

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 2009

Temperature (°C / °F)			Anomaly	Rank in the past 128 years			
Mean maximum	20.0	68.0	+1.1	26 th highest			
Mean minimum	9.8	49.6	+0.1	35 th highest			
Daily mean	14.9	58.8	+0.6	24 th highest			
Highest maximum	26.5	79.7	on 8 th	Lowest maximum	16.9	62.4	on 15 th
Highest minimum	17.2	63.0	on 8 th	Lowest minimum	3.8	38.8	on 27 th
Mean grass minimum	6.6	43.9	-0.2	Lowest grass minimum	0.4	32.7	on 27 th
Mean earth @30 cm	16.1	61.0	0.0	Earth @100 cm	16.2	61.2	
Frost duration (hrs)	0.0			Rain duration (hrs)	11.2		
Rainfall total (mm / in)	17.2	0.68	27 %	15 th lowest			
Highest daily fall	12.1	0.48	on 2 nd				
Number of: Dry days (<0.2mm)	25	Wet days (>0.9mm)	3	days ≥5mm	1		
Sunshine total (hrs) 159.8	Daily mean 5.33	111 %		Sunniest day 11.3	on 25 th		
N° days with: Air frost 0	Ground frost 0	Snow falling 0	Snow lying 0				
Thunder 0	Hail ≥5mm 0	Small hail/ice 0	Fog @09 0	Nil sun 1			
Air pressure MSL : Mean @09 GMT (mbar/in)	1022.9	+6.4	30.21				
Absolute highest	1038.5		30.67	on 11 th			
Absolute lowest	993.3		29.33	on 2 nd			

Anomaly = departure from 1971 to 2000 average (degrees C, percent and mbar).

Notes:

Warm and Dry with Above Average Sunshine.

Temperature: This is the warmest September since 2006, though 2006 was the warmest since before 1882, and was 3.1° above this month's mean. Nevertheless, the mean maximum this month is 1.1° above the current climatological average, and there was a good scattering of warm days throughout the month. The month's highest temperature is 2.0° above the median, while the month's lowest is 1.0° above the median. The lowest max is 3.0° above the median and ranks 5th highest in 97 years. The highest min is 2.1° above its median and is 7th highest in the same period. We just escaped without a ground frost, although the lowest grass min was only +0.4°, allowing for the probability of one in many less urbanized parts of the district. It is interesting to note that there was ground frost in September in all the years between 1982 and 1996 except 1992, with an astonishing 13 in 1986. However, air frost in September is a good deal rarer, with the last occasion 50 years ago. Earth temperatures are close to normal. **Rainfall:** This has been a predominantly dry September, and driest since 2003. All but 5.1 mm of this month's total fell on the 2nd, and there were 2 long dry spells, the first of 11 days ended on the 14th and the second of 14 days ended on the 29th. The number of dry days is most since 2003 and is 7 more than average. The duration of measurable rain is also lowest since 2003, and is 26.9 hours below normal. The highest rainfall rate was 37 mm/hr on the 2nd. No thunder or hail was recorded this month. **Sunshine:** This September had about 10 % more sunshine than normal, and most since 2004. The best of the sunshine occurred from the 24th to the 27th when there was 40.6 hours, 85 % of the maximum. Overall there were 10 days with <3 hours, 12 with =>6 hours and 6 with =>9 hours. **Wind :** This has been a fairly windy September, with a mean speed of 6.2 mph, 0.4 mph above average and highest since 2004. The 3rd was the windiest day, mean 13.2 mph, also highest since 2004, and the month's highest gust of 38 mph was also on that day. The least windy day was the 26th, mean 1.5 mph, and there were 1198 minutes (19.97 hours) with a mean speed of 0.5 mph or less. Daily mean direction/number of days: N,6 NE,6 E,0 SE,0 S,1 SW,7 W,9 NW,1. **Humidity:** The overall mean relative humidity was 75.4 % and the lowest value was 37 % on the 4th. The mean water vapour content per kg of air was 7.9 g at 0900 GMT and 7.6 g at 1500 GMT. **Pressure:** The mean pressure and the month's absolute highest are both highest since 1986. **Commentary : From the 1st to the 8th :** Temperatures were near or a little below normal except on the 8th, an isolated hot day with anomalies for both max and min near +7°. The 2nd was a wet day with 12.1 mm, and some rain also fell on the 1st and 3rd, but thereafter it was dry. Sunshine overall was near normal, but the 2nd and 7th together only produced a total of 0.5 hours. Winds were SW'ly, fresh until the 4th then mainly moderate. **From the 9th to the 20th :** Temperatures were rather variable, with anomalies for max ranging from -1.5° on the 15th to +5.3° on the 19th, while anomalies for daily min lay between -4.3° on the 10th to +4.5° on the 15th and 16th. Apart from the 15th, when 2.8 mm of rain fell, the period was dry. Sunshine was above normal until the 11th, then mainly below. Winds were NE'ly, moderate until the 13th then fresh until the 16th, becoming light on the 18th. **From the 21st to the 30th :** Temperatures by day were generally a little above normal, with anomalies for the max between +0.4° on the 30th and +3.6° on the 29th. By night, values were more variable, with anomalies for the min between -5.5° on the 27th and +5.2° on the 23rd. Apart from 0.6 mm on the 30th the period was dry. Sunshine was below normal until the 23rd, then mainly above. Winds were mainly W'ly and light, but temporarily moderate on the 22nd.

