

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 2015

Temperature (°C / °F)			Anomaly	Rank in the past 134 years				
Mean maximum	16.2	61.2	+2.2	7 th highest				
Mean minimum	3.8	38.8	-0.6	61 st highest				
Daily mean	10.0	50.0	+0.8	17 th highest				
Highest maximum	23.6	74.5	on 15 th	Lowest maximum	10.6	51.1	on 4 th	
Highest minimum	10.7	51.3	on 25 th	Lowest minimum	-0.9	30.4	on 20 th	
Mean grass minimum	0.0	32.0	-0.7	Lowest grass minimum	-5.2	22.6	on 20 th	
Mean earth @30 cm	11.1	52.0	+1.2	Earth @100 cm	9.7	49.5		
Frost duration (hrs)	1.8			Rain duration (hrs)	22.0			
Rainfall total (mm / in)	15.6	0.61	32 %	13 th lowest				
Highest daily fall	4.8	0.19	on 24 th					
Number of: Dry days (<0.2mm)	22	Wet days (>0.9mm)	6	days ≥5mm	0			
Sunshine total (hrs)	214.5	Daily mean	7.15	134 %	Sunniest day	13.8	on 21 st	
N ^o days with: Air frost	3	Ground frost	19	Snow falling	0	Snow lying	0	
Thunder	0	Hail ≥5mm	0	Small hail/ice	0	Fog @09	0	
Nil sun	1							
Pressure MSL : Mean @09 GMT, mbar	1022.2	+7.2	Highest	1038.3	on 7 th	Lowest	1004.2	on 25 th
Relative humidity : Mean (%)	70.5	Lowest	25	on 15 th	Water vapour (g/kg), mean at 09 and 15 GMT			5.5, 5.1
Overall mean wind speed (mph)	6.2	Windiest day	11.7	on 1 st	Max gust	35	on 12 th	
Wind direction (days)	N 3	NE 10	E 0	SE 0	S 3	SW 8	W 5	NW 1
Least windy day (mph)	2.4	on 7 th	Calm; less than 0.5 mph (minutes)			1055		

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

Notes:

Mild, Sunny and Very Dry

This has been a generally pleasant April with a long spell of sunny, warm and dry weather mid-month. **Temperature:** Much of the month was characterized by warm sunny days and clear cool nights. The resulting mean maximum is well above, and the mean minimum below, average. The mean maximum ranks 7th highest in 134 years, but higher values were seen as recently as 2011 and 2007, both years setting records for daytime warmth. However, the mean minimum ranks only 61st highest, and is only 0.1° above the long-term median, as opposed to 2.8° above for the mean maximum. The mean temperature is 1.5° above the median and is 6th highest this millennium. The month's highest temperature is 2.9° above the median, and the lowest max is 2.8° above its median. The highest min is 0.9° above the median and the lowest min 1.0° above its median. The mean daily temperature range of 12.4° is 2.7° above average and 3rd highest for April in the past 40 years. The mean grass min, at 0.7° below average, is similar in this respect to the mean air min. Earth temperature at 30 cm depth is 1.2° above average, but at 1 m depth is much closer to average. From the 1st to the 5th, daily max were a little below normal, and min a little above. From the 6th to the 25th, daily max were generally above normal, the anomaly reaching +9.5° on the 15th, and were >4° above on the 6th, 10th, 12th, 14th to 16th, 20th and 21st. During this period daily min were >4 below normal on the 6th, 20th and 22nd, and >4° above normal on the 11th and 25th. After the 25th daily max and min were generally below normal, >4° below for the max on the 26th and the min on the 27th and 28th. **Rainfall:** This was a month with a lot of dry weather, and a rainfall total less than one third of average. The period 4th to the 23rd had only 2 days with rain, the 10th and 12th, giving only 1.3 mm in total. Both the month's total and the amount on the wettest day are in the lowest 10% of values in over 100 years, but recent Aprils in 2011 and 2007 were much drier than this month, being 3rd and 4th driest in the record. Interestingly, the 2 wettest Aprils since 1882 are 2000 and 2012. The duration of measurable rain is 54 % of average, and the number of dry days is 5 above average. The highest rainfall rate was 36 mm/hr on the 2nd. There was no thunder or hail this April. **Sunshine:** This has been a sunny April with 34 % more sunshine than average. Although the month got off to a dull start, overall there were many sunny days. The mean sunshine for the first 5 days was only 10 % of the maximum, but this figure improved dramatically from the 6th on, reaching a mean of 73 % of the max over the next 7 days, and apart from the odd dull day, continued so until the 24th, when there was a 3 day dull spell. Over the month, the 6th, 7th, 9th, 14th, 15th, 18th, 20th and 21st all had over 85% of the maximum. Compared with recent Aprils those of 2007, 2010 and 2011 were sunnier. Overall there were 8 days with <3 hours, 19 with =>6 hours, 11 with =>9 hours and 6 with =>12 hours. **Wind:** The mean wind speed is 0.8 mph below average, but is 0.3 mph higher than April last year. The highest gust is 5 mph below average. Daily winds were mainly light or moderate, but were fresh on the 1st, 4th, 11th, 12th and 18th. Directions were SW'ly from the 1st to 3rd, 11th to 15th and 24th to 30th, and NE'ly from the 4th to 6th and 16th to 23rd, otherwise NW on the 7th backing NE by the 9th, veering S on the 10th. **Pressure:** The month's highest pressure is highest for the month since 1995, and 2nd highest since before 1976.

