

Appendix 7 Detailed fibre optic route coordinates

The spatial extent of the proposed Fibre Optic Project, for which EA is being sought, is defined as follows:

- Underground sections (total of approximately 162 km): within a 30 m wide corridor around the centre line of the roads (i.e. the road reserve) where the cabling will be installed underground.
- Overhead sections, outside of the road reserve (total of approximately 21 km): a 30 m wide corridor around the engineering Low Level Design (LLD) route (latest technically feasible engineering design at the time of writing this report).

Thus, 30 m around the coordinates provided below:

Point id	Latitude (decimal degrees)	Longitude (decimal degrees)	Latitude (degrees minutes seconds)	Longitude (degrees minutes seconds)
UNDERGROUND IN ROAD RESERVE OF THE R381, FROM START IN BEAUFORT WEST TO MOLTENO PASS SECTION.				
1-UDG-BW start	-32.3504	22.57657	32° 21' 01.45296160" S	022° 34' 35.66783960" E
2-UDG	-32.3506	22.58036	32° 21' 02.00291034" S	022° 34' 49.30938015" E
3-UDG	-32.3463	22.58088	32° 20' 46.75101817" S	022° 34' 51.16497783" E
4-UDG	-32.3423	22.58164	32° 20' 32.20080011" S	022° 34' 53.89356026" E
5-UDG	-32.3411	22.58146	32° 20' 27.82345066" S	022° 34' 53.27059703" E
6-UDG	-32.3358	22.5812	32° 20' 09.02991886" S	022° 34' 52.30598450" E
7-UDG	-32.3323	22.5849	32° 19' 56.37408241" S	022° 35' 05.63729855" E
8-UDG	-32.3282	22.58261	32° 19' 41.59805606" S	022° 34' 57.38818967" E
9-UDG	-32.3239	22.5796	32° 19' 25.97040761" S	022° 34' 46.55034939" E
10-UDG	-32.3195	22.57661	32° 19' 10.28562641" S	022° 34' 35.80027383" E
11-UDG	-32.3147	22.57442	32° 18' 53.00473608" S	022° 34' 27.90072979" E
12-UDG	-32.3099	22.57231	32° 18' 35.55831511" S	022° 34' 20.33035145" E
13-UDG	-32.305	22.57023	32° 18' 18.08243493" S	022° 34' 12.82925048" E
14-UDG	-32.3002	22.56813	32° 18' 00.63823782" S	022° 34' 05.25374631" E
15-UDG	-32.2952	22.56669	32° 17' 42.56787540" S	022° 34' 00.07618073" E
16-UDG	-32.2899	22.56664	32° 17' 23.58132606" S	022° 33' 59.91103601" E
17-UDG	-32.2847	22.56559	32° 17' 04.95096006" S	022° 33' 56.12302521" E
OVERHEAD – MOLTENO PASS, WITHIN THE ROAD RESERVE OF THE R381 (WHERE POSSIBLE) AND OUTSIDE ROAD RESERVE ON THE FOLLOWING PROPERTIES:				
<ul style="list-style-type: none"> • Erf 3545 of the Beaufort West region [C00900010000354500000] (Karoo National Park). • Erf 1707 of the Beaufort West Region [C00900010000170700000] (Karoo National Park). • Portion 9 of the Farm Alwins Gate 186 [C00900000000018600009] (Karoo National Park). • Portion 1 of the farm Matjes Valie 103 [C00900000000010300001]. 				
18-OVH-Molteno	-32.2842	22.5653	32° 17' 03.02461154" S	022° 33' 55.06331864" E
19-OVH-Molteno	-32.2842	22.56547	32° 17' 02.94091091" S	022° 33' 55.69023963" E
20-OVH-Molteno	-32.2791	22.56458	32° 16' 44.86673690" S	022° 33' 52.47386231" E
21-OVH-Molteno	-32.2739	22.56434	32° 16' 25.86727471" S	022° 33' 51.63368839" E
22-OVH-Molteno	-32.2693	22.56212	32° 16' 09.60720586" S	022° 33' 43.62430146" E
23-OVH-Molteno	-32.2658	22.56241	32° 15' 56.91674841" S	022° 33' 44.68485862" E
24-OVH-Molteno	-32.2628	22.5664	32° 15' 46.12713425" S	022° 33' 59.03698334" E
25-OVH-Molteno	-32.2589	22.56979	32° 15' 32.120457984" S	022° 34' 11.25605872" E
26-OVH-Molteno	-32.2544	22.5684	32° 15' 15.88049089" S	022° 34' 06.24983823" E
27-OVH-Molteno	-32.2518	22.56396	32° 15' 06.53495032" S	022° 33' 50.26720424" E
28-OVH-Molteno	-32.2498	22.55908	32° 14' 59.29453256" S	022° 33' 32.68276468" E
29-OVH-Molteno	-32.2485	22.55767	32° 14' 54.75479842" S	022° 33' 27.61200097" E
30-OVH-Molteno	-32.2457	22.55926	32° 14' 44.63517952" S	022° 33' 33.32014439" E
31-OVH-Molteno	-32.2439	22.55843	32° 14' 37.86907444" S	022° 33' 30.35991510" E
32-OVH-Molteno	-32.2409	22.55947	32° 14' 27.37904234" S	022° 33' 34.10617670" E
33-OVH-Molteno	-32.2364	22.56172	32° 14' 10.91420258" S	022° 33' 42.18368623" E
34-OVH-Molteno	-32.2321	22.56486	32° 13' 55.62767268" S	022° 33' 53.49730025" E
35-OVH-Molteno	-32.2308	22.56556	32° 13' 50.76480016" S	022° 33' 56.00879929" E

Square Kilometre Array fibre optic cable between Beaufort West and Carnarvon.