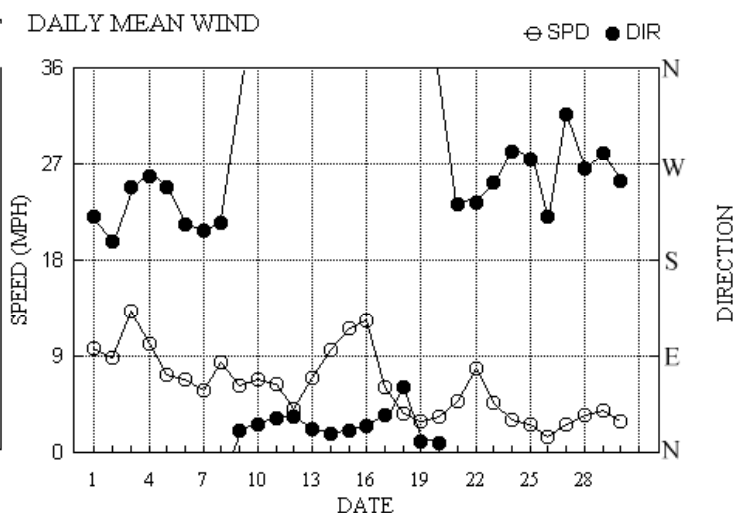
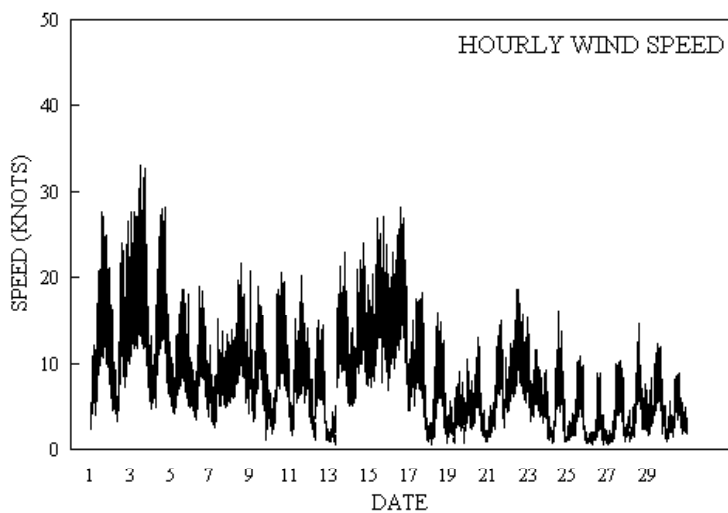
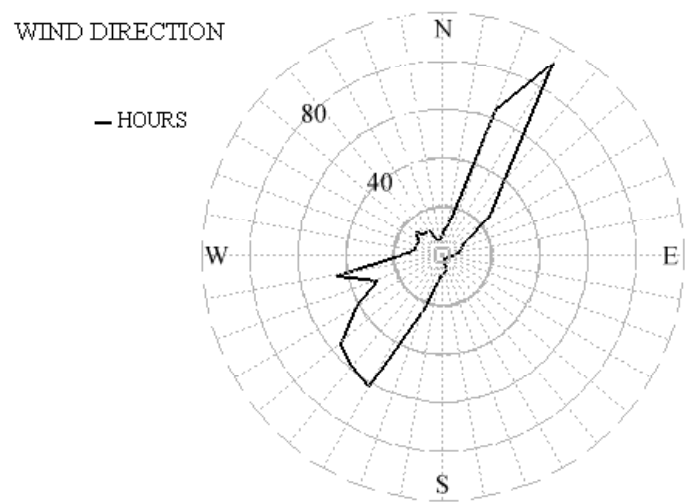
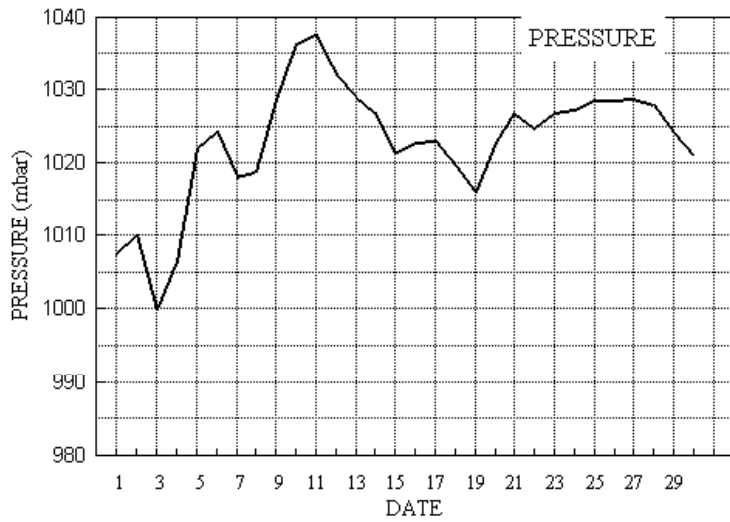
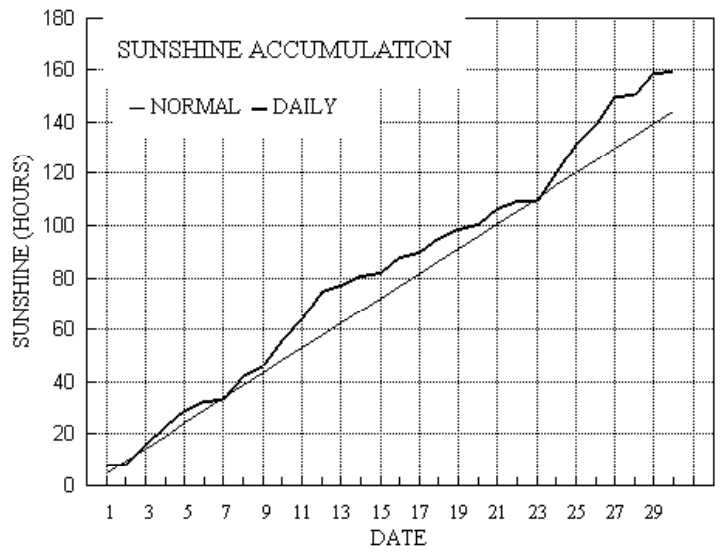
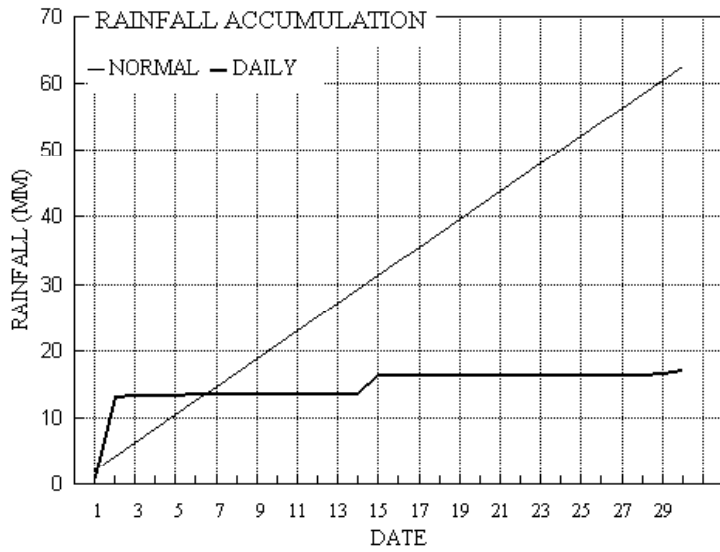
