

CONTRACT RVMSP01/NC061/09/2022**RICHTERSVELD MUNICIPALITY****RVM BULK WATER SUPPLY - SOLAR CONVERSION****C2.2 BILL OF QUANTITIES**

SECTION 1 : SITE ESTABLISHMENT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
1		SECTION 1 : SITE ESTABLISHMENT				
1.1		FIXED-CHARGE AND VALUE RELATED ITEMS				
1.1.1	8.3.1	Contractual Requirements	Sum	1		
1.1.2	8.3.2	Establishment of Facilities on Site				
1.1.2.1	8.3.2.1	Facilities for Engineer:				
	c)	Erection of Project Nameboards (2 No.)	Sum	1		
1.1.2.2	8.3.2.2	Facilities for Contractor:				
	a)	Offices and Storage Sheds	Sum	1		
	b)	Workshops	Sum	1		
	d)	Living Accommodation	Sum	1		
	e)	Ablution and Latrine Facilities	Sum	1		
	f)	Tools and Equipment	Sum	1		
	g)	Water Supply, Electric Power and Communications	Sum	1		
	h)	Dealing with Water	Sum	1		
	i)	Access	Sum	1		
	j)	Plant	Sum	1		
1.1.3	8.3.4	Removal of Site Establishment	Sum	1		
Total Carried Forward						

C2.2 BILL OF QUANTITIES

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C2.2 BILL OF QUANTITIES

SECTION 1 : SITE ESTABLISHMENT

C2.2-3

RICHTERSVELD MUNICIPALITY

C2.2 BILL OF QUANTITIES

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CONTRACT RVMSP01/NC061/09/2022**RICHTERSVELD MUNICIPALITY****RVM BULK WATER SUPPLY - SOLAR CONVERSION****C2.2 BILL OF QUANTITIES**

SECTION 3 : PORT NOLLOTH SOLAR CONVERSION

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
3		SECTION 3: PORT NOLLOTH SOLAR CONVERSION				
		GENERAL NOTES FOR ALL INSTALLTIONS				
		To be supplied, delivered to Site, installed, connected complete and commissioned in full working condition including all the necessary fixing/mounting/terminting accessories, tested and commissioned to the satisfaction of the Engineer. All products to be SABS approved.				
3.1		BOREHOLE 1 SOLAR CONVERSION				
3.1.1		SOLAR INSTALLATION				
3.1.1.1		1.5 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
3.1.1.2		Reprogram of VSD	Sum	1		
3.1.2		FENCING				
3.1.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	22		
3.2		BOREHOLE 3 SOLAR CONVERSION				
3.2.1		SOLAR INSTALLATION				
3.2.1.1		4 KW- Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
3.2.1.2		Reprogram of VSD	Sum	1		
3.2.2		FENCING				
3.2.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	30		
Total Carried Forward						

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SECTION 3 : PORT NOLLOTH SOLAR CONVERSION

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Brought Forward						
3.3		BOREHOLE 4 SOLAR CONVERSION				
3.3.1		SOLAR INSTALLATION				
3.3.1.1		4 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
3.3.1.2		Reprogram of VSD	Sum	1		
3.3.2		FENCING				
3.3.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	30		
3.4		BOREHOLE 5 SOLAR CONVERSION				
3.4.1		SOLAR INSTALLATION				
3.4.1.1		5.5 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
3.4.1.2		Reprogram of VSD	Sum	1		
3.4.2		FENCING				
3.4.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	32		
3.5		BOREHOLE 6 SOLAR CONVERSION				
3.5.1		SOLAR INSTALLATION				
3.5.1.1		0.75 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
3.5.1.2		Reprogram of VSD	Sum	1		
Total Carried Forward						

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ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Brought Forward						
3.5.2		FENCING				
3.5.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	12		
3.6		BOREHOLE 7 SOLAR CONVERSION				
3.6.1		SOLAR INSTALLATION				
3.6.1.1		1.5 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
3.6.1.2		Reprogram of VSD	Sum	1		
3.6.2		FENCING				
3.6.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	22		
3.7		BOREHOLE 9 SOLAR CONVERSION				
3.7.1		SOLAR INSTALLATION				
3.7.1.1		0.75 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
3.7.1.2		Reprogram of VSD	Sum	1		
3.7.2		FENCING				
3.7.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	10		
Total Carried Forward						

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SECTION 3 : PORT NOLLOTH SOLAR CONVERSION

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Brought Forward						
3.8		BOREHOLE 10 SOLAR CONVERSION				
3.8.1		SOLAR INSTALLATION				
3.8.1.1		0.37 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
3.8.1.2		Reprogram of VSD	Sum	1		
3.8.2		FENCING				
3.8.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	8		
3.9		BOREHOLE 11 SOLAR CONVERSION				
3.9.1		SOLAR INSTALLATION				
3.9.1.1		1.5 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
3.9.1.2		Reprogram of VSD	Sum	1		
3.9.2		FENCING				
3.9.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	22		
3.10		BOREHOLE 12 SOLAR CONVERSION				
3.10.1		SOLAR INSTALLATION				
3.10.1.1		2.2 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
3.10.1.2		Reprogram of VSD	Sum	1		
Total Carried Forward						

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SECTION 3 : PORT NOLLOTH SOLAR CONVERSION

