

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

MARCH 2016

Temperature (°C / °F)			Anomaly	Rank in the past 135 years			
Mean maximum	10.6	51.1	-0.6	67 th highest			
Mean minimum	1.8	35.2	-1.4	60 th lowest			
Daily mean	6.2	43.2	-1.0	61 st lowest			
Highest maximum	14.9	58.8	on 25 th	Lowest maximum	7.2	45.0	on 2 nd
Highest minimum	6.6	43.9	on 25 th	Lowest minimum	-4.3	24.3	on 8 th
Mean grass minimum	-1.5	29.3	-1.4	Lowest grass minimum	-10.0	14.0	on 8 th
Mean earth @30 cm	7.0	44.6	-0.1	Earth @100 cm	7.7	45.9	
Frost duration (hrs)	46.7			Rain duration (hrs)	47.9		
Rainfall total (mm / in)	66.7	2.63	146 %	28 th highest			
Highest daily fall	21.0	0.83	on 27 th	Rain rate, max, mm/hr	31	on 29 th	
Number of: Dry days (<0.2mm)	18	Wet days (>0.9mm)	8	days ≥5mm	4		
Sunshine total (hrs) 122.8	Daily mean 3.96	110 %		Sunniest day 11.0	on 17 th		
N ^o days with: Air frost 10	Ground frost 18	Snow falling 3	Snow lying 0				
Thunder 1	Hail ≥5mm 2	Small hail/ice 4	Fog @09 2	Nil sun 6			
Pressure MSL : Mean @09 GMT, mbar 1014.9	-1.0	Highest 1035.6	on 13 th	Lowest 972.5	on 28 th		
Relative humidity : Mean (%) 80.3	Lowest 26	on 14 th	Water vapour (g/kg), mean at 09 and 15 GMT 4.7,	4.6			
Overall mean wind speed (mph) 7.4	Windiest day 16.0	on 28 th	Max gust 54	on 28 th			
Wind direction (days) N 2	NE 10	E 1	SE 0	S 3	SW 6	W 4	NW 5
Least windy day (mph) 2.1	on 12 th	Calm; less than 0.5 mph (minutes)	807				

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

Notes:

Temperature Below Average, Rainfall and Sunshine Above Average.

Unsettled weather until the 10th was replaced by dry anticyclonic conditions until the 23rd with a return to unsettled and at times stormy weather for the final 9 days. **Temperature:** The mean, while 1.0° below the current 30 year average, is only 0.2° below the long term median. In recent years we have had colder Marches, 2013 was the 6th coldest in 135 years, and 2006 was also cooler than this March. Both the mean minimum and mean grass minimum are lower than in any of the 3 winter months. There was an absence of extremes, with the span of daily maxima reduced from an average of 11.1° to just 7.7° this month. Thus while the highest max is 1.6° below the median, the lowest max is 2.6° above its median. The highest min is 2.2° below the median and the lowest min is 0.2° below its median. Throughout the month there were only a scattering of days with a maximum above normal, the greatest anomalies being +3.7° on the 1st and +3.1° on the 25th, with most days being near or below normal, anomaly -4.1° on the 18th and -3.4° on the 10th. Extreme anomalies for daily min ranged from -7.5 ° on the 8th to +2.8° on the 25th, but anomalies exceeding -4° also occurred on the 5th, 7th, 13th, 15th, 18th and 22nd. Earth temperatures at both 30 cm and 1 m depth have returned to normal. There were 3 more days with air frost than average, and the duration of air frost is 6.6 hours above average. **Rainfall:** Although there was a long dry spell of 14 days, ending on the 23rd, and the number of dry days being 1 more than average, the rainfall total is 46 % above average, and is in the wet category. However, 3 Marches in this millennium have been wetter, 2013, 2008 and 2001. The rainfall distribution was uneven as can be seen by the rainfall accumulation compared with normal, with a surplus of 13 mm by the 9th which had become a deficit of 8 mm by the 23rd, only to end the month over 20 mm in surplus. This was helped by the 21 mm which fell on the 27th, the wettest March day since 1984, and 10th wettest in 113 years. Snow fell on the 2nd, 4th and 5th, but mostly from wintry showers that also contained ice pellets and hail. Large hail fell on the 2nd and 27th, and there was also thunder on the latter. The duration of measurable rain was 15 % above average. **Sunshine:** Sunshine this March has been a little above the climatological average, but is very close to the average since 1999, when the current detector came into use. The accumulation of daily sunshine shows a deficit of nearly 10 hours by the 10th, with only 2 days in this period having >50 % of the maximum. However, the next 7 days were sunnier, with 4 days having >50 % of the maximum, and the 17th having 92 %, resulting in a surplus of 8 hours by the 17th. The final 14 days saw just 4 with >50 % of the maximum, and 5 days with zero sun, but the 22nd and 25th were sunny with over 80 % of the max, and this allowed the accumulation to stay close to normal, with a small surplus by the 31st. Overall there were 15 days with <3 hours, 10 with =>6 hours and 4 with =>9 hours. **Wind:** The mean speed is 0.2 mph below average, but the month's highest gust is 6 mph above average and 2nd highest after 2015 since 2004. There were windy periods at both ends of the month, the first 2 days saw gusts of 43 mph, and the 25th to 28th had a peak gust of 54 mph. The strong winds on the 1st and 2nd decreased to light by the 6th, increasing fresh on the 9th, then dropping very light to the 12th, remaining light or moderate until the 25th, increasing strong or very strong until the 28th, decreasing light by the 31st. Directions were SW'ly at first, veering NW'ly on the 5th, backing NE'ly by the 9th, backing NW'ly on the 23rd and S'ly by the 26th, veering SW'ly on the 28th and N'ly on the 31st.

