Meteorology

Meteorological data for the site is available from Hawarden observation station located approximately 7km east-southeast of the site and NRW comment in their most recent Decision Document that '*conditions are likely to be representative of those at the proposed landfill*'. Five consecutive years of hourly-sequential observation data from this location, covering the period 2012 – 2016, inclusive, have been obtained and presented as a windrose below. Reference should be made to presentation of individual 2012 – 2016, inclusive, wind roses for then modelled Hawarden meteorological dataset.
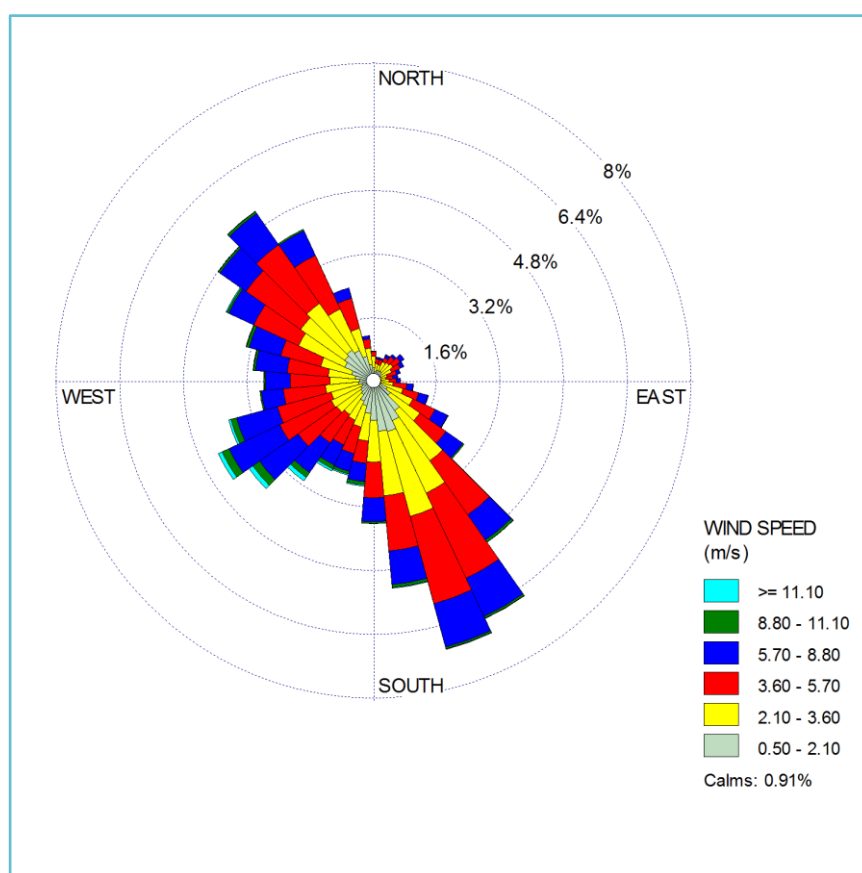

Figure 1
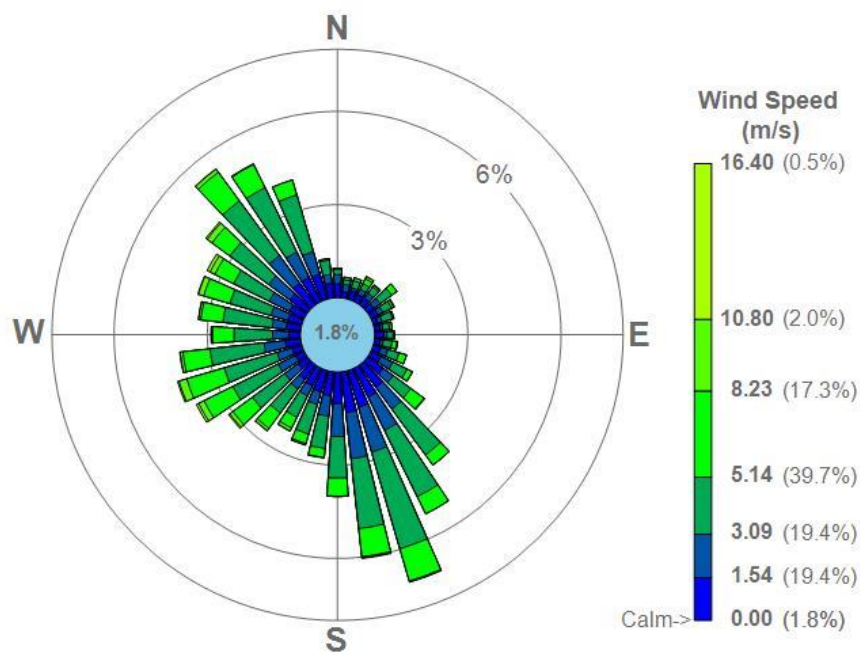**Hawarden Meteorological Station – 2012 - 2016**

