

WOKINGHAM METEOROLOGICAL DATA

Wokingham Climatological Station, Emmbrook, Berkshire.

Lat/Long 51°25'N 00°51'W NGR (SU)798701 Altitude 46m ASL.

Monthly Means and Totals

FEBRUARY 2022

Temperature (°C)		Anomaly	Rank in the past 141 years
Mean maximum	10.9	+2.1	7 th highest
Mean minimum	3.8	+1.9	12 th highest
Daily mean	7.3	+1.9	8 th highest
Highest maximum	14.3	on 16 th	Lowest maximum 7.8 on 24 th
Highest minimum	7.7	on 18 th	Lowest minimum -2.5 on 26 th
Mean grass minimum	1.1	+2.4	Lowest grass minimum -5.6 on 26 th
Mean earth @30 cm	6.8	+1.2	Earth @100 cm 7.4 +0.3
Frost duration (hrs)	12.6		Rain duration (hrs) 59.9
Rainfall total (mm)	57.6	122 %	42 nd highest
Highest daily fall	17.4	on 13 th	Highest rate mm/hr 58 on 15 th
Number of: Dry days (<0.2mm)	12	Wet days (>0.9mm)	9
Sunshine total (hrs)	101.6	Daily mean	3.63
N° days with: Air frost	2	Ground frost	12
Thunder	0	Hail ≥5mm	0
Pressure MSL: Mean @09 GMT, mbar	1016.0	Highest	1034.4
Relative humidity: Mean (%)	78.6	Lowest	38
Overall mean wind speed (mph)	10.6	Windiest day	19.5
Wind direction (days)	N 0 NE 0 E 0 SE 2 S 4 SW 16 W 6 NW 0		
Least windy day (mph)	4.4	on 11 th	Calm; less than 0.5 mph (minutes) 77

Anomaly = departure from 1991 to 2020 average (degrees C, percent and mbar).

Notes: **Very Mild and Wet but with Above Average Sunshine. Damaging winds on the 18th.**

