

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

OCTOBER 2009

Temperature (°C / °F)			Anomaly	Rank in the past 128 years			
Mean maximum	16.1	61.0	+1.3	17 th highest			
Mean minimum	8.0	46.4	+1.3	11 th highest			
Daily mean	12.1	53.8	+1.3	13 th highest			
Highest maximum	19.2	66.6	on 6 th	Lowest maximum	12.1	53.8	on 18 th
Highest minimum	12.4	54.3	on 7 th	Lowest minimum	-0.7	30.7	on 18 th
Mean grass minimum	4.5	40.1	+0.3	Lowest grass minimum	-5.5	22.1	on 18 th
Mean earth @30 cm	13.4	56.1	+0.6	Earth @100 cm	14.5	58.1	
Frost duration (hrs)	1.2			Rain duration (hrs)	32.6		
Rainfall total (mm / in)	41.7	1.64	62 %	39 th lowest			
Highest daily fall	13.3	0.52	on 7 th				
Number of: Dry days (<0.2mm)	20	Wet days (>0.9mm)	9	days ≥5mm	3		
Sunshine total (hrs) 102.0	Daily mean 3.29	89 %	Sunniest day 10.3		on 8 th		
N° days with: Air frost 1	Ground frost 7	Snow falling 0	Snow lying 0				
Thunder 0	Hail ≥5mm 0	Small hail/ice 0	Fog @09 0	Nil sun	4		
Air pressure MSL : Mean @09 GMT (mbar/in)	1017.0	+1.8	30.03				
Absolute highest	1034.1		30.54	on 15 th			
Absolute lowest	994.0		29.35	on 21 st			

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

Notes:

Mild with Rainfall and Sunshine Below Normal.

Temperature: This is the mildest October since 2006, with the mean temperature 1.9° above last year's. For much of the month the daily maximum fluctuated about normal, as did the daily min. However, from the 21st onwards daily anomalies for both max and min were exclusively above normal. The highest max is 1.0° below the median and is lowest since 2004, but the lowest max is 2.8° above the median and is 7th highest in 97 years. The lowest min is 0.3° above the median while the highest min is 0.7° below the median and is equal lowest with 1994 and 2008 since 1993. The mean grass min is highest since 2006 but the lowest grass min is 0.9° below the average for the past 30 years. The number of ground frosts is about average. The first air frost of the season was on the 18th after 201 frost-free days. Earth temperatures are not far from normal. **Rainfall:** This has been quite a dry month overall, and the total is just 0.1 mm more than would place it in the dry category. It is, however, only driest since 2007, with both of the last 2 Octobers having a deficit of rain. The highest daily fall is 3.0 mm below the median and lowest since 1999. The total duration of measurable rain is 20.1 hours below normal and the number of dry days is 3 more than average. A dry spell of 8 days ended on the 19th. There was a complete absence of both thunder and hail. The month's highest rainfall rate was 27 mm/hr at 0709 GMT on the 31st. **Sunshine:** This is the dullest October since 2005. The 3 days ending on 7th had no sunshine, and the 9 day period 14th to the 22nd had 7 days with <15 % of the maximum possible. Days with >80 % of the max were the 8th, 12th, 13th and 26th. Overall there were 18 days with <3 hours, 7 with =>6 hours and 4 with =>9 hours. **Wind:** The mean speed of 5.3 mph this month is 0.9 mph below the average for the past 22 years. The 3rd was the windiest day, mean speed 12.1 mph, and the month's highest gust of 33 mph was also on that day, and is 2nd lowest in 22 years. The 13th was the calmest day, mean 1.6 mph, and there were 1274 minutes (21.2 hours) with a mean speed of 0.5 mph or less. Daily mean direction/number of days: N,4 NE,1 E,2 SE,7 S,2 SW,9 W,3 NW,3. **Humidity:** The overall mean relative humidity this October was 82.6 % and the lowest value was 37 % on the 4th. The mean water vapour content per kg of air was 7.4 g at 0900 GMT and 7.0 g at 1500 GMT. **Commentary: From the 1st to the 11th:** Daily maximum temperatures were generally within 2° of normal, except for the 7th with an anomaly of -3.3°. Daily min showed a wider variation with anomalies of -5.2° on the 2nd up to +4.4° on the 7th. Dry until the 5th, then 3 fairly wet days giving a total of 22.4 mm, with some further rain on the 9th and 11th. Not very much sunshine, the best days being the 1st, 2nd and 8th, with 92 % of the maximum on the latter date. Light or moderate winds, but fresh on the 3rd, were mainly Wly until the 4th, then Nly on 5th veering through S to Nly again on the 7th, veering Ely on 9th and Wly on 10th. **From the 12th to the 20th:** A similar temperature regime to the first period, with daily max within about 2° of normal, but the anomalies for daily min ranging from -7.2° on the 18th to +1.6° on the 13th. Mainly dry until the 20th when 2.0 mm fell. Sunshine was poor except on the 12th and 13th which both had over 9 hours. Moderate winds were NWly on the 12th, becoming light and variable, then moderate Nly on the 16th, backing SEly by the 19th. **From the 21st to the 31st:** This period was mainly mild, with positive anomalies for both max and min every day. The anomaly for daily max was +6.2° on the 28th, and similar values for daily min occurred on the 24th and 31st. Some rain fell on the 23rd, 24th, 26th, 30th and 31st, the rest being dry. Not a lot of sun once more, but sunny exceptions were the 25th and 26th, with 90 % of the max on the latter day. Light SEly winds on the 21st veered Sly and increased moderate on the 24th and became fresh SWly on the 25th, dropping light by the 27th and ending the month mainly Sly.