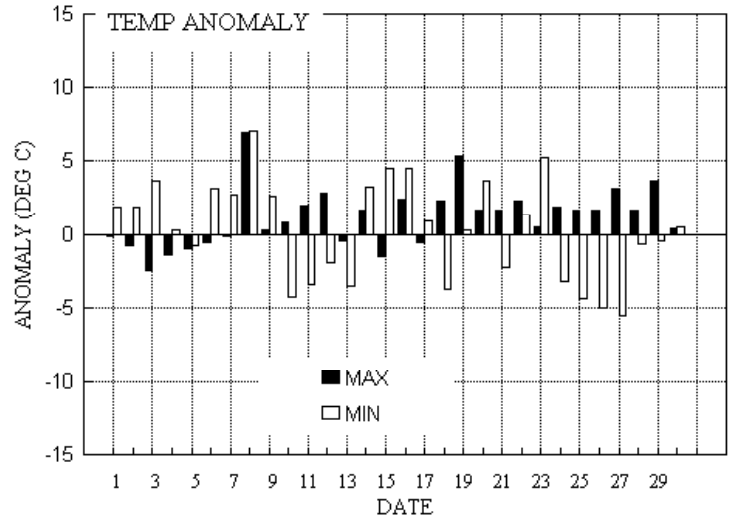
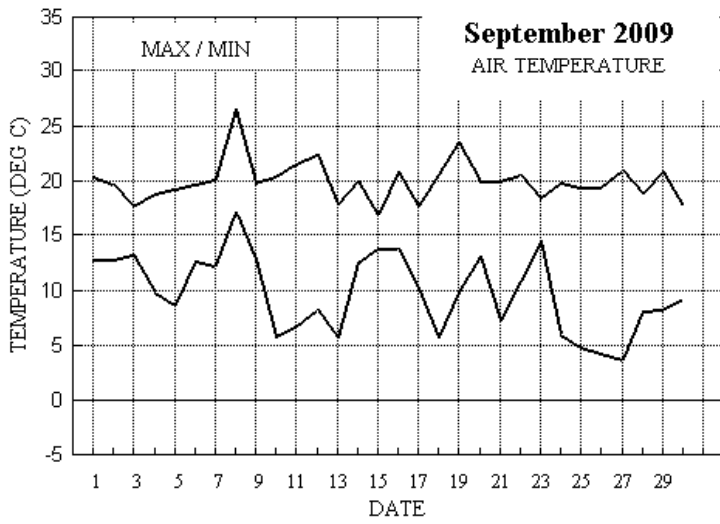
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 30 th			
+0.2°	+1.8°	65 %	117 %	+1.6°	+0.5°	14 %	94 %	+1.8°	-1.5°	3 %	123 %

