

Appendix 17.1:

Shadow Flicker

Meteorological Data

This page is intentionally blank.

Appendix 17.1 – Shadow Flicker Meteorological Data

Glenlee Meteorological Data

Table 17.1.1 below summarises the raw data received from the historical weather station data for Glenlee.

Table 17.1.1 – Summary of Meteorological Data for Glenlee from 1991-2020

Month	Number of Days in Month	Average Hours per Month	Hours per day
January	31	31.36	1.01
February	28	59.57	2.13
March	31	97.93	3.16
April	30	140.77	4.69
May	31	180.76	5.83
June	30	149.55	4.99
July	31	158.16	5.10
August	31	142.11	4.58
September	30	110.52	3.68
October	31	73.95	2.39
November	30	44.45	1.48
December	31	25.96	0.84

Wind Parameters

Table 17.1.2 below outlines the wind parameters used within windPRO model for the Proposed Varied Development. It adopts a 16 degree sector with 7,446 hours of wind per year (equivalent to the Proposed Varied Development being operational for 85 % of the year). Wind distribution data for the site is taken from the historical weather station data for Prestwick Airport.

Table 17.1.2 – Wind Distribution at Prestwick Airport from 2000-2010

Direction	Wind Distribution	Hours of Wind / Year	Operational Hours (85%)
N	0.64%	56.06	48
NNE	0.88%	77.09	66
NE	2.49%	218.12	185
ENE	0.64%	56.06	48
E	2.27%	198.85	169
ESE	2.23%	195.35	166
SE	3.23%	282.95	241
SSE	5.69%	498.44	424

Direction	Wind Distribution	Hours of Wind / Year	Operational Hours (85%)
S	17.00%	1489.20	1266
SSW	10.23%	896.15	762
SW	16.66%	1459.42	1241
WSW	12.13%	1062.59	903
W	13.78%	1207.13	1026
WNW	9.84%	861.98	733
NW	2%	164.69	140
NNW	0.41%	35.92	31

References

Rensmart (n.d.) Wind Speed Map. Available at: <https://www.rensmart.com/Maps#NOABL>. Accessed 10/03/2026.

UK Met Office (2026). Historic Station Data. Available at: <https://www.metoffice.gov.uk/research/climate/maps-and-data/historic-station-data>. Accessed 10/03/2026.