

Environmental Impact Assessment Report

Cummeennabuddoge Wind Farm

Technical Appendix 13-2: Cumulative Schemes

Cummeennabuddoge Wind (DAC)

September 2024



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Cumulative Schemes

Tables 13-2-1 shows the cumulative wind farms considered in the noise assessment including their locations, the turbine type assumed, and the level of uncertainty added to the manufacturers sound power level data for each.

Table 13-2-1: Cumulative Wind Farms

Wind Farms	ID	Easting	Northing	Elevation	Hub Height	Turbine Make and Model	Uncertainty
Knocknamork	KNO1	517839	581480	410	100	Vestas V150	2
Knocknamork	KNO2	518291	581779	420	100	Vestas V150	2
Knocknamork	KNO3	518723	581633	430	100	Vestas V150	2
Knocknamork	KNO4	518000	580985	360	100	Vestas V150	2
Knocknamork	KNO5	518610	581168	350	100	Vestas V150	2
Knocknamork	KNO6	519120	581334	400	100	Vestas V150	2
Knocknamork	KNO7	519576	581523	450	100	Vestas V150	2
Coomacheo	COO1	520737	584984	380	65	Enercon E82	2
Coomacheo	COO2	521064	584808	380	65	Enercon E82	2
Coomacheo	COO3	521413	584797	400	65	Enercon E82	2
Coomacheo	COO4	521132	585183	400	65	Enercon E82	2
Coomacheo	COO5	520943	585422	410	65	Enercon E82	2
Coomacheo	COO6	520757	585662	410	65	Enercon E82	2
Coomacheo	COO7	521439	585526	410	65	Enercon E82	2
Coomacheo	COO8	521263	585773	420	65	Enercon E82	2
Coomacheo	COO9	520671	585991	440	65	Enercon E82	2
Coomacheo	COO10	521093	586023	430	65	Enercon E82	2
Coomacheo	COO11	520983	586326	440	65	Enercon E82	2
Coomacheo	COO12	520653	586408	460	65	Enercon E82	2
Coomacheo	COO13	522117	585795	420	65	Enercon E82	2
Coomacheo	COO14	522468	585819	420	65	Enercon E82	2
Coomacheo	COO15	522299	585353	420	65	Enercon E82	2
Coomacheo	COO24	519182	582183	430	65	Enercon E82	2
Coomacheo	COO18	519624	582392	440	65	Enercon E82	2
Coomacheo	COO19	519951	582277	450	65	Enercon E82	2
Curragh	CUR1	522927	584517	400	80	Enercon E82	2
Curragh	CUR2	523203	584267	430	80	Enercon E82	2
Curragh	CUR3	523405	584657	400	80	Enercon E82	2
Curragh	CUR4	523698	584470	430	80	Enercon E82	2
Curragh	CUR5	523858	584816	420	80	Enercon E82	2
Curragh	CUR6	524138	584632	450	80	Enercon E82	2
Curragh	CUR7	524008	585256	414	80	Enercon E82	2
Curragh	CUR8	524261	585017	420	80	Enercon E82	2
Caherdowney	CAH1	523194	583506	480	68.3	Enercon E-70	2
Caherdowney	CAH2	523030	583888	450	68.3	Enercon E-70	2