B J Burton. FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham Climatological Graphs for September 2009



Month: September 2009

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	20.4	12.8	1.0	8.6	17.4	16.8	7.9	0.0	1007.6	0 0 0 0	0 0 0 0	0 0 0 0	221	8.4	8.5	205	28	1344	212	14	13	1.4	
2	19.7	12.8	12.1	9.9	17.1	16.8	0.2	0.0	1010.0	0 0 0 0	0 0 0 0	0 0 0 0	197	7.3	7.7	190	27	2051	213	12	12	5.3	
3	17.8	13.2	0.4	11.3	17.0	16.7	7.7	0.0	999.9	0 0 0 0	0 0 0 0	0 0 0 0	248	11.3	11.5	259	33	1123	252	15	10	0.1	
4	18.9	9.8	0.0	7.3	16.5	16.7	7.5	0.0	1006.5	0 0 0 0	0 0 0 0	0 0 0 0	259	8.5	8.8	262	28	1600	271	14	14	0.0	
5	19.3	8.7	tr	4.1	16.2	16.6	5.7	0.0	1022.0	0 0 0 0	0 0 0 0	0 0 0 0	248	6.2	6.3	263	19	1357	250	9	15	0.0	
6	19.7	12.6	0.1	11.5	16.4	16.5	3.7	0.0	1024.3	0 0 0 0	0 0 0 0	0 0 0 0	214	5.6	5.9	245	19	1145	210	9	14	0.3	
7	20.2	12.2	tr	8.8	16.6	16.4	0.3	0.0	1018.1	0 0 0 0	0 0 0 0	0 0 0 0	208	4.9	5.1	201	15	0912	205	7	14	0.0	
8	26.5	17.2	0.0	16.4	17.1	16.4	9.2	0.0	1018.8	0 0 0 0	0 0 0 0	0 0 0 0	215	6.9	7.3	217	22	1242	213	10	12	0.0	
9	19.9	12.8	tr	10.5	17.7	16.4	4.0	0.0	1028.5	0 0 0 0	0 0 0 0	0 0 0 0	20	5.3	5.5	347	20	0001	21	10	09	0.0	
10	20.4	5.9	0.0	0.5	16.8	16.4	9.7	0.0	1036.4	0 0 0 0	0 0 0 0	0 0 0 0	27	5.9	6.0	24	21	1418	26	9	09	0.0	
11	21.6	6.8	0.0	1.6	16.4	16.5	8.1	0.0	1037.7	0 0 0 0	0 0 0 0	0 0 0 0	32	5.4	5.5	23	20	1401	30	8	16	0.0	
12	22.4	8.3	0.0	3.9	16.4	16.5	11.1	0.0	1031.8	0 0 0 0	0 0 0 0	0 0 0 0	34	3.3	3.6	25	15	1010	32	8	10	0.0	
13	17.9	5.8	0.0	0.5	16.2	16.4	2.2	0.0	1029.0	0 0 0 0	0 0 0 0	0 0 0 0	22	5.8	6.1	20	23	1813	20	10	13	0.0	
14	20.0	12.5	tr	11.9	16.1	16.3	3.7	0.0	1026.9	0 0 0 0	0 0 0 0	0 0 0 0	18	8.3	8.3	22	24	1634	23	13	16	0.0	
15	16.9	13.8	2.8	11.9	16.2	16.2	1.1	0.0	1021.2	0 0 0 0	0 0 0 0	0 0 0 0	20	10.1	10.1	25	27	1634	21	13	12	3.2	
16	20.8	13.8	0.0	12.9	16.1	16.2	5.8	0.0	1022.8	0 0 0 0	0 0 0 0	0 0 0 0	25	10.7	10.7	21	28	1447	26	14	16	0.0	
17	17.8	10.2	0.0	6.8	15.9	16.1	2.0	0.0	1022.9	0 0 0 0	0 0 0 0	0 0 0 0	35	5.2	5.4	61	18	1524	24	8	04	0.0	
18	20.6	5.8	0.0	1.7	15.5	16.1	5.3	0.0	1019.5	0 0 0 0	0 0 0 0	0 0 0 0	61	2.9	3.1	66	16	1126	74	6	13	0.0	
19	23.6	9.8	0.1	5.5	15.5	16.0	3.9	0.0	1016.0	0 0 0 0	0 0 0 0	0 0 0 0	10	2.1	2.5	340	11	2239	329	5	22	0.1	
20	20.0	13.1	0.0	9.2	16.2	15.9	1.6	0.0	1022.8	0 0 0 0	0 0 0 0	0 0 0 0	9	2.4	2.9	3	13	1021	19	6	10	0.0	
21	20.0	7.3	0.0	2.8	16.0	16.0	5.7	0.0	1026.8	0 0 0 0	0 0 0 0	0 0 0 0	232	3.9	4.1	239	15	1438	243	7	15	0.0	
22	20.6	10.8	tr	9.0	15.9	16.0	2.9	0.0	1024.6	0 0 0 0	0 0 0 0	0 0 0 0	234	6.6	6.8	258	19	1055	250	9	11	0.2	
23	18.4	14.5	tr	13.7	16.3	16.0	0.0	0.0	1026.7	0 0 0 0	0 0 0 0	0 0 0 0	253	3.7	4.1	216	14	0009	224	6	00	0.0	
24	19.8	6.1	0.0	2.1	16.2	16.0	10.8	0.0	1027.3	0 0 0 0	0 0 0 0	0 0 0 0	282	2.2	2.6	245	16	1226	291	6	15	0.0	
25	19.5	4.9	0.0	0.9	15.6	16.0	11.3	0.0	1028.6	0 0 0 0	0 0 0 0	0 0 0 0	274	1.6	2.3	288	11	1414	284	5	14	0.0	
26	19.5	4.3	0.0	1.0	15.1	15.9	8.1	0.0	1028.6	0 0 0 0	0 0 0 0	0 0 0 0	221	0.2	1.3	57	9	1121	18	3	12	0.0	
27	21.0	3.8	0.0	0.4	14.8	15.8	10.4	0.0	1028.8	0 0 0 0	0 0 0 0	0 0 0 0	316	1.4	2.3	337	11	1439	328	5	16	0.0	
28	18.9	8.1	0.0	4.4	14.9	15.7	0.8	0.0	1027.8	0 0 0 0	0 0 0 0	0 0 0 0	265	2.5	3.1	328	15	1425	313	6	14	0.0	
29	20.9	8.3	0.1	4.4	14.9	15.6	8.3	0.0	1024.0	0 0 0 0	0 0 0 0	0 0 0 0	280	2.5	3.4	294	12	1206	313	6	12	0.2	
30	17.7	9.3	0.6	5.3	15.0	15.5	0.8	0.0	1020.9	0 0 0 0	0 0 0 0	0 0 0 0	254	2.1	2.6	313	9	1433	320	4	14	0.4	
Total			17.2				159.8	0.0															
Mean	20.0	9.8		6.6	16.1	16.2	5.33	0.0	1022.9					295	1.4	5.4							
Anom	+1.1	+0.1	27%		+0.0	-0.6	111%				+6.4												11.2
Daily mean		14.9																					
Anom		+0.6																					

