

Schedule 1:

Plant Positioning Agreement: Site layout, servitudes & requirements

Project Number:	522	Location: Okahandja, Namibia	Date: 27/05/2020
Project Name:	Okahandja Solar		
Client:	Cenored		
Owner:	Okahandja Solar Pty Ltd		
Contractor:	Summit Renewables		
Landowner:	Okahandja Local Municipality		

Adjacent structure	Specifications	Actual distance	Approved		
			CENEC	Summit Renewables	

Α.	Roads			
	Tertiary Road	No restriction. Recommended:	N/A	
		60 m from centre of road		

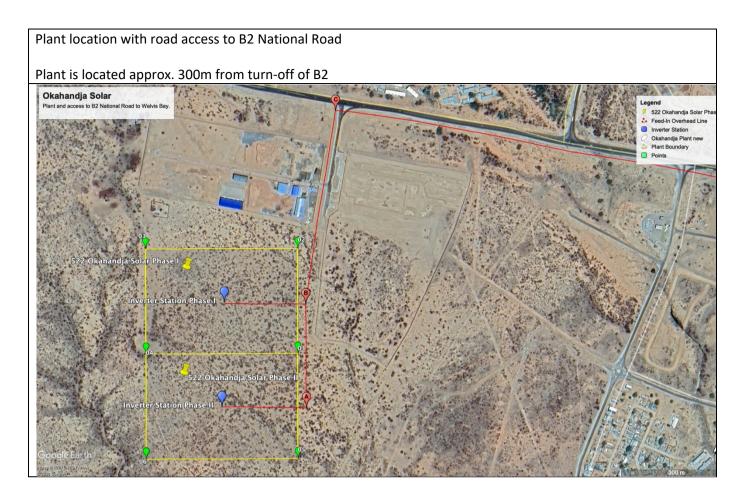
B. Railways			
	Recommended: 150 m from closest rail	N/A	

C. Aero landing strip							
	Recommended distance from: 1 km	N/A					
	On approach or departure line of sight?	N/A					

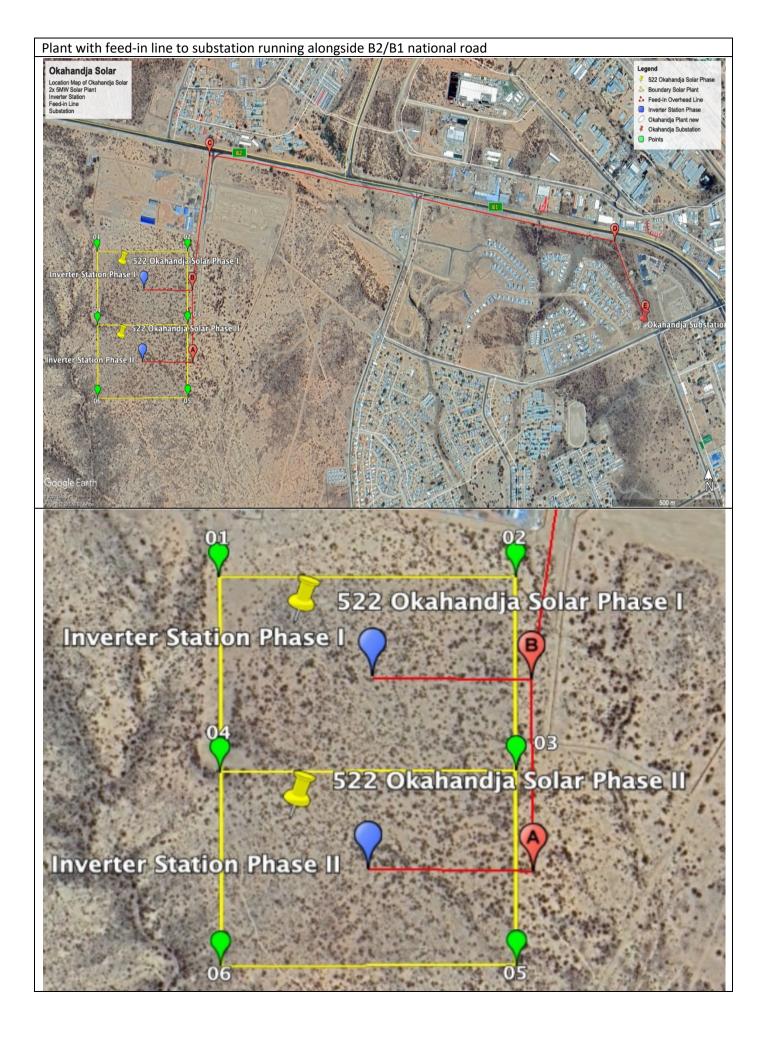
E. Other underground cables or pipe leads							
No excavation or build	ng closer than 1.0 m from	N/A					
cables and other pipe l	eads.						

