

BILL OF QUANTITIES

TENDER NO. JSM-E&M0/01/22-23

APPOINTMENT OF A PANEL OF SERVICE PROVIDERS TP REPAIR AND MAINTAIN WATER TREATMENT WORKS, WASTEWATER TREATMENT WORKS AND ITS SUBSTATIONS AROUND DR J.S MOROKA LOCAL MUNICIPALITY (Rates Only).

PRICE SCHEDULE

NOTE 1: The tender will be evaluated and awarded FOR THE WHOLE BILL OF QUANTITIES. Tenderers must tender on all sub-items per section. Tenderers, who did not tender on all sub-items per section, will automatically be disqualified.

NOTE 2: The quantities indicated are only approximate figures for evaluation purposes and the Municipality does not guarantee to purchase this or any quantity.

NOTE 3: The tendered rate shall include the supply, delivery and offloading of the specified items in the Bill of Quantities.

NOTE 4: All the items in the Bill of Quantities must comply with SABS standards.

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Tenderer

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BILL 1 : PRELIMINARY & GENERAL				
ITEM No.	DESCRIPTION	UNIT	QTY	TENDERED RATE
1,1	General			
1,2	Compliance with OHS Act (Act No 85 of 1993) and the Construction Regulations, 2014:			
1.2.1.	Health and Safety Compliance for contract period according to OHS specification and OHS requirements (Including PPE, first aid kit and onsite compliance)	Monthly	1	
1.2.2.	Health and Safety File complete, submit annually.	No	1	
1.3.	Technical Staff and Labour			
	This item includes on and off site rate of suitably qualified personnel, inclusive of all overhead charges, profit and site supervision.			
1.3.1	Professional Engineer/ Contract Manager	H	1	
1.3.2	Engineering Technician (Mechanical/ Electrical / Civil/ Instrumentation/other)	H	1	
1.3.2	Artisan (Electrician/ Mechanical/ Fitter/ Civil)	H	1	
1.3.3	Artisan Assistant (Skilled labour)	H	1	
1.3.4	General Worker (Unskilled labour/Handyman)	H	1	
1.3.5	Plant / machinery operator	H	1	
1.3.6	Safety officer	H	1	
1.5.	VEHICLES/PLANT HIRE			
	This item includes provision travel, transportation, operation, use and maintenance of roadworthy vehicles, inclusive of all the vehicle operator, fuel, overhead charges, profit and site supervision			
1.5.1	5t Lowbed Truck	Km	1	

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1.5.2.	8t Lowbed Truck	Km	1	
1.5.3.	10t Lowbed	Km	1	
1.5.4.	30t Lowbed	Km	1	
1.5.5.	2 x 4WD LDV	Km	1	
1.5.6.	4 x 4WD LDV	Km	1	
1.5.7.	Cherry picker	H	1	
1.5.8.	10t Crane	H	1	
1.5.9.	30t Crane	H	1	
1.5.10.	TLB 4x4	H	1	
1.5.11.	Excavator	H	1	
1.5.12.	6m ³ Tipper Truck	H	1	
1.5.13.	Portable generator	H	1	
1.5.14.	Portable water pump	H	1	
1.5.15.	Dewatering pump	H	1	
1,6	Travelling or Transport cost			
1.6.1	Travelling and Transport (to and from within DRJSMLM boundary) LDV.	Km	1	
1.6.2	Transport (to and from within DRJSMLM boundary) heavy -5 tons upwards.	Km	1	
	SUBTOTAL CARRIED FORWARD TO SUMMARY OF BILL 1:			

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BILL 2	ELECTRICAL EQUIPMENT MAINTENANCE AND REPAIRS			
ITEM No.	DESCRIPTION	UNIT	QTY	TENDERED RATE
2,1	Repair 0.18Kw Electrical Motors and submersible pump– Single and three phase			
2.1.1	Removal, strip, assessment, quote	No	1	
2.1.2	Repair, assemble and test	No	1	
2.1.3	Installation of motor 0.18Kw motor	No	1	
2.2.	Service and repair of 0.75Kw Electrical Motor and submersible pump– Single and three phase.			
2.2.1	Removal, strip, assessment, quote	No	1	
2.2.2	Installation or onsite repairs (including laser alignment)	No	1	
2.2.3	Repair, assemble and test	No	1	
2,3	Repair 1.1 Kw Electrical Motors–three phase , IEC3/ flange or foot mount.			
2.3.1	Removal, strip, assessment, quote	No	1	
2.3.2	Motor Installation	No	1	
2.3.3	Repair, assemble and test	No	1	
2,4	Repair 2.2Kw Electrical Motor–three phase , IEC3/ flange or foot mount			
2.4.1	Removal, strip, assessment, quote	No	1	
2.4.2	Motor Installation	No	1	
2.4.3	Repair, assemble and test	No	1	

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2,5	Repair 3kw Electrical Motor–three phase , IEC3/ flange or foot mount, 380v.			
2.5.1	Removal, strip, assessment, quote	No	1	
2.5.2	Motor Installation	No	1	
2.5.3	Repair, assemble and test	No	1	
2,6	Repair 4Kw Electrical Motor–three phase , IEC3/ flange or foot mount.			
2.6.1	Removal, strip, assessment, quote	No	1	
2.6.2	Motor Installation	No	1	
2.6.3	Repair, assemble and test	No	1	
2.7.	Repair 5.5Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 380v.			
2.7.1	Removal, strip, assessment, quote	No	1	
2.7.2	Motor Installation	No	1	
2.7.3	Repair, assemble and test	No	1	
2.8.	Repair 7.5kw Electrical Motor–three phase , IEC3/ flange or foot mount, 380v.			
2.8.1	Removal, strip, assessment, quote	No	1	
2.8.2	Motor Installation	No	1	
2.8.3	Repair, assemble and test	No	1	
2,9	Repair 9Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 380v.			
2.9.1	Removal, strip, assessment, quote	No	1	
2.9.2	Motor Installation	No	1	
2.9.3	Repair, assemble and test	No	1	