Number of days with:

Air frost = 0 Ground frost = 0 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 1971-2000 climatological average.
 All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for September 2009

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	N	Ch	shs	N	Ch	shs	Date	Remarks
1	83	1	24	09	18	17.8	9.2	57	7.5	1007.6	2	009	03	0	0	1	2	5	7	2					1	1Ac60 1Ac68 1Ci72 Cu med Ci edge ESE	
2	80	7	20	06	11	15.3	13.1	87	9.4	1010.0	8	004	21	6	2	3	8	4	7	/	81812	83656	85362		2	1Sc45 7As65 Cu fra/med	
3	86	2	26	12	26	15.8	8.1	60	6.8	999.9	2	031	02	0	0	1	1	5	0	2					3	1Ci75 Cu hum	
4	86	2	28	11	21	14.9	6.8	58	6.2	1006.5	2	018	03	1	1	1	1	5	7	1					4	1Ac62 1Ac65 2Ci70 Cu hum	
5	86	1	26	06	14	15.3	8.2	62	6.8	1022.0	2	013	03	0	0	1	1	5	4	1					5	1Ac62 1Ci78 Cu fra/hum	
6	83	7	23	05	10	15.7	8.9	64	6.9	1024.3	2	002	02	2	2	7	8	6	/	2	81830	87640			6	/Ci72 Cu hum	
7	65	7	21	09	14	17.7	14.4	81	10.2	1018.1	0	006	02	6	2	7	5	4	7	/	81712	83640	85650		7	6Ac59	
8	62	7	22	07	18	19.9	17.0	83	12.1	1018.8	2	010	01	5	2	7	5	4	/	/	83710	87613			8		
9	80	6	02	08	15	16.4	9.5	64	7.3	1028.5	2	019	15	1	1	1	1	5	7	9					9	1Cc70 Cu hum jpW&NW	
10	83	1	03	07	18	15.3	9.7	69	7.4	1036.4	1	010	03	0	0	1	1	4	0	0					10	Cu hum	
11	70	6	03	07	14	14.4	11.1	80	7.9	1037.7	8	004	03	2	2	4	6	4	0	1					11	COTRA	
12	78	1	06	05	12	16.6	11.0	70	7.9	1031.8	7	006	03	0	0	1	1	4	0	1					12	1Ci300 Cu fra/hum	
13	78	6	02	09	16	15.2	11.5	78	8.0	1029.0	8	002	03	1	1	6	8	4	0	1					13	2Ci300 COTRA Cu hum	
14	65	2	03	12	21	16.3	9.9	66	7.6	1026.9	8	005	03	1	1	2	8	5	0	0					14	1Sc35 Cu fra	
15	70	7	02	13	21	16.1	11.4	73	8.3	1021.2	6	004	03	1	1	4	8	4	5	/	83818	87358			15	2Sc56 Cu fra/hum	
16	75	6	02	11	22	15.5	10.7	73	7.9	1022.8	1	006	03	1	1	6	8	4	0	8					16	2Sc25 1Cs75 Cu hum Cs S	
17	84	7	04	07	17	15.2	7.5	60	6.3	1022.9	0	005	02	1	1	7	5	6	/	/	81635	87640			17	Sc str tr pe	
18	72	4	07	05	10	15.4	11.0	75	8.0	1019.5	7	002	03	0	0	4	8	4	0	0					18	1Sc56 Cu hum	
19	59	7	06	03	07	16.0	13.1	83	9.3	1016.0	1	007	05	2	2	7	5	7	/	/	87650				19	Sky turbid	
20	64	7	01	04	09	14.9	10.7	76	7.8	1022.8	2	016	02	2	2	7	8	4	/	/	81816	87656			20	2Sc25 Cu hum	
21	78	7	25	04	08	14.0	8.8	71	6.9	1026.8	2	007	02	2	2	1	0	9	8	8					21	1Ac68 COTRA Ac cas vir	
22	80	2	24	07	15	16.1	10.5	69	7.7	1024.6	1	004	01	1	1	2	8	4	0	1					22	2Sc25 1Ci80 COTRA Cu fra	
23	70	8	26	06	12	16.6	12.5	76	8.7	1026.7	2	010	60	6	2	5	8	4	7	/	81815	85645	88357		23	Cu fra Pptn v slit	
24	80	2	34	04	08	14.7	10.5	76	7.7	1027.3	1	006	03	0	0	1	1	4	0	1					24	2Ci80 COTRA Cu fra	
25	82	4	27	01	04	13.1	8.0	71	6.5	1028.6	1	006	02	0	0	0	0	9	0	1					25	COTRA Parhelion	
26	68	7	31	02	03	11.7	8.9	83	7.0	1028.6	1	007	03	1	1	7	5	6	/	/	87630				26		
27	60	5	25	02	05	12.4	10.1	86	7.6	1028.8	3	007	05	1	1	5	6	3	0	1					27	1Ci80 COTRA	
28	80	7	26	03	05	14.9	11.5	80	8.2	1027.8	2	007	02	2	2	7	5	5	/	/	87628				28		
29	81	3	26	05	10	15.1	11.3	78	8.1	1024.0	1	004	03	1	1	1	5	7	0	1					29	COTRA Sc len Parhelion	
30	25	8	24	03	05	14.4	13.2	92	9.3	1020.9	2	001	58	6	5	8	5	3	/	/	85707	88618			30		

