

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

SEPTEMBER 2014

Temperature (°C / °F)			Anomaly	Rank in the past 133 years				
Mean maximum	21.2	70.2	+1.8	11 th highest				
Mean minimum	10.2	50.4	+0.2	20 th highest				
Daily mean	15.7	60.3	+1.0	9 th highest				
Highest maximum	26.4	79.5	on 18 th	Lowest maximum	18.3	64.9	on 23 rd	
Highest minimum	16.0	60.8	on 20 th	Lowest minimum	2.8	37.0	on 22 nd	
Mean grass minimum	6.5	43.7	-0.2	Lowest grass minimum	-1.5	29.3	on 22 nd	
Mean earth @30 cm	17.5	63.5	+1.1	Earth @100 cm	16.9	62.4		
Frost duration (hrs)	0.0			Rain duration (hrs)	7.8			
Rainfall total (mm / in)	10.1	0.40	19 %	6 th lowest				
Highest daily fall	3.8	0.15	on 18 th					
Number of: Dry days (<0.2mm)	26	Wet days (>0.9mm)	4	days ≥5mm	0			
Sunshine total (hrs)	120.9	Daily mean	4.03	84 %	Sunniest day	11.0	on 9 th	
N° days with: Air frost	0	Ground frost	3	Snow falling	0	Snow lying	0	
Thunder	1	Hail ≥5mm	0	Small hail/ice	0	Fog @09	0	
Nil sun	2							
Pressure MSL : Mean @09 GMT, mbar	1020.1	+3.4	Highest	1027.8	on 22 nd	Lowest	1007.5	on 18 th
Relative humidity : Mean (%)	82.5	Lowest	38	on 8 th	Water vapour (g/kg), mean at 09 and 15 GMT	9.6,	8.6	
Overall mean wind speed (mph)	3.8	Windiest day	6.7	on 21 st	Max gust	25	on 24 th	
Wind direction (days)	N 5	NE 12	E 1	SE 3	S 0	SW 6	W 3	NW 0
Least windy day (mph)	1.8	on 8 th	Calm; less than 0.5 mph (minutes)	2223				

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

Notes:

Very Warm, Very Dry, Dull, Very Calm

Much of the month was pleasantly warm, with light winds and very little rain, though rather cloudy at times. **Temperature:** The mean temperature this September is in the very mild category, that is the top 10% of ranked values since 1882. However, since 1998 5 have ranked higher than this year's, although the last was in 2006, which holds the record at 18.0°. The mean max is also highest since 2006, but is 1.4° lower than that year's value. The mean min was exceeded as recently as 2011, and is 3.2° below the record set in 2006. The highest max is 1.9° above the median while the lowest max is 4.4° above the median and is 2nd highest after 1959 in the past 102 years. The highest min is 0.8° above the median while the lowest min exactly equals its median. The mean grass min is close to average while the lowest grass min is 1.0° below average. There were 3 ground frosts this month, while 13 out of the last 35 Septembers have had none, and there were an exceptional 13 in 1986. The mean earth temperature at 30 cm depth is 1.1° above average, though at 1 m depth is close to normal. Daily maxima were close to normal from the 1st to the 11th and again from the 20th to the 25th, otherwise above normal, with anomalies of +5° or more on the 18th, 28th and 30th. Daily minima were near or above normal from the 1st to the 7th, the 12th to 21st and from the 26th on, but anomalies of -4° or more occurred on the 8th, 11th, 22nd, 23rd and 25th. **Rainfall:** This September had very little rainfall. There were some showery days over southern England, but Wokingham escaped most. The resulting rainfall total of 10.1 mm is over 80 % below average, and is lowest since 2003, and before that 1959, with only 5 drier Septembers since 1882. Significant rain fell on only 4 days, the 1st, 18th, 23rd and 30th, and the highest daily fall of 3.8 mm is lowest since 1959. The number of dry days is 7 more than average and most since 1986, though the duration of measurable rain is only lowest since 2003. There were two dry spells, the first of 16 days ended on the 17th and the second of 6 days ended on the 29th. Thunder occurred on the 19th. **Sunshine:** Although slightly sunnier than last September, the total is lowest since 2008, and it has been a rather dull month overall. Only the 2nd, 8th, 9th, 10th, 22nd and 30th had over 50% of the maximum. Sunshine accumulation was already 15 hours below normal by the 6th, though subsequent sunny days brought this up to normal by the 10th. A sequence of dull days then saw the accumulation fall to 20 hours below normal by the 20th, where it remained until the month's end. Overall there were 11 days with <3 hours, 7 with =>6 hours and 3 with =>9 hours. **Wind:** A predominance of light wind on many days has been a characteristic of this September. The mean speed, the highest daily mean wind and the highest gust are all lowest for the month since before 1988, and the mean speed is also lowest for any month in that period. 17 days had a N or NE mean wind, while only 9 had a SW or W wind. **Pressure:** Despite the mean pressure being 3.4 mbar above average, the highest pressure is lowest since 2001, and the lowest pressure highest since 2005. The resulting pressure range for the month of 20.3 mbar as 13.7 mbar below average.

