

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

APRIL 2017

Temperature (°C)	Anomaly	Rank in the past	136 years
Mean maximum	15.4	+1.4	18 th highest
Mean minimum	4.1	-0.3	52 nd highest
Daily mean	9.7	+0.5	28 th highest
Highest maximum	24.4	on 9 th	Lowest maximum 10.9 on 27 th
Highest minimum	9.1	on 15 th	Lowest minimum -1.3 on 27 th
Mean grass minimum	-1.0	-1.7	Lowest grass minimum -7.0 on 27 th
Mean earth @30 cm	11.3	+1.4	Earth @100 cm 10.4
Frost duration (hrs)	3.8		Rain duration (hrs) 6.9
Rainfall total (mm)	6.4	13%	7 th lowest
Highest daily fall	2.7	on 30 th	
Number of: Dry days (<0.2mm)	24	Wet days (>0.9mm)	3 days ≥5mm 0
Sunshine total (hrs) 183.2	Daily mean 6.11	114%	Sunniest day 12.8 on 8 th
N° days with: Air frost 1	Ground frost 20	Snow falling 0	Snow lying 0
Thunder 0	Hail ≥5mm 0	Small hail/ice 1	Fog @09 0 Nil sun 2
Pressure MSL: Mean @09 GMT, mbar 1023.5	+8.5	Highest 1037.8	on 19 th Lowest 997.7 on 30 th
Relative humidity: Mean (%) 71.2	Lowest 28	on 25 th	Water vapour (g/kg), mean at 09 and 15 GMT 5.2, 5.2
Overall mean wind speed (mph) 5.6	Windiest day 8.3	on 30 th	Max gust 31 on 26 th
Wind direction (days) N 4	NE 1	E 2	SE 1 S 1 SW 5 W 10 NW 6
Least windy day (mph) 2.7	on 7 th	Calm; less than 0.5 mph (minutes)	967

Anomaly = departure from 1981 to 2010 average (degrees C, percent and mbar).

Notes:

Mild, Sunny and Very Dry

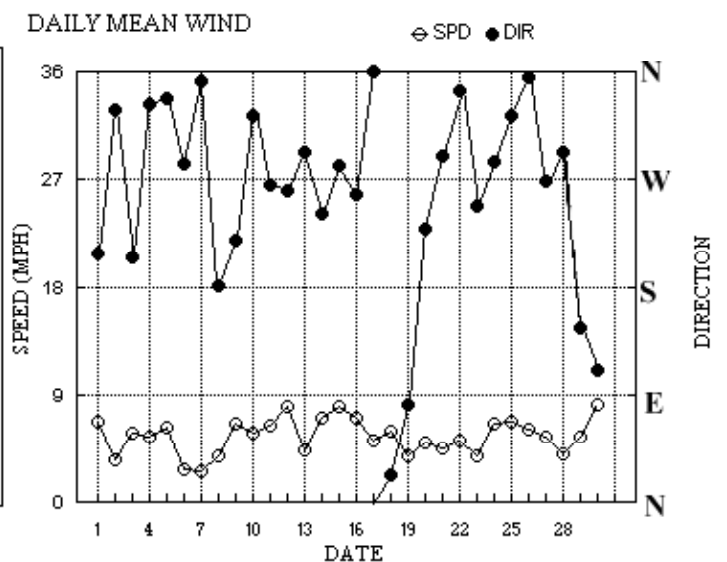
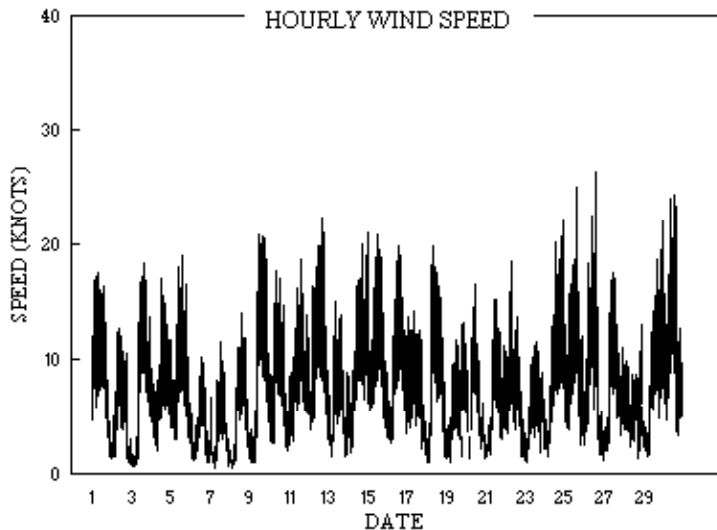
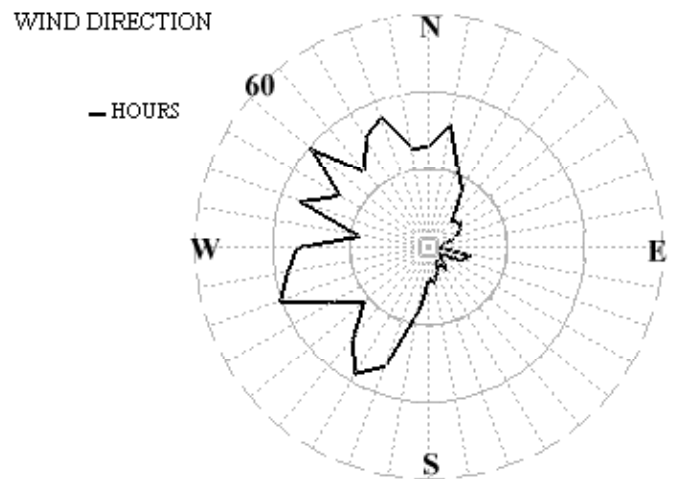
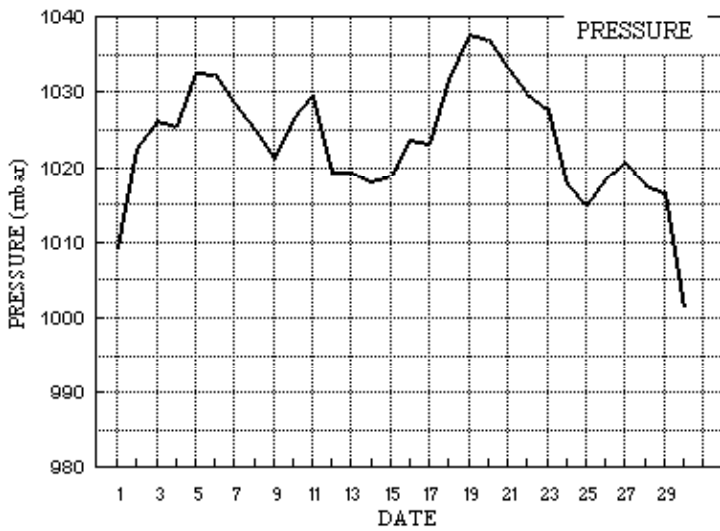
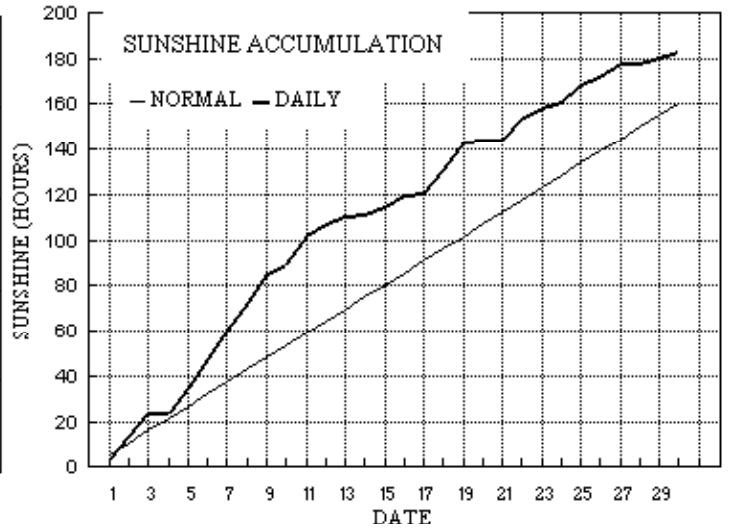
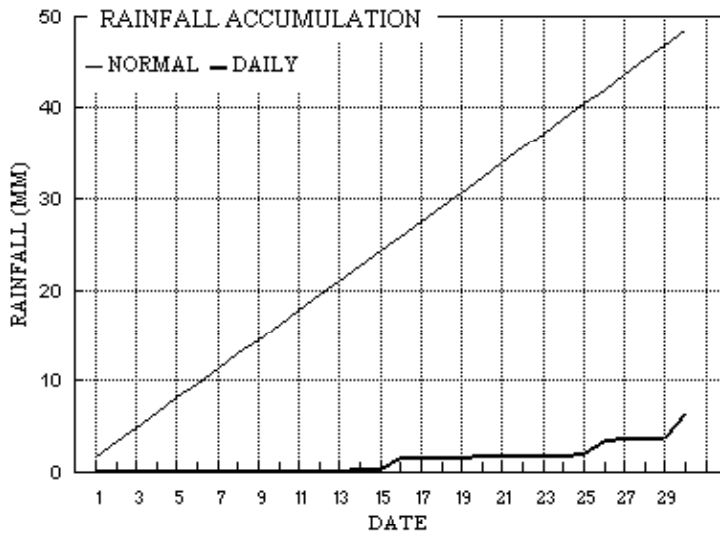
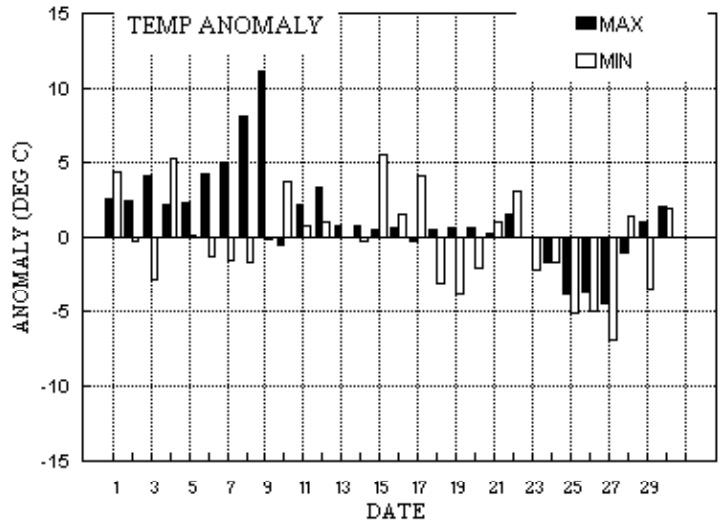
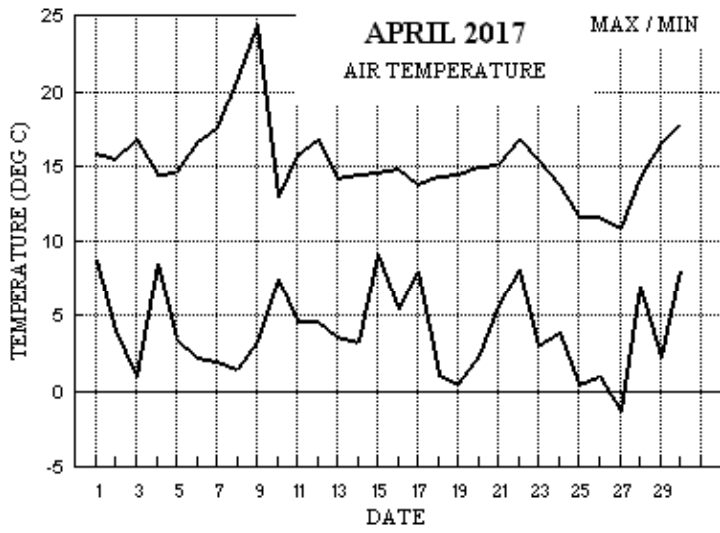
Temperature: Despite the large difference between the anomaly with respect to the mean maximum and mean minimum, +1.4° and -0.3° respectively, a difference which can also be seen in the 136 year rankings, in the shorter period since 2000, 8 Aprils have been milder and 9 colder than this month for both the mean maximum and mean minimum. Nevertheless, the ranking of 28th highest for the mean temperature puts this April firmly in the mild category. Although there were both mild and cool spells this month, the warm episode was longer and more intense than the cold one. The highest max is 3.7° above the median and is 7th highest in 114 years, though the record, set in 2011, is even 2.2° higher. The lowest max is 3.1° above the median and is 6th highest in 105 years. The highest min is 0.7° below the median while the lowest min is 0.6° above its median. The mean daily temperature range is 1.7° above average and the highest daily range of 21.2° on the 9th is highest for April since 2003. The mean grass min is lowest since 1990, but the lowest grass min is close to average, and the same as in April last year. Earth temperature at 30 cm depth is well above average, but slightly less so at 1 m depth. The lowest daily values at both depths are highest in the record. Although the number of ground frosts is 6 above average, and most since 1984, the one air frost is 3 fewer than average, although 3 Aprils in the past 42 years have had none. Anomalies for daily max were above normal up to the 9th and below normal between the 24th and 28th, individual extremes being +11.1° on the 9th and -4.5° on the 27th. For daily min, a scattering of nights were above normal, though all were below normal from the 23rd to 27th, and individual anomalies near +5° occurred on the 4th and 15th, and more than -5° from the 25th to 27th. **Rainfall:** This has been a very dry April with just 13% of average, and only 2011, 2007 and 1984 have been drier in the past 42 years. The month's highest fall of 2.7 mm ranks 6th lowest for April in 114 years. There were 7 more dry days than average, although in 2011 rain fell on only 1 day in April. A dry spell of 13 days ended on the 13th, but only 2.1 mm had fallen by the 25th, and most of the remaining total accrued on the 26th and 30th. There was no snow or thunder this month, but a heavy shower of snow pellets (classed as hail) on the 26th produced a temporary white covering. The highest rainfall rate for the month was 12 mm/hr in that shower. The duration of measurable rain is 17% of normal. **Sunshine:** This has been a sunny April, mainly as a result of a stunningly sunny start, the total reaching 102 hours by the 11th, an average of 9.3 hours per day, despite the 4th being sunless. The accumulated departure from normal reached a surplus of 42 hours by the 11th, but dropped back to 30 hours by the 17th, and to 23 hours by the 30th. Overall there were 9 days with <3 hours, 12 with =>6 hours, 11 with =>9 hours and 6 with =>12 hours. **Wind:** This has been a low wind speed month, the mean being 1.3 mph below average and lowest for April since 2009. The highest gust is 10 mph below average, and both this and the highest daily mean speed are lowest for April since before 1988. Daily mean winds were light or moderate throughout. Directions varied between SW and NW up to the 4th veering N'ly by the 7th, becoming S'ly on the 8th, veering W'ly on the 10th, then N'ly on the 17th, E'ly on the 19th, SW'ly on the 20th, then ranging between W and N up to the 28th, becoming SE'ly on the 29th.