Mean vis = 29.2 km

Mean cloud = 4.9 61%

Mean wind speed = 6.4 kn

Mean gust = 13 kn

Mean TT = 15.4 °C

Mean TdDd = 10.6 °C

Mean RH = 73.4 %

Mean r = 7.9 g/kg

Mean PPP = 1022.9 mbar

See also, appendix to this report.

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

dd = Direction from which wind is blowing, tens of degrees true

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdDd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

r = Humidity mixing ratio at 1.2 m, g/kg

PPP = Air pressure reduced to sea level, mbar

a = Characteristic of pressure tendency (Code FM12-0200)

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

W1, W2 = Past weather code (Code FM12-4561)-

covers past 3 hours.

Nh = Amount of low cloud present, oktas

Cl = Type of low cloud (Code Fm12-0513)

h = Height of low cloud (Code FM12-1600)

Cm = Type of medium cloud (Code FM12-0515)

Ch = Type of high cloud (Code FM12-0509)

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation

trails present.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for September 2009

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	hCr	Cl	Nh	shs	NCh	shs	NCh	shs	Date	Remarks
1	70	6	23	10	27	16.9	10.7	67	7.9	1007.0	3	003	80	8	2	4	9	5	6	3	83925	82830	84070			1	1Ac62 vv50k ex p	
2	65	8	20	08	23	17.1	10.9	67	8.1	1005.7	7	023	60	6	2	3	8	5	7	/	83825	87358	88460			2	1Sc40 Cu med	
3	82	6	26	13	26	16.9	6.6	51	6.2	1001.7	1	007	25	8	2	4	8	6	7	1	84840					3	1Sc45 2Ac61 1Ac63 2Ci75 Cu med jp all quads	
4	86	6	27	14	28	18.9	5.6	42	5.6	1010.5	1	018	02	2	2	5	8	6	0	1	82848	84656				4	2Ci75 Cu med	
5	65	8	29	06	15	18.4	14.8	80	10.4	1018.8	3	002	60	6	2	1	8	5	7	/	81820	87358	88465			5	1Sc56 Cu fra/hum	
6	83	8	21	08	17	18.1	10.0	59	7.5	1021.3	6	018	02	2	2	7	8	6	/	8	81830	88635				6	/Cs70 Cu hum	
7	60	7	21	08	14	19.7	15.6	77	11.0	1018.4	8	002	05	5	2	7	5	4	/	/	84615	85622	87635			7		
8	84	1	22	08	17	25.9	15.1	51	10.8	1016.9	6	005	02	0	0	1	1	6	3	1	81840					8	1Ac64 1Ci78 Cu hum	
9	86	6	03	08	16	18.7	5.5	42	5.5	1030.1	0	005	15	6	2	1	1	7	7	/	81850	84360	86363			9	2Ac58 Cu hum jpSE Ac edge NW	
10	82	4	03	10	21	18.2	7.6	50	6.4	1035.6	7	001	01	1	1	4	8	6	0	0	81840	84642				10	Cu hum	
11	84	7	05	07	20	19.8	8.2	47	6.7	1034.3	6	021	02	2	2	3	4	6	0	1	81842	83645	86080			11	COPTRA Cu hum Parheliion	
12	84	1	05	06	14	21.8	9.0	44	6.9	1029.1	7	018	01	0	0	1	1	6	0	1	81848					12	1Ci80 COTRA Cu hum	
13	84	7	02	10	18	16.8	8.5	58	6.8	1027.4	8	007	02	2	2	7	8	6	/	/	82835	87640				13	Cu hum	
14	82	7	02	10	19	18.5	8.4	52	6.8	1024.7	6	015	02	2	2	7	8	6	6	/	82838	85656				14	4Ac57 Cu med	
15	58	8	03	10	21	15.7	13.7	88	9.7	1019.5	6	006	58	6	5	7	5	4	2	/	82712	87620	88530			15		
16	82	7	02	14	28	18.6	8.3	51	6.8	1021.7	7	004	02	2	2	7	8	6	/	2	82840	86650				16	/Ci75 Cu hum	
17	83	7	04	07	17	16.5	7.3	54	6.2	1021.5	7	006	02	2	2	7	8	6	/	/	82837	87640				17	Cu hum	
18	65	5	07	06	13	19.2	11.5	61	8.3	1016.5	7	017	02	2	2	5	8	6	0	0	81830	84650				18	2Sc35 Cu hum	
19	60	7	22	01	07	22.2	13.1	56	9.3	1015.2	5	004	05	1	1	7	8	6	/	/	85835	83656				19	Cu med Sky turbid. Wind dir variable	
20	84	7	12	01	07	19.1	9.2	53	7.1	1023.3	5	001	02	2	2	7	8	6	/	/	81838	84845	85656			20	Cu hum/med	
21	84	6	24	06	15	19.5	7.6	46	6.5	1025.0	6	015	02	2	2	6	0	9	7	2	81363	83465				21	4Ac68 /Ci75 COTRA	
22	83	7	25	09	16	19.7	12.7	64	9.0	1024.0	6	004	02	2	2	7	5	5	/	/	87628					22		
23	68	8	25	04	09	17.0	14.0	82	9.7	1025.8	8	007	02	6	2	8	8	4	/	/	84815	88625				23	Cu hum	
24	86	6	29	05	13	19.3	5.5	40	5.5	1025.7	7	012	02	1	1	1	4	6	3	2	81645	86071				24	1Ac68 1Cc73 COTRA Halo 22° part	
25	81	1	31	04	11	18.9	6.6	44	6.0	1026.4	7	016	01	0	0	1	4	6	0	0	81640					25		
26	82	6	30	02	08	18.7	7.3	47	6.3	1026.3	7	013	02	1	1	1	4	6	0	1	81640	86080				26	COTRA Cz arc	
27	80	5	34	04	10	20.6	10.0	51	7.5	1027.0	7	010	03	1	1	1	4	6	0	1	81635	85075				27	COTRA	
28	86	8	33	07	14	17.8	10.4	62	7.7	1025.4	6	016	02	2	2	7	5	6	/	1	87630					28	/Ci75	
29	84	7	30	07	11	20.0	11.7	59	8.4	1021.3	7	013	02	1	1	7	8	6	/	1	82830	86635				29	/Ci80 COTRA Cu hum	
30	85	7	31	03	09	16.9	12.2	73	8.8	1018.4	7	014	02	2	2	7	8	5	/	/	81820	83635	87656			30	Cu med	