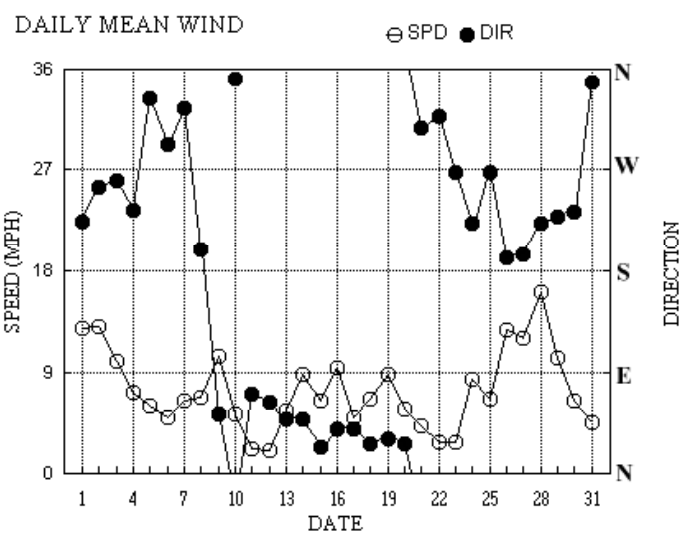
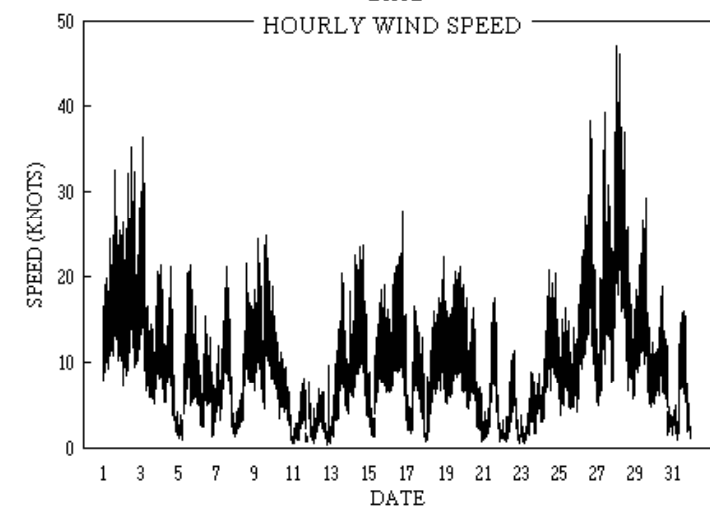
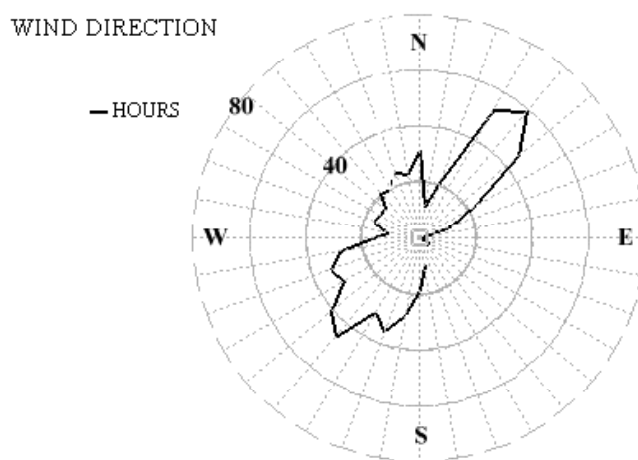
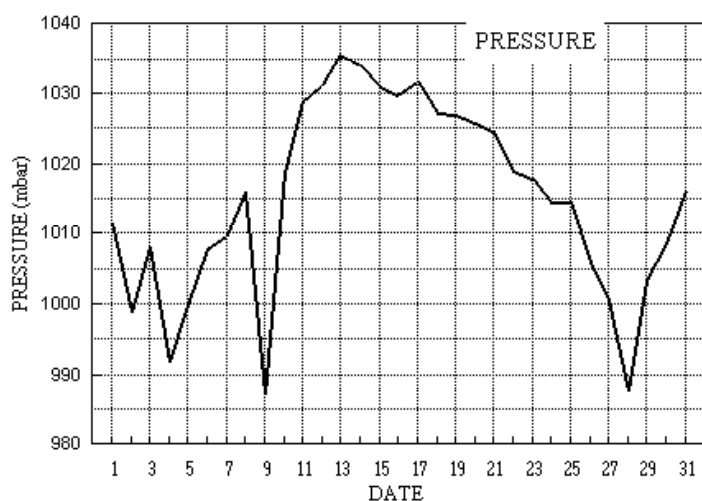
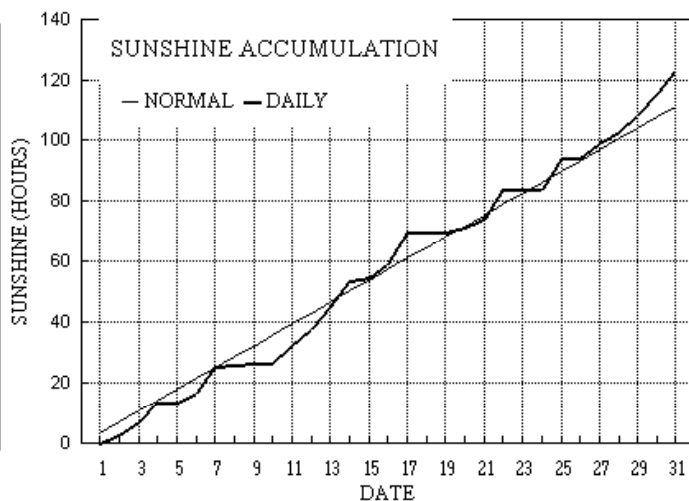
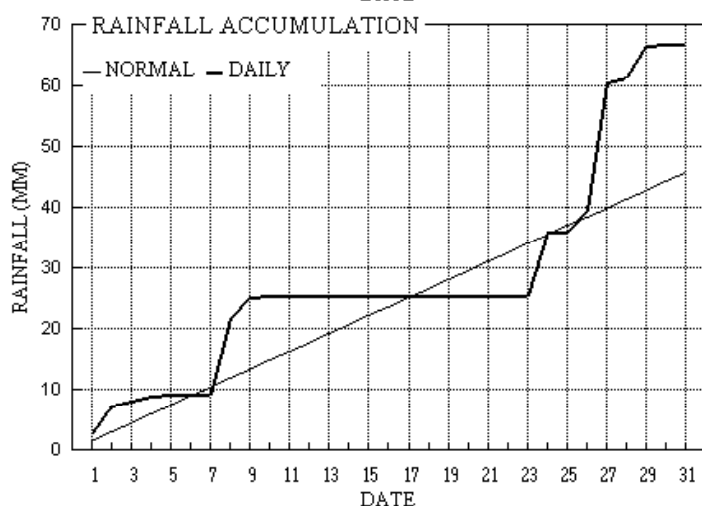