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 30 th			
+4.2°	+0.6°	0%	168%	+1.0°	+0.4°	12%	103%	-1.0°	-1.7°	30%	73%

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

Wokingham climatological graphs for April 2017



Month: APRIL 2017

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af 3f	Sf Sl	Th Ha	Ic Fg	Vec mean ddd ff sp	Max gust ddd gg HHhh	High hr ddd ff	Rain HH hrs							
1	15.9	8.7	0.1	5.2	11.0	9.6	3.2	0.0	1009.1	0	0	0	0	208	5.3	5.9	231	18	0804	220	9	08	0.2	
2	15.5	4.0	0.0	-1.1	10.7	9.7	10.7	0.0	1022.5	0	1	0	0	328	2.5	3.2	325	13	0852	330	6	08	0.0	
3	16.8	0.9	tr	-3.6	10.9	9.8	9.9	0.0	1026.4	0	1	0	0	205	4.8	5.1	196	18	1625	217	10	15	0.0	
4	14.5	8.5	tr	6.4	11.0	9.9	0.0	0.0	1025.6	0	0	0	0	333	3.1	4.8	328	17	1356	10	7	20	0.0	
5	14.6	3.5	0.0	-1.6	11.0	9.9	11.0	0.0	1032.6	0	1	0	0	337	5.3	5.4	1	19	1456	346	8	09	0.0	
6	16.6	2.2	0.0	-2.9	11.0	10.0	12.4	0.0	1032.4	0	1	0	0	283	1.9	2.5	259	10	1331	282	5	16	0.0	
7	17.5	2.0	0.0	-3.0	11.1	10.0	12.7	0.0	1028.6	0	1	0	0	351	1.0	2.3	250	12	1312	240	4	13	0.0	
8	20.9	1.5	0.0	-3.9	11.2	10.1	12.8	0.0	1025.0	0	1	0	0	181	2.9	3.4	250	14	1504	162	7	17	0.0	
9	24.4	3.2	0.0	-1.7	11.5	10.1	12.5	0.0	1021.1	0	1	0	0	219	4.1	5.7	225	21	1243	206	11	14	0.0	
10	13.0	7.4	0.0	1.7	11.8	10.2	4.4	0.0	1026.5	0	0	0	0	322	4.7	5.1	324	18	0833	326	8	08	0.0	
11	15.7	4.7	0.0	-0.6	11.5	10.3	12.5	0.0	1029.5	0	1	0	0	266	4.9	5.6	260	19	1533	248	9	16	0.0	
12	16.7	4.7	0.0	0.4	11.6	10.3	5.4	0.0	1019.5	0	0	0	0	261	6.6	6.9	257	22	1737	256	10	11	0.0	
13	14.2	3.6	0.0	-2.5	11.8	10.4	3.3	0.0	1019.5	0	1	0	0	292	3.3	3.9	277	15	0827	311	7	08	0.0	
14	14.4	3.3	0.3	-3.0	11.6	10.4	0.8	0.0	1018.1	0	1	0	0	242	6.0	6.1	257	20	1739	243	9	12	0.5	
15	14.6	9.1	0.0	6.4	11.6	10.4	3.4	0.0	1018.9	0	0	0	0	281	6.6	7.0	250	21	0007	298	9	16	0.0	
16	14.8	5.4	1.2	0.7	11.4	10.5	5.0	0.0	1023.7	0	0	0	0	258	5.8	6.1	249	20	1534	269	9	16	1.2	
17	13.8	8.0	0.1	5.8	11.5	10.5	0.8	0.0	1023.1	0	0	0	0	359	3.9	4.5	21	14	0851	18	7	08	0.2	
18	14.3	1.1	0.0	-4.4	11.6	10.5	10.1	0.0	1031.7	0	1	0	0	23	4.9	5.2	25	20	0912	22	9	07	0.0	
19	14.5	0.4	tr	-6.0	11.4	10.6	12.4	0.0	1037.7	0	1	0	0	82	1.3	3.5	189	13	2241	187	7	22	0.0	
20	15.0	2.4	0.2	-3.5	11.6	10.6	1.0	0.0	1036.9	0	1	0	0	229	3.9	4.3	257	17	1208	236	8	09	0.3	
21	15.1	5.7	0.0	-0.5	11.8	10.6	0.0	0.0	1033.2	0	1	0	0	290	3.4	4.0	308	15	1221	297	7	12	0.0	
22	16.8	8.1	0.0	1.6	11.8	10.7	9.3	0.0	1029.9	0	0	0	0	343	4.2	4.5	357	19	0733	347	9	07	0.0	
23	15.4	3.0	0.0	-3.5	11.8	10.7	4.7	0.0	1027.8	0	1	0	0	248	1.4	3.3	296	12	1437	291	6	14	0.0	
24	13.7	3.9	tr	-1.7	11.8	10.8	2.5	0.0	1017.7	0	1	0	0	285	4.6	5.7	319	22	2220	320	9	22	0.0	
25	11.7	0.4	0.2	-5.1	11.3	10.8	7.9	0.0	1014.7	0	1	0	0	322	5.2	5.9	342	25	1636	345	10	16	0.1	
26	11.6	0.9	1.5	-4.5	11.0	10.8	3.4	0.0	1018.5	0	1	0	0	355	5.1	5.3	21	27	1503	5	10	11	0.8	
27	10.9	-1.3	0.1	-7.0	10.7	10.7	5.5	3.8	1020.7	1	1	0	0	269	4.2	4.7	299	18	1230	301	8	09	0.2	
28	14.2	7.0	tr	3.0	10.7	10.7	0.4	0.0	1017.6	0	0	0	0	293	2.6	3.6	251	13	2227	267	6	22	0.0	
29	16.5	2.2	0.0	-4.2	10.9	10.6	2.3	0.0	1016.5	0	1	0	0	146	4.0	4.8	120	20	2243	158	9	17	0.0	
30	17.8	8.1	2.7	4.5	11.0	10.6	2.9	0.0	1001.3	0	0	0	0	111	6.8	7.2	119	24	1527	99	11	09	3.4	
Total			6.4				183.2	3.8																6.9
Mean	15.4	4.1		-1.0	11.3	10.4	6.11	0.1	1023.5					282	2.1	4.9								
Anom	+1.4	-0.3	13%	-1.7	+1.4	+1.2	114%		+8.5															
Daily mean		9.7																						
Anom		+0.5																						

Number of days with:

Air frost = 1 Ground frost = 20 Nil sun = 2
Snow falling = 0 Snow lying = 0 Thunder = 0
Hail=>5mm = 0 Hail<5mm or ice = 1 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.

Anom = Departure from 1981-2010 climatological average.

