever any special non-working days stated in Clause 1.6 and Clause 38 of Part 1 of the Contract Data fall within the days allowed or stipulated in the Contract in terms of Clause 1.6 of Part 1 of the Contract Data, such special non-working days shall also be excluded from the calculation of the number of working days concerned.

The Contractor shall not work on any statutory public holidays or on any public holidays declared by the Government to be statutory non-working days, except for work related to repair fatal and emergency breakdowns which influences the functionality of any of the installations.

Working hours might be limited and the Contractor shall work in close cooperation with the User Department and Engineer in this regard. Working hours for the different installations are indicated at the end of this clause where applicable.

The Engineer shall be entitled at any time during the Contract, to vary the normal working hours specified in the Bid documents, including increasing or decreasing the total number of hours per day during which the Contractor may execute the Works or specific portions thereof.

If any variation by the Engineer of the normal working hours specified in the Bid Documents should result in an increase or a decrease in the total number of hours per week during which the Contractor is permitted to execute the Works or any particular portions of Works, then the time allowed in the Contract for the completion of the respective part of the Works to which the varied normal working hours apply shall be adjusted proportionately in relation to:

- a. the remaining time allowed for completion of the specific part or parts of the Works; and
- b. the extent of the variation in the total normal working hours per week.





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**3.5.2 AMENDMENTS TO THE STANDARD AND PARTICULAR SPECIFICATION:**

**Insert amendments**

**C3.5.3 PARTICULAR SPECIFICATIONS:**

**PSA 1 SCOPE**

**REPLACE SUBCLAUSE 1.1 WITH THE FOLLOWING:**

"1.1 This specification covers requirements, principles and responsibilities of a general nature that are normally applicable to all Civil Engineering Contracts, as well as the requirements for the Contractor's establishment on the Site."

**PSA 2 INTERPRETATIONS**

**PSA 2.3 DEFINITIONS**

(a) General

**ADD THE FOLLOWING DEFINITIONS:**

"General conditions: The General Conditions of Contract specified for use with this Contract, and the Contract Data.

Specified: As specified in the standardised and standard specifications, the Drawings or the Scope of Work.

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Permanent Works: as defined in Clause 1.1.17 of the General Conditions of Contract shall for the purpose of this Contract, be regarded as the repair work and maintenance work as defined in Subclause SA 02.06 of Additional Specification SA: General Maintenance."

(c) Measurement and payment

REPLACE THE DEFINITIONS FOR "fixed charge", "time-related charge" AND "value-related charge" WITH THE FOLLOWING:

"Fixed charge: A charge that is not subject to adjustment on account of variation in the value of the Contract price or the Contract Time of Completion.

Time-related charge: A charge, the amount of which varies in accordance with the Time for Completion of the repair work, adjusted in accordance with the provisions of the Contract.

Value-related charge: A charge, the amount of which varies pro rata with the final value of the measured repair work executed and valued in accordance with the provisions of the Contract."

**PSA 2.4 ABBREVIATIONS**

(a) Abbreviations relating to standard documents

ADD THE FOLLOWING ABBREVIATION:

"CKS: SABS Co-ordinating Specification."

**PSA 3 MATERIALS**

**PSA 3.1 QUALITY**

ADD THE FOLLOWING:

"All manufactured materials supplied shall be new materials unless the contrary is specified. All materials specified in accordance with SABS Specifications shall bear the SABS mark, whether so specified or not."

ADD THE FOLLOWING SUBCLAUSE:

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**PSA 3.3 ORDERING OF MATERIALS**

The quantities set out in the Bill of Quantities have been carefully determined from calculations based on data available at the time and should therefore be considered to be approximate quantities only. Before ordering materials of any kind the Contractor shall check with the Engineer whether or not the scope of the work for which the materials are required is likely to change substantially. No liability or responsibility whatsoever shall be attached to the Employer for materials ordered by the Contractor except when ordered in accordance with written confirmation issued by the Engineer."

**PSA 4 PLANT**

**PSA 4.2 CONTRACTOR'S OFFICES, STORES AND SERVICES**

ADD THE FOLLOWING PARAGRAPH BEFORE THE FIRST PARAGRAPH:

"The Contractor's construction camp shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. The camp shall always be kept in a neat and orderly condition.

No personnel may reside on the Site. Only one night-watchman may be on the Site after hours."

ADD THE FOLLOWING TO THE SECOND PARAGRAPH:

"One chemical toilet per 10 workmen shall be provided and must be screened from public view and its use shall be enforced.

The Contractor shall, where applicable, make the necessary arrangements for the removal of night soil."

**PSA 5 CONSTRUCTION**

**PSA 5.4 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES**

REPLACE THE HEADING AND THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

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## **PSA 5.4 LOCATION AND PROTECTION OF EXISTING SERVICES**

### **PSA 5.4.1 Location of existing services**

Before underground or excavation work is carried out, the Contractor shall ascertain the presence and position of all services likely to be damaged or interfered with by his activities. He shall obtain up-to-date plans from the Engineer for this purpose, showing the position of services in the area where he intends to work. As services can often not be reliably located from such plans, the Contractor shall determine the exact position of such services by means of suitable detecting equipment and afterwards by careful hand excavation where necessary in order to expose the services at the positions of possible interference by his activities. This procedure shall also be followed in respect of services not shown on the plans but believed to be present.

All such services, the positions of which have been located at the critical points, shall be designated as 'known' services and their positions shall be indicated on a separate set of Drawings, a copy of which shall be furnished to the Engineer.

While he is occupying the Site, the Contractor shall be liable for all damage caused by him to known services as well as for consequential damage, whether caused directly by his operations or by the lack of proper protection.

