

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
	This BoQ shall be read in conjunction with this Specifications Document and the RFQ clauses.						
1.	Port of Ngqura SHE File						
1.1.	<u>PoN SHE File (detailed breakdown to be provided upon request for such information).</u>	Sum	1				
2.	ROUTINE PUMP MAINTENANCE						

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
2.1.	Quarterly (3 monthly) inspection and condition assessment of sewer pumps for 36 months at the following pump stations:						
2.1.1.	Pump Station No.2	No.	4				
2.1.2.	Pump Station No.3	No.	4				
2.1.3.	Pump Station No.6	No.	4				
2.1.4.	Pump Station No.7	No.	4				
2.1.5.	Pump Station No.8	No.	4				
2.1.6.	Pump Station No.9	No.	4				
2.1.7.	Pump Station No.11	No.	4				
2.1.8.	Concor Pump Station	No.	4				
2.1.9.	eMendi Admin Building Pump Station	No.	4				
2.1.10.	B100 Pump Station	No.	4				

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
2.2.	<u>Quarterly (3 monthly) servicing of sewer pumps for 36 months at the following pump stations:</u>						
2.2.1.	Pump Station No.2	No.	4				
2.2.2.	Pump Station No.3	No.	4				
2.2.3.	Pump Station No.6	No.	4				
2.2.4.	Pump Station No.7	No.	4				
2.2.5.	Pump Station No.8	No.	4				
2.2.6.	Pump Station No.9	No.	4				
2.2.7.	Pump Station No.11	No.	4				
2.2.8.	Concor Pump Station	No.	4				
2.2.9.	eMendi Admin Building Pump Station	No.	4				
2.2.10.	B100 Pump Station	No.	4				

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
2.3.	<u>Repairs to the following mechanical pump components:</u>						
2.3.1.	Impeller	No.	10		(Rate only)		(Rate only)
2.3.2.	Bearings	No.	10		(Rate only)		(Rate only)
2.3.3.	Shaft	No.	10		(Rate only)		(Rate only)
2.3.4.	Diffuser	No.	10		(Rate only)		(Rate only)
2.3.5.	Casing	No.	10		(Rate only)		(Rate only)
2.3.6.	Head	No.	10		(Rate only)		(Rate only)
2.3.7.	Motor	No.	10		(Rate only)		(Rate only)
2.4.	<u>Replacement of the following mechanical pump components:</u>						

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
2.4.1.	Impeller	No.	10		(Rate only)		(Rate only)
2.4.2.	Bearings	No.	10		(Rate only)		(Rate only)
2.4.3.	Shaft	No.	10		(Rate only)		(Rate only)
2.4.4.	Diffuser	No.	10		(Rate only)		(Rate only)
2.4.5.	Casing	No.	10		(Rate only)		(Rate only)
2.4.6.	Head	No.	10		(Rate only)		(Rate only)
2.4.7.	Motor	No.	10		(Rate only)		(Rate only)
2.5.	<u>Repairs to the following electrical pump components:</u>						
2.5.1.	Kiosk	No.	10		(Rate only)		(Rate only)

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
2.5.2.	Contactors - K/M contactor D32/3 JQ 43B (220V, 40A contacts)	No.	10		(Rate only)		(Rate only)
2.5.3.	Relays- D4N-230AC 50/60Hz, 14 Pin Relay, D4N-024AC, 24V coil 50/60Hz, 14 Pin Relay	No.	10		(Rate only)		(Rate only)
2.5.4.	Float switches – 240V 3 wire	No.	10		(Rate only)		(Rate only)
2.5.5.	Overload contactors – Electronic overload (0-60A)	No.	10		(Rate only)		(Rate only)
2.5.6.	3 phase circuit breakers – 32 Amp and 10 Amp	No.	10		(Rate only)		(Rate only)
2.5.7.	Single phase breakers – 6 Amp	No.	10		(Rate only)		(Rate only)
2.5.8.	Cables	No.	10		(Rate only)		(Rate only)
2.5.9.	Relay – 220V 11 pin Flip-flop relay	No.	10		(Rate only)		(Rate only)

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
2.5.10.	Start buttons	No.	10		(Rate only)		(Rate only)
2.5.11.	Stop buttons	No.	10		(Rate only)		(Rate only)
2.5.12.	Ampere meters – (0-80 Amp)	No.	10		(Rate only)		(Rate only)
2.5.13.	Voltage meters – (0 – 500V)	No.	10		(Rate only)		(Rate only)
2.5.14.	Relay base – 14 pin relay base	No.	10		(Rate only)		(Rate only)
2.5.15.	Timers – DAC51 start delta timer DAA51 Delay on operate timer	No.	10		(Rate only)		(Rate only)