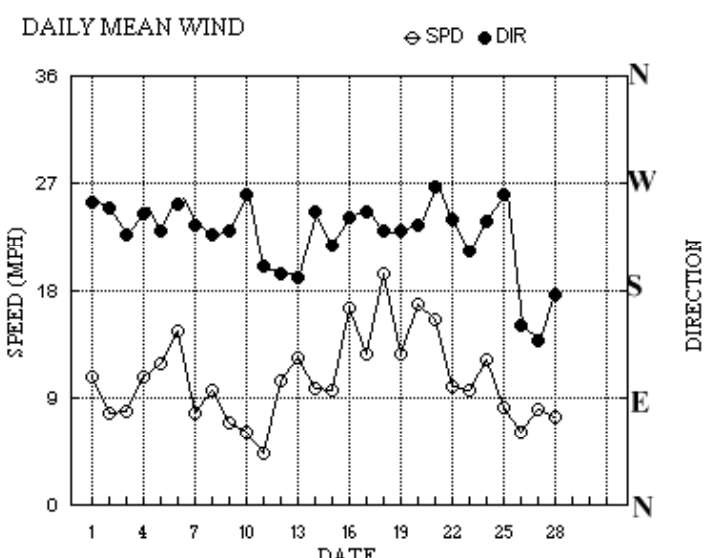
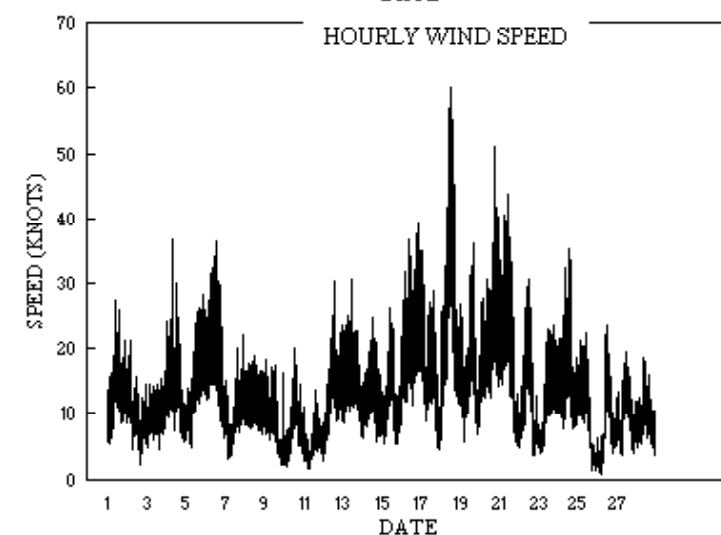
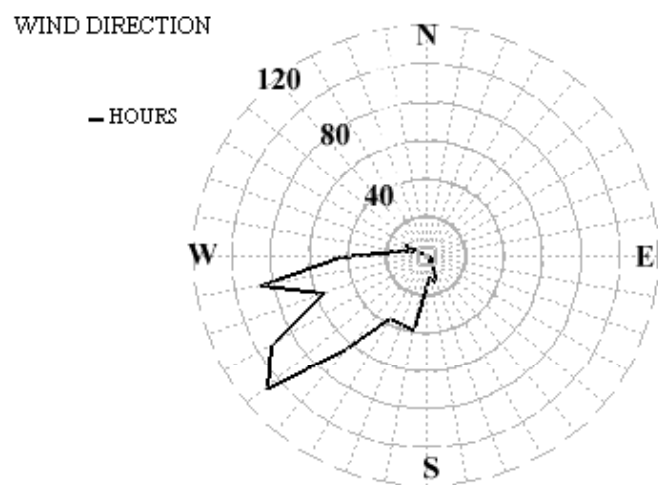
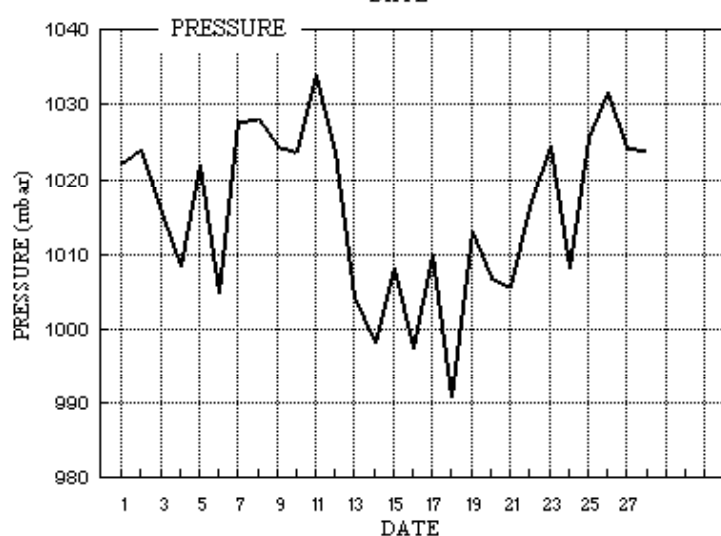
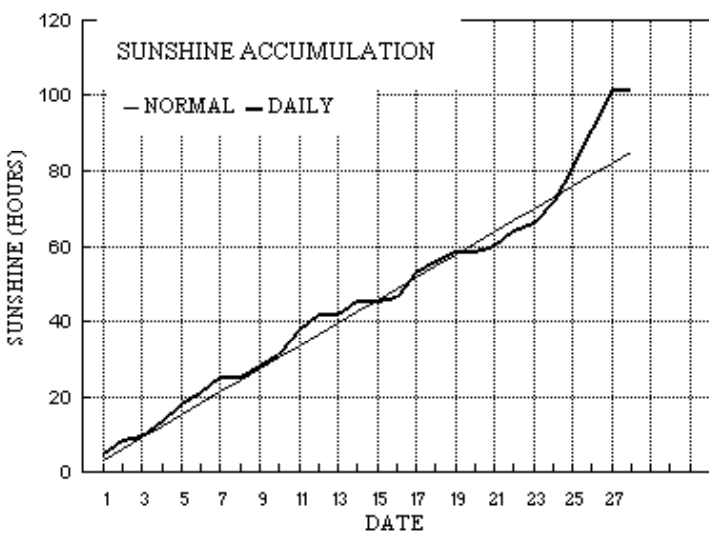
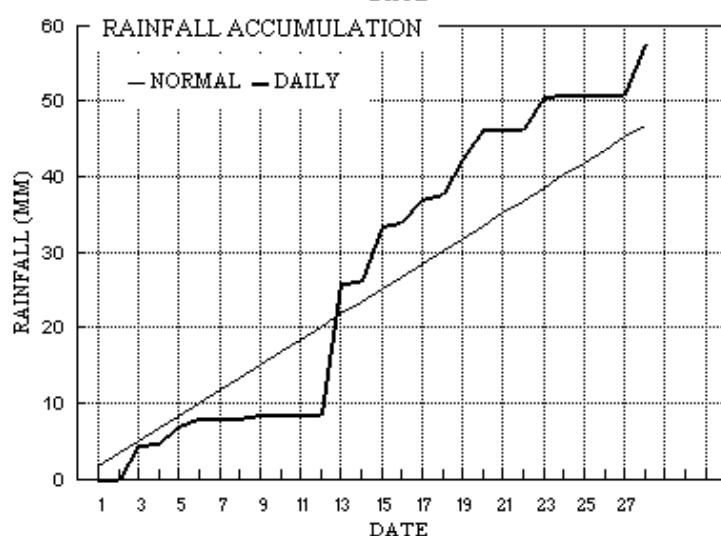
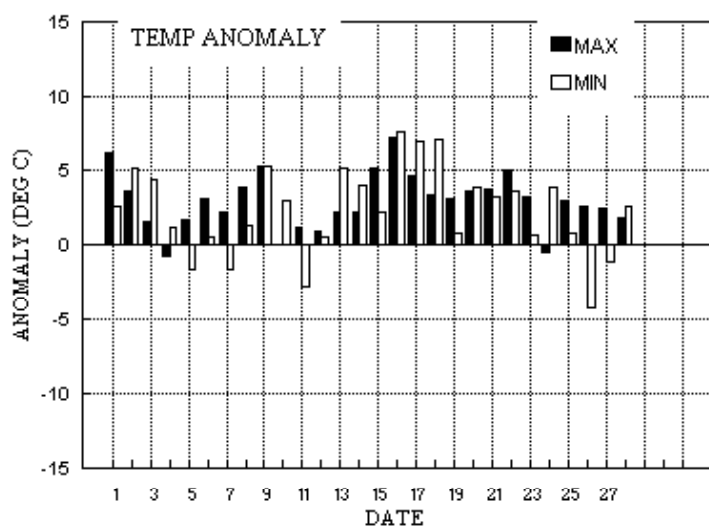
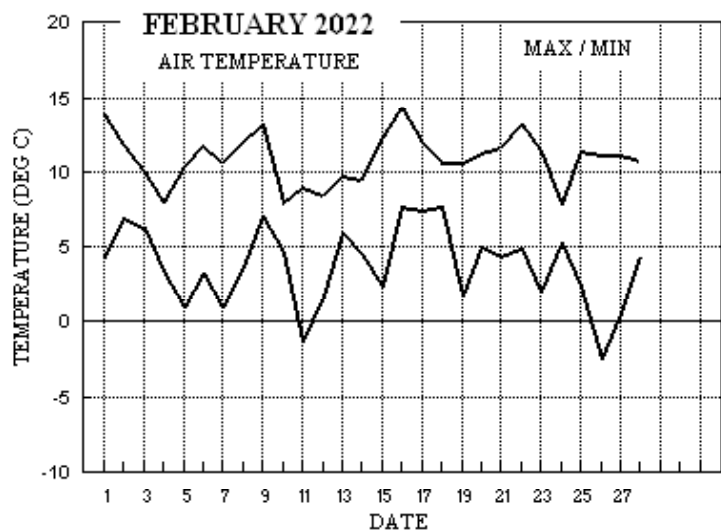
Temperature: This has been a very mild February, mildest since 2002. The mean temperature is 8th highest in the past 141 years, but is 1.0° below the record set in 1990. The mean maximum, however, was exceeded as recently as 2019, and the mean minimum was equaled in 2020 and exceeded in 2014. The highest max is 1.2° above the median and the lowest max is 5.4° above its median and 3rd highest in 110 years. The highest min is 0.3° below the median while the lowest min is 2.5° above its median and is 9th highest in 119 years. The mean grass min is 2.4° above average and the lowest is 4.8° above average. Mean earth temperature at 30 cm depth is 1.3° above the 43 year average, but at 1 m depth is only slightly above average. There were only 2 days with air frost, lowest since 2014, though in the past 47 years both 2014 and 1990 had none. The number of ground frosts is 5 days less than average and lowest since 2007. The duration of air frost is 73.5 hours below average. Anomalies for daily max showed only 3 days below normal, the greatest anomaly being -0.7° on the 4th, but anomalies of over +5° occurred on the 1st, 9th, 15th, 16th and 22nd, with an extreme value of +7.2° on the 16th. Daily min had only 5 days with a negative anomaly, the greatest being -4.2° on the 26th, and anomalies over +5° occurred on the 2nd, 9th, 13th, and 16th to 18th, with an extreme value of +7.6° on the 16th. **Rainfall:** The total this month puts it into the wet category, but by only 0.5 mm. In recent years 2020 and 2014 had wetter Februaries, and in this millennium 8 have been wetter than this year's. The number of dry days is 3 fewer than average, and there were no dry spells, although only 0.7 mm was recorded in the 6 days to the 12th. The amount on the month's wettest day ranks 17th highest in the past 119 years, and is 6.9 mm above the median value. Daily accumulation compared with normal showed a deficit of 12 mm on the 12th becoming a surplus of 4 mm on the 13th, increasing to 14 mm by the 20th, decreasing to 11 mm by the 28th. Snow was absent this month and there was no thunder, but ice pellets fell on the 18th, and snow pellets on the 24th. Rainfall rate reached the violent category (50 mm/hr or more) on the 15th and 24th. **Sunshine:** This has been a very sunny February, the mean being 5th highest this millennium. 8 days this month has at least 50 % of the maximum, including the 4 days to the 27th, with over 90 % on the 26th and 27th. It is fair to say that without those 4 days it would have been a barely average month sun wise. Daily accumulation was close to normal up to the 24th, then building a 19 hours surplus by the 27th. Overall there were 11 days with <3 hours, 5 with =>6 hours and 3 with =>9 hours. **Wind:** This February contained a notable windstorm on the 18th, when gusts of 69 mph were recorded here in Emmbrook. This is the 2nd highest February gust in the past 35 years after 70 mph in 1990. Higher gusts, though, have been recorded in January in that period, 81 mph in 1990, 76 mph in 1993 and 74 mph in 2007. The mean speed this month is 2.4 mph above average, and the highest hourly mean speed of 32.2 mph on the 18th is 9.9 mph above average and is a new February record. Daily mean winds were moderate or fresh to the 15th, but strong on the 6th and light on the 11th, then strong or above from 15th to 21st, increasing to near gale on the 18th and to very strong on the 20th, becoming moderate or fresh after the 21st. Daily mean directions were between S and W except between E and S from 26th to 28th.

Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 28 th			
+2.7°	+2.0°	51%	104%	+3.3°	+3.5°	226%	90%	+2.7°	+1.1°	84%	176%

B J Burton FRMetS. Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for February 2022