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2,1	Repair 11Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 380v.			
2.10.1	Removal, strip, assessment, quote	No	1	
2.10.2	Motor Installation	No	1	
2.10.3	Repair, assemble and test	No	1	
2,11	Repair 15Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 380v.			
2.11.1	Removal, strip, assessment, quote	No	1	
2.11.2	Bake	No	1	
2.11.3	Rewind	No	1	
2.11.4	Balance rotor	No	1	
2.11.5	Repair of End Shield	No	1	
2.11.6	Balance fan	No	1	
2.11.7	Repair Shaft	No	1	
2.11.8	Repair Bearing Journals	No	1	
2.11.9	Motor Installation 15Kw	No	1	
2,12	Repair 18.5Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 380v.			
2.12.1	Removal, strip, assessment, quote	No	1	
2.12.2	Bake	No	1	
2.12.3	Rewind	No	1	
2.12.4	Balance rotor	No	1	
2.12.5	Repair of End Shield	No	1	
2.12.6	Balance fan	No	1	
2.12.7	Repair Shaft	No	1	

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2.12.8	Repair Bearing Journals	No	1	
2.12.9	Motor Installation 18.5Kw	No	1	
2,13	Repair 22.5Kw Electrical Motor—three phase , IEC3/ flange or foot mount, 380v.			
2.13.1	Removal, strip, assessment, quote	No	1	
2.13.2	Bake	No	1	
2.13.3	Rewind	No	1	
2.13.4	Balance rotor	No	1	
2.13.5	Repair of End Shield	No	1	
2.13.6	Balance fan	No	1	
2.13.7	Repair Shaft	No	1	
2.13.8	Repair Bearing Journals	No	1	
2.13.9	Motor Installation 22.5kw	No	1	
2,14	Repair 30Kw Electrical Motor—three phase , IEC3/ flange or foot mount, 380v.			
2.14.1	Removal, strip, assessment, quote	No	1	
2.14.2	Bake	No	1	
2.14.3	Rewind	No	1	
2.14.4	Balance rotor	No	1	
2.14.5	Repair of End Shield	No	1	
2.14.6	Balance fan	No	1	
2.14.7	Repair Shaft	No	1	
2.14.8	Repair Bearing Journals	No	1	
2.14.9	Motor Installation 30Kw	No	1	
	Repair 37.5Kw Electrical Motor—three			

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2,15	phase , IEC3/ flange or foot mount, 380v.			
2.15.1	Removal, strip, assessment, quote	No	1	
2.15.2	Bake	No	1	
2.15.3	Rewind	No	1	
2.15.4	Balance rotor	No	1	
2.15.5	Repair of End Shield	No	1	
2.15.6	Balance fan	No	1	
2.15.7	Repair Shaft	No	1	
2.15.8	Repair Bearing Journals	No	1	
2.15.9	Motor Installation 37.5kw	No	1	
2,16	Repair 45Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 380v.			
2.16.1	Removal, strip, assessment, quote	No	1	
2.16.2	Bake	No	1	
2.16.3	Rewind	No	1	
2.16.4	Balance rotor	No	1	
2.16.5	Repair of End Shield	No	1	
2.16.6	Balance fan	No	1	
2.16.7	Repair Shaft	No	1	
2.16.8	Repair Bearing Journals	No	1	
2.16.9	Motor Installation 45kw	No	1	
2,17	Repair 55 Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 380v.			
2.17.1	Removal, strip, assessment, quote	No	1	
2.17.2	Bake	No	1	

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2.17.3	Rewind	No	1	
2.17.4	Balance rotor	No	1	
2.17.5	Repair of End Shield	No	1	
2.17.6	Balance fan	No	1	
2.17.7	Repair Shaft	No	1	
2.17.8	Repair Bearing Journals	No	1	
2.17.9	Motor Installation 55Kw	No	1	
2,18	Repair 60Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 400v.			
2.18.1	Removal, strip, assessment, quote	No	1	
2.18.2	Bake	No	1	
2.18.3	Rewind	No	1	
2.18.4	Balance rotor	No	1	
2.18.5	Repair of End Shield	No	1	
2.18.6	Balance fan	No	1	
2.18.7	Repair Shaft	No	1	
2.18.8	Repair Bearing Journals	No	1	
2.18.9	Motor Installation 60kw	No	1	
2,19	Repair 75Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 400v.			
2.19.1	Removal, strip, assessment, quote	No	1	
2.19.2	Bake	No	1	
2.19.3	Rewind	No	1	
2.19.4	Balance rotor	No	1	
2.19.5	Repair of End Shield	No	1	
2.19.6	Balance fan	No	1	