### **PSA 5.4.2 Protection during repair and maintenance work**

The Contractor shall exercise all the necessary care to prevent damage to known services during repair and maintenance work. Where applicable, major excavating equipment and other Plant shall not be operated dangerously close to these services. Where necessary, excavation in close proximity to these services shall be carefully carried out with suitable hand tools, excluding picks wherever their use could damage the services. No additional payment will apply to such more difficult work.

Services left exposed shall be suitably protected from damage.

### **PSA 5.4.3 Alterations and repairs to existing services**

Unless the contrary is clearly specified or ordered, the Contractor shall not carry out alterations to existing services. When this is necessary, the Contractor shall inform the Engineer, who will either make arrangements for such work to be executed by the owner of the service, or instruct the Contractor to make such arrangements himself.

When existing services are damaged by the Contractor, he shall immediately inform the Engineer, or when this is not possible, the relevant authority, and obtain instructions as to who should carry out repairs. In urgent cases the Contractor shall take the necessary steps to minimise damage to and interruption of the service. No repairs of telecommunication cables or electric power lines and cables shall be attempted.





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The Employer will accept no liability for damages due to a delay in having such alterations or repairs effected. The Contractor shall provide all reasonable opportunity, access and assistance to persons carrying out alterations or repairs of existing services."

ADD THE FOLLOWING SUBCLAUSE:

**"PSA 5.9 SITE MEETINGS**

The Contractor will be required to attend regular site meetings, normally held once a month to discuss general progress, quality of work, problems, claims, payments, etc., but not matters concerning the day-to-day running of the Contract."

**PSA 6 TOLERANCES**

ADD THE FOLLOWING SUBCLAUSE:

**"PSA 6.4 GENERAL**

No guarantee is given that the full specified tolerances will be available independently of each other, and the Contractor is cautioned that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the work.

Except where the contrary is specified or when clearly not applicable, all quantities for measurement and payment shall be determined from the 'authorised' dimensions. These are specified dimensions or those shown on the Drawings or, if changed, as finally prescribed by the Engineer, without any allowance for the specified tolerances. Except if otherwise specified, all measurements for determining quantities for payment will be based on the 'authorised' dimensions.

If the work is therefore constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, quantities will be based on the 'authorised' dimensions regardless of the actual dimensions to which the work has been constructed.

When the work is not constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the Engineer may nevertheless, at his sole discretion, accept the work for payment. In such cases no payment shall be made for quantities of work or material in excess of those calculated for the 'authorised' dimensions, and where the actual dimensions are less than the 'authorised' dimensions minus the tolerance allowed, quantities for payment shall be based on the actual dimensions as constructed."



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**PSA 8 MEASUREMENT AND PAYMENT**

**PSA 8.1 MEASUREMENT**

**PSA 8.1.2 Preliminary and general items or section (for repair phase only)**

**PSA 8.1.2.2 Bid sums**

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"The Contractor's bid sums under items PSA 8.3 and PSA 8.4 shall collectively cover all charges during the repair phase for

- risks, costs and obligations in terms of the General Conditions of Contract, the Contract Data and of this Standardised Specification, except where provision is made in these Project Specifications to cover compensation for any of these items;
- head-office and site overheads and supervision;
- profit and financing costs;
- expenses of a general nature not specifically related to any item or items of permanent or temporary work;
- providing facilities on Site for the Contractor's personnel, including offices, storage facilities, workshops, ablutions, for providing services such as water, electricity, sewerage, sewage and rubbish disposal, for access roads and all other facilities required, as well as for the maintenance and removal on completion of the Works of these facilities and the cleaning-up of the camp site on completion of the Works;
- providing facilities for the Engineer and his staff as specified in SABS 1200 AB and in these Project Specifications"



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## **PSA 8.2 PAYMENT**

### **PSA 8.2.1 Fixed-charge and value-related items**

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"Payment of fixed charges in respect of item 8.3.1 will be made as follows:

Eighty per cent (80%) of the sum bid will be paid when the facilities have been provided and approved. The remaining 20% will be paid when the repair works have been completed, the facilities have been removed and the camp site has been cleared and cleaned.

Payment for the sum bid under item 8.3.2 will be made in three separate instalments as follows:

- (a) The first instalment, which is 40% of the sum, will be paid when the Contractor has fulfilled all his obligations to date under this Standardised Specification, the General Conditions of Contract and the Contract Data, and when the value of work certified for payment, excluding materials on Site and payments for preliminary and general items, is equal to not less than 5% of the total value of the repair work listed in the Bills of Quantities.
- (b) The second instalment, which is 40% of the sum, will be made when the amount certified for payment, including retention monies but excluding this second instalment, exceeds 50% of the repair work.
- (c) The final payment, which is 20% of the sum, will be made when the repair works have been certified as completed and the Contractor has fulfilled all his obligations to date under this Standardised Specification, the General Conditions of Contract and the Contract Data.

Should the value of the measured repair work finally completed be more or less than the Bid Sum for repair work, the sum bid under item 8.3.2 will be adjusted up or down in accordance with the provisions of Clause 50 of the General Conditions of Contract as amended in Part 1 of the Contract Data, and this adjustment will be applied to the third instalment. No adjustment will apply to item 8.3.1 in respect of variations in the value of work done or after the finally authorised Time for Completion."

Note: Payment under item 8.3.2 will only be applicable to repair work.