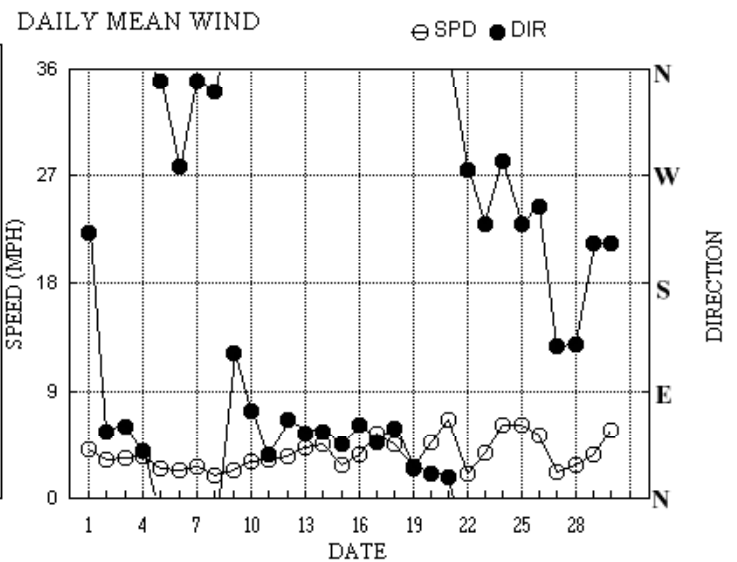
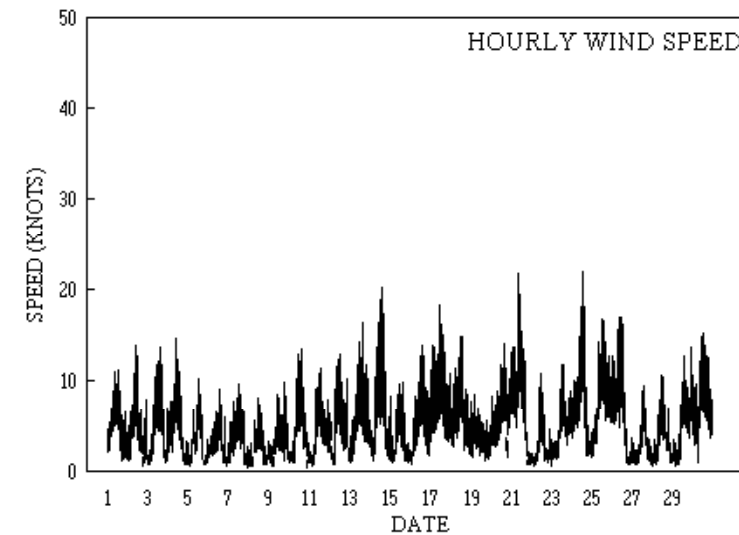
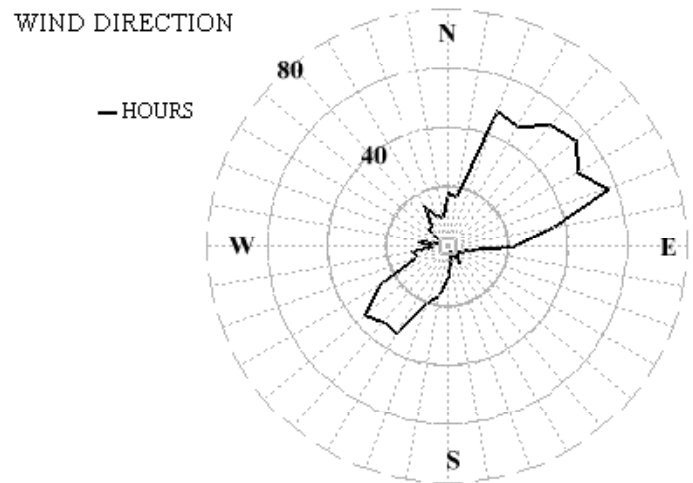
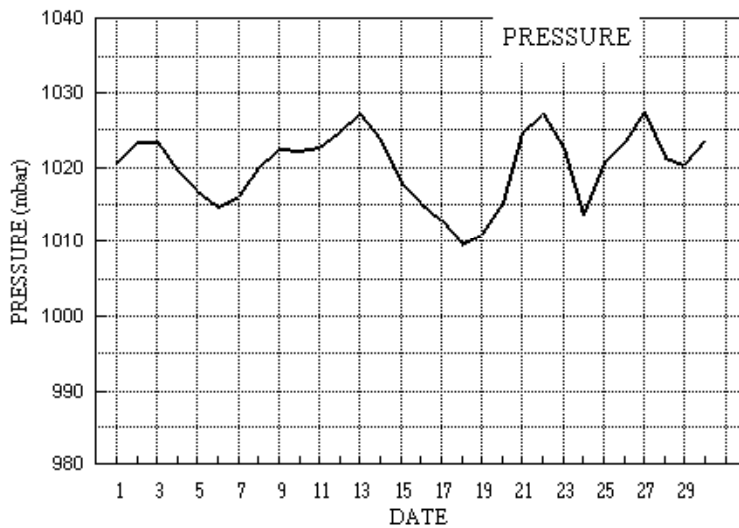
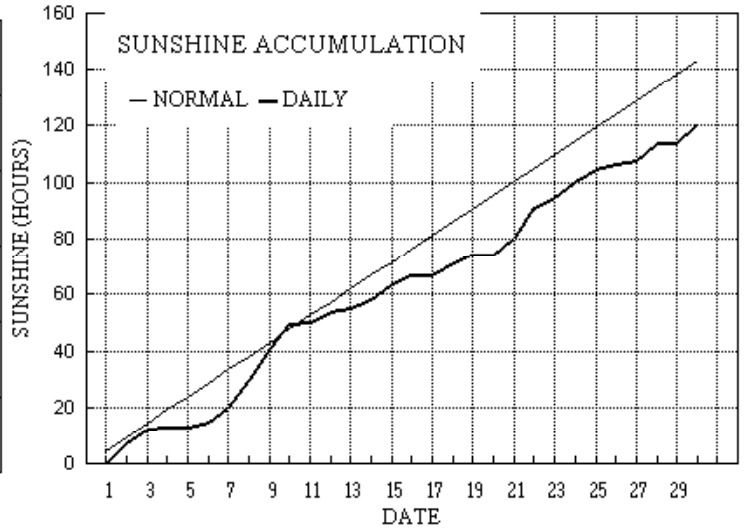
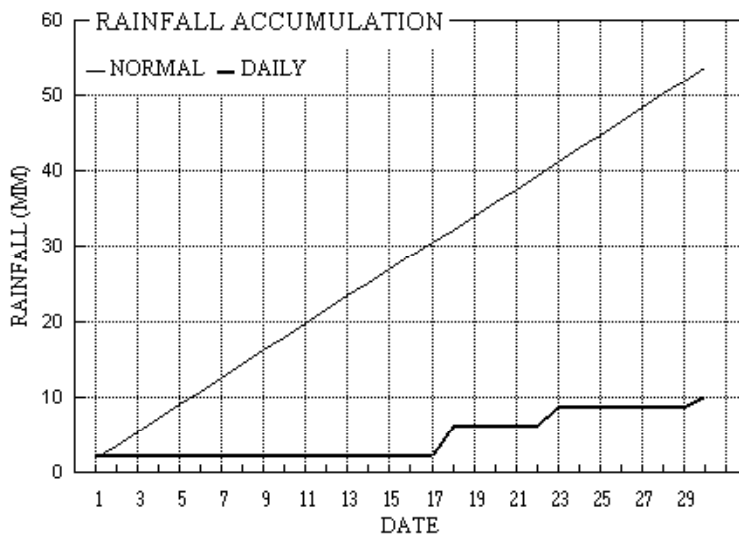