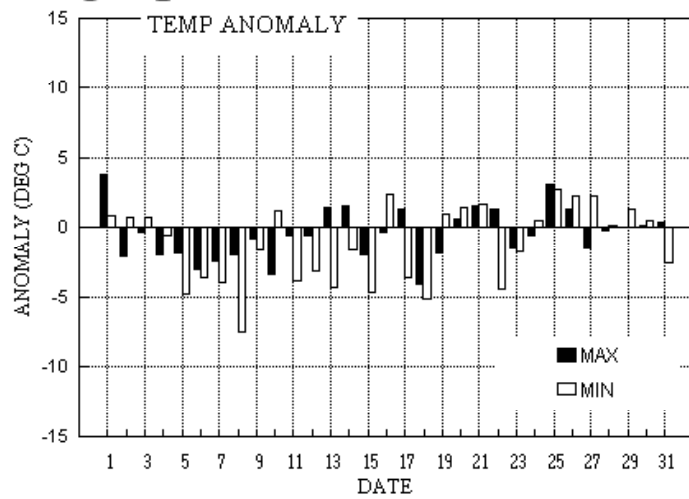
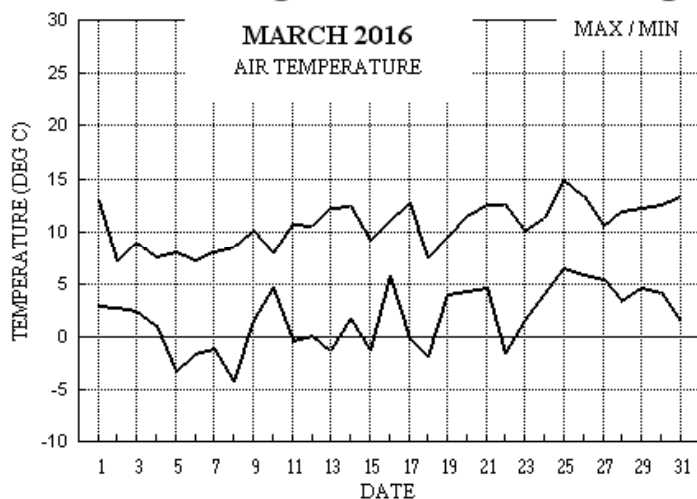
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 31 st			
-1.4°	-1.9°	170%	75%	-0.4°	-2.1°	0%	125%	+0.4°	+0.3°	259%	131%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for March 2016