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**PSA 8.2.2 Time-related items**

REPLACE THE CONTENTS OF THIS SUBCLAUSE WITH THE FOLLOWING:

"Subject to the provisions of Subclauses 8.2.3 and 8.2.4, payment under item 8.4.1 (time-related item) will be made monthly in equal amounts for each installation, calculated by dividing the sum bid for the item by the repair phase period for the installation in months, provided always that the total of the monthly amounts so paid for the item is not out of proportion with the progress of the work on the installation as a whole.

Should the Engineer grant an extension of Time for Completion of the repair works on the installation, the Contractor will be entitled to an increase in the sum bid for the time-related item, which increase shall be in the same proportion to the original sum bid as the extension of time is to the original Time for Completion of the repair works.

Payment of such increased amounts will be deemed full compensation for all additional time-related preliminary and general costs due to the circumstances pertaining to the extension of time granted for an installation. The length of the repair phase for each installation is indicated in Part 1 of the Contract Data.

In the Bills of Quantities separate provision is made for time-related items for each installation individually. Time-related payment for an installation shall only be made when the repair work on the installation is in progress and shall end when the time for completion or an extension of time granted by the Engineer expires. When repair work on more than one installation is in progress, time-related payment will be made for each installation and the conditions as stated above shall apply to each installation individually."

**PSA 8.3 BILLED FIXED-CHARGE AND VALUE-RELATED ITEMS**

REPLACE THE ITEMS WITH THE FOLLOWING:

**"PSA 8.3.1 Fixed preliminary and general charges Unit : Sum**

**PSA 8.3.2 Value-related preliminary and general charges Unit : Sum**

The sums bid shall include full compensation for all fixed and value-related preliminary and general charges as described in Subclause PSA 8.1.2.2. Payment will be made as described in Subclause PSA 8.2.1.\*





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**PSA 8.4 BILLED TIME-RELATED ITEMS**

REPLACE THIS ITEM WITH THE FOLLOWING:

**"PSA 8.4.1 Time-related preliminary and general charges:**

(a) Kosi Bay Port of Entry

Unit: Month

The sums bid shall include full compensation for all time-related preliminary and general charges as described in Subclause PSA 8.1.2.2. Payment will be made as described in Subclause PSA 8.2.2.

NOTE: The total amount bid for items PSA 8.3.1, PSA 8.3.2 and PSA 8.4.1 shall not exceed 15% of the total amount bid for repair work, excluding value-added tax.

**PSA 8.6 PRIME COST ITEMS**

REPLACE THIS ITEM WITH THE FOLLOWING:

**"PSA 8.6 PRIME COST SUMS:**

(a) Housing for Engineer's representative

Unit: PC Sum

(b) Charge required by Contractor on subitem (a) above

Unit: %

The Prime Cost Sum provided under subitem (a) in the Bill of Quantities will be expended in accordance with Clause 45.2 of the General Conditions of Contract.

The bid percentage under subitem (b) will be paid to the Contractor on the value of each payment made to the Engineer.



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**PSA 8.8 TEMPORARY WORKS**

REPLACE ITEM 8.8.4 WITH THE FOLLOWING:

**"PSA 8.8.4 Location and protection of existing services:**

**PSA 8.8.4.1 Provision of detecting devices for:**

- |     |                             |            |
|-----|-----------------------------|------------|
| (a) | Water and sewer pipes       | Unit : Sum |
| (b) | Electrical and other cables | Unit : Sum |

The bid sums shall cover the cost of providing and operating suitable equipment for as long as it is needed to locate all the existing services likely to be affected by the construction activities. Alternatively, an approved specialist firm may be employed to carry out the work.

**PSA 8.8.4.2 Hand excavation necessary for locating and exposing existing services in all material:**

- |     |                    |          |
|-----|--------------------|----------|
| (a) | In roadways        | Unit: m3 |
| (b) | In all other areas | Unit: m3 |

The rates shall cover the cost of excavating by means of hand tools within authorised dimensions, for all precautionary measures to protect the services from damage during excavation and backfilling, and for subsequent backfilling and compacting. Compaction of material in all areas except in roadways shall be to 90% of the modified AASHTO density.

The rate for hand excavation in roadways shall include compensation for compacting excavated or selected backfill material to 93% of modified AASHTO density.

The bid rates shall also include for keeping excavations safe, for dealing with surface and subsurface water, for removing surplus excavated material from the Site, for transporting all material, and for supplying adequate supervision during both excavation and backfilling operations."



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ADD THE FOLLOWING ITEMS:

**"PSA 8.9 ADDITIONAL TESTS:**

- (a) Additional tests required by the Engineer Unit : Sum
- (b) Attendance and profit Unit : %

An amount has been allowed in the Bill of Quantities under subitem (a) to cover the cost of additional tests required by the Engineer. The Engineer will have the sole authority to spend the amount or part thereof.

The bid percentage under subitem (b) will be paid to the Contractor on the value of each payment made to the testing authority.

Note in connection with subitem (a):

The Contractor is responsible for both the cost of normal testing as described in Subclause PS 8.10 in portion 1 of the Project Specifications and for the cost of any additional test that indicates that the Specifications have not been complied with.

**PSA 8.10 SECTIONAL FENCING FOR THE PROTECTION OF THE WORKFORCE**

Unit : m

The bid rate shall include full compensation for the supply, delivery, initial erection and finally removal from the site of the sectional fencing. The cost to move the fencing will not be paid for separately but shall be deemed to be included in the rate bid.

**PSA 8.11 MAINTENANCE MATERIAL:**

Supply and deliver maintenance material to the site:

- (a) Description of type of service for which material is needed:
- (i) Description of specific material Unit: litre, m<sup>2</sup>, m, number
- (ii) Etc., for other types of material.
- (b) Etc. for other types of service.