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Point id	Latitude (decimal degrees)	Longitude (decimal degrees)	Latitude (degrees minutes seconds)	Longitude (degrees minutes seconds)
36-OVH-Molteno	-32.2276	22.56362	32° 13' 39.44424042" S	022° 33' 49.04269495" E
37-OVH-Molteno	-32.2271	22.56402	32° 13' 37.54869755" S	022° 33' 50.48492730" E
38-OVH-Molteno	-32.225	22.56008	32° 13' 29.93194058" S	022° 33' 36.27590531" E
39-OVH-Molteno	-32.2245	22.55898	32° 13' 28.11873609" S	022° 33' 32.31102377" E
40-OVH-Molteno	-32.2205	22.55841	32° 13' 13.63151249" S	022° 33' 30.26510066" E
41-OVH-Molteno	-32.2153	22.55892	32° 12' 55.06325500" S	022° 33' 32.10214917" E
42-OVH-Molteno	-32.2125	22.55944	32° 12' 44.99693502" S	022° 33' 33.97245183" E
43-OVH-Molteno	-32.2102	22.55864	32° 12' 36.69345999" S	022° 33' 31.12071380" E
44-OVH-Molteno	-32.2076	22.55855	32° 12' 27.37344249" S	022° 33' 30.76582087" E
45-OVH-Molteno	-32.2057	22.55995	32° 12' 20.69664442" S	022° 33' 35.82888543" E
46-OVH-Molteno	-32.204	22.56098	32° 12' 14.34451938" S	022° 33' 39.51655209" E
47-OVH-Molteno	-32.2014	22.55943	32° 12' 04.97355553" S	022° 33' 33.94223362" E
48-OVH-Molteno	-32.1975	22.55586	32° 11' 50.96367062" S	022° 33' 21.08404688" E
49-OVH-Molteno	-32.1927	22.55417	32° 11' 33.72825731" S	022° 33' 15.01530504" E
50-OVH-Molteno	-32.1878	22.55289	32° 11' 15.97959434" S	022° 33' 10.39982093" E
51-OVH-Molteno	-32.185	22.54837	32° 11' 06.14186426" S	022° 32' 54.14588165" E
52-OVH-Molteno	-32.1805	22.55045	32° 10' 49.76619757" S	022° 33' 01.60524662" E
53-OVH-Molteno	-32.176	22.54848	32° 10' 33.50493050" S	022° 32' 54.53489054" E
54-OVH-Molteno	-32.1742	22.54889	32° 10' 27.21284468" S	022° 32' 56.01735196" E
55-OVH-Molteno	-32.1729	22.54465	32° 10' 22.28736431" S	022° 32' 40.74561608" E
56-OVH-Molteno	-32.1728	22.54605	32° 10' 22.10238336" S	022° 32' 45.76840434" E
57-OVH-Molteno	-32.1728	22.54465	32° 10' 22.03944820" S	022° 32' 40.73755132" E
UNDERGROUND IN ROAD RESERVE OF THE R381, BETWEEN MOLTENO PASS AND BLOUNEK PASS.				
58-UDG	-32.174	22.49533	32° 10' 26.50896770" S	022° 29' 43.18997724" E
59-UDG	-32.174	22.50059	32° 10' 26.36480976" S	022° 30' 02.12227075" E
60-UDG	-32.1739	22.50587	32° 10' 25.98436834" S	022° 30' 21.13613473" E
61-UDG	-32.1738	22.51115	32° 10' 25.63830791" S	022° 30' 40.15110880" E
62-UDG	-32.1737	22.51644	32° 10' 25.29224749" S	022° 30' 59.16608287" E
63-UDG	-32.1735	22.52172	32° 10' 24.75217055" S	022° 31' 18.17639578" E
64-UDG	-32.1734	22.527	32° 10' 24.18470587" S	022° 31' 37.18605072" E
65-UDG	-32.1732	22.53228	32° 10' 23.61724119" S	022° 31' 56.19570565" E
66-UDG	-32.1731	22.53756	32° 10' 23.04977651" S	022° 32' 15.20536058" E
67-UDG	-32.1729	22.54284	32° 10' 22.48231183" S	022° 32' 34.21501551" E
68-UDG	-32.1722	22.4904	32° 10' 20.01252918" S	022° 29' 25.42527857" E
69-UDG	-32.1695	22.48588	32° 10' 10.12559911" S	022° 29' 09.18227708" E
70-UDG	-32.1667	22.48142	32° 09' 59.96307621" S	022° 28' 53.10707490" E
71-UDG	-32.1638	22.47697	32° 09' 49.69433102" S	022° 28' 37.10253807" E
72-UDG	-32.1597	22.47408	32° 09' 34.79032501" S	022° 28' 26.69724524" E
73-UDG	-32.1545	22.47486	32° 09' 16.09874887" S	022° 28' 29.50125539" E
74-UDG	-32.1496	22.4743	32° 08' 58.46074171" S	022° 28' 27.46810353" E
75-UDG	-32.1464	22.47005	32° 08' 47.16121122" S	022° 28' 12.18808510" E
76-UDG	-32.1434	22.46575	32° 08' 36.14379040" S	022° 27' 56.68641177" E
77-UDG	-32.1403	22.46145	32° 08' 25.08199260" S	022° 27' 41.21625901" E
78-UDG	-32.1372	22.45715	32° 08' 14.02019480" S	022° 27' 25.74610626" E