All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for APRIL 2017

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	80	6	24	08	18	10.5	7.4	81	6.3	1009.1	2	017	03	2	2	6	2	4	0	1	86813						1	/Ci75 Cu med	
2	70	2	33	06	13	10.1	5.5	73	5.6	1022.5	1	025	02	1	1	2	5	4	0	1	82617						2	1Ci75	
3	62	5	19	04	08	12.1	5.9	66	5.7	1026.4	0	000	02	1	1	0	0	9	0	1	85081						3	COTRA	
4	58	8	34	04	08	11.2	9.5	89	7.3	1025.6	1	019	50	5	2	8	8	3	/	/	82807	86615	88620			4	Cu fra/hum		
5	81	7	33	08	13	9.8	4.0	67	5.0	1032.6	1	011	03	1	1	1	1	5	0	1	81822	87078				5	COTRA Cu hum Halo 22° part		
6	59	1	01	02	05	9.9	5.5	74	5.6	1032.4	0	003	05	0	0	0	0	9	0	1	81081					6	COTRA		
7	68	1	09	03	06	10.9	5.0	67	5.4	1028.6	0	001	02	0	0	0	0	9	0	1	81081					7	COTRA		
8	58	0	19	04	08	13.0	5.7	61	5.6	1025.0	1	001	05	0	0	0	0	9	0	0						8			
9	56	0	16	03	07	17.3	8.2	55	6.7	1021.1	8	001	05	0	0	0	0	9	0	0						9			
10	86	3	33	07	18	11.2	2.2	54	4.4	1026.5	1	016	03	1	1	1	1	6	0	1	81833	83078				10	COTRA Cu hum		
11	84	7	30	06	12	10.2	3.5	63	4.8	1029.5	3	003	03	2	2	1	1	5	0	1	81825	87080				11	COTRA Cu hum		
12	78	7	24	08	16	10.8	5.6	70	5.6	1019.5	6	014	01	2	2	7	5	5	/	2	87622					12	/Ci75		
13	83	6	31	08	15	10.3	1.9	56	4.3	1019.5	0	005	03	1	1	6	8	5	/	1	82825	85645				13	/Ci75 Cu med		
14	65	8	23	05	11	10.1	5.7	74	5.6	1018.1	0	001	03	1	1	8	5	6	/	/	88638					14			
15	84	7	30	09	16	10.4	2.3	57	4.4	1018.9	2	017	03	2	2	6	8	5	/	8	82825	85650	87270			15	2Sc40 Cu med		
16	84	2	29	07	12	12.0	3.8	57	4.9	1023.7	0	003	03	1	1	1	8	5	3	1	81828					16	1Sc50 1Ac65 2Ci80 COTRA Cu hum		
17	81	7	02	08	14	9.3	6.0	80	5.8	1023.1	2	017	02	6	2	7	5	4	3	/	87615					17	/Sc25 /Ac57		
18	86	6	03	07	18	8.6	-0.7	52	3.6	1031.7	1	017	03	1	1	1	1	6	0	1	81835	85080				18	2Ci73 COTRA Cu hum Parheliion		
19	77	3	04	04	10	8.9	1.1	58	4.1	1037.7	1	010	03	0	0	1	1	6	0	1	81830	83078				19	COTRA Cu hum		
20	70	7	25	08	15	10.3	4.0	65	5.0	1036.9	8	001	02	2	2	7	5	6	/	/	85645	87650				20			
21	72	7	29	05	10	13.1	7.1	67	6.2	1033.2	4	000	02	2	2	7	5	6	/	/	81645	87650				21			
22	84	6	33	06	15	10.7	4.0	63	5.0	1029.9	1	005	03	1	1	6	8	5	/	/	83828	85635				22			
23	61	7	20	03	08	11.1	6.2	72	5.9	1027.8	0	001	03	2	2	7	8	4	/	/	86815	83635				23	Cu med		
24	75	8	26	05	12	10.8	6.4	74	5.9	1017.7	6	010	15	1	1	7	8	5	/	/	82835	87650				24	/Ac65 Cu med jp NW		
25	86	3	35	06	17	6.9	-0.8	58	3.6	1014.7	1	005	03	0	0	3	2	6	0	0	83830					25	Cu med		
26	82	7	36	08	16	6.3	1.4	71	4.2	1018.5	1	010	03	2	2	7	8	5	/	/	86820	83628				26	Cu med		
27	84	7	30	07	14	8.2	0.2	57	3.8	1020.7	8	003	03	1	1	1	1	6	5	2	81830	85360	87070			27	1Ac57 COTRA Parheliion Irridescence		
28	72	8	35	03	06	9.1	5.1	76	5.4	1017.6	1	003	02	2	2	8	8	4	/	/	83815	88635				28	Cu hum		
29	82	8	15	01	05	8.8	4.2	73	5.1	1016.5	7	001	03	2	2	8	8	4	/	/	81715	88645				29	2Cu20 2Sc35 Cu med		
30	80	7	09	09	17	14.8	3.9	48	5.0	1001.3	8	032	02	2	2	1	0	9	4	8	81368	87073				30	2Cs70 COTRA Halo 22° part		

Mean vis = 31.2 km
 Mean cloud = 5.4 67%
 Mean wind speed = 5.7 kn
 Mean gust = 12 kn
 Mean TT = 10.6 °C
 Mean TdTd = 4.3 °C
 Mean RH = 65.9 %
 Mean r = 5.2 g/kg
 Mean PPP = 1023.5 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.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for APRIL 2017

