

## Appendix 15.1 Meteorological Data

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### Kirkwall Airport Meteorological Data

Table 15.1.1 below summarises the raw data received from the historical weather station data for Kirkwall Airport and held by the Met Office (2021).

**Table 15.1.1 - Summary of Raw Meteorological Data for Kirkwall Airport Met Station from 1981 to 2010**

Month	Number of Days in Month	Average Sun Hours per Month	Average Sun Hours per Day
January	31	31.31	1.01
February	28	61.93	2.21
March	31	99.36	3.21
April	30	139.51	4.65
May	31	177.50	5.73
June	30	150.66	5.02
July	31	133.71	4.31
August	31	131.77	4.25
September	30	101.77	3.39
October	31	74.74	2.41
November	30	39.86	1.33
December	31	22.80	0.74

## Wind Parameters

Table 15.1.2 below outlines the wind parameters used within WindPro model for the Proposed Development. It adopts a 16 degree sector with 7,446 hours of wind per year (equivalent to the development being operational for 85 % of the year). Wind distribution data for the site is taken from Kirkwall Airport historical weather station data, the closest weather station to the Proposed Development.

**Table 15.1.2 - Wind Distribution at Kirkwall Airport**

Direction	Wind Distribution	Hours of Wind / Year
N	6 %	471
NNE	3 %	259
NE	3 %	194
ENE	3 %	223
E	4 %	321
ESE	4 %	319
SE	6 %	457
SSE	8 %	608
S	14 %	1007
SSW	8 %	571
SW	6 %	437
WSW	8 %	574
W	13 %	956
WNW	6 %	440
NW	4 %	282
NNW	4 %	327

## References

UK Met Office (2021). Historic Station Data. Available at:

<https://www.metoffice.gov.uk/research/climate/maps-and-data/historic-station-data>

World Meteorological Organisation (2021) Open source World Meteorological Organisation  
Synoptic data