79-UDG	-32.1341	22.45286	32° 08' 02.90856513" S	022° 27' 10.31351223" E
80-UDG	-32.1305	22.44907	32° 07' 49.93381940" S	022° 26' 56.65746504" E
81-UDG	-32.1255	22.44771	32° 07' 31.97351659" S	022° 26' 51.74989800" E
82-UDG	-32.1203	22.44817	32° 07' 13.07161652" S	022° 26' 53.40093283" E
83-UDG	-32.1151	22.4489	32° 06' 54.23958726" S	022° 26' 56.03148128" E
84-UDG	-32.1098	22.44952	32° 06' 35.35442613" S	022° 26' 58.26243802" E
85-UDG	-32.1046	22.44992	32° 06' 16.39242052" S	022° 26' 59.72234901" E
86-UDG	-32.0993	22.45033	32° 05' 57.43041491" S	022° 27' 01.18226000" E
87-UDG	-32.0941	22.45109	32° 05' 38.63470458" S	022° 27' 03.91464293" E
88-UDG	-32.0888	22.45188	32° 05' 19.84473475" S	022° 27' 06.75862951" E
89-UDG	-32.0836	22.45243	32° 05' 00.93120476" S	022° 27' 08.75045788" E
OVERHEAD – BLOUNEK PASS, WITHIN THE ROAD RESERVE OF THE R381 (WHERE POSSIBLE) AND OUTSIDE ROAD RESERVE ON THE FOLLOWING PROPERTIES:				
<ul style="list-style-type: none"> • Remainder of the Farm Waterval 97 [C0090000000009700000]. • Remainder of the Farm Middle Kraal 98 [C0090000000009800000]. 				
90-OVH-Blounek	-32.0789	22.45238	32° 04' 44.06088094" S	022° 27' 08.55324082" E

Square Kilometre Array fibre optic cable between Beaufort West and Carnarvon.
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Point id	Latitude (decimal degrees)	Longitude (decimal degrees)	Latitude (degrees minutes seconds)	Longitude (degrees minutes seconds)
91-OVH-Blounek	-32.0788	22.45181	32° 04' 43.83273014" S	022° 27' 06.51615552" E
92-OVH-Blounek	-32.0756	22.45177	32° 04' 32.32599452" S	022° 27' 06.36196394" E
93-OVH-Blounek	-32.0715	22.45446	32° 04' 17.31505951" S	022° 27' 16.05668125" E
94-OVH-Blounek	-32.0675	22.45167	32° 04' 03.05074598" S	022° 27' 06.00487021" E
95-OVH-Blounek	-32.0634	22.44853	32° 03' 48.18441178" S	022° 26' 54.71565692" E
96-OVH-Blounek	-32.059	22.45117	32° 03' 32.32431337" S	022° 27' 04.20324135" E
97-OVH-Blounek	-32.0565	22.45407	32° 03' 23.39639974" S	022° 27' 14.65199975" E
98-OVH-Blounek	-32.0552	22.45448	32° 03' 18.79242715" S	022° 27' 16.11355818" E
99-OVH-Blounek	-32.0514	22.45729	32° 03' 05.06415169" S	022° 27' 26.23028290" E
100-OVH-Blounek	-32.0506	22.45719	32° 03' 02.21457694" S	022° 27' 25.88224819" E
101-OVH-Blounek	-32.0472	22.45486	32° 02' 50.02197874" S	022° 27' 17.50749483" E
102-OVH-Blounek	-32.0436	22.4517	32° 02' 37.07520690" S	022° 27' 06.12362411" E
103-OVH-Blounek	-32.0435	22.45183	32° 02' 36.60534962" S	022° 27' 06.58795163" E
UNDERGROUND IN ROAD RESERVE THE R381, BETWEEN BLOUNEK PASS AND ROSEBERG PASS				
104-UDG	-32.043	22.45132	32° 02' 34.97866581" S	022° 27' 04.73919067" E
105-UDG	-32.0396	22.44735	32° 02' 22.41573224" S	022° 26' 50.46117621" E
106-UDG	-32.0361	22.44338	32° 02' 09.85279868" S	022° 26' 36.18316174" E
107-UDG	-32.0326	22.43942	32° 01' 57.26659454" S	022° 26' 21.92565808" E
108-UDG	-32.0292	22.43536	32° 01' 45.11242245" S	022° 26' 07.30385317" E
109-UDG	-32.0254	22.43177	32° 01' 31.41730185" S	022° 25' 54.37672358" E
110-UDG	-32.0204	22.43154	32° 01' 13.26544486" S	022° 25' 53.55522311" E
111-UDG	-32.0151	22.43183	32° 00' 54.27640897" S	022° 25' 54.60164743" E
112-UDG	-32.0099	22.43128	32° 00' 35.48044532" S	022° 25' 52.61930854" E
113-UDG	-32.0047	22.42998	32° 00' 17.05148990" S	022° 25' 47.93803996" E
114-UDG	-31.9998	22.42815	31° 59' 59.21047247" S	022° 25' 41.35245871" E
115-UDG	-31.9948	22.42644	31° 59' 41.24443165" S	022° 25' 35.16738856" E
116-UDG	-31.9897	22.42486	31° 59' 23.09605831" S	022° 25' 29.48208124" E