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2.19.7	Repair Shaft	No	1	
2.19.8	Repair Bearing Journals	No	1	
2.19.9	Motor Installation 75Kw	No	1	
2,2	Repair 90Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 400v.			
2.20.1	Removal, strip, assessment, quote	No	1	
2.20.2	Bake	No	1	
2.20.3	Rewind	No	1	
2.20.4	Balance rotor	No	1	
2.20.5	Repair of End Shield	No	1	
2.20.6	Balance fan	No	1	
2.20.7	Repair Shaft	No	1	
2.20.8	Repair Bearing Journals	No	1	
2.20.9	Motor Installation 90Kw	No	1	
2,21	Repair 110Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 400v.			
2.21.1	Removal, strip, assessment, quote	No	1	
2.21.2	Bake	No	1	
2.21.3	Rewind	No	1	
2.21.4	Balance rotor	No	1	
2.21.5	Repair of End Shield	No	1	
2.21.6	Balance fan	No	1	
2.21.7	Repair Shaft	No	1	
2.21.8	Repair Bearing Journals	No	1	
2.21.9	Motor Installation	No	1	
	Repair 132Kw Electrical Motor–three			

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2,22	phase , IEC3/ flange or foot mount, 400v.			
2.22.1	Removal, strip, assessment, quote	No	1	
2.22.2	Bake	No	1	
2.22.3	Rewind	No	1	
2.22.4	Balance rotor	No	1	
2.22.5	Repair of End Shield	No	1	
2.22.6	Balance fan	No	1	
2.22.7	Repair Shaft	No	1	
2.22.8	Repair Bearing Journals	No	1	
2.22.9	Motor Installation 132Kw	No	1	
2,23	Repair 160Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 400v.			
2.23.1	Removal, strip, assessment, quote	No	1	
2.23.2	Bake	No	1	
2.23.3	Rewind	No	1	
2.23.4	Balance rotor	No	1	
2.23.5	Repair of End Shield	No	1	
2.23.6	Balance fan	No	1	
2.23.7	Repair Shaft	No	1	
2.23.8	Repair Bearing Journals	No	1	
2.23.9	Motor Installation 160 kw	No	1	
2,24	Repair 200Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 400v.			
2.24.1	Removal, strip, assessment, quote	No	1	
2.24.2	Bake	No	1	

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2.24.3	Rewind	No	1	
2.24.4	Balance rotor	No	1	
2.24.5	Repair of End Shield	No	1	
2.24.6	Balance fan	No	1	
2.24.7	Repair Shaft	No	1	
2.24.8	Repair Bearing Journals	No	1	
2.24.9	Motor Installation 200kw	No	1	
2,25	Repair 220Kw Electrical Motor—three phase , IEC3/ flange or foot mount, 400v.			
2.25.1	Removal, strip, assessment, quote	No	1	
2.25.2	Bake	No	1	
2.25.3	Rewind	No	1	
2.25.4	Balance rotor	No	1	
2.25.5	Repair of End Shield	No	1	
2.25.6	Balance fan	No	1	
2.25.7	Repair Shaft	No	1	
2.25.8	Repair Bearing Journals	No	1	
2.25.9	Motor Installation 220Kw	No	1	
2,26	Repair 250Kw Electrical Motor—three phase , IEC3/ flange or foot mount, 400v.			
2.26.1	Removal, strip, assessment, quote	No	1	
2.26.2	Bake	No	1	
2.26.3	Rewind	No	1	
2.26.4	Balance rotor	No	1	
2.26.5	Repair of End Shield	No	1	
2.26.6	Balance fan	No	1	

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2.26.7	Repair Shaft	No	1	
2.26.8	Repair Bearing Journals	No	1	
2.26.9	Motor Installation 250 kw	No	1	
2,27	Repair 315 Kw Electrical Motor—three phase , IEC3/ flange or foot mount, 400v.			
2.27.1	Removal, strip, assessment, quote	No	1	
2.27.2	Bake	No	1	
2.27.3	Rewind	No	1	
2.27.4	Balance rotor	No	1	
2.27.5	Repair of End Shield	No	1	
2.27.6	Balance fan	No	1	
2.27.7	Repair Shaft	No	1	
2.27.8	Repair Bearing Journals	No	1	
2.27.9	Motor Installation 315 kw	No	1	
2,28	Repair 350Kw Electrical Motor—three phase , IEC3/ flange or foot mount, 400v.			
2.28.1	Removal, strip, assessment, quote	No	1	
2.28.2	Bake	No	1	
2.28.3	Rewind	No	1	
2.28.4	Balance rotor	No	1	
2.28.5	Repair of End Shield	No	1	
2.28.6	Balance fan	No	1	
2.28.7	Repair Shaft	No	1	
2.28.8	Repair Bearing Journals	No	1	
2.28.9	Motor Installation 350 kw	No	1	
	Repair 400Kw Electrical Motor—three			

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2,29	phase , IEC3/ flange or foot mount,400v.			
2.29.1	Removal, strip, assessment, quote	No	1	
2.29.2	Bake	No	1	
2.29.3	Rewind	No	1	
2.29.4	Balance rotor	No	1	
2.29.5	Repair of End Shield	No	1	
2.29.6	Balance fan	No	1	
2.29.7	Repair Shaft	No	1	
2.29.8	Repair Bearing Journals	No	1	
2.29.9	Motor Installation 400 kw	No	1	
2,3	Repair 450Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 380v.			
2.30.1	Removal, strip, assessment, quote	No	1	
2.30.2	Bake	No	1	
2.30.3	Rewind	No	1	
2.30.4	Balance rotor	No	1	
2.30.5	Repair of End Shield	No	1	
2.30.6	Balance fan	No	1	
2.30.7	Repair Shaft	No	1	
2.30.8	Repair Bearing Journals	No	1	
2.30.9	Motor Installation 450kw	No	1	
2,31	Repair 500Kw Electrical Motor–three phase , IEC3/ flange or foot mount 400v.			
2.31.1	Removal, strip, assessment, quote	No	1	
2.31.2	Bake	No	1	