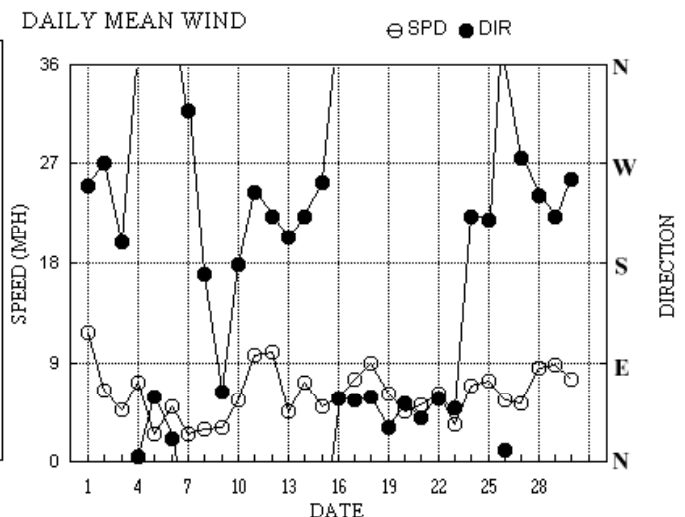
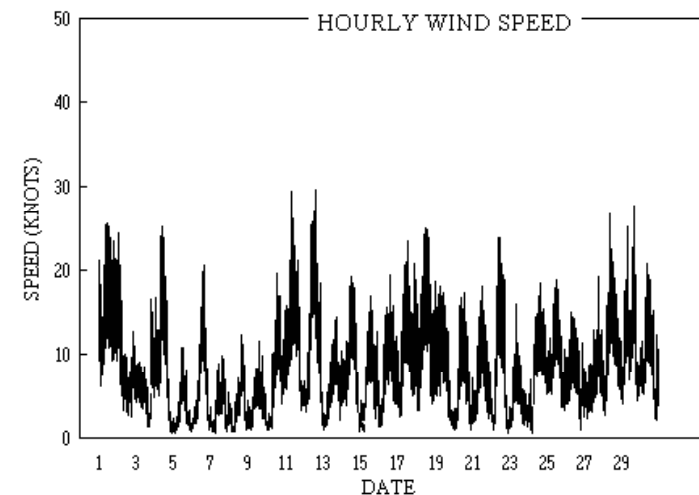
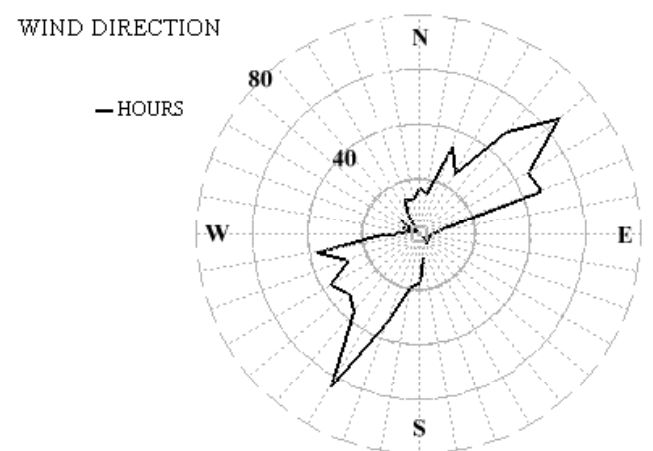
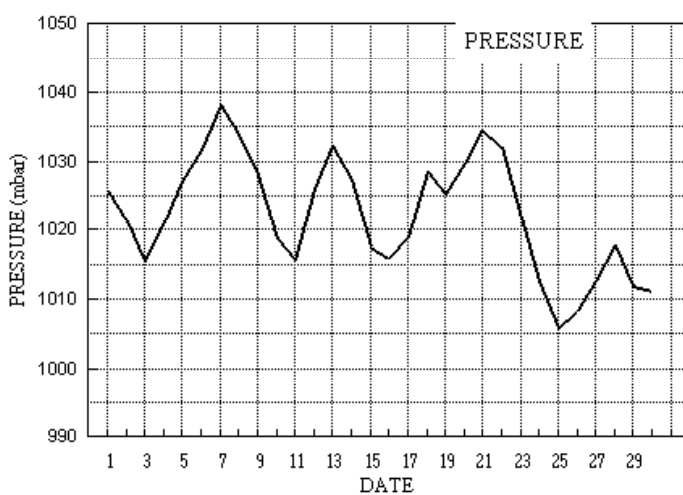
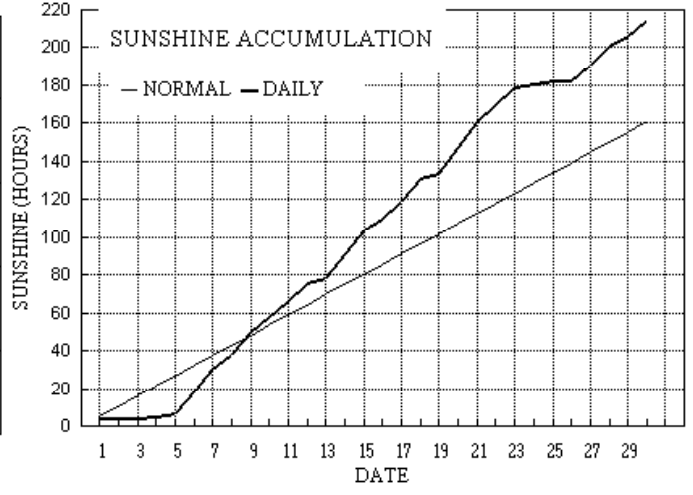
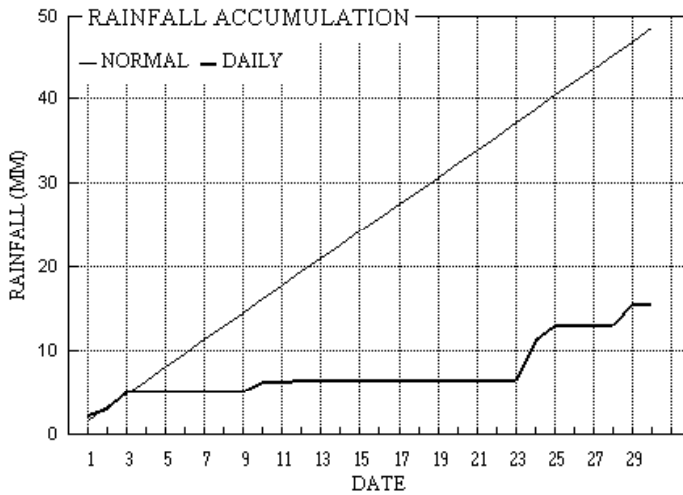
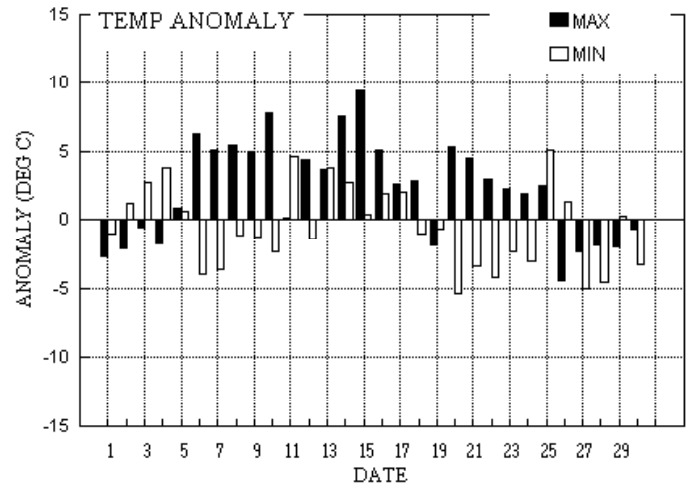
