Procedures to estimate the frequency of wind conditions that enhance noise levels

Department of
Environment, Climate Change and Water NSW

This report has been prepared by Holmes Air Sciences on behalf of the Department of Environment, Climate Change and Water (DECCW).

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1 Introduction

The purpose of this report is to help officers from the Department of Environment, Climate Change and Water (DECCW), consultants and others to determine if the effects of meteorological conditions on noise propagation should be taken into account when assessing the impacts of noise sources. The report focuses on:

- the way that wind speed and wind direction can be taken into account when assessing noise impacts, including considering the availability of meteorological data sets that are suitable for the assessments and ways in which the data should be analysed to determine when noise enhancement is significant
- providing guidance on where data can be obtained and what types of data are suitable
- providing a software tool to make the analysis of data less tedious – this tool can be used to quickly process meteorological data (in a limited range of formats) to assess if meteorological enhancement of noise is significant for a particular source–receiver pair.

The extent to which noise levels may be affected by meteorological conditions and the mechanisms by which these effects arise are also discussed briefly.

It is assumed that most readers would be familiar with the requirements of the NSW Government's *NSW industrial noise policy* (NSW Environment Protection Authority 2000) and have a general knowledge of the fundamentals of acoustics.

2 Background

The *NSW industrial noise policy* provides guidance on the assessment of industrial noise in NSW. Meteorological conditions, in particular the way in which temperature varies with height and the way in which wind speed and wind direction vary with height, can lead to changes in noise levels, so levels will be higher or lower than they would be in so-called neutral conditions.

Part of the assessment procedure described in the *NSW industrial noise policy* involves determining whether meteorological conditions at the location of the noise source would lead to the enhancement of noise propagation to the extent that such enhancement would need to be taken into account in the assessment process.

The *NSW industrial noise policy* defines the wind speed and wind direction conditions that need to be considered using the following words:

> 'Wind effects need to be assessed where wind is a feature of the area. Wind is considered to be a feature of the area where source–to–receiver wind speeds (at 10 m height) of 3 m/s or below occur for 30% of the time or more in any assessment period (day, evening or night) in any season. This differs from the procedure used with temperature inversions, in that the 30-percent occurrence applies to all seasons and each assessment period-and not just the winter season and night assessment period. There are two ways to assess wind effects:
>
> - Use a wind rose to determine whether wind is a feature based on the frequency of occurrence and wind speed. In doing this, take care to assess the source-to-receiver components of the wind that are relevant.
> - Simply assume that wind is a feature of the area (foregoing the need to use a wind rose) and apply a "maximum impact scenario".'

3 Mechanism by which noise is affected by wind

Wind enhances noise propagation and causes higher noise levels on the ground in the downwind direction of a noise source, and lower levels in the upwind direction, than would be the case in still air. The mechanism by which these effects occur is discussed by Bies and Hansen (1996). The effect is attributable to the fact that the wind speed at the surface must always be zero, so if there is a non-zero wind at any non-zero height above the ground there must be a wind speed gradient. The gradient depends on the aerodynamic roughness of the ground and the profile of temperature in the vertical. Aerodynamic roughness will vary from site to site. It will be lowest over very smooth surfaces such as water, flat snow, flat open grasslands and similar surfaces, and highest in cities, forests and mountainous areas.

Typical profiles of wind will take the form:

$$u_z = u_{ref}\left(\frac{z}{z_{ref}}\right)^p$$

where,

u_z = wind speed at height z

u_{ref} = wind speed at reference height z ref

p = exponent dependent on stabilty class and surface roughness.

The temperature profile that exists in the boundary layer can be determined approximately if the prevailing atmospheric stability category is known. The next few paragraphs will discuss the concept of a ‘stability category’ with a view to explaining the factors that determine the form of the wind speed profile and the values that can be used for the exponent ‘p’.

In atmospheric dispersion modelling, the stability of the boundary layer is categorised into six or seven classes: A to F or A to G.

Category A applies on bright sunny days with light winds. Under these conditions, convection will occur, and the air will be mixed in the vertical as the sun warms the earth’s surface which in turn will warm the air at the surface. As the wind speed increases, mechanically induced turbulence caused by the action of the air and the roughness elements on the ground will cause the air near the ground to mix with higher adjacent layers, making the temperature more even and thereby interrupting the convective process.

Categories B, C and D describe the conditions as the wind speed increases, with Category B corresponding to lower wind speeds and Category D corresponding to stronger winds.

At night time, the earth’s surface will lose heat through radiation to outer space and the rate of radiation loss will depend largely on the cloud cover. Clear skies will allow the most rapid cooling of the ground. The cooling ground will chill the air close to it and over time inversion conditions, where the air temperature increases with height, will be established. The wind will moderate the cooling effect in the same way as it interrupted the convective process. The wind-induced turbulence will cause the cooling effect of the ground to be spread through a deeper layer (meaning not just the layer near the ground but higher layers adjacent to the near ground layer, typically less than 100 metres from the ground) thereby reducing the strength of the inversion. Thus the strongest inversion will occur on clear calm nights. Table E3 of

the *NSW industrial noise policy* shows the relationship between cloud cover, wind speed and stability category.

Different methods have been devised by air pollution modellers to assign stability categories. Some of these are described in Appendix E of the *NSW industrial noise policy*. Once the stability category has been established, it is possible to make use of the empirical and theoretically derived information developed for dispersion modelling to estimate:

1. the temperature profile in the lower atmosphere
2. the wind speed profile, i.e. the exponent 'p'.

For a known stability category, Table E1 of the *NSW industrial noise policy* allows the temperature lapse rate to be determined. Table 1 below shows the exponents used in the two most widely used dispersion models in Australia, ISC and Ausplume. The ISC and Ausplume exponents are identical for rural environments but there are differences in exponents in urban environments. The exponents adopted in the Ausplume model are probably the most scientifically defensible.

Table 1. Stability category and wind speed profile exponents

Pasquill-Gifford stability category	Rural exponent		Urban exponent	
	ISC	Ausplume	ISC	Ausplume
A	0.07	0.07	0.15	0.15
B	0.07	0.07	0.15	0.15
C	0.10	0.10	0.20	0.20
D	0.15	0.15	0.25	0.25
E	0.35	0.35	0.30	0.40
F	0.55	0.55	0.30	0.60
G	Not defined – use 0.55	Not defined – use 0.55	Not defined – use 0.30	Not defined – use 0.60

Source: US EPA (1995) and Victorian EPA (2000)

The increase in wind speed with height causes the wavefronts of sound waves, propagating in the downwind direction, at higher levels to propagate faster than those at lower levels. Such movement causes the sound wave to be bent downwards or refracted towards the ground, resulting in increased noise levels on the ground in the downwind direction. The reverse applies for sound waves propagating in the upwind direction.

The *NSW industrial noise policy* makes an assumption, based on some analyses made using the ENM model (Tonin 1985 and Tonin 1993), that winds with the vector component along the line from the source to receiver and in the range 0–3 m/s, will enhance noise to a sufficient extent that the effect should be taken into account when undertaking an assessment.

It is not clear that very low wind speeds need to be taken into account unless they occur in association with an inversion which would not be uncommon at night. Further, it is not clear that very strong winds which blow almost perpendicular to the line from the source to the receiver need to be taken into account. Because of the geometry of the situation, such winds can still have wind speed components less than three m/s towards the receiver even though the wind speed might be so high that the wind-induced noise would make the impact of manufactured noise sources relatively minor.

As an example, it may be noted that the component of the wind towards a receiver is given by u x Cos(φ) where u is the wind speed and φ is the smallest angle between the wind vector and the source receiver vector. If φ is 80^o then Cos(φ) is 0.17 and a wind speed of 17.3 m/s would be considered as a condition where wind enhancement is important because its component towards the receiver would be less than 3 m/s. For this reason, DECC has adopted a flexible approach in applying this part of the *NSW industrial noise policy,* allowing assessors to either limit the range of angles or the maximum speeds to be considered. This process works because a proponent is responsible for meeting the noise level criteria for a project, and the assessment process is designed to assess the feasibility of meeting the criteria.

These issues may benefit from further exploration but are beyond the scope of this report.

The rest of this report focuses on identifying sources of wind data and developing tools to conveniently analyse the data and identify the percentage occurrence of wind components from the source to the receiver. This percentage can be calculated in a user-selected wind speed range (usually 0.5–3 m/s) or restricted to a nominated range of wind directions around the primary source to receiver direction, which is usually taken to be +/- 45^o(meaning source to receiver direction and 45^o either side, giving a total span of 90^o), or with both conditions applying.

4 Availability of meteorological data

Suitable meteorological data are available from a number of sources. It is the user's responsibility to ensure that the selected data represent the areas being assessed. This will involve reviewing the proximity of the site (where the data were collected) to the site at which the noise sources and receivers are, or are to be, located. It will also be necessary to take account of topographical conditions in the area and the proximity of the coastline. Topography, and sea or lake breeze effects, can introduce local effects which may affect the area over which data can be considered representative. Vegetative cover may also need to be considered. In some cases, specialist opinion may need to be sought.

Users of data sets should also check with the data provider whether the wind direction refers to grid north, true north or magnetic north and in what units wind speed is measured. By convention, wind direction is usually the direction the wind is blowing from (not to). That is, a wind direction of 90^{o} is usually understood to be describing an easterly wind, that is, a wind from the east blowing to the west. The difference between true north and grid north is usually too small to matter and would usually be less than the uncertainty of the wind direction measurement, but the difference between magnetic north and true or grid north may be in the order of 10^{o} which could be important in some cases.

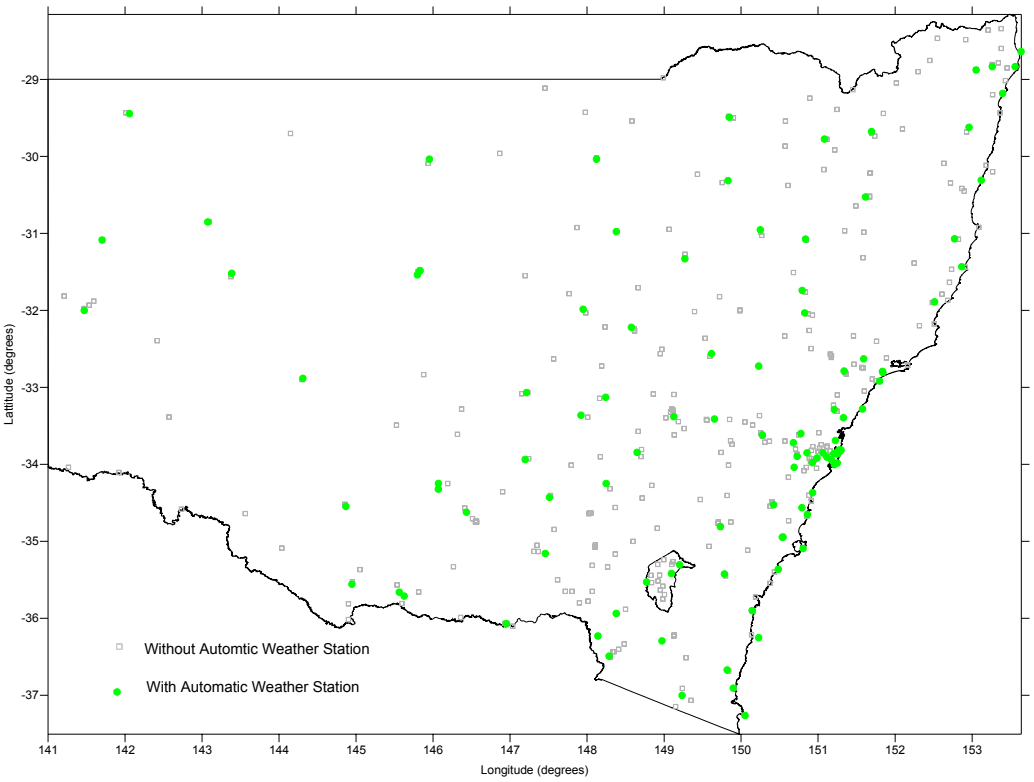
4.1 The Bureau of Meteorology

The Bureau of Meteorology is the country's primary source of meteorological data and it is useful to review its data at www.bom.gov.au. If the 'Climate Services' pages are accessed, the user will find links for each state at www.bom.gov.au/climate/how/. To get to the list of stations that report wind data, the user should access www.bom.gov.au/climate/how/sitedat.shtml, select 'wind speed' and 'NSW' for NSW data, and then submit the request. A list of all stations from which wind data can be obtained will be generated.

Figure 1 shows the locations of the stations and **Table 2** describes the values given in the list.

See **Appendix A** for an example of the list.

Figure 1: Sites from which Bureau of Meteorology data are available (Source: Bureau of Meteorology)



Site from which Bureau of Meteorology data are available

The Bureau of Meteorology may be contacted and data for any site may be purchased in a format that can be read by Microsoft Excel or other spreadsheet programs. The data will be provided in the form of a time series at usually half-hourly or hourly intervals listing date and time, and wind speed and wind direction.

To use the software that accompanies this report, the user must check the data file and remove any 'glitches' or extraneous comments that are embedded in the data supplied by the Bureau of Meteorology. The user must then create a comma delineated file (CSV file) in the following format:

Year, month, day, hour, wind speed, wind direction.

Note that:

- the year can be in any format, for example either 2006 or 06 would be acceptable
- the month should be a number in the range 1 to 12
- the day should be a number in the range 1 to 31
- the hour should be specified using a 24-hour clock and in the range 1 to 24
- the wind speed should be in m/s
- the wind direction should be a number between 0 and 360 and should refer to the direction from which the wind is blowing, specified in degrees clockwise from true north (i.e. standard Bureau of Meteorology conventions).

Table 2. Key to Bureau of Meteorology's wind data records for NSW (Source: Bureau of Meteorology at www.bom.gov.au)

Lists have been run using all available data, but stations with less than one year of data have not been listed. For daily files, the following values are supplied:	
Site:	Bureau of Meteorology station number
Name:	Station name
Latitude:	Latitude in degrees to two decimal places (actually four decimal places – Note added by NEH)
Longitude:	Longitude in degrees to two decimal places (actually four decimal places – NEH)
Start:	First month and year where observations of this type are available
End:	Last month and year where observations of this type are available
Years:	Equivalent years with observations. (Total months with data/12.) This takes into account gaps, therefore the start year could be 1940, the end year 1960, but there may be only 10 years worth of data.
Percentage:	Percentage complete. This figure is the estimated completeness of observations averaged over all months of record, taking gaps into account. As this does not indicate where gaps occur, it is a crude guide for recording quality.
A:	AWS (Automatic Weather Station) indicator. Y = Yes, this station currently has an AWS, (most stations will not always have used an AWS). N = No. The presence of an AWS does not imply that there is no observer at the site.

4.2 Other sources of data

For selected sites, suitable raw data can be obtained from Sydney Water at or near many sewage treatment plants (STPs), DECCW, various industries and consultants. Caution should be used in using STP data as STP sites are often at low points in the local topography, and as such wind speeds are often lower than would be the case elsewhere in the area. The data will however be representative of the STP site and immediate surroundings.

Often data are provided in ISC format (US Environmental Protection Agency 1995) or Ausplume format (Victorian Environment Protection Authority 2000). Both these data formats can be read directly by the software accompanying this report. Caution should be taken when using data in ISC format. Wind direction in an ISC data file is normally specified as the flow vector and specifies the direction that the wind is blowing towards. This is 180^{o} different from the normal conventions used to specify wind directions by the Bureau of Meteorology and by Ausplume. The software provided with this report assumes that an ISC file is based on flow vectors as this is the most common way in which ISC files are provided. However, the user should check with the data provider to ensure that this is the case.

5 Analysis of selected data sets

The methods for assessing whether wind effects are significant in a particular area and for particular source–receiver combinations are described in the *NSW industrial noise policy*. The approach involves analysing wind data representative of the area and determining the percentage of time that the component of the wind blowing from the source to the receiver is less than 3 m/s for day, evening and night periods for all four seasons. For periods and seasons when this percentage is greater than 30%, wind is considered to be a feature of the area.

DECCW allows some flexibility in the way that the analysis is undertaken and places the onus on the proponent to meet the assessment criteria.

Meteorological data are expensive to collect and it takes at least one year to collect a representative data set for any particular location.

Also, given the wide range of areas for which noise impact assessments need to be undertaken and the difficulty in obtaining high quality meteorological data (i.e. hourly or at a shorter time interval), wind speed and wind direction data for all locations that may need to undergo a noise impact assessment, the suitability of alternatives to continuous records of wind speed and wind direction is also explored.

A commonly available data set is 9 a.m. and 3 p.m. observations made by the Bureau of Meteorology. Clearly, 9 a.m. and 3 p.m. observations fall into the day period as defined by the *NSW industrial noise policy*. However, the 9 a.m. observation may be representative of night-time conditions, particularly in the winter when the sun has not risen far above the horizon and solar heating is relatively weak. However, in summer, it is very unlikely that a 9 a.m. observation would represent night-time conditions.

To explore this issue, three meteorological data sets have been analysed. These are from:

- Beresfield (DECCW site in the lower Hunter Valley) covering 1 August 2004–31 July 2005 and including 95% of available data
- Kembla Grange (DECCW site in the Illawarra) covering 1 January–31 December 2001 and including 99% of available data
- Dora Creek (on the Central Coast) covering 1 January–31 December 1996 and including 98% of available data.