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2.31.3	Rewind	No	1	
2.31.4	Balance rotor	No	1	
2.31.5	Repair of End Shield	No	1	
2.31.6	Balance fan	No	1	
2.31.7	Repair Shaft	No	1	
2.31.8	Repair Bearing Journals	No	1	
2.31.9	Motor Installation 500 kw	No	1	
2,32	Repair 660Kw Electrical Motor–three phase , IEC3/ flange or foot mount, 380v.			
2.32.1	Removal, strip, assessment, quote	No	1	
2.32.2	Bake	No	1	
2.32.3	Rewind	No	1	
2.32.4	Balance rotor	No	1	
2.32.5	Repair of End Shield	No	1	
2.32.6	Balance fan	No	1	
2.32.7	Repair Shaft	No	1	
2.32.8	Repair Bearing Journals	No	1	
2.32.9	Motor Installation 660 kw	No	1	
2,33	Motor Control Center (Electric panel)			
2.33.1.	Fault finding or diagnostic assessment	h	1	
2.33.2	Onsite repairs and installation	h	1	
2.33.3	Electrical test , inspection & service	h	1	
2,34	SOFT STATER for (MCC) electrical motor 380v, supply and programme for motor range:			
a)	Soft Starter for 3.5Kw motor	No.	1	

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b)	Soft Starter for 7.5Kw motor	No.	1	
c)	Soft Starter for 11Kw motor	No.	1	
d)	Soft Starter for 18Kw motor	No.	1	
e)	Soft Starter for 22Kw motor	No.	1	
f)	Soft Starter for 30Kw motor	No.	1	
g)	Soft Starter for 45Kw motor	No.	1	
h)	Soft Starter for 55Kw motor	No.	1	
i)	Soft Starter for 75Kw motor	No.	1	
j)	Soft Starter for 90Kw motor	No.	1	
k)	Soft Starter for 110kW motor	No.	1	
l)	Soft Starter for 160kW motor	No.	1	
m)	Soft Starter for 220kW motor	No.	1	
n)	Soft Starter for 300kW motor	No.	1	
o)	Soft Starter for 400kW motor	No.	1	
p)	Soft Starter for 500kW motor	No.	1	
q)	Soft Starter for 600kW motor	No.	1	
r)	Site works or Install or service or program Soft stater	H	1	
2,34	Variable Speed drive (VSDs) for (MCC) electrical motor 380v, supply and programme for motor range:			
a)	VSD for 3.5Kw motor	No.	1	
b)	VSD for 7.5Kw motor	No.	1	
c)	VSD for 11Kw motor	No.	1	
d)	VSD for 18Kw motor	No.	1	
e)	VSD for 22Kw motor	No.	1	
f)	VSD for 30Kw motor	No.	1	

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g)	VSD for 45Kw motor	No.	1	
h)	VSD for 55Kw motor	No.	1	
i)	VDS for 75kw motor	No.	1	
j)	VSD for 90Kw motor	No.	1	
k)	VSD for 110kW motor	No.	1	
l)	VSD for 160kW motor	No.	1	
m)	VSD for 220kW motor	No.	1	
n)	VSD for 300kW motor	No.	1	
o)	VSD for 400kW motor	No.	1	
p)	VSD for 500kW motor	No.	1	
q)	VSD for 600kW motor	No.	1	
r)	On-Site works or Install or service or program VSD	h	1	
2,34	Generator Service & Repairs			
a)	Generator (size from 50 to 100KVa) Fault finding/ strip and assessment/ onsite works service and repairs.	h	1	
b)	Generator (Size from 101 to 250 KVa) Fault finding/ strip and assessment/ onsite works service and repairs.	h	1	
c)	Generator (size from 101 to 250 KVa) Fault finding/ strip and assessment/ onsite works service and repairs.	h	1	
d)	Generator (Size from 251 to 500 kVa) Fault finding/ strip and assessment/ onsite works service and repairs.	h	1	

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e)	Generator (size from 501 to 750 kVa)	h	1		
	Fault finding/ strip and assessment/ onsite works service and repairs.				
f)	Generator (size fro 751 to 1000 kVa)	h	1		
	Fault finding/ strip and assessment/ onsite works service and repairs.				
g)	Generator (from 1001 ro 1500 kVa)	h	1		
	Fault finding/ strip and assessment/ onsite works service and repairs.				
h)	Generator (1501 to 3000kVa)	h	1		
	Fault finding/ strip and assessment/ onsite works service and repairs.				
i)	Generator (3001 to 4500kVa)	h	1		
	Fault finding/ strip and assessment/ onsite service and repairs.				
2,35	Electrical Cables				
	Onsite repair or fault finding or installation of (flat & round Surfix, bare copper earth, metallic sheathed & non- metallic cable, underground cable, armoured cable,: Single core, two core, three core, four core, and.)				
a)	1.5mm ²	h	1		
b)	2.5mm ²	h	1		
c)	4.0mm ²	h	1		
d)	6.0mm ²	h	1		
e)	10mm ²	h	1		
f)	16mm ²	h	1		
g)	25mm ²	h	1		