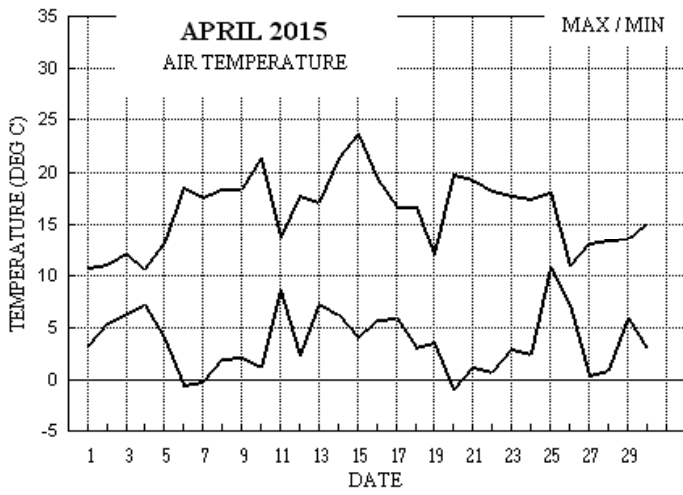
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th		From the 11 th to the 20 th				From the 21 st to the 30 th					
+2.4°	-0.5°	37%	108%	+3.9°	+0.7°	1%	166%	+0.3°	-1.9°	56%	127%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for April 2015