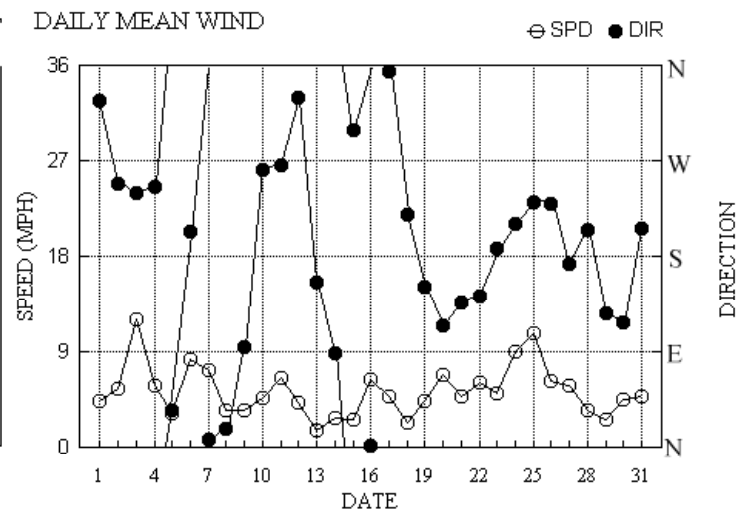
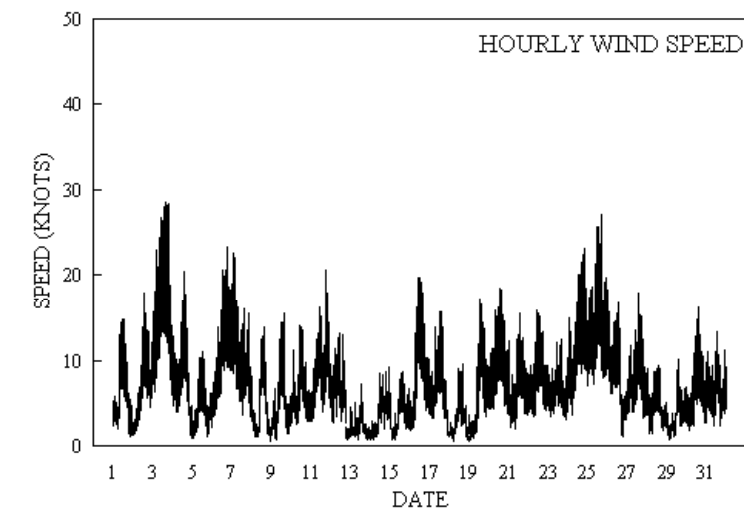
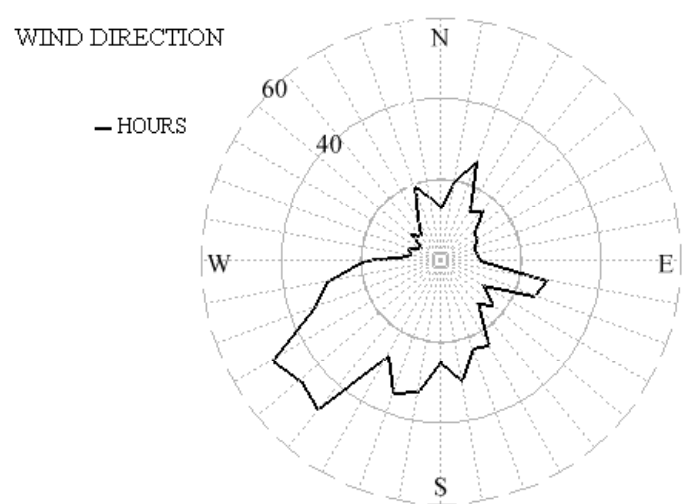
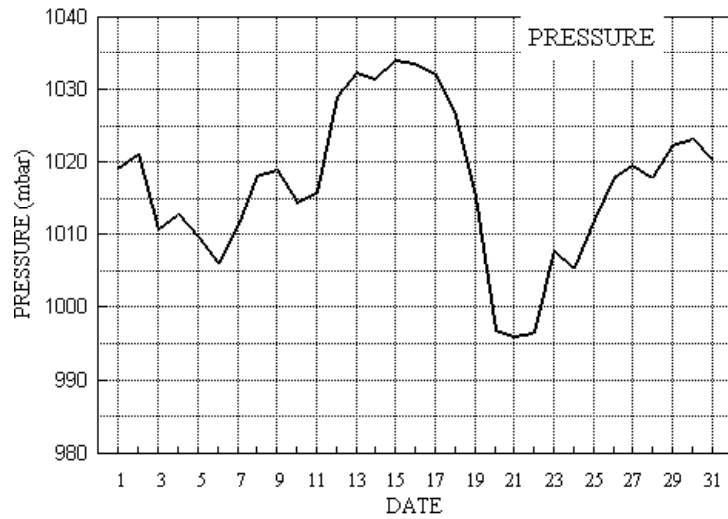
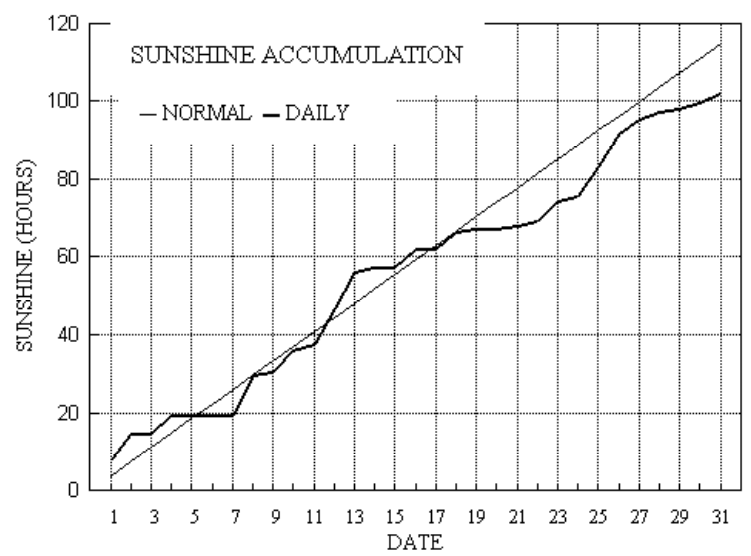
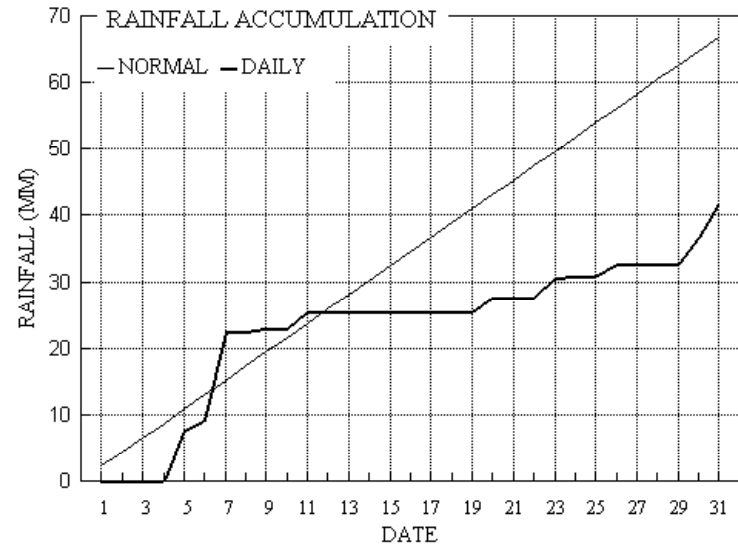