Month: MARCH 2016

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 mean ddd ff sp	Max gust ddd gg HHhh	High hr ddd ff	Rain HH hrs							
1	12.9	2.9	2.7	0.8	5.8	7.6	0.2	0.0	1011.4	0	0	0	0	224	10.3	11.2	256	33	1658	253	16	2.9		
2	7.2	2.8	4.6	-1.1	6.5	7.6	2.4	0.0	998.7	0	1	1	0	254	10.8	11.4	271	35	1218	270	18	12	1.6	
3	9.0	2.5	0.9	-0.8	6.3	7.6	4.6	0.0	1007.9	0	1	0	0	260	5.5	8.6	301	37	0357	295	15	03	1.6	
4	7.6	1.0	0.8	-3.7	6.4	7.6	6.2	2.9	991.8	0	1	1	0	234	4.9	6.2	262	22	0115	210	10	13	1.2	
5	8.1	-3.3	0.2	-8.7	6.1	7.6	0.4	8.2	999.7	1	1	1	0	334	4.6	5.2	349	22	1412	357	10	13	0.3	
6	7.3	-1.5	tr	-6.9	5.7	7.6	2.9	3.1	1007.8	1	1	0	0	293	4.0	4.4	296	16	1015	286	7	10	0.0	
7	8.1	-1.1	0.0	-6.7	5.6	7.6	9.1	7.4	1009.7	1	1	0	0	325	5.1	5.5	346	21	1345	342	10	11	0.0	
8	8.6	-4.3	12.5	-10.0	5.3	7.5	0.1	7.9	1016.0	1	1	0	0	199	5.6	5.8	228	22	1356	218	10	14	6.1	
9	10.1	1.6	3.5	5.4	5.7	7.4	0.7	0.0	987.0	0	0	0	0	52	3.3	9.0	4	25	1402	353	13	14	4.7	
10	7.9	4.6	0.1	4.2	6.4	7.4	0.0	0.0	1018.8	0	0	0	0	351	4.4	4.6	346	16	0125	353	8	01	0.0	
11	10.8	-0.4	0.0	-5.0	6.4	7.4	6.2	3.4	1028.9	1	1	0	0	70	0.9	1.9	25	8	1428	111	4	20	0.0	
12	10.6	0.2	0.0	-3.7	6.5	7.4	5.4	0.0	1031.1	0	1	0	0	63	0.8	1.8	60	10	2127	119	3	11	0.0	
13	12.3	-1.2	0.0	-6.0	6.5	7.5	6.8	2.6	1035.5	1	1	0	0	49	4.8	4.8	35	21	1442	55	8	16	0.0	
14	12.5	1.7	0.0	-4.1	6.7	7.5	8.8	0.0	1034.0	0	1	0	0	48	7.6	7.7	58	24	1720	59	11	14	0.0	
15	9.1	-1.3	tr	-5.7	6.6	7.5	1.1	2.0	1030.8	1	1	0	0	24	5.4	5.6	25	19	2051	23	10	20	0.0	
16	11.1	5.8	0.0	4.4	6.7	7.6	4.0	0.0	1029.8	0	0	0	0	39	8.1	8.1	64	28	1835	55	11	18	0.0	
17	12.8	-0.2	tr	-5.4	7.0	7.6	11.0	0.5	1031.6	1	1	0	0	40	4.2	4.3	47	17	1012	49	8	11	0.0	
18	7.4	-1.9	tr	-6.8	6.9	7.7	0.0	4.0	1027.2	1	1	0	0	26	5.5	5.7	36	23	2307	32	9	20	0.0	
19	9.4	4.0	tr	4.3	6.8	7.7	0.0	0.0	1026.9	0	0	0	0	30	7.6	7.6	19	21	1929	25	10	19	0.1	
20	11.5	4.3	0.0	3.9	7.1	7.7	1.4	0.0	1025.8	0	0	0	0	27	4.8	4.9	34	19	0018	24	8	11	0.0	
21	12.6	4.7	0.0	-0.2	7.3	7.7	2.7	0.0	1024.7	0	1	0	0	307	2.8	3.7	317	18	1521	324	8	15	0.0	
22	12.6	-1.5	0.0	-5.9	7.5	7.8	10.1	4.7	1019.0	1	1	0	0	317	1.6	2.4	323	12	1725	331	5	17	0.0	
23	10.1	1.5	0.0	-3.3	7.6	7.8	0.0	0.0	1017.7	0	1	0	0	268	1.5	2.4	271	9	1349	228	5	23	0.0	
24	11.3	4.1	10.6	1.5	7.7	7.9	0.0	0.0	1014.6	0	0	0	0	222	7.1	7.2	254	21	1232	237	10	12	13.5	
25	14.9	6.6	tr	4.9	8.0	8.0	10.4	0.0	1014.4	0	0	0	0	268	2.8	5.7	329	17	0804	332	8	08	0.0	
26	13.4	5.9	3.5	2.7	8.5	8.1	0.0	0.0	1005.9	0	0	0	0	191	10.7	11.1	198	39	1549	199	17	17	2.4	
27	10.6	5.4	21.0	2.7	8.5	8.1	4.6	0.0	1000.4	0	0	0	1	195	10.0	10.4	198	39	1147	173	17	23	10.3	
28	12.0	3.4	0.8	2.5	8.4	8.2	3.9	0.0	987.6	0	0	0	0	223	12.1	13.9	175	47	0154	243	22	06	0.6	
29	12.3	4.6	5.3	2.4	8.4	8.3	5.3	0.0	1003.2	0	0	0	0	228	8.7	8.9	232	29	1455	244	12	11	2.4	
30	12.6	4.2	0.2	1.0	8.4	8.4	7.3	0.0	1008.3	0	0	0	0	233	5.3	5.6	235	19	1104	238	10	10	0.2	
31	13.4	1.4	0.0	-2.4	8.5	8.4	7.2	0.0	1016.1	0	1	0	0	348	3.3	3.9	320	16	1443	356	8	12	0.0	
Total			66.7				122.8	46.7																47.9
Mean	10.6	1.8		-1.5	7.0	7.7	3.96	1.5	1014.9					268	1.4	6.4								
Anom	-0.6	-1.4	146%	-1.4	-0.1	+0.2	110%			-1.0														
Daily mean		6.2																						
Anom		-1.0																						

Number of days with:

Air frost = 10 Ground frost = 18 Nil sun = 6
 Snow falling = 3 Snow lying = 0 Thunder = 1
 Hail=>5mm = 2 Hail<5mm or ice = 4 Fog at 09GMT = 2