Daily meteorological data.

Emmbrook, WOKINGHAM, Berkshire.

Month: APRIL 2015

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 HH	Rain hrs							
1	10.7	3.3	2.3	-2.2	8.7	8.2	4.4	0.0	1025.6	0	1	0	0	250	9.9	10.2	253	26	1237	257	12	12	3.1	
2	11.1	5.4	0.8	5.7	8.6	8.3	0.3	0.0	1021.3	0	0	0	0	270	2.4	5.6	238	25	0220	248	13	02	2.4	
3	12.2	6.4	2.2	6.5	9.2	8.3	0.0	0.0	1015.4	0	0	0	0	199	1.4	4.1	346	17	2009	325	7	22	4.1	
4	10.6	7.1	tr	4.8	9.5	8.4	0.6	0.0	1021.1	0	0	0	0	5	5.8	6.3	11	25	0908	11	13	10	0.0	
5	13.1	4.0	0.0	-0.5	9.4	8.5	1.7	0.0	1027.1	0	1	0	0	58	1.5	2.2	60	11	1254	45	5	11	0.0	
6	18.6	-0.5	0.0	-3.8	9.4	8.6	11.7	0.2	1031.6	1	1	0	0	21	2.8	4.3	23	21	1509	16	11	14	0.0	
7	17.6	-0.1	0.0	-4.0	9.6	8.7	12.3	0.1	1038.2	1	1	0	0	318	0.7	2.1	322	10	1558	331	5	16	0.0	
8	18.3	2.0	0.0	-2.1	10.0	8.8	7.4	0.0	1033.9	0	1	0	0	169	1.2	2.5	200	13	1550	191	6	18	0.0	
9	18.3	2.1	0.0	-2.0	10.3	8.9	12.0	0.0	1028.1	0	1	0	0	63	1.9	2.7	63	12	1435	170	4	19	0.0	
10	21.3	1.3	1.1	-2.6	10.6	9.0	7.9	0.0	1018.6	0	1	0	0	179	3.6	4.8	197	20	1400	200	9	14	0.7	
11	13.7	8.5	0.0	5.9	10.8	9.2	8.0	0.0	1015.5	0	0	0	0	244	7.5	8.4	272	30	0815	259	12	13	0.0	
12	17.7	2.3	0.2	-2.9	10.7	9.3	9.5	0.0	1026.0	0	1	0	0	222	7.4	8.7	224	30	1439	224	15	13	0.2	
13	17.1	7.3	0.0	6.9	11.0	9.4	2.9	0.0	1032.2	0	0	0	0	203	2.9	4.0	190	15	1820	191	8	17	0.0	
14	21.3	6.3	0.0	0.5	11.1	9.5	12.4	0.0	1027.4	0	0	0	0	223	6.0	6.2	208	20	1350	228	10	14	0.0	
15	23.6	4.0	0.0	-0.9	11.6	9.6	12.9	0.0	1017.6	0	1	0	0	253	2.4	4.3	275	17	1422	230	8	11	0.0	
16	19.3	5.7	tr	0.5	12.0	9.8	6.2	0.0	1015.8	0	0	0	0	57	4.9	5.0	64	20	1541	65	9	15	0.0	
17	16.6	5.9	0.0	0.8	12.2	9.9	9.0	0.0	1018.9	0	0	0	0	55	6.4	6.5	62	24	1352	59	10	13	0.0	
18	16.6	3.1	0.0	-1.4	12.2	10.1	11.9	0.0	1028.5	0	1	0	0	58	7.6	7.7	65	25	1311	67	13	13	0.0	
19	12.0	3.6	0.0	-1.5	12.1	10.2	3.0	0.0	1025.1	0	1	0	0	30	5.2	5.3	28	19	0100	26	8	09	0.0	
20	19.7	-0.9	0.0	-5.2	11.5	10.4	12.9	1.5	1029.6	1	1	0	0	53	3.7	4.0	64	18	1409	55	8	11	0.0	
21	19.3	1.3	0.0	-4.3	11.8	10.4	13.8	0.0	1034.7	0	1	0	0	40	4.5	4.5	29	18	1439	36	8	14	0.0	
22	18.2	0.8	0.0	-4.5	12.0	10.5	8.9	0.0	1031.9	0	1	0	0	57	5.1	5.3	59	24	1046	62	10	09	0.0	
23	17.7	2.9	0.0	-2.2	12.2	10.6	8.8	0.0	1021.7	0	1	0	0	48	2.0	2.9	31	16	0910	63	4	09	0.0	
24	17.4	2.5	4.8	-1.6	12.4	10.7	1.9	0.0	1012.5	0	1	0	0	223	5.8	6.0	236	19	1643	232	10	15	7.0	
25	18.0	10.7	1.7	10.7	12.7	10.8	2.0	0.0	1005.7	0	0	0	0	220	6.3	6.4	238	19	1314	229	10	13	3.5	
26	10.9	7.2	0.0	7.5	13.1	10.9	0.2	0.0	1008.4	0	0	0	0	10	4.4	4.8	7	15	0717	11	7	10	0.0	
27	13.1	0.5	tr	-5.0	12.3	11.0	7.8	0.0	1012.5	0	1	0	0	275	2.9	4.6	255	20	1840	251	9	18	0.0	
28	13.4	1.0	0.1	-4.5	12.1	11.1	10.2	0.0	1017.8	0	1	0	0	241	6.9	7.4	224	27	1051	253	11	11	0.3	
29	13.5	5.9	2.4	3.6	12.1	11.1	5.2	0.0	1011.8	0	0	0	0	222	6.8	7.6	267	28	1609	260	12	16	0.7	
30	15.1	3.0	0.0	-1.8	11.8	11.2	8.7	0.0	1011.1	0	1	0	0	256	3.9	6.5	264	21	1002	246	10	10	0.0	
Total			15.6				214.5	1.8																22.0
Mean	16.2	3.8		0.0	11.1	9.7	7.15	0.1	1022.2					258	0.7	5.4								
Anom	+2.2	-0.6	32%	-0.7	+1.2	+0.5	134%		+7.2															
Daily mean		10.0																						
Anom		+0.8																						

Number of days with:

Air frost = 3 Ground frost = 19 Nil sun = 1
 Snow falling = 0 Snow lying = 0 Thunder = 0
 Hail=>5mm = 0 Hail<5mm or ice = 0 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 2015