The data sets are all continuous hourly average wind speed and wind direction data covering a year with minor missing periods as noted above. The data have been analysed to show:

- wind roses produced for the day, evening and night periods using all hours in each season
- wind roses for only 9 a.m. observations for each season
- wind roses for only 3 p.m. observations for each season
- wind roses for 9 a.m. and 3 p.m. observations for each season.

Note the data analysed are hourly averages. A particular time refers to the average of the measurements that are made up to the hour listed, thus 9 a.m. refers to data averaged between 8 a.m. and 9 a.m. Day would be defined as 8 a.m.–6 p.m. to capture the hours 7 a.m.–6 p.m.

Wind speeds less than or equal to 0.5 m/s are counted as calm winds and are not included in the wind roses, although the percentage of such winds is displayed below the relevant wind rose. The value of 0.5m/s is selected because it is a typical stall speed for the types of anemometers likely to be used to collect meteorological data for dispersion modelling at mines sites, quarries and industrial facilities. Bureau of Meteorology anemometers are generally less sensitive and have stalling speeds of 2 knots (approximately 1m/s), but it is unlikely that serious errors will be introduced in any assessment if the value of 0.5 m/s is assumed.

5.1 Beresfield

Comparison of the data collected at Beresfield for the day, evening and night periods (see Figures 2, 3 and 4 on the next three pages) show the diurnal variations that occur at the site.

Figure 2: Annual and seasonal wind roses for Beresfield (DECCW site) 2004–2005. Day: 7 a.m.–6 p.m. (Source: Bureau of Meteorology)

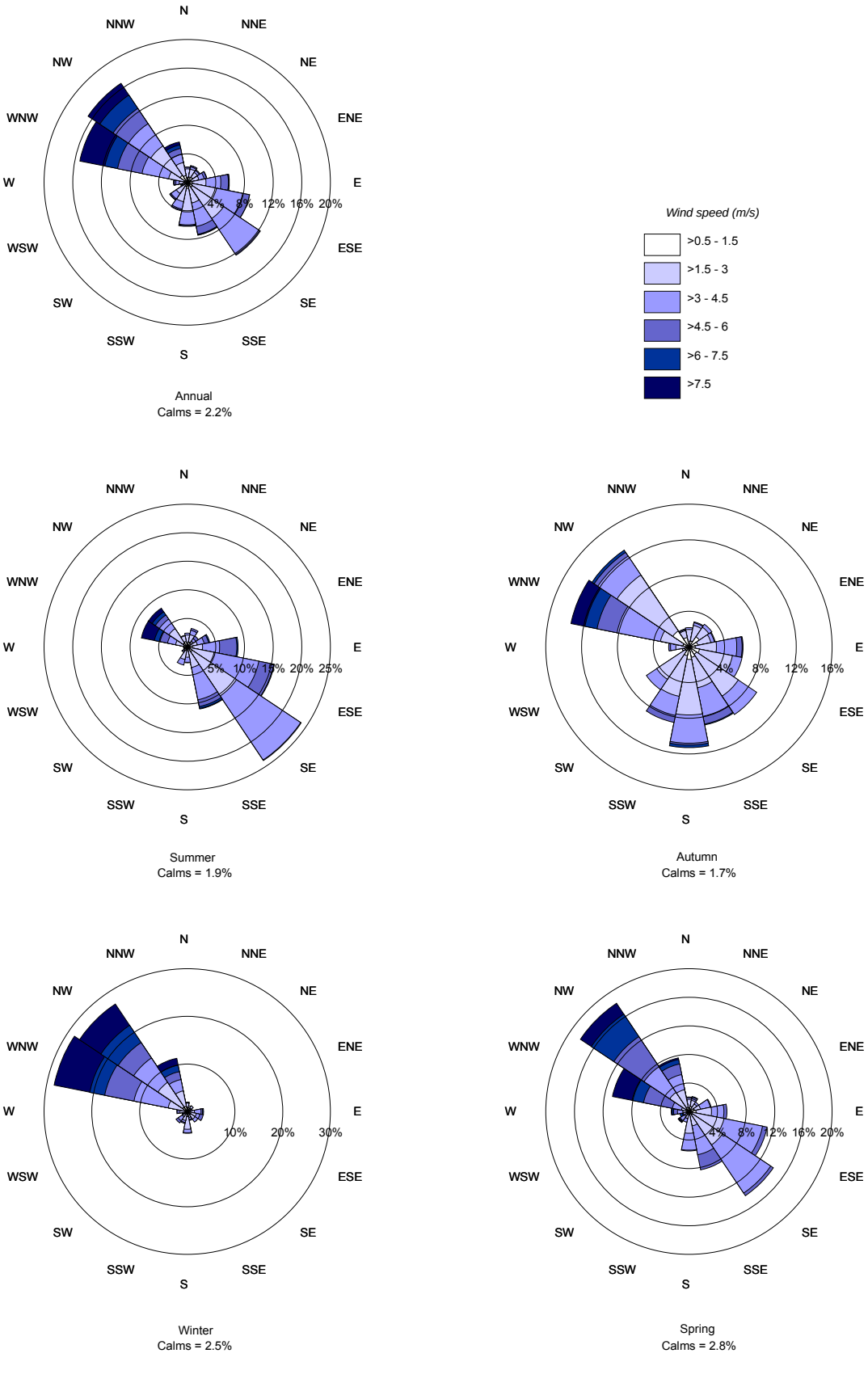


Figure 3: Annual and seasonal wind roses for Beresfield (DECCW site) 2004–2005. Evening: 6 p.m.–10 p.m. (Source: Bureau of Meteorology)

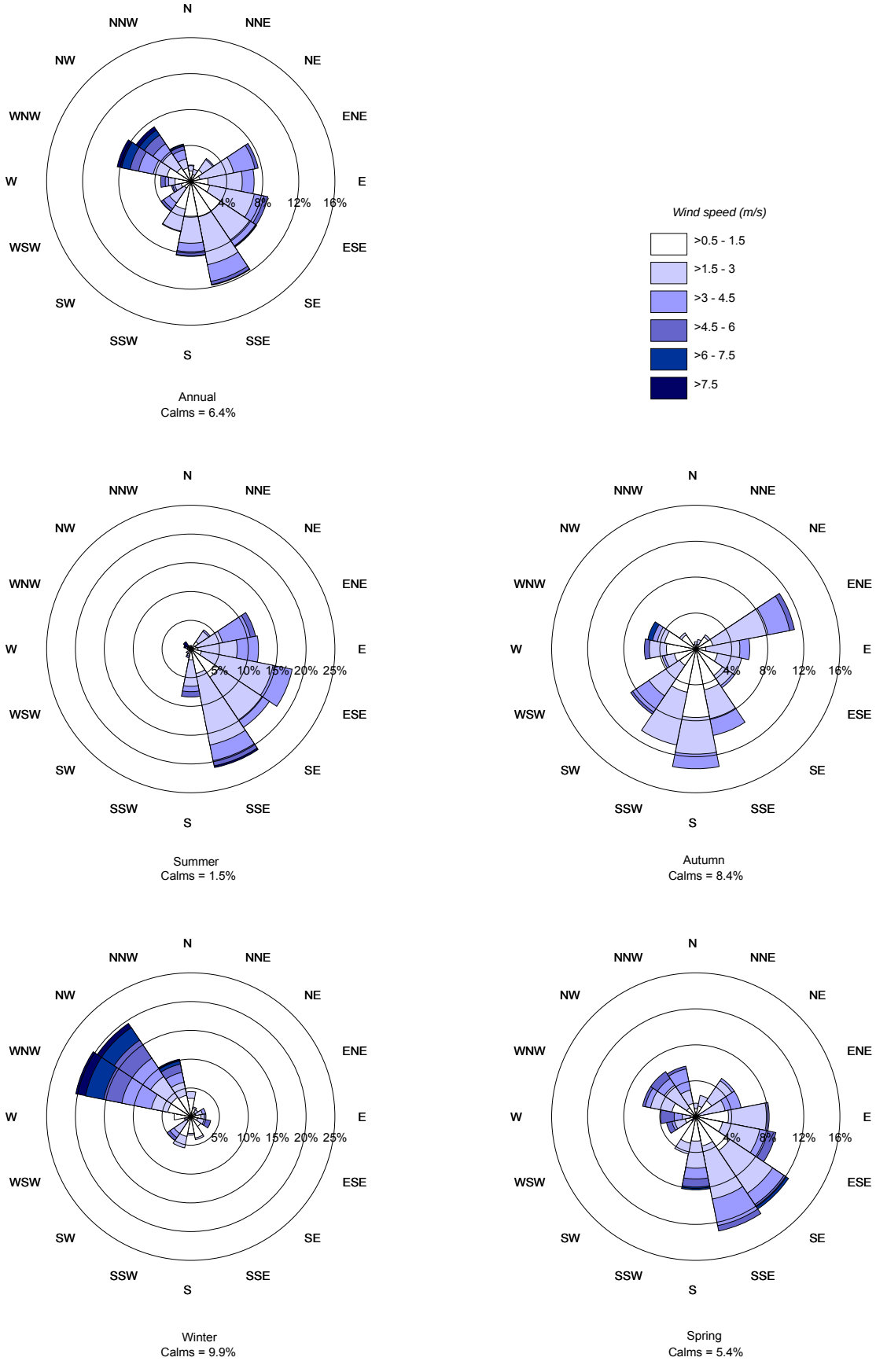


Figure 4: Annual and seasonal wind roses for Beresfield (DECCW site) 2004–2005. Night: 10 p.m.–7 a.m. (Source: Bureau of Meteorology)

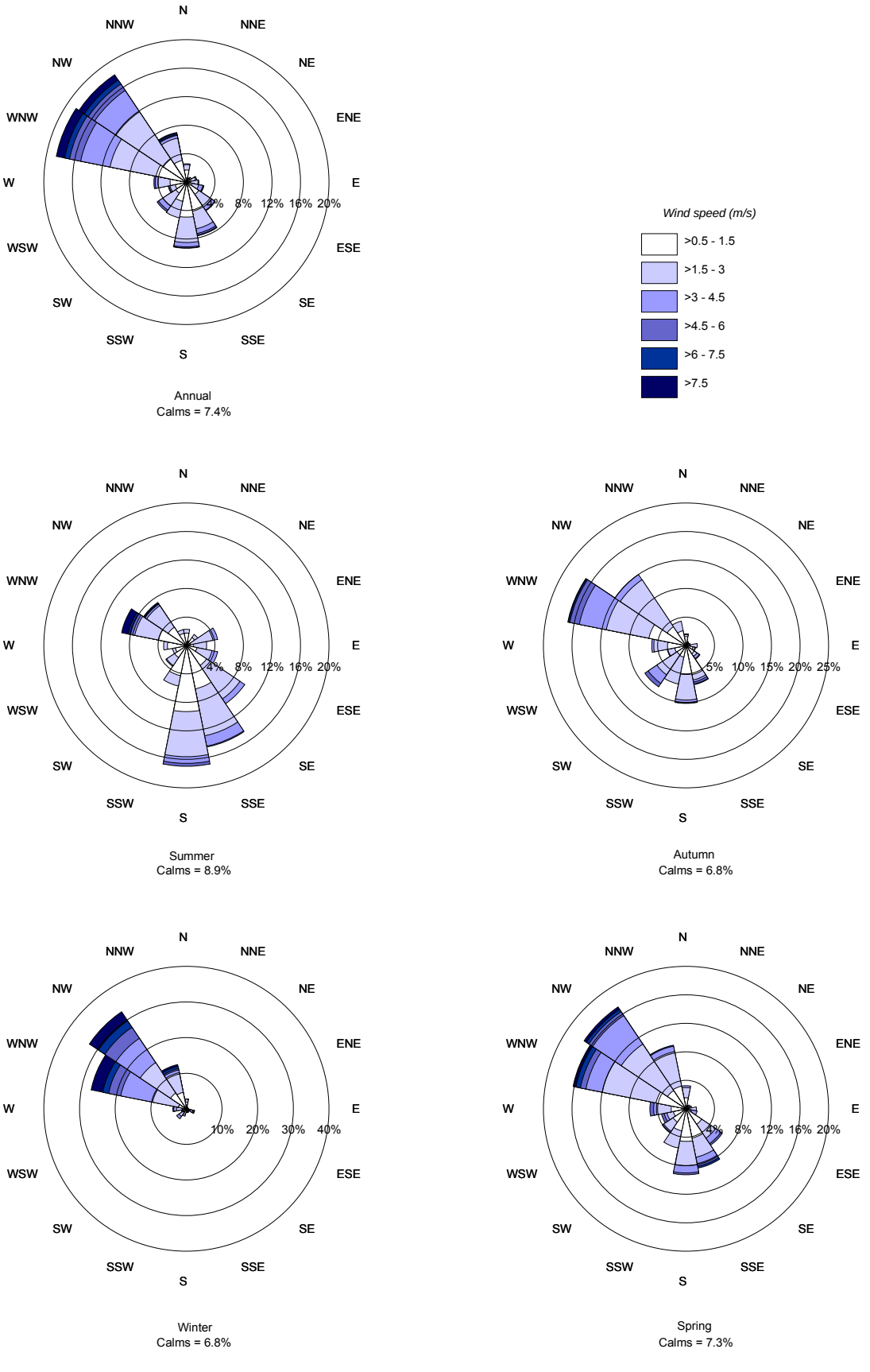


Figure 5 indicates that it would not be safe to assume that 9 a.m. observations could be used to represent either day or night.

Figure 5: Annual and seasonal wind roses for Beresfield (DECCW site) 2004–2005. Day: 9 a.m. (Source: Bureau of Meteorology)

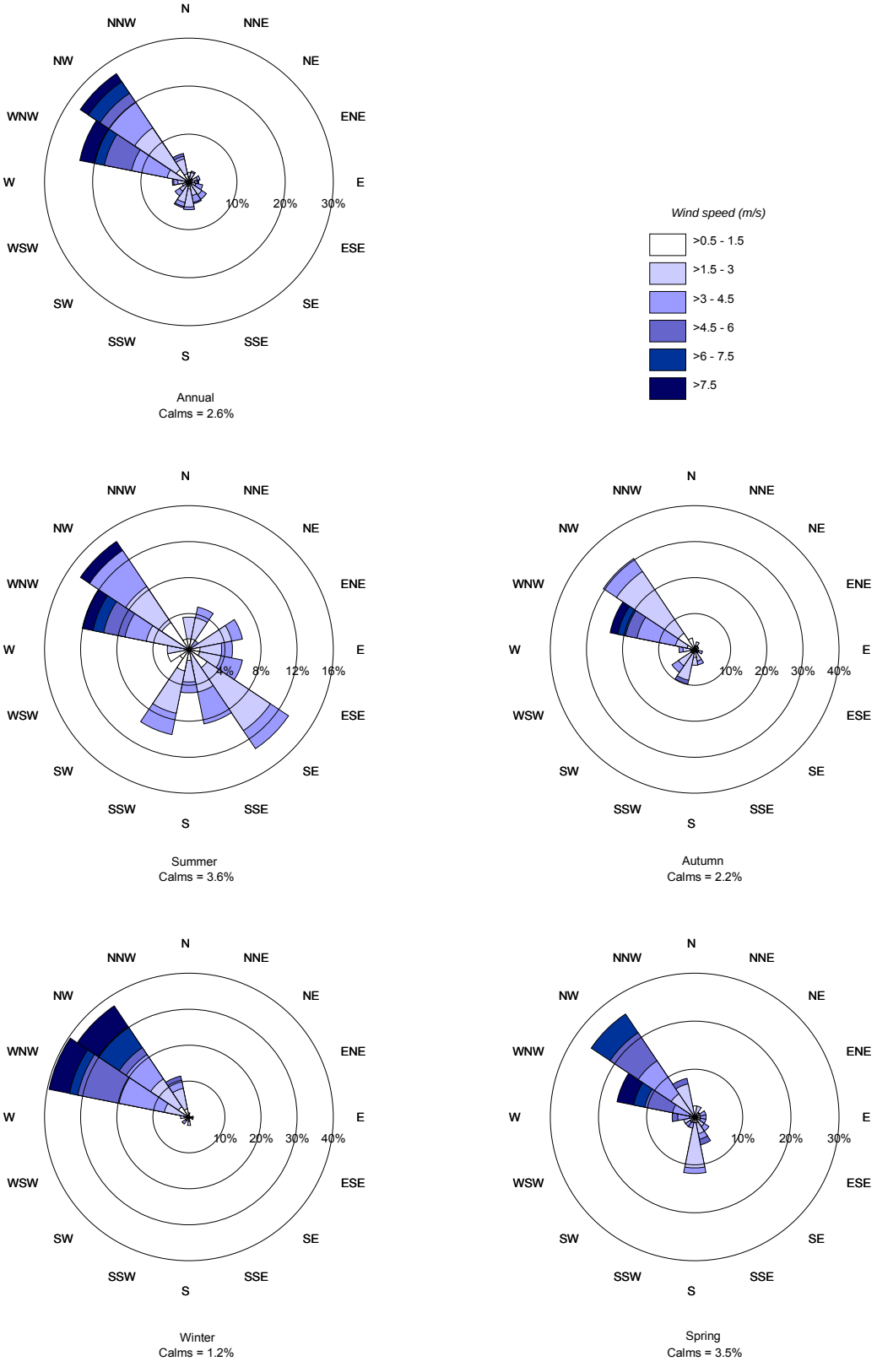


Figure 6 shows that the 3 p.m. data does not represent the day adequately for the purpose of noise assessment as required by the *NSW industrial noise policy*.