Month: FEBRUARY 2022

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf Sl	Th Ha	Ic Fg	Vec ddd	mean ff	sp	Max gust ddd	gg	HHhh ddd	High hr ff	Rain HH	hrs					
1	13.8	4.3	tr	-0.3	5.7	6.8	5.1	0.0	1022.2	0	1	0	0	0	0	0	254	9.2	9.3	264	28	1011	257	13	13	0.0	
2	11.7	6.9	tr	1.9	6.3	6.9	3.7	0.0	1023.9	0	0	0	0	0	0	0	249	6.6	6.8	256	21	0312	257	11	03	0.0	
3	10.0	6.3	4.4	3.8	6.7	7.0	0.9	0.0	1015.5	0	0	0	0	0	0	0	227	6.7	6.9	223	17	2257	217	9	23	1.4	
4	8.0	3.4	0.3	3.3	7.0	7.1	4.0	0.0	1008.3	0	0	0	0	0	0	0	244	8.0	9.3	242	39	0759	266	13	13	0.9	
5	10.4	0.9	2.3	-2.7	6.5	7.2	4.7	0.0	1022.0	0	1	0	0	0	0	0	230	10.3	10.3	233	29	2027	230	15	21	4.3	
6	11.8	3.2	0.9	6.5	6.5	7.2	3.2	0.0	1004.9	0	0	0	0	0	0	0	252	11.9	12.7	252	37	1344	263	18	13	0.8	
7	10.6	0.9	tr	-3.5	6.6	7.3	3.8	0.0	1027.9	0	1	0	0	0	0	0	235	6.6	6.8	246	22	2136	220	10	15	0.2	
8	12.0	3.6	0.0	7.7	6.7	7.3	0.0	0.0	1028.0	0	0	0	0	0	0	0	227	8.3	8.4	238	19	1138	232	9	06	0.0	
9	13.2	7.1	0.7	3.5	7.3	7.3	2.9	0.0	1024.6	0	0	0	0	0	0	0	231	5.4	6.0	230	19	0335	224	9	00	2.2	
10	7.9	4.6	0.0	1.9	7.6	7.5	3.3	0.0	1023.6	0	0	0	0	0	0	0	260	5.1	5.3	262	20	1444	266	10	14	0.0	
11	8.9	-1.3	0.0	-5.6	7.1	7.6	6.4	4.9	1034.0	1	1	0	0	0	0	0	200	3.7	3.8	245	14	1424	189	6	18	0.0	
12	8.5	1.7	tr	-1.9	6.5	7.6	4.0	0.0	1023.6	0	1	0	0	0	0	0	194	9.0	9.1	218	31	1409	197	14	12	0.1	
13	9.7	5.9	17.4	4.9	6.5	7.5	0.0	0.0	1004.3	0	0	0	0	0	0	0	190	10.6	10.7	189	31	1157	181	13	11	12.5	
14	9.4	4.5	0.2	2.2	7.0	7.4	3.6	0.0	998.3	0	0	0	0	0	0	0	246	8.2	8.5	239	25	1400	252	11	12	0.7	
15	12.2	2.3	7.4	-1.0	6.9	7.5	0.0	0.0	1008.2	0	1	0	0	0	0	0	218	8.1	8.3	223	26	1105	221	13	12	7.1	
16	14.3	7.7	0.4	6.0	7.0	7.5	1.2	0.0	997.5	0	0	0	0	0	0	0	241	14.0	14.4	260	40	2029	249	18	21	1.4	
17	11.9	7.4	3.0	4.3	7.9	7.5	6.5	0.0	1010.0	0	0	0	0	0	0	0	246	10.7	11.1	250	35	0120	253	17	01	3.8	
18	10.6	7.7	0.7	6.5	7.8	7.6	3.1	0.0	990.7	0	0	0	0	0	1	0	230	15.3	16.9	253	60	1312	237	28	12	0.8	
19	10.6	1.7	4.6	-2.0	7.5	7.8	2.5	0.0	1013.1	0	1	0	0	0	0	0	231	10.5	11.0	250	36	1603	252	16	16	2.9	
20	11.3	5.0	4.0	3.3	7.0	7.8	0.0	0.0	1006.9	0	0	0	0	0	0	0	235	14.1	14.6	259	51	1847	249	21	18	5.2	
21	11.6	4.4	tr	2.3	7.2	7.8	1.3	0.0	1005.7	0	0	0	0	0	0	0	267	12.7	13.5	265	44	1058	255	20	06	0.1	
22	13.1	4.9	tr	0.1	7.0	7.8	3.9	0.0	1016.2	0	0	0	0	0	0	0	240	7.8	8.6	252	31	1307	240	14	11	0.1	
23	11.4	2.0	4.3	-3.3	7.0	7.7	2.4	0.0	1024.4	0	1	0	0	0	0	0	213	8.4	8.4	220	24	1947	212	11	18	1.6	
24	7.8	5.2	0.4	4.7	6.9	7.7	5.5	0.0	1008.1	0	0	0	0	0	1	0	239	10.0	10.6	254	36	1305	262	15	15	0.2	
25	11.4	2.3	0.0	-0.9	6.6	7.7	9.0	0.2	1025.6	0	1	0	0	0	0	0	261	6.1	7.1	301	23	1052	254	11	04	0.0	
26	11.1	-2.5	0.0	-5.6	6.3	7.6	10.3	7.5	1031.6	1	1	0	0	0	0	0	151	4.6	5.4	166	24	1222	176	12	12	0.0	
27	11.1	0.5	0.0	-4.5	5.8	7.5	10.3	0.0	1024.2	0	1	0	0	0	0	0	138	6.5	7.0	162	20	1107	153	11	11	0.0	
28	10.7	4.4	6.6	-0.3	5.8	7.3	0.0	0.0	1024.1	0	1	0	0	0	0	0	176	6.2	6.4	186	19	0953	180	9	10	13.6	
Total			57.6				101.6	12.6																			59.9
Mean	10.9	3.8		1.1	6.8	7.4	3.63	0.5	1016.0								231	7.8	9.2								
Anom	+2.1	+1.9	122%	+2.4	+1.2	+0.3	120%																				
Daily mean		7.3																									
Anom		+1.9																									

Number of days with:
 Air frost = 2 Ground frost = 12 Nil sun = 5
 Snow falling = 0 Snow lying = 0 Thunder = 0
 Hail=>5mm = 0 Hail<5mm or ice = 2 Fog at 09GMT = 0

Abbreviations.
 Max/min = highest and lowest air temperature at 1.2m in 24 hour period ending at 09 GMT
 Rain = total rainfall and melted snowfall in 24 hour period ending at 09 GMT, millimetres. (Tr = trace, <.05mm).
 Grass min = Lowest overnight temperature at grass tip level.
 Sun = hours of bright sunshine, measured electronically. Frost = Number of hours with air temp below 0 deg C.
 pp09 = Air pressure corrected to mean sea level at 0900 GMT, millibars.
 Af = Air frost. Gf = Ground frost. Sf = Snow falling. Sl = Snow lying at 09 GMT.
 Th = Thunder. Ha = Hail =>5mm. Ic = Hail <5mm or ice. Fg = Fog at 09 GMT.
 Vec mean = 24 hour mean wind vector, ddd = direction in degrees from true north, ff = speed in knots.
 Sp = 24 hour mean wind speed in knots.
 Max gust = Highest gust in 24 hours, gg = speed in knots, HHhh = Time, hours and minutes, GMT.
 High hr = Highest hourly mean wind, HH = hour commencing. Rain Hrs = Duration of rain, 24 hours to 09 GMT. Excludes snow/hail.
 30cm and 100 cm are earth temperatures at those depths, read at 09 GMT.
 Maximum daily rain rate in mm/hr
 All temperatures in degrees Celsius.
 Anomaly - Departure from the 1991 to 2020 climatological average