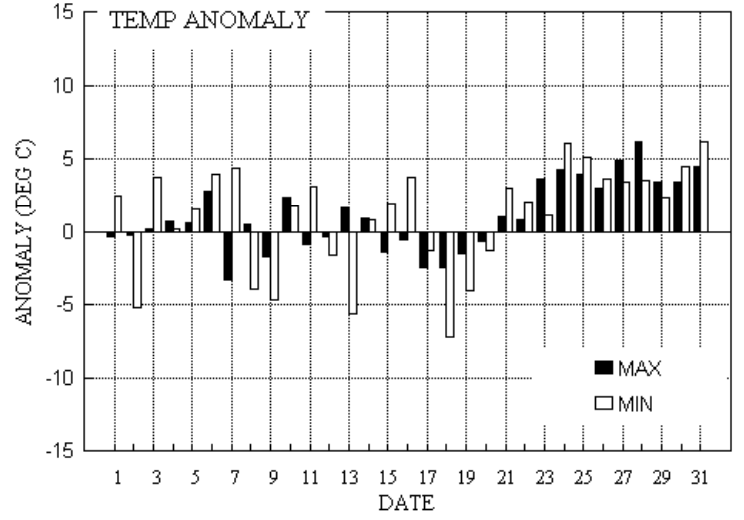
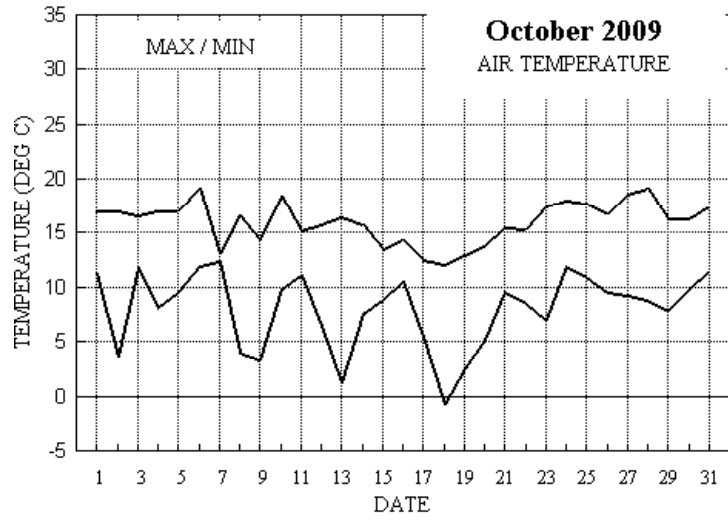
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 31 st			
+0.2°	+0.4°	106 %	97 %	-0.8°	-1.1°	23 %	84 %	+3.6°	+3.7°	60 %	86 %