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
2.6.	<u>Replacement to the following electrical pump components:</u>						
2.6.1.	Kiosk	No.	10		(Rate only)		(Rate only)
2.6.2.	Contactors - K/M contactor D32/3 JQ 43B (220V, 40A contacts)	No.	10		(Rate only)		(Rate only)
2.6.3.	Relays- D4N-230AC 50/60Hz, 14 Pin Relay, D4N-024AC, 24V coil 50/60Hz, 14 Pin Relay	No.	10		(Rate only)		(Rate only)
2.6.4.	Float switches – 240V 3 wire	No.	10		(Rate only)		(Rate only)
2.6.5.	Overload contactors – Electronic overload (0-60A)	No.	10		(Rate only)		(Rate only)
2.6.6.	3 phase circuit breakers – 32 Amp and 10 Amp	No.	10		(Rate only)		(Rate only)
2.6.7.	Single phase breakers – 6 Amp	No.	10		(Rate only)		(Rate only)

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
2.6.8.	Cables	No.	10		(Rate only)		(Rate only)
2.6.9.	Relay – 220V 11 pin Flip-flop relay	No.	10		(Rate only)		(Rate only)
2.6.10.	Start buttons	No.	10		(Rate only)		(Rate only)
2.6.11.	Stop buttons	No.	10		(Rate only)		(Rate only)
2.6.12.	Ampere meters – (0-80 Amp)	No.	10		(Rate only)		(Rate only)
2.6.13.	Voltage meters – (0 – 500V)	No.	10		(Rate only)		(Rate only)
2.6.14.	Relay base – 14 pin relay base	No.	10		(Rate only)		(Rate only)
2.6.15.	Timers – DAC51 start delta timer DAA51 Delay on operate timer	No.	10		(Rate only)		(Rate only)

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
2.7.	<u>Quarterly (3 monthly) Drainage of pump stations during the routine maintenance works for the following pump stations:</u>						
2.7.1.	Pump Station No.2	No.	4				
2.7.2.	Pump Station No.3	No.	4				
2.7.3.	Pump Station No.6	No.	4				
2.7.4.	Pump Station No.7	No.	4				
2.7.5.	Pump Station No.8	No.	4				
2.7.6.	Pump Station No.9	No.	4				
2.7.7.	Pump Station No.11	No.	4				
2.7.8.	Concor Pump Station	No.	4				
2.7.9.	eMendi Admin Building Pump Station	No.	4				
2.7.10.	B100 Pump Station	No.	4				

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
2.8.	<u>Drainage of septic tanks fortnightly</u>						
2.8.1.	Cerebos rail gate	No.	24				
2.8.2.	Joorst Park Homes	No.	24				
2.9.	<u>Quarterly cleaning of the screening bucket for 36months to the following pump stations:</u>						
2.9.1.	Pump Station No.2	No.	4				
2.9.2.	Pump Station No.3	No.	4				
2.9.3.	Pump Station No.6	No.	4				

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
2.9.4.	Pump Station No.7	No.	4				
2.9.5.	Pump Station No.8	No.	4				
2.9.6.	Pump Station No.9	No.	4				
2.9.7.	Pump Station No.11	No.	4				
2.9.8.	Concor Pump Station	No.	4				
2.9.9.	eMendi Admin Building Pump Station	No.	4				
2.9.10.	B100 Pump Station	No.	4				
2.10.	Hiring of backup sewer pumps	Days	30				

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
3.	ROUTINE WATER PUMP MAINTENANCE						
3.1.	<u>Quarterly inspection and condition assessment of sewer pumps for 36months at the following pump stations:</u>						
3.1.1.	Water Pump 1	No.	4				
3.1.2.	Water Pump 2	No.	4				
3.1.3.	Water Pump 3	No.	4				
3.1.4.	Water Pump 4	No.	4				
3.2.	<u>Servicing of sewer pumps quarterly at the following pump stations:</u>						
3.2.1.	Water Pump 1	No.	4				
3.2.2.	Water Pump 2	No.	4				

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
3.2.3.	Water Pump 3	No.	4				
3.2.4.	Water Pump 4	No.	4				
3.3.	<u>Repairs to the following mechanical pump components:</u>						
3.3.1.	Impeller	No.	4		(Rate only)		(Rate only)
3.3.2.	Bearings	No.	4		(Rate only)		(Rate only)
3.3.3.	Shaft	No.	4		(Rate only)		(Rate only)
3.3.4.	Casing	No.	4		(Rate only)		(Rate only)
3.3.5.	Head	No.	4		(Rate only)		(Rate only)
3.3.6.	Motor	No.	4		(Rate only)		(Rate only)
3.3.7.	Tiding control valve. 50mm, 106 LCV	No.	4		(Rate only)		(Rate only)