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for FEBRUARY 2022

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	NChs	hshs	NChs	Date	Remarks
1	86	6	25	09	19	13.5	8.1	70	6.7	1021.1	6	010	02	1	1	4	8	5	0	1	83826	83080	1	1Sc35 COTRA Cu hum	
2	85	6	27	04	09	11.4	6.7	73	6.0	1022.6	2	015	02	2	2	1	5	5	2	2	81625	85465	2	/Ci70 /Ci80 COTRA	
3	88	7	24	05	14	9.8	5.2	73	5.5	1013.4	7	010	02	2	2	7	8	6	/ /	81825	87630	3	Cu hum		
4	84	3	26	12	24	7.3	0.5	62	3.9	1012.9	1	013	02	1	1	3	8	6	0	0	82835		4	1Sc45 Cu med	
5	75	7	24	14	24	9.9	4.5	69	5.2	1018.0	7	023	25	8	1	1	8	5	4	8	82828	87275	5	1Sc45 1Ac65 Cu med	
6	70	6	26	10	34	8.3	5.9	85	5.8	1005.8	6	006	25	8	1	6	8	5	6	0	83828	83650	6	2Ac59 Cu med jpNW&SW vv50k ex p	
7	67	8	22	09	16	9.1	4.9	75	5.3	1027.5	8	009	03	6	2	8	5	5	/ /	86620	88625	7			
8	86	7	23	09	16	11.8	6.7	71	6.0	1026.7	7	009	02	2	2	7	5	5	/ /	81625	87628	8			
9	80	8	24	06	13	11.6	7.3	75	6.3	1023.2	6	012	50	5	2	8	5	5	/ /	86620	88625	9	vv50k ex p		
10	82	5	26	09	20	7.8	-0.2	57	3.7	1023.4	6	005	01	2	2	1	8	6	0	8	81833	84075	10	1Sc40 1Cs70 Cu hum Cs edge SE	
11	84	7	21	04	14	7.7	-0.5	56	3.6	1032.7	8	015	03	1	1	2	4	6	4	6	81835	87272	11	2Sc38 1Ac69 COTRA Cu hum	
12	75	6	20	12	31	7.4	-0.8	56	3.6	1018.4	7	030	03	2	2	3	0	9	4	1	82362	83368	85078	12	COTRA
13	50	8	18	11	23	8.0	6.9	93	6.3	995.3	7	047	63	6	6	7	7	3	2	/	83707	87710	88550	13	
14	88	7	25	09	25	8.7	4.7	76	5.4	1001.3	3	013	21	6	2	7	8	5	1	/	83822	86635	87465	14	Cu med
15	25	8	27	10	23	8.4	7.2	92	6.3	1004.2	6	014	59	6	5	7	5	3	2	/	85708	87622	88530	15	CF 1453 Rain rate 58 mm/hr
16	63	7	23	14	29	13.9	12.1	89	8.9	995.2	8	025	21	6	5	7	5	3	/ /	82709	87613	16			
17	83	3	24	13	26	10.5	4.4	66	5.2	1011.2	8	006	25	8	1	3	2	6	7	0	83830		17	1Ac60 Cu med	
18	82	7	26	23	55	8.1	-0.9	53	3.6	996.6	3	099	02	8	2	7	8	6	/ /	85836	83645	18	Cu hum		
19	75	7	24	16	32	9.7	6.6	81	6.1	1005.1	7	032	21	6	2	7	8	5	/ 1	83825	85635	87072	19	Cu med	
20	57	8	23	13	29	11.2	9.6	90	7.5	1000.0	8	050	58	6	5	7	5	3	2	/	81709	87613	88525	20	
21	75	7	30	15	30	11.6	2.4	53	4.5	1013.9	2	046	25	8	2	7	8	6	/ /	84842	85650	21	Cu hum		
22	83	2	28	12	24	12.7	3.4	53	4.8	1016.6	3	016	01	6	1	2	8	6	0	0	81840		22	2Sc45 Cu hum	
23	80	7	22	12	19	10.7	3.3	60	4.8	1018.7	7	031	02	2	2	7	8	5	/ /	82828	87645	23	Absent vv&cld est		
24	84	2	26	15	29	7.6	-3.6	45	2.9	1011.8	1	023	01	8	1	2	2	6	0	3	82840		24	1Ci68 Cu med Cb tops N&E	
25	81	2	29	06	18	9.8	-0.7	48	3.5	1028.9	2	010	02	0	0	2	4	6	0	5	81845		25	2Sc50 1Cs75 Cu hum Cs NW	
26	82	7	17	08	19	10.4	-1.0	45	3.5	1028.1	7	018	02	1	1	0	0	9	0	1	87079		26	COTRA	
27	82	0	16	08	17	10.5	-0.9	45	3.5	1022.8	6	011	02	0	0	0	0	9	0	0			27		
28	80	7	18	08	14	10.7	6.5	75	5.9	1023.2	7	012	21	6	2	3	5	5	7	/	83620	86357	87361	28	

Mean vis = 35.9 km
 Mean cloud = 5.9 74%
 Mean wind speed = 10.6 kn
 Mean gust = 23 kn
 Mean TT = 9.9 °C
 Mean TdTd = 3.9 °C
 Mean RH = 67.4 %
 Mean r = 5.2 g/kg
 Mean PPP = 1015.0 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)
 N = Total cloud amount, oktas
 dd = Direction from which wind is blowing, tens of degrees true
 ff = 10 minute mean wind speed, knots
 gg = Highest gust in past hour, knots
 TT = Air temperature at 1.2 m, deg Celsius
 TdTd = Dew point temperature at 1.2 m, deg Celsius
 RH = Relative humidity at 1.2 m
 r = Humidity mixing ratio at 1.2 m, g/kg
 PPP = Air pressure reduced to sea level, mbar
 a = Characteristic of pressure tendency (Code FM12-0200)
 ppp = 3 hr pressure tendency, tenths of mbar
 ww = Present weather code (Code FM12-4677)
 W1, W2 = Past weather code (Code FM12-4561)-
 covers past 3 hours.
 Nh = Amount of low cloud present, oktas
 Cl = Type of low cloud (Code Fm12-0513)
 h = Height of low cloud (Code FM12-1600)
 Cm = Type of medium cloud (Code FM12-0515)
 Ch = Type of high cloud (Code FM12-0509)
 8 groups. 8 = indicator for cloud detail
 N = Amount of cloud, oktas
 C = Type of cloud (FM12-0500)
 hshs= Height of cloud (FM12-1677)
 Remarks : COTRA = persistent condensation trails present

Wokingham	Hour	01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb	07-Feb	08-Feb	09-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb
Sunshine	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hourly analysis	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2022	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
	7	0.00	0.07	0.00	0.00	0.00	0.00	0.21	0.00	0.30	0.00	0.11	0.09	0.00	1.00	0.00
	8	0.00	1.00	0.22	0.00	0.43	0.04	1.00	0.00	0.64	0.00	0.14	0.00	0.00	0.58	0.00
	9	0.93	0.87	0.50	0.00	0.57	0.15	1.00	0.00	0.43	0.00	1.00	0.00	0.00	0.19	0.00
	10	1.00	0.00	0.20	0.01	0.87	0.19	1.00	0.00	0.01	0.17	1.00	0.42	0.00	0.10	0.00
	11	1.00	0.00	0.00	0.82	1.00	0.19	0.60	0.00	0.56	0.55	1.00	0.21	0.00	0.02	0.00
	12	1.00	0.00	0.00	0.72	0.95	0.98	0.00	0.00	0.96	0.00	0.94	0.93	0.00	0.03	0.00
	13	0.85	0.00	0.00	0.47	0.18	0.69	0.00	0.00	0.04	0.03	0.78	0.78	0.00	0.25	0.00
	14	0.26	0.46	0.00	0.79	0.13	0.26	0.00	0.00	0.00	0.65	0.70	1.00	0.00	0.07	0.00
	15	0.03	0.99	0.00	0.64	0.53	0.02	0.01	0.00	0.00	1.00	0.76	0.47	0.00	0.00	0.00
	16	0.06	0.31	0.00	0.53	0.00	0.65	0.00	0.00	0.00	0.86	0.00	0.08	0.00	0.00	0.00
	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot		5.13	3.69	0.91	4.00	4.65	3.17	3.82	0.00	2.94	3.26	6.43	3.99	0.00	3.56	0.00

Hour	16-Feb	17-Feb	18-Feb	19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	28-Feb	Mean
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
7	0.00	0.46	0.00	0.31	0.00	0.00	0.00	0.63	0.00	0.77	0.77	0.85	0.00	0.20
8	0.10	0.87	0.00	0.95	0.00	0.37	0.00	0.85	0.00	1.00	1.00	1.00	0.00	0.36
9	0.12	0.63	0.57	0.01	0.00	0.07	0.04	0.42	0.00	1.00	1.00	1.00	0.00	0.38
10	0.85	0.99	0.69	0.00	0.00	0.06	0.77	0.02	0.55	1.00	1.00	1.00	0.00	0.43
11	0.15	1.00	0.03	0.00	0.00	0.01	0.00	0.00	0.69	1.00	1.00	1.00	0.00	0.39
12	0.00	0.71	0.12	0.00	0.00	0.01	0.00	0.00	0.51	0.81	1.00	1.00	0.00	0.38
13	0.00	0.00	0.31	0.00	0.00	0.07	0.10	0.10	0.68	0.71	1.00	1.00	0.00	0.29
14	0.00	0.77	0.41	0.40	0.00	0.03	0.59	0.29	0.89	0.77	1.00	1.00	0.00	0.37
15	0.00	0.72	0.75	0.44	0.00	0.10	1.00	0.03	0.98	0.75	1.00	1.00	0.00	0.40
16	0.00	0.36	0.22	0.29	0.00	0.39	1.00	0.00	0.82	1.00	1.00	1.00	0.00	0.31
17	0.00	0.00	0.00	0.08	0.00	0.20	0.36	0.00	0.35	0.22	0.50	0.45	0.00	0.08
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	1.23	6.53	3.11	2.49	0.00	1.32	3.86	2.36	5.47	9.04	10.27	10.30	0.00	101.49