B J Burton FRMetS

Hon. Met. Officer to Wokingham Town Council.

Wokingham Climatological Graphs for October 2009



Month: October 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	17.0	11.3	0.0	7.2	15.3	15.7	7.9	0.0	1019.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	327 2.9 3.8	5 15 1239	340 7 10	0.0		
2	17.1	3.6	tr	-0.6	14.6	15.6	6.7	0.0	1021.1	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	248 4.5 4.8	278 18 1323	262 8 13	0.0		
3	16.6	11.8	tr	9.5	14.7	15.6	0.2	0.0	1010.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	240 10.4 10.5	262 29 1448	239 14 12	0.2		
4	17.1	8.2	tr	3.5	14.6	15.5	4.8	0.0	1012.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	246 4.8 5.0	253 21 1402	259 9 13	0.0		
5	17.0	9.5	7.5	7.0	14.6	15.4	0.0	0.0	1009.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	35 1.5 2.8	28 11 1245	18 6 12	5.6		
6	19.2	12.0	1.6	12.6	14.7	15.4	0.0	0.0	1006.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	204 6.7 7.2	224 23 1700	221 11 17	1.6		
7	13.1	12.4	13.3	12.0	15.3	15.3	0.0	0.0	1011.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	7 2.5 6.3	230 23 0256	212 10 00	7.4		
8	16.6	4.1	0.0	-0.1	14.7	15.4	10.3	0.0	1018.1	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	17 2.9 3.1	22 14 1542	24 7 13	0.0		
9	14.4	3.3	0.6	-1.0	13.8	15.3	0.8	0.0	1018.9	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	95 2.3 3.0	106 16 1430	107 6 14	0.9		
10	18.5	9.8	tr	5.3	13.8	15.2	5.3	0.0	1014.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	261 3.6 4.0	300 14 1029	302 7 11	0.0		
11	15.2	11.1	2.4	8.1	14.0	15.1	1.6	0.0	1015.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	265 4.5 5.7	345 21 1838	339 10 18	3.2		
12	15.8	6.4	0.0	1.1	13.7	15.0	9.1	0.0	1029.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	330 2.9 3.6	28 13 1054	19 7 09	0.0		
13	16.5	1.2	0.1	-2.9	13.0	14.9	9.6	0.0	1032.4	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	156 0.5 1.4	22 7 1228	25 3 13	0.4		
14	15.8	7.6	0.0	3.5	12.9	14.7	1.1	0.0	1031.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	89 1.9 2.4	104 9 2233	108 4 19	0.0		
15	13.5	8.8	tr	8.1	13.4	14.6	0.1	0.0	1034.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	299 1.6 2.3	324 9 1456	278 4 13	0.0		
16	14.3	10.6	0.0	10.3	13.5	14.5	4.6	0.0	1033.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	2 5.1 5.6	22 20 1124	21 12 10	0.0		
17	12.5	5.5	0.0	-1.1	13.1	14.5	0.1	0.0	1032.0	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	354 3.9 4.2	7 16 1128	8 7 13	0.0		
18	12.1	-0.7	0.0	-5.5	12.4	14.4	4.3	1.2	1026.4	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	219 1.9 2.1	236 10 1509	230 4 15	0.0		
19	13.0	2.5	0.1	-1.9	11.9	14.2	0.7	0.0	1015.1	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	151 2.5 3.8	202 17 1344	188 8 14	0.3		
20	13.8	5.2	2.0	0.5	11.6	14.1	0.0	0.0	996.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	115 5.6 5.9	133 19 1209	137 9 12	3.2		
21	15.5	9.5	0.0	6.4	11.9	13.9	0.8	0.0	996.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	137 3.9 4.2	164 16 1306	144 6 12	0.0		
22	15.3	8.6	tr	3.8	12.2	13.8	1.4	0.0	996.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	142 4.6 5.2	142 16 1014	156 7 14	0.0		
23	17.4	7.0	3.0	1.7	12.2	13.7	5.1	0.0	1007.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	188 3.8 4.4	218 13 1526	215 6 09	2.7		
24	18.0	12.0	0.3	9.5	12.5	13.7	1.1	0.0	1005.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	211 6.8 7.8	227 23 1907	248 11 17	0.3		
25	17.7	11.0	0.0	8.6	12.8	13.6	7.4	0.0	1012.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	231 9.2 9.3	238 27 1504	238 12 12	0.0		
26	16.7	9.6	1.7	6.5	12.6	13.7	9.0	0.0	1018.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	230 4.7 5.4	216 18 0042	224 9 00	3.3		
27	18.6	9.3	0.0	3.6	12.6	13.6	3.3	0.0	1019.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	173 5.0 5.1	150 18 1313	158 8 14	0.0		
28	19.2	8.9	0.0	4.6	12.9	13.6	2.2	0.0	1017.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	205 2.9 3.0	212 10 1314	211 5 08	0.0		
29	16.4	7.8	0.0	3.2	12.9	13.6	0.7	0.0	1022.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	126 1.4 2.3	177 10 1436	165 5 14	0.0		
30	16.4	9.9	4.1	5.9	12.9	13.7	1.4	0.0	1023.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	118 3.6 3.9	159 16 1407	130 7 12	1.4		
31	17.5	11.6	5.0	10.0	13.0	13.7	2.4	0.0	1020.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	206 3.2 4.2	257 14 1215	263 7 12	2.1		
Total			41.7				102.0	1.2										32.6	
Mean	16.1	8.0		4.5	13.4	14.5	3.29	0.0	1017.0					216 1.6 4.6					
Anom	+1.3	+1.3	62%	+0.6	-0.2	89%			+1.8										
Daily mean		12.1							Pressure, abs highest =	1034.1									
Anom		+1.3							Pressure, abs lowest =	994.0									