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h)	35mm ²	h	1	
i)	50mm ²	h	1	
J)	70mm ²	h	1	
k)	95mm ²	h	1	
l)	120mm ²	h	1	
m)	150mm ²	h	1	
2,36	ELECTRICAL EQUIPMENT MAINTENANCE AND REPAIRS LABOUR (FOR ITEMS NOT SPECIFIED IN BOQ)			
2.36.1	Artisan: Working Hours			
a)	Monday – Friday 07:00-17:00	hr	1	
b)	Saturday and After 17:00	hr	1	
c)	Sunday and Public Holidays	hr	1	
2.36.2	Artisan Assistant: Working Hours			
a)	Monday – Friday 07:00-17:00	hr	1	
b)	Saturday and After Hours	hr	1	
c)	Sunday and Public Holidays	hr	1	
2.36.3	Unskilled Labour: Working Hours			
a)	Monday – Friday 07:00-17:00	hr	1	
b)	Saturday and After Hours	hr	1	
c)	Sunday and Public Holidays	hr	1	
	LABOUR SUB Total: BILL 2			
BILL 2 SUBTOTAL CARRIED TO SUMMARY OF SCHEDULES				

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BILL 3: MECHANICAL EQUIPMENT MAINTENANCE AND REPAIRS				
ITEM No.	DESCRIPTION	UNIT	QTY	TENDERED RATE
3,1	GEARBOXES (repair and Service)			
	Repair Motor driven gearboxes for clarifier, horizontal and vertical aerators, mixer and other waterworks units. WEG or Similar (excluding spare parts)			
3.1.1.	For Gearboxes from 0.18kW – 2.2kW (Ranged on driving motor size)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Onsite repair or Installation	No.	1	
3.1.2.	For Gearboxes from 2.2kW – 5.5kW (Ranged on driving motor size)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Onsite repair or Installation	No.	1	
3.1.3	Gearboxes sizes ranging from 5.6kW – 7.5kW (Ranged on driving motor size)			

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a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.1.4	For Gearboxes sizes ranging from 7.6kW – 15kW (Ranged on driving motor size)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.1.5	For Gearboxes sizes ranging from 15kW – 30kW (Ranged on driving motor size)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.1.6	For Gearboxes sizes ranging from 30kw to 45kW and above (Ranged on driving motor size)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.1.7	For Gearboxes sizes ranging from 46 to 75kW and above (Ranged on driving motor size)			
a)	Remove, strip, assessment & quote	No.	1	

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b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3,8	For Gearboxes sizes ranging from 76 to 110kW and above (Ranged on driving motor size)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3,2	PUMPS (Repair and Service)			
	Repair of Self-Priming Cetrifugal Pump, installation to include alignment (excluding spares parts)			
3.2.1	T2 Series,Gorman-Rupp pump or similar			
3.2.1.1	Remove, strip, assessment & quote	No.	1	
3.2.1.2.	Repair, assemble and test	No.	1	
3.2.1.3.	Onsite works & Installation	No.	1	
3.2.2.	T3 Series,Gorman-Rupp pump or similar			
3.2.2.1	Remove, strip, assessment & quote	No.	1	
3.2.2.2	Repair, assemble and test	No.	1	
3.2.2.3	Onsite & Installation	No.	1	
3.2.3	T4 Series,Gorman-Rupp pump or similar			

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3.2.3.1	Remove, strip, assessment & quote	No.	1	
3.2.3.2	Repair, assemble and test	No.	1	
3.2.3.3	Onsite works & Installation	No.	1	
3.2.4	T6 Series,Gorman-Rupp pump or similar			
3.2.4.1	Remove, strip, assessment & quote	No.	1	
3.2.4.2	Repair, assemble and test	No.	1	
3.2.4.3	Onsite works & Installation	No.	1	
3.2.5	T8 Series,Gorman-Rupp pump or similar			
3.2.5.1	Remove, strip, assessment & quote	No.	1	
3.2.5.2	Repair, assemble and test	No.	1	
3.2.5.3	Onsite works & Installation	No.	1	
3.2.6	T10 Series,Gorman-Rupp pump or similar			
3.2.6.1	Remove, strip, assessment & quote	No.	1	
3.2.6.2	Repair, assemble and test	No.	1	
3.2.6.3	Onsite works & Installation	No.	1	
3.2.7	Ultra V3 Series,Gorman-Rupp pump or similar			
3.2.7.1	Remove, strip, assessment & quote	No.	1	
3.2.7.2	Repair, assemble and test	No.	1	
3.2.7.3	Onsite works & Installation	No.	1	
3.2.8	Ultra V4 Series,Gorman-Rupp pump or similar			

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a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Onsite works & Installation	No.	1	
3.2.9	Ultra V6 Series,Gorman-Rupp pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Onsite & Installation	No.	1	
3.2.9	6500 Series(6516A60B), Gorman-Rupp Pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Onsite works & Installation	No.	1	
3.2.10	6500 Series(6516A60B), Gorman-Rupp Pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Onsite works & Installation	No.	1	
3.2.11	Cornell Pump 3STX- Series Cornell Pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Onsite works & Installation	No.	1	

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3.2.12	4STX- Series Cornell Pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Onsite works & Installation	No.	1	
3.2.13	2STH- Series Cornell Pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Onsite works & Installation	No.	1	
3.2.14	3STH- Series Cornell Pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Onsite works & Installation	No.	1	
3.2.15	6STH- Series Cornell Pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Onsite works & Installation	No.	1	
3.2.16	KSB ETA 150/50 KSB pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	

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c)	Onsite works & Installation	No.	1	
3.2.17	ETA 250/29 KSB pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Onsite works & Installation	No.	1	
3.2.18	WKLn 50/3 KSB pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.2.19	WKLn 150/4 KSB pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.2.20	ETA 125/250 KSB pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.2.21	ETANORM 65-050-160 KSB pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	