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 MARCH 2016

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cl	N	Ch	shs	N	Ch	shs	Date	Remarks												
1	57	8	21	11	21	9.4	8.2	92	6.7	1011.4	7	034	51	6	5	8	5	3	/	/	82706	87708	88615						1												
2	68	7	23	12	32	4.1	2.3	88	4.5	998.7	7	030	27	8	2	6	9	4	6	3	82712	83630	85070						2	2Cb25 3Ac58											
3	86	3	32	07	16	5.1	-0.7	66	3.6	1007.9	2	021	03	0	0	1	5	6	0	5	81640	83275							3	COTRA											
4	80	1	23	07	12	4.3	0.1	74	3.9	991.8	2	004	02	0	0	1	0	9	3	1	81365									4	1Ci70										
5	35	7	32	05	13	0.8	0.1	95	3.9	999.7	1	022	68	7	1	7	5	2	/	2	85705	87640									5	/Ci70									
6	63	5	29	04	11	3.2	0.6	83	4.0	1007.8	0	005	01	1	1	3	8	4	3	0	83613											6	1Cu025 2Ac070 Cu hum								
7	67	1	32	08	14	2.8	-1.7	72	3.3	1009.7	2	018	02	0	0	1	5	7	0	0	81650											7									
8	70	8	20	04	07	1.6	-3.3	70	3.0	1016.0	2	001	03	2	2	8	5	6	/	/	82635	86640	88650									8									
9	65	6	11	08	16	7.5	5.3	86	5.7	987.0	3	018	01	6	2	2	5	4	7	8	81712	85275											9	2Sc20 2Ac65 COTRA							
10	60	8	01	05	10	5.2	3.5	89	4.9	1018.8	2	030	58	5	2	8	5	3	/	/	81708	84712	88625											10							
11	01	9	35	01	03	1.2	1.1	99	4.0	1028.9	2	012	45	4	4	9	/	/	/	/														11	Vis 110m						
12	01	9	06	02	07	3.2	3.1	99	4.6	1031.1	1	013	45	4	4	9	/	/	/	/															12	vv 100m					
13	11	8	04	04	07	3.6	3.0	96	4.6	1035.5	1	013	10	4	2	8	6	0	/	/	88701															13					
14	58	7	04	10	22	5.3	0.7	72	3.9	1034.0	2	002	05	2	2	7	5	4	/	/	87618																14				
15	58	6	02	07	11	7.6	4.2	79	5.0	1030.8	2	001	05	2	2	2	6	4	0	1	82710	86075															15	1Sc30 COTRA			
16	63	3	04	09	21	7.3	3.0	74	4.6	1029.8	3	009	02	5	1	3	8	5	0	0	83820																16	1Sc35 Cu hum			
17	56	0	04	05	10	5.5	2.3	80	4.4	1031.6	2	007	05	0	0	0	0	9	0	0																	17				
18	58	8	02	08	13	4.0	2.7	91	4.5	1027.2	4	000	51	5	2	8	6	2	/	/	83705	86706	88708															18			
19	59	8	03	06	15	5.7	3.5	86	4.8	1026.9	2	007	50	5	2	8	5	4	/	/	83710	86615	88620																19		
20	80	8	02	07	12	5.7	2.9	82	4.6	1025.8	0	003	21	6	2	8	5	4	/	/	83613	88620																	20		
21	58	7	29	03	07	8.3	4.5	77	5.1	1024.7	2	004	05	2	2	7	5	6	/	/	87645																	21			
22	58	3	33	02	04	7.1	2.5	75	4.7	1019.0	7	005	05	0	0	0	0	9	0	1	83080																	22	COTRA		
23	56	8	25	02	04	6.5	3.1	79	4.7	1017.7	2	005	05	2	2	8	5	6	/	/	88638																		23		
24	60	8	23	07	14	7.4	4.4	81	5.2	1014.6	1	002	05	2	2	1	5	7	2	/	81650	88460																	24		
25	72	1	33	08	17	9.3	4.7	73	5.3	1014.4	2	027	03	1	1	1	1	4	0	0	81818																		25	Cu fra	
26	35	8	17	10	23	9.1	7.7	91	6.5	1005.9	7	026	51	5	2	8	5	2	/	/	86705	88615																	26		
27	80	6	20	13	23	9.5	5.5	76	5.7	1000.4	8	001	15	1	1	4	9	5	6	3	82920	83640	85072																	27	1Ac62 Absent 27&28 vv&cld est
28	82	7	24	16	32	7.9	3.7	75	5.1	987.6	1	124	02	6	2	6	8	5	7	/	82820	85630	85360																28		
29	82	3	24	10	21	8.8	2.6	65	4.6	1003.2	2	015	03	0	0	1	2	5	6	3	81825	83070																	29	1Ac65 Cu med Cb top SW	
30	84	5	23	07	14	7.7	3.7	76	5.0	1008.3	2	020	03	1	1	1	8	5	3	1	81820	83072																	30	1Sc35 1Ac69 COTRA Cu hum	
31	80	2	33	07	12	7.9	3.2	72	4.7	1016.1	1	017	01	1	1	1	8	5	0	2	81820																		31	1Sc50 2Ci72 Cu fra	