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Brought Forward						
3.10.2		FENCING				
3.10.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	24		
3.11		WELL (1 AND 2) SOLAR CONVERSION				
3.11.1		SOLAR INSTALLATION				
3.11.1.1		2.2 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
3.11.1.2		Reprogram of VSD	Sum	1		
3.11.2		FENCING				
3.11.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	22		
3.12		WELL 3 SOLAR CONVERSION				
3.12.1		SOLAR INSTALLATION				
3.12.1.1		2.2 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
3.12.1.2		Reprogram of VSD	Sum	1		
3.12.2		FENCING				
3.12.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	22		
Total Carried Forward To Summary						

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SECTION 4 : LEKKERSING SOLAR CONVERSION

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
4		SECTION 4 : LEKKERSING SOLAR CONVERSION				
		GENERAL NOTES FOR ALL INSTALLTIONS				
		To be supplied, delivered to Site, installed, connected complete and commissioned in full working condition including all the necessary fixing/mounting/terminting accessories, tested and commissioned to the satisfaction of the Engineer. All products to be SABS approved.				
4.1		BOREHOLE 1 SOLAR CONVERSION				
4.1.1		SOLAR INSTALLATION				
4.1.1.1		7.5 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
4.1.1.2		Reprogram of VSD	Sum	1		
4.1.2		FENCING				
4.1.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	40		
Total Carried Forward To Summary						

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SECTION 5: EKSTEENFONTEIN SOLAR CONVERSION

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
5		SECTION 5 : EKSTEENFONTEIN SOLAR CONVERSION				
		GENERAL NOTES FOR ALL INSTALLTIONS				
		To be supplied, delivered to Site, installed, connected complete and commissioned in full working condition including all the necessary fixing/mounting/terminting accessories, tested and commissioned to the satisfaction of the Engineer. All products to be SABS approved.				
5.1		BOREHOLE 7 SOLAR CONVERSION				
5.1.1		SOLAR INSTALLATION				
5.1.1.1		4 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
5.1.1.2		New VSD Complete Installation	Sum	1		
5.1.2		FENCING				
5.1.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	30		
5.1		BOREHOLE 5 SOLAR CONVERSION				
5.1.1		SOLAR INSTALLATION				
5.1.1.1		2.2 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
5.1.1.2		Reprogram of VSD	Sum	1		
5.1.2		FENCING				
5.1.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	24		
Total Carried Forward						

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SECTION 5: EKSTEENFONTEIN SOLAR CONVERSION

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Brought Forward						
5.1		BOREHOLE 2 SOLAR CONVERSION				
5.1.1		SOLAR INSTALLATION				
5.1.1.1		0.75 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
5.1.1.2		New VSD Complete Installation	Sum	1		
5.1.1.2		Supply labour, equipment and material for submersible 0.75kW solar pump and motor installation. Rate to include borehole rope, borehole pipe, cabling and all accessories.	Sum	1		
5.1.2		FENCING				
5.1.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	24		
5.1		BOREHOLE 3 SOLAR CONVERSION				
5.1.1		SOLAR INSTALLATION				
5.1.1.1		0.75 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
5.1.1.2		New VSD Complete Installation	Sum	1		
5.1.1.2		Supply labour, equipment and material for submersible 0.75kW solar pump and motor installation. Rate to include borehole rope, borehole pipe, cabling and all accessories.	Sum	1		
5.1.2		FENCING				
5.1.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	24		
Total Carried Forward To Summary						

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SECTION 6: SANDDRIFT SOLAR CONVERSION

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
6		SECTION 6 : SANDDRIFT SOLAR CONNECTION				
		GENERAL NOTES FOR ALL INSTALLTIONS				
		To be supplied, delivered to Site, installed, connected complete and commissioned in full working condition including all the necessary fixing/mounting/terminting accessories, tested and commissioned to the satisfaction of the Engineer. All products to be SABS approved.				
6.1		CENTRIFUGAL VOLUTE PUMP SOLAR CONVERSION				
6.1.1		SOLAR INSTALLATION				
6.1.1.1		10 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
6.1.1.2		New VSD Complete Installation	Sum	1		
6.1.2		FENCING				
6.1.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	45		
6.2		VERTICAL CENTRIFUGAL PUMP SOLAR CONVERSION				
6.2.1		SOLAR INSTALLATION				
6.2.1.1		15 KW - Solar panels, charge controllers, load cables, Inverter/chargers, batteries and lockable panel frames (galvanised) are to be supplied erected and commissioned in full working condition including all necessary accessories.	Sum	1		
6.2.1.2		New VSD Complete Installation	Sum	1		
6.2.2		FENCING				
6.2.2.1		Supply labour, equipment and material for the erection of 2.1m high palisade fencing including 1m wide lockable gate with lockset. Fencing to be prefabricated and pregalvanised. Rate to include earthworks, concrete works, steel works and all necessary accessories.	m	50		
Total Carried Forward						

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SECTION 6: SANDDRIFT SOLAR CONVERSION

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SECTION 7: KUBOES SOLAR CONVERSION

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RICHTERSVELD MUNICIPALITY
RVM BULK WATER SUPPLY - SOLAR CONVERSION
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SECTION	SUMMARY OF SECTIONS DESCRIPTION	AMOUNT R
1	SECTION 1 : SITE ESTABLISHMENT
2	SECTION 2 : SITE CLEARANCE
3	SECTION 3 : PORT NOLLOTH SOLAR CONVERSION
4	SECTION 4 : LEKKERSING SOLAR CONVERSION
5	SECTION 5: EKSTEENFONTEIN SOLAR CONVERSION
6	SECTION 6: SANDDRIFT SOLAR CONVERSION
7	SECTION 7: KUBOES SOLAR CONVERSION
	SUBTOTAL	_____
	Add 10% CONTINGENCIES
	Add 15% VAT

	Total Carried Forward To Form of Offer	
