

**Table 2.19(b)** Annual and seasonal average percentage frequencies of hourly wind speed by wind direction: Birmingham (1982–2011)

Direction / deg.	Percentage frequency for stated range of wind speed / m·s <sup>-1</sup>																
	0–2	2–4	4–6	6–8	8–10	10–12	12–14	14–16	16–18	18–20	20–22	22–24	24–26	26–28	28–30	30–32	All speeds
<b>Annual average</b>																	
Calm/variable	1.77	0.02															1.78
020 to 040	1.57	2.62	1.62	0.54	0.10	0.02	0.00										6.47
050 to 070	1.28	2.34	1.52	0.55	0.11	0.02	0.00										5.82
080 to 100	0.85	1.56	0.74	0.28	0.07	0.01											3.50
110 to 130	1.03	1.52	0.86	0.30	0.05	0.01	0.00										3.76
140 to 160	1.72	3.18	1.54	0.47	0.09	0.01											7.01
170 to 190	2.48	4.81	3.38	1.56	0.47	0.11	0.02	0.00									12.83
200 to 220	1.67	5.33	4.86	2.49	0.91	0.20	0.04	0.01	0.00								15.51
230 to 250	1.80	5.12	3.59	1.47	0.43	0.09	0.02	0.00									12.52
260 to 280	1.16	2.76	2.36	1.29	0.43	0.11	0.03	0.01									8.14
290 to 310	1.60	3.38	2.20	0.70	0.17	0.04	0.01	0.00									8.10
320 to 340	1.57	3.12	2.18	0.69	0.13	0.02	0.00										7.72
350 to 010	2.27	2.83	1.30	0.35	0.08	0.01											6.84
All directions	20.77	38.57	26.14	10.71	3.03	0.65	0.12	0.02	0.00								100.00
<b>Spring average</b>																	
Calm/variable	1.49	0.03															1.53
020 to 040	1.65	3.81	2.89	1.17	0.22	0.03	0.00										9.78
050 to 070	1.40	3.23	2.24	1.06	0.14	0.01											8.10
080 to 100	0.83	1.77	0.98	0.31	0.05	0.00											3.94
110 to 130	0.99	1.51	0.93	0.36	0.06	0.01											3.85
140 to 160	1.44	2.96	1.62	0.47	0.07	0.01											6.57
170 to 190	2.13	4.24	3.26	1.44	0.39	0.08	0.00										11.54
200 to 220	1.28	4.12	4.39	2.32	0.64	0.10	0.02	0.01	0.00								12.88
230 to 250	1.36	4.13	3.28	1.57	0.37	0.06	0.01	0.00									10.78
260 to 280	0.89	2.29	2.23	1.46	0.51	0.15	0.03	0.00									7.56
290 to 310	1.31	2.92	2.32	0.87	0.22	0.07	0.02	0.00									7.74
320 to 340	1.37	3.03	2.48	0.85	0.20	0.01	0.01										7.94
350 to 010	2.27	3.38	1.54	0.46	0.13	0.03											7.81
All directions	18.43	37.40	28.16	12.35	3.00	0.56	0.09	0.01	0.00								100.00
<b>Summer average</b>																	
Calm/variable	1.69	0.02															1.71
020 to 040	1.79	2.60	1.23	0.24	0.02												5.88
050 to 070	1.53	2.29	1.32	0.33	0.06	0.02											5.56
080 to 100	0.97	1.53	0.57	0.20	0.01	0.00											3.28
110 to 130	1.12	1.43	0.57	0.15	0.01	0.01											3.28
140 to 160	1.78	2.52	0.91	0.17	0.01												5.38
170 to 190	2.58	4.68	3.04	0.98	0.12	0.00	0.00										11.41
200 to 220	2.22	6.20	4.63	1.44	0.25	0.02	0.00										14.77
230 to 250	2.33	6.14	3.50	0.89	0.11	0.01											12.98
260 to 280	1.48	3.53	2.72	0.86	0.06												8.65
290 to 310	2.00	4.95	2.75	0.53	0.05	0.00											10.28
320 to 340	1.99	4.56	2.75	0.57	0.03	0.00											9.90
350 to 010	2.50	2.99	1.18	0.20	0.06												6.93
All directions	23.96	43.45	25.17	6.56	0.78	0.07	0.01										100.00
<b>Autumn average</b>																	
Calm/variable	2.28	0.01															2.28
020 to 040	1.45	2.04	1.13	0.36	0.05	0.02											5.05
050 to 070	1.05	1.86	0.99	0.21	0.04												4.15
080 to 100	0.89	1.41	0.67	0.15	0.04	0.00											3.17
110 to 130	1.06	1.58	1.10	0.38	0.05	0.01											4.18
140 to 160	1.98	4.15	2.01	0.57	0.08	0.01											8.79
170 to 190	3.00	5.73	3.78	1.83	0.59	0.14	0.02	0.00									15.10
200 to 220	1.87	6.00	4.94	2.50	0.81	0.17	0.02	0.00									16.31
230 to 250	2.12	5.51	3.38	1.31	0.32	0.06	0.00										12.71
260 to 280	1.36	2.94	2.12	1.04	0.29	0.04	0.01										7.79
290 to 310	1.72	3.17	1.88	0.48	0.07	0.01											7.33
320 to 340	1.48	2.72	1.87	0.58	0.07	0.01											6.74
350 to 010	2.23	2.43	1.31	0.41	0.04	0.00											6.41
All directions	22.48	39.55	25.18	9.83	2.45	0.46	0.05	0.01									100.00

Table continues

