Preliminary Environmental Information Report

Appendix 12A: Analysis Solar Array Data

PEIR Appendices [PINS Ref: EN 010171]

Document Reference: EN 010171/PEIR APP/12A

Revision Number: 1

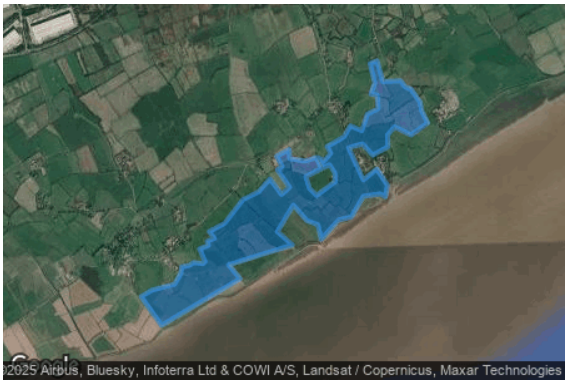
December 2025

Future Energy Llanwern Limited

Component Data

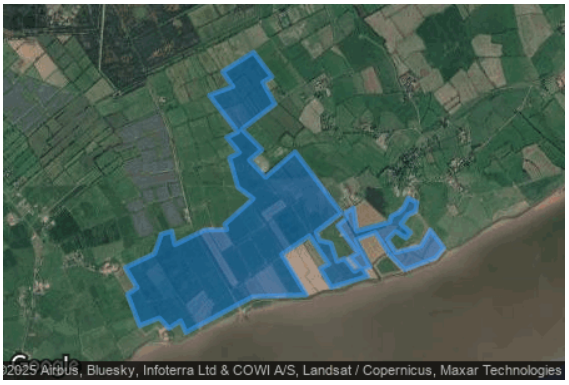
Solar arrays

Name: Solar array 1
Axis tracking: Fixed (no rotation)
Tilt: 18.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	51.549755	-2.846471	5.10	2.12	7.23
2	51.547307	-2.843660	5.08	2.12	7.21
3	51.551277	-2.832867	4.87	2.12	7.00
4	51.552457	-2.834454	5.59	2.12	7.72
5	51.554158	-2.825678	6.65	2.12	8.78
6	51.555279	-2.827749	5.48	2.12	7.60
7	51.557554	-2.825550	4.92	2.12	7.05
8	51.556226	-2.823683	6.04	2.12	8.17
9	51.555880	-2.822181	5.85	2.12	7.98
10	51.554639	-2.821709	7.54	2.12	9.66
11	51.556280	-2.819348	6.21	2.12	8.33
12	51.556540	-2.817589	7.29	2.12	9.42
13	51.558294	-2.815926	6.65	2.12	8.78
14	51.558510	-2.813616	6.45	2.12	8.57
15	51.558263	-2.812908	6.31	2.12	8.43
16	51.559230	-2.812607	7.62	2.12	9.74
17	51.560617	-2.814066	7.02	2.12	9.15
18	51.559690	-2.815933	6.37	2.12	8.49
19	51.562438	-2.817961	6.25	2.12	8.37
20	51.562759	-2.816030	6.43	2.12	8.55
21	51.561811	-2.814646	6.86	2.12	8.99
22	51.562505	-2.812554	6.57	2.12	8.70
23	51.563526	-2.812597	6.58	2.12	8.71
24	51.564206	-2.811642	6.18	2.12	8.30
25	51.563519	-2.809367	6.28	2.12	8.40
26	51.564553	-2.807071	5.60	2.12	7.73
27	51.565613	-2.807940	5.84	2.12	7.97
28	51.566287	-2.808101	5.92	2.12	8.04
29	51.567414	-2.809367	6.46	2.12	8.58
30	51.567594	-2.810140	7.14	2.12	9.26
31	51.568134	-2.810816	6.10	2.12	8.22
32	51.568061	-2.813240	5.59	2.12	7.72
33	51.569834	-2.814045	5.88	2.12	8.00
34	51.569601	-2.814989	6.43	2.12	8.56
35	51.567947	-2.814367	6.22	2.12	8.34
36	51.567007	-2.814893	6.53	2.12	8.65
37	51.566914	-2.814024	6.52	2.12	8.64
38	51.565746	-2.813884	6.22	2.12	8.34
39	51.565293	-2.815369	6.18	2.12	8.31
40	51.563879	-2.816142	5.71	2.12	7.84
41	51.564292	-2.817697	6.18	2.12	8.31
42	51.563359	-2.818577	6.12	2.12	8.24
43	51.562534	-2.820887	6.57	2.12	8.69
44	51.561934	-2.820404	5.95	2.12	8.08
45	51.561307	-2.821327	5.87	2.12	8.00
46	51.561581	-2.822153	6.49	2.12	8.62
47	51.560760	-2.821370	6.14	2.12	8.27
48	51.560980	-2.820565	5.87	2.12	7.99
49	51.560300	-2.819846	5.56	2.12	7.68
50	51.559526	-2.819803	6.92	2.12	9.04
51	51.558366	-2.822368	7.11	2.12	9.23
52	51.558946	-2.823312	6.13	2.12	8.25
53	51.559967	-2.823837	6.12	2.12	8.25
54	51.560680	-2.821638	6.67	2.12	8.79
55	51.561594	-2.822400	5.88	2.12	8.00
56	51.561301	-2.823912	6.04	2.12	8.17
57	51.561501	-2.826037	5.24	2.12	7.36
58	51.562274	-2.826133	5.97	2.12	8.10
59	51.561707	-2.827839	4.90	2.12	7.03