Number of days with:

Air frost = 1 Ground frost = 7 Nil sun = 4
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 October 2009

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	Nh	Cl	h	Cr	Ch	shs	NChs	hNChs	Date	Remarks		
1	86	7	36	07	15	13.9	7.3	64	6.3	1019.2	2	017	03	2	2	7	8	5	3	1	83825	85650	1	1Ac62 3Ci78 COTRA Cu hum	
2	80	2	27	04	08	11.8	6.2	69	5.9	1021.1	2	004	01	1	1	1	5	7	4	1	81650		2	1Ac68 2Ci72 COTRA	
3	84	7	23	10	25	13.5	8.6	72	6.9	1010.6	6	013	02	5	2	7	5	4	/	/	83618	87625	3	/Ci75	
4	80	6	25	05	10	12.5	7.1	69	6.2	1012.8	2	012	02	2	2	3	0	9	7	1	81369	83371	85078	4	COTRA
5	58	8	03	05	10	12.2	10.2	88	7.7	1009.6	6	009	60	6	2	8	7	2	/	/	82705	85707	88710	5	
6	30	8	18	07	12	16.8	16.3	97	11.6	1006.0	7	007	63	6	5	7	7	2	2	/	82705	86708	88520	6	
7	65	8	05	05	12	12.6	10.5	87	7.9	1011.4	1	026	02	2	2	8	5	3	/	/	82708	86612	88620	7	
8	70	2	35	02	04	9.7	6.8	82	6.0	1018.1	2	027	01	1	1	0	0	9	0	1	82075			8	COTRA
9	64	7	07	02	07	10.3	8.0	85	6.6	1018.9	7	014	03	2	2	2	5	7	3	8	82656	83272	87078	9	2Ac65 COTRA
10	65	1	26	02	08	13.6	11.6	87	8.5	1014.5	2	018	02	0	0	1	1	4	0	0	81810			10	Cu fra
11	68	7	24	07	13	13.0	11.0	87	8.1	1015.8	7	008	02	6	2	1	5	3	7	/	81708	87357		11	1Sc30 1Sc50
12	86	0	36	05	13	10.5	6.0	74	5.7	1029.0	1	027	02	0	0	0	0	9	0	0				12	
13	59	3	13	01	03	7.6	6.8	94	6.0	1032.4	3	010	05	1	1	0	0	9	0	1	81072	83078		13	COTRA Parheliion
14	58	7	05	01	03	11.0	9.8	92	7.4	1031.5	3	013	05	6	2	6	5	6	7	/	86640	87358		14	
15	65	8	24	01	02	10.6	6.3	75	5.7	1034.1	1	008	02	2	2	8	5	6	/	/	86635	88645		15	
16	60	8	01	08	16	12.0	8.1	77	6.6	1033.6	2	016	15	2	2	8	8	4	/	/	83815	88625		16	Cu hum jp NW vv 25k ex p
17	73	7	35	05	11	9.0	4.5	73	5.1	1032.0	6	002	02	2	2	7	5	6	/	/	81640	87643		17	
18	67	7	19	02	04	5.7	4.2	90	5.1	1026.4	8	003	02	2	2	7	5	6	/	/	87643			18	
19	60	8	16	02	06	8.3	6.2	87	5.9	1015.1	8	012	05	2	2	7	5	6	7	8	82630	83640	86650	19	/Ac62 /Cs75
20	64	8	10	05	14	9.6	6.0	78	5.9	996.9	7	017	15	2	2	4	8	5	7	/	83625	88462		20	1Cu30 1Sc50 2Ac60 Cu med jp W-NW
21	60	7	13	02	04	12.3	11.7	96	8.7	996.0	2	009	10	2	2	1	6	4	7	8	81710	86364		21	2As58 1Ac62 /Cs72 Cld edge W Dist Cu top W
22	65	7	12	06	12	12.2	11.0	92	8.3	996.5	1	016	03	2	2	6	8	4	7	2	82815	85625		22	1Sc50 1Ac60 3Ac65 2Ci72 Cu med
23	65	2	21	05	09	12.0	10.9	93	8.2	1007.9	2	017	03	0	0	1	5	7	3	2	81650			23	1Ac68 2Ci72 COTRA Dist Cu top SSE
24	60	8	19	08	13	15.6	15.0	96	10.7	1005.3	8	003	60	6	2	8	5	3	/	/	83706	87708	88512	24	
25	65	3	23	11	20	13.1	9.5	79	7.4	1012.0	1	012	03	1	1	3	8	4	0	0	81815	83620		25	1Sc45 Cu fra
26	82	3	24	07	13	12.3	9.1	81	7.2	1018.0	2	021	02	0	0	1	5	6	0	2	81640	83075		26	COTRA
27	56	8	17	03	09	14.9	14.0	94	9.8	1019.6	3	005	10	2	2	8	5	3	/	/	82706	87709	88620	27	
28	59	7	20	05	09	14.3	12.9	91	9.2	1017.9	2	008	05	2	2	7	5	4	/	/	82612	87615		28	
29	40	8	05	01	03	11.6	11.3	98	8.3	1022.4	2	010	10	2	2	8	5	3	/	/	81708	86620	88656	29	
30	30	7	08	04	06	11.6	11.1	97	8.1	1023.1	0	003	10	2	2	3	6	3	3	1	83708	87075		30	1Ac68 COTRA
31	18	8	21	03	05	14.4	13.9	97	9.8	1020.2	3	005	10	6	2	8	6	2	/	/	87703	88705		31	