117-UDG	-31.9848	22.42311	31° 59' 05.16703554" S	022° 25' 23.20389022" E
118-UDG	-31.9801	22.42067	31° 58' 48.48433594" S	022° 25' 14.41515621" E
119-UDG	-31.9756	22.41801	31° 58' 32.09040449" S	022° 25' 04.81927657" E
120-UDG	-31.9708	22.42016	31° 58' 15.03547600" S	022° 25' 12.56504881" E
121-UDG	-31.9665	22.42314	31° 57' 59.33194808" S	022° 25' 23.29296603" E
122-UDG	-31.9616	22.42405	31° 57' 41.60421224" S	022° 25' 26.56892881" E
123-UDG	-31.9564	22.42278	31° 57' 23.13706351" S	022° 25' 22.02432603" E
124-UDG	-31.9513	22.42136	31° 57' 04.82381716" S	022° 25' 16.90269267" E
125-UDG	-31.9463	22.4199	31° 56' 46.54633389" S	022° 25' 11.64697179" E
126-UDG	-31.9412	22.41844	31° 56' 28.26885061" S	022° 25' 06.39125090" E
127-UDG	-31.9361	22.41697	31° 56' 09.99902496" S	022° 25' 01.10911151" E
128-UDG	-31.931	22.41549	31° 55' 51.74408523" S	022° 24' 55.77561617" E
129-UDG	-31.926	22.41401	31° 55' 33.48914551" S	022° 24' 50.44212083" E
130-UDG	-31.9209	22.41253	31° 55' 15.23420579" S	022° 24' 45.10862549" E
131-UDG	-31.9158	22.41105	31° 54' 56.97821857" S	022° 24' 39.77873219" E
132-UDG	-31.9108	22.40958	31° 54' 38.70996392" S	022° 24' 34.49102297" E
133-UDG	-31.9057	22.40813	31° 54' 20.42109010" S	022° 24' 29.27622082" E
134-UDG	-31.9006	22.40673	31° 54' 02.08936609" S	022° 24' 24.21293220" E
135-UDG	-31.8957	22.40486	31° 53' 44.37634641" S	022° 24' 17.48318820" E
136-UDG	-31.8917	22.4015	31° 53' 30.14325760" S	022° 24' 05.38204191" E
OVERHEAD – ROSEBERG PASS, IN THE ROAD RESERVE OF THE R381				
137-OVH-Roseberg	-31.8901	22.3984	31° 53' 24.44750265" S	022° 23' 54.25716000" E
138-OVH-Roseberg	-31.89	22.39847	31° 53' 24.08273979" S	022° 23' 54.50761436" E
139-OVH-Roseberg	-31.8889	22.39583	31° 53' 20.08487329" S	022° 23' 44.98787511" E
140-OVH-Roseberg	-31.8876	22.39299	31° 53' 15.23988381" S	022° 23' 34.75990085" E
141-OVH-Roseberg	-31.8861	22.39228	31° 53' 10.02207126" S	022° 23' 32.21035846" E

Square Kilometre Array fibre optic cable between Beaufort West and Carnarvon.
 Appendices

Point id	Latitude (decimal degrees)	Longitude (decimal degrees)	Latitude (degrees minutes seconds)	Longitude (degrees minutes seconds)
UNDERGROUND IN ROAD RESERVE OF THE R381 and R63 FROM BLOUNEK PASS TO END AT SKA INTERNET POINT-OF-PRESENCE IN CARNARVON				
142-UDG	-31.8824	22.38974	31° 52' 56.47092650" S	022° 23' 23.07543987" E
143-UDG	-31.8776	22.38765	31° 52' 39.36168175" S	022° 23' 15.53916225" E
144-UDG	-31.8733	22.38464	31° 52' 23.72626681" S	022° 23' 04.71246541" E
145-UDG	-31.8689	22.38162	31° 52' 08.12657691" S	022° 22' 53.83468684" E
146-UDG	-31.8653	22.3778	31° 51' 55.06211346" S	022° 22' 40.09236068" E
147-UDG	-31.8621	22.37358	31° 51' 43.65962182" S	022° 22' 24.89893883" E
148-UDG	-31.8592	22.36916	31° 51' 33.27861459" S	022° 22' 08.96395575" E
149-UDG	-31.8564	22.36473	31° 51' 22.90238152" S	022° 21' 53.02587665" E
150-UDG	-31.8533	22.3605	31° 51' 11.83120626" S	022° 21' 37.79789674" E
151-UDG	-31.8487	22.35804	31° 50' 55.22266161" S	022° 21' 28.95116482" E
152-UDG	-31.8443	22.35564	31° 50' 39.30615743" S	022° 21' 20.29065076" E
153-UDG	-31.839	22.35505	31° 50' 20.44978204" S	022° 21' 18.18512200" E
154-UDG	-31.8337	22.35478	31° 50' 01.45778628" S	022° 21' 17.21288749" E
155-UDG	-31.8285	22.35461	31° 49' 42.44963690" S	022° 21' 16.59705150" E
156-UDG	-31.8232	22.35482	31° 49' 23.48476861" S	022° 21' 17.36134272" E
157-UDG	-31.8183	22.35679	31° 49' 05.94876004" S	022° 21' 24.42975756" E