Figure 6: Annual and seasonal wind roses for Beresfield (DECCW site) 2004–2005. Day: 3 p.m. (Source: Bureau of Meteorology)

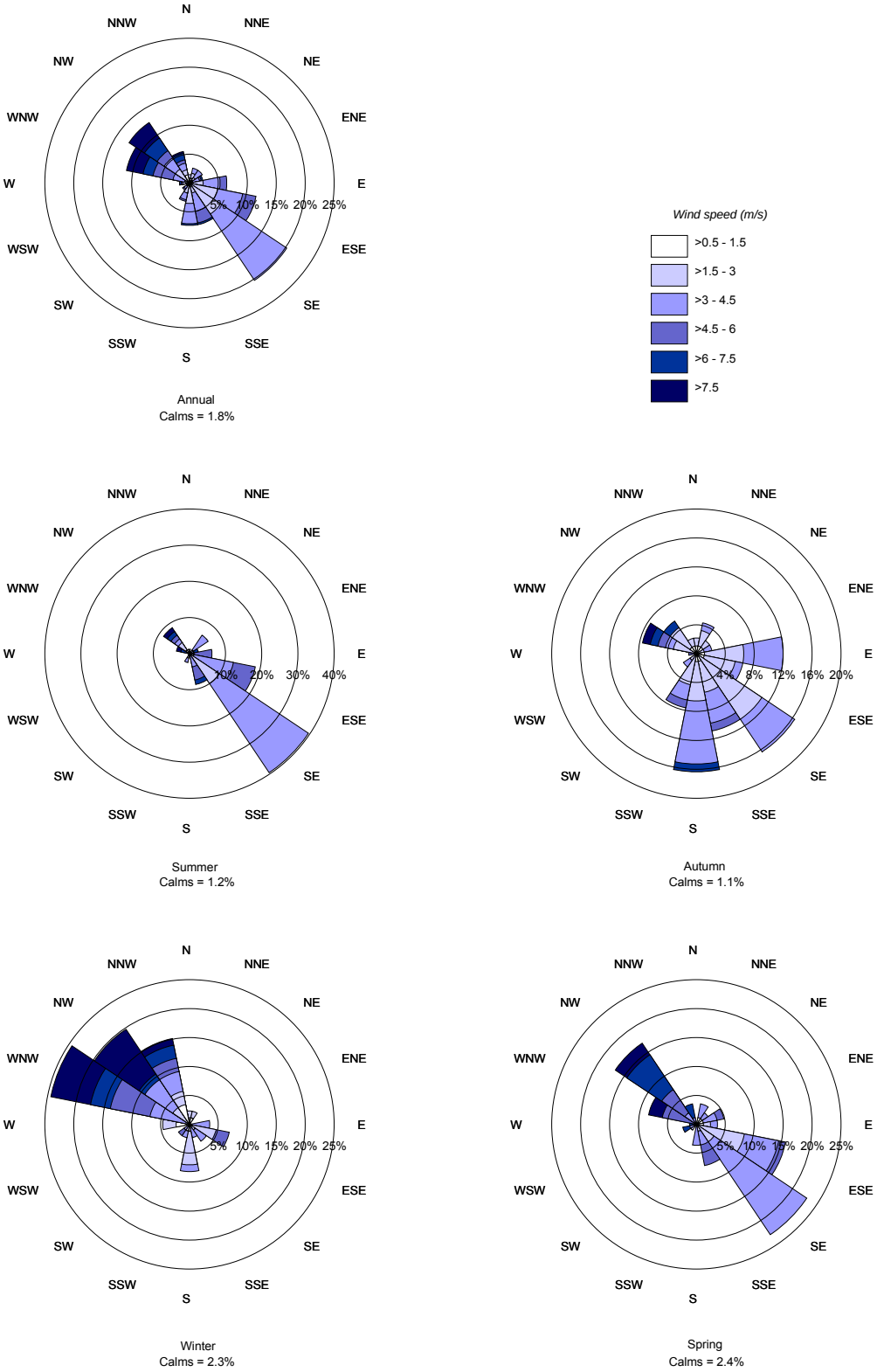
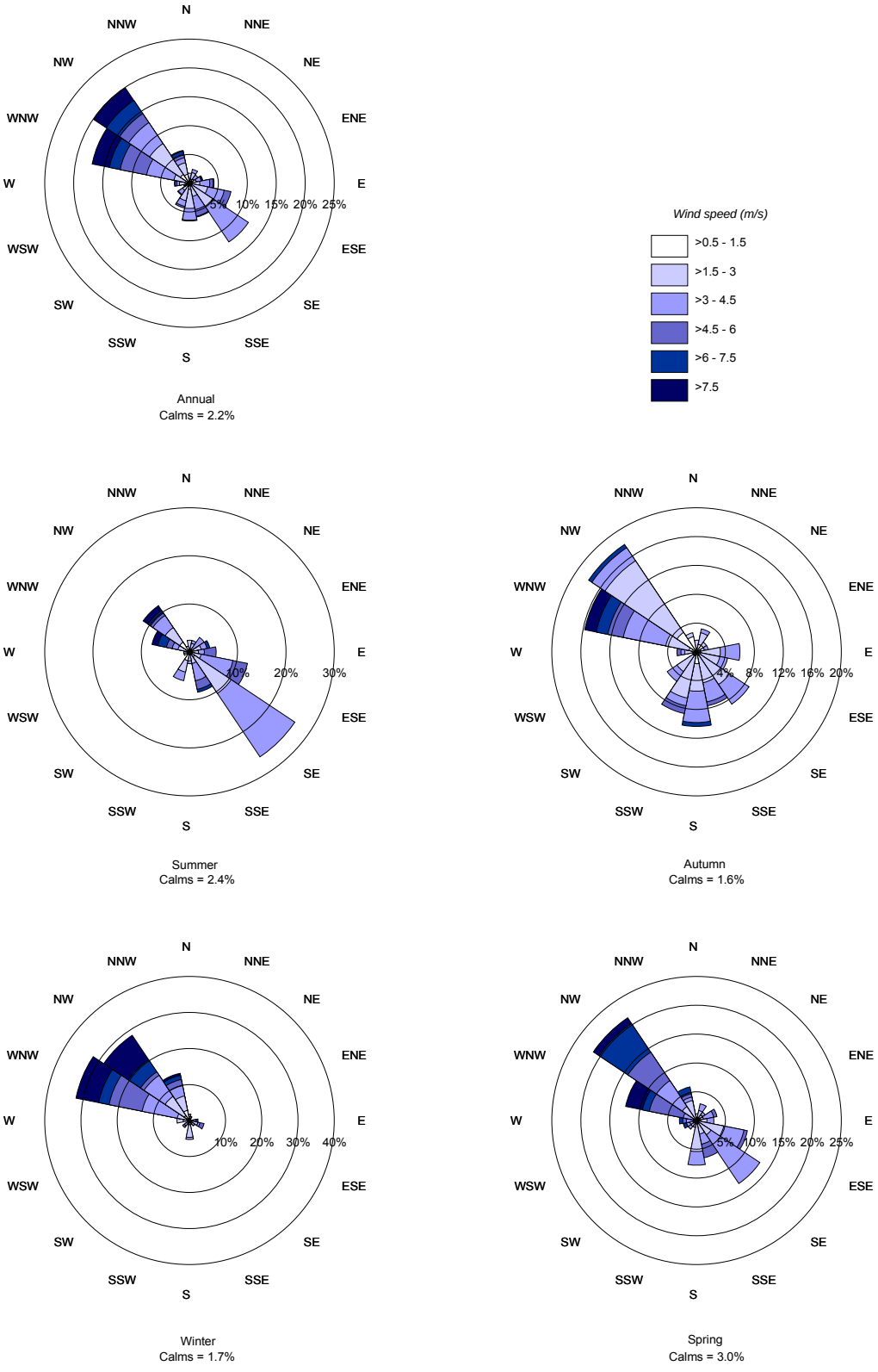


Figure 7 shows that the combined 9 a.m. and 3 p.m. data are a reasonable representation of the daytime conditions when all data is included.

Figure 7: Annual and seasonal wind roses for Beresfield (DECCW site) 2004–2005. Day: 9 a.m. and 3 p.m. (Source: Bureau of Meteorology)



Kembla Grange

A similar review of the wind rose analysis for Kembla Grange (see Figures 8–13) shows similar results, namely the combined 9 a.m. and 3 p.m. data are a reasonable representation of the day, but not of any other period.

Figure 8: Annual and seasonal wind roses for Kembla Grange (DECCW site) 2001. Day: 7 a.m.–6 p.m. (Source: Bureau of Meteorology)

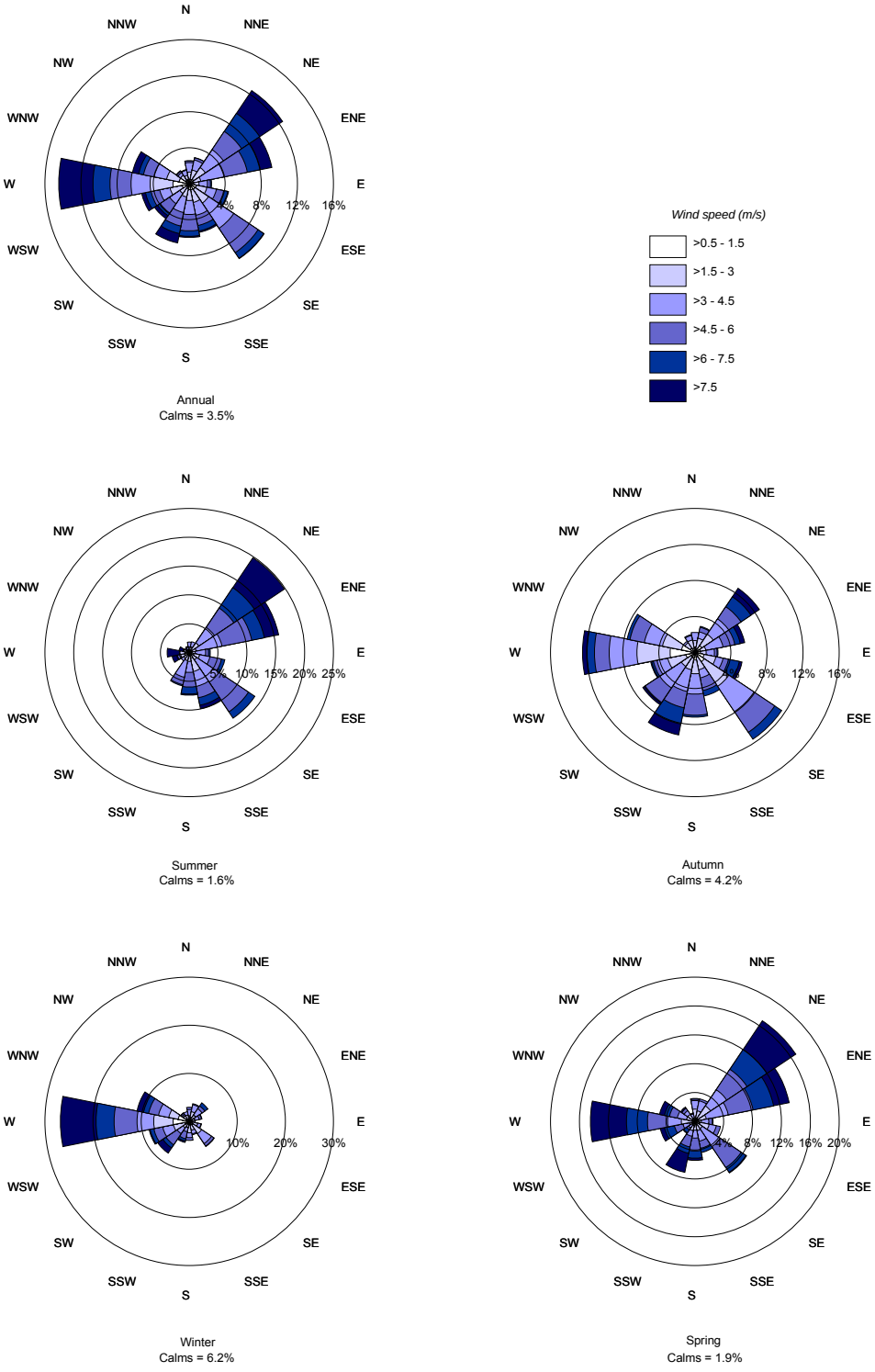
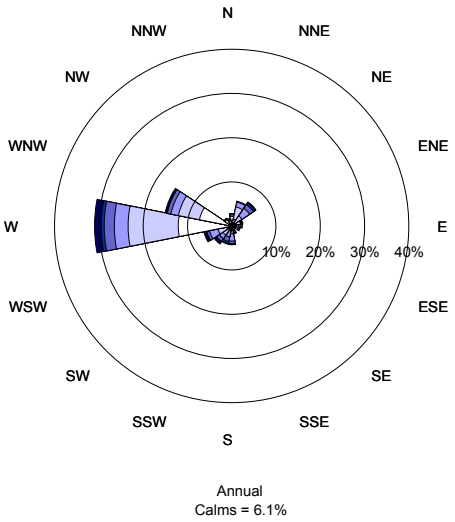
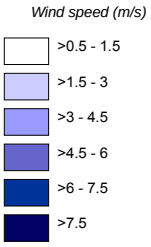
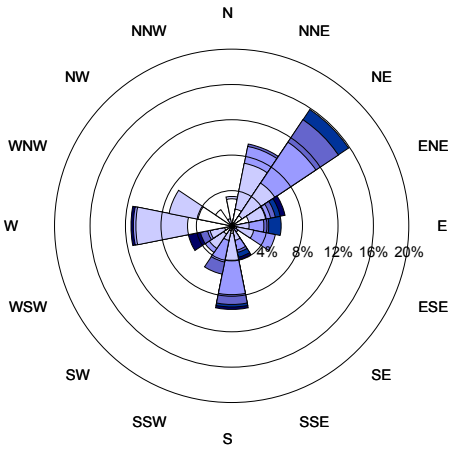


Figure 9: Annual and seasonal wind roses for Kembla Grange (DECCW site) 2001. Evening: 6 p.m.–10 p.m. (Source: Bureau of Meteorology)

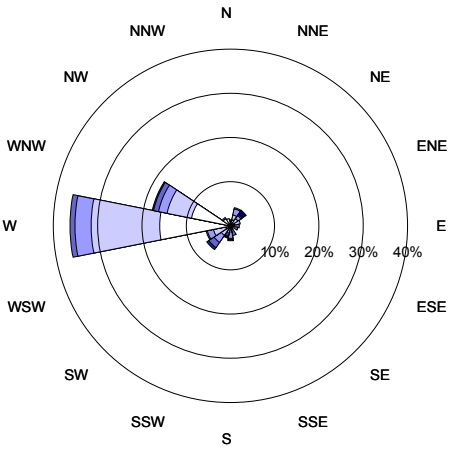


Annual
Calms = 6.1%

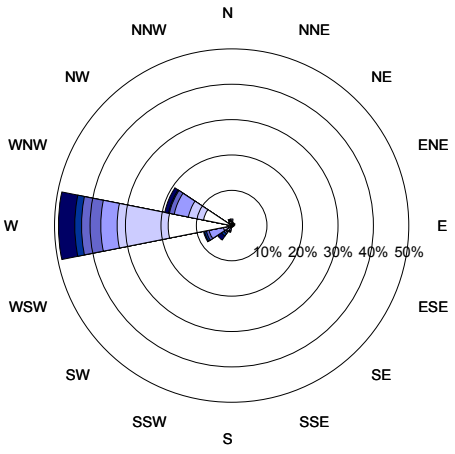




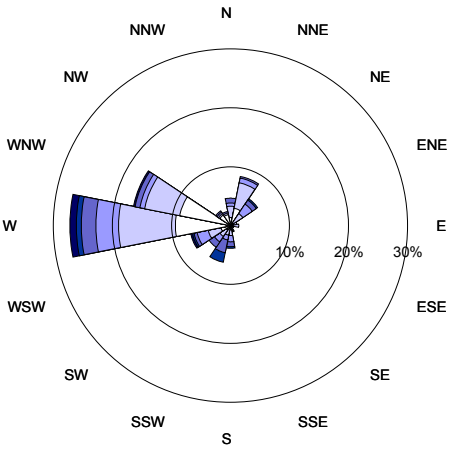
Summer
Calms = 4.7%



Autumn
Calms = 5.3%



Winter
Calms = 8.4%



Spring
Calms = 6.0%

Figure 10: Annual and seasonal wind roses for Kembla Grange (DECCW site) 2001. Night: 10 p.m.–7 a.m. (Source: Bureau of Meteorology)