Name: Solar array 2
Axis tracking: Fixed (no rotation)
Tilt: 18.0°
Orientation: 180.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (m)	Height above ground (m)	Total elevation (m)
1	51.551430	-2.848880	5.38	2.12	7.51
2	51.551036	-2.847678	4.90	2.12	7.02
3	51.550309	-2.847892	5.01	2.12	7.13
4	51.550015	-2.848874	4.27	2.12	6.39
5	51.549221	-2.849877	4.59	2.12	6.72
6	51.548501	-2.848590	5.29	2.12	7.42
7	51.548021	-2.849191	5.11	2.12	7.23
8	51.548574	-2.850639	4.96	2.12	7.09
9	51.547914	-2.851744	4.38	2.12	6.50
10	51.546793	-2.850585	4.26	2.12	6.39
11	51.547320	-2.847174	5.02	2.12	7.14
12	51.548701	-2.845843	4.29	2.12	6.42
13	51.547187	-2.844009	5.17	2.12	7.29
14	51.546339	-2.845114	3.92	2.12	6.04
15	51.545332	-2.849362	4.85	2.12	6.98
16	51.546646	-2.851497	4.56	2.12	6.68
17	51.548494	-2.853439	5.42	2.12	7.54
18	51.547874	-2.856057	4.78	2.12	6.90
19	51.545565	-2.854115	4.61	2.12	6.74
20	51.545365	-2.855070	4.56	2.12	6.68
21	51.544765	-2.854501	4.44	2.12	6.57
22	51.543804	-2.859458	4.46	2.12	6.59
23	51.545432	-2.860992	4.44	2.12	6.57
24	51.545792	-2.859823	4.80	2.12	6.92
25	51.548207	-2.862484	5.43	2.12	7.56
26	51.546626	-2.866282	4.00	2.12	6.13
27	51.543177	-2.862891	4.46	2.12	6.59
28	51.543016	-2.870273	5.52	2.12	7.64
29	51.539974	-2.879457	5.50	2.12	7.62
30	51.540975	-2.880165	5.18	2.12	7.31
31	51.540321	-2.881774	5.37	2.12	7.50
32	51.541215	-2.883105	5.33	2.12	7.46
33	51.540547	-2.885808	5.58	2.12	7.70
34	51.543230	-2.887482	4.37	2.12	6.50
35	51.543790	-2.886152	4.96	2.12	7.08
36	51.545498	-2.887761	5.17	2.12	7.30
37	51.546692	-2.883758	4.00	2.12	6.13
38	51.548340	-2.882836	3.06	2.12	5.19
39	51.548613	-2.881398	4.52	2.12	6.65
40	51.547459	-2.880990	3.74	2.12	5.86
41	51.548700	-2.876892	4.00	2.12	6.12
42	51.548727	-2.873845	4.55	2.12	6.67
43	51.549194	-2.874103	3.58	2.12	5.71
44	51.551369	-2.870197	3.55	2.12	5.67
45	51.552329	-2.872300	4.17	2.12	6.30
46	51.554851	-2.873459	4.41	2.12	6.54
47	51.555291	-2.872107	3.71	2.12	5.83
48	51.556599	-2.873845	4.71	2.12	6.83
49	51.557039	-2.872322	4.61	2.12	6.74
50	51.560174	-2.876227	4.43	2.12	6.56
51	51.560921	-2.872987	4.52	2.12	6.64
52	51.562175	-2.874424	4.80	2.12	6.92
53	51.563842	-2.870176	4.09	2.12	6.21
54	51.561748	-2.867601	4.39	2.12	6.52
55	51.561281	-2.868888	5.23	2.12	7.36
56	51.559427	-2.867215	3.90	2.12	6.02
57	51.557279	-2.871764	5.49	2.12	7.61
58	51.555545	-2.868996	4.86	2.12	6.98
59	51.554651	-2.870734	4.79	2.12	6.92