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The unit of measurement shall be the litre, square metre, metre or number as applicable to each item ordered on the written instructions of the Engineer.

The bid rates shall include full compensation for supplying and delivering to the maintenance store(s) of the Employer on the Site of the Works each item as billed and shall include for all labour, material, waste and, transport.

A complete book keeping system with delivery notes and order "invoices" shall be kept by the Contractor and the cost thereof shall be deemed to be included in the rates bid for the various items.

The rates bid will be fixed for the full duration of the repair phases and shall be applicable to any quantity "ordered" irrespective of size, contents, volume of container or the number. The actual square metre size of the "ordered" items will be calculated to two decimal points for payment purposes. No "rounding-off" to the nearest square metre quantity will be allowed. It is expected that the maintenance material will be ordered in small quantities throughout the duration of the Contract."

**PSA 8.12 CALL CENTRE**

- |     |  |           |
|-----|--|-----------|
| (a) | Call center operating costs for breakdown calls logged | Unit: Sum |
| (b) | Charge required by contractor on subitem (a) above     | Unit: %   |

An amount has been allowed in the Bill of Quantities under subitem (a) to cover the cost of administrating breakdown calls logged through the call centre. The call centre will submit to the contractor a monthly invoice for breakdown calls logged and monthly subscription . The

Contractor will be responsible for prompt payment of the invoice received from the call centre.

The bid percentage under subitem (b) will be paid to the Contractor on the value of each payment pertaining to the call centre to cover his expenses in this regard.

Payment to the Contractor will only become due upon submission of proof of payment to the call centre.

**PSA 8.13 COMPLIANCE WITH OHS ACT AND CONSTRUCTION REGULATIONS 2003**

**Unit: sum**

The bid sum shall include full compensation to the Contractor for compliance with all the requirements of the OHS Act and the Construction Regulations 2003 at all times during the repair and maintenance phase, as described in PS 13 of Portion 1 of the Project Specifications. The successful bidder shall provide the Engineer with a complete breakdown of this bid sum.





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This sum will be paid to the Contractor in equal monthly amounts for the entire duration of the contract period.

**PSAB ENGINEER'S OFFICE**

**PSAB 3 MATERIALS**

**PSAB 3.1 NAMEBOARDS**

REPLACE THE FIRST SENTENCE OF SUB-CLAUSE 3.1 OF SANS 1200AB WITH THE FOLLOWING:

"The Contractor shall supply and erect at locations approved by the Engineer, the number of contract nameboards specified in Portion 1 of the Project Specifications, which, unless otherwise specified in the Contract, shall comply with the recommendations for the standard board of the South African Association of Consulting Engineers, with regards to size, painting, decorating and detail, and the requirements described hereunder."

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**PSAB 3.2 OFFICE BUILDING(S)**

REPLACE THE WORDS: "as scheduled" IN PARENTHESIS IN THE FIRST LINE OF SUBCLAUSE 3.2 OF SANS 1200 AB WITH: "as specified in Portion 1 of the Project Specifications";

AND REPLACE SUBCLAUSE 3.2(j) OF SANS 1200 AB WITH THE FOLLOWING:

- "(j) a heater and fan / air-conditioning unit both of such capacity that the inside of the office(s) is always at a temperature of between 20°C and 24°C."

ADD THE FOLLOWING SUBCLAUSE IN CLAUSE 3:

**"PSAB 3.3 CAR-PORT**

The Contractor shall construct the number of carports indicated in Portion 1 of the Project Specifications, for the sole use of the Engineer and his staff. Each car-port shall be constructed so that the vehicle parked under it is always protected against the direct rays of the sun. The carport area shall be at least 36 m<sup>2</sup> and the floor shall be covered with a layer of crushed stone to alleviate dusty and muddy conditions. The carport(s) shall be positioned so as to provide easy and convenient access to the Engineer's office."

**PSAB 4 PLANT**

**PSAB 4.1 TELEPHONE**

*REPLACE THE WORDS: "Department of Post and Telecommunications" WITH "Telecoms Provider" AND ADD THE FOLLOWING AT THE END OF SUBCLAUSE 4.1 OF SABS 1200 AB:*

*ADD THE FOLLOWING NEW SUBCLAUSES TO CLAUSE 4 OF SABS 1200 AB:*

**"PSAB 4.2 COMPUTER EQUIPMENT**

Where it is specified in Portion 1 of the Project Specifications that the Contractor shall provide computer equipment on site for the exclusive use of the Engineer and his staff, such computer hardware and software shall comply with the specifications set out in Subclauses PSAB 4.2.1 and PSAB 4.2.2 hereunder.



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**PSAB 4.2.1 Computer hardware**

(a) Computers

**Laptop shall comply with the following minimum specifications:**

**System Features**

1x laptop with CPU - intel® Core™ i7-12<sup>th</sup> generation (2.90 GHz, 4 MB L3 cache, 4 cores) Genuine Windows® 11 Professional 64

Mobile intel® QM57 Express

Memory - 32 GB MEMORY

Storage - 1TB Solid State Drive

Graphics – 15.6 LED-backlit FHD Anti-Glare 4k display

NVIDIA Quadro FX 8000M with 8 GB dedicated GDDR5 video memory

Ports - 3USB 3.0 ports,

Mobile Broadband 4G/LTE/5G wireless card

1x 32-inch 4k display monitor

(b) Printers

Printers shall, unless otherwise approved by the Engineer, be DeskJet (Black and White) or laser printers.



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All computer hardware shall be provided complete with the requisite connecting cables and all inter-facing devices and software necessary for its efficient operation as an integral system.