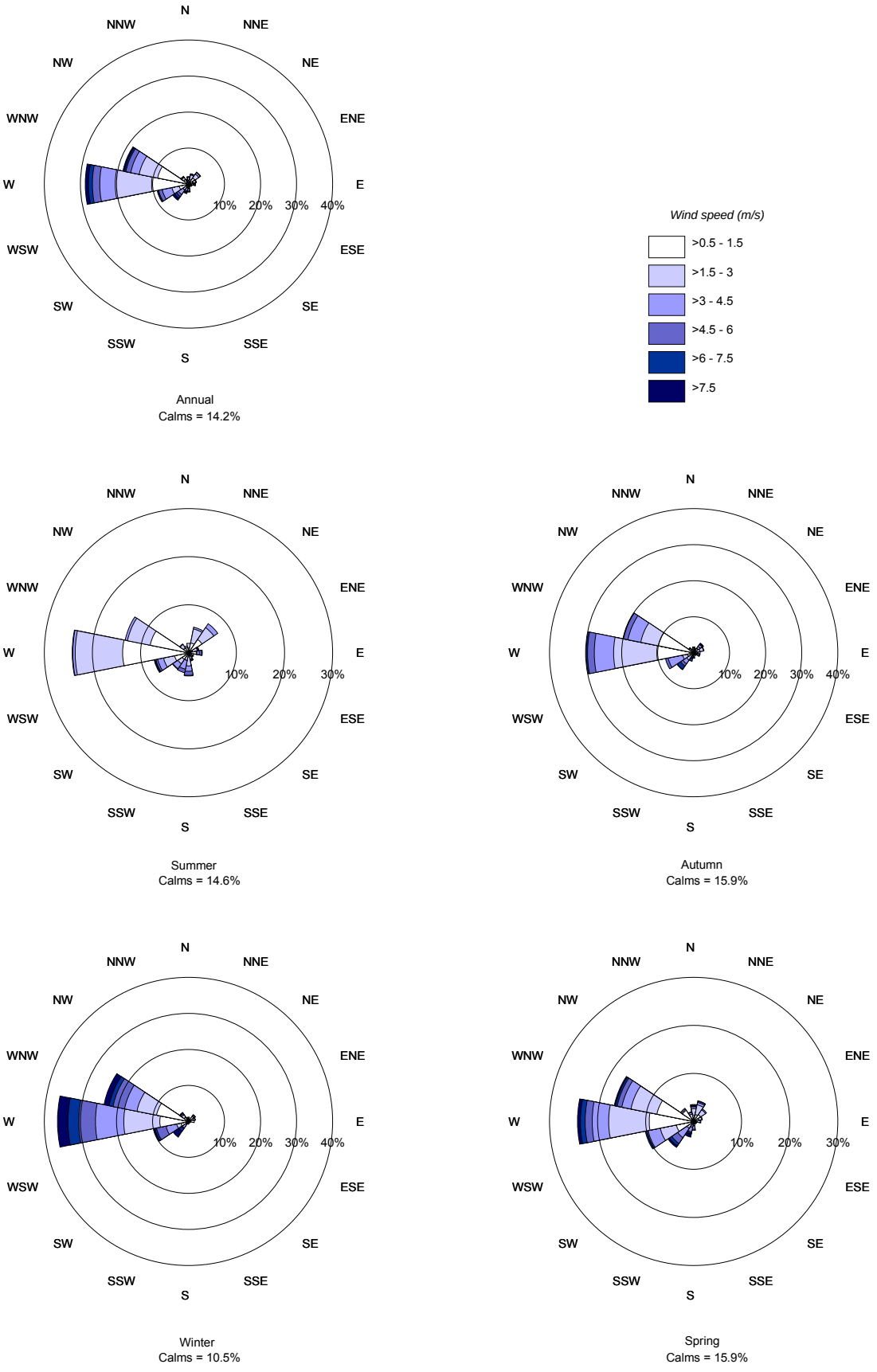


Figure 11: Annual and seasonal wind roses for Kembla Grange (DECCW site) 2001. Day: 9 a.m. (Source: Bureau of Meteorology)

Figure 12: Annual and seasonal wind roses for Kembla Grange (DECCW site) 2001. Day: 3 p.m. (Source: Bureau of Meteorology)

Figure 13: Annual and seasonal wind roses for Kembla Grange (DECCW site) 2001. Day: 9 a.m. and 3 p.m. (Source: Bureau of Meteorology)

Dora Creek

Similarly, the data for Dora Creek (see Figures 14–19) lead to a similar conclusion.

Figure 14: Annual and seasonal wind roses for Dora Creek 1996. Day: 7 a.m.–6 p.m. (Source: Bureau of Meteorology)

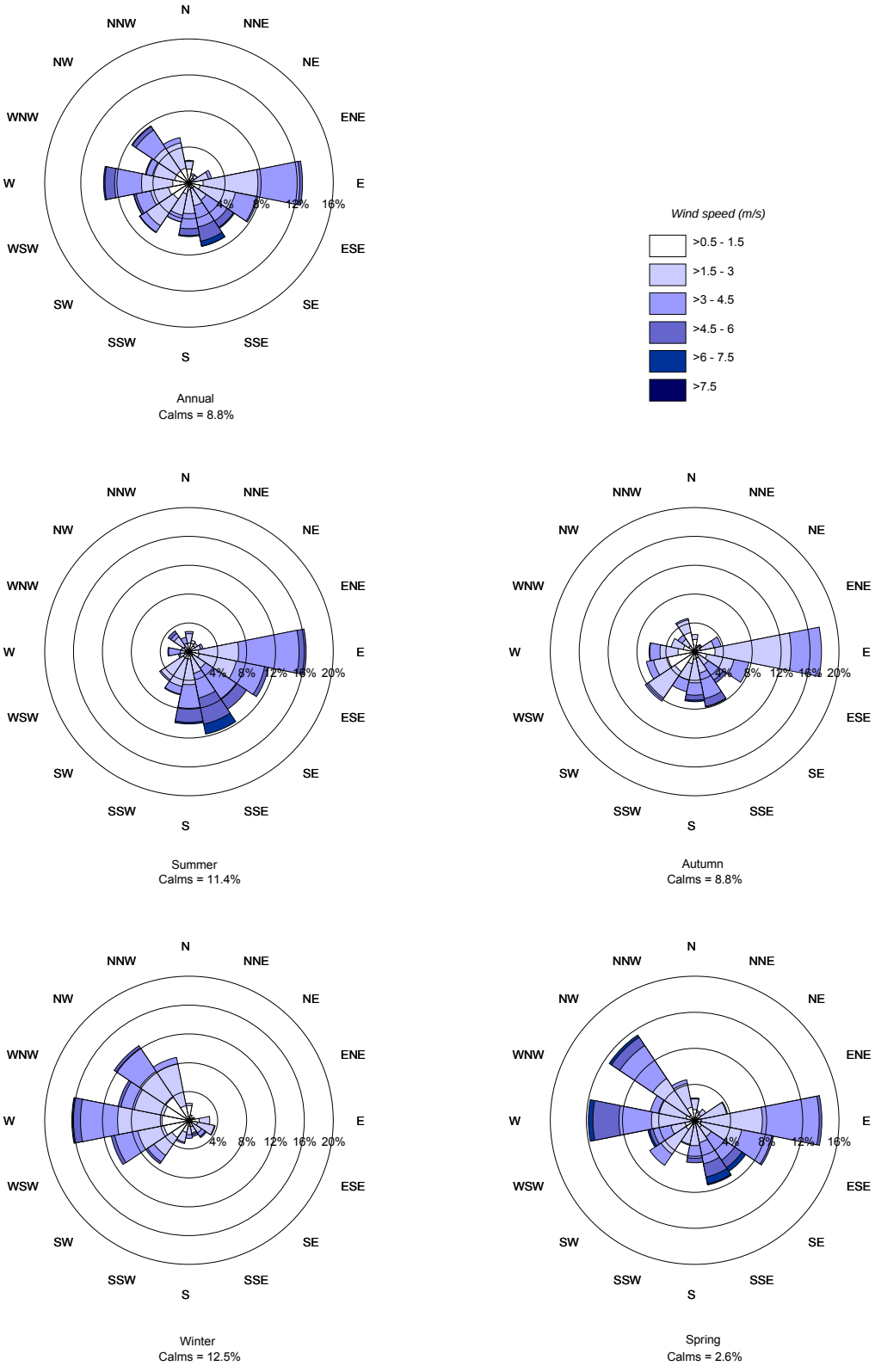


Figure 15: Annual and seasonal wind roses for Dora Creek 1996. Evening: 6 p.m.–10 p.m. (Source: Bureau of Meteorology)

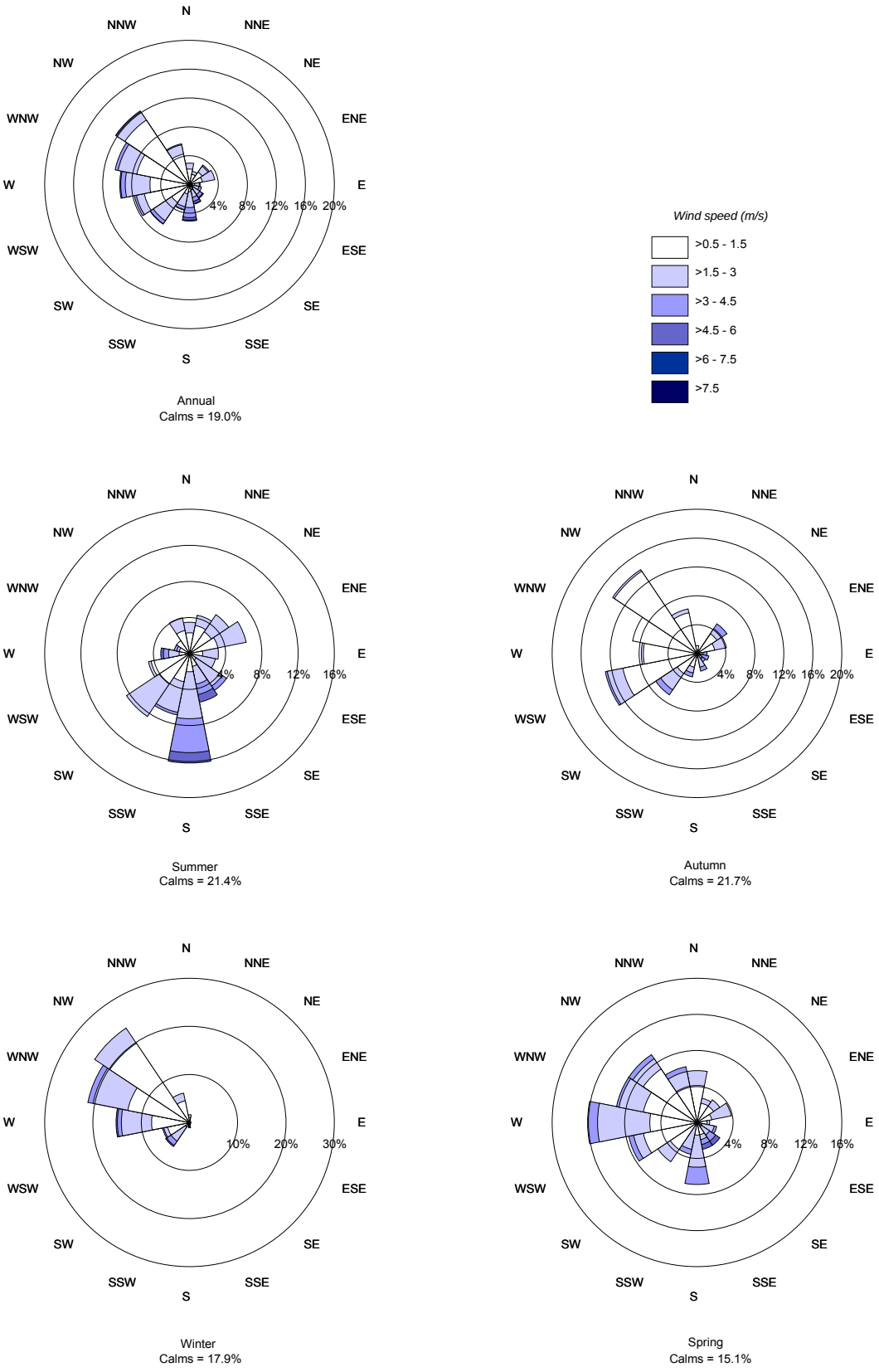


Figure 16: Annual and seasonal wind roses for Dora Creek 1996. Night: 10 p.m.–7 a.m. (Source: Bureau of Meteorology)

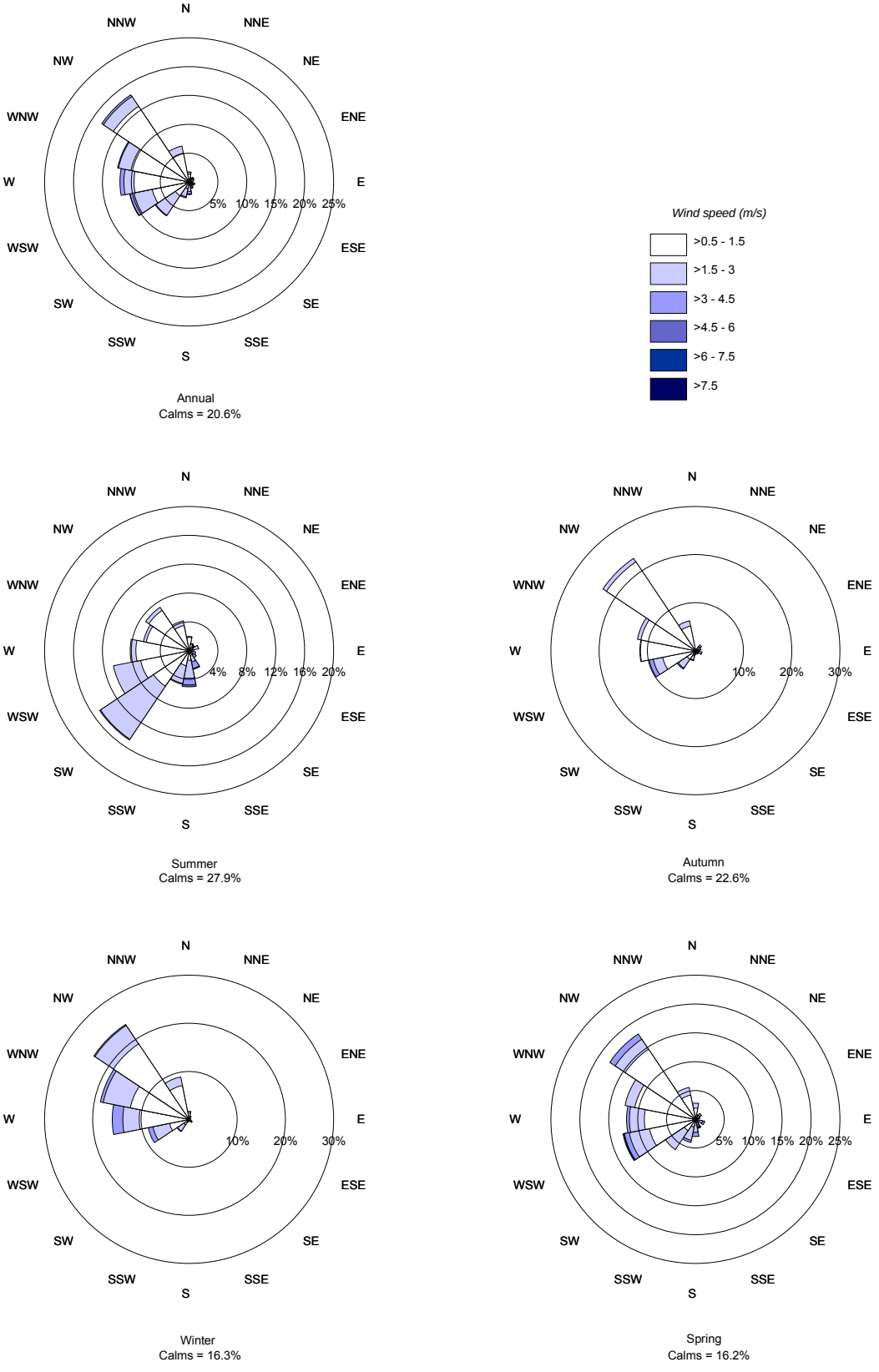
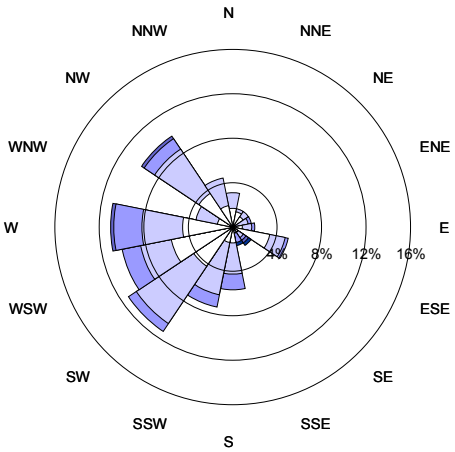
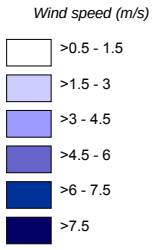
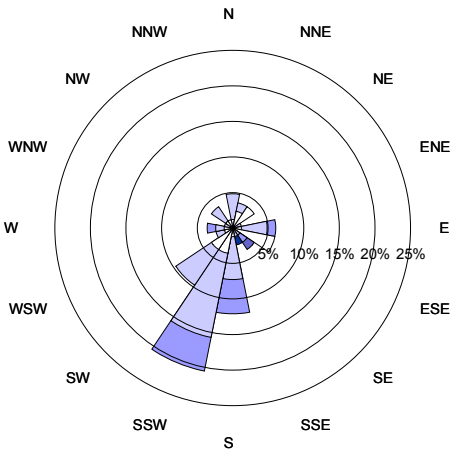