158-UDG	-31.8131	22.35772	31° 48' 47.27463854" S	022° 21' 27.79415783" E
159-UDG	-31.8079	22.35838	31° 48' 28.40327958" S	022° 21' 30.15229430" E
160-UDG	-31.8026	22.35903	31° 48' 09.53192061" S	022° 21' 32.51043077" E
161-UDG	-31.7974	22.35985	31° 47' 50.74964447" S	022° 21' 35.45130321" E
162-UDG	-31.7922	22.36065	31° 47' 31.96526923" S	022° 21' 38.33356872" E
163-UDG	-31.787	22.36114	31° 47' 13.03423569" S	022° 21' 40.11444009" E
164-UDG	-31.7817	22.36112	31° 46' 54.02513858" S	022° 21' 40.02377089" E
165-UDG	-31.7765	22.36008	31° 46' 35.38023221" S	022° 21' 36.27457585" E
166-UDG	-31.7713	22.35924	31° 46' 16.62159008" S	022° 21' 33.26549717" E
167-UDG	-31.766	22.35878	31° 45' 57.68696372" S	022° 21' 31.59851823" E
168-UDG	-31.7608	22.35898	31° 45' 38.86282655" S	022° 21' 32.32359699" E
169-UDG	-31.7562	22.36161	31° 45' 22.49469150" S	022° 21' 41.78469490" E
170-UDG	-31.7514	22.36326	31° 45' 04.90971205" S	022° 21' 47.75184246" E
171-UDG	-31.7462	22.36246	31° 44' 46.17133419" S	022° 21' 44.84925990" E
172-UDG	-31.741	22.36114	31° 44' 27.75277006" S	022° 21' 40.11159250" E
173-UDG	-31.7359	22.36022	31° 44' 09.09905041" S	022° 21' 36.79356325" E
174-UDG	-31.7306	22.36058	31° 43' 50.23784118" S	022° 21' 38.07514621" E
175-UDG	-31.7255	22.36176	31° 43' 31.70426005" S	022° 21' 42.34074901" E
176-UDG	-31.7203	22.36295	31° 43' 13.17067892" S	022° 21' 46.60635181" E
177-UDG	-31.7151	22.36374	31° 42' 54.39251445" S	022° 21' 49.46905747" E
178-UDG	-31.7099	22.36309	31° 42' 35.58033011" S	022° 21' 47.11813821" E
179-UDG	-31.7047	22.36193	31° 42' 17.03045024" S	022° 21' 42.93411862" E
180-UDG	-31.6996	22.36068	31° 41' 58.54957462" S	022° 21' 38.44643681" E
181-UDG	-31.6944	22.35968	31° 41' 39.89801838" S	022° 21' 34.84496393" E
182-UDG	-31.6892	22.35892	31° 41' 21.07502822" S	022° 21' 32.12760524" E
183-UDG	-31.684	22.3582	31° 41' 02.23795995" S	022° 21' 29.52741793" E
184-UDG	-31.679	22.35954	31° 40' 44.27403580" S	022° 21' 34.34174495" E
185-UDG	-31.6743	22.35748	31° 40' 27.31693392" S	022° 21' 26.94314803" E
186-UDG	-31.669	22.3566	31° 40' 08.56883461" S	022° 21' 23.77171162" E
187-UDG	-31.6638	22.35577	31° 39' 49.78835712" S	022° 21' 20.77460270" E
188-UDG	-31.6586	22.35494	31° 39' 31.00787962" S	022° 21' 17.77749378" E
189-UDG	-31.6534	22.35406	31° 39' 12.25306772" S	022° 21' 14.62590920" E
190-UDG	-31.6482	22.35316	31° 38' 53.51242963" S	022° 21' 11.38901554" E
191-UDG	-31.6429	22.35272	31° 38' 34.60009087" S	022° 21' 09.78246861" E
192-UDG	-31.6377	22.35276	31° 38' 15.58345796" S	022° 21' 09.92077456" E
193-UDG	-31.6324	22.35289	31° 37' 56.57836550" S	022° 21' 10.39938069" E
194-UDG	-31.6271	22.35331	31° 37' 37.62065343" S	022° 21' 11.91402586" E
195-UDG	-31.6219	22.35374	31° 37' 18.66648679" S	022° 21' 13.47109363" E
196-UDG	-31.6166	22.3542	31° 36' 59.72035408" S	022° 21' 15.12428801" E
197-UDG	-31.6113	22.35466	31° 36' 40.77422092" S	022° 21' 16.77747728" E
198-UDG	-31.6061	22.35507	31° 36' 21.81380650" S	022° 21' 18.25258918" E
199-UDG	-31.6008	22.35482	31° 36' 02.85840454" S	022° 21' 17.33697163" E
200-UDG	-31.5956	22.35399	31° 35' 44.11403017" S	022° 21' 14.38010108" E
201-UDG	-31.5905	22.35268	31° 35' 25.69475395" S	022° 21' 09.64566046" E

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Point id	Latitude (decimal degrees)	Longitude (decimal degrees)	Latitude (degrees minutes seconds)	Longitude (degrees minutes seconds)
202-UDG	-31.5853	22.35186	31° 35' 06.98076670" S	022° 21' 06.70139124" E
203-UDG	-31.58	22.35185	31° 34' 47.96266218" S	022° 21' 06.67497875" E