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3.2.22	ETANORM 65-050-250 KSB pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.2.23	ETANORM 100-080-250 KSB pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.2.24	ETANORM 100-065-250 KSB pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.2.25	OMEGA 125-290A KSB pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.2.26	OMEGA 200-670A KSB pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	

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3.2.27	OMEGA 200-760A KSB pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.2.28	OMEGA 350-510A KSB pump or similar			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.3.	VALVES			
3.3.1.	Repair and service of gate,butterfly,Non-return, knife valve size 50, 65 & 80mm flanged and non flanged, PN16 & PN25 . (VOSA, AVK or Similar)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.3.2	Repair and service of gate,butterfly,Non-return, knife valve size , 100, 125 & 150mm flanged and non flanged, PN16 & PN25 . (VOSA, AVK or Similar)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	

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3.3.3	Repair and service of gate,butterfly,Non-return, knife valve size , 200 & 250mm flanged and non flanged, PN16 & PN25 . (VOSA, AVK or Similar)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.3.4	Repair and service of gate,butterfly,Non-return, knife valve size , 300& 350mm flanged and non flanged, PN16 & PN25 . (VOSA, AVK or Similar)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.3.5	Repair and service of gate,butterfly,Non-return, knife valve size , 400& 450mm flanged and non flanged, PN16 & PN25 . (VOSA, AVK or Similar)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.3.6	Repair and service of gate,butterfly,Non-return, knife valve size , 500mm & 600mm flanged and non flanged, PN16 & PN25 . (VOSA, AVK or Similar)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	

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c)	Site Works & Installation	No.	1	
3.3.7	Repair and service of gate,butterfly,Non-return, knife valve size , 700mm & 800mm flanged and non flanged, PN16 & PN25 . (VOSA, AVK or Similar)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.3.8	Repair and service of gate,butterfly,Non-return, knife valve size , 900mm & 1000mm flanged and non flanged, PN16 & PN25 . (VOSA, AVK or Similar)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3.3.9	Repair and service of gate,butterfly,Non-return, knife valve size , 1200mm & 1500mm flanged and non flanged, PN16 & PN25 . (VOSA, AVK or Similar)			
a)	Remove, strip, assessment & quote	No.	1	
b)	Repair, assemble and test	No.	1	
c)	Site Works & Installation	No.	1	
3,4	MECHANICAL FRONT RAKE SCREEN, gearbox motor operated. consists of spaced steel bar screen, chain, frame, discharge chute, gearmotor, conveyer unit, Stainless steel constructed.			

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	Remove. service and repair specify size			
3.4.1	width up to 1m and up to 1m deep..	No		
3.4.1.1	Remove, strip, assessment & quote	No.	1	
3.4.1.2	Repair, assemble and test	No.	1	
3.4.1.3	Site Works & Installation	h	1	
3.4.2	width up to 1m and up to 2m deep			
3.4.2.1	Remove, strip, assessment & quote	No.	1	
3.4.2.2	Repair, assemble and test	No.	1	
3.4.2.3	Site Works & Installation	h	1	
3.4.3	Width up to 2m and up to 3m deep			
3.4.3.1	Remove, strip, assessment & quote	No.	1	
3.4.3.2	Repair, assemble and test	No.	1	
3.4.3.3	Site Works & Installation	h	1	
3,5	<u>SLUICE GATE</u> <u>Repair and service- rate to remove or install.</u>			
	Durable and heavy duty, to isolate or bypass flow , wall mouted, screw operated, hand wheel- cast iron, or gear box, frame and fasteners 304/316 stainless steel.			
3.5.1	width up to 0.7m x height 0.7m Manual operated	No.	1	
3.5.2	width up to 1.4m x height 1.4m, manual operated	No.	1	

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3.5.3	width up to 2.5m x height 2.5m, Manual operated	No.	1	
3.5.4	width up to 3.5m x height 3.5m, Manual operated	No.	1	
3.5.5	Onsite works	hr	1	
3,6	SCREW COMPACTOR Repair and service. For dewatering, compaction and transport of screenings to bin, to include compactor material- 304/316 SS.			
3.6.1	Remove, strip, assessment & quote	No.	1	
3.6.2	Repair, assemble and test	No.	1	
3.6.3	Site Works & Installation	h	1	
3,7	STEEL PIPE Works			
3.7.1	Onsite repair	h	1	
3.7.2	Corrosion protection and pipe coating	M2	1	
3,8	STEEL WORKS			
	Service & repair of steel structure i.e elevated tanker, clarifier, pump base, and others.			
3.8.1	Site Works	h	1	
3.8.2	Corrosion protection and Site coating	M2	1	
3.8.3	Fabrication of steel structure	h	1	
3,9	AIR COMPRESSOR / BLOWER Robuschi - RBS model or similar			

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	Solid Air- Model B41 or similar			
3.9.1	Site Works including fault finding	h	1	
2.9.2	Remove or install	No	1	
3,1	MECHANICAL COMPONENTS Waterworks Mechanical equipment or units (Belt press, clarifier, DAF unit, Bio-filter and etc)			
3.10.1.	Site Works including, Strip ,fault finding and repairs	h	1	
3,11	MECHANICAL EQUIPMENT MAINTENANCE AND REPAIRS LABOUR (FOR ITEMS NOT SPECIFIED IN BOQ)			
3.11.1	Artisan: Working Hours			
a)	Monday – Friday 07:00-17:00	h	1	
b)	Saturday and After 17:00	h	1	
c)	Sunday and Public Holidays	h	1	
3.11.2	Artisan Assistant: Working Hours			
a)	Monday – Friday 07:00-17:00	h		
b)	Saturday and After Hours	h		
c)	Sunday and Public Holidays	h		
3.11.3	Unskilled Labour: Working Hours			
a)	Monday – Friday 07:00-17:00	h		
b)	Saturday and After Hours	h		
c)	Sunday and Public Holidays	H		
3,12	LABOUR SUB Total: BILL 3			