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
3.4.	<u>Replacement of the following mechanical pump components:</u>						
3.4.1	Impeller	No.	4		(Rate only)		(Rate only)
3.4.2.	Bearings	No.	4		(Rate only)		(Rate only)
3.4.3.	Shaft	No.	4		(Rate only)		(Rate only)
3.4.4.	Casing	No.	4		(Rate only)		(Rate only)
3.4.5.	Head	No.	4		(Rate only)		(Rate only)
3.4.6.	Motor	No.	4		(Rate only)		(Rate only)
3.4.7.	Tiding control valve. 50mm, 106 LCV	No.	4		(Rate only)		(Rate only)
3.5.	<u>Repairs to the following electrical pump components:</u>						
3.5.1.	Distribution board	No.	2		(Rate only)		(Rate only)

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
3.5.2.	Contactors – AON PKZM01-10, XTPB010BC1	No.	4		(Rate only)		(Rate only)
3.5.3.	3 phase circuit breakers – 63 Amp	No.	2		(Rate only)		(Rate only)
3.5.4.	Single phase circuit breaker – 6 Amps	No.	2		(Rate only)		(Rate only)
3.5.5.	Relay – 8 Amps, 24V input & 250V output	No.	2		(Rate only)		(Rate only)
3.5.6.	Relay – 24V coil, 50Hz	No.	2		(Rate only)		(Rate only)
3.5.7.	AC transformer – 330V Input & 24V output, 50/60Hz, 15VA	No.	2		(Rate only)		(Rate only)
3.5.8.	Programmable timer switch – 20 Amps	No.	2		(Rate only)		(Rate only)
3.5.9.	Power button	No.	2		(Rate only)		(Rate only)
3.5.10	Siren test button	No.	2		(Rate only)		(Rate only)

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
3.5.11.	Enclosed isolator – ET32, 32A, AC 23A, 240/415 V.a.c, 50/60 Hz, IP66, 3P, IEG60947-3	No.	2		(Rate only)		(Rate only)
3.5.12.	VSD	No.	2		(Rate only)		(Rate only)
3.5.13.	Float levels switches	No.	2		(Rate only)		(Rate only)
3.5.14.	Pressure switches	No.	2		(Rate only)		(Rate only)
3.5.15.	Pressure valves	No.	2		(Rate only)		(Rate only)
3.6.	<u>Replacement of the following electrical pump components:</u>						
3.6.1.	Distribution board	No.	2		(Rate only)		(Rate only)
3.6.2.	Contactors – AON PKZM01-10, XTPB010BC1	No.	4		(Rate only)		(Rate only)
3.6.3.	3 phase circuit breakers – 63 Amp	No.	2		(Rate only)		(Rate only)

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
3.6.4.	Single phase circuit breaker – 6 Amps	No.	2		(Rate only)		(Rate only)
3.6.5.	Relay – 8 Amps, 24V input & 250V output	No.	2		(Rate only)		(Rate only)
3.6.6.	Relay – 24V coil, 50Hz	No.	2		(Rate only)		(Rate only)
3.6.7.	AC transformer – 330V Input & 24V output, 50/60Hz, 15VA	No.	2		(Rate only)		(Rate only)
3.6.8.	Programing timer switch – 20 Amps	No.	2		(Rate only)		(Rate only)
3.6.9.	Power button	No.	2		(Rate only)		(Rate only)
3.6.10.	Siren test button	No.	2		(Rate only)		(Rate only)
3.6.11.	Enclosed isolator – ET32, 32A, AC 23A, 240/415 V.a.c, 50/60 Hz, IP66, 3P, IEG60947-3	No.	2		(Rate only)		(Rate only)
3.6.12.	VSD	No.	2		(Rate only)		(Rate only)
3.6.13.	Float levels switches	No.	2		(Rate only)		(Rate only)
3.6.14.	Pressure switches	No.	2		(Rate only)		(Rate only)
3.6.15.	Pressure valves	No.	2		(Rate only)		(Rate only)