204-UDG	-31.5747	22.35188	31° 34' 28.94512558" S	022° 21' 06.75348989" E
205-UDG	-31.5694	22.35194	31° 34' 09.92842125" S	022° 21' 06.98576827" E
206-UDG	-31.5641	22.35201	31° 33' 50.91171692" S	022° 21' 07.21804666" E
207-UDG	-31.5589	22.35198	31° 33' 31.89598223" S	022° 21' 07.13922242" E
208-UDG	-31.5539	22.3502	31° 33' 14.09022134" S	022° 21' 00.70967943" E
209-UDG	-31.5491	22.34813	31° 32' 56.59324890" S	022° 20' 53.25912233" E
210-UDG	-31.5451	22.34482	31° 32' 42.18408900" S	022° 20' 41.36771932" E
211-UDG	-31.5416	22.34079	31° 32' 29.90677809" S	022° 20' 26.84390374" E
212-UDG	-31.5376	22.33855	31° 32' 15.18599810" S	022° 20' 18.76270703" E
213-UDG	-31.5336	22.34095	31° 32' 01.02636733" S	022° 20' 27.40409588" E
214-UDG	-31.5288	22.3389	31° 31' 43.64139366" S	022° 20' 20.03314672" E
215-UDG	-31.5236	22.33826	31° 31' 24.82669074" S	022° 20' 17.74644258" E
216-UDG	-31.5184	22.33937	31° 31' 06.33442511" S	022° 20' 21.74894321" E
217-UDG	-31.5134	22.34095	31° 30' 48.18459677" S	022° 20' 27.42901239" E
218-UDG	-31.5083	22.34255	31° 30' 30.05708445" S	022° 20' 33.18073334" E
219-UDG	-31.5033	22.34414	31° 30' 11.91670591" S	022° 20' 38.89173451" E
220-UDG	-31.4983	22.34572	31° 29' 53.77710823" S	022° 20' 44.60520781" E
221-UDG	-31.4932	22.34732	31° 29' 35.64908394" S	022° 20' 50.35531495" E
222-UDG	-31.4882	22.3489	31° 29' 17.50311548" S	022° 20' 56.04764737" E
223-UDG	-31.4833	22.35086	31° 28' 59.88035701" S	022° 21' 03.10532933" E
224-UDG	-31.4795	22.35082	31° 28' 46.16558783" S	022° 21' 02.93429580" E
225-UDG	-31.4766	22.34843	31° 28' 35.87547501" S	022° 20' 54.33788947" E
226-UDG	-31.4721	22.34945	31° 28' 19.61496839" S	022° 20' 58.01198897" E
227-UDG	-31.4683	22.34582	31° 28' 05.81138237" S	022° 20' 44.93619143" E
228-UDG	-31.4644	22.34225	31° 27' 51.77131300" S	022° 20' 32.10789888" E
229-UDG	-31.4605	22.33868	31° 27' 37.75139661" S	022° 20' 19.25757043" E
230-UDG	-31.4566	22.33511	31° 27' 23.73148022" S	022° 20' 06.40724198" E
231-UDG	-31.4527	22.33154	31° 27' 09.71156384" S	022° 19' 53.55691353" E
232-UDG	-31.4475	22.3307	31° 26' 51.07845246" S	022° 19' 50.52956042" E
233-UDG	-31.4423	22.32999	31° 26' 32.23651219" S	022° 19' 47.94687114" E
234-UDG	-31.4371	22.32927	31° 26' 13.39457193" S	022° 19' 45.36418187" E
235-UDG	-31.4318	22.32855	31° 25' 54.55263166" S	022° 19' 42.78149259" E
236-UDG	-31.4266	22.32783	31° 25' 35.71069140" S	022° 19' 40.19880332" E
237-UDG	-31.4222	22.32528	31° 25' 19.76846764" S	022° 19' 31.01295163" E
238-UDG	-31.4181	22.32191	31° 25' 05.11718243" S	022° 19' 18.88740676" E
239-UDG	-31.414	22.31854	31° 24' 50.46589721" S	022° 19' 06.76186190" E
240-UDG	-31.4099	22.31518	31° 24' 35.81461199" S	022° 18' 54.63631704" E
241-UDG	-31.4059	22.31181	31° 24' 21.16332677" S	022° 18' 42.51077217" E
242-UDG	-31.4018	22.30844	31° 24' 06.51204155" S	022° 18' 30.38522731" E
243-UDG	-31.3973	22.30574	31° 23' 50.33446327" S	022° 18' 20.65166623" E
244-UDG	-31.3924	22.30388	31° 23' 32.52641946" S	022° 18' 13.97649254" E
245-UDG	-31.3874	22.30202	31° 23' 14.72570777" S	022° 18' 07.28155342" E
246-UDG	-31.3824	22.30051	31° 22' 56.53588028" S	022° 18' 01.82859339" E
247-UDG	-31.3773	22.29907	31° 22' 38.27437136" S	022° 17' 56.64534735" E
248-UDG	-31.3725	22.29691	31° 22' 20.92100764" S	022° 17' 48.86475601" E
249-UDG	-31.3676	22.29509	31° 22' 03.19087596" S	022° 17' 42.33046289" E
250-UDG	-31.3625	22.2965	31° 21' 44.96956797" S	022° 17' 47.39172909" E
251-UDG	-31.3575	22.29822	31° 21' 26.98670265" S	022° 17' 53.57985420" E