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3.12.1	% Markup (must not exceed 25%) for supply of new/replacement. In case where repair cost is more than new equipment.	Per item	
3.12.2	% Mark up (must not exceed 25%) for supply of mechanical spares & material.	Per item	
BILL 3: SUBTOTAL CARRIED TO SUMMARY OF SCHEDULES			

BILL 4	INSTRUMENTATION MAINTENANCE AND REPAIRS			
4,1	FLOW METERS MAINTENANCE AND REPAIR. Mechanical, electro-magnetic, ultrasonic- including open flume channel and other, (Specify diameter)	UNIT	QTY	Tendered RATE
4.1.1	Repair or service of DN 50, 65 & 80mm			

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4.1.1.1	Site Works, remove or Installation, including fault finding	No.	1	
4.1.1.2	Calibration of flow meter	No.	1	
4.1.1.3	Strip and assessment	No.	1	
4.1.1.4	Repair, assemble and test	No.	1	
4.1.2	Repair or service of DN 100 & 150mm.			
4.1.2.1	Site Works, remove or Installation, including fault finding	No.	1	
4.1.2.2	Calibration of flow meter	No.	1	
4.1.2.3	Strip and assessment	No.	1	
4.1.1.4	Repair, assemble and test	No.	1	
4.1.3	Repair or service of DN 200 & 250mm.			
4.1.3.1	Site Works, remove or Installation, including fault finding	No.	1	
4.1.3.2	Calibration of flow meter	No.	1	
4.1.2.3	Strip and assessment	No.	1	
4.1.1.4	Repair, assemble and test	No.	1	
4.1.4	Repair or service of DN 300 & 350mm.			
4.1.4.1	Site Works, remove or Installation, including fault finding	No.	1	
4.1.4.2	Calibration of flow meter	No.	1	
4.1.4.3	Strip and assessment	No.	1	
4.1.4.4	Repair, assemble and test	No.	1	
4.1.5	Repair or service of DN 400 & 450mm.			
4.1.5.1	Site Works, remove or Installation, including fault finding	No.	1	
4.1.5.2	Calibration of flow meter	No.	1	
4.1.5.3	Strip and assessment	No.	1	

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4.1.5.4	Repair, assemble and test	No.	1	
4.1.6	Repair or service of DN 500 & 550mm.			
4.1.6.1	Site Works, remove or Installation, including fault finding	No.	1	
4.1.6.2	Calibration of flow meter	No.	1	
4.1.6.3	Strip and assessment	No.	1	
4.1.6.4	Repair, assemble and test	No.	1	
4.1.7	Repair or service of DN 600 & 650mm flow meter.			
4.1.7.1	Site Works, remove or Installation, including fault finding	No.	1	
4.1.7.2	Calibration of flow meter	No.	1	
4.1.7.3	Strip and assessment	No.	1	
4.1.7.4	Repair, assemble and test	No.	1	
4.1.8	Repair or service of DN 700 & 800mm.			
4.1.8.1	Site Works, remove or Installation, including fault finding	No.	1	
4.1.8.2	Calibration of flow meter	No.	1	
4.1.8.3	Strip and assessment	No.	1	
4.1.8.4	Repair, assemble and test	No.	1	
4.1.9	Repair or service of DN 900 & 1000mm.			
4.1.8.1	Site Works, remove or Installation, including fault finding	No.	1	
4.1.8.2	Calibration of flow meter	No.	1	
4.1.8.3	Strip and assessment	No.	1	
4.1.8.4	Repair, assemble and test	No.	1	
4.1.10	FLUME CHANNEL FLOW METER			
4.1.9.1	Site Works, remove or Installation, including fault finding	No.	1	

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4.1.9.2	Calibration of flow meter	No.	1	
4.1.9.3	Strip & assessment.	No.	1	
4.1.9.4	Repair, assemble and test.	No.	1	
4,2	Water works Telemetry			
a)	fault finding or diagnostic assessment of Telemetry water works system	h	1	
b)	Repair and installations of telemetry	h	1	
4,3	Supervisory Control and data Acquisition (SCADA) Service and repair.			
a)	Fault finding, diagnostic assessment of SCADA at the water works.	h	1	
b)	Repair and Installation.	h	1	
4.4.	Instrumentation for water works including Laboratory			
a)	Fault finding, diagnostic assessment of instrumentation water works.	h	1	
b)	Calibration instrument and issuing of certificate.	No.	1	
4.5.	Level control			
a)	Installation and service of control spares (float switch, sensor and others)	h	1	
4,6	CHEMICAL DOSING EQUIPMENTS			
4.6.1	Onsite works, remove or install and faulty finding	h	1	
4.6.2	Strip, repair and assembly	No.	1	