Mean vis = 16.9 km

Mean cloud = 5.7 71%

Mean wind speed = 6.9 kn

Mean gust = 14 kn

Mean TT = 5.9 °C

Mean TdDd = 2.8 °C

Mean RH = 81.1 %

Mean r = 4.7 g/kg

Mean PPP = 1014.9 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

TdDd = 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 MARCH 2016

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cl	N	Ch	shs	N	Ch	shs	Date	Remarks
1	83	7	25	13	25	12.1	8.9	81	7.1	1006.9	6	015	02	2	2	7	5	4	/	/	86615	87620						1	
2	58	7	28	14	29	6.6	0.3	64	3.9	998.0	2	024	16	8	1	7	9	4	/	3	81815	86930	83070				2	Cu fra jp NW-N	
3	84	7	23	07	11	8.3	3.2	70	4.8	1005.2	8	018	02	8	2	7	8	5	/	1	85825	84645						3	/Ci75 Cu med
4	84	6	25	06	15	6.1	-2.5	54	3.2	989.9	7	011	15	1	1	3	9	6	6	3	81935	83840						4	1Sc56 1Ac59 1Ci70 Cu con jp SE
5	80	7	02	06	22	5.5	2.0	78	4.4	1001.8	2	008	87	8	2	7	8	6	/	1	83830	86650						5	Cu med
6	84	7	30	06	11	5.4	-0.4	66	3.7	1004.7	6	017	80	8	2	7	8	6	/	/	83830	83645	87656					6	
7	86	6	34	08	19	6.6	-2.8	51	3.1	1010.7	3	006	03	1	1	6	4	6	0	0	82845	85650						7	Cu hum
8	65	8	22	11	18	7.9	2.6	69	4.6	1013.0	7	014	15	2	2	8	5	5	/	/	87625	88630						8	jp N
9	62	8	35	12	25	6.3	4.0	85	5.1	997.4	2	047	60	6	2	8	5	4	/	/	85712	88620						9	
10	64	8	35	05	10	7.8	4.2	78	5.1	1021.9	1	013	01	2	2	8	8	4	/	/	85815	88640						10	Cu hum
11	58	2	08	03	08	10.2	2.1	57	4.3	1027.8	7	014	05	0	0	1	1	6	0	1	81835							11	2Ci80 Cu hum
12	58	7	27	03	06	10.0	2.4	59	4.4	1030.5	5	005	05	2	2	3	0	9	3	1	83365	87075						12	COTRA Halo 22° part Parhelion
13	64	1	04	07	21	12.0	2.7	53	4.5	1033.4	7	018	02	0	0	0	0	9	0	1	81075							13	
14	80	5	06	10	22	12.1	-3.7	33	2.8	1030.4	7	024	03	1	1	0	0	9	0	1	85080							14	
15	60	8	02	08	15	7.5	5.0	84	5.3	1029.5	7	008	05	5	2	8	5	4	/	/	87710	88615						15	
16	67	4	04	10	23	8.9	0.6	56	3.9	1028.6	6	010	01	1	1	4	4	6	0	0	81835	84640						16	Cu hum
17	61	1	07	08	14	12.6	0.7	44	3.9	1028.6	7	019	02	0	0	1	1	6	0	0	81845							17	Cu hum
18	72	8	03	06	15	7.3	4.1	80	5.0	1025.6	8	014	02	2	2	8	5	4	/	/	86613	88616						18	
19	84	8	03	10	19	8.1	2.8	69	4.5	1025.9	6	006	02	5	2	8	5	5	/	/	86620	88625						19	
20	75	3	05	05	12	10.4	3.0	60	4.6	1023.7	7	016	01	1	1	3	8	6	0	0	81832	83640						20	Cu hum
21	68	7	28	07	17	12.1	2.6	52	4.5	1021.6	7	020	02	2	2	6	8	6	/	1	81835	86640	86075				21	COTRA Cu hum	
22	65	3	30	05	10	12.1	2.0	50	4.4	1016.3	7	017	02	1	1	3	4	6	0	0	81838	83642						22	
23	59	7	26	03	09	9.7	1.4	56	4.2	1016.5	6	010	05	2	2	7	5	6	/	/	83635	87640						23	
24	64	8	23	11	18	9.6	6.3	80	5.9	1012.2	7	010	01	6	2	7	8	4	2	/	81715	83820	85640				24	8Ns50 Cu med	
25	84	6	26	06	11	14.2	2.1	44	4.4	1015.4	0	000	03	1	1	1	4	7	0	6	81650	84075						25	2Cs73
26	58	8	18	16	28	13.3	10.3	82	7.9	998.0	7	044	51	6	5	8	5	4	/	/	85712	88620						26	Absent 26 to 28 inc vv&cld est
27	58	7	23	16	31	7.1	4.1	81	5.1	999.1	8	009	81	8	1	7	9	5	6	3	83930	83640						27	4Ac60 /Ci70
28	82	5	26	09	24	10.8	2.6	57	4.7	992.7	1	011	03	1	1	4	8	6	6	1	82835	83650						28	2Ac58 /Ci75
29	50	8	23	13	29	8.2	3.3	71	4.8	1003.9	5	006	88	8	2	5	3	6	2	/	82945	83848	88556				29	Ice pell 2-3 mm Cb embedded in Ns.	
30	86	7	26	06	14	11.1	4.3	63	5.2	1008.5	7	005	02	8	1	2	8	6	3	8	82835	87272						30	1Sc50 1Ac66 COTRA Cu med Halo 22° part
31	86	5	35	09	16	12.3	1.0	46	4.1	1015.6	7	003	02	2	2	5	4	6	0	0	82840	84650						31	Cu med