F. Environmental Impact Assessment							
EIA	EIA						
Area covered	Approx including access road and lay-off area outside plant for materials	25ha					
Line length	From Plant to Feed-In at substation:	2.7km					











Plant Coordinates

Phase 1 / 5MW			
	Latitude	Longitude	Elevation
Solar plant point 01	21°58'22.51"S	16°52'47.54"E	1360 m
Solar plant point 02	21°58'22.47"S	16°53'1.47"E	1354 m
Solar plant point 03	21°58'31.38"S	16°53'1.47"E	1353 m
Solar plant point 04	21°58'31.44"S	16°52'47.54"E	1355 m
Inverter station phase 1	21°58'27.04"S	16°52'54.72"E	1355 m

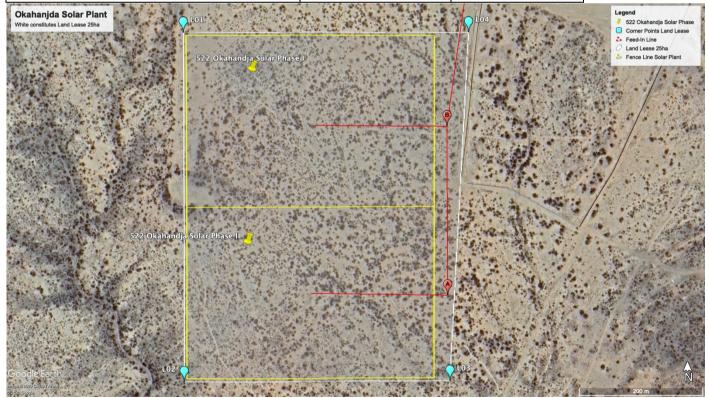
Phase 2 / 5MW			
	Latitude	Longitude	Elevation
Solar plant point 04	21°58'31.44"S	16°52'47.54"E	1355 m
Solar plant point 03	21°58'31.38"S	16°53'1.47"E	1353 m
Solar plant point 05	21°58'40.34"S	16°53'1.47"E	1351 m
Solar plant point 06	21°58'40.36"S	16°52'47.54"E	1354 m
Inverter station phase 2	21°58'35.91"S	16°52'54.72"E	1354 m

Land Lease Area Coordinates

The co-ordinates of the 25 hectares in extent lease area is are indicated below and are inside the property, Portion 221/10/277, which is known as Townlands South and which extends alongside the B2 National Road (Okahandja to Karibib).

The Land Lease area should cover a 5 m building restriction corridor around the solar plant fence line, on the north, west, and south of the plant. On the eastern side the access road and gates to access the solar plants are planned, as well as lay-down area during construction.

	Latitude	Longitude	
LO1	21°58'22.35"S	16°52'47.37"E	
L02	21°58'40.53"S	16°52'47.37"E	
L03	21°58'40.53"S	16°53'2.38"E	
L04	21°58'22.35"S	16°53'3.41"E	





Feed-in line Coordinates

	Latitude	Longitude	Elevation
Inverter station phase 1	21°58'27.04"S	16°52'54.72"E	1355 m
Inverter station phase 2	21°58'35.91"S	16°52'54.72"E	1354 m
Feed-in line point A	21°58'36.04"S	16°53'2.25"E	1351 m
Feed-in line point B	21°58'27.23"S	16°53'2.25"E	1353 m
Feed-in line point C	21°58'10.94"S	16°53'4.94"E	1361 m
Feed-in line point D	21°58'21.28"S	16°54'7.53"E	1358 m
Feed-in line point E (Okahandja Substation)	21°58'31.57"S	16°54'11.72"E	1358 m
Length Feed-In Line	2.67km		

Feed in lin	ne elevatio	n profile	from inve	erter stati	on phase	1 to Oka	nandja suk	ostation			
	n, Avg, Max Elevation										
Ra 1361 m 1356 m	inge Totals: Distance	e: 2.9 km Ele	v Gain/Loss: 18.0 m	19.9 m Max S	ope: 4.2%, -3.7%	Avg Slope: 1.2	61.4%				
1355 m		-									
1.5%											
0 m	0.25 km	0.5 km	0.75 km	1 km	1.25 km	1.5 km	1.75 km	2 km	2.25 km	2.5 km	2.9 km



EPC Specifications Agreement

1. Access and Servitude

As per Lease Agreement:

The Lessor (Owner) agrees to grant the Lessee an appropriate and adequate servitude over his immovable property for the following purpose: The right of way to access the solar plant area from the B2 road, allowing for a 6 m wide road and a reserve area of 5 m on both sides, meaning that the servitude is, rectangularly measured, at least 26 m wide at any given point.