Mean vis = 38.5 km

Mean cloud = 6.1 77%

Mean wind speed = 7.2 kn

Mean gust = 16 kn

Mean TT = 18.8 °C

Mean TdTd = 9.9 °C

Mean RH = 57.3 %

Mean r = 7.6 g/kg

Mean PPP = 1021.5 mbar

See also, appendix below

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.

September 2009	T mn	Tx	Time	Tn	Time	RHmn	RH x	Time	RH n	Time	Tdmn	r mn	r x	Time	r n	Time	p mn	p x	Time	p n	Time	R tot
1	16.24	20.5	1339	12.6	559	69.2	92.7	604	43.8	1136	10.32	7.84	9.2	1441	6.3	1136	1007.17	1011.0	2359	1003.4	100	0.2
2	15.17	19.7	1139	12.6	49	82.7	95.0	1859	56.5	1219	12.11	8.86	10.5	2102	7.5	48	1005.49	1011.3	237	993.3	2352	11.4
3	14.43	17.9	1123	10.4	2353	68.1	89.8	118	43.9	1532	8.38	6.95	9.0	19	5.4	1532	1000.13	1004.3	2310	993.3	0	0.2
4	14.12	19.1	1516	9.7	531	67.2	91.6	534	37.4	1506	7.56	6.51	7.5	2031	4.9	1414	1009.43	1018.0	2359	1003.8	221	0.0
5	13.89	19.3	1326	8.6	511	73.7	93.5	531	45.5	1328	8.98	7.06	8.2	2026	5.9	1047	1022.05	1024.7	2014	1017.9	0	0.0
6	15.25	19.8	1335	12.4	529	69.2	84.9	2200	46.9	1335	9.44	7.29	8.7	2314	6.0	959	1022.23	1024.6	33	1018.0	2350	0.0
7	17.13	20.5	1440	11.9	308	84.7	96.6	339	74.4	1441	14.50	10.22	12.3	1339	8.1	308	1018.28	1019.2	2037	1016.7	431	0.1
8	20.47	26.8	1309	15.8	2359	75.3	95.5	430	47.5	1309	15.45	10.85	12.3	928	8.9	1845	1018.29	1022.3	2359	1016.6	1509	0.0
9	14.89	19.8	1643	8.5	2345	67.8	86.9	404	40.5	1456	8.68	6.90	9.3	0	5.3	1501	1028.91	1034.0	2359	1022.1	0	0.0
10	13.35	20.5	1323	6.0	544	70.2	97.7	610	42.2	1323	7.44	6.27	7.7	835	5.4	321	1035.86	1038.0	2252	1033.9	1	0.0
11	14.29	21.5	1342	7.0	334	72.5	97.4	435	41.7	1526	8.83	6.89	8.5	915	5.9	334	1035.92	1038.5	623	1033.4	2358	0.0
12	14.74	22.2	1504	8.4	2359	74.3	97.3	630	41.6	1506	9.58	7.28	9.0	838	6.4	2350	1030.63	1033.6	53	1028.2	1657	0.0
13	12.86	17.9	1152	5.9	355	74.7	97.9	627	51.9	1317	8.09	6.62	8.8	822	5.5	356	1028.41	1029.6	643	1026.8	1545	0.0
14	15.20	20.2	1351	12.2	453	67.3	79.7	2332	47.6	1352	9.03	7.05	8.0	2353	6.2	4	1025.98	1028.2	15	1023.7	2359	0.0
15	15.17	16.8	1616	13.6	601	82.9	95.2	2251	70.8	1025	12.24	8.78	9.8	1526	7.8	1	1021.09	1024.0	7	1018.8	1625	2.6
16	15.14	20.8	1308	10.5	2311	72.3	92.5	0	43.3	1309	9.89	7.52	9.5	0	6.3	1326	1022.30	1023.7	2143	1021.1	139	0.0
17	13.07	17.6	1242	7.8	2207	68.3	90.6	2210	49.1	1243	7.06	6.18	7.2	1020	5.7	1653	1022.10	1023.3	0	1020.8	1803	0.0
18	13.05	20.4	1332	6.0	501	80.5	97.2	542	54.0	1333	9.46	7.36	8.8	1534	5.5	324	1018.22	1021.5	0	1015.7	1654	0.0
19	16.78	23.6	1324	10.0	548	77.5	96.8	617	51.2	1343	12.57	9.02	11.2	1631	7.3	540	1016.09	1019.2	2359	1014.8	437	0.0
20	15.24	19.6	1519	9.5	2359	73.5	94.4	2320	51.4	1428	10.27	7.69	8.9	16	6.7	1736	1022.80	1025.9	2233	1019.0	1	0.0
21	13.77	20.2	1453	7.3	157	74.1	97.0	255	41.7	1429	8.67	6.89	8.2	2344	5.8	1221	1025.67	1027.1	955	1024.5	1701	0.0
22	16.02	20.5	1156	10.8	341	76.6	92.5	40	56.1	1125	11.75	8.48	10.0	2358	7.2	341	1024.67	1025.6	2226	1023.9	1435	0.0
23	16.16	18.4	1101	12.0	2359	82.5	94.0	307	66.8	1029	13.15	9.26	10.3	1741	8.0	2359	1025.87	1027.0	928	1024.8	1722	0.0
24	12.83	19.9	1400	6.1	551	74.1	98.3	726	37.4	1434	7.51	6.39	8.4	35	5.1	1438	1026.63	1028.1	2359	1025.4	1652	0.0
25	11.72	19.4	1445	5.0	554	76.1	97.6	641	40.8	1342	6.97	6.12	7.0	835	5.2	554	1027.69	1028.8	834	1025.8	1603	0.0
26	11.02	19.2	1514	4.5	527	80.3	98.1	714	46.2	1501	7.20	6.24	8.0	1148	5.0	527	1027.61	1028.7	934	1026.0	1641	0.0
27	12.29	21.1	1454	3.9	549	80.2	98.3	736	48.1	1526	8.45	6.84	8.2	2000	4.8	619	1027.87	1029.0	919	1026.5	1643	0.0
28	13.84	19.1	1319	8.1	315	80.8	97.8	337	53.7	1320	10.32	7.69	8.6	2130	6.4	315	1026.44	1028.5	129	1024.5	2359	0.0
29	14.44	21.1	1212	8.0	546	79.3	97.6	648	54.4	1213	10.55	7.84	9.2	1304	6.3	546	1022.80	1024.7	108	1021.1	1547	0.0