Wind Farms	ID	Easting	Northing	Elevation	Hub Height	Turbine Make and Model	Uncertainty
Caherdowney	CAH3	523498	584100	440	68.3	Enercon E-70	2
Caherdowney	CAH4	523509	583840	440	68.3	Enercon E-70	2
Clydaghroe	CLY4	520628	582492	510	64	Enercon E-70	2
Clydaghroe	CLY5	520322	582567	470	64	Enercon E-70	2
Clydaghroe	CLYX1	519582	582062	460	64	Enercon E-70	2
Gneeves 1&2	GNE1	522224	584999	400	65	Vestas V52	2
Gneeves 1&2	GNE2	522355	584745	390	65	Vestas V52	2
Gneeves 1&2	GNE3	522453	584545	390	65	Vestas V52	2
Gneeves 1&2	GNE4	522485	585108	410	65	Vestas V52	2
Gneeves 1&2	GNE5	522573	584884	400	65	Vestas V52	2
Gneeves 1&2	GNE6	522712	584681	390	65	Vestas V52	2
Gneeves 1&2	GNE7	522696	585228	410	65	Vestas V52	2
Gneeves 1&2	GNE8	522803	584993	400	65	Vestas V52	2
Gneeves 1&2	GNE9	522944	584801	390	65	Vestas V52	2
Gneeves 1&2	GNE10	523032	585129	409	65	Vestas V52	2
Gneeves 1&2	GNE11	523184	584916	390	65	Vestas V52	2
Gneeves 1&2	GNE12	522928	585343	420	65	Vestas V52	2
Gneeves 1&2	GNE13	523147	585505	440	65	Vestas V52	2
Gneeves 1&2	GNE14	523320	585329	420	65	Vestas V52	2
Gneeves 1&2	GNE15	523531	585193	400	65	Vestas V52	2
Gneeves 1&2	GNE16	523358	585057	392	65	Vestas V52	2
Gneeves 1&2	GNE17	523614	585412	400	65	Vestas V52	2
Gneeves 1&2	GNE18	522227	584431	380	65	Vestas V52	2

Sound Power Levels

The sound power levels presented below include the uncertainty specified at Table 13-2-1.

Table 13-2-2: Sound Power Level for the Vestas V150 (100m hub height)

Standardised 10m Height Wind Speed (m/s)	Octave Band (Hz)								Total
	63	125	250	500	1k	2k	4k	8k	
4	78.7	86.6	91.4	93.3	92.1	88.0	80.8	70.6	98.1
5	83.1	90.9	95.7	97.6	96.5	92.3	85.2	75.0	102.4
6	86.4	94.3	99.2	101.1	100.0	95.9	88.8	78.6	105.9
7	87.1	95.1	100.0	102.0	100.9	96.8	89.7	79.5	106.8
8	87.5	95.3	100.2	102.1	101.0	96.8	89.7	79.6	106.9
9	88.3	95.7	100.2	102.0	100.9	96.8	90.0	80.2	106.9
10	88.3	95.7	100.2	102.0	100.9	96.8	90.0	80.2	106.9
11	88.3	95.7	100.2	102.0	100.9	96.8	90.0	80.2	106.9
12	88.3	95.7	100.2	102.0	100.9	96.8	90.0	80.2	106.9

Table 13-2-3: Enercon E82 (65m hub height)

Standardised 10m Height Wind Speed (m/s)	Octave Band (Hz)								Total
	63	125	250	500	1k	2k	4k	8k	
4	80.6	88.6	88.3	90.9	92.7	87.8	75.5	67.4	97.2
5	84.7	92.7	92.4	95.0	96.8	91.9	79.6	71.5	101.3
6	88.3	96.3	96.0	98.6	100.4	95.5	83.2	75.1	104.9
7	89.4	97.4	97.1	99.7	101.5	96.6	84.3	76.2	106.0
8	90.2	98.2	97.9	100.5	102.3	97.4	85.1	77.0	106.8
9	90.3	98.3	98.0	100.6	102.4	97.5	85.2	77.1	106.9
10	90.3	98.3	98.0	100.6	102.4	97.5	85.2	77.1	106.9
11	90.3	98.3	98.0	100.6	102.4	97.5	85.2	77.1	106.9
12	90.3	98.3	98.0	100.6	102.4	97.5	85.2	77.1	106.9

Table 13-2-4: Enercon E82 (80m hub height)