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	m	h	NChshs	VChshs	NChshs	Date	Remarks
1	75	5	19	08	15	14.9	7.0	59	6.2	1009.7	2	004	25	8	1	3	9	5	6	3	81928	82835	83070	1	1Sc56 1Ac60 jpW&SE vv80k ex p
2	82	2	32	04	09	14.4	4.7	52	5.3	1023.5	3	003	02	0	0	2	1	6	0	1	82838			2	1Ci75 Cu hum
3	84	6	21	08	18	16.3	6.2	51	5.8	1024.3	6	008	02	1	1	3	2	6	0	1	83840	85081	Cu med	3	
4	65	7	34	05	16	13.7	9.0	73	7.1	1026.8	2	003	21	6	2	7	8	5	/	/	82820	83625	87640	4	Cu hum
5	72	4	36	09	19	13.9	4.2	52	5.1	1030.3	7	015	03	1	1	2	5	6	0	1	82635	83073		5	COTRA
6	68	1	35	05	10	16.2	6.9	54	6.1	1028.2	7	018	02	0	0	1	1	6	0	0	81840			6	Cu hum
7	65	1	26	02	10	17.1	6.3	49	5.9	1025.3	7	020	02	0	0	1	1	6	0	0	81845			7	Cu hum
8	81	0	23	06	12	20.7	5.1	36	5.4	1021.5	7	019	02	0	0	0	0	9	0	0				8	
9	83	2	21	10	20	23.3	8.6	39	6.9	1018.0	7	013	03	0	0	0	0	9	0	4	82075			9	COTRA
10	86	7	33	06	14	12.1	2.3	51	4.4	1026.7	6	002	02	2	2	6	5	6	0	1	86645			10	2Ci80
11	83	7	25	09	16	15.4	4.8	49	5.3	1026.6	8	018	02	2	2	1	4	6	0	1	81643	87077		11	2Ci72 COTRA U/a cont
12	82	4	28	08	18	16.1	6.0	51	5.7	1017.3	8	012	02	1	1	3	8	6	4	1	81840	83642		12	1Ac62 2Ci75 Ch hum
13	84	7	26	04	14	13.4	2.0	46	4.4	1017.8	6	013	02	2	2	7	5	6	/	1	87645			13	/Ci80 COTRA
14	88	8	25	08	17	14.0	6.6	61	6.0	1016.3	7	010	02	2	2	8	8	6	/	/	85832	88640		14	Cu hum
15	86	7	30	08	18	12.8	1.2	45	4.1	1019.1	7	004	01	2	2	2	4	7	0	1	82650	86080		15	COTRA
16	82	7	26	08	17	14.1	5.5	56	5.6	1021.4	7	012	21	6	2	7	8	6	7	/	85835	86640		16	/Ac58 Cu hum
17	82	7	02	06	12	11.7	4.4	61	5.2	1023.9	2	002	02	2	2	5	8	6	3	/	83832	83645	86357	17	Cu med
18	86	2	03	07	17	11.1	-2.7	38	3.1	1032.0	2	002	02	0	0	2	1	7	0	1	82850			18	1Ci75 Cu hum
19	82	2	07	05	11	13.2	-1.9	35	3.3	1035.7	7	013	02	0	0	1	1	7	3	1	81856			19	1Ac65 2Ci78 COTRA Cu hum Halo 22° part Parhelion
20	65	7	26	05	11	13.1	8.4	73	6.8	1034.9	8	014	21	6	2	7	8	4	/	/	85818	87635		20	Cu hum
21	82	7	31	07	13	14.6	5.9	56	5.7	1030.7	7	013	02	2	2	7	8	6	/	/	82838	83645	87650	21	
22	86	3	33	05	13	16.2	2.2	39	4.4	1027.4	7	016	01	1	1	3	1	7	0	0	83850			22	Cu hum
23	84	5	28	06	12	14.6	3.4	44	4.8	1024.7	7	015	02	2	2	4	8	6	0	1	82842	83650		23	2Ci80 COTRA Cu hum
24	70	8	27	08	16	12.6	5.8	63	5.7	1013.3	7	021	25	8	2	8	8	5	/	/	81828	83640	88656	24	Cu med jpW&S vv60k ex p
25	75	4	34	08	18	10.9	-5.1	32	2.6	1013.6	8	010	15	1	1	4	9	7	6	3	81950	83856		25	1Ac50 1Ci70 jp all quads vv60k ex p
26	60	5	35	11	19	10.7	0.1	48	3.8	1018.5	3	002	87	8	1	4	9	6	6	3	83935	81840		26	1Ac60 1Ci70 Snow pellets
27	70	8	25	08	16	10.3	2.6	59	4.6	1018.0	8	012	61	6	2	7	5	6	7	/	86632	87650		27	/Ac58
28	84	7	25	04	08	12.7	4.9	59	5.3	1016.5	7	006	15	8	2	7	8	6	/	/	83835	87656		28	Cu med jp W
29	84	7	18	09	15	14.2	2.8	46	4.6	1013.0	8	020	02	2	2	7	8	6	/	/	82842	87650		29	Cu hum
30	75	8	13	08	20	14.6	5.4	54	5.5	998.4	8	005	60	6	2	2	8	6	7	/	81835	86357	88460	30	2Sc50 Cu hum