**PSAB 4.2.2 Computer software**

The following software shall be properly installed on the computer, and the original licence agreements and disks shall be provided to the Engineer for safekeeping:

- (a) Microsoft Windows® 11 Professional 64-bit
- (b) MS-Office 2021 Professional

**PSAB 4.3 TELEFAX FACILITIES**

Not applicable

**PSAB 4.4 SURVEY EQUIPMENT**

No survey equipment is required.

**PSAB 5 CONSTRUCTION**

**PSAB 5.4 TELEPHONE**

REPLACE THE CONTENTS OF SUBCLAUSE 5.4 OF SABS 1200 AB WITH THE FOLLOWING:

**"PSAB 5.4.1 Telkom telephones**

The Contractor shall advise Telkom promptly of any faults which develop in the telephone service and shall, in such circumstances, arrange for the earliest possible restoration of the said service.

The Contractor shall ensure that the telephone account is promptly paid.



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**PSAB 5.4.2 Cellular telephones**

The Contractor shall advise the cellular service provider of any faults which develop in the cellular telephone service and/or the cellular telephone handsets and shall, in such circumstances, arrange for the earliest possible restoration of the said service.

The costs of any necessary repairs and/or the replacement of components to the handsets of the cellular telephones shall be for the Contractor's account.

The Contractor shall ensure that all accounts for cellular phone calls and the respective service contracts are promptly paid."

ADD THE FOLLOWING NEW SUBCLAUSES TO CLAUSE 5 OF SABS 1200 SB:

**"PSAB 5.6 COMPUTER EQUIPMENT**

All computer equipment provided shall be kept fully serviceable at all times by the Contractor. The Contractor shall have any defective equipment repaired or replaced at his own cost within 12 hours after notification by the Engineer's staff.

The Contractor shall further provide at his own cost, all paper and black ink cartridges and other consumables reasonably required by the Engineer.

**PSAB 5.7 TELEFAX FACILITIES**

Not applicable

**PSAB 5.8 SURVEY EQUIPMENT**

No survey equipment is required.





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### C3.6 STANDARD MINIMUM REQUIREMENTS

In terms of section 5(2) of the Construction Industry Development Board Act, 2000 (Act no. 38 of 2000) (the Act), the Construction Industry Development Board is empowered to establish and promote best practice standards, Standard Requirements and Guidelines which includes the following but not limited to:

- C3.6.1 cidb Best Practice: Green Building Certification, No. 34158 Government Gazette, 1 April 2011
- C3.6.2 cidb Standard for Developing Skills through Infrastructure Contracts, No. 36760 Government Gazette, 23 August 2013
- C3.6.3 cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013
- C3.6.4 Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2017, No. 40553 Government Gazette, 20 January 2017
- C3.6.5 cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts, No. 41237 Government Gazette, 10 November 2017
- C3.6.6 cidb Standard for Minimum Requirements for Engaging Contractors and Sub-Contractors on Construction Works Contracts, No. 41237 Government Gazette, 10 November 2017
- C3.6.7 cidb Standard for Minimum Requirements for Engaging Contractors and Sub- Contractors on Construction Works Contracts, No. 42021 Government Gazette, 9 November 2018
- C3.6.8 cidb Standard for Developing Skills through Infrastructure Contracts, No. 43495 Government Gazette, 3 July 2020

### C3.7 CONTRACT PARTICIPATION GOALS AND CIDB BUILD PROGRAMME

The contractor shall achieve in the performance of the contract the following Contract Participation Goals (CPGs) as indicated below. Provision for pricing of compliance with the achieving the CPGs is made in the Contract Participation Goal Section of the Bills of Quantities and it is explicitly pointed out that all requirements in respect of the aforementioned are deemed to be priced thereunder and no additional claims in this regard shall be entertained:

#### C3.7.1 Minimum Thirty Percent (30%) Mandatory Sub-contracting Contract Participation Goal

##### **MINIMUM THIRTY PERCENT (30%) MANDATORY SUBCONTRACTING TO SMMEs: IMPLEMENTATION OF PREFERENTIAL PROCUREMENT REGULATIONS 2017**

**30% Mandatory subcontracting is *applicable* to this project.**

It is the requirement of the employer that the contractor enhances the use of local Small, Micro and Medium Enterprises (SMME's) in executing this contract, irrespective whether the 30% Participation Goal is applicable or not.

The thirty percent (30%) mandatory Sub-contracting shall be achieved in the execution of the contract in terms of in accordance with the Preferential Procurement Policy Framework Act, 2000: Preferential Procurement Regulations, 2017 as published in the Government Gazette Notice No. 40553 of 20 January 2017.

- (a) SMME's involvement of at least **30% thirty Percent** of the tender amount at the time of tender to be sourced from within **50km** radius of the project site with the intention to maximize use of local SMMEs within **Manguzi, KwaZulu-Natal**.



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- (b) **SMME's involvement of at least 30% thirty Percent** of the Tender Value to be sourced from within **100km** radius of the project site.

Bidders are cautioned not to under-price items earmarked to be executed by SMMEs as adjustment to too low rates will not be entertained by the Employer.

Bidders to sub-contract a minimum of thirty percent (30%) of the tender amount including VAT at the time of tender (All inclusive, including VAT), to any one or more of the following categories:

- a. An EME or QSE
- b. An EME or QSE which is at least 51% owned by black people
- c. An EME or QSE which is at least 51% owned by black people who are youth
- d. An EME or QSE which is at least 51% owned by black people who are women
- e. An EME or QSE which is at least 51% owned by black people with disabilities
- f. An EME or QSE which is at least 51% owned by black people living in rural or underdeveloped areas or townships
- g. A co-operative which is at least 51% owned by black people
- h. An EME or QSE which is at least 51% owned by black people who are Military veterans
- i. More than one of the categories referred to in paragraphs (a) to (h).