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	N	Ch	shs	Date	Remarks
1	75	2	27	10	23	8.1	-0.7	54	3.6	1025.6	1	012	03	0	0	1	8	6	0	9	81832				1	1Sc40 1Cc70 1Ci80 COTRA Cu hum	
2	82	7	35	06	10	7.0	4.3	83	5.1	1021.3	1	023	01	6	2	7	8	4	/	/	83812	87656			2	Cu med	
3	58	8	17	03	08	9.3	8.6	95	6.9	1015.4	6	012	61	6	2	7	7	2	2	/	83704	86706	88520		3		
4	72	7	01	11	24	8.9	4.5	74	5.2	1021.1	2	010	02	2	2	7	8	4	/	1	81818	83625	87635		4	/Ci75 Cu hum	
5	61	7	28	02	05	9.1	4.7	73	5.2	1027.1	1	007	03	1	1	7	8	5	/	/	81825	87650			5	2Sc35 Cu hum	
6	58	2	33	04	07	11.6	7.4	75	6.3	1031.6	3	005	05	0	0	1	5	6	0	1	81635				6	2Ci78 COTRA	
7	60	2	22	03	08	9.4	4.8	73	5.2	1038.2	0	005	05	0	0	0	0	9	0	1	82080				7		
8	58	5	06	03	05	11.7	6.7	71	6.0	1033.9	8	004	05	1	1	1	0	9	3	1	81365	85078			8	COTRA	
9	33	1	04	04	08	9.7	6.7	82	6.0	1028.1	7	002	05	0	0	1	6	2	0	0	81705				9		
10	50	5	12	06	10	13.3	6.0	61	5.8	1018.6	7	018	05	1	1	3	0	9	8	2	81362	83365			10	3Ci72 COTRA Ac cas vir	
11	82	7	26	08	30	8.6	6.0	84	5.8	1015.5	3	031	21	6	2	7	8	4	7	/	81810	85640	87650		11	/Ac58 Cu fra Cld edge W	
12	88	5	20	11	20	11.3	2.8	56	4.6	1026.0	7	006	01	1	1	1	1	6	3	1	81830	85080			12	1Ac65 COTRA Cu fra	
13	75	8	17	03	07	9.7	5.7	76	5.6	1032.2	1	008	02	5	2	8	5	4	/	/	86616	88620			13		
14	62	3	25	07	12	11.3	7.0	75	6.1	1027.4	2	002	02	1	1	1	6	2	0	1	81705	83080			14	COTRA St W&NW only	
15	63	0	22	04	09	17.5	8.7	56	6.9	1017.6	8	009	02	0	0	0	0	9	0	0					15		
16	58	5	06	04	13	13.2	8.4	73	6.8	1015.8	7	001	05	2	2	3	0	9	8	1	83862	84080			16	COTRA Ac cas vir	
17	86	4	06	07	17	12.2	4.8	61	5.3	1018.9	1	017	02	1	1	2	0	9	8	1	81359	83075			17	COTRA Ac cas	
18	82	1	06	08	18	10.5	3.4	61	4.8	1028.5	1	006	03	1	1	1	1	5	0	0	81825				18	Cu fra	
19	86	7	04	07	18	9.1	1.3	58	4.1	1025.1	8	012	01	2	2	6	5	5	0	1	86628	85075			19	COTRA Halo 22° part	
20	75	1	04	06	14	11.9	5.0	63	5.3	1029.6	1	009	03	0	0	0	0	9	0	1	81075				20		
21	75	1	05	05	14	12.7	4.7	58	5.2	1034.7	0	002	02	0	0	0	0	9	0	1	81078				21	COTRA	
22	82	2	06	10	18	12.9	3.6	53	4.8	1031.9	7	008	02	0	0	0	0	9	0	1	82080				22	COTRA	
23	75	7	10	05	11	9.3	4.4	71	5.1	1021.7	8	007	01	2	2	7	5	5	/	/	87620				23		
24	45	7	21	05	11	11.6	8.0	79	6.7	1012.5	7	007	05	1	1	2	5	7	7	/	82656	87359			24		
25	75	7	24	07	16	12.8	10.8	87	8.1	1005.7	2	004	02	6	2	7	8	4	/	/	83815	87640			25	Cu fra/hum	
26	70	8	02	06	15	7.4	5.6	89	5.7	1008.4	1	009	02	2	2	8	5	3	/	/	81708	85710	88618		26		
27	88	1	09	04	09	8.1	-0.1	56	3.8	1012.5	1	009	03	0	0	1	1	5	0	0	81828				27	Cu hum	
28	86	1	27	09	18	8.7	-1.4	49	3.4	1017.8	1	016	03	0	0	1	1	6	0	0	81835				28	Cu hum	
29	62	8	22	11	21	10.0	5.6	74	5.7	1011.8	6	012	60	6	2	8	5	4	/	/	87615	88650			29		
30	82	5	25	08	17	10.7	3.4	61	4.8	1011.1	7	006	03	1	1	5	8	5	0	0	85828				30	1Sc40 Cu med	