Mean vis = 37.8 km

Mean cloud = 5.2 65%

Mean wind speed = 6.8 kn

Mean gust = 15 kn

Mean TT = 14.3 °C

Mean TdTd = 4.1 °C

Mean RH = 51.0 %

Mean r = 5.2 g/kg

Mean PPP = 1021.8 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 Sunshine Hourly analysis 2017	Hour	01-Apr	02-Apr	03-Apr	04-Apr	05-Apr	06-Apr	07-Apr	08-Apr	09-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	16-Apr
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	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	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	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	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	0.00	0.00	0.00
5	0.00	0.00	0.05	0.00	0.02	0.00	0.16	0.10	0.33	0.02	0.49	0.00	0.18	0.51	0.00	0.00	0.00
6	0.00	0.79	1.00	0.00	0.90	0.97	1.00	1.00	1.00	1.00	0.50	1.00	0.00	0.93	0.26	0.00	0.49
7	0.01	0.78	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.92	0.00	0.00	1.00
8	0.62	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.02	0.66	0.02	0.00	0.87
9	0.18	0.84	1.00	0.00	0.89	1.00	1.00	1.00	1.00	1.00	0.96	0.99	0.35	0.18	0.00	0.00	0.77
10	0.50	0.76	0.99	0.00	0.80	1.00	1.00	1.00	1.00	1.00	0.45	0.82	0.84	0.00	0.00	0.00	0.30
11	0.28	1.00	0.62	0.00	0.64	0.97	1.00	1.00	1.00	1.00	0.16	0.98	0.94	0.00	0.00	0.02	0.37
12	0.15	0.94	0.76	0.00	0.94	1.00	1.00	1.00	1.00	1.00	0.11	1.00	1.00	0.00	0.02	0.13	0.41
13	0.29	0.73	0.90	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.02	0.86	0.91	0.28	0.00	0.50	0.02
14	0.42	0.88	0.39	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.07	0.89	0.73	0.12	0.00	0.48	0.01
15	0.42	0.74	0.48	0.00	0.91	1.00	1.00	1.00	1.00	1.00	0.10	0.95	0.33	0.05	0.00	0.55	0.08
16	0.14	0.80	0.69	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.03	0.00	0.01	0.40	0.00
17	0.25	1.00	0.97	0.00	0.78	1.00	1.00	1.00	1.00	1.00	0.05	1.00	0.01	0.00	0.00	0.69	0.64
18	0.00	0.44	0.08	0.00	0.12	0.44	0.53	0.70	0.15	0.00	0.49	0.29	0.00	0.00	0.00	0.56	0.03
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	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	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	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	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	0.00	0.00
Tot		3.23	10.70	9.93	0.00	10.99	12.37	12.69	12.80	12.49	4.44	12.47	5.44	3.31	0.81	3.35	4.99

Hour	17-Apr	18-Apr	19-Apr	20-Apr	21-Apr	22-Apr	23-Apr	24-Apr	25-Apr	26-Apr	27-Apr	28-Apr	29-Apr	30-Apr	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	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	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
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	0.02	0.00	0.00
5	0.00	0.00	0.80	0.00	0.00	0.38	0.00	0.82	0.09	0.21	0.88	0.00	0.00	0.49	0.18
6	0.00	0.91	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.20	1.00	0.00	0.00	0.59	0.55
7	0.00	1.00	1.00	0.01	0.00	1.00	0.00	0.66	1.00	0.02	1.00	0.00	0.00	0.93	0.58
8	0.12	1.00	1.00	0.00	0.00	0.78	0.06	0.00	0.77	0.06	0.92	0.00	0.00	0.85	0.56
9	0.05	0.83	0.98	0.08	0.00	0.00	0.63	0.00	0.47	0.31	0.98	0.00	0.00	0.03	0.48
10	0.01	0.88	1.00	0.00	0.00	0.10	0.39	0.00	0.62	0.38	0.68	0.02	0.00	0.00	0.45
11	0.15	0.41	0.97	0.01	0.00	0.17	0.31	0.00	0.60	0.73	0.01	0.10	0.00	0.00	0.41
12	0.12	0.75	0.95	0.02	0.00	0.65	0.11	0.00	0.62	0.56	0.00	0.02	0.00	0.00	0.44
13	0.05	0.46	0.86	0.00	0.00	0.62	0.13	0.00	0.56	0.21	0.00	0.02	0.00	0.00	0.41
14	0.28	0.62	0.91	0.00	0.00	0.81	0.72	0.00	0.92	0.65	0.00	0.14	0.01	0.00	0.47
15	0.04	0.59	1.00	0.60	0.00	1.00	0.73	0.00	0.54	0.00	0.00	0.00	0.47	0.00	0.45
16	0.01	0.83	1.00	0.26	0.00	0.91	0.16	0.00	0.28	0.04	0.00	0.00	0.55	0.00	0.40
17	0.00	1.00	0.93	0.00	0.00	0.92	0.68	0.00	0.46	0.00	0.00	0.00	0.90	0.00	0.48
18	0.00	0.78	0.00	0.00	0.00	0.96	0.73	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.22
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	0.06	0.06	0.06	0.05	0.01
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	0.82	10.05	12.39	0.98	0.00	9.29	4.65	2.48	7.93	3.37	5.54	0.36	2.34	2.94	183.16