Figure AQ1-1
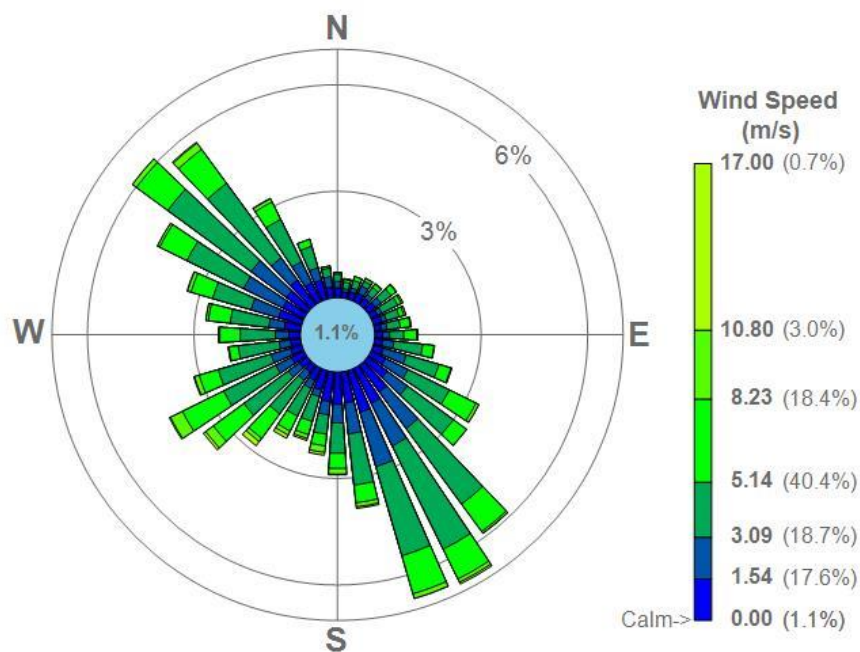**Wind-rose for Hawarden Meteorological Station**
(2012)

Figure AQ1-2
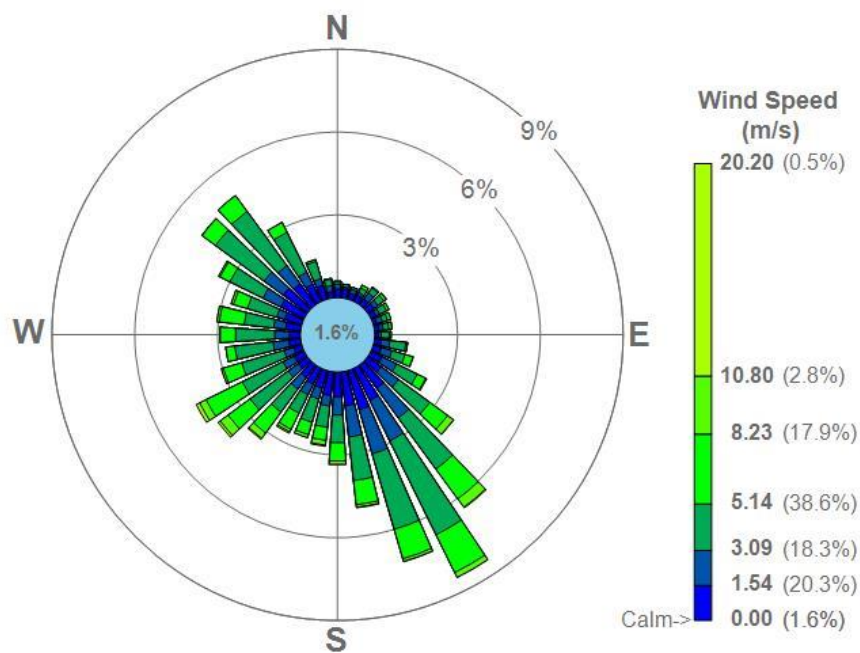**Wind-rose for Hawarden Meteorological Station**
(2013)