Mean vis = 27.2 km

Mean cloud = 4.5 56%

Mean wind speed = 6.2 kn

Mean gust = 14 kn

Mean TT = 10.6 °C

Mean TdTd = 5.0 °C

Mean RH = 69.4 %

Mean r = 5.5 g/kg

Mean PPP = 1022.2 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 2015

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NChs	h	NChs	Date	Remarks
1	70	7	25	10	24	8.3	3.0	69	4.6	1024.0	7	012	25	8	2	7	8	6	/	/	81825	83650	87656	1	Cu hum jp all quads	
2	83	7	30	03	07	10.7	1.4	52	4.1	1022.5	8	002	02	2	2	7	8	6	/	/	81835	87656		2	1Sc40 2Sc50 Cu hum	
3	62	8	23	04	06	11.7	9.0	83	7.1	1014.0	6	002	60	6	2	8	8	4	/	/	83815	85620	88630	3	Cu med	
4	84	8	02	10	21	8.7	3.1	68	4.7	1023.8	2	010	03	2	2	7	8	5	/	/	82825	85630	88635	4	Cu hum	
5	80	8	02	03	07	11.4	4.2	61	5.0	1027.2	1	003	02	2	2	8	8	6	/	/	82830	88650		5	Cu med	
6	80	2	02	12	23	17.3	7.6	53	6.4	1031.6	2	003	02	0	0	2	1	6	0	1				6	1Ci78	
7	62	2	06	02	08	17.2	6.3	48	5.8	1034.8	7	018	03	0	0	2	1	6	0	1				7	1Ci80 Cu hum	
8	63	6	09	04	06	16.8	6.9	52	6.0	1030.9	7	016	03	1	1	6	8	6	/	/	82840	85650		8	Cu med	
9	59	1	04	04	12	18.1	4.6	41	5.2	1024.3	7	021	05	0	0	1	1	7	0	1				9	1Ci80 COTRA Cu hum	
10	68	7	20	08	20	20.1	2.6	31	4.6	1014.1	6	022	01	2	2	2	0	9	8	1				10	2Ac63 COTRA Ac cas U/a cont.	
11	86	6	26	10	20	13.0	-3.2	32	3.0	1021.8	2	021	03	1	1	1	1	7	0	1				11	COTRA Cu hum U/a cont	
12	86	7	23	14	30	15.8	5.3	50	5.5	1023.4	6	012	03	2	2	5	8	6	4	1				12	1Ac62 COTRA Cu hum	
13	80	7	22	03	11	15.7	6.8	55	6.0	1030.0	8	018	01	2	2	3	8	6	0	1				13	1Sc36 Cu hum	
14	82	3	22	09	19	20.8	9.1	47	7.1	1023.3	6	023	02	0	0	1	1	6	0	1				14	COTRA Cu hum	
15	84	1	26	08	17	23.2	3.2	27	4.8	1014.5	7	018	03	0	0	1	0	9	4	1				15	1Ci75	
16	84	7	06	08	18	16.1	6.8	54	6.1	1013.6	6	009	05	2	2	7	0	9	8	/				16	Ac cas vir jp S-W	
17	88	7	06	09	19	15.4	-0.5	34	3.6	1020.9	0	008	03	1	1	1	4	7	2					17	2Ac62 1Ac68 COTRA Halo 22° part	
18	84	1	06	10	25	16.2	3.7	43	4.9	1026.2	6	012	02	0	0	1	1	7	0	0				18	Cu hum	
19	84	8	02	07	13	10.1	3.2	62	4.7	1023.3	7	008	02	2	2	8	8	5	/	/	83828	85640	88650	19		
20	65	5	07	07	18	18.9	3.1	35	4.6	1029.3	6	004	02	1	1	0	0	9	0	1				20	COTRA Halo 22° part+u/a cont+parhelia	
21	75	1	05	05	14	12.7	4.7	58	5.2	1034.7	0	002	02	0	0	0	0	9	0	1				21	COTRA	
22	84	6	06	09	21	15.4	6.6	55	5.9	1028.0	7	015	03	1	1	6	8	6	/	1				22	/Ci75 Cu hum	
23	68	1	05	04	09	17.0	5.8	48	5.7	1017.1	7	027	02	0	0	0	0	9	0	1				23		
24	75	7	24	09	17	16.6	6.8	52	6.2	1009.4	8	019	03	2	2	3	8	6	7	/				24	1Sc50 2Ac62 Cu hum	
25	88	7	22	11	18	16.2	7.0	54	6.3	1004.6	6	007	03	1	1	2	8	6	7	2				25	1Sc50 2As63 1Ac65 Cu med	
26	84	8	01	07	13	10.1	3.9	65	5.0	1008.2	7	005	02	2	2	8	8	5	/	/	81825	83630	88640	26	Cu hum	
27	88	7	28	06	12	11.8	-2.3	37	3.2	1011.4	7	007	03	1	1	2	2	7	6	/				27	Cu med	
28	86	6	26	11	21	13.0	-5.4	27	2.5	1017.9	8	003	02	1	1	2	2	7	0	1				28	COTRA Cu med	
29	84	2	21	09	19	12.6	3.9	55	5.0	1011.5	7	007	01	1	1	2	8	6	0	0				29	1Sc56 Absent vv&cld est	
30	88	6	30	08	18	13.0	0.3	42	3.9	1010.5	3	002	02	1	1	3	8	7	6	1				30	2Sc56 1Ci75	