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4,7	INSTRUMENTATION MAINTENANCE AND REPAIR LABOUR (FOR ITEMS NOT SPECIFIED IN BOQ)			
4.7.1	Technician: Working Hours			
a)	Monday – Friday 07:00-17:00	H	1	
b)	Saturday and After 17:00	H	1	
c)	Sunday and Public Holidays	H	1	
4.7.2	Artisan: Working Hours			
a)	Monday – Friday 07:00-17:00	H	1	
b)	Saturday and After Hours	H	1	
c)	Sunday and Public Holidays	H	1	
4.7.3	Artisan Assistant: Working Hours			
a)	Monday – Friday 07:00-17:00	H	1	
b)	Saturday and After Hours	H	1	
c)	Sunday and Public Holidays	H	1	
BILL 4: SUBTOTAL CARRIED TO SUMMARY OF SCHEDULES				
4.7.4	% Markup (must not exceed 25%) for supply of new/replacement. In case where repair cost is more than new equipment.	Per item		
4.7.5	% Mark up (must not exceed 25%) for supply of instrumentation spares & material.	Per item		
BILL 4: SUBTOTAL CARRIED TO SUMMARY OF SCHEDULES				

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BILL 5: CIVIL WORKS MAINTENANCE AND REPAIRS				
5,1	Pipe works, repair and modification of pipe (Specify size) PVC, Copper, HDPE, steel, GRP and other types, Rate Excluding supply of material or fittings.	UNIT	QTY	Tendered RATE
5.1.1	Repair or install of DN15mm, 19 mm and 25mm pipe.	h	1	
5.1.2	Repair or install of DN 32mm,40mm and 50mm pipe.	H	1	
5.1.3	Repair of DN 63mm,75mm and 90mm pipe.	H	1	
5.1.4	Repair or install of DN 110mm, 125 mm and 140mm.	H	1	
5.1.5	Repair or install of DN160mm and 200mm pipe.	H	1	
5.1.6	Repair or install of DN300mm and 350mm pipe.	H	1	
5.1.7	Repair or install of DN400mm and 450mm pipe.	H	1	
5.1.8	Repair or install of DN500mm and 550mm pipe.	H	1	
5.1.9	Repair or install of DN600mm and 650mm pipe.	H	1	
5.1.10	Repair or install of DN700mm and 750mm pipe.	H	1	
5.1.11	Repair or install of DN 800mm and 850mm pipe.	H	1	
5.1.12	Repair or install of DN 900mm and 950mm pipe.	H	1	
5.1.13	Repair or install of DN1000mm pipe.	H	1	
5,2	Structural Concrete and grout			

Tenderer

Witness 1

Witness 2

Employer

Witness 1

Witness 2

5.2.1	Concrete Repair (cracks and leaks), application of grout or primer, SABS approved products up to 20mm	M2	1	
5.2.1	Concrete Repair (cracks and leaks), application of grout or primer, SABS approved products up to 50mm	M2	1	
5.2.3	Breaking of concrete	m ³	1	
5.2.4	Shuttering	M2	1	
5.2.5	Pump base (pouring of grout or primer, SABS approved products)	m ³	1	
5.2.6	<u>Supply, pour and/or installation of the following structural concrete:</u>			
a.	15 Mpa/19mm concrete	m ³	1	
b.	20 Mpa/19mm concrete	m ³	1	
c.	30 Mpa/19mm concrete	m ³	1	
d.	35 Mpa/19mm concrete	m ³	1	
5,3	filter Media			
a.	Onsite works	h	1	
b.	Replace filter media	m ³	1	
5,4	Floor Coating			
a.	Repair	m ²	1	
b.	Supply and apply (incl. all surface preparation) coat epoxy floor coating system	m ²	1	
5,5	Water works Civil engineering works, paving and General building structures.			

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Witness 1

Witness 2

Employer

Witness 1

Witness 2

a.	Onsite works repair & maintenance	h	1	
b.	Earth works- excavation or compaction	h	1	
5,6	CIVIL WORKS MAINTENANCE AND REPAIRS LABOUR (FOR ITEMS NOT SPECIFIED IN BOQ)			
5.6.1	Artisan: Working Hours			
a)	Monday – Friday 07:00-17:00	h	1	
b)	Saturday and After 17:00	h	1	
c)	Sunday and Public Holidays	h	1	
5.6.2	Artisan Assistant: Working Hours			
a)	Monday – Friday 07:00-17:00	h	1	
b)	Saturday and After Hours	h	1	
c)	Sunday and Public Holidays	h	1	
5.6.3	unskilled Labour: Working Hours			
a)	Monday – Friday 07:00-17:00	h	1	
b)	Saturday and After Hours	h	1	
c)	Sunday and Public Holidays	H	1	
BILL 5: SUBTOTAL CARRIED TO SUMMARY OF SCHEDULES				

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Witness 1

Witness 2

Employer

Witness 1

Witness 2

<u>SUMMARY OF BILL</u>		
BILL 1	PRELIMINARY & GENERAL	
BILL 2	ELECTRICAL EQUIPMENT MAINTENANCE AND REPAIRS	
BILL 3	MECHANICAL EQUIPMENT MAINTENANCE AND REPAIRS	
BILL 4	INSTRUMENTATION MAINTENANCE AND REPAIRS	
BILL 5	CIVIL WORKS MAINTENANCE AND REPAIRS	
SUB-TOTAL		
ADD 15% VAT		
GRAND TOTAL - CARRIED TO FORM OF OFFER (VAT INCL.)		

TOTAL AMOUNT (INCLUDING VAT) TO BE FORWARDED TO FORM C 1.1 (FORM OF OFFER)

NB: Pricing must comply with the requirements as set in the scope of work.

Items not covered on the BOQ will be required to quote the municipality in line with MRI market related prices and with a mark-up of 20 %.

Tenderer

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Tenderer

Witness 1

Witness 2

Employer

Witness 1

Witness 2