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
4.	EMERGENCY PUMP MAINTENANCE						
4.1.	Emergency servicing of pumps after hours (16h30 – 08h00), weekends, public holidays, emergency call out (respond within 2hrs)	Occurrence	10				
4.2.	Drainage of pump station during emergency works	Occurrence	10				
5.	ROUTINE PIPELINE MAINTENANCE						
5.1.	<u>Unblocking of the following size pipes as and when required:</u>						
5.1.1.	0 to 160mm ø gravity main	m	100				
5.1.2.	0 to 90mm ø pumped main	m	100				

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
5.2.	<u>Installation of new pipelines and manholes as and when required</u>						
5.2.1.	160mm ø gravity main up to 2.0m deep	m	50				
5.2.2.	90mm ø pumped main into 1.0m deep	m	50				
5.2.3.	1m ø manhole up to 2.0m deep	No.	8				
6.	EMERGENCY PIPE REPAIRS						
6.1.	<u>Sewer pipes</u>						
6.1.1.	<p>Emergency repairs to 110mm diameter uPVC sewer pipeline at the following depths:</p> <p>Pricing include</p> <ul style="list-style-type: none"> - All plant and labour - 2m pipe section, - All uPVC repair couplings 						

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
6.1.1.1.	0m-1.5m	No.	2				
6.1.1.2.	1.5m – 2.5m	No.	2				
6.1.2.	<p>Emergency repairs to 110mm diameter uPVC sewer pipeline at the following depths:</p> <p>Pricing include</p> <ul style="list-style-type: none"> - All plant and labour - 2m pipe section, - All uPVC repair couplings 						
6.1.2.1.	0m-1.5m	No.	2				
6.1.2.2.	1.5m – 2.5m	No.	2				
6.1.3.	<p>Emergency repairs to 90mm diameter HDPE pumped sewer main at the following depths:</p> <p>Pricing include</p> <ul style="list-style-type: none"> - All plant and labour - 2m pipe section, - All HDPE repair couplings - All HDPE welding required 						

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
6.1.3.1	0m-1.5m	No.	2				
6.1.3.2.	1.5m – 2.5m	No.	2				
6.2.	<u>Water pipes</u>						
6.2.1.	Emergency repairs to 160mm diameter HDPE water main at the following depths: Pricing include <ul style="list-style-type: none"> - All plant and labour - 2m pipe section, - All HDPE repair couplings - All HDPE welding required 						
6.2.1.1.	0m-1.5m	No.	5				
6.2.1.2.	1.5m – 2.5m	No.	5				
6.2.2.	Emergency repairs to 110mm to 250mm diameter HDPE water main at the following depths:						

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
	Pricing includes <ul style="list-style-type: none"> - All plant and labour - 2m pipe section, - All HDPE repair couplings - All HDPE welding required 						
6.2.2.1.	0m-1.5m	No.	5				
6.2.2.2.	1.5m – 2.5m	No.	5				
6.2.3.	Emergency repairs to 350mm to 450mm diameter HDPE water main at the following depths: Pricing include <ul style="list-style-type: none"> - All plant and labour - 2m pipe section, - All HDPE repair couplings - All HDPE welding required 						
6.2.3.1.	0m-1.5m	No.	1		(Rate Only)		(Rate Only)
6.2.3.2.	1.5m – 2.5m	No.	1		(Rate Only)		(Rate Only)

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
6.2.4.	Emergency repairs to 75mm to 160mm diameter uPVC water pipeline at the following depths: Pricing include <ul style="list-style-type: none"> - All plant and labour - 2m pipe section, - All uPVC repair couplings 						
6.2.4.1.	0m-1.5m	No.	2				
6.2.4.2.	1.5m – 2.5m	No.	2				
6.2.5.	Emergency repairs to 200mm to 350mm diameter uPVC water pipeline at the following depths: Pricing include <ul style="list-style-type: none"> - All plant and labour - 2m pipe section, - All uPVC repair couplings 						
6.2.5.1.	0m-1.5m	No.	2				
6.2.5.2.	1.5m – 2.5m	No.	2				

ITEM NO.	DESCRIPTION	Unit	QTY	Rate YEAR 1	Total YEAR 1	Rate YEAR 2	Total YEAR 2
6.2.6.	Emergency repairs to 400mm to 450mm diameter uPVC water pipeline at the following depths: Pricing include <ul style="list-style-type: none"> - All plant and labour - 2m pipe section, - All uPVC repair couplings 						
6.2.6.1.	0m-1.5m	No.	2		(Rate only)		(Rate only)
6.2.6.2.	1.5m – 2.5m	No.	2		(Rate Only)		(Rate Only)
7.	SUB-TOTAL (YEAR 1)						
8.	SUB-TOTAL (YEAR 2)						
10.	ADD 15% VAT						
11.	TOTAL						