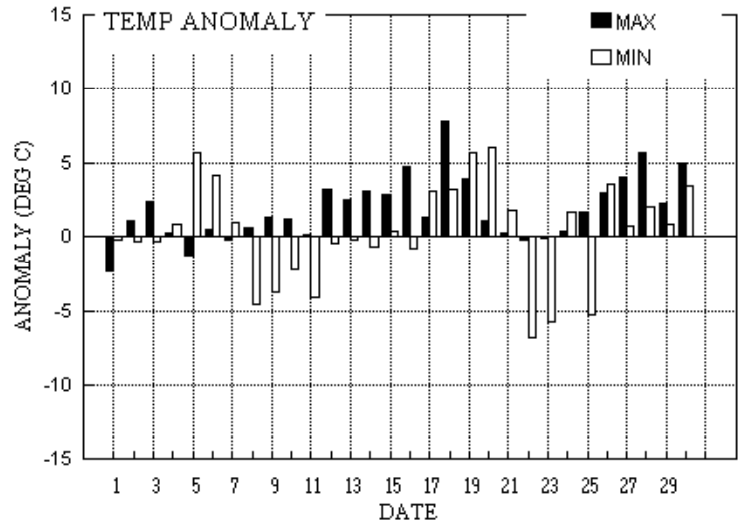
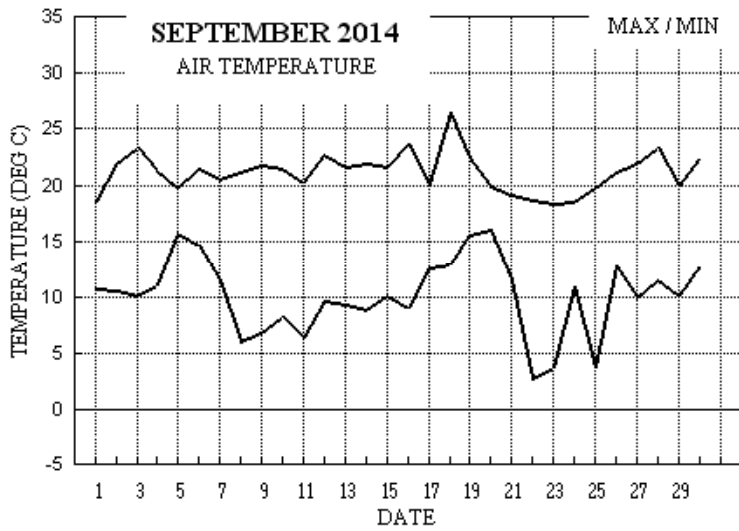
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 30 th			
+0.4°	+0.1°	11%	105%	+3.1°	+1.2	22%	52%	+2.2°	-0.4	22%	96%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for September 2014