APRIL 2017	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
1	10.57	16.0	1155	4.8	2356	79.9	99	2357	48	1155	7.03	6.25	7.6	949	5.2	2356	1009.88	1015.7	2359	1006.6	208
2	9.00	15.6	1521	3.5	2358	77.9	100	421	47	1522	4.90	5.33	6.9	1322	4.6	2358	1022.32	1026.7	2349	1015.6	0
3	9.33	16.9	1346	0.8	546	76.9	100	605	44	1254	4.93	5.37	7.1	1057	3.9	546	1025.12	1026.8	8	1023.1	1713
4	11.44	14.6	1314	7.3	2359	81.2	96	631	64	1710	8.24	6.70	7.6	1259	4.6	2359	1026.32	1030.9	2320	1022.7	230
5	9.43	14.8	1552	3.3	612	68.6	94	614	47	1427	3.66	4.84	6.3	1541	4.4	612	1031.37	1032.9	815	1029.7	1627
6	9.51	16.7	1417	2.1	526	75.7	98	647	46	1409	4.95	5.32	7.0	1531	4.2	526	1030.66	1032.9	822	1028.5	1815
7	9.60	17.6	1628	1.9	525	77.0	99	600	44	1334	5.23	5.45	7.2	1413	4.2	525	1027.12	1029.4	31	1024.6	1648
8	11.31	21.0	1447	1.4	529	68.8	100	605	29	1329	4.59	5.23	7.5	1627	4.0	1014	1023.34	1025.7	6	1021.1	1638
9	13.75	24.5	1357	3.1	446	68.2	99	619	31	1541	6.85	6.16	9.0	1400	4.6	502	1020.22	1022.1	2357	1017.6	1617
10	9.82	13.1	1514	6.1	2226	65.6	92	520	45	1515	3.38	4.80	6.0	516	4.0	1444	1026.07	1028.8	2303	1022.0	1
11	10.11	15.8	1451	4.5	532	65.0	87	532	44	1333	3.51	4.81	6.3	1416	4.2	1115	1027.22	1029.6	631	1023.5	2349
12	10.96	16.9	1502	4.6	401	70.1	94	402	45	1328	5.37	5.53	6.7	1144	4.8	401	1019.32	1023.7	0	1016.6	1622
13	9.55	14.3	1439	3.5	519	66.3	97	620	42	1439	3.18	4.75	6.1	57	3.7	922	1018.61	1019.7	825	1017.5	1612
14	10.45	14.5	1558	3.2	533	72.2	93	529	58	1608	5.56	5.65	6.9	1553	4.3	525	1017.02	1018.4	652	1015.4	1719
15	10.46	14.7	1351	6.5	2347	64.2	95	338	37	1513	3.43	4.94	7.1	137	3.6	1803	1018.92	1022.8	2253	1015.6	21
16	10.25	14.9	1522	5.3	134	70.0	95	2331	44	1227	4.73	5.32	7.1	2341	4.0	24	1022.14	1024.0	749	1020.0	2346
17	9.35	13.9	1404	3.6	2357	78.3	95	2340	52	1406	5.60	5.61	7.0	6	4.6	2357	1023.30	1027.2	2358	1019.9	122
18	7.07	14.4	1441	1.0	329	66.2	99	500	30	1636	0.24	3.81	5.1	1036	2.5	1644	1031.46	1035.9	2358	1000.0	
19	7.99	14.6	1423	0.3	447	62.5	98	548	28	1507	0.27	3.80	4.9	844	2.7	1457	1036.52	1037.8	904	1035.1	1729
20	9.55	15.1	1536	2.3	457	77.8	99	2352	56	1123	5.73	5.68	7.7	1924	4.0	457	1035.80	1037.6	9	1033.8	1845
21	11.43	15.2	1116	5.6	118	72.6	99	203	50	1215	6.24	5.80	6.9	818	5.1	1141	1031.81	1034.1	31	1029.8	2245
22	11.01	16.9	1324	4.0	2357	63.0	94	2359	32	1659	3.68	4.90	6.4	1047	3.3	1659	1028.51	1030.0	3	1026.8	1747
23	9.79	15.5	1704	2.9	157	71.9	98	202	41	1526	4.44	5.15	6.8	900	4.2	1545	1025.68	1028.3	4	1021.5	2359
24	8.84	13.8	1143	3.8	225	72.3	99	601	39	2142	3.78	5.09	6.7	951	2.4	2142	1016.22	1021.6	6	1012.4	1656
25	4.97	11.8	1506	0.3	357	62.2	96	2148	28	1506	-2.39	3.22	4.4	1908	2.2	1233	1014.67	1016.8	2343	1013.3	1517
26	4.69	11.8	1452	0.4	2324	79.0	99	2335	37	1311	0.93	4.04	5.5	1621	3.0	1311	1018.74	1021.6	2335	1016.5	315
27	6.20	11.0	1245	-1.4	433	76.9	100	330	41	1109	1.95	4.40	5.8	2002	3.2	1109	1019.28	1021.5	0	1017.0	1815
28	9.79	14.3	1414	6.5	2358	73.5	89	549	49	1415	5.12	5.44	6.4	1017	4.8	1348	1017.02	1017.8	744	1016.1	1737
29	9.66	16.6	1545	2.0	325	68.1	99	350	41	1619	3.50	4.87	6.1	1120	4.2	308	1014.03	1017.1	0	1008.5	2357
30	12.22	17.9	1141	7.9	445	62.7	96	2359	35	1144	4.88	5.48	7.7	2207	4.4	1151	1001.20	1008.6	6	997.7	1622

Total	Mean	Max	Min	Tn	RHmn	RH x	RH n	Tdmn	r mn	r x	r n	p mn	p x	p n
	9.60	15.49	-1.36	3.37	71.2	96.54	42.46	4.12	5.12	6.66	3.96	1022.66	1025.53	1018.94
	13.75	24.52		7.90	81.2	100.00	64.00	8.24	6.70	9.02	5.22	1036.52	1037.77	1035.08
	4.69	10.96			62.2	87.00	28.22	-2.39	3.22	4.39	2.24	1001.20	1008.59	997.66

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

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.