

Appendix 9.6 – Cumulative Developments

Contents

Introduction	1
Table 9.6.1	1
Table 9.6.2	3

This page is intentionally blank.

Appendix 9.6: Cumulative Noise Immission Levels

Introduction

Table 9.6.1 shows the turbine coordinates used for the prediction of noise immission levels from each of the neighbouring wind farms under consideration, which when combined with the noise immission levels from the Proposed Development result in the cumulative or “overall” noise immission levels. Table 9.6.2 shows the turbine types installed or expected at each wind farm, together with their overall sound power levels at a wind speed of 8 m/s at 10 m height. The sound power levels shown include the uncertainties derived in each case as appropriate according to the guidance in the Institute of Acoustics Good Practice Guide.

Table 9.6.1 – Turbine Coordinates for Noise Predictions

Turbine No.	Easting	Northing	Turbine No.	Easting	Northing
Douglas West					
T1	280331	633205	T8	281769	632799
T2	280690	633124	T9	282110	632385
T3	281111	633045	T10	282170	631825
T4	281331	631665	T11	282490	632125
T5	281577	631442	T12	282296	632950
T6	281651	633144	T13	282570	632685
T7	281771	631965			
Dalquhandy Revised					
T1	279674	634793	T9	279037	633681
T2	279808	634499	T10	278802	633276
T3	280025	634175	T11	278448	633295
T4	279988	633262	T12	278908	632553
T5	279635	633381	T13	279320	632770
T6	279513	633732	T14	279794	632839
T7	279308	634083	T15	279162	632358
T8	279255	634454			
Hagshaw Hill Repowered					
T1	278749	629561	T8	279327	630246
T2	279149	629586	T9	278976	630329
T3	279760	629664	T10	279546	630730
T4	279042	629950	T11	279242	630900
T5	279595	630026	T12	278864	630881
T6	280015	630194	T13	278604	631053
T7	279831	630506	T14	279590	631291
Hagshaw Hill Extension					
T1	280632	631203	T11	278303	630782

Turbine No.	Easting	Northing	Turbine No.	Easting	Northing
T2	280713	631008	T12	278446	630647
T3	280349	631109	T13	278581	630517
T4	280475	630920	T14	278706	630374
T5	279833	631159	T15	278204	630513
T6	280002	631085	T16	278325	630378
T7	280116	630949	T17	278455	630248
T8	280250	630825	T18	278585	630118
T9	280280	630629	T19	280355	630462
T10	278696	629927	T20	280519	630732
Nutberry					
T1	276936	633340	T4	277320	632610
T2	277106	633118	T5	277502	632403
T3	277232	632877	T6	277687	632194
Cumberhead Revised					
T1	274565	631923	T8	276367	632904
T2	274776	632370	T9	276392	632270
T3	275158	631862	T10	276193	633804
T4	275804	632626	T11	278675	631621
T5	275175	632769	T12	276731	632693
T6	278733	632056	T13	278292	632443
T7	275859	632204	T14	278205	632004
Galawhistle					
T1	278151	629564	T12	276312	630336
T2	277848	629763	T13	276764	630496
T3	277809	630096	T14	276386	630711
T4	277815	630481	T15	276502	631459
T5	277746	630796	T16	277178	631514
T6	278060	630367	T17	277449	631817
T7	277702	631568	T18	276764	631232
T8	277330	630880	T19	277608	631207
T9	276623	629429	T20	276879	630866
T10	276386	629669	T21	278173	631037
T11	276480	630018			
Auchrobert					
T1	274541	638638	T7	274799	638941
T2	274663	638343	T8	275228	638772
T3	274320	638062	T9	275260	638462
T4	274135	637777	T10	275759	639036

Turbine No.	Easting	Northing	Turbine No.	Easting	Northing
T5	273506	637702	T11	275801	638716
T6	273900	637478	T12	275794	638389
Dungavel					
T1	267540	637130	T8	268332	635982
T2	267870	636925	T9	266922	636661
T3	268115	636657	T10	267311	636450
T4	268530	636335	T11	269185	635830
T5	266930	637055	T12	268714	635753
T6	267295	636824	T13	268808	635308
T7	267630	636645			
Kype Muir					
T1	270717	638122	T14	272058	638645
T2	271087	638023	T15	272255	638354
T3	271407	637789	T16	272340	637882
T4	270544	638992	T17	271124	639878
T5	270816	638699	T18	271506	639437
T6	271136	638515	T19	271843	639333
T7	271480	638380	T20	272182	639143
T8	271785	638177	T21	272605	638956
T9	271879	637789	T22	272650	638312
T10	270694	639448	T23	271517	639855
T11	271014	639180	T24	272012	639807
T12	271339	639001	T25	272317	639623
T13	271752	638823	T26	272652	639406
Kype Muir Extension					
T1	267803	637568	T10	271484	637307
T2	268152	637346	T11	271267	636729
T3	268499	637088	T12	270988	637006
T4	268936	636755	T13	270705	636500
T5	269207	636479	T14	270426	636819
T6	270552	637674	T15	270221	635859
T7	270622	637282	T16	270163	636308
T8	272034	637408	T17	269705	636170
T9	271838	636936	T18	269950	636614
Douglas West Extension					
T1	279277	631335	T8	280290	632711
T2	279356	631993	T9	280607	632496
T3	279649	631800	T10	280920	632244

Turbine No.	Easting	Northing	Turbine No.	Easting	Northing
T4	280129	631515	T11	280975	631781
T5	279793	632368	T12	281354	632708
T6	280077	632065	T13	281508	632328
T7	280551	631615			
Hare Craig					
T1	273084	630745	T5	273440	631633
T2	273506	630938	T6	273779	631346
T3	273880	630674	T7	274165	631109
T4	274330	630680	T8	273555	632106

Table 9.6.2 – Turbine Details for Cumulative Noise Predictions

Wind Farm	no. of turbines	type	LwA at 8m/s*
Douglas West	13	Siemens SG-6.0-155	107.70
Douglas West Extension	13	Siemens SG-6.0-155	107.70
Dalquhandy	15	Senvion MM82	104.9
Hagshaw Hill repowered	14	Siemens Gamesa SG6.0-155	107.7
Hagshaw Hill extension	20	RePower MD77	103.8
Nutberry	6	Nordex N90	107.5
Cumberhead	14	Vestas V90	109.0
Galawhistle	22	Vestas V80	107.0
Auchrobert	12	Vestas V90	109.0
Dungavel	13	Vestas V80	107.0
Kype Muir	26	Vestas V90	109.0
Kype Muir extension	18	Vestas V90	109.0
Hare Craig	8	Siemens SG-6.0-155	107.70

* including uncertainty as defined by the IOA Good Practice Guide