30	14.52	17.8	1346	10.2	0	84.9	96.6	2	69.6	1351	11.95	8.62	10.6	1037	7.4	0	1019.41	1021.9	0	1017.1	2235	0.7

Total																						15.2
Mean	14.57	20.04		9.17		75.4	94.37		49.87		9.88	7.58	9.08		6.27		1022.20	1024.81		1019.36		
Max	20.47	26.78		15.79		84.9	98.30		74.40		15.45	10.85	12.28		8.87		1035.92	1038.54		1033.86		
Min	11.02	16.83		3.86		67.2	79.70		37.38		6.97	6.12	6.99		4.78		1000.13	1004.31		993.30		

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
 Rtot = 00-24 GMT rainfall total from AWS tipping bucket raingauge, mm
 Time = hours and minutes in GMT of extreme values

Appendix 1.

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

Average: Generally refers to the 30 year climatological average, currently 1971 to 2000. This will be next updated in 2010. 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 1971 to 2000 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/www1.html>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix 2.

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

VV : Visibility.

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

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

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

Code figure 89 = visibility above 70 km.

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

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

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

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

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

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

RH : Relative humidity at 1.2m, %.

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

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

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

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

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

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

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

4 = Steady, pressure the same as 3 hours ago

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

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

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

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hail includes large hail, small hail and snow pellets.

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

Code figures:

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

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

Cl : Type of low cloud

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

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

Cm : Type of medium cloud.

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

Ch : Type of high cloud

0 = No high cloud

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

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

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

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

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

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

7 = Veil of Cirrostratus covering the celestial dome.

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

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

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

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

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

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

00 to 50 = Height in hundreds of feet

51 to 55 Not used

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

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