February 2022	T mn	Tx	Time	Tn	Time	RHmn	RH x	Time	RH n	Time	Tdmn	r mn	r x	Time	r n	Time	p mn	p x	Time	p n	Time	R tot
1	10.07	13.8	1417	6.4	109	80.2	91.5	2256	68.2	1434	6.8	6.1	6.8	1610	4.7	0	1022.65	1027.1	1	1020.9	1405	0.0
2	9.54	11.7	1550	6.9	807	82.1	94.0	706	71.0	1524	6.6	6.0	6.5	128	5.2	2221	1022.79	1024.8	1108	1020.1	2359	0.0
3	8.56	10.0	1324	6.3	823	81.3	90.5	856	72.2	1414	5.5	5.6	6.0	2050	5.2	611	1014.73	1020.2	3	1011.0	2359	0.0
4	6.44	9.6	403	2.8	2255	77.6	93.0	1005	55.8	1603	2.7	4.7	6.2	759	3.5	1759	1012.36	1020.6	2359	1005.1	755	4.4
5	6.28	10.4	1256	0.9	637	79.4	91.3	703	64.1	1336	2.9	4.7	5.9	2225	3.6	630	1018.88	1022.3	826	1012.2	2359	0.1
6	8.56	11.8	1331	4.7	2303	77.4	92.5	749	58.4	1324	4.7	5.4	6.7	755	3.8	2239	1008.92	1018.9	2357	1003.6	730	3.0
7	6.81	10.6	2132	0.9	647	80.4	95.0	2003	61.5	1252	3.6	4.9	6.9	2016	3.6	423	1026.07	1028.5	1148	1018.9	0	0.1
8	10.61	12.0	1235	9.2	2341	75.5	85.8	2358	69.0	1332	6.4	5.9	6.2	2155	5.5	801	1026.97	1028.0	837	1025.5	2243	0.0
9	9.51	13.2	1304	6.7	2357	86.3	97.0	2249	67.9	1306	7.3	6.3	6.8	1829	5.7	2357	1023.73	1025.8	7	1021.7	2359	0.7
10	5.54	7.9	1501	1.2	2258	75.2	94.0	0	54.7	1551	1.3	4.2	5.7	0	3.3	1913	1023.77	1028.1	2359	1021.4	250	0.0
11	3.47	8.9	1233	-1.3	515	78.9	96.2	545	51.2	1226	-0.1	3.7	4.3	1135	3.2	513	1031.96	1034.4	1041	1027.9	17	0.1
12	5.77	8.5	1337	1.7	13	76.4	91.3	301	53.2	1417	1.8	4.3	5.6	2354	3.3	1606	1021.20	1030.2	0	1013.2	2350	0.0
13	8.13	9.7	2012	6.8	805	89.3	95.7	2331	77.1	1138	6.5	6.1	7.1	1959	5.1	820	1000.50	1013.4	6	991.1	2315	15.2
14	6.87	9.4	1209	3.6	2358	82.4	95.6	136	68.7	1210	4.0	5.1	6.5	0	4.1	2320	1000.36	1010.6	2359	991.5	0	1.5
15	6.97	9.6	1436	2.3	307	90.0	94.9	1527	83.7	21	5.4	5.7	6.9	1430	4.0	354	1006.46	1011.4	302	999.6	2357	6.2
16	12.34	14.3	1115	8.8	2	85.0	95.6	116	69.3	2215	9.8	7.7	9.1	1446	5.6	2326	996.82	1000.6	2350	994.2	1735	1.0
17	9.32	11.9	1251	7.4	730	68.2	79.1	0	47.7	1248	3.7	5.0	5.9	11	4.0	1145	1008.79	1012.3	1126	1000.0	0	0.1
18	7.63	11.0	607	3.1	1805	74.1	95.5	341	43.9	1640	3.1	5.0	7.7	550	2.9	1640	997.94	1010.6	2358	985.0	1148	3.6
19	5.90	10.6	1537	1.7	538	79.8	92.7	1402	67.1	1559	2.6	4.7	6.4	1431	3.4	32	1010.53	1013.7	723	1004.3	1448	4.2
20	9.30	11.3	1612	4.7	2352	84.0	93.5	1248	59.3	2230	6.7	6.3	7.6	1819	3.3	2230	1004.14	1011.1	0	993.9	1756	4.0
21	7.76	11.6	1459	4.4	317	63.8	81.6	2348	48.0	1511	1.2	4.2	5.0	1312	3.4	16	1011.46	1022.5	2244	1002.9	641	0.0
22	8.71	13.1	1035	4.6	2347	75.7	94.0	630	46.1	1547	4.4	5.2	7.3	1257	3.9	1544	1019.38	1025.4	2349	1014.7	1140	0.0
23	6.60	11.4	1417	2.0	503	82.5	97.1	650	57.0	1438	3.6	4.9	5.8	1045	4.1	503	1020.91	1025.6	22	1013.1	2356	0.0
24	6.00	8.9	500	2.3	2231	73.5	91.5	712	37.7	1517	1.4	4.3	6.1	606	2.4	1517	1011.90	1018.8	2352	1005.9	730	4.3
25	5.36	11.4	1409	-0.1	2352	71.0	94.1	2358	44.7	1410	0.2	3.8	4.3	1157	3.4	1534	1026.49	1032.5	2350	1018.7	48	0.0
26	3.95	11.1	1444	-2.5	709	76.6	97.9	636	44.4	1446	-0.3	3.7	5.0	1011	3.0	709	1029.49	1032.5	3	1025.5	2359	0.1
27	5.66	11.1	1407	0.5	623	68.5	90.5	627	42.1	1513	-0.1	3.7	4.3	2359	3.3	1518	1024.01	1025.7	145	1022.4	1557	0.0
28	8.70	10.7	1453	4.7	15	84.5	96.9	2356	74.6	1437	6.2	5.9	7.0	2200	4.2	15	1023.76	1024.5	1122	1022.7	1635	2.2

Total																						50.8
Mean	7.51	10.90		3.60		78.6	92.80		59.23		3.85	5.10	6.27		3.96		1015.96	1021.43		1010.25		
Max	12.34	14.32		9.24		90.0	97.90		83.70		9.84	7.69	9.06		5.67		1031.96	1034.39		1027.89		
Min	3.47	7.91		-2.51		63.8	79.10		37.68		-0.32	3.66	4.28		2.39		996.82	1000.60		985.03		

Wokingham Automatic Weather Station
 AWS samples taken every 0.5 seconds
 x and n refer to maximum and minimum respectively

Readings taken at Wokingham Climatological Station, Emmbrook, Berkshire
Lat 51.425 N, Long 0.853 W, NGR (SU) 798701
Altitude 45 m ASL.

Tmn = 00 to 24 GMT mean air temperature at 1.2 m, deg C
 RHmn = 00-24 GMT mean relative humidity at 1.2 m, percent
 Tdmn = 00-24 GMT mean dew point at 1.2 m, deg C
 rmn = 00-24 GMT mean humidity mixing ratio, g/kg
 pmn = 00-24 GMT mean air pressure reduced to mean sea level, mbar
 Time = hours and minutes in GMT of extreme values

Temperature and humidity are from an aspirated Vaisala HMP45 unit
 Pressure is from a Setra CS100 sensor
 Data is logged on a Campbell Scientific CR10X measurement and control system
 R tot = Rainfall from TBR, uncorrected

WOKINGHAM METEOROLOGICAL DATA

Wokingham Climatological Station, Emmbrook, Berkshire.

Lat 51°25'N 00°51'W NGR (SU)798701 Altitude 46m ASL

Seasonal Means and Totals

WINTER 2021/22

Temperature (°C)		Rank in the past 140 years	
Mean maximum	9.5 (+1.1)	13 th highest	
Mean minimum	3.1 (+1.0)	11 th highest	
Daily mean	6.3 (+1.0)	11 th highest	
Rainfall total (mm)	134.6 (76%)	46 th lowest	
Sunshine total (hours)	239.3 (106 %)		
N° of:	Dry days 44 (0)	Wet days 28 (-4)	
Days with:	Air frost 22 (-8)	Ground frost 41 (-9)	Snow falling 4 (-5) Snow lying 0 (-4)
Thunder 1 (0)	Hail ≥5mm 0 (0)	Small hail/ice 4 (0)	Fog @09 GMT 4 (-1) Nil sun 24 (-3)
Air pressure MSL : Mean @09 GMT (mbar)	1018.5 (+2.1)		

Departure from 1991 to 2020 average shown in brackets.