Mean vis = 26.3 km

Mean cloud = 6.1 76%

Mean wind speed = 8.4 kn

Mean gust = 18 kn

Mean TT = 9.4 °C

Mean TdTd = 2.6 °C

Mean RH = 63.6 %

Mean r = 4.6 g/kg

Mean PPP = 1014.0 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 Sunshine Hourly analysis 2016	Hour	01-Mar	02-Mar	03-Mar	04-Mar	05-Mar	06-Mar	07-Mar	08-Mar	09-Mar	10-Mar	11-Mar	12-Mar	13-Mar	14-Mar	15-Mar	16-Mar
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	0.00	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
6	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.14	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
7	0.00	0.52	0.97	0.95	0.00	0.86	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.12
8	0.00	0.00	1.00	1.00	0.00	0.26	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.93	0.68
9	0.00	0.03	1.00	1.00	0.00	0.87	1.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.71	0.13	0.36
10	0.00	0.00	1.00	0.99	0.00	0.48	1.00	0.00	0.02	0.00	0.00	0.07	0.00	0.22	1.00	0.00	0.06
11	0.00	0.03	0.00	0.61	0.00	0.20	0.73	0.00	0.00	0.00	0.91	0.48	0.86	1.00	0.00	0.00	0.02
12	0.00	0.37	0.07	0.38	0.01	0.19	0.82	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
13	0.18	0.45	0.20	0.94	0.18	0.00	0.66	0.00	0.00	0.00	1.00	0.89	1.00	1.00	1.00	0.00	0.17
14	0.01	0.74	0.03	0.13	0.11	0.00	0.30	0.00	0.00	0.00	1.00	0.97	1.00	1.00	0.00	0.00	0.35
15	0.00	0.20	0.24	0.16	0.05	0.00	0.54	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.70
16	0.02	0.00	0.13	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.62	1.00	1.00	0.00	0.00	0.78
17	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.00	0.19	0.45	0.74	0.99	0.00	0.00	0.68
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	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	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	0.21	2.35	4.64	6.17	0.35	2.87	9.05	0.08	0.69	0.00	6.17	5.43	6.82	8.81	1.06	3.95	

Hour	17-Mar	18-Mar	19-Mar	20-Mar	21-Mar	22-Mar	23-Mar	24-Mar	25-Mar	26-Mar	27-Mar	28-Mar	29-Mar	30-Mar	31-Mar	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	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
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
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
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
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	0.00	0.00	0.00
6	0.29	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.01	0.00	0.14	0.00	0.90	0.95	0.00	0.10
7	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.85	0.00	0.78	0.00	1.00	0.74	0.99	0.35
8	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.79	0.01	1.00	1.00	1.00	0.38
9	1.00	0.00	0.00	0.00	0.67	1.00	0.00	0.00	1.00	0.00	0.12	0.68	0.69	1.00	1.00	0.42
10	1.00	0.00	0.00	0.00	0.80	1.00	0.00	0.00	1.00	0.00	0.63	0.53	0.70	0.99	0.53	0.39
11	1.00	0.00	0.00	0.00	0.46	0.58	0.00	0.00	1.00	0.00	0.04	0.49	0.44	0.54	0.15	0.31
12	1.00	0.00	0.00	0.20	0.39	0.55	0.00	0.00	0.98	0.00	0.00	0.89	0.57	0.38	0.41	0.36
13	1.00	0.00	0.00	0.00	0.06	0.69	0.00	0.00	0.80	0.00	0.68	0.62	0.00	0.55	0.57	0.38
14	1.00	0.00	0.00	0.10	0.32	0.99	0.00	0.00	0.80	0.00	0.33	0.11	0.00	0.09	0.55	0.32
15	1.00	0.00	0.00	0.27	0.05	0.98	0.00	0.00	1.00	0.00	0.51	0.00	0.00	0.44	0.17	0.33
16	1.00	0.00	0.00	0.03	0.01	1.00	0.00	0.00	0.93	0.00	0.41	0.52	0.00	0.31	0.69	0.34
17	0.70	0.00	0.00	0.84	0.00	0.87	0.00	0.00	0.95	0.00	0.19	0.00	0.00	0.36	0.92	0.28
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.21	0.01
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
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
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
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
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
Tot	10.99	0.00	0.00	1.44	2.74	10.11	0.00	0.00	10.44	0.00	4.63	3.85	5.31	7.34	7.18	122.69