Bidders to refer to the CSD for a list of prospective sub-contractors provided with the tender. The bidder to refer to the CSD website should the list provided be insufficient.

**Bidders must ensure that the sub-contractors conform to the following:**

- a. Possess relevant accreditation where applicable;
- b. Be registered with relevant bodies (CIDB, various Councils, etc.) where applicable;
- c. Possess necessary capabilities to deliver the sub-contracted work;
- d. Meet the requirements in terms of the stipulated designated groups; and
- e. Geographical located at the place where the project will be delivered. Geographical location must be determined using the following criteria:
  - Relevant Ward. If not available;
  - Relevant neighbouring Wards. If not available;
  - Relevant Local Municipality. If not available;
  - Relevant District Municipality. If not available;
  - Relevant Metro. If not available;
  - Relevant Province. If not available;
  - Relevant Neighbouring Province. And If not available;
  - Anywhere within the borders of South Africa .

It is the bidder's responsibility to source alternative SMMEs should the parties with whom agreements were entered into at the time of tendering either no longer exist or do not perform or render work of an acceptable standard, subject to the approval by the Employer. Failure to achieve the **minimum 10 percent (10%) SMME** participation based on the tender amount including VAT, will result in a **10% Ten Percent** penalty on the amount of work on which there is no compliance (Excluding VAT), unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.





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### C3.7.2 Minimum Targeted Local Material Manufacturer Contract Participation Goal

The Minimum Targeted Local Building Material Manufacturers CPG is *applicable* to this project.

It is the requirement of the employer that the contractor enhances the use of local Small, Micro and Medium Enterprise Local Material Manufacturers (SMME's) in executing this contract, irrespective whether a minimum percentage Participation Goals is applicable or not.

The Minimum Targeted Local Manufacturers of Material Contract Participation Goal, in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020.

A Targeted Local Material Manufacturer is a targeted enterprise that operates or maintains a factory or establishment that produces on its premises materials or goods required by the principal contractor for the performance of the contract.

Note: Adapted from SANS 10845-7:2015, definition 2.13

Preference shall be given to the Targeted Local Material Manufacturer where feasible in **Manguzi, KwaZulu-Natal**, and provided that:

- (a) Such materials comply in all respects with the specific requirements of PW371 and SANS specifications,
- (b) The non-availability of such materials shall not adversely affect the desired progress of the specific works,
- (c) The use of such suppliers shall not constitute grounds for any claim for increased cost in respect thereof,
- (d) Materials of at least **10% Ten Percent** of the total value of materials purchased excluding VAT to be sourced from within **50km** radius of the project site,
- (e) Material of at least **10% Ten Percent** of the total value of materials purchased excluding VAT to be sourced from within **100km** radius of the project site.

Failure to achieve the minimum **10% Ten Percent** Targeted Local Material Manufacturer participation expressed as a percentage of the original tender amount, excluding allowances and VAT, will result in a **10% Ten Percent** penalty of the prorated targeted value of materials not complied with unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

### C3.7.3 Minimum Targeted-Local Building Material Suppliers Contract Participation Goal

The Minimum Targeted Local Building Material Suppliers CPG is *applicable* to this project.

It is the requirement of the employer that the contractor enhances the use of local Small, Micro and Medium Enterprise Local Material Suppliers (SMME's) in executing this contract, irrespective whether a minimum percentage Participation Goals is applicable or not.

The Minimum Targeted Local Manufacturers of Material Contract Participation Goal shall be achieved in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract..

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A targeted supplier is a targeted enterprise that

- a) owns, operates or maintains a store, warehouse or other establishment in which goods are bought, kept in stock and regularly sold to wholesalers, retailers or the public in the usual course of business; and
- b) engages, as its principal business and in its own name, in the purchase and sale of goods.

Note: Adapted from SANS 10845-7:2015, definition 2.14

Preference shall be given to the local material suppliers where feasible in the **Manguzi, KwaZulu-Natal**, and provided that:

- (a) Such materials comply in all respects with the specific requirements of PW371 and SANS specifications,
- (b) The none availability of such materials shall not adversely affect the desired progress of the specific works,
- (c) The use of such suppliers shall not constitute grounds for any claim for increased cost in respect thereof,
- (d) Materials of at least **10% Ten Percent** of the total value of materials purchased excluding VAT to be sourced from within **50km** of the project site,
- (e) Material of at least **10% Ten Percent** of the total value of materials purchased excluding VAT to be sourced from within **100km** of the project site.

Failure to achieve the minimum **10% Ten Percent Targeted Local Material Manufacturer** participation expressed as a percentage of the original tender amount, excluding allowances and VAT, will result in a **10% Ten Percent** penalty of the prorate targeted value of materials not complied with, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

### **C3.7.4 Minimum Targeted Local Labour Skills Development Contract Participation Goal**

**The Minimum Targeted Local Labour Skills Development CPG is *applicable* to this project.**

It is the requirement of the employer that the contractor enhances the use of local labour in executing this contract. This is required to be done through the use of both traditional building techniques and labour-intensive construction techniques careful and considered construction planning and implemented in the project irrespective whether a minimum percentage Participation Goal is applicable or not.

The Minimum Targeted Local Skills Development Contract Participation Goal shall be achieved in accordance with the cidb Standard for Contract Participation Goals for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract..

Targeted labour: individuals who:

- a) are employed by the principal contractor, sub-contractor or targeted enterprises in the performance of the contract;
- b) are defined as the target group in the targeting data; and
- c) permanently reside in the target area or who are recognized as being residents of the target area on the basis of identification and association with and recognition by the residents of the target area.