Figure 17: Annual and seasonal wind roses for Dora Creek 2001. Day: 9 a.m. (Source: Bureau of Meteorology)

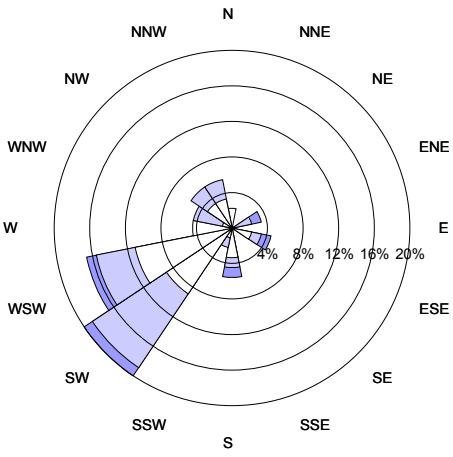


Annual
Calms = 18.0%

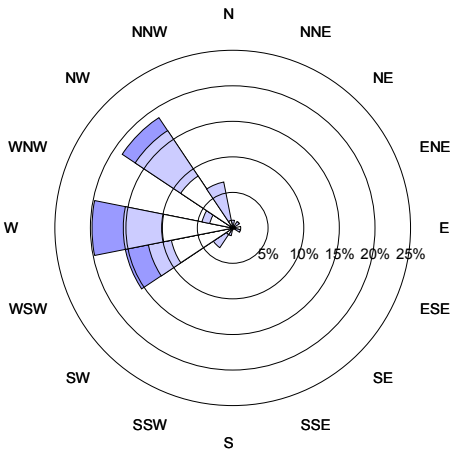




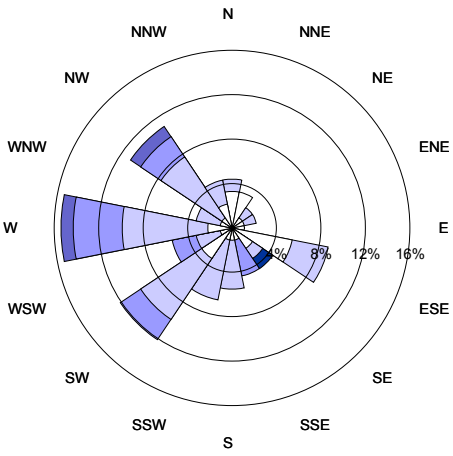
Summer
Calms = 14.5%



Autumn
Calms = 25.6%



Winter
Calms = 26.4%



Spring
Calms = 5.5%

Figure 18: Annual and seasonal wind roses for Dora Creek 2001. Day: 3 p.m. (Source: Bureau of Meteorology)

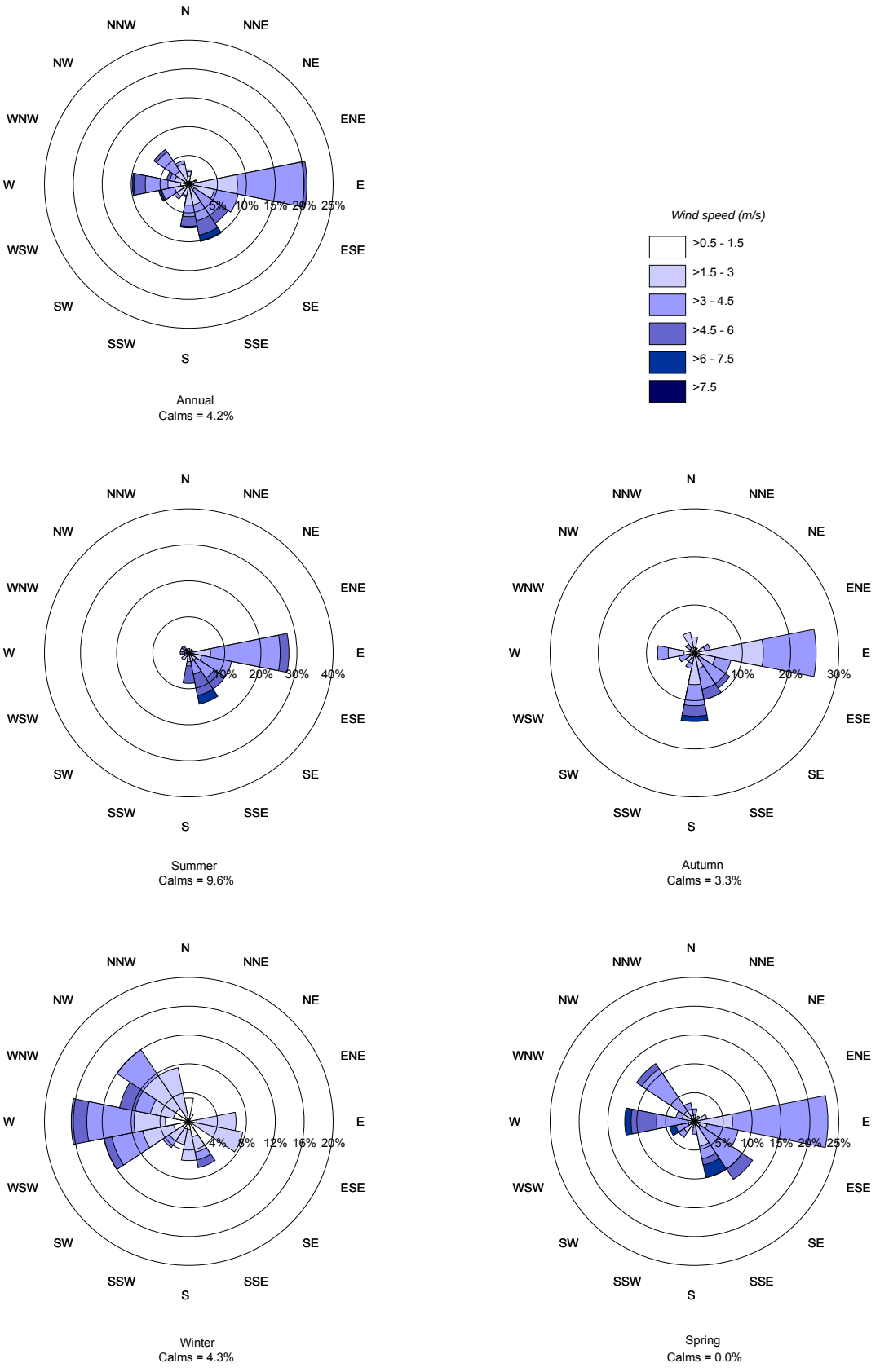
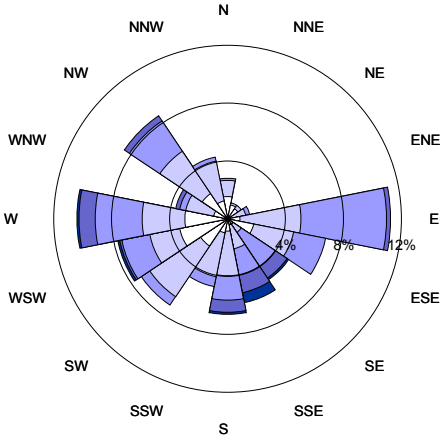
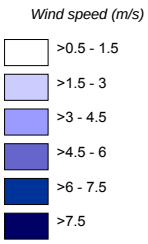
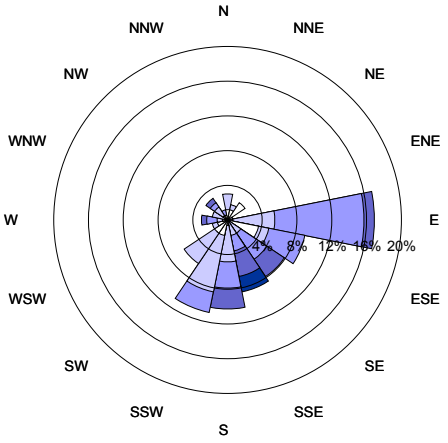


Figure 19: Annual and seasonal wind roses for Dora Creek 2001. Day: 9 a.m. and 3 p.m. (Source: Bureau of Meteorology)

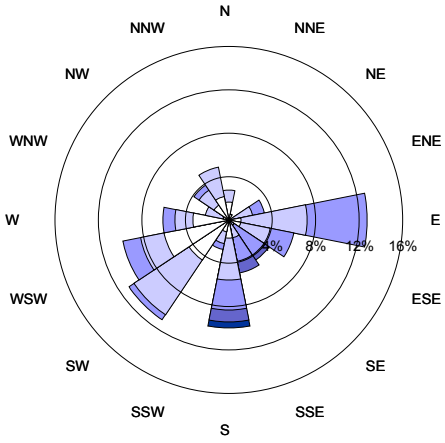


Annual
Calms = 11.1%

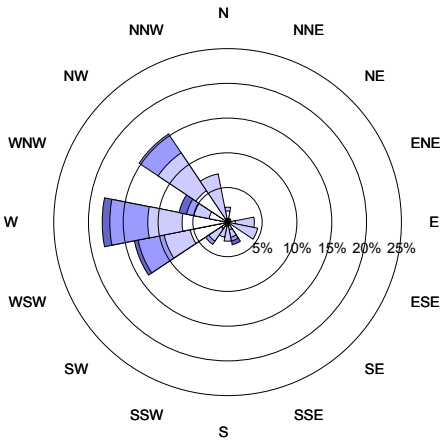




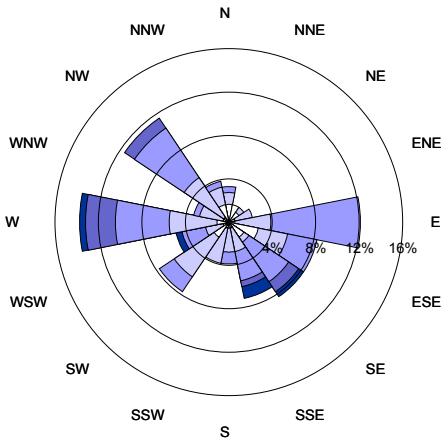
Summer
Calms = 12.0%



Autumn
Calms = 14.4%



Winter
Calms = 15.3%



Spring
Calms = 2.7%

Thus in summary the analysis shows that a combined analysis of 9 a.m. and 3 p.m. data would provide a reasonable basis for assessing if wind conditions should be treated as a feature of a particular area, provided the analysis was only required for daytime operations. This would expand the available number of meteorological stations suitable for the assessment significantly.

6 Summary and conclusions

This report and associated study has:

- provided a review of available sources that provide suitable data for assessing the effects of noise and determining if wind conditions at a site should be taken into account in a noise assessment
- developed procedures for preparing the data
- developed a simple software application to quickly analyse a data set to provide the information required by the *NSW industrial noise policy*, and to explore the data set to test the sensitivity of the analysis to variations in some of the assumptions concerning ways in which the analysis is performed.

The study has also analysed three data sets to determine if simple, more readily available data sets, could be used in noise assessments. It is concluded that standard Bureau of Meteorology 9 a.m. and 3 p.m. observations, if combined, can provide a reasonable representation of wind conditions for the acoustical day (7 a.m–6 p.m.). For other periods, the 9 a.m. and 3 p.m. observations are not useful.

7 References and further reading

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Appendix A: List of meteorological stations in NSW reporting wind data (Source: Bureau of Meteorology – www.bom.gov.au)

New South Wales stations measuring wind speed — Produced: 18 May 2006

Site	Name	Lat	Lon	Start	End	Years	%	Obs	A
72000	ADELONG POST OFFICE	-35.3126	148.0668	Mar 1965	Feb 1994	25.3	82	1.9	N
68241	ALBION PARK (WOLLONGONG AIRPORT)	-34.5638	150.7900	Jun 1999	Apr 2006	6.9	98	8.0	Y
72146	ALBURY AIRPORT	-36.0705	146.9550	Jun 1983	Apr 2006	22.8	98	4.1	N
72160	ALBURY AIRPORT AWS	-36.0690	146.9509	May 1993	Apr 2006	13.0	97	8.0	Y
72059	ALBURY GRAMMAR SCHOOL	-36.0667	146.9333	Mar 1962	Nov 1969	7.3	87	2.0	N
72097	ALBURY PUMPING STATION	-36.0817	146.9550	Jun 1970	Aug 1986	16.3	99	2.0	N
58131	ALSTONVILLE TROPICAL FRUIT RESEARCH STAT	-28.8521	153.4556	Feb 1968	Apr 2006	30.3	78	1.0	N
74000	ARDLETHAN POST OFFICE	-34.3567	146.9032	Jan 1965	Dec 1975	6.3	45	1.2	N
56238	ARMIDALE AIRPORT AWS	-30.5273	151.6158	Jun 1994	Apr 2006	11.9	95	7.9	Y
56002	ARMIDALE (RADIO STATION 2AD)	-30.5167	151.6681	Jan 1957	Jun 1997	40.4	99	2.9	N
56037	ARMIDALE (TREE GROUP NURSERY)	-30.5264	151.6697	Jun 1997	Apr 2006	8.9	98	3.8	N
67108	BADGERYS CREEK AWS	-33.8969	150.7281	Nov 1995	Apr 2006	10.5	94	7.7	Y
67068	BADGERYS CREEK MCMASTERS F.STN	-33.8683	150.7278	Mar 1967	Jun 1983	13.1	78	1.0	N
58198	BALLINA AIRPORT AWS	-28.8353	153.5585	Nov 1992	Apr 2006	13.5	97	7.2	Y
49002	BALRANALD (RSL)	-34.6398	143.5610	Jan 1965	Apr 2006	39.0	72	1.9	N
66137	BANKSTOWN AIRPORT AWS	-33.9181	150.9864	Jul 1968	Apr 2006	37.8	95	5.4	Y
53002	BARADINE FORESTRY	-30.9473	149.0655	Jan 1965	Apr 2006	40.8	64	2.0	N
54003	BARRABA POST OFFICE	-30.3781	150.6096	Mar 1966	Apr 2006	39.9	98	1.6	N

69134	BATEMANS BAY (CATALINA COUNTRY CLUB)	-35.7234	150.1872	Nov 1991	Apr 2006	14.5	86	2.0	N
63005	BATHURST AGRICULTURAL STATION	-33.4289	149.5559	Jan 1966	Apr 2006	40.3	96	1.8	N
63291	BATHURST AIRPORT AWS	-33.4120	149.6540	Aug 1989	Apr 2006	16.8	96	8.3	Y
63004	BATHURST GAOL	-33.4167	149.5500	Jan 1858	May 1983	118.2	87	1.9	N
69139	BEGA AWS	-36.6722	149.8191	Mar 1992	Apr 2006	14.2	95	8.0	Y
69002	BEGA (NEWTOWN ROAD)	-36.6884	149.8380	Jan 1965	Dec 1994	29.8	98	2.0	N
70090	BELCONNEN (HOLT (PINE RIDGE))	-35.2389	148.9958	Oct 1999	Feb 2003	3.4	65	2.0	N
68228	BELLAMBI AWS	-34.3691	150.9291	Apr 1997	Apr 2006	9.1	97	8.0	Y
60000	BELLANGRY STATE FOREST 524	-31.3167	151.5833	Jan 1965	Aug 1968	3.7	58	2.0	N
59001	BELLINGEN POST OFFICE	-30.4519	152.8979	Jan 1957	Jun 1986	29.3	97	2.0	N
59094	BELLINGEN (THE OBSERVATORY)	-30.4167	152.8667	Jun 1986	Feb 1989	2.8	96	2.0	N
70316	BENDORA DAM	-35.4424	148.8296	Aug 1984	Apr 1990	5.3	65	1.0	N
74009	BERRIGAN POST OFFICE	-35.6577	145.8126	Mar 1965	Dec 1975	10.8	83	1.8	N
54004	BINGARA POST OFFICE	-29.8673	150.5715	Jan 1965	Dec 1975	10.4	75	1.0	N
63281	BLACKHEATH M.C.A.	-33.6333	150.2833	Sep 1981	Oct 1983	2.0	73	2.0	N
63087	BLACK SPRINGS FORESTRY	-33.8463	149.7396	Jan 1965	Jun 1968	3.4	58	2.0	N
63010	BLAYNEY POST OFFICE	-33.5350	149.2600	Jan 1965	Dec 1975	7.9	65	2.0	N
70328	BOMBALA AWS	-37.0016	149.2336	Jul 1989	Apr 2006	16.8	94	7.8	Y
70005	BOMBALA (THERRY STREET)	-36.9113	149.2379	Jan 1965	Apr 2006	41.2	87	1.7	N
56041	BONSHAW (MONKSTADT)	-29.1333	151.4500	Jan 1965	Sep 1969	3.6	55	1.0	N
70220	BOOROWA POST OFFICE	-34.4383	148.7159	Jan 1965	Apr 1969	4.3	81	1.0	N
48239	BOURKE AIRPORT	-30.0423	145.9520	Nov 1994	Jan 1999	4.3	97	7.0	N
48245	BOURKE AIRPORT AWS	-30.0362	145.9521	Dec 1998	Apr 2006	7.4	96	8.9	Y
48013	BOURKE POST OFFICE	-30.0917	145.9358	Jul 1871	Aug 1996	123.6	94	2.0	N