Month: SEPTEMBER 2014

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	18.5	10.7	2.4	7.2	17.8	17.0	0.1	0.0	1020.6	0 0 0 0	0 0 0 0	0 0 0 0	223	2.6	3.6	235	11 1324	238	6	13	2.5	
2	21.9	10.6	0.0	7.3	17.7	17.0	7.5	0.0	1023.5	0 0 0 0	0 0 0 0	0 0 0 0	56	2.5	2.8	69	14 1016	78	5	11	0.0	
3	23.3	10.1	0.0	6.8	18.1	17.0	5.1	0.0	1023.5	0 0 0 0	0 0 0 0	0 0 0 0	60	2.9	3.0	67	14 1521	64	5	15	0.0	
4	21.3	11.1	0.0	7.2	18.3	17.0	0.5	0.0	1019.4	0 0 0 0	0 0 0 0	0 0 0 0	40	2.9	3.0	69	15 0939	60	6	10	0.0	
5	19.7	15.8	tr	15.4	18.5	17.1	0.0	0.0	1016.9	0 0 0 0	0 0 0 0	0 0 0 0	349	1.6	2.2	336	10 1340	340	5	13	0.0	
6	21.5	14.6	0.0	13.9	18.5	17.1	2.1	0.0	1014.8	0 0 0 0	0 0 0 0	0 0 0 0	278	1.0	2.0	280	9 1406	322	4	14	0.0	
7	20.6	11.6	0.0	7.5	18.5	17.2	4.6	0.0	1016.1	0 0 0 0	0 0 0 0	0 0 0 0	350	1.9	2.2	326	10 1226	327	4	12	0.0	
8	21.2	6.1	0.0	2.7	18.1	17.2	10.1	0.0	1020.0	0 0 0 0	0 0 0 0	0 0 0 0	341	0.5	1.6	310	8 1126	86	3	13	0.0	
9	21.8	6.8	0.0	3.1	17.9	17.2	11.0	0.0	1022.5	0 0 0 0	0 0 0 0	0 0 0 0	121	0.8	2.0	168	10 1945	179	4	20	0.0	
10	21.5	8.3	0.0	4.5	17.9	17.2	8.9	0.0	1022.2	0 0 0 0	0 0 0 0	0 0 0 0	73	2.5	2.7	51	14 1613	74	5	15	0.0	
11	20.3	6.4	0.0	1.8	17.5	17.2	0.1	0.0	1022.6	0 0 0 0	0 0 0 0	0 0 0 0	36	2.7	2.8	49	12 1402	25	5	13	0.0	
12	22.7	9.6	0.0	4.9	17.5	17.1	4.1	0.0	1024.9	0 0 0 0	0 0 0 0	0 0 0 0	66	2.7	3.1	119	13 1241	98	6	12	0.0	
13	21.6	9.4	0.0	4.5	17.5	17.1	0.9	0.0	1027.1	0 0 0 0	0 0 0 0	0 0 0 0	54	3.4	3.7	69	17 1523	50	6	12	0.0	
14	22.0	8.8	0.0	4.0	17.4	17.0	3.3	0.0	1023.6	0 0 0 0	0 0 0 0	0 0 0 0	55	3.8	3.9	69	20 1545	69	7	13	0.0	
15	21.7	10.1	0.0	4.9	17.3	17.0	5.7	0.0	1017.9	0 0 0 0	0 0 0 0	0 0 0 0	46	2.1	2.4	52	10 1538	35	5	11	0.0	
16	23.6	9.0	0.0	4.7	17.4	17.0	3.0	0.0	1015.3	0 0 0 0	0 0 0 0	0 0 0 0	61	3.1	3.2	73	14 1511	63	6	12	0.0	
17	20.1	12.6	0.0	7.0	17.5	16.9	0.2	0.0	1012.8	0 0 0 0	0 0 0 0	0 0 0 0	47	4.7	4.7	59	18 1231	63	7	12	0.0	
18	26.4	13.0	3.8	9.8	17.7	16.9	4.1	0.0	1009.6	0 0 0 0	0 0 0 0	0 0 0 0	59	3.7	4.0	65	15 1417	83	7	14	1.1	
19	22.5	15.6	0.1	11.9	18.1	16.9	3.3	0.0	1011.1	0 0 0 0	1 0 0 0	0 0 0 0	25	2.0	2.3	33	9 0411	49	3	05	0.2	
20	19.9	16.0	tr	12.8	18.3	17.0	0.0	0.0	1015.3	0 0 0 0	0 0 0 0	0 0 0 0	21	3.9	4.0	27	14 1757	8	7	13	0.0	
21	19.2	11.6	0.0	9.2	18.1	17.0	6.0	0.0	1024.6	0 0 0 0	0 0 0 0	0 0 0 0	18	5.5	5.8	27	22 0944	20	10	10	0.0	
22	18.7	2.8	0.0	-1.5	17.2	17.0	10.7	0.0	1027.2	0 1 0 0	0 0 0 0	0 0 0 0	275	1.0	1.8	245	11 1146	281	4	11	0.0	
23	18.3	3.8	2.4	-0.5	16.6	17.0	3.2	0.0	1022.5	0 1 0 0	0 0 0 0	0 0 0 0	230	3.1	3.3	260	12 1358	251	6	14	3.2	
24	18.6	10.9	tr	7.8	16.6	16.9	5.8	0.0	1013.6	0 0 0 0	0 0 0 0	0 0 0 0	283	4.1	5.4	325	22 1406	321	10	15	0.0	
25	19.8	3.7	tr	-1.1	16.0	16.8	4.5	0.0	1020.7	0 1 0 0	0 0 0 0	0 0 0 0	230	5.1	5.4	268	17 1234	258	8	13	0.0	
26	21.2	12.7	0.0	14.0	16.3	16.6	1.5	0.0	1023.5	0 0 0 0	0 0 0 0	0 0 0 0	244	4.0	4.5	245	17 1105	233	8	08	0.0	
27	22.0	9.9	0.0	5.1	16.5	16.5	1.6	0.0	1027.5	0 0 0 0	0 0 0 0	0 0 0 0	127	1.2	1.9	103	10 1427	122	5	14	0.0	
28	23.4	11.5	0.0	7.8	16.8	16.5	5.9	0.0	1021.2	0 0 0 0	0 0 0 0	0 0 0 0	129	1.6	2.4	149	11 1225	140	5	12	0.0	
29	20.0	10.2	tr	6.0	16.9	16.4	0.2	0.0	1020.3	0 0 0 0	0 0 0 0	0 0 0 0	214	2.8	3.2	219	14 2219	226	6	22	0.0	
30	22.5	12.8	1.4	7.4	16.9	16.4	6.9	0.0	1023.6	0 0 0 0	0 0 0 0	0 0 0 0	213	4.8	5.0	236	15 1357	232	8	13	0.8	
Total			10.1				120.9	0.0														7.8
Mean	21.2	10.2		6.5	17.5	16.9	4.03	0.0	1020.1					35	0.8	3.3						
Anom	+1.8	+0.2	19%	-0.2	+1.1	+0.1	84%															+3.4