Notes: **Very Mild with Below Average Rainfall and Above Average Sunshine.**

Temperature: The mean this winter, while in the highest 10% of values in the past 140 years, was exceeded as recently as 2019/20. While it is 1.0° above the current 30 year average, in the longer-term it is 1.7° above the 140 year median. Both the mean maximum and minimum are highest only since 2020, and are 1.1° and 1.3° respectively below the record values set in 2016. Compared with average, January was the only month with a negative anomaly, -0.7°, while in December it was +1.8° and February +1.9°. In respect of mean temperature, February was mildest with 7.3°, December having 7.2° and January 4.4°. The season's highest max was 15.0° on the 1st January, 1.1° above the median while the lowest max was 4.2° on 24th January, 4.3° above the median and 3rd highest in 109 years. The highest min was 11.9° on 31st December, 2.0° above the median and 8th highest in 109 years, while the lowest min was -4.9° on 6th January, 2.4° above its median. The mean grass min was 0.9°, anomaly +1.9°, and the lowest was -8.4° on the 6th January, anomaly +4.3°. The mean earth temperature at 30 cm depth was 7.0°, anomaly +1.1°, while at 1 m depth the mean was 8.1°, anomaly 0.0. The number of days with air frost is 8 below average, and the duration of frost, 137 hours, is 50 % of average. **Rainfall:** This has been quite a dry winter, the rainfall total just 76 % of average. In this millennium only 4 winters have been drier, the last in 2017. December was the driest month with 15.9 mm, 24 % of average, February was next with 57.6 mm, 122 % of average, and December was wettest with 61.1 mm, 95 % of average. The 13th February was the wettest day, 17.4 mm, and this is close to the season's long-term median. The duration of measurable rain was 141.6 hours, 84 % of average. December with 64.5 hours and February with 59.9 hours were counterbalanced by January's 17.2 hours. February 28th had the highest daily duration with 13.6 hours, though the 25th December with 12.7 hours was a close second. The highest rainfall rate was 152 mm/hr on 7th December, but rates over 50 mm/hr occurred on the 15th and 24th February. A dry spell of 5 days ended on 18th December and one of 16 days on the 27th January, in fact only 0.8 mm of rain fell in the 22 days to the 2nd February. Snow fell on the 2nd and 3rd December, and the 4th and 7th January, mostly accompanied by rain, and never enough to lay. Ice pellets occurred on 1st and 7th December and the 18th February, and snow pellets on the 24th February, and there was thunder on the 26th December. **Sunshine:** This season has seen slightly more sun than average, but compared to recent winters, 4 of the past 5 have had more sun, and in this millennium there have been 9 sunnier winters. December was the dullest month, daily mean 1.41 hours, 64% of average, then January, 3.04 hours, 129 % of average, and February, 101.6 hours, 120 % of average. December had 12 sunless days, the same as January and February combined. The sunniest day was the 27th February with 10.3 hours, equal to the winter season record. There was a long dull period in December when over the 18 days to the 30th there was a total of only 3.2 hours, 11 days with nil, and 1.2 hours on the sunniest day. Conversely, the 3 day period to 14th January had a total of 23.3 hours, and the 3 days to the 27th February, 29.6 hours. Overall there were 55 days with <3 hours, 19 with =>6 hours and 3 with =>9 hours. **Wind:** The mean speed this winter was 7.7 mph, exactly average. The 18th February was the windiest day, mean 19.5 mph, and the season's highest gust of 69 mph was on that day, the highest winter season gust since 74 mph in 2007. February was the windiest month, mean 10.6 mph, January the least windy, mean 5.5 mph, with a mean of 7.3 mph for December. The 14th January was the least windy day, mean 1.5 mph and there were 1656 minutes of calm overall. Daily mean direction/number of days; N,0 NE,5 E,6 SE,4 S,13 SW,40 W,18 NW,4. Compared with average, winds from SW and W combined were 15.8 % more frequent at the expense of N and NE combined, 13.6 % less frequent. **Pressure:** The highest value this winter was 1043.0 mbar on 12th January and the lowest 984.3 mbar on 8th December, and span of 58.7 mbar, average 64.2 mbar. **Humidity:** The overall mean relative humidity was 84.6 % and the lowest was 38 % on the 24th February. The mean water vapour content per kg of air was 5.1 g at 0900 GMT and 5.3 g at 1500 GMT, both 0.3 g above average. **December:** Very mild and very dull with rainfall slightly below average. Mean min 7th highest in 140 years. Highest max 9th highest in 118 years, lowest max 5th highest in 109 years, highest min 6th highest in 109 years. Air frost duration 3rd lowest in 41 years. Sunshine lowest since 2010. **January:** Very dry and very sunny with below average temperature. Highest max equal highest in past 119 years. Highest min 2nd highest in 110 years. Driest since 1997. 3.3 mm on month's wettest day lowest for January in past 119 years. 2nd sunniest January on record. Mean pressure highest since 1992. Pressure pulse from the Tonga volcanic explosion recorded here on 15th, 16th and 17th as it did 2 circuits of the globe. **February:** Very mild and wet but with above average sunshine. Lowest max 3rd highest in 110 years. Damaging wind storm on 18th with 69 mph gusts. New February record hourly mean wind speed of 32.2 mph.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom	Sun hrs	Anom	Mean Wind mph	Max gust	Mean pressure	Anom
December	9.6°	+1.1°	4.8°	+2.5°	61.1	95%	43.6	64%	7.3	45	1013.0	-2.6
January	8.1°	0.0°	0.7°	-1.3°	15.9	24%	94.1	129%	5.5	38	1026.4	+10.1
February	10.9°	+2.1°	3.8°	+1.9°	57.6	122%	101.6	120%	10.6	69	1016.0	-0.7

B J Burton FRMetS. Hon. Met. Officer to Wokingham Town Council.

Appendix 1.

Explanation and definition of some of the terms used in the Wokingham Weather Reports.

Average: Generally refers to the 30 year climatological average, currently 1981 to 2010. This will be next updated in 2020. For some parameters, notably wind, the climatological average is not available, and if the word average is used in the context of wind, it refers to the average for the period for which data is held, namely 1988 to present.

For sunshine, there was a change, in July 1999, in the type of instrument used to detect sunshine amount, making the climatological average based on the old instrument of little use. In general, the new instrument produces higher values in the winter half year, and lower ones in the summer half, than the old type, due to a combination of faster reaction and higher sensitivity than the old type. The average used in this case is based on a theoretical equivalent 1981 to 2010 average, drawn from comparison with the Met Office published tables of departure from climatological average sunshine in the months since 2000 for their area 'Southern England'. Users of the Wokingham Monthly Weather reports should be aware of this, and regard anomalies for sunshine published therein as a guide only, until such time has elapsed since the introduction of the new instrument that a genuine average becomes available.

Mean: The mean of the data under discussion, often the monthly mean of daily data. The mean is obtained by summation of the individual values and dividing by the number of values. The term 'daily mean' in respect of temperature is defined as '(max + min) / 2'. A true daily 24 hour (00 to 24 GMT) mean temperature is available from the Automatic Weather Station (AWS), and is currently published on page 7 of the Wokingham Monthly Weather report, on the Wokingham Weather web site, page 1. <http://www.woksat.info/wwp1.html>

Anomaly: When a value is given for anomaly, this will have one of the following meanings:

- a): The departure of a mean from the current climatological average.
- b): The departure of a value on a particular day from the average for that day, (this need not be a climatological average).

When the word anomaly is used in respect of temperature, any values given are in °C. In respect of rainfall or sunshine, percent. In respect of wind, mph. In respect of pressure, millibars (hpa).

Categories: Reference may be made in the reports to 'categories'. Each category has a strict statistical range, as outlined below.

Temperature: The terms cold/mild are used in the winter half year, and cool/warm in the summer half. The term 'normal' is used when the individual mean (monthly, seasonal or annual) value is within 20 % of the median of all ranked values for that month/season/year.

Mild/warm: The value lies between 10 % and 30 % below the highest value in the ranked series.

Very mild/very warm: The value lies within 10 % of the highest value in the ranked series.

Cold/cool: The value lies between 10 % and 30 % above the lowest value in the ranked series.

Very cold/very cool: The value lies within 10 % of the lowest value in the ranked series.

Sunshine: The terms for sunshine are very sunny, sunny, normal, dull and very dull.

The definition of these terms follow the same rules as for temperature.

Rainfall: The terms for rainfall are very dry, dry, normal, wet and very wet.

The definition of the term 'normal' follows the same rule as for temperature and sunshine.

Wet: The value lies between 10 % and 30% of the highest value in the ranked series.

Very wet: The value lies within 10 % of the highest value in the ranked series.

Dry: The value lies between 10 % and 30 % above the lowest value in the ranked series.

Very dry: The value lies within 10 % of the lowest value in the ranked series.

Long-term: Mention may be made in the reports to the 'long-term'. The long-term record comprises a temperature/rainfall/sunshine data series compiled from records of various weather stations in the Wokingham area in the years prior to the establishment of the weather station at Emmbrook in 1976 together with data from this station.