252-UDG	-31.3525	22.29994	31° 21' 09.01226491" S	022° 17' 59.79293801" E
253-UDG	-31.3474	22.30095	31° 20' 50.64468240" S	022° 18' 03.42578465" E
254-UDG	-31.3423	22.30142	31° 20' 32.42208792" S	022° 18' 05.12826680" E
255-UDG	-31.3378	22.30415	31° 20' 16.13787014" S	022° 18' 14.95207992" E
256-UDG	-31.3333	22.30689	31° 19' 59.87395133" S	022° 18' 24.80917920" E
257-UDG	-31.3295	22.31051	31° 19' 46.08634001" S	022° 18' 37.82686868" E
258-UDG	-31.3258	22.31432	31° 19' 32.93362419" S	022° 18' 51.56096198" E
259-UDG	-31.3214	22.31712	31° 19' 16.96398680" S	022° 19' 01.63356500" E
260-UDG	-31.3162	22.31791	31° 18' 58.25605219" S	022° 19' 04.48910506" E
261-UDG	-31.3109	22.3182	31° 18' 39.26678624" S	022° 19' 05.53555478" E
262-UDG	-31.3057	22.31764	31° 18' 20.50216715" S	022° 19' 03.50789071" E
263-UDG	-31.3011	22.31502	31° 18' 04.13998958" S	022° 18' 54.07568467" E
264-UDG	-31.297	22.31178	31° 17' 49.12961408" S	022° 18' 42.39765576" E
265-UDG	-31.2928	22.30853	31° 17' 34.13948908" S	022° 18' 30.69360239" E

Square Kilometre Array fibre optic cable between Beaufort West and Carnarvon.
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Point id	Latitude (decimal degrees)	Longitude (decimal degrees)	Latitude (degrees minutes seconds)	Longitude (degrees minutes seconds)
266-UDG	-31.2884	22.30562	31° 17' 18.30259507" S	022° 18' 20.22955184" E
267-UDG	-31.2838	22.30302	31° 17' 01.74917817" S	022° 18' 10.86614739" E
268-UDG	-31.2792	22.30042	31° 16' 45.19068172" S	022° 18' 01.51172802" E
269-UDG	-31.2746	22.29783	31° 16' 28.62085277" S	022° 17' 52.17739541" E
270-UDG	-31.27	22.29524	31° 16' 12.04627661" S	022° 17' 42.85149559" E
271-UDG	-31.2654	22.29264	31° 15' 55.48804027" S	022° 17' 33.49683579" E
272-UDG	-31.2608	22.29005	31° 15' 38.91744442" S	022° 17' 24.16387195" E
273-UDG	-31.2562	22.28745	31° 15' 22.34619417" S	022° 17' 14.83211297" E
274-UDG	-31.2516	22.28486	31° 15' 05.77779625" S	022° 17' 05.49528827" E
275-UDG	-31.247	22.28227	31° 14' 49.20519634" S	022° 16' 56.16593172" E
276-UDG	-31.2427	22.27925	31° 14' 33.64010945" S	022° 16' 45.29360935" E
277-UDG	-31.2388	22.27562	31° 14' 19.80931253" S	022° 16' 32.24551680" E
278-UDG	-31.235	22.27195	31° 14' 06.15927012" S	022° 16' 19.00304615" E
279-UDG	-31.2312	22.26828	31° 13' 52.46603314" S	022° 16' 05.80515969" E
280-UDG	-31.2274	22.26461	31° 13' 38.77224854" S	022° 15' 52.60783950" E
281-UDG	-31.2236	22.26095	31° 13' 25.07846394" S	022° 15' 39.41051931" E
282-UDG	-31.2198	22.25728	31° 13' 11.39451581" S	022° 15' 26.20302308" E
283-UDG	-31.216	22.2536	31° 12' 57.74020304" S	022° 15' 12.96486839" E
284-UDG	-31.2122	22.24993	31° 12' 44.07895470" S	022° 14' 59.73390359" E
285-UDG	-31.2084	22.24626	31° 12' 30.39807657" S	022° 14' 46.52342268" E
286-UDG	-31.2046	22.24267	31° 12' 16.43288977" S	022° 14' 33.62550063" E
287-UDG	-31.2006	22.23921	31° 12' 02.07062093" S	022° 14' 21.15897624" E
288-UDG	-31.1965	22.2359	31° 11' 47.27717299" S	022° 14' 09.24355457" E
289-UDG	-31.1921	22.23286	31° 11' 31.72143909" S	022° 13' 58.30243307" E
290-UDG	-31.1878	22.22982	31° 11' 16.16570519" S	022° 13' 47.36131157" E
291-UDG	-31.1835	22.22678	31° 11' 00.60997129" S	022° 13' 36.42019008" E
292-UDG	-31.1792	22.22374	31° 10' 45.05423738" S	022° 13' 25.47906858" E
293-UDG	-31.1749	22.2207	31° 10' 29.49850348" S	022° 13' 14.53794709" E
294-UDG	-31.1705	22.21767	31° 10' 13.94276958" S	022° 13' 03.59682559" E
295-UDG	-31.1662	22.21463	31° 09' 58.38703568" S	022° 12' 52.65570409" E
296-UDG	-31.1619	22.21159	31° 09' 42.83130178" S	022° 12' 41.71458260" E