Daily mean 15.7 Pressure, abs highest = 1027.8 on 22
 Anom +1.0 Pressure, abs lowest = 1007.5 on 18

Number of days with:
 Air frost = 0 Ground frost = 3 Nil sun = 2
 Snow falling = 0 Snow lying = 0 Thunder = 1
 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 SEPTEMBER 2014

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	hCr	Cr	NCh	shs	NChshs	NChshs	Date	Remarks
1	35	8	20	06	10	15.6	14.7	94	10.3	1020.6	1	005	51	5	2	8	7	2	/	/	82705	87807	88712	1	
2	75	2	07	05	10	17.1	14.7	86	10.3	1023.5	0	005	01	1	1	2	8	4	0	0	81812			2	2Sc45 Cu fra
3	50	7	08	05	11	17.2	16.2	94	11.3	1023.5	2	001	10	2	2	7	6	4	/	/	87710			3	
4	50	7	03	05	10	17.0	15.5	90	10.8	1019.4	8	002	05	4	2	7	1	3	/	/	83706	86810		4	Cu hum
5	50	8	04	02	04	17.1	14.7	85	10.3	1016.9	1	006	05	2	2	8	5	4	/	/	82710	88640		5	
6	40	8	31	03	06	16.9	13.5	81	9.6	1014.8	2	005	21	6	2	3	5	7	2	/	83650	88458		6	
7	75	8	03	02	07	15.0	10.0	73	7.8	1016.1	2	010	02	2	2	8	5	4	/	/	82615	88625		7	
8	50	4	03	03	06	15.0	14.0	94	9.8	1020.0	2	005	10	4	1	3	1	4	0	1	83812			8	2Ci80 COTRA Cu hum
9	58	5	03	02	04	15.5	12.5	82	8.9	1022.5	2	009	05	2	2	0	0	9	0	1	85080			9	COTRA U/a cont+parhelio
10	65	1	05	02	05	16.4	12.6	78	9.0	1022.2	1	003	02	0	0	1	5	6	0	0	81635			10	
11	56	8	04	03	05	13.6	12.1	91	8.7	1022.6	3	006	05	2	2	8	5	6	/	/	88635			11	
12	58	7	07	05	12	15.6	13.6	87	9.5	1024.9	1	008	05	2	2	7	6	4	/	/	87710			12	
13	59	8	05	03	08	14.8	14.2	97	9.9	1027.1	2	002	10	4	2	8	6	3	/	/	88707			13	
14	60	7	06	06	14	16.1	14.1	88	9.9	1023.6	7	005	05	2	2	6	1	4	0	1	86810	87075		14	COTRA Cu fra/hum
15	57	7	03	03	07	15.4	13.5	88	9.6	1017.9	7	001	05	2	2	7	6	4	/	1	87710			15	/Sc18 /Ci75 COTRA
16	15	8	06	03	08	15.9	15.5	98	10.9	1015.3	0	002	10	4	2	8	6	2	/	/	88703			16	
17	56	8	05	05	12	16.5	13.7	84	9.7	1012.8	8	001	05	2	2	8	5	4	/	/	86712	88615		17	
18	25	7	03	06	11	17.1	15.8	92	11.2	1009.6	0	005	05	2	2	5	6	3	8	1	85707	85363		18	/Ci78 COTRA
19	11	8	04	02	06	16.9	16.5	97	11.7	1011.1	3	009	95	9	2	8	6	2	/	/	88703			19	t SW 0845-0901
20	61	8	05	03	09	17.4	16.2	93	11.4	1015.3	2	009	02	2	2	7	6	3	7	/	86708	87712		20	/Ac62
21	75	1	01	07	14	14.4	9.7	73	7.4	1024.6	2	014	03	1	1	1	1	4	0	0	81818			21	Cu hum
22	57	7	01	02	04	11.7	10.3	91	7.7	1027.2	0	000	05	1	1	0	0	9	0	1	87075			22	COTRA
23	40	6	21	01	03	11.0	10.4	96	7.7	1022.5	7	001	10	4	1	5	8	6	0	1	82840	84650		23	4Ci80 COTRA Cu hum
24	50	8	26	05	09	13.4	12.4	94	8.9	1013.6	3	002	61	6	2	7	5	3	/	/	82708	85712	86625	24	8Sc50
25	75	6	24	06	11	13.0	9.4	79	7.2	1020.7	1	006	03	1	1	3	0	9	3	1	83362	86075		25	COTRA
26	84	7	24	08	16	17.2	14.6	85	10.2	1023.5	3	017	02	2	2	7	5	4	/	/	86612	87615		26	
27	70	7	04	01	03	14.7	12.9	89	9.1	1027.5	1	009	02	2	2	7	5	6	/	/	87648			27	
28	56	7	07	03	06	18.1	16.4	89	11.4	1021.2	7	002	05	2	2	0	0	9	0	1	87080			28	COTRA
29	15	7	03	01	03	13.5	13.2	98	9.3	1020.3	2	007	10	2	2	1	6	2	7	/	81705	87363		29	2Ac61 Absent vv&cld est
30	59	3	24	04	07	16.1	13.9	87	9.7	1023.6	2	009	05	1	1	3	8	3	0	1	81708	83656		30	1Cu15 1Ci75 COTRA Cu med