Standardised 10m Height Wind Speed (m/s)	Octave Band (Hz)								Total
	63	125	250	500	1k	2k	4k	8k	
4	81.1	89.1	88.8	91.4	93.2	88.3	76.0	67.9	97.7
5	85.3	93.3	93.0	95.6	97.4	92.5	80.2	72.1	101.9
6	88.6	96.6	96.3	98.9	100.7	95.8	83.5	75.4	105.2
7	89.5	97.5	97.2	99.8	101.6	96.7	84.4	76.3	106.1
8	90.3	98.3	98.0	100.6	102.4	97.5	85.2	77.1	106.9
9	90.3	98.3	98.0	100.6	102.4	97.5	85.2	77.1	106.9
10	90.3	98.3	98.0	100.6	102.4	97.5	85.2	77.1	106.9
11	90.3	98.3	98.0	100.6	102.4	97.5	85.2	77.1	106.9
12	90.3	98.3	98.0	100.6	102.4	97.5	85.2	77.1	106.9

Table 13-2-5: Enercon E-70 (64m hub height)

Standardised 10m Height Wind Speed (m/s)	Octave Band (Hz)								Total
	63	125	250	500	1k	2k	4k	8k	
4	76.2	83.2	88.8	87.8	82.9	78.2	73.2	70.0	92.8
5	79.0	86.0	91.6	90.6	85.7	81.0	76.0	72.8	95.6
6	84.1	91.1	96.7	95.7	90.8	86.1	81.1	77.9	100.7
7	87.1	94.3	98.9	98.5	94.0	89.0	85.0	82.1	103.4
8	89.0	97.2	100.3	99.2	96.8	92.8	86.1	79.6	105.1
9	88.8	97.7	101.9	101.7	97.1	92.4	88.2	84.6	106.5
10	90.4	99.0	101.5	100.1	98.6	95.2	88.4	80.9	106.5
11	90.4	99.0	101.5	100.1	98.6	95.3	88.4	80.8	106.5
12	90.4	99.0	101.5	100.1	98.6	95.3	88.4	80.8	106.5

Table 13-2-6: Enercon E-70 (68.3m hub height)

Standardised 10m Height Wind Speed (m/s)	Octave Band (Hz)								Total
	63	125	250	500	1k	2k	4k	8k	
4	76.3	83.3	88.9	87.9	83.0	78.3	73.3	70.1	92.9
5	79.2	86.2	91.8	90.8	85.9	81.2	76.2	73.0	95.8
6	84.3	91.3	96.9	95.9	91.0	86.3	81.4	78.2	100.9
7	87.2	94.4	99.0	98.5	94.1	89.2	85.1	82.1	103.5
8	89.0	97.3	100.4	99.3	96.8	92.9	86.2	79.9	105.2
9	88.9	97.8	101.9	101.6	97.2	92.6	88.2	84.5	106.5
10	90.4	99.0	101.5	100.1	98.6	95.3	88.4	80.8	106.5
11	90.4	99.0	101.5	100.1	98.6	95.3	88.4	80.8	106.5
12	90.4	99.0	101.5	100.1	98.6	95.3	88.4	80.8	106.5

Table 13-2-7: Vestas V52 (65m hub height)

Standardised 10m Height Wind Speed (m/s)	Octave Band (Hz)								Total
	63	125	250	500	1k	2k	4k	8k	
4	75.5	83.4	89.2	94.8	94.5	90.6	84.2	74.0	99.2
5	75.5	83.4	89.2	94.8	94.5	90.6	84.2	74.0	99.2
6	80.0	87.9	93.7	99.3	99.0	95.1	88.7	78.5	103.7
7	82.2	90.1	95.9	101.5	101.2	97.3	90.9	80.7	105.9
8	82.7	90.6	96.4	102.0	101.7	97.8	91.4	81.2	106.4
9	82.9	90.8	96.6	102.2	101.9	98.0	91.6	81.4	106.6
10	81.7	89.6	95.4	101.0	100.7	96.8	90.4	80.2	105.4
11	81.7	89.6	95.4	101.0	100.7	96.8	90.4	80.2	105.4
12	81.7	89.6	95.4	101.0	100.7	96.8	90.4	80.2	105.4