Mean vis = 40.1 km

Mean cloud = 5.3 66%

Mean wind speed = 7.5 kn

Mean gust = 16 kn

Mean TT = 14.8 °C

Mean TdTd = 3.9 °C

Mean RH = 49.7 %

Mean r = 5.1 g/kg

Mean PPP = 1020.9 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

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 2015	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
	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	0.01	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.55	0.21
	6	1.00	0.00	0.00	0.00	0.00	0.72	1.00	0.80	0.93	0.88	0.00	1.00	0.00	0.70	1.00	0.07
	7	1.00	0.00	0.00	0.00	0.07	0.99	1.00	1.00	1.00	0.43	0.00	1.00	0.00	1.00	1.00	0.40
	8	1.00	0.00	0.00	0.00	0.48	1.00	1.00	1.00	1.00	0.96	0.00	1.00	0.00	1.00	1.00	0.71
	9	0.83	0.00	0.00	0.34	0.30	1.00	1.00	1.00	1.00	0.40	0.45	1.00	0.00	1.00	1.00	0.98
	10	0.30	0.00	0.00	0.18	0.38	1.00	1.00	1.00	1.00	0.16	0.97	1.00	0.00	1.00	1.00	0.56
	11	0.22	0.00	0.00	0.04	0.16	0.99	1.00	0.89	1.00	0.00	0.92	1.00	0.00	1.00	1.00	0.97
	12	0.09	0.00	0.00	0.03	0.26	0.86	1.00	0.91	1.00	0.54	0.76	1.00	0.00	1.00	1.00	0.43
	13	0.01	0.25	0.00	0.00	0.00	0.70	1.00	0.34	0.98	0.41	1.00	1.00	0.07	1.00	1.00	0.91
	14	0.00	0.00	0.00	0.00	0.00	0.85	0.77	0.00	0.93	0.94	0.68	0.81	0.11	1.00	1.00	0.44
	15	0.00	0.00	0.00	0.00	0.00	1.00	0.95	0.00	1.00	1.00	0.85	0.07	0.94	1.00	1.00	0.01
	16	0.00	0.00	0.00	0.03	0.00	1.00	0.81	0.07	1.00	0.81	0.92	0.08	0.45	1.00	1.00	0.21
	17	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.38	1.00	0.98	1.00	0.10	1.00	1.00	1.00	0.27
	18	0.00	0.00	0.00	0.00	0.01	0.56	0.44	0.00	0.18	0.38	0.41	0.00	0.33	0.71	0.37	0.05
	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		4.44	0.25	0.00	0.62	1.67	11.67	12.26	7.39	12.01	7.89	7.95	9.49	2.89	12.40	12.92	6.21

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	0.04	0.12	0.00	0.14	0.01
5	0.24	0.00	0.00	0.67	0.90	0.85	0.00	0.35	0.00	0.00	1.00	1.00	0.00	0.98	0.25
6	1.00	0.07	0.03	1.00	1.00	1.00	0.00	0.27	0.00	0.00	1.00	1.00	0.00	1.00	0.52
7	0.96	1.00	0.80	1.00	1.00	1.00	0.00	0.01	0.00	0.00	1.00	1.00	0.21	1.00	0.60
8	0.93	1.00	0.19	1.00	1.00	1.00	0.00	0.01	0.04	0.00	1.00	1.00	0.18	0.69	0.61
9	0.94	1.00	0.07	1.00	1.00	1.00	0.11	0.61	0.15	0.00	1.00	0.97	0.00	0.37	0.62
10	0.87	1.00	0.03	1.00	1.00	1.00	0.94	0.15	0.16	0.00	0.84	0.98	0.00	0.87	0.61
11	1.00	1.00	0.11	1.00	1.00	1.00	1.00	0.00	0.29	0.00	0.78	0.83	0.00	0.64	0.59
12	1.00	1.00	0.00	1.00	1.00	0.97	1.00	0.01	0.43	0.00	0.19	0.85	0.03	0.64	0.57
13	1.00	1.00	0.00	1.00	1.00	0.37	1.00	0.00	0.58	0.00	0.00	0.42	0.33	0.55	0.53
14	0.51	1.00	0.00	1.00	1.00	0.23	1.00	0.00	0.38	0.00	0.12	0.75	0.49	0.35	0.48
15	0.03	1.00	0.11	1.00	1.00	0.19	1.00	0.01	0.02	0.00	0.33	0.68	0.79	0.14	0.47
16	0.06	1.00	0.30	1.00	1.00	0.17	1.00	0.18	0.00	0.00	0.36	0.41	0.98	0.40	0.47
17	0.29	1.00	1.00	1.00	1.00	0.09	1.00	0.28	0.00	0.00	0.00	0.10	1.00	0.25	0.52
18	0.18	0.81	0.37	0.19	0.86	0.00	0.75	0.00	0.00	0.24	0.00	0.04	1.00	0.55	0.28
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.20	0.17	0.02
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	9.00	11.87	3.00	12.86	13.76	8.86	8.80	1.88	2.05	0.24	7.79	10.16	5.19	8.74	214.28