Mean vis = 10.5 km
 Mean cloud = 6.4 80%
 Mean wind speed = 3.7 kn
 Mean gust = 8 kn
 Mean TT = 15.5 °C
 Mean TdTd = 13.6 °C
 Mean RH = 88.4 %
 Mean r = 9.6 g/kg
 Mean PPP = 1020.1 mbar

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for SEPTEMBER 2014

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	hCr	Cr	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	40	8	23	04	10	18.4	16.4	88	11.5	1019.7	8	005	58	5	6	8	5	3	/	/	81707	86712	88620		1		
2	80	5	03	04	06	20.5	10.8	53	7.9	1022.5	6	006	03	1	1	5	8	6	0	0	82842	84650			2	Cu hum	
3	68	6	05	04	12	21.3	15.0	67	10.5	1020.8	7	015	02	2	2	6	8	6	/	1	82835	85650			3	/Ci80 COTRA	
4	62	7	03	04	11	20.0	14.3	70	10.1	1017.3	8	009	02	2	2	7	8	6	/	/	82830	87638			4	Cu hum	
5	61	8	32	05	08	19.4	12.6	65	9.0	1015.4	6	007	02	2	2	8	8	5	/	/	82828	88640			5	Cu hum	
6	58	5	34	03	09	20.7	13.8	64	9.8	1013.5	8	006	05	2	2	3	2	5	3	0	83828	83362			6	Cu med	
7	75	5	31	03	06	20.5	11.2	55	8.2	1015.3	8	009	02	2	2	5	8	6	0	0	84835				7	2Sc40 Cu hum	
8	72	5	25	03	06	21.0	7.3	41	6.3	1019.1	6	003	02	1	1	1	1	7	0	1	81850	85080			8	COTRA Cu hum	
9	70	6	04	04	05	21.5	8.4	43	6.8	1020.4	7	011	02	1	1	1	4	7	0	1	81850	86080			9	1Sc50 COTRA Cu hum	
10	65	5	07	05	11	21.3	9.0	45	7.1	1020.2	8	012	02	2	2	5	8	6	0	0	82845	84650			10	Cu hum	
11	59	7	05	05	12	18.3	10.7	61	7.9	1022.0	6	004	05	2	2	7	8	6	/	/	82833	87638			11	Cu hum	
12	75	6	06	04	09	20.6	11.3	55	8.2	1023.6	7	005	02	2	2	5	8	6	0	1	82840	84650			12	1Ci80 COTRA Cu hum	
13	75	7	08	06	13	20.6	12.8	61	9.0	1025.6	8	008	02	2	2	6	8	6	/	1	82835	85645	87080		13	Cu med	
14	65	7	07	08	15	20.2	12.7	62	9.0	1019.9	8	019	02	2	2	5	8	6	0	1	81835	85656	85080		14	COTRA Cu med	
15	72	7	08	03	08	21.1	10.0	49	7.6	1015.0	6	015	01	2	2	2	8	6	0	1	82843	86075			15	1Sc56 1Cc72 COTRA Cu med	
16	59	3	07	06	12	23.0	15.0	61	10.6	1013.0	6	013	05	1	1	1	2	6	3	0	81838	83359			16	Cu med	
17	58	7	05	07	15	19.8	14.3	70	10.1	1010.5	6	013	05	2	2	1	1	5	0	8	81822	85270	87075		17	COTRA Cu fra Halo 22 part+parhelia	
18	63	4	09	06	15	26.0	15.7	53	11.1	1007.9	5	007	03	1	1	2	9	6	3	3	81935	81840			18	2Sc45 2Ac62 1Ci72 CbS	
19	57	4	02	02	06	22.1	16.8	72	11.9	1010.8	8	007	05	1	1	1	9	5	3	1	81920	81820			19	2Ac67 2Ci78 Cu fra/hum. CbE	
20	56	8	01	05	11	17.7	15.2	85	10.7	1016.4	3	004	05	2	2	8	6	3	/	/	87708	88711			20		
21	77	7	02	06	13	16.8	7.3	53	6.3	1024.9	1	005	02	2	2	7	8	6	/	/	81838	83645	87650		21	Cu med	
22	65	4	01	03	09	18.5	7.4	48	6.3	1024.4	7	018	01	1	1	1	1	6	0	1	81845	84080			22	1Cc72 Cu hum COTRA	
23	63	7	26	06	12	17.8	4.5	41	5.2	1018.7	7	019	02	2	2	1	1	7	0	2	81850	87070			23	COTRA Cu hum Cz arc+U/a cont	
24	86	1	34	08	22	17.4	5.5	46	5.6	1014.0	3	004	01	1	1	1	8	6	0	0	81845				24	1Sc56 Cu med	
25	80	6	24	07	17	19.7	11.0	57	8.1	1019.8	8	005	02	2	2	6	5	6	/	1	86635				25	/Ci75	
26	82	3	26	04	13	19.6	11.1	58	8.1	1024.1	3	005	01	1	1	3	4	6	0	1	81835	83638			26	1Ci80 COTRA	
27	82	7	13	04	10	20.5	11.4	56	8.2	1024.9	7	016	02	1	1	6	8	6	/	1	81840	86645			27	4Ci80 Cu hum	
28	82	7	18	04	09	22.6	13.4	56	9.4	1018.5	6	011	02	2	2	3	8	6	0	2	81838	83645	87075		28	Cu hum Absent vv&cld est	
29	59	7	22	04	11	19.2	14.5	74	10.2	1019.5	6	004	21	6	2	3	2	4	7	/	83818	87365			29	2As60 Cu med	
30	75	3	24	06	15	21.1	11.4	54	8.3	1022.8	7	006	02	0	0	2	2	6	0	1	82840				30	2Ci78 COTRA Cu med	