MARCH 2016	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	8.89	13.2	1330	4.0	104	87.4	97.7	304	70.6	1804	6.84	6.23	8.4	1328	4.2	0	1010.67	1023.5	7	1003.4	0	2.1
2	5.34	8.1	4	2.9	650	77.9	95.3	1019	59.5	1448	1.74	4.37	5.6	123	3.6	1740	999.80	1003.5	0	994.6	1148	4.5
3	6.38	9.3	1348	2.6	713	72.7	96.7	2315	53.4	1055	1.74	4.38	6.2	2359	3.4	1009	1003.23	1008.0	1044	992.3	2349	0.4
4	4.03	8.0	1308	-1.7	2340	78.5	99.0	2353	47.4	1439	0.37	4.01	6.2	11	3.0	1508	991.61	995.0	2359	989.8	1502	1.0
5	2.25	8.4	1439	-3.2	530	87.7	99.0	610	56.1	1433	0.25	3.93	5.0	1323	3.1	530	1000.77	1006.5	2359	995.0	4	0.2
6	3.35	7.6	1215	-1.3	653	78.2	99.0	731	57.2	1550	-0.30	3.74	4.8	1143	3.2	1733	1005.97	1007.9	806	1004.0	1728	0.0
7	2.78	8.4	1342	-2.6	2359	69.8	92.8	2324	42.9	1422	-2.65	3.14	3.8	1340	2.6	1704	1010.25	1015.4	2359	1005.1	0	0.0
8	3.44	8.9	1329	-4.1	426	84.8	97.9	2155	60.1	1335	0.96	4.25	6.7	2358	2.6	356	1012.64	1016.2	920	1001.1	2359	0.4
9	7.35	10.4	1250	5.2	2356	91.0	98.4	651	59.6	1256	5.92	5.88	7.0	652	4.7	1256	996.22	1010.7	2358	984.8	634	12.8
10	5.76	8.2	1534	1.2	2353	91.2	99.0	2354	77.4	1459	4.39	5.15	5.6	1406	4.1	2359	1019.75	1026.5	2359	1010.6	0	0.2
11	3.73	11.1	1450	-0.3	653	89.2	99.0	715	47.9	1506	1.73	4.24	5.6	1123	3.6	1333	1028.27	1030.0	2334	1026.5	0	0.0
12	4.58	10.9	1336	0.3	406	87.7	99.0	846	47.5	1648	2.36	4.43	5.9	1219	3.6	1647	1030.75	1032.8	2255	1029.3	312	0.0
13	5.00	12.6	1450	-1.1	300	84.7	99.0	417	43.4	1550	2.19	4.36	5.8	1102	3.5	300	1034.25	1035.6	854	1032.6	5	0.0
14	6.42	12.8	1448	1.8	2351	66.2	94.4	5	26.0	1702	-0.24	3.72	5.2	1233	2.0	1702	1032.37	1034.9	54	1029.6	1713	0.0
15	5.22	9.4	1236	-1.2	552	89.2	99.0	553	76.0	855	3.55	4.88	5.9	1231	3.4	617	1030.12	1031.5	6	1029.0	1643	0.0
16	7.33	11.4	1528	3.7	2358	74.7	96.9	438	45.0	1522	2.88	4.64	5.8	439	3.5	1921	1029.44	1031.0	2301	1028.0	1604	0.0
17	5.74	13.1	1443	-0.1	628	77.7	99.0	453	39.7	1411	1.50	4.16	5.1	1038	3.5	1415	1029.89	1031.7	910	1027.7	1709	0.0
18	4.25	7.7	1502	-1.8	329	90.2	99.0	355	77.3	2322	2.72	4.58	5.4	1549	3.3	329	1026.92	1029.2	13	1025.3	1532	0.0
19	6.54	9.7	1306	5.1	607	78.3	95.9	920	61.3	1309	3.01	4.65	5.5	924	4.1	2308	1026.26	1027.0	916	1025.6	426	0.0
20	6.86	11.8	1513	4.4	603	76.3	96.6	606	49.4	1514	2.82	4.59	5.3	1503	3.9	1145	1025.02	1026.5	1	1023.4	1639	0.0
21	7.73	13.0	1212	1.6	2357	74.3	95.2	536	45.5	1253	3.07	4.69	5.7	1016	3.9	1953	1023.05	1024.9	915	1020.9	2350	0.0
22	5.38	13.0	1509	-1.4	543	77.6	99.5	511	45.7	1435	1.22	4.13	5.5	1112	3.4	618	1017.98	1021.0	12	1015.7	1646	0.0
23	7.02	10.4	1318	2.0	343	73.1	97.4	344	51.3	1319	2.22	4.44	5.4	1051	3.8	1313	1016.76	1018.0	1039	1015.8	2306	0.0
24	7.73	11.6	1237	4.2	427	85.1	97.6	2323	64.1	1245	5.32	5.59	6.8	2359	4.2	34	1013.01	1016.3	21	1009.3	2325	6.6
25	10.07	15.2	1442	6.0	2336	70.5	99.5	426	36.5	1536	4.32	5.23	7.1	424	3.7	1543	1013.61	1016.1	1351	1007.7	236	2.7
26	9.53	13.7	1600	6.0	120	86.6	95.7	1020	73.1	16	7.40	6.54	8.5	1527	4.6	22	1003.35	1014.0	0	994.8	1716	2.6
27	7.72	10.9	1404	5.5	356	82.5	95.8	1021	61.8	1443	4.88	5.46	6.5	1036	4.7	114	998.32	1001.4	953	984.8	2359	12.7
28	7.76	12.4	1338	3.5	631	78.9	94.2	612	42.9	1249	4.03	5.23	7.1	355	3.5	1235	988.53	998.3	2351	972.5	427	6.9
29	7.23	12.6	1248	4.8	27	78.2	97.1	1907	38.6	1257	3.30	4.88	5.9	1837	3.3	1257	1002.70	1004.8	2247	998.2	1	4.3
30	7.74	12.9	1522	3.7	2352	75.4	94.5	2350	44.8	1534	3.35	4.85	6.3	1214	3.9	1647	1008.26	1012.2	2357	1004.5	0	0.3
31	6.76	13.8	1626	1.3	2357	73.3	99.5	655	38.0	1627	1.68	4.27	5.3	855	3.5	1718	1015.81	1019.4	2359	1012.1	1	0.0
Total																						57.7
Mean	6.13	10.97		1.65		80.3	97.37		52.90		2.66	4.67	5.96		3.59		1014.37	1018.38		1009.48		
Max	10.07	15.20		6.04		91.2	99.50		77.40		7.40	6.54	8.52		4.73		1034.25	1035.57		1032.61		
Min	2.25	7.56		-4.12		66.2	92.80		26.01		-2.65	3.14	3.76		1.95		988.53	995.00		972.48		

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

NOTE: Temperature calibration error. All temperatures are approximately 0.2C high.

**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

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 or 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.