Figure AQ1-3
Wind-rose for Hawarden Meteorological Station
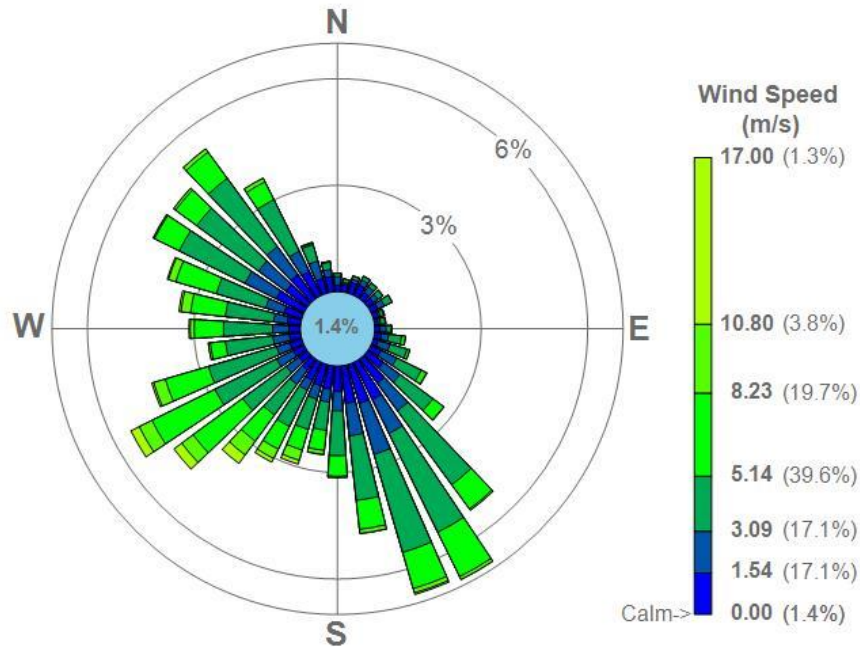**(2014)**

Figure AQ1-4
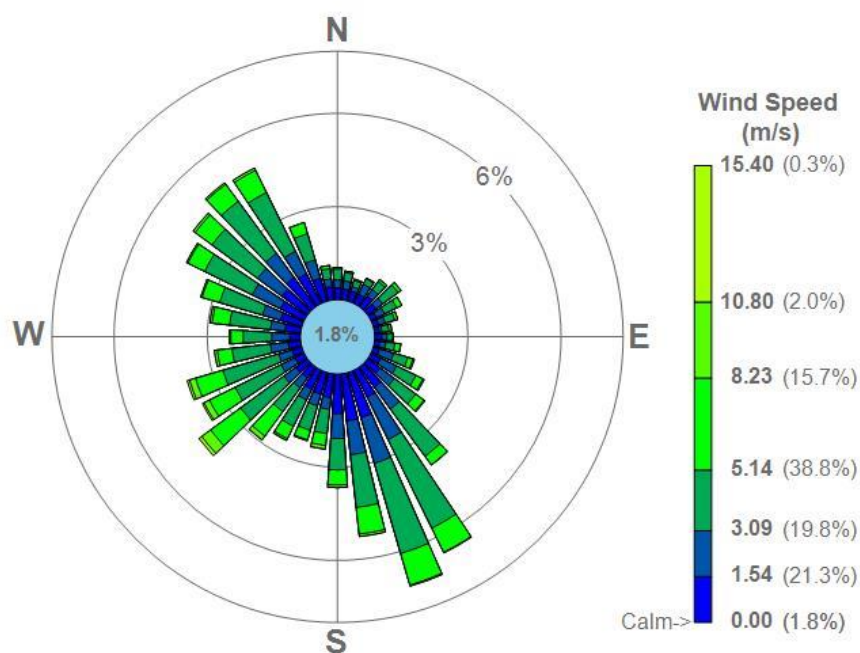**Wind-rose for Hawarden Meteorological Station**
(2015)

Figure AQ1-5
Wind-rose for Hawarden Meteorological Station (2016)

Table 1 MORECS data for square 104 – Long-term average 1971 to 2000 for grass land use with median available water capacity (AWC) soil type

Month	Rainfall (mm)	HER (mm)
January	69.6	53.1
February	51.5	32.8
March	62.9	32.5
April	51.2	15.9
May	50.5	2.0
June	60.4	1.1
July	55.9	0.0
August	69.0	0.4
September	73.9	2.2
October	86.5	20.9
November	85.3	37.0
December	83.0	63.9
Annual	799.7	261.8

Long-term average rainfall is c. 800mm per year. The highest monthly rainfall occurs in October and reduces to a minimum in May. The HER is 262mm per year. This is defined as the sum of rainfall less actual evapotranspiration.

Meteorological data for the site is available from Hawarden observation station located approximately 7km east- southeast of the site. Five consecutive years of hourly-sequential observation data from this location, covering the period 2012 – 2016, inclusive, have been obtained and presented as a windrose in Figure 1.