Mean vis = 20.1 km
 Mean cloud = 5.7 72%
 Mean wind speed = 4.8 kn
 Mean gust = 11 kn
 Mean TT = 20.2 °C
 Mean TdTd = 11.7 °C
 Mean RH = 58.8 %
 Mean r = 8.6 g/kg
 Mean PPP = 1018.7 mbar

Wokingham Sunshine Hourly analysis 2014	Hour	01-Sep	02-Sep	03-Sep	04-Sep	05-Sep	06-Sep	07-Sep	08-Sep	09-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep
	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	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	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	0.00	0.57	0.98	1.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	0.00	0.31	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
	8	0.00	0.96	0.19	0.05	0.00	0.00	0.00	0.84	1.00	1.00	0.00	0.01	0.00	0.07	0.00	0.00
	9	0.00	1.00	0.70	0.35	0.00	0.00	0.00	0.96	1.00	1.00	0.00	0.37	0.00	0.02	0.03	0.00
	10	0.00	1.00	0.60	0.09	0.00	0.00	0.00	0.33	1.00	0.61	0.00	0.40	0.16	0.30	0.42	0.00
	11	0.00	1.00	0.67	0.01	0.00	0.00	0.41	0.23	1.00	0.61	0.00	0.82	0.12	0.50	0.91	0.04
	12	0.00	0.39	0.38	0.00	0.00	0.10	0.41	1.00	0.77	0.67	0.00	0.64	0.19	0.24	0.79	0.97
	13	0.00	0.78	0.13	0.00	0.00	0.00	1.00	1.00	0.31	0.44	0.03	0.09	0.30	0.04	0.89	0.37
	14	0.00	0.02	0.32	0.00	0.00	0.13	0.78	1.00	0.97	0.39	0.05	0.39	0.04	0.23	0.43	0.14
	15	0.00	0.60	0.32	0.00	0.00	0.93	0.86	1.00	1.00	0.36	0.00	0.58	0.07	0.38	0.75	0.76
	16	0.00	0.24	0.49	0.00	0.00	0.35	0.29	1.00	1.00	0.69	0.00	0.25	0.00	0.88	0.70	0.45
	17	0.00	0.60	1.00	0.00	0.00	0.56	0.62	0.98	0.90	0.95	0.00	0.57	0.00	0.59	0.83	0.25
	18	0.00	0.57	0.27	0.00	0.00	0.00	0.26	0.18	0.04	0.16	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
	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		0.08	7.47	5.07	0.50	0.00	2.08	4.63	10.08	10.98	8.92	0.09	4.12	0.87	3.25	5.73	2.98

	Hour	17-Sep	18-Sep	19-Sep	20-Sep	21-Sep	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	30-Sep	Mean
	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
	6	0.00	0.00	0.00	0.00	0.49	0.43	0.00	0.24	0.62	0.00	0.00	0.07	0.00	0.00	0.15
	7	0.00	0.00	0.00	0.01	1.00	0.89	0.15	0.16	0.97	0.00	0.00	0.98	0.00	0.21	0.26
	8	0.00	0.00	0.00	0.00	0.98	0.96	0.33	0.00	0.27	0.01	0.00	1.00	0.00	0.45	0.27
	9	0.00	0.00	0.00	0.00	0.94	1.00	0.72	0.28	0.74	0.03	0.00	1.00	0.00	0.73	0.36
	10	0.00	0.76	0.00	0.00	0.93	1.00	0.68	0.32	0.65	0.13	0.13	1.00	0.00	0.89	0.38
	11	0.00	0.39	0.00	0.00	0.49	0.83	0.99	0.58	0.26	0.10	0.60	0.94	0.00	0.92	0.41
	12	0.08	0.69	0.00	0.00	0.38	1.00	0.11	0.56	0.00	0.02	0.40	0.61	0.00	0.87	0.38
	13	0.11	0.77	0.20	0.00	0.07	1.00	0.00	0.57	0.02	0.18	0.10	0.13	0.00	0.81	0.31
	14	0.00	1.00	1.00	0.00	0.15	1.00	0.08	0.60	0.80	0.20	0.25	0.14	0.00	0.52	0.35
	15	0.00	0.54	0.89	0.00	0.19	1.00	0.00	1.00	0.13	0.87	0.10	0.00	0.06	0.53	0.43
	16	0.00	0.00	0.91	0.00	0.32	0.91	0.18	0.99	0.00	0.00	0.00	0.01	0.14	0.51	0.34
	17	0.00	0.00	0.29	0.00	0.00	0.64	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.47	0.33
	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	0.05
	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
	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		0.18	4.15	3.30	0.01	5.95	10.65	3.24	5.81	4.49	1.54	1.59	5.88	0.20	6.91	120.76