Mean vis = 18.0 km

Mean cloud = 6.0 75%

Mean wind speed = 4.5 kn

Mean gust = 10 kn

Mean TT = 11.9 °C

Mean TdTd = 9.4 °C

Mean RH = 85.2 %

Mean r = 7.4 g/kg

Mean PPP = 1017.0 mbar

A full explanation of the codes used can be found in the 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

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

covers past 3 hours.

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation

trails present.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for October 2009

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NCh	shs	NCh	shs	Date	Remarks						
1	82	5	32	04	12	16.4	4.8	46	5.4	1019.6	5	001	02	1	1	1	4	6	0	5	81645	84078			1	1Cs75	COTRA	Sc	cugen	Cs	N		
2	84	7	26	06	15	15.1	7.0	58	6.2	1019.0	6	009	03	1	1	7	5	6	/	/	86632	87645			2								
3	86	7	25	14	29	16.5	8.0	57	6.7	1007.1	7	014	02	2	2	7	8	6	/	/	84832	86638			3	/Ci75	Cu	hum					
4	86	7	25	08	20	14.9	4.3	49	5.2	1013.0	2	001	03	1	1	7	8	6	/	/	81838	83640	86650		4	Cu	hum						
5	56	8	36	04	08	13.5	12.6	94	9.1	1008.2	5	000	10	6	2	8	5	3	/	/	86706	88612			5								
6	81	7	22	09	18	19.0	16.8	87	11.9	1004.7	6	006	01	8	2	7	8	4	/	/	82710	84815	87630		6	Absent	vv&cld	est					
7	56	8	04	04	16	11.8	11.1	96	8.2	1009.8	6	015	63	6	2	6	7	3	2	/	86707	88515			7	Absent,	vv&cld	est					
8	82	1	02	06	13	15.3	4.1	47	5.1	1019.1	3	005	02	0	0	1	1	6	0	1	81840				8	1Ci75							
9	66	8	11	06	16	13.3	8.1	71	6.7	1013.5	7	030	03	2	2	8	5	5	/	/	88620				9								
10	82	7	27	04	13	17.2	8.9	58	7.1	1016.3	3	006	02	2	2	6	8	6	0	1	81835	86650			10	3Ci75	Cu	med					
11	75	7	27	05	09	14.7	14.0	95	9.9	1012.9	6	018	21	6	2	7	8	3	/	/	83708	85812			11	2Sc35	Cu	fra	hum				
12	84	4	34	07	13	14.5	5.4	54	5.5	1029.4	3	002	03	0	0	2	4	6	3	1	82640				12	2Ac66	2Ci75						
13	73	6	27	01	05	15.1	5.3	52	5.4	1030.4	6	011	02	1	1	1	1	6	3	1	81838	86078			13	1Ac65	COTRA	Parhelia					
14	70	7	09	05	08	14.4	8.5	68	6.8	1031.1	7	003	02	2	2	7	8	5	/	/	81825	87630			14	Cu	hum						
15	64	7	32	04	09	13.1	7.5	69	6.4	1031.7	7	014	01	2	2	7	5	6	/	/	83635	87645			15								
16	80	6	36	08	18	13.9	3.6	50	4.8	1032.9	6	004	03	1	1	5	4	6	0	1	83840	83645			16	2Ci80	COTRA	Cu	hum				
17	80	7	01	07	16	11.6	1.9	51	4.3	1029.6	6	013	02	2	2	7	8	6	/	/	81840	87645			17	Cu	hum						
18	80	7	23	04	09	11.2	1.0	50	4.0	1022.9	8	021	03	1	1	1	4	6	0	8	81640	87078			18	2Cs72	COTRA	Parhelion					
19	82	7	19	08	17	12.5	3.4	54	4.9	1010.7	7	024	01	2	2	7	8	6	3	/	81833	87656			19	2Sc40	/Ac63	Cu	hum				
20	50	8	14	07	18	12.8	10.8	88	8.2	995.4	6	008	58	6	5	7	5	3	2	/	81708	87645	88557		20	2Sc35							
21	84	7	15	06	13	14.5	9.6	73	7.6	994.4	7	014	02	2	2	1	8	5	7	8	81820	86464			21	1Sc35	2Ac62	/Cs72	Cu	med	Cld	edge	W
22	70	7	14	08	15	14.8	9.7	71	7.5	998.5	2	008	15	2	2	3	8	5	6	2	81820	84362			22	2Sc50	1Ac57	2Ci72	Cu	med	jp	W	
23	80	7	20	06	11	16.1	8.9	62	7.0	1009.3	1	003	02	2	2	2	8	6	7	1	81830	84357			23	2Sc50	3Ac65	2Ci72	COTRA	Cu	med	Parhelion	
24	78	6	22	09	20	17.5	14.2	81	10.2	1003.6	3	002	01	6	5	6	8	4	0	0	81815	85820			24	1Sc35	Cu	med					
25	75	2	24	14	24	16.4	6.8	53	6.1	1011.7	7	002	02	1	1	2	8	6	4	0	81838				25	1Sc45	1Sc56	1Ac68	Cu	hum	med		
26	81	7	26	05	14	15.5	8.2	62	6.6	1019.5	2	007	03	1	1	1	4	6	3	1	81830	87073			26	1Sc35	1Ac68	COTRA	Cu	hum	U/a	cont	
27	82	7	16	07	15	16.9	9.2	60	7.1	1017.8	6	015	02	2	2	1	0	9	4	2	81368	84072	86080		27	1Cc73	COTRA	Iridescence					
28	84	5	22	03	09	18.2	12.2	68	8.7	1018.3	6	004	02	1	1	5	8	5	0	0	82825	84635			28	Cu	med						
29	67	6	19	04	10	16.0	11.4	74	8.3	1022.1	5	006	02	2	2	6	5	5	3	1	82620	85628			29	1Ac68	2Ci75	COTRA					
30	67	8	14	06	16	15.5	9.5	68	7.3	1020.5	6	013	02	2	2	3	0	9	7	7	82366	88270			30	2As68	COTRA						
31	75	7	28	05	11	16.1	11.2	73	8.2	1021.1	1	003	02	2	2	2	8	5	0	1	81820	87075			31	2Sc25	1Cc72	COTRA	Cu	hum			

Mean vis = 30.9 km

Mean cloud = 6.5 81%

Mean wind speed = 6.3 kn

Mean gust = 14 kn

Mean TT = 15.0 °C

Mean TdTd = 8.3 °C

Mean RH = 65.8 %

Mean r = 7.0 g/kg

Mean PPP = 1015.9 mbar

A full explanation of the codes used can be found in the 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

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.