In the case of monthly max, min and mean temperature and of rainfall total the series starts in 1882. For temperature extremes, the highest max and lowest min go back to 1904, and lowest max and highest min to 1913.

Rank: The word rank refers to the position of a value for a particular month/season/year in the ranked series, and may be expressed relative to either the highest or lowest value in the series. The central value in the ranked series is known as the **median**. This value may be different from the average of the whole series if the population is skewed. It can also be different from the climatological average which only refers to a 30 year period.

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

When discussing 'winter', if a single year is given this refers to the year in which the January/February fall.

Annual or Year: The calendar year, 1st January to 31st December.

The climatological day: runs from 0900 to 0900 GMT. The max temperature and rainfall read at 0900 hours are attributed to the previous day (thrown back), as is the duration of measurable rain. The min temperature and grass min read at 0900 hours are attributed to the day of reading. Pressure read at 0900 GMT, and the monthly mean pressure is the mean of the 0900 GMT readings. Sunshine data, wind data, rainfall rate data and 24 hour data from the AWS use the normal 00-24 GMT day.

Frost: An air frost day is recorded when the minimum temperature read at 0900 GMT on that day is -0.1°C or below. A ground frost day is recorded when the grass minimum temperature read at 0900 GMT on that day is -0.1°C or lower.

Duration of air frost is defined as the number of minutes that the AWS one minute average temperature is below 0.0°C , and the day runs from midnight to midnight.

Snow: A day with snow falling is triggered if snow falls at any time in the 24 hours from midnight on that day. A day with snow lying is entered if there is at least 50% snow cover at the 0900 GMT observation.

Snow depth is the depth of undrifted snow. Snow that collects in the raingauge funnel is melted and the amount recorded as rainfall.

Hail: A day of hail is recorded if hailstones 5 mm or more in diameter are observed or recorded on the hail pad in a 24 hour period starting at midnight.

A day of small hail is recorded if hailstones less than 5 mm diameter are observed or recorded in a 24 hour period starting at midnight. The term small hail also includes various other types of ice meteor such as ice pellets, snow grains and some types of snow pellets.

Fog: A day with fog is recorded if the horizontal visibility at 0900 GMT is below 1000 m.

Thunder: A day of thunder is recorded if thunder is heard in the 24 hour period from midnight on that day. The appearance of lightning without thunder being heard does not qualify as a thunder day.

Trace of rainfall: A trace of rain, entered as 'tr' in the daily log, is recorded if rain is observed to fall but is of insufficient quantity to collect in the raingauge, or if the amount of rain in the gauge is less than 0.05 mm.

Dry spell: A dry spell is defined as a period of 5 or more consecutive dry days.

Dry day: A dry day is one with less than 0.2 mm of rainfall.

Rain day: A rain day is one with 0.2 mm or more of rainfall.

Wet day: A wet day is one having 1.0 mm or more of rainfall.

Appendix 2.

Explanation and decode for code figures used in the Wokingham 0900 and 1500 GMT observations

VV : Visibility.

Code figures 00 to 50 are in km and tenths e.g. 01 = 0.1 km = 100 m, 33 = 3.3 km, 50 = 5.0 km

Code figures 60 to 80. Subtract 50 to obtain visibility in km. e.g. 56 = 6 km, 65 = 15 km, 77 = 27 km.

Code figures 81 to 89. Subtract 50 and add 5 for every one above 80. e.g. 83 = 45 km, 86 = 60 km.

Code figure 89 = visibility above 70 km.

N : Total cloud amount in okta (eighths of sky covered). 9 = sky obscured (e.g. by fog or snow)

dd : Wind direction in tens of degrees from true north. Wind is measured at a height of 10 m, and the direction is the mean over a period of 10 minutes ending at the observation time.

ff : Wind speed in knots, measured at 10 m, and is the mean over a period of 10 minutes ending at observation time.

gg : Wind gust in knots at 10 m. The highest gust in the 60 minutes up to observation time.

TT : Air temperature at 1.2m, degrees C and tenths.

TdTd : Dew point temperature at 1.2m, degrees C and tenths.

RH : Relative humidity at 1.2m, %.

r : Humidity mixing ratio (amount of water vapour per kg of air), grams and tenths.

PPP : Air pressure reduced to MSL, millibars and tenths.

a : Characteristic of pressure tendency during the past 3 hours.

Code figures 0 to 3, pressure higher than 3 hours ago, 5 to 8, pressure lower than 3 hours ago

Code figure 0 = Increasing then decreasing, pressure the same as or higher than 3 hours ago

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

3 = Decreasing or steady then increasing, or increasing then increasing more rapidly

4 = Steady, pressure the same as 3 hours ago

5 = Decreasing then increasing, pressure lower than 3 hours ago

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

8 = Steady or increasing then decreasing, or decreasing then decreasing more rapidly

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

04 = Visibility reduced by smoke, e.g. veldt or forest fires, industrial smoke or volcanic ashes.

05 = Haze, visibility reduced by extremely small dry particles (RH less than appx. 95 %)

06 = Widespread dust in suspension, not raised by the wind near the station at the time of the observation

07 = Dust or sand raised by the wind at or near the station at the time of the observation, but no well-developed dust whirls or sand whirls, and no duststorm or sandstorm seen: In marine environments, blowing spray at the station.

08 = Well-developed dust or sand whirls seen at or near the station during the preceding hour or at the time of the observation, but no duststorm or sandstorm.

09 = Duststorm or sandstorm within sight at the time of the observation, or at the station during the preceding hour

10 = Mist
11 = Patches of shallow fog not deeper than 2 metres on land
12 = More or less continuous shallow fog not deeper than 2 metres on land
13 = Lightning visible, no thunder heard
14 = Precipitation within sight, not reaching the ground
15 = Precipitation within sight, reaching the ground more than 5 km from the station
16 = Precipitation within sight, reaching the ground, near to but not at the station
17 = Thunderstorm, but no precipitation at the time of the observation
18 = Squalls at or within sight of the station at the time of the observation or during the preceding hour
19 = Funnel cloud(s) at or within sight of the station at the time of the observation or during the preceding hour

20 = Drizzle (not freezing) at the station during the preceding hour but not at the time of the observation
21 = Rain (not freezing) at the station during the preceding hour but not at the time of the observation
22 = Snow at the station during the preceding hour but not at the time of the observation
23 = Rain and snow or ice pellets at the station during the preceding hour but not at the time of the observation
24 = Freezing drizzle or freezing rain at the station during the preceding hour but not at the time of the observation
25 = Shower(s) of rain at the station during the preceding hour but not at the time of the observation
26 = Shower(s) of snow or rain and snow at the station during the preceding hour but not at the time of the observation
27 = Shower(s) of hail or rain and hail at the station during the preceding hour but not at the time of the observation
28 = Fog or ice fog at the station during the preceding hour but not at the time of the observation
29 = Thunderstorm, with or without precipitation at the station during the preceding hour but not at the time of the observation

30 = Slight or moderate duststorm or sandstorm has decreased during the preceding hour
31 = Slight or moderate duststorm or sandstorm with no appreciable change during the past hour
32 = Slight or moderate duststorm or sandstorm has begun or increased during the past hour
33 = Severe duststorm or sandstorm has decreased during the preceding hour
34 = Severe duststorm or sandstorm with no appreciable change during the past hour
35 = Severe duststorm or sandstorm has begun or increased during the past hour
36 = Slight or moderate drifting snow generally below eye level
37 = Heavy drifting snow generally below eye level
38 = Slight or moderate blowing snow generally above eye level
39 = Heavy blowing snow generally above eye level

40 = Fog or ice fog at a distance at the time of the observation, but not at the station during the preceding hour, the fog extending to a level above that of the observer.
41 = Fog or ice fog in patches
42 = Fog or ice fog, sky visible has become thinner during the past hour
43 = Fog or ice fog, sky invisible has become thinner during the past hour
44 = Fog or ice fog, sky visible no appreciable change during the past hour
45 = Fog or ice fog, sky invisible no appreciable change during the past hour
46 = Fog or ice fog, sky visible has begun or become thicker during the past hour
47 = Fog or ice fog, sky invisible has begun or become thicker during the past hour
48 = Fog, depositing rime, sky visible
49 = Fog depositing rime, sky invisible