68102	BOWRAL (PARRY DRIVE)	-34.4864	150.4021	Dec	1965	Apr 2006	39.0	93	4.0 N
68005	BOWRAL POST OFFICE	-34.5000	150.4000	Jan	1965	Nov 1965	0.9	83	1.0 N
69132	BRAIDWOOD RACECOURSE AWS	-35.4253	149.7835	Oct	1987	Apr 2006	18.1	88	7.4 Y
69010	BRAIDWOOD (WALLACE STREET)	-35.4489	149.7990	Jan	1965	Jan 1975	5.6	45	2.0 N
48015	BREWARRINA HOSPITAL	-29.9614	146.8651	Jan	1965	Apr 2006	39.7	84	1.9 N
58065	BROADWATER SUGAR MILL	-29.0167	153.4333	Jan	1965	Mar 1974	4.7	48	1.0 N
47048	BROKEN HILL AIRPORT AWS	-32.0012	141.4694	Jan	1946	Apr 2006	26.7	42	6.7 Y
47007	BROKEN HILL (PATTON STREET)	-31.9759	141.4676	May	1959	Apr 2006	40.3	85	4.3 N
47102	BROKEN HILL RFDS	-31.9333	141.5333	Nov	1979	Nov 1985	6.1	91	2.0 N
47031	BROKEN HILL (STEPHENS CREEK RESERVOIR)	-31.8803	141.5930	Oct	1968	Jan 1970	1.3	97	1.0 N
72009	BROOKFIELD FOREST STATION	-35.8000	147.9000	Jan	1965	Mar 1968	3.2	93	1.2 N
56006	BUNDARRA POST OFFICE	-30.1711	151.0757	Jan	1965	Dec 1969	4.4	64	1.0 N
73007	BURRINJUCK DAM	-35.0008	148.5969	Jan	1965	Apr 2006	37.8	89	1.0 N
58216	BYRON BAY (CAPE BYRON AWS)	-28.6399	153.6358	Nov	2002	Apr 2006	3.5	96	8.0 Y
58009	BYRON BAY (CAPE BYRON LIGHTHOUSE)	-28.6388	153.6361	Jan	1957	Apr 2006	48.9	95	2.7 N
72091	CABRAMURRA SMHEA	-35.9383	148.3842	Jan	1962	Apr 1999	37.3	93	1.3 N
72161	CABRAMURRA SMHEA AWS	-35.9371	148.3779	Dec	1996	Apr 2006	9.4	96	7.9 Y
68192	CAMDEN AIRPORT AWS	-34.0391	150.6890	Jan	1943	Apr 2006	32.5	48	3.9 Y
68081	CAMPBELLTOWN SWIMMING CENTRE	-34.0833	150.8167	Jan	1962	Apr 1984	22.2	93	2.0 N
70014	CANBERRA AIRPORT	-35.3049	149.2014	Mar	1939	Apr 2006	67.2	98	7.7 Y
70282	CANBERRA CITY	-35.2667	149.1167	Dec	1974	Dec 1992	14.1	76	6.9 N
70015	CANBERRA FORESTRY	-35.3000	149.1000	Jan	1957	Apr 1980	21.5	91	2.0 N
65006	CANOWINDRA (CANOWINDRA STREET)	-33.5723	148.6629	Jan	1965	Jan 1982	9.1	38	1.5 N
66194	CANTERBURY RACECOURSE AWS	-33.9057	151.1134	Oct	1995	Apr 2006	10.5	97	8.0 Y

72013	CARABOST FOREST HEADQUARTERS	-35.6500	147.8022	Jan 1965	Oct 1967	0.5	17	1.0	N
72014	CARABOST STATE FOREST 2	-35.6500	147.7167	Feb 1965	Mar 1968	0.8	26	1.0	N
63019	CARCOAR	-33.6167	149.1333	Jan 1965	Sep 1969	4.7	80	1.0	N
63216	CARCOAR (ICELY STREET)	-33.6167	149.1333	Nov 1969	Dec 1975	5.4	73	1.8	N
58063	CASINO AIRPORT	-28.8755	153.0493	Jan 1965	Apr 2006	37.7	80	2.1	N
58208	CASINO AIRPORT AWS	-28.8775	153.0520	Jan 1995	Apr 2006	11.3	97	7.8	Y
62009	CASSILIS (DALKEITH)	-31.9963	149.9857	Jan 1965	Dec 1966	2.0	99	1.0	N
62005	CASSILIS POST OFFICE	-32.0051	149.9815	May 1967	Dec 1975	5.9	56	2.0	N
61260	CESSNOCK AIRPORT AWS	-32.7886	151.3377	Oct 1968	Apr 2006	14.6	36	6.8	Y
61242	CESSNOCK (NULKABA)	-32.8093	151.3490	Jun 1973	Apr 2006	32.9	95	2.0	N
61009	CESSNOCK POST OFFICE	-32.8272	151.3661	Jan 1964	May 1968	4.4	100	2.0	N
71003	CHARLOTTE PASS (KOSCIUSKO CHALET)	-36.4337	148.3327	Dec 1967	Apr 2006	19.3	42	1.7	N
59008	CLOUDS CREEK STATE FOREST	-30.0903	152.6333	Jan 1965	Dec 1969	2.8	36	1.0	N
48237	COBAR AIRPORT AWS	-31.5389	145.7964	Jul 1993	Apr 2006	12.8	96	8.5	Y
48244	COBAR COMPARISON	-31.4861	145.8281	Nov 1997	Nov 2000	3.1	95	5.4	Y
48027	COBAR MO	-31.4840	145.8294	May 1962	Apr 2006	44.0	98	7.4	Y
48030	COBAR POST OFFICE	-31.5000	145.8000	Jan 1908	Dec 1965	49.9	81	1.4	N
59040	COFFS HARBOUR MO	-30.3107	153.1187	Feb 1943	Apr 2006	57.6	90	7.5	Y
48031	COLLARENEBRI (ALBERT ST)	-29.5407	148.5818	Jan 1965	Apr 2006	41.3	84	1.9	N
50052	CONDOBOLIN AG RESEARCH STN	-33.0664	147.2283	Jan 1965	Apr 2006	37.3	76	1.5	N
50137	CONDOBOLIN AIRPORT AWS	-33.0682	147.2133	Jul 1993	Apr 2006	12.8	97	8.0	Y
50014	CONDOBOLIN RETIREMENT VILLAGE	-33.0818	147.1524	Jan 1965	Jul 1995	27.3	85	2.0	N
50102	CONDOBOLIN SOIL CONSERVATION	-33.0833	147.1500	Dec 1965	Dec 1985	20.0	98	1.0	N
64025	COOLAH (BINNIA ST)	-31.8231	149.7200	May 1966	Aug 1975	8.3	75	2.0	N

60009	COOLONGALOOK STATE FOREST	-32.2000	152.3167	Jan 1965	Jun 1968	3.1	75	1.2	N
70217	COOMA AIRPORT AWS	-36.2939	148.9725	Jun 1990	Apr 2006	15.9	97	8.0	Y
70258	COOMA NORTH GERINGA AVENUE	-36.2167	149.1333	Jan 1959	Jun 1973	14.0	81	2.0	N
70094	COOMA NORTH SMHEC	-36.2167	149.1333	Jan 1959	Dec 1970	11.8	82	2.0	N
70278	COOMA VISITORS CENTRE	-36.2318	149.1243	Oct 1973	Apr 2006	32.6	96	2.0	N
64017	COONABARABRAN AIRPORT AWS	-31.3304	149.2699	Jul 2001	Apr 2006	4.8	99	8.0	Y
64008	COONABARABRAN (NAMOI STREET)	-31.2712	149.2714	Jan 1957	Apr 2006	47.3	95	3.8	N
51161	COONAMBLE AIRPORT AWS	-30.9776	148.3798	Sep 1997	Apr 2006	8.7	98	8.0	Y
51010	COONAMBLE COMPARISON	-30.9753	148.3806	Jan 1965	Apr 2006	41.1	89	2.3	N
73118	COOTAMUNDRA AERO	-34.6333	148.0500	Nov 1940	Nov 1943	3.1	96	5.5	N
73142	COOTAMUNDRA AIRPORT	-34.6299	148.0364	Oct 1995	Apr 2006	10.6	98	3.9	N
73009	COOTAMUNDRA POST OFFICE	-34.6411	148.0236	Jan 1957	Oct 1995	38.8	98	2.4	N
70317	CORIN DAM	-35.5368	148.8383	Feb 1986	May 1993	6.9	62	1.0	N
70322	CORIN FOREST REC FACILITY	-35.5155	148.9216	Jun 1987	Dec 1987	0.6	74	2.0	N
74034	COROWA AIRPORT	-35.9887	146.3574	Feb 1970	Apr 2006	34.7	93	2.0	N
65111	COWRA AIRPORT AWS	-33.8449	148.6497	Jul 2004	Apr 2006	1.8	95	8.0	Y
65091	COWRA AIRPORT COMPARISON	-33.8452	148.6535	May 1967	Apr 2006	36.3	92	4.9	N
63021	COWRA POST OFFICE	-33.9000	148.7000	Jan 1957	Dec 1966	10.0	97	2.0	N
63023	COWRA RESEARCH CENTRE	-33.8088	148.7072	Jan 1965	Apr 2006	39.8	95	1.0	N
70326	CRAIGIE (BONDI FOREST LODGE)	-37.1475	149.1496	May 1965	Dec 1969	2.2	30	1.0	N
70025	CROOKWELL POST OFFICE	-34.4578	149.4693	Jan 1965	Dec 1975	8.6	61	1.0	N
56008	DEEPWATER POST OFFICE	-29.4421	151.8483	Aug 1967	Dec 1975	4.4	50	2.0	N
74258	DENILIQUIN AIRPORT AWS	-35.5575	144.9458	Jun 1997	Apr 2006	8.9	98	8.1	Y
74039	DENILIQUIN FALKINER MEMORIAL	-35.3667	145.0500	Jan 1957	Nov 1977	20.8	91	1.9	N

74128	DENILIQUIN (WILKINSON ST)	-35.5269	144.9520	Feb 1858	Jun 2003	141.7	88	1.9	N
59140	DORRIGO (OLD CORAMBA RD)	-30.3458	152.7189	Jan 1997	Apr 2006	9.3	99	2.0	N
65070	DUBBO AIRPORT AWS	-32.2206	148.5753	Jan 1993	Apr 2006	13.3	96	8.5	Y
65012	DUBBO (DARLING STREET)	-32.2388	148.6089	Jan 1957	Dec 1999	42.8	98	2.6	N
65037	DUBBO STATE FOREST	-32.2667	148.6167	Jan 1965	Mar 1967	2.3	69	2.0	N
64009	DUNEDOO POST OFFICE	-32.0163	149.3953	Jan 1965	Apr 2006	40.9	87	1.9	N
61017	DUNGOG POST OFFICE	-32.4022	151.7582	Jan 1966	Dec 1975	9.3	77	2.0	N
61034	EAST MAITLAND BOWLING CLUB	-32.7483	151.5833	Feb 1965	Jul 1968	2.8	61	1.0	N
49013	EUSTON POST OFFICE	-34.5833	142.7333	Jan 1965	Jan 1970	4.5	87	1.0	N
58212	EVANS HEAD RAAF BOMBING RANGE AWS	-29.1830	153.3964	Feb 1998	Apr 2006	8.3	94	8.0	Y
74023	FINLEY AIRPORT AWS	-35.6613	145.5610	Mar 2001	Oct 2003	2.7	91	7.9	Y
74253	FINLEY (CSIRO)	-35.7111	145.6236	Jun 1994	Mar 2001	6.8	91	7.9	Y
74093	FINLEY (STRATHDRUMMOND)	-35.5667	145.5333	Jan 1965	Sep 1968	3.7	95	2.0	N
65103	FORBES AIRPORT AWS	-33.3627	147.9205	Dec 1995	Apr 2006	10.4	98	8.0	Y
65016	FORBES (CAMP STREET)	-33.3892	148.0081	Jun 1873	May 1998	123.4	84	1.7	N
60013	FORSTER - TUNCURRY R.V.C.P.	-32.1755	152.5089	Mar 1999	Apr 2006	7.2	94	2.0	N
66022	FORT DENISON	-33.8567	151.2242	Aug 1998	Apr 2006	7.8	97	23.7	Y
46128	FOWLERS GAP AWS	-31.0867	141.7017	Oct 2004	Apr 2006	1.6	91	8.0	Y
46091	FOWLERS GAP RESEARCH STATION	-31.0869	141.7017	Dec 1968	Dec 1973	4.3	64	1.0	N
70034	FROGMORE	-34.2739	148.8400	Jun 1969	Dec 1990	21.4	92	1.6	N
51018	GILGANDRA (CHELMSFORD AVE)	-31.7055	148.6625	Jan 1965	Dec 1975	10.5	85	1.6	N
57009	GIRARD STATE FOREST	-28.9000	152.3000	Apr 1967	Jan 1968	0.3	24	1.0	N
67009	GLENFIELD (MACQUARIE)	-33.9667	150.9000	Jan 1965	Dec 1975	10.7	92	1.0	N
56013	GLEN INNES AG RESEARCH STN	-29.6952	151.6936	Jun 1970	Apr 2006	35.8	98	1.0	N

56243	GLEN INNES AIRPORT AWS	-29.6780	151.6940	Oct 1996	Apr 2006	9.6	98	8.0	Y
57082	GLEN INNES (MT MITCHELL FOREST)	-29.6449	152.0960	Jul 1965	Jul 1974	7.9	84	1.5	N
56011	GLEN INNES POST OFFICE	-29.7368	151.7366	Jan 1962	Apr 2006	44.3	99	3.2	N
67010	GLENORIE (OLD NORTHERN RD)	-33.5908	151.0094	Jan 1973	Dec 1975	3.0	80	2.0	N
48046	GOODOOGA POST OFFICE	-29.1142	147.4543	Jul 1969	Dec 1981	12.1	91	2.0	N
61087	GOSFORD (NARARA RESEARCH STATION) AWS	-33.3949	151.3290	Jan 1965	Apr 2006	22.8	52	3.4	Y
70037	GOULBURN	-34.7500	149.8667	Jan 1962	May 1967	5.3	95	2.0	N
70210	GOULBURN AERO CLUB	-34.8167	149.7333	May 1967	Jul 1971	4.3	91	2.3	N
70330	GOULBURN AIRPORT AWS	-34.8085	149.7312	Aug 1989	Apr 2006	16.8	96	7.8	Y
70285	GOULBURN ST JOHNS	-34.7667	149.7000	Jan 1975	May 1978	3.3	84	2.0	N
70263	GOULBURN TAFE	-34.7495	149.7034	Sep 1971	Apr 2006	31.1	87	2.0	N
58130	GRAFTON OLYMPIC POOL	-29.6833	152.9283	Sep 1966	Apr 2006	39.6	99	2.0	N
58077	GRAFTON RESEARCH STN	-29.6224	152.9605	Sep 2002	Apr 2006	3.7	95	7.7	Y
66134	GRANVILLE SHELL REFINERY	-33.8322	151.0340	Jan 1965	Sep 1967	1.5	38	2.0	N
69137	GREEN CAPE AWS	-37.2622	150.0504	Apr 1991	Apr 2006	15.1	95	17.4	Y
69055	GREEN CAPE LIGHTHOUSE	-37.2614	150.0497	Oct 1966	May 1992	25.7	99	2.0	N
73014	GRENFELL (QUONDONG RD)	-33.9029	148.1717	Jan 1965	Apr 2006	39.8	84	1.9	N
75041	GRIFFITH AIRPORT AWS	-34.2487	146.0695	Jan 1967	Apr 2006	33.3	65	3.0	Y
75028	GRIFFITH CSIRO	-34.3183	146.0667	Jan 1962	Jan 1979	17.1	96	2.0	N
75174	GRIFFITH CSIRO	-34.3229	146.0684	Jun 1994	Oct 2003	9.4	92	7.9	Y
70172	GUDGENBY	-35.7500	148.9833	Apr 1967	Oct 1988	20.3	79	2.0	N
62013	GULGONG POST OFFICE	-32.3634	149.5329	Mar 1970	Apr 2006	36.1	94	2.0	N
73125	GUNDAGAI OTWAY ST	-35.0667	148.1000	Mar 1971	Jul 1976	5.2	94	2.0	N
73128	GUNDAGAI RIDGE STREET	-35.0778	148.1039	Aug 1976	May 1995	18.8	96	2.0	N