Oct 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	12.59	17.1	1247	5.5	2305	70.7	94.6	10	42.5	1354	6.90	6.21	8.2	30	5.0	1531	1019.27	1021.6	2111	1016.7	423	0.0	
2	11.36	17.3	1312	3.6	302	73.6	96.2	334	44.3	1219	6.41	5.98	7.8	2315	4.6	258	1019.47	1021.5	120	1015.6	2358	0.0	
3	13.85	16.6	1456	11.5	632	74.8	90.4	2056	55.7	1504	9.31	7.30	8.4	2057	6.5	1504	1009.86	1015.9	9	1006.4	1550	0.0	
4	12.50	17.1	1223	8.0	614	70.4	89.2	2334	37.3	1224	6.80	6.19	7.9	2	4.4	1142	1012.51	1014.3	2030	1009.5	5	0.0	
5	12.26	14.1	1413	9.3	325	93.1	97.2	2348	87.0	833	11.17	8.28	9.6	1413	6.8	325	1010.06	1013.5	0	1007.6	1346	2.4	
6	16.66	19.2	1449	13.0	0	92.4	97.3	52	82.7	2216	15.42	10.96	12.7	1411	9.1	0	1006.47	1010.7	11	1004.4	1538	5.0	
7	12.78	17.9	0	9.9	2336	91.6	97.2	1718	82.0	1032	11.44	8.46	11.3	0	7.1	2359	1009.56	1012.2	2359	1005.5	158	11.6	
8	9.24	16.2	1321	3.5	2359	80.5	98.4	718	43.8	1431	5.58	5.63	7.2	0	4.6	2359	1018.06	1022.3	2231	1012.1	0	0.0	
9	9.69	14.4	1342	3.3	3	88.9	98.0	2254	65.8	1337	7.82	6.66	8.8	2346	4.6	4	1016.40	1022.4	107	1011.2	2359	0.5	
10	13.85	18.6	1240	9.6	636	81.7	98.0	655	54.2	1338	10.51	7.87	9.0	47	6.7	1320	1015.18	1018.8	2002	1010.7	136	0.1	
11	12.36	15.2	1525	8.9	2356	86.7	96.8	1433	66.0	1850	10.16	7.77	10.0	1514	5.5	2035	1016.23	1020.8	2359	1012.7	1456	2.4	
12	9.62	15.9	1418	4.1	2335	78.1	97.0	2347	48.8	1429	5.68	5.59	6.6	1150	4.8	2335	1028.23	1031.6	2359	1020.8	0	0.0	
13	8.28	15.9	1358	1.2	523	84.2	98.1	558	49.8	1402	5.34	5.51	6.8	2143	4.0	523	1031.15	1032.5	936	1029.8	1618	0.0	
14	11.31	15.4	1249	7.9	118	80.1	96.9	718	54.4	1257	7.75	6.46	7.7	944	4.1	2319	1031.46	1033.6	2358	1029.9	205	0.1	
15	10.85	13.4	1347	8.6	419	75.3	89.1	2357	56.7	1300	6.56	5.94	7.1	2350	4.4	3	1032.92	1034.1	829	1031.6	1536	0.0	
16	11.47	14.5	1305	7.9	2141	72.9	95.5	531	47.7	1450	6.50	5.97	8.2	623	4.6	1451	1032.85	1034.0	948	1031.7	320	0.0	
17	8.30	12.3	1252	2.3	2338	72.6	95.1	2344	48.5	1322	3.37	4.75	5.4	749	4.0	1445	1030.69	1033.3	16	1028.2	2351	0.0	