Adapted from SANS 10845-7:2015, definition 2.12

Targeting of labour by skills categories is only permissible within categories of semi-skilled and unskilled labour.

Contract participation goals for semi-skilled and unskilled labour shall be limited to on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake





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the work in accordance with the requirements of the contract and in a manner that does not compromise worker health and safety. In the case of targeted labour, the certification of records shall be in accordance with SANS 10845-8.

Beneficiaries will be sourced from the **Manguzi, KwaZulu-Natal** for the full duration of the Construction Period, employed by either the principal contractor, sub-contractors or targeted enterprises. The total number of working days to complete the Works amount to **365** working days. The minimum CPG participation for Targeted Local Labour Skills Development is **10% Ten Percent**, expressed as a percentage of the total number of working days required to complete the Works. The contractor shall attain or exceed the CPG in the performance of the contract. Failure to achieve the minimum Targeted Local Labour Skills Development CPG will result in a payment reduction of **R5 000** (Excluding VAT), per working day which training has not been provided to the workforce in attendance, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

**C3.7.5 CIDB BUILD PROGRAMME: Minimum Targeted Enterprise Development Contract Participation Goal**

**The Minimum Targeted Enterprise Development CPG is *applicable* to this project.**

The aim of this best practice standard for indirect targeting for enterprise development in accordance with the Standard for Indirect Targeting for Enterprise Development (published in Government Gazette 36190 of 25 February 2013), as amended in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract, is to promote enterprise development by providing for a minimum contract participation goal (CPG) of **five percent (5%)** of the contract amount as defined in the Standard (Tender amount, excluding allowances and VAT on selected contracts to be undertaken by joint-venture partners or to be sub-contracted to developing contractors that are also to be beneficiaries of enterprise development support from the main contractor.

The lead partner or main contractor shall dedicate a **minimum five percent (5%)** of the tender value at the time of award, excluding allowances and VAT, to provide developmental support to targeted subcontractor or joint venture partner applicable to contracts in Grades 7 to 9, General Building and Civil Engineering contracts. Preference will be given to General Building, Electrical, Mechanical, Plumbing, etc. It could be either or any combination of all Enterprises.

The contractor shall attain or exceed the enterprise development goal in the performance of the contract. Failing to achieve the Participation Goal will result in A) a thirty percent (30%) penalty of the value not achieved, excluding VAT, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The bidder shall submit monthly reports in terms of monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

**C3.7.5.1 Criteria**

The main or lead partner of the successful bidder shall:

- (a) There must be a needs analysis for indirect targeting and development or skill standard and should be development in at least any two developmental areas namely;
- Administrative and cost control systems
  - construction management systems and plans
  - planning, tendering and programming
  - business; technical; procurement skills
  - legal compliance
  - credit rating/history; financial loan capacity/history



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- contractual knowledge
- (b) The above needs analysis shall be mutually agreed upon between contractor and targeted enterprise
- (c) The contractor shall appoint an enterprise development coordinator to:
  - perform needs analysis on the targeted enterprise to identify developmental goals
  - develop a project specific enterprise development plan to improve the targeted enterprise/s performance in the identified developmental areas
  - provide internal mentorship support to improve the targeted enterprise/s performance
  - monitor and submit to the employer's representative a monthly enterprise development report thereby reporting on the progress of the agreed development areas with the targeted enterprise/s
  - submit a project completion report to the Employer's representative for each targeted enterprise.

**C3.7.5.2      Management**

The contractor shall provide a competent person/s to provide internal mentorship to the Targeted Enterprise/s in the two agreed developmental areas.

**C3.7.5.3      Competence Criteria for an Enterprise Development Co-ordinator**

The enterprise development co-ordinator shall have the following competencies:

- Minimum experience of 5 years in the construction industry at Managerial level as a Site Agent, Contracts Manager, Site Manager, Construction Manager, Business Development Manager or Enterprise Development Manager.
- Minimum experience of 2 years in training and development in Building or Construction; and
- National Diploma or B Degree in the Built Environment or Business Management

**C3.7.5.4      Format of Communications**

The contractor shall submit to the Employer's Representative:

- *Project interim reports* in the specified format (**ED105P**) detailing interim values of the CPG that was achieved together with an assessment of the enterprise development support provided should be tabled and discussed at least monthly at progress meetings between employer's representative and the contractor;
- *Project completion report* in the specified format (**ED101P**) to the Employer's Representative for acceptance within 15 days of achieving practical completion. The report shall include the value of the CPG that was certified in accordance with the contract, cidb registration numbers of each and every targeted enterprise, and the value of the subcontracted works or of the joint venture entered into; and the participation parameter
- *Enterprise development declaration* (**ED104P**).



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**C3.7.5.5 The Key Personal**

The contractor shall appoint an Enterprise Development Co-ordinator and a competent person/s to provide internal mentorship.

**C3.7.5.6 Management Meetings**

The contractor shall report to the Employer's Representative on the implementation and progress of the targeted enterprise development and CPG at monthly progress site meetings.

**C3.7.5.7 Forms for contract administration**

The contractor shall submit to the Employer's Representative the following proformas:

- Form ED 105P Project Interim Report
- Form ED 104P Enterprise Development Declaration
- Form ED 101P Project Completion Report

**C3.7.5.8 Records**

The contractor shall:

- keep records of the targeted enterprise development
- keep records of the payments made to the targeted enterprises in relation to the CPG.
- ensure all the documentation required in terms of the Standard is provided with each monthly progress payment certificate and according to a prescribed format where applicable.