73108	GUNDAGAI SHIRE OFFICE	-35.0667	148.1000	Dec 1967	Feb 1971	2.2	55	1.9	N
73141	GUNDAGAI (WILLIAM ST)	-35.0479	148.1075	May 1995	Apr 2006	11.0	98	2.0	N
55202	GUNNEDAH AIRPORT AWS	-30.9537	150.2494	Sep 2001	Apr 2006	4.7	96	7.9	Y
55024	GUNNEDAH (DIPNR)	-31.0261	150.2687	Apr 1948	Apr 2006	57.8	97	1.1	N
55023	GUNNEDAH POOL	-30.9841	150.2540	Feb 1877	Apr 2006	111.8	63	1.5	N
63033	GURNANG STATE FOREST (OBERON YOUNG ADULT	-34.0111	149.8369	Jan 1964	Feb 1975	9.7	86	2.0	N
56229	GUYRA HOSPITAL	-30.2133	151.6788	Sep 1981	Apr 2006	24.7	98	2.0	N
56016	GUYRA POST OFFICE	-30.2204	151.6714	Jan 1965	Nov 1972	7.6	77	1.4	N
73016	HARDEN (EAST ST)	-34.5607	148.3653	Sep 1967	Mar 1980	11.0	78	2.0	N
60023	HARRINGTON (OXLEY ANCHORAGE CARAVAN PARK	-31.8714	152.6827	Jan 1965	Dec 1975	10.8	95	2.0	N
75175	HAY CSIRO AWS	-34.5471	144.8670	Jun 1994	Apr 2006	11.8	91	7.9	Y
75031	HAY (MILLER STREET)	-34.5194	144.8545	Jan 1957	Apr 2006	49.3	94	2.7	N
75032	HILLSTON AIRPORT	-33.4915	145.5249	Jan 1957	Apr 2006	47.3	93	3.1	N
66154	HOLDSWORTHY AIR CAVALRY	-33.9500	150.9500	Feb 1970	Oct 1974	4.7	93	2.0	N
67117	HOLSWORTHY CONTROL RANGE	-33.9795	150.9254	Jun 1998	Apr 2006	7.9	95	8.0	Y
70241	HONEYSUCKLE CREEK	-35.5833	148.9833	Aug 1967	Nov 1981	14.3	99	2.0	N
67119	HORSLEY PARK EQUESTRIAN CENTRE AWS	-33.8511	150.8567	Sep 1997	Apr 2006	8.7	97	8.0	Y
72023	HUME RESERVOIR	-36.1040	147.0329	Jan 1965	Apr 2006	41.3	99	1.3	N
56017	INVERELL COMPARISON	-29.7783	151.1114	Feb 1874	Nov 1997	121.1	81	1.5	N
56242	INVERELL (RAGLAN ST)	-29.7795	151.1122	Mar 1995	Apr 2006	11.2	99	3.9	N
56018	INVERELL RESEARCH CENTRE	-29.7752	151.0819	Jan 1965	Apr 2006	40.7	92	1.6	Y
71031	ISLAND BEND	-36.3333	148.4833	Jan 1965	Oct 1967	2.8	99	1.0	N
49000	IVANHOE AERODROME AWS	-32.8831	144.3088	Feb 2000	Apr 2006	6.3	96	7.9	Y
49019	IVANHOE POST OFFICE	-32.8999	144.2995	Jan 1959	Apr 2006	46.2	88	3.4	N

61086	JERRYS PLAINS POST OFFICE	-32.4972	150.9093	Jan 1957	Apr 2006	49.3	98	2.0	N
68034	JERVIS BAY (POINT PERPENDICULAR LIGHTHOU	-35.0936	150.8048	Jan 1957	Jun 2004	47.4	98	3.5	N
68151	JERVIS BAY (PT PERPENDICULAR AWS)	-35.0936	150.8049	Aug 2003	Apr 2006	1.7	51	7.7	Y
73019	JUNEE TREATMENT WORKS	-34.8457	147.5714	Jan 1965	Dec 1975	10.6	77	1.5	N
63039	KATOOMBA (MURRI ST)	-33.7122	150.3087	Jan 1957	Apr 2006	42.8	84	4.1	N
59007	KEMPSEY AIRPORT AWS	-31.0711	152.7717	Feb 2001	Apr 2006	5.3	98	8.0	Y
59017	KEMPSEY (WIDE STREET)	-31.0770	152.8235	Jan 1965	Apr 2006	37.8	89	2.0	N
60039	KENDALL FORESTRY	-31.6367	152.7061	Jan 1965	Jul 1967	2.6	63	2.0	N
72162	KHANCOBAN AWS	-36.2304	148.1405	Jan 1997	Apr 2006	9.3	97	7.8	Y
72060	KHANCOBAN SMHEA	-36.2254	148.1431	Jan 1962	Nov 1994	32.9	87	1.6	N
68242	KIAMA (BOMBO HEADLAND)	-34.6533	150.8609	Dec 2001	Apr 2006	4.4	97	8.0	Y
68038	KIAMA BOWLING CLUB	-34.6750	150.8519	Jul 1981	Jul 2002	21.1	76	1.7	N
71010	KIANDRA CHALET	-35.8833	148.5000	Jan 1957	Aug 1974	14.6	78	2.0	N
69126	KIOLOA (LONDON FOUNDATION)	-35.5467	150.3767	Jun 1980	Oct 1986	5.3	72	1.0	N
63111	KIRKCONNELL PRISON CAMP	-33.4167	149.8500	Feb 1968	Dec 1975	7.4	91	2.0	N
61029	KULNURA (WILLIAM ROAD)	-33.2333	151.2000	Dec 1968	Aug 1981	12.8	99	2.0	N
66043	KURNELL AWS	-34.0039	151.2111	Apr 2000	Apr 2006	6.1	97	23.8	Y
75039	LAKE CARGELLIGO AIRPORT	-33.2833	146.3707	Jan 1965	Apr 2006	38.1	78	1.9	N
47016	LAKE VICTORIA STORAGE	-34.0398	141.2652	Jan 1965	Apr 2006	41.3	98	1.0	N
72090	LAUREL HILL PRISON CAMP	-35.6500	148.0667	Jun 1969	Jun 1975	5.8	87	2.0	N
74062	LEETON CARAVAN PARK	-34.5670	146.4114	Jan 1957	Dec 1975	17.3	87	2.0	N
63046	LIDSDALE STATE FOREST	-33.4500	150.0500	Jun 1967	Dec 1969	1.1	40	1.0	N
48243	LIGHTNING RIDGE BOWLING CLUB	-29.4273	147.9780	Jun 1997	Apr 2006	8.9	97	2.0	N
58214	LISMORE AIRPORT AWS	-28.8343	153.2616	Feb 2002	Apr 2006	4.3	95	8.0	Y

58037	LISMORE (CENTRE STREET)	-28.8070	153.2628	Jan 1957	Dec 2003	47.0	98	2.0	N
58221	LISMORE (RICHMOND HILL)	-28.7853	153.3409	Jan 2004	Apr 2006	2.3	100	2.0	N
63224	LITHGOW (BIRDWOOD ST)	-33.4901	150.1498	Aug 1965	Apr 2006	40.3	93	2.0	N
63062	LITHGOW (NEWNES FOREST CENTRE)	-33.3675	150.2383	Jan 1965	Dec 1975	9.1	66	1.7	N
66051	LITTLE BAY (THE COAST GOLF CLUB)	-33.9828	151.2502	Jan 2000	Apr 2006	6.3	97	23.8	Y
67020	LIVERPOOL (MICHAEL WENDEN CENTRE)	-33.9214	150.8861	Sep 2001	Apr 2006	4.7	95	2.0	N
67035	LIVERPOOL(WHITLAM CENTRE)	-33.9272	150.9128	Jun 1962	Sep 2001	39.3	97	2.0	N
200440	LORD HOWE ISLAND	-31.5500	159.0833	Apr 1939	Nov 1988	49.7	98	9.6	N
200839	LORD HOWE ISLAND AERO	-31.5421	159.0786	Nov 1988	Apr 2006	17.5	99	8.1	Y
61288	LOSTOCK DAM	-32.3322	151.4595	Nov 1969	Apr 2006	36.3	96	1.3	N
66078	LUCAS HEIGHTS ANSTO	-34.0517	150.9800	Jan 1962	Dec 1982	20.7	95	2.0	N
61388	MAITLAND VISITORS CENTRE	-32.7427	151.5683	Jun 1997	Apr 2006	8.9	97	2.0	N
61259	MAITLAND WEST AERO	-32.7000	151.4667	Jun 1968	Jun 1974	5.8	79	2.0	N
61375	MANGROVE MOUNTAIN AWS	-33.2894	151.2107	Jul 1994	Apr 2006	11.8	96	8.0	Y
66197	MANLY (NORTH HEAD)	-33.8152	151.2986	Feb 1999	Apr 2006	7.3	96	23.4	Y
66193	MARSFIELD (MACQUARIE UNIVERSITY NO:2)	-33.7654	151.1176	Mar 1994	Oct 1995	1.7	90	1.0	N
66156	MARSFIELD (WILLANDRA VILLAGE)	-33.7791	151.1121	Feb 1971	Oct 1995	19.3	69	1.7	N
61223	MARYVILLE	-32.9131	151.7500	Jan 1969	Jan 1993	24.1	99	2.0	N
74069	MATHOURA STATE FOREST	-35.8119	144.9010	Jan 1957	Dec 1969	12.9	97	1.6	N
47019	MENINDEE POST OFFICE	-32.3937	142.4173	Jan 1959	Apr 2006	43.8	74	1.0	N
69147	MERIMBULA AIRPORT AWS	-36.9077	149.8989	Feb 1998	Apr 2006	8.3	97	8.0	Y
69093	MERIMBULA AIRPORT COMPARISON	-36.9106	149.9017	Aug 1969	Dec 1998	29.3	91	4.0	N
66199	MIDDLE HEAD	-33.8283	151.2636	Feb 1999	Mar 2001	2.2	93	23.6	Y
63053	MILLTHORPE (INALA)	-33.4455	149.1847	Jan 1965	Dec 1993	27.8	73	1.9	N

68220	MINTO (ALDERNEY STREET)	-34.0411	150.8458	Apr 1984	Nov 1995	9.5	68	2.0	N
74077	MOIRA STATE FOREST	-36.0167	144.9000	Jan 1965	Dec 1969	1.1	20	1.0	N
65023	MOLONG (KING ST)	-33.0866	148.8598	Jan 1957	Jul 1975	18.6	94	2.0	N
69017	MONTAGUE ISLAND LIGHTHOUSE	-36.2519	150.2275	Jan 1962	Apr 2006	43.8	94	3.9	Y
60006	MOORLAND (COOPERNOOK STATE FOREST)	-31.7900	152.6092	Nov 1966	Nov 1969	0.6	7	1.0	N
53115	MOREE AERO	-29.4914	149.8458	May 1995	Apr 2006	11.0	99	8.9	Y
53048	MOREE COMPARISON	-29.4819	149.8383	Mar 1964	May 1995	31.3	98	6.6	N
53027	MOREE POST OFFICE	-29.5000	149.9000	Jan 1957	Dec 1965	9.0	96	2.0	N
69148	MORUYA AIRPORT AWS	-35.9004	150.1437	Oct 1999	Apr 2006	6.6	95	7.9	Y
69018	MORUYA HEADS PILOT STATION	-35.9093	150.1532	Jan 1957	Apr 2006	49.3	99	3.9	N
68239	MOSS VALE AWS	-34.5253	150.4217	Feb 2001	Apr 2006	5.3	96	8.0	Y
68045	MOSS VALE (HOSKINS STREET)	-34.5444	150.3768	Jan 1962	Dec 1975	13.9	91	2.0	N
75046	MOULAMEIN POST OFFICE	-35.0885	144.0349	Aug 1970	Dec 1975	3.6	57	2.0	N
63292	MOUNT BOYCE AWS	-33.6185	150.2741	Aug 1989	Apr 2006	16.8	97	7.8	Y
70349	MOUNT GININI AWS	-35.5293	148.7721	Jun 2004	Apr 2006	1.9	88	5.5	Y
49032	MOUNT HOPE (CYPRESS GROVE)	-32.8345	145.8772	Jan 1965	Mar 1971	3.8	43	1.1	N
56021	MOUNT TOPPER STATE FOREST	-29.9167	151.2167	Jan 1965	Dec 1969	4.5	89	1.0	N
63056	MOUNT VICTORIA (MT VICTORIA (SELSDON STR	-33.5917	150.2544	Jan 1962	Nov 1987	25.9	91	2.2	N
62101	MUDGEE AIRPORT AWS	-32.5624	149.6160	Aug 1989	Apr 2006	16.8	95	7.8	Y
62021	MUDGEE (GEORGE STREET)	-32.5956	149.5956	Jan 1962	Dec 1995	33.8	96	2.2	N
63058	MULLION CREEK (MULLION RANGE FOREST)	-33.0934	149.1280	Jun 1967	Jun 1968	0.5	46	1.0	N
52020	MUNGINDI POST OFFICE	-28.9786	148.9899	Jan 1965	Apr 2006	39.8	78	1.2	N
72035	MURRAGULDRIE STATE FOREST 1	-35.5000	147.6167	Jun 1967	Nov 1969	0.8	30	1.0	N
61392	MURRURUNDI GAP AWS	-31.7416	150.7937	Jun 2003	Apr 2006	2.9	97	8.0	Y

61051	MURRURUNDI POST OFFICE	-31.7631	150.8362	Jan	1965	Apr	2006	40.9	93	3.9 N
58158	MURWILLUMBAH (BRAY PARK)	-28.3408	153.3784	Oct	1972	Apr	2006	33.6	99	2.0 N
61053	MUSWELLBROOK (LOWER HILL ST)	-32.2611	150.8847	Jan	1969	Jun	1972	3.5	100	2.0 N
69021	NALBAUGH STATE FOREST	-37.0667	149.3500	Jun	1967	Apr	1977	8.9	88	2.0 N
70312	NAMADGI NATIONAL PARK (GLENDALE CROSSING	-35.6920	149.0052	Oct	1983	Sep	1992	9.0	61	1.0 N
75050	NARADHAN (URALBA)	-33.6104	146.3161	Jul	1970	May	1991	20.8	98	2.0 N
69022	NAROOMA RVCP	-36.2144	150.1358	Jan	1965	Apr	2006	21.9	49	1.8 N
54038	NARRABRI AIRPORT AWS	-30.3154	149.8302	Jul	2001	Apr	2006	4.8	97	8.0 Y
53030	NARRABRI WEST POST OFFICE	-30.3401	149.7552	Jan	1962	Jul	2002	39.0	94	2.4 N
74148	NARRANDERA AIRPORT	-34.7071	146.5126	Feb	1968	Mar	2005	36.8	94	1.2 N
74221	NARRANDERA GOLF CLUB	-34.7325	146.5592	Jan	1970	Apr	2006	36.3	96	2.3 N
74082	NARRANDERA POST OFFICE	-34.7500	146.5500	Jan	1962	Feb	1970	7.9	95	2.0 N
74083	NARRANDERA STATE FOREST	-34.7500	146.5667	Jan	1965	Dec	1969	4.8	59	1.7 N
51115	NARROMINE AIRPORT	-32.2167	148.2333	May	1965	Jun	1974	4.6	43	1.9 N
61054	NELSON BAY (NELSON HEAD)	-32.7103	152.1612	Jul	1968	Apr	2006	8.8	22	2.0 N
69049	NERRIGA COMPOSITE	-35.1165	150.0847	Oct	1971	Apr	2006	34.6	97	2.0 N
61055	NEWCASTLE NOBBYS SIGNAL STATION AWS	-32.9185	151.7985	Jan	1957	Apr	2006	49.0	98	4.0 Y
61390	NEWCASTLE UNIVERSITY	-32.8925	151.7056	Jul	1998	Apr	2006	6.8	83	2.0 N
70067	NIMMITABEL POST OFFICE	-36.5123	149.2850	Jan	1965	Dec	1975	9.9	85	2.0 N
61366	NORAH HEAD AWS	-33.2815	151.5766	Jan	1995	Apr	2006	11.3	96	8.0 Y
61273	NORAH HEAD LIGHTHOUSE	-33.2815	151.5759	Jul	1969	Oct	2004	35.0	96	3.9 N
200288	NORFOLK ISLAND AERO	-29.0389	167.9408	Apr	1939	Apr	2006	67.1	99	7.5 Y
68076	NOWRA RAN AIR STATION	-34.9449	150.5450	Dec	1955	Nov	2000	45.0	97	7.9 Y
68072	NOWRA RAN AIR STATION AWS	-34.9469	150.5353	Nov	2000	Apr	2006	5.5	96	9.2 Y