APRIL 2015	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	7.07	10.8	1230	3.3	519	65.8	93.2	2328	40.4	1230	0.85	4.07	6.2	2359	3.0	348	1022.96	1026.2	1036	1016.7	2359
2	8.33	11.2	1537	5.2	623	78.7	95.8	635	51.0	1505	4.57	5.25	6.8	328	4.0	1401	1020.62	1022.9	1236	1015.0	228
3	9.53	12.3	1241	6.5	0	92.3	96.9	733	78.4	1329	8.31	6.79	7.7	1908	5.7	0	1016.23	1021.2	0	1013.7	1412
4	8.03	10.7	1229	4.0	2328	78.7	95.5	13	61.8	1611	4.46	5.19	6.6	114	4.4	1625	1022.53	1026.4	2356	1018.1	0
5	8.20	13.2	1101	2.0	2356	77.2	94.6	2359	56.7	1240	4.22	5.06	6.1	1035	4.1	2356	1027.33	1030.0	2325	1025.6	318
6	8.63	18.7	1343	-0.1	517	78.2	97.8	550	45.8	1429	4.48	5.21	7.2	1342	3.6	517	1032.13	1036.4	2358	1029.8	0
7	8.79	17.7	1453	0.0	512	75.2	98.4	614	45.3	1745	4.03	4.99	6.6	1349	3.6	513	1036.11	1038.3	743	1034.1	1751
8	9.95	18.4	1257	2.1	542	72.4	97.4	653	41.7	1325	4.58	5.18	7.0	959	4.1	542	1032.32	1034.9	1	1029.9	1754
9	10.18	18.4	1451	2.3	513	73.4	97.2	645	39.3	1502	4.98	5.36	6.8	1038	4.2	513	1026.22	1030.3	5	1023.0	1757
10	11.62	21.4	1359	1.6	437	64.8	97.8	645	26.6	1403	3.82	5.00	6.9	821	3.9	1749	1017.11	1023.3	0	1013.3	1618
11	9.85	13.8	1400	4.5	2355	61.2	90.9	244	28.0	1747	1.90	4.54	6.9	246	2.2	1757	1019.04	1027.7	2359	1011.7	408
12	10.19	17.8	1337	2.2	339	65.6	89.9	609	35.2	1128	3.51	4.89	6.8	2114	3.5	3	1025.96	1029.6	2358	1023.1	1447
13	10.82	17.2	1613	7.1	2358	73.5	90.8	2359	49.5	1512	6.09	5.76	6.9	1329	4.8	520	1030.37	1032.4	942	1028.6	1654
14	12.92	21.4	1522	6.1	148	71.7	96.7	604	41.5	1519	7.28	6.27	7.9	1235	5.2	121	1025.00	1028.8	6	1021.3	2348
15	14.49	23.7	1431	4.2	514	61.5	97.3	623	25.0	1635	5.66	5.66	7.6	920	4.2	1635	1016.95	1021.4	4	1014.0	1640
16	11.47	19.4	1358	5.8	453	68.4	94.9	536	43.8	1350	5.43	5.63	7.9	1141	3.8	2111	1015.08	1016.6	29	1012.5	1615
17	10.52	16.8	1318	6.1	523	60.9	79.0	524	30.5	1401	2.85	4.63	6.0	1009	3.4	1402	1020.22	1026.8	2358	1015.6	37
18	9.41	16.7	1401	3.2	427	62.9	88.6	510	33.5	1652	2.13	4.38	6.2	1106	3.3	1652	1027.21	1028.6	913	1025.7	1539
19	7.26	11.8	1655	2.4	2348	70.0	91.0	2358	46.9	1156	1.92	4.31	5.1	1655	3.7	842	1025.01	1027.8	14	1022.3	1744
20	9.68	19.8	1440	-0.6	503	67.9	97.7	528	31.8	1443	3.01	4.67	6.9	1316	3.5	503	1029.47	1033.4	2357	1026.2	4
21	10.87	19.4	1504	1.6	504	62.2	93.3	541	29.2	1640	2.81	4.56	6.1	1431	3.6	1112	1033.60	1035.0	749	1031.8	1716
22	9.65	18.3	1247	1.1	505	71.1	95.6	546	45.1	1248	4.22	5.08	6.9	1238	3.8	505	1029.60	1033.7	0	1024.8	2354
23	10.36	17.8	1529	3.0	34	71.7	95.9	116	40.7	1533	4.93	5.36	6.5	1244	4.4	34	1019.49	1024.9	4	1015.2	2335
24	10.81	17.4	1437	2.6	448	78.2	97.3	615	50.3	1512	6.81	6.20	7.7	2355	4.3	448	1011.19	1015.4	2	1007.5	2356
25	12.78	18.2	1310	10.5	418	81.8	96.5	650	45.7	1311	9.40	7.38	8.6	822	5.8	1311	1005.57	1007.6	4	1004.2	1537
26	8.44	11.0	1649	3.4	2359	79.0	96.7	225	48.4	2151	4.78	5.45	7.8	39	3.0	2151	1008.06	1010.6	2359	1005.7	9
27	6.96	13.2	1509	0.8	313	59.9	87.7	540	30.2	1606	-1.01	3.55	4.4	923	2.6	1323	1011.80	1013.4	2358	1010.3	132
28	7.74	13.5	1451	0.9	448	59.8	92.9	442	25.4	1455	-0.56	3.67	4.6	2348	2.3	1503	1017.00	1018.5	1153	1013.3	0
29	8.69	13.6	1608	4.6	2345	67.2	89.0	942	29.7	1729	2.46	4.61	6.3	807	2.6	1729	1012.91	1017.2	0	1011.0	1521
30	8.66	15.2	1314	2.8	428	63.5	86.2	457	30.0	1310	1.49	4.24	5.6	916	3.1	1258	1011.36	1013.0	0	1009.6	1317
Total																					
Mean	9.73	16.29		3.30		70.5	93.75		40.90		3.98	5.10	6.68		3.79		1021.61	1025.08		1018.45	
Max	14.49	23.70		10.45		92.3	98.40		78.40		9.40	7.38	8.57		5.80		1036.11	1038.34		1034.10	
Min	6.96	10.74		-0.57		59.8	79.00		24.95		-1.01	3.55	4.44		2.20		1005.57	1007.64		1004.18	

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

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.