18	5.27	11.7	1430	-0.6	442	81.4	98.0	505	47.8	1424	1.93	4.32	5.4	925	3.5	442	1024.41	1028.3	5	1019.8	2357	0.0	
19	7.65	13.0	1428	2.4	43	80.4	96.5	121	52.1	1436	4.25	5.17	7.2	1055	4.3	43	1012.33	1019.8	2	1003.2	2355	0.2	
20	10.16	13.7	1358	4.9	133	83.0	94.8	2359	73.3	1312	7.39	6.60	8.3	1516	4.5	54	997.04	1003.3	0	994.3	2316	1.5	
21	12.23	15.4	1254	9.7	2230	88.6	97.7	312	70.4	1318	10.33	7.93	9.0	1041	7.1	2206	995.08	996.3	838	994.0	16	0.4	
22	11.89	15.2	1505	8.5	445	87.2	97.5	649	68.7	1310	9.73	7.59	8.5	918	6.8	445	998.11	1003.7	2359	994.6	322	0.1	
23	12.03	17.2	1335	6.9	656	85.7	98.2	745	56.7	1416	9.50	7.43	9.0	2352	6.1	657	1007.80	1009.9	1830	1003.5	0	1.6	
24	14.86	17.9	1344	11.8	2352	87.2	97.8	604	62.4	1711	12.66	9.26	11.8	1341	6.9	2103	1005.89	1009.5	2352	1002.9	1243	1.4	
25	12.95	17.5	1337	10.7	2218	74.9	85.9	101	51.2	1413	8.45	6.87	7.8	1034	5.9	1506	1011.88	1014.2	2313	1009.4	0	0.0	
26	12.20	16.3	1238	9.1	1812	81.3	96.6	2347	55.2	1310	8.88	7.04	8.8	2359	6.1	1241	1018.26	1021.2	2220	1013.9	17	1.0	
27	14.21	18.2	1348	11.5	2204	83.9	96.8	134	58.6	1436	11.36	8.34	10.0	958	6.5	1627	1018.59	1020.4	0	1016.5	2327	0.5	
28	13.10	18.7	1435	8.7	456	89.5	98.1	2203	64.9	1429	11.32	8.30	10.1	1144	6.7	456	1018.29	1020.6	2151	1016.1	238	0.0	
29	11.68	16.4	1512	7.6	107	92.9	98.9	352	72.4	1442	10.50	7.83	9.5	1250	6.3	107	1022.20	1023.9	2109	1020.3	20	0.0	
30	12.65	16.2	1401	9.8	48	87.6	97.8	132	64.8	1436	10.53	7.83	8.5	1109	7.1	1436	1021.74	1023.6	819	1019.8	2229	0.2	
31	13.85	17.2	1216	12.0	1	90.0	97.1	909	70.5	1411	12.18	8.75	11.0	1146	7.8	2056	1020.51	1021.8	1703	1019.2	408	3.1	
Total																						32.1	
Mean	11.67	15.98		7.45		82.6	96.02		59.23		8.57	7.06	8.63		5.68		1016.53	1019.67		1013.28			
Max	16.66	19.19		13.04		93.1	98.90		87.00		15.42	10.96	12.70		9.05		1032.92	1034.14		1031.66			
Min	5.27	11.74		-0.60		70.4	85.90		37.25		1.93	4.32	5.36		3.49		995.08	996.28		994.02			

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 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.