62100	NULLO MOUNTAIN AWS	-32.7244	150.2290	Aug 1990	Apr 2006	15.8	96	7.9	Y
51039	NYNGAN AIRPORT	-31.5495	147.1961	Jan 1959	Apr 2006	46.3	95	2.8	N
63293	OBERON (JENOLAN CAVES ROAD)	-33.7400	149.8822	Sep 1989	Aug 2005	16.0	84	2.0	N
63063	OBERON (WOODCHEM)	-33.6948	149.8627	Jan 1965	Apr 2006	25.1	45	1.7	N
61057	OLNEY STATE FOREST	-33.1000	151.2500	Feb 1965	Oct 1967	2.4	44	1.0	N
63254	ORANGE AGRICULTURAL INSTITUTE	-33.3211	149.0828	Jan 1976	Apr 2006	30.3	96	1.2	N
63303	ORANGE AIRPORT AWS	-33.3813	149.1269	Apr 1996	Apr 2006	10.1	96	7.9	Y
63231	ORANGE AIRPORT COMPARISON	-33.3815	149.1229	Aug 1968	Apr 2006	37.8	99	6.2	N
63018	ORANGE (CANOBOLAS STATE FOREST)	-33.3971	149.0236	Jun 1967	Sep 1969	0.7	25	1.0	N
63065	ORANGE POST OFFICE	-33.2833	149.1000	Jan 1957	Jul 1968	11.5	99	2.0	N
63237	ORANGE TV CHANNEL CNB8	-33.3000	149.1167	Aug 1968	Nov 1968	0.3	83	2.0	N
63244	ORANGE (WOLAROI)	-33.3000	149.1167	Feb 1969	Jul 1975	1.8	24	2.0	N
67084	ORCHARD HILLS TREATMENT WORKS	-33.8020	150.7069	Feb 1972	Jun 1989	16.8	94	2.0	N
70206	ORRORAL VALLEY (STADAN)	-35.6333	148.9500	Jan 1971	Aug 1985	14.6	95	2.0	N
65068	PARKES AIRPORT AWS	-33.1294	148.2417	Jan 1965	Apr 2006	21.3	45	4.2	Y
65026	PARKES (MACARTHUR STREET)	-33.1439	148.1633	Jan 1957	Apr 2006	49.3	99	3.3	N
66124	PARRAMATTA NORTH (MASONS DRIVE)	-33.7917	151.0181	Jun 1967	Apr 2006	38.8	97	2.0	N
61250	PATERSON (TOCAL AWS)	-32.6296	151.5919	Nov 1967	Apr 2006	36.2	93	2.6	Y
50031	PEAK HILL POST OFFICE	-32.7235	148.1902	Jul 1965	Apr 2006	40.7	98	2.0	N
61351	PEATS RIDGE (WARATAH ROAD)	-33.3102	151.2443	Oct 1981	Apr 2006	24.6	92	2.0	N
67113	PENRITH LAKES AWS	-33.7195	150.6783	Sep 1995	Apr 2006	10.7	97	7.8	Y
71072	PERISHER VALLEY SKI CENTRE	-36.4033	148.4104	Jun 1976	Apr 2006	29.9	81	2.0	N
68052	PICTON COUNCIL DEPOT	-34.1685	150.6145	Jan 1965	Dec 1975	10.9	92	2.0	N
54104	PINDARI DAM	-29.3900	151.2448	Aug 1971	Apr 2006	34.8	99	1.0	N

47029	POONCARIE TELECENTRE	-33.3856	142.5696	Jul	2002	Apr	2006	3.8	99	2.0 N
68053	PORT KEMBLA SIGNAL STATION	-34.4772	150.9131	Jan	1957	Mar	1976	19.2	98	2.0 N
60139	PORT MACQUARIE AIRPORT AWS	-31.4336	152.8655	Jul	1995	Apr	2006	10.8	97	8.0 Y
60026	PORT MACQUARIE (BELLEVUE GARDENS)	-31.4399	152.9110	Jan	1957	Oct	2003	46.8	98	2.6 N
67019	PROSPECT DAM	-33.8193	150.9127	Jan	1965	Apr	2006	41.2	96	1.8 N
51042	QUAMBONE STATION	-30.9252	147.8690	Jan	1965	Feb	1973	4.9	43	1.0 N
73032	QUANDIALLA POST OFFICE	-34.0112	147.7937	Mar	1968	Apr	2006	38.0	98	2.0 N
55049	QUIRINDI POST OFFICE	-31.5086	150.6792	Jan	1965	Apr	2006	37.8	85	1.3 N
61063	RATHMINES AMO	-33.0500	151.6000	Jan	1941	Jul	1950	9.6	99	6.9 N
61076	RAYMOND TERRACE (WALLAROO STATE FOREST)	-32.6180	151.8877	Jan	1965	Aug	1968	2.3	57	1.1 N
72052	RED HILL STATE FOREST	-35.1667	148.3667	Jan	1965	Jan	1970	4.7	90	1.0 N
67033	RICHMOND RAAF	-33.6022	150.7794	Dec	1939	Feb	1995	37.8	60	5.5 N
67105	RICHMOND RAAF	-33.6004	150.7761	Oct	1993	Apr	2006	12.6	97	7.8 Y
67021	RICHMOND - UWS HAWKESBURY	-33.6165	150.7477	Jan	1965	Jun	1975	10.3	97	1.3 N
66131	RIVERVIEW OBSERVATORY	-33.8258	151.1556	Mar	1962	Apr	2006	21.7	41	1.9 N
58050	ROSEBERRY STATE FOREST NURSERY	-28.4833	152.9167	Jan	1964	Jun	1968	4.5	99	2.0 N
61317	SANDY HOLLOW (MT DANGER VINEYARDS)	-32.3333	150.5667	Feb	1972	Aug	1975	3.3	83	2.0 N
61363	SCONE AIRPORT AWS	-32.0335	150.8264	Jan	1990	Apr	2006	16.3	96	7.9 Y
61069	SCONE (PHILIP STREET)	-32.0458	150.8708	Jan	1965	Dec	1991	26.9	98	2.3 N
61089	SCONE SCS	-32.0632	150.9272	Jan	1965	Apr	2006	41.3	86	1.6 N
67026	SEVEN HILLS (COLLINS ST)	-33.7704	150.9318	Jan	1965	Dec	1975	10.6	88	1.2 N
61275	SINGLETON ARMY	-32.6133	151.1717	Aug	1969	Sep	1990	16.1	66	2.0 N
61397	SINGLETON STP	-32.5918	151.1743	Nov	2002	Apr	2006	3.5	94	2.0 N
61371	SINGLETON WATER BOARD	-32.5687	151.1589	Aug	1991	Nov	2002	11.3	87	2.0 N

66201	SOUTH HEAD	-33.8361	151.2800	Feb 1999	Mar 2001	2.2	93	23.6	Y
59074	SOUTH SOLITARY ISLAND	-30.2000	153.2667	Oct 1968	Nov 1975	7.2	99	2.0	N
59030	SOUTH WEST ROCKS (SMOKY CAPE LIGHTHOUSE)	-30.9225	153.0870	Jan 1957	Apr 2006	49.3	99	3.8	N
71029	SPENCERS CREEK	-36.4333	148.3500	Jan 1962	Mar 1967	5.3	82	2.0	N
63077	SPRINGWOOD BOWLING CLUB	-33.6984	150.5694	Feb 2006	Apr 2006	0.3	76	2.3	N
66037	SYDNEY AIRPORT AMO	-33.9411	151.1725	Apr 1939	Apr 2006	67.1	99	7.7	Y
66203	SYDNEY HARBOUR (BOMBORA)	-33.8167	151.2722	Mar 1999	Oct 2000	1.5	53	21.6	Y
66202	SYDNEY HARBOUR (CANNAE POINT)	-33.8153	151.2842	Feb 1999	Mar 2001	2.2	90	23.2	Y
66200	SYDNEY HARBOUR (CLARKE ISLAND)	-33.8642	151.2394	Feb 1999	Mar 2001	2.2	93	23.7	Y
66198	SYDNEY HARBOUR (SHARK ISLAND)	-33.8614	151.2569	Feb 1999	Mar 2001	2.2	92	23.5	Y
66196	SYDNEY HARBOUR (WEDDING CAKE WEST)	-33.8414	151.2633	Sep 1997	Apr 2006	8.7	97	20.9	Y
66062	SYDNEY (OBSERVATORY HILL)	-33.8607	151.2050	Jan 1955	May 1992	37.4	99	7.9	Y
66195	SYDNEY OLYMPIC PARK (SYDNEY OLYMPIC PK A	-33.8521	151.0646	Dec 1995	Apr 2006	10.4	98	8.0	Y
58052	TABBIMOBILE STATE FOREST	-29.2000	153.2667	Jan 1965	Jan 1969	4.0	98	1.0	N
57095	TABULAM (MUIRNE)	-28.7551	152.4507	Aug 1970	Apr 2006	35.8	99	1.3	N
55054	TAMWORTH AIRPORT	-31.0867	150.8467	Jan 1957	Dec 1992	36.0	95	4.9	N
55325	TAMWORTH AIRPORT AWS	-31.0743	150.8363	Jan 1992	Apr 2006	14.3	95	8.2	Y
70313	TARAGO (WOODLAWN MINES)	-35.0667	149.5833	Jan 1984	Jun 1988	4.4	84	1.2	N
70080	TARALGA POST OFFICE	-34.4048	149.8197	Jan 1957	Apr 2006	49.0	91	1.5	N
60141	TAREE AIRPORT AWS	-31.8896	152.5121	Jul 1997	Apr 2006	8.8	98	8.0	Y
60030	TAREE (RADIO STATION 2RE)	-31.8986	152.4834	Jan 1965	Mar 2005	40.3	95	3.2	N
73151	TEMORA AIRPORT	-34.4292	147.5111	Feb 2005	Apr 2006	1.3	100	8.0	Y
73038	TEMORA RESEARCH STATION	-34.4061	147.5248	Jan 1965	Jan 2005	40.0	96	1.0	N
56032	TENTERFIELD (FEDERATION PARK)	-29.0479	152.0172	Jan 1965	Apr 2006	41.1	96	2.9	N

66059	TERREY HILLS AWS	-33.6908	151.2253	Sep 2004	Apr 2006	1.7	94	8.1	Y
71032	THREDBO AWS	-36.4917	148.2859	Nov 1966	Apr 2006	29.9	69	3.8	Y
71041	THREDBO VILLAGE	-36.5031	148.3040	Nov 1969	Apr 2006	33.5	87	2.0	N
46126	TIBOOBURRA AIRPORT	-29.4448	142.0567	Sep 1997	Apr 2006	8.7	94	8.8	Y
46037	TIBOOBURRA POST OFFICE	-29.4345	142.0098	Jan 1910	Apr 2006	92.0	92	2.1	N
70310	TIDBINBILLA NATURE RESERVE	-35.4408	148.9422	Apr 1982	Apr 2006	24.1	92	1.6	N
74106	TOCUMWAL AIRPORT	-35.8082	145.5954	Dec 1970	Apr 2006	35.4	96	2.0	N
51048	TRANGIE POST OFFICE	-32.0322	147.9826	Jan 1965	Dec 1975	5.6	40	2.0	N
51049	TRANGIE RESEARCH STATION AWS	-31.9861	147.9489	Dec 1968	Apr 2006	37.3	84	3.1	Y
70339	TUGGERANONG (ISABELLA PLAINS) AWS	-35.4186	149.0953	May 1996	Apr 2006	10.0	97	7.9	Y
50037	TULLAMORE (OLD POST OFFICE)	-32.6310	147.5659	Mar 1970	Jul 1988	18.3	95	2.0	N
72043	TUMBARUMBA POST OFFICE	-35.7781	148.0121	Apr 1965	Apr 2006	40.9	79	2.0	N
72046	TUMUT PLAINS (HOMESDALE)	-35.3333	148.2667	Jun 1973	Dec 1975	2.4	89	2.0	N
58057	TYALGUM (COODGEE STREET)	-28.3600	153.2078	Aug 1970	Aug 1992	22.1	98	1.9	N
69031	ULLADULLA	-35.3667	150.4833	Aug 1968	May 1970	1.8	87	2.0	N
69138	ULLADULLA AWS	-35.3635	150.4827	Aug 1990	Apr 2006	15.8	97	7.9	Y
47039	UMBERUMBERKA RESERVOIR	-31.8153	141.2090	Jan 1965	Dec 1969	4.8	91	1.0	N
56034	URALLA (DUMARESQ ST)	-30.6437	151.4906	Jan 1965	Jan 1967	2.1	68	1.0	N
74110	URANA POST OFFICE	-35.3305	146.2652	Jan 1965	Dec 1975	8.6	62	2.0	N
57021	URBENVILLE STATE FOREST	-28.4667	152.5500	Jan 1957	Sep 1968	11.7	76	2.0	N
70260	URIARRA FOREST 2	-35.3000	148.9167	Jul 1971	May 1973	1.6	76	1.2	N
66169	VILLAWOOD ARCHIVES	-33.8333	151.0000	Nov 1975	Jun 1977	1.7	81	2.0	N
73127	WAGGA WAGGA AGRICULTURAL INSTITUTE	-35.0517	147.3493	Mar 1934	Oct 1975	26.3	58	1.0	N
72150	WAGGA WAGGA AMO	-35.1583	147.4573	Aug 1941	Apr 2006	64.8	99	7.7	Y

72151	WAGGA WAGGA (KOORINGAL)	-35.1333	147.3667	May	1871	Dec	1950	77.8	87	1.5 N
74114	WAGGA WAGGA RESEARCH CENTRE	-35.1311	147.3091	Mar	1948	Jul	2003	54.8	90	1.0 N
56035	WALCHA POST OFFICE	-30.9853	151.5942	Jan	1965	Dec	1975	10.8	85	1.7 N
52088	WALGETT AIRPORT AWS	-30.0372	148.1223	Jun	1993	Apr	2006	12.9	95	6.7 Y
52026	WALGETT COUNCIL DEPOT	-30.0236	148.1218	Aug	1878	Jul	1993	112.9	92	1.8 N
54036	WALLANGRA (WALLANGRA STATION)	-29.2443	150.8922	Jan	1965	Oct	1969	4.4	84	1.0 N
48079	WANAARING POST OFFICE	-29.7029	144.1482	Oct	1991	Apr	2006	14.3	88	2.0 N
54029	WARIALDA POST OFFICE	-29.5416	150.5754	Jan	1965	Dec	1975	8.8	64	1.5 N
51124	WARREN (AUSCOTT)	-31.7833	147.7667	Dec	1968	May	1982	12.5	66	1.3 N
68161	WATTAMOLLA	-34.7333	150.6167	Oct	1970	Sep	1975	4.8	82	2.0 N
60034	WAUCHOPE STATE FOREST	-31.4667	152.7333	Jan	1965	Dec	1969	4.9	65	2.0 N
53087	WEE WAA (NAMCOTT)	-30.2333	149.4333	Aug	1969	Dec	1969	0.4	68	2.0 N
65034	WELLINGTON (AGROWPLOW)	-32.5635	148.9503	Jan	1965	Apr	2006	40.7	92	2.0 N
65035	WELLINGTON RESEARCH CENTRE	-32.5059	148.9708	Jan	1965	Feb	2005	39.8	97	1.0 N
63227	WENTWORTH FALLS COUNTRY CLUB	-33.6998	150.3678	May	1967	Jul	1973	5.4	85	2.0 N
47053	WENTWORTH POST OFFICE	-34.1065	141.9189	Jan	1957	Sep	1967	10.7	95	2.0 N
67089	WEST PENNANT HILLS (CUMBERLAND STATE FOR	-33.7459	151.0402	Jan	1964	Feb	1967	3.2	51	2.0 N
50103	WEST WYALONG AIRPORT	-33.9380	147.1901	Jan	1966	Mar	1986	20.3	98	1.0 N
50017	WEST WYALONG AIRPORT AWS	-33.9382	147.1962	Apr	1999	Apr	2006	7.1	98	8.0 Y
58060	WHIAN WHIAN (RUMMERY PARK)	-28.5988	153.3783	Jun	1967	Jul	1968	0.3	21	1.0 N
46129	WHITE CLIFFS AWS	-30.8517	143.0742	Jul	2005	Apr	2006	0.8	95	8.0 Y
46042	WHITE CLIFFS POST OFFICE	-30.8506	143.0897	Jan	1962	Apr	2006	42.8	93	2.8 N
46012	WILCANNIA AERODROME AWS	-31.5194	143.3850	Jan	2000	Apr	2006	6.3	98	8.0 Y
46043	WILCANNIA (REID ST)	-31.5631	143.3747	Jan	1957	Apr	2006	49.0	95	2.6 N

61379	WILLIAMTOWN COMPARISON AWS	-32.8081	151.8419	Jul 1995	Aug 1999	4.2	92	7.7	Y
61078	WILLIAMTOWN RAAF	-32.7932	151.8359	Sep 1942	Apr 2006	58.8	91	7.2	Y
68188	WOLLONGONG UNIVERSITY	-34.4030	150.8795	Nov 1970	Apr 2006	34.9	97	2.0	N
69106	WOODBURN STATE FOREST	-35.4000	150.4333	May 1967	Apr 1969	0.5	24	1.0	N
55136	WOOLBROOK (DANGLEMAH ROAD)	-30.9672	151.3451	Jan 1970	Apr 2006	36.3	99	2.0	N
59051	WOOLGOOLGA STATE FOREST	-30.1167	153.1833	Jan 1965	Feb 1969	3.8	49	2.0	N
73054	WYALONG POST OFFICE	-33.9262	147.2418	Jan 1965	Apr 2006	40.3	93	2.4	N
58012	YAMBA PILOT STATION	-29.4333	153.3633	Jan 1944	Apr 2006	50.3	80	3.1	N
74037	YANCO AGRICULTURAL INSTITUTE	-34.6223	146.4328	Aug 1999	Apr 2006	6.8	97	8.0	Y
60085	YARRAS (MOUNT SEAVIEW)	-31.3865	152.2482	Jan 1969	Apr 2006	37.3	99	2.0	N
70091	YASS (LINTON HOSTEL)	-34.8305	148.9117	Dec 1965	Apr 2006	40.2	94	2.0	N
75079	YENDA (HENRY STREET)	-34.2502	146.1897	Jan 1965	Oct 1985	20.3	88	1.8	N
73138	YOUNG AIRPORT	-34.2494	148.2476	Aug 1989	Apr 2006	16.8	96	7.8	Y
73056	YOUNG POST OFFICE	-34.3167	148.2967	Jan 1965	Oct 1991	26.8	74	2.0	N