This access road will be marked out by a registered surveyor, at the cost of the Lessee, for the notarial registration of the servitude within two months of this agreement being signed.

The Lessor (Owner) will also, if necessary, support the application at the regional/national traffic authority as necessary for this turnoff and any implied bridging or expansion works on the existing access road, to enable access appropriate to the traffic towards the site for the solar plant. The EPC contractor will

- Plot and construct the access road to the solar plant site as above from the end of the existing tarred section to the plant gate.
- Repair and improve the surface of the existing road as may be necessary.
- Level some space outside the fence line for the external storage of materials.

2. Temporary Storage and Debris space

The Lessor (Owner) agrees that

- A space of 100 m by 100 m in extent, adjacent to the leased property, will be allowed for the EPC contractor for the storage and other operations supportive of the construction.
- An additional space of 50 m by 100 m in extent, adjacent to the south of the leased property, will be allowed for the dumping of any veld and soil debris resulting from the levelling of the construction area.

The EPC contractor will

- In general, tidy up the storage and operational space and assure that no foreign or hazardous substances remain after all the EPC assets have been removed from this space.
- Ensure that the veld debris dumped are well clustered and does not contain foreign or hazardous substances introduced by the construction participants.

3. Feed-In line servitude

As per Lease Agreement:

The Lessor (Owner) agrees to grant the Lessee appropriate and adequate servitude over all his land for the following purpose:

The transportation of electrical power from the solar plant to the Okahandja D/S Substation via an 11kV staggered vertical wooden pole overhead power line, strung with Hare ACSR conductor, for a distance of approximately 2.7km.

This electrical line servitude will be marked out by a registered surveyor, at the cost of the Lessee, for the notarial registration of the servitude within two months of this agreement being signed. This servitude will be 30 metres wide or otherwise as required by Nampower, should be granted to connect the power station and electricity infrastructure to the existing NamPower line or to the nearest substation of CENORED

The EPC contractor will

Construct an electrical powerline from the solar plant to the Okahandja D/S Substation via an 11kV staggered vertical wooden pole overhead power line, strung with Hare ACSR conductor and for a distance of approximately 2.7km.

The specifications are as follows:

- The 11/22kV OHL structures will be built as per the wooden pole staggered vertical configuration, with 600mm phase spacings.
- Wooden poles will have a minimum pole top diameter of 180mm for suspension poles and 200mm for strain poles, with minimum wood fibre strength of 55MPa, and will be treated with creosote to prevent insect infestation and wood degradation. The constructed Line Phasing on the staggered vertical poles will be as follows:
 - Top phase- White
 - Centre phase- Blue
 - Bottom phase- Red
 - Standard 11m poles will be used, except at road crossings, where the pole height will be increased as per the spanning plans and detailed design drawings.

The line Maximum span length will be limited by the wind span to 100m. Poles and components supplied shall be for use with ACSR Hare conductor.

The designs parameters will cater for the working loads that are likely to be exerted onto the poles during construction as well as during operation.

Both terminal poles and angle strain poles will be capable of withstanding broken wire conditions to prevent cascading failure of the line. An inline (0° deviation) strain pole will be installed in every 2km of a straight line section to prevent cascading failure of the line in the event of broken wire conditions.

Strain structures will withstand strain on either side of the structure, and terminal structures on one side, for temperature variations of -5° C to 60°C. The lines are designed for a dynamic wind pressure of 700Pa, with a shape factor of 0.6 for round objects like poles and conductor.



Anti-climbing devices (Barbed wire wrapped and strapped around the base of the wooden poles) will be installed on all strain poles so as to prevent unauthorized persons from climbing up to the live conductors. 11m 180/200mm WOODEN POLE HARE CONDUCTOR 200 Т WHITE PHASE \bigcirc SIDE GRO 600 33kV 10kN POST INSULATOR BLUE PHASE e ¥ ŧ 600 - RED PHASE Ð 3 x 3.35mm BIL DOWN WIRE 7800 SIDE VIEW N.G.L. PLANTING DEPTH NOTES: WOOD POLE FIBRE STRENGTH: POWERLINE BIL: INSULATION CREEPAGE: 55MPa 200kV 31mm/kV FRONT VIEW

	EPC Contractor	Karah Assets (Technical Director)	Landowner
Date:			
SIGNED OFF			