50 = Drizzle, not freezing, intermittent slight at time of observation
51 = Drizzle, not freezing, continuous slight at time of observation
52 = Drizzle, not freezing, intermittent moderate at time of observation
53 = Drizzle, not freezing, continuous moderate at time of observation
54 = Drizzle, not freezing, intermittent heavy at time of observation
55 = Drizzle, not freezing, continuous heavy at time of observation
56 = Drizzle, freezing, slight
57 = Drizzle, freezing, moderate or heavy (dense)
58 = Drizzle and rain, slight
59 = Drizzle and rain, moderate or heavy

60 = Rain, not freezing, intermittent slight at time of observation
61 = Rain, not freezing, continuous slight at time of observation
62 = Rain, not freezing, intermittent moderate at time of observation
63 = Rain, not freezing, continuous moderate at time of observation
64 = Rain, not freezing, intermittent heavy at time of observation
65 = Rain, not freezing, continuous heavy at time of observation
66 = Rain, freezing, slight
67 = Rain, freezing, moderate or heavy
68 = Rain or drizzle and snow, slight
69 = Rain or drizzle and snow, moderate or heavy

70 = Intermittent fall of snowflakes slight at time of observation
71 = Continuous fall of snowflakes slight at time of observation
72 = Intermittent fall of snowflakes moderate at time of observation
73 = Continuous fall of snowflakes moderate at time of observation
74 = Intermittent fall of snowflakes heavy at time of observation
75 = Continuous fall of snowflakes heavy at time of observation
76 = Diamond dust (with or without fog)
77 = Snow grains (with or without fog)
78 = Isolated star-like snow crystals (with or without fog)
79 = Ice pellets

80 = Rain shower(s), slight
81 = Rain shower(s), moderate or heavy
82 = Rain shower(s), violent
83 = Shower(s) of rain and snow mixed, slight
84 = Shower(s) of rain and snow mixed, moderate or heavy
85 = Snow shower(s), slight
86 = Snow shower(s), moderate or heavy
87 = Shower(s) of snow pellets or small hail, with or without rain or rain and snow mixed, slight
88 = Shower(s) of snow pellets or small hail, with or without rain or rain and snow mixed, moderate or heavy
89 = Shower(s) of hail, with or without rain or rain and snow mixed, not associated with thunder, slight
90 = Shower(s) of hail, with or without rain or rain and snow mixed, not associated with thunder, moderate or heavy

91 = Slight rain at time of observation, thunderstorm during the past hour but not at time of observation
92 = Moderate or heavy rain at time of observation, thunderstorm during the past hour but not at time of observation
93 = Slight snow, or rain and snow mixed, or hail at time of observation, thunderstorm during the past hour but not at time of observation
94 = Moderate or heavy snow, or rain and snow mixed, or hail at time of observation, thunderstorm during the past hour but not at time of observation
95 = Thunderstorm, slight or moderate, without hail but with rain and or snow at time of observation
96 = Thunderstorm, slight or moderate, with hail at time of observation
97 = Thunderstorm, heavy, without hail but with rain and or snow at time of observation
98 = Thunderstorm combined with duststorm or sandstorm at time of observation
99 = Thunderstorm, heavy, with hail at time of observation

Hail includes large hail, small hail and snow pellets.

W1, W2 : Past weather (for 0900 and 1500 GMT observations, the period covered is 3 hours)

Code figures:

- 0 = Cloud covering half or less of the sky throughout the period
- 1 = Cloud covering more than half the sky during only part of the period
- 2 = Cloud covering more than half the sky throughout the period
- 3 = Sandstorm, duststorm or blowing snow
- 4 = Fog or ice fog or thick haze (visibility less than 1000 m)
- 5 = Drizzle
- 6 = Rain
- 7 = Snow or rain and snow mixed
- 8 = Shower(s)
- 9 = Thunderstorm(s) with or without precipitation

Nh : Amount of low cloud, or medium cloud if no low cloud present, okta

Cl : Type of low cloud

- 0 = No low cloud
- 1 = Cumulus with little vertical extent and seemingly flattened, or ragged Cumulus other than bad weather, or both
- 2 = Cumulus of moderate or strong vertical extent, either accompanied or not by other Cumulus or Stratocumulus all having their bases at the same level
- 3 = Cumulonimbus whose summits, at least partially, lack sharp outline, but are neither clearly fibrous (cirriform), nor in the form of an anvil; Cumulus, Stratocumulus or Stratus may also be present
- 4 = Stratocumulus formed by the spreading out of Cumulus; Cumulus may also be present
- 6 = Stratus in a more or less continuous sheet or layer, or ragged shreds, or both, but no Stratus fractus of bad weather
- 7 = Stratus fractus of bad weather or Cumulus fractus of bad weather or both (pannus), usually below Altostratus or Nimbostratus
- 8 = Cumulus and Stratocumulus other than that formed by the spreading out of Cumulus, the bases of the Cumulus and Stratocumulus are not at the same level.
- 9 = Cumulonimbus, the upper part of which is clearly fibrous (cirriform), often in the form of an anvil, either accompanied or not by any other type(s) of low cloud
- / = Types of low cloud invisible due to darkness, fog, blowing dust or sand or other similar phenomena.

'Bad weather' denotes the conditions which generally exist during precipitation and a short time before and after.

Cm : Type of medium cloud.

- 0 = No medium cloud.
- 1 = Altostratus, the greater part of which is semi-transparent; through this part the sun or moon may be weakly visible, as through ground glass
- 2 = Altostratus, the greater part of which is sufficiently dense to hide the sun or moon, or Nimbostratus
- 3 = Altocumulus, the greater part of which is semi-transparent; the various elements of the cloud change only slowly and are all at a single level
- 4 = Altocumulus in patches (often in the form of almonds or fishes), the greater part of which is semi-transparent ; the clouds occur at one or more levels and the elements are continually changing in appearance
- 5 = Altocumulus in bands semi-transparent, of Altocumulus in one or more fairly continuous layers (semi-transparent or opaque), progressively invading the sky; these Altocumulus clouds generally thicken as a whole
- 6 = Altocumulus resulting from the spreading out of Cumulus (or Cumulonimbus)
- 7 = Altocumulus in two or more layers, usually opaque in places, and not progressively invading the sky; or opaque layer of Altocumulus not progressively invading the sky; or Altocumulus together with Altostratus or Nimbostratus
- 8 = Altocumulus with sproutings in the form of small towers or battlements, or Altocumulus having the appearance of cumuliform tufts
- 9 = Altocumulus of a chaotic sky, generally at several levels
- / = Types of medium cloud invisible owing to darkness, fog, blowing dust or sand or other similar phenomena, or more often because of the presence of a continuous layer of lower clouds.

Ch : Type of high cloud

0 = No high cloud

1 = Cirrus in the form of filaments, strands or hooks, not progressively invading the sky.

2 = Dense cirrus, in patches or entangled sheaves, which usually do not increase and sometimes seem to be the remains of the upper part of a Cumulonimbus; or Cirrus with sproutings in the form of small turrets or battlements, or Cirrus having the appearance of cumuliform tufts

3 = Dense Cirrus, often in the form of an anvil, being the remains of the upper part of Cumulonimbus, or where the rest of the Cumulonimbus is below the horizon

4 = Cirrus in the form of hooks or filaments, or both, progressively invading the sky; they generally become denser as a whole

5 = Cirrus (often in bands converging towards one or two opposite points on the horizon) and Cirrostratus, or Cirrostratus alone; in either case they are progressively invading the sky, and generally growing denser as a whole, but the continuous veil does not reach 45 degrees above the horizon.

6 = Cirrus (often in bands converging towards one or two opposite points on the horizon) and Cirrostratus, or Cirrostratus alone; in either case they are progressively invading the sky, and generally growing denser as a whole; the continuous veil extends more than 45 degrees above the horizon, without the sky being totally covered

7 = Veil of Cirrostratus covering the celestial dome.

8 = Cirrostratus not progressively invading the sky and not completely covering the celestial dome

9 = Cirrocumulus alone, or accompanied by Cirrus or Cirrostratus, or both, but Cirrocumulus is predominant.

/ = Types of high cloud invisible owing to darkness, fog, blowing dust of sand or other similar phenomena, or more often because of the presence of a continuous layer of lower clouds.

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

/ = Cloud type not visible owing to darkness, fog, duststorm, or other analogous phenomena.

hshs = Height of cloud above station level reported by type C

00 to 50 = Height in hundreds of feet

51 to 55 Not used

56 to 80 = Subtract 50 to obtain cloud height in thousands of feet

81 to 88 = Height of cloud between 35000 and 70000 ft in 5000 ft steps.