

Appendix 15.1 Meteorological Data

Contents

Sunshine Hours	1
Wind Distribution	1

This page is intentionally blank.

Appendix 15.1 Meteorological Data

Sunshine Hours

Table 1 below summarises raw data received from the historical weather station data for Kirkwall and held by the UK Met Office (2019)¹.

Table 1 – Mean Monthly Sunshine from 1981-2010 at Kirkwall

Month	Number of Days in Month	Average Sun Hours /month	Average Sun Hours /day
January	31	32.2	1.04
February	28	59.3	2.12
March	31	98.2	3.17
April	30	136.8	4.56
May	31	190	6.13
June	30	148.6	4.95
July	31	132.2	34.26
August	31	129.7	4.18
September	30	105.3	3.51
October	31	75.8	2.45
November	30	10.1	1.34
December	31	24.5	0.79

Wind Distribution

Table 2 below outlines the wind parameters used within the WindPro model for the Proposed Development. It adopts a 12 degree sector with 7,475 hours of wind per year (equivalent to the development being operational for 85 % of the year). Wind distribution for the site is based on generic data for wind distribution in Orkney.

Table 2 – Wind Distribution

Direction	Wind Distribution	Hours of Wind / year	Direction	Wind Distribution	Hours of Wind / year
N	5.67%	424	S	6.47%	484
NNE	3.29%	246	SSW	5.48%	410
NE	2.78%	208	SW	6.77%	506
ENE	2.29%	171	WSW	12.45%	931

¹ <https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-climate-averages/gfmzqh0rc>

Direction	Wind Distribution	Hours of Wind / year	Direction	Wind Distribution	Hours of Wind / year
E	2.69%	201	W	11.25%	841
ESE	3.59%	268	WNW	7.77%	581
SE	6.27%	469	NW	6.77%	506
SSE	8.87%	663	NNW	7.57%	566
Totals				100.0%	7446.0