297-UDG	-31.1574	22.20879	31° 09' 26.77359888" S	022° 12' 31.63718498" E
298-UDG	-31.1526	22.2066	31° 09' 09.46659466" S	022° 12' 23.75850545" E
299-UDG	-31.1478	22.2045	31° 08' 52.01856199" S	022° 12' 16.19179198" E
300-UDG	-31.1429	22.2024	31° 08' 34.57052932" S	022° 12' 08.62507851" E
301-UDG	-31.1381	22.20029	31° 08' 17.12249665" S	022° 12' 01.05836504" E
302-UDG	-31.1332	22.19819	31° 07' 59.67437389" S	022° 11' 53.49185932" E
303-UDG	-31.1284	22.19609	31° 07' 42.23168764" S	022° 11' 45.91291243" E
304-UDG	-31.1236	22.19396	31° 07' 24.82395936" S	022° 11' 38.25393125" E
305-UDG	-31.1188	22.19177	31° 07' 07.53737976" S	022° 11' 30.37235710" E
306-UDG	-31.1143	22.18886	31° 06' 51.65413613" S	022° 11' 19.91235860" E
307-UDG	-31.1099	22.18596	31° 06' 35.77089250" S	022° 11' 09.45236010" E
308-UDG	-31.1055	22.18305	31° 06' 19.88764887" S	022° 10' 58.99236159" E
309-UDG	-31.1011	22.18015	31° 06' 04.00403803" S	022° 10' 48.53292074" E
310-UDG	-31.0967	22.17724	31° 05' 48.12024886" S	022° 10' 38.07375067" E
311-UDG	-31.0923	22.17433	31° 05' 32.26378918" S	022° 10' 27.57320497" E
312-UDG	-31.0879	22.17141	31° 05' 16.40980949" S	022° 10' 17.06890466" E
313-UDG	-31.0835	22.16849	31° 05' 00.55582980" S	022° 10' 06.56460436" E
314-UDG	-31.0789	22.16586	31° 04' 44.07578599" S	022° 09' 57.07858627" E
315-UDG	-31.0743	22.16324	31° 04' 27.54639955" S	022° 09' 47.67282312" E
316-UDG	-31.0697	22.16063	31° 04' 11.01701311" S	022° 09' 38.26705996" E
317-UDG	-31.0651	22.15802	31° 03' 54.48762666" S	022° 09' 28.86129680" E
318-UDG	-31.0605	22.15541	31° 03' 37.95580669" S	022° 09' 19.45981564" E
319-UDG	-31.0559	22.1528	31° 03' 21.41102977" S	022° 09' 10.08116503" E
320-UDG	-31.0513	22.1502	31° 03' 04.85915588" S	022° 09' 00.71503573" E
321-UDG	-31.0468	22.14759	31° 02' 48.31135775" S	022° 08' 51.34170262" E
322-UDG	-31.0422	22.14499	31° 02' 31.76355961" S	022° 08' 41.96836950" E
323-UDG	-31.0376	22.14239	31° 02' 15.21576148" S	022° 08' 32.59503639" E
324-UDG	-31.033	22.13978	31° 01' 58.66757029" S	022° 08' 23.22239723" E
325-UDG	-31.0284	22.13718	31° 01' 42.11906211" S	022° 08' 13.85031775" E
326-UDG	-31.0238	22.13458	31° 01' 25.57055393" S	022° 08' 04.47823827" E
327-UDG	-31.0191	22.13213	31° 01' 08.74839480" S	022° 07' 55.68185144" E
328-UDG	-31.0142	22.13024	31° 00' 51.00238652" S	022° 07' 48.85001507" E
329-UDG	-31.0091	22.12862	31° 00' 32.90035029" S	022° 07' 43.01861033" E

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Point id	Latitude (decimal degrees)	Longitude (decimal degrees)	Latitude (degrees minutes seconds)	Longitude (degrees minutes seconds)
330-UDG	-31.004	22.12736	31° 00' 14.48443880" S	022° 07' 38.47815137" E
331-UDG	-30.9988	22.12666	30° 59' 55.63095041" S	022° 07' 35.98115869" E
332-UDG	-30.9935	22.12597	30° 59' 36.77746202" S	022° 07' 33.48416601" E
333-UDG	-30.9883	22.12531	30° 59' 17.90594799" S	022° 07' 31.12857231" E
334-UDG	-30.9831	22.12467	30° 58' 59.02899284" S	022° 07' 28.81566050" E
335-UDG	-30.9778	22.124	30° 58' 40.16796531" S	022° 07' 26.39980483" E
336-UDG	-30.9726	22.12462	30° 58' 21.31409517" S	022° 07' 28.64356368" E
337-UDG	-30.9711	22.13233	30° 58' 16.08057945" S	022° 07' 56.38180468" E
338-UDG	-30.9697	22.12509	30° 58' 10.89765852" S	022° 07' 30.30814425" E
339-UDG	-30.9696	22.13739	30° 58' 10.45448580" S	022° 08' 14.59243035" E
340-UDG	-30.9692	22.13267	30° 58' 09.24492008" S	022° 07' 57.60840063" E
341-UDG-CNV end	-30.9699	22.14119	30° 58' 11.78892624" S	022° 08' 28.29445774" E