**C3.7.5.9 Payment Certificates**

The contractor shall:

- achieve the measurable CPG and providing enterprise development support to the targeted enterprise/s as per the Standard.
- submit payment certificates to the Employer Representative at intervals determined in the Contract.

**C3.7.5.10 Compliance requirements**

**Non-compliance with the Best Practice Project Assessment Scheme**

The wording of regulation 27A of the cidb regulations makes provision for the Board to enforce the cidb code of conduct in the event of clients being found to be in breach of the best practice project assessment scheme.

- Not including the requirements of the cidb standards in the conditions of tender
- Not registering the award of contract on the cidb Register of Projects (RoP)
- Not reporting practical completion on the cidb Register of Projects (RoP)

**3.7.6 CIDB BUILD PROGRAMME: Minimum Targeted Contract Skills Development Goal (CSDG)**

**The Minimum Targeted Contract Skills Development CPG is *applicable* to this project.**

The contractor shall achieve or exceed in the performance of the contract the Contract Skills Development Goal (CSDG) established in the Standard for Developing Skills through Infrastructure Contracts (published in Government Gazette No 43495 of 3 July 2020, as amended in cidb Best





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Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract.

Failing to achieve the targeted Contract Skills Development Goal will result in A) a **thirty percent (30%)** penalty of the value of the portion not achieved, excluding VAT, and B) the issuing of completion certificates only after the completion certificate of achieving the skills development goal, counter-signed by the relevant individuals has been submitted, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control.

The contractor shall apportion the learners in the different construction activities based on the scope of work. The cost of accommodating learners will be determined by using Table 3 in the Standard and this cost will be used to determine the value in Rand and will be added to the provision for training as provided for in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule.

**C3.7.6.1**      Methodology

The contractor shall achieve the measurable contract skills development goal by providing opportunities to learners requiring structured workplace learning using one or a combination of any of the following in relation to work directly related to the contract or order:

Method 1: structured workplace learning opportunities for learners towards the attainment of a part or a full occupational qualification;

Method 2: structured workplace learning opportunities for apprentices or other artisan learners towards the attainment of a trade qualification leading to a listed trade (GG No. 35625, 31 August 2012) subject to at least sixty percent (60%) of the artisan learners being holders of public TVET college qualifications;

Method 3: work integrated learning opportunities for University of Technology or Comprehensive University students completing their national diplomas;

Method 4: structured workplace learning opportunities for candidates towards registration in a professional category by a statutory council listed in Table 1 above.

The contract skills participation goals, expressed in Rand, shall not be less than the contract amount multiplied by a percentage (%) factor given in Table 2 in the Standard for the applicable class of construction works.

*Table 2: Contracting skills development goals for different classes of engineering and construction works contracts*

Class of construction works as identified in terms of Regulation 25 (3) of the Construction Industry Regulations 2004		Construction skills development goal (CSDG) (%)
Designation	Description	
CE	Civil Engineering	0.25
CE and GB	Civil engineering and General Building	0.375
EE	Electrical Engineering works (buildings)	0.25
EP	Electrical Engineering works (infrastructure)	0.25
GB	General Building	0.5
ME	Mechanical Engineering works	0.25
SB	Specialist	0.25



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The contractor shall apportion the learners in the different construction activities based on the scope of work. The cost of accommodating learners will be determined by using Table 3 in the Standard and this cost will be used to determine the value in Rand and will be added to the provision for training as provided for in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule.

**Table 3: Notional Cost of Training per Headcount**

Source: cidb Standard for Skills Development

Type of Training Opportunity	Provision for stipends (Unemployed learners only)	Provisions for mentorship	Provisions for additional costs*	Total costs	
				Unemployed learners	Employed learners
<b>Method 1</b>					
Occupational qualification	R7 000	R0	R9 000	R16 000	R9 000
<b>Method 2</b>					
TVET College graduates	R14 000	R0	R9 000	R23 000	N/A
Apprenticeship	R14 000	R0	R12 000	R26 000	R12 000
<b>Method 3</b>					
P1 and P2 learners	R24 000	R20 000	R4 500	R48 500	N/A
<b>Method 4</b>					
Candidates with a 3 year diploma	R37 000	R20 000	R4 500	R61 500	R20 000
Candidates with 4 year qualification	R47 000	R20 000	R4 500	R71 500	R20 000

Note: the required CPG will be recalculated based on the awarded tender amount and "Contract amount" once the beneficiaries have been appointed and actual costs are known. The notional cost of providing training opportunities will increase by CPI on an annual basis based on April CPI. Should the rates increase after bid award or during construction the rates will be adjusted as a re-measurable item.

- (a) (a) The successful contractor may employ part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates directly or through a Skills Development Agency (SDA), (A1 - List of cidb accredited SDAs).
- (b) The successful contractor must employ at least sixty percent (60%) of the learners from an FET / TVET college should the contractor select to have part/full occupational qualification learners and trade qualification learners contributing to the CSDG.
- (c) The successful contractor shall employ at least **minimum five percent (5%)** from eligible part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates in the employment of the employer.
- (d) The successful contractor shall ensure that no single method shall contribute more than seventy five percent (75%) of the CSDG for the contract.
- (e) The successful contractor may only place thirty three percent (33%) employed employees or that of his subcontractors contributing to the CSDG.
- (f) The contractor shall employ at least sixty percent (60%) of the learners from a Public FET / TVET college should the contractor select to have trade qualification learners (Method 2) contributing to the CSDG.
- (g) One of the objectives of the project is to train **minimum five percent (5%)** Occupational qualifications, trade qualification, work integrated learners – P1 and P2 learners, professional candidates.