SEPTEMBER 2014	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	15.05	18.6	1412	10.7	356	94.4	98.6	2358	86.5	1418	14.16	10.03	12.2	1631	7.6	356	1020.45	1022.2	2358	1019.3	1647
2	15.73	22.0	1339	10.5	200	81.5	99.0	43	43.4	1542	12.06	8.67	10.8	858	6.9	1544	1022.88	1024.2	907	1021.9	115
3	16.40	23.4	1516	10.3	253	83.2	99.0	340	55.6	1533	13.24	9.39	11.9	922	7.6	254	1022.20	1024.9	905	1020.0	1742
4	16.82	21.4	1106	11.5	0	85.1	97.4	701	66.8	1607	14.19	9.99	11.5	1104	7.9	1	1018.44	1021.0	32	1016.6	1716
5	17.15	19.8	1234	15.7	335	82.7	94.7	348	61.9	1404	14.06	9.93	10.7	925	8.6	1404	1015.94	1017.4	903	1015.0	2357
6	16.74	21.6	1528	13.1	2226	82.9	97.3	2340	58.0	1541	13.68	9.69	10.8	1716	8.9	1541	1014.27	1015.2	34	1013.1	1546
7	14.88	20.8	1436	9.0	2346	81.0	98.6	355	52.7	1427	11.30	8.30	9.9	10	6.8	2347	1015.93	1018.2	2358	1014.3	54
8	13.45	21.4	1334	6.5	529	79.5	98.9	701	38.1	1453	9.26	7.25	10.3	909	5.8	1453	1019.45	1021.1	2357	1018.0	5
9	14.43	22.0	1540	7.0	542	77.4	98.5	652	38.6	1541	9.84	7.50	9.2	844	6.0	542	1021.28	1022.9	905	1020.0	1624
10	14.27	21.6	1458	8.7	551	79.2	98.7	707	44.2	1454	10.23	7.69	9.7	849	6.7	1427	1021.42	1022.8	923	1019.8	1613
11	13.36	20.4	1403	6.7	325	81.0	98.7	605	50.8	1404	9.89	7.53	9.0	858	5.9	326	1022.38	1023.9	2359	1021.4	107
12	15.36	22.8	1248	9.8	424	79.9	97.1	537	41.9	1555	11.53	8.35	10.3	1022	6.9	1555	1024.23	1026.2	2352	1023.0	1559
13	15.25	21.7	1316	9.6	445	83.5	98.5	524	57.5	1318	12.25	8.74	11.1	1009	7.1	445	1026.28	1027.4	903	1025.1	1641
14	14.90	22.2	1249	9.1	336	81.6	98.4	627	53.2	1249	11.50	8.37	10.4	831	6.8	336	1022.20	1026.2	1	1019.3	1750
15	14.96	21.8	1503	9.9	2349	81.5	97.9	528	45.6	1507	11.37	8.32	10.5	1109	7.1	1458	1016.89	1020.0	5	1013.9	1732
16	16.04	23.7	1304	9.3	132	86.0	98.4	808	57.1	1554	13.45	9.62	12.4	1204	7.1	132	1014.29	1015.9	8	1012.3	1641
17	16.90	20.2	1237	13.0	30	84.8	97.6	103	69.4	1454	14.26	10.09	11.1	2306	8.9	30	1011.78	1014.1	3	1010.1	1706
18	18.44	26.4	1445	13.0	333	82.5	97.7	408	49.3	1454	15.10	10.69	12.5	1212	9.0	333	1009.10	1010.4	1	1007.5	1424
19	17.79	22.6	1508	15.8	537	92.5	97.9	658	70.4	1510	16.50	11.66	13.5	1355	10.5	0	1011.15	1013.4	2127	1009.0	146
20	16.80	20.0	1153	14.2	2010	90.8	98.2	448	76.1	1156	15.27	10.74	12.0	757	9.2	2229	1016.28	1020.9	2359	1013.1	46
21	13.39	19.3	1226	6.2	2352	76.5	96.9	2339	45.9	1310	8.97	7.07	9.5	0	5.6	2352	1024.35	1027.6	2352	1020.7	7
22	10.42	18.8	1454	3.3	524	81.2	98.8	743	43.9	1403	6.74	6.07	7.9	901	4.6	524	1025.86	1027.8	55	1023.9	1627
23	11.72	18.4	1406	4.1	542	76.2	99.0	714	40.4	1459	7.06	6.23	8.3	919	4.9	542	1020.32	1024.2	20	1015.9	2359
24	12.89	18.7	1255	6.0	2357	77.6	95.6	700	43.3	1627	8.56	7.00	9.9	942	4.8	1701	1015.00	1019.3	2357	1012.9	739
25	12.95	19.9	1502	3.8	352	78.8	98.1	600	56.0	1458	9.03	7.21	9.2	2355	4.8	352	1020.48	1021.5	2155	1019.1	14
26	16.27	21.3	1352	12.2	1956	80.2	95.5	2315	48.1	1534	12.59	8.96	10.8	917	7.3	1548	1023.63	1026.9	2244	1020.6	234
27	15.54	22.1	1404	10.1	255	81.3	97.8	415	46.6	1403	11.97	8.58	9.8	2103	7.0	1259	1025.89	1027.6	841	1023.5	2359
28	16.80	23.5	1237	11.5	624	82.1	98.8	717	51.4	1237	13.30	9.41	11.6	901	8.1	2338	1020.40	1023.7	6	1018.3	1557
29	14.62	20.1	1518	10.3	144	89.1	99.0	643	65.0	1548	12.72	9.08	10.8	1221	7.6	144	1020.00	1021.7	2336	1019.0	401
30	16.90	22.6	1354	12.5	631	80.2	97.0	710	48.4	1437	13.12	9.27	10.5	944	7.9	1425	1022.99	1024.0	2049	1021.5	10

Total

Mean	15.21	21.30		9.78		82.5	97.92		53.53		11.91	8.71	10.61		7.13		1019.53	1021.76		1017.61	
Max	18.44	26.44		15.79		94.4	99.00		86.50		16.50	11.66	13.46		10.52		1026.28	1027.78		1025.06	
Min	10.42	18.38		3.27		76.2	94.70		38.10		6.74	6.07	7.91		4.62		1009.10	1010.38		1007.51	

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.