

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

JULY 2010

Temperature (°C / °F)			Anomaly	Rank in the past 129 years			
Mean maximum	23.9	75.0	+1.4	16 th highest			
Mean minimum	13.6	56.5	+1.3	4 th highest			
Daily mean	18.7	65.7	+1.3	10 th highest			
Highest maximum	30.0	86.0	on 9 th	Lowest maximum	20.2	68.4	on 13 th
Highest minimum	17.7	63.9	on 2 nd	Lowest minimum	8.1	46.6	on 6 th
Mean grass minimum	10.6	51.1	+0.9	Lowest grass minimum	3.3	37.9	on 6 th
Mean earth @30 cm	19.1	66.4	+0.7	Earth @100 cm	17.2	63.0	
Frost duration (hrs)	0.0			Rain duration (hrs)	19.7		
Rainfall total (mm / in)	34.7	1.37	84 %	38 th lowest			
Highest daily fall	13.6	0.54	on 22 nd				
Number of: Dry days (<0.2mm)	19	Wet days (>0.9mm)	7	days ≥5mm	2		
Sunshine total (hrs) 165.2	Daily mean 5.33	85 %	Sunniest day 11.8		on 21 st		
N° days with: Air frost 0	Ground frost 0	Snow falling 0	Snow lying 0				
Thunder 1	Hail ≥5mm 1	Small hail/ice 0	Fog @09 0	Nil sun	0		
Air pressure MSL : Mean @09 GMT (mbar/in)	1015.9	-1.5	30.00				
Absolute highest	1027.3	30.34		on 6 th			
Absolute lowest	998.7	29.49		on 14 th			

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

Notes: **Very Warm.** **Dry.** **Sunshine Below Normal.**

Temperature: This is the warmest July since the record breaking one in 2006, despite the mean temperature this July being 2.2° below that record. The mean min ranks 4th highest since before 1882, after 1983, 1995 and 2006. The mean max, however, is 3.6° below the record, although it is 2.4° above the long-term median. The highest max is 1.6° above the median, but higher July values occurred in 2001, 2002, 2003, 2006 and 2009. The lowest max is 3.4° above the median and ranks 4th highest in 98 years. The highest min is 1.4° above the median, and the lowest min is 1.1° above its median. The lowest grass min is exactly average. Earth temperatures at both 30 cm and 1 m depth are above average. **Rainfall:** This is the driest July since 2006, and the 5th consecutive below average month. There were an average number of dry days, and only 0.2 mm fell before the 11th, and 0.3 mm between the 23rd and 29th. A dry spell of 8 days ended on the 6th. The heaviest rain fell during a shower on the 15th, with a rate of 123 mm/hr recorded at 0011 GMT. However, the 22nd had thunder in the morning and afternoon, and 1 cm dia hail fell at 1620 GMT, with a rain rate of 95 mm/hr near that time. **Sunshine:** Rather a poor showing for a summer month, but 5 out of the past 13 Julys have been duller overall. The aggregate remained close to normal until the 21st, but fell increasingly short thereafter. The amount of sunshine on the sunniest day is 3rd lowest in 13 years. Overall there were 10 days with <3 hours, 14 with =>6 hours and 6 with =>9 hours. **Wind:** The overall mean wind speed this July was 6.6 mph, slightly above average. The 15th was the windiest day, mean 13.7 mph, and the month's highest gust of 38 mph was also on that day. The 22nd was the least windy, mean 2.7 mph, and there were 433 minutes (7.22 hr) with a mean speed of 0.5 mph or less. Daily mean direction/number of days: N,1 NE,0 E,0 SE,1 S, 4 SW,15 W,8 NW,2. **Humidity:** The mean relative humidity was 68.0 %, while the lowest value was 29 % on the 19th. The mean water vapour content per kg of air was 9.0 g at 0900 GMT and 8.1 g at 1500 GMT. **Commentary: From the 1st to the 11th:** Temperatures were mostly near or above normal, with 2 hot days on the 9th and 10th. Daily anomalies for max ranged from -0.7° on the 7th to +7.2° on the 9th, the month's hottest day. At night, anomalies were more variable, between -4.3° on the 6th and +6.4° on the 2nd. This period was mainly dry, just 0.2 mm until 1.1 mm on the 11th. Sunny days on the 3rd, 9th, 10th and 11th made this the sunniest period of the month. Mainly moderate winds were generally SW'ly. **From the 12th to the 18th:** This period was mostly cool by day, with daily anomalies ranging from -2.6° on the 13th and +1.2° on the 18th. Conversely, by night values were more often above normal, with anomalies between -2.2° on the 18th and +2.7° on the 12th. Only the 17th and 18th were dry, otherwise 16.1 mm fell in this period. Just one day with over 50 % of the maximum sunshine, and 2 with less than 10 %. Light or moderate SW'ly winds temporarily backed SE'ly on the 13th, then increased fresh for the 15th and 16th. **From the 19th to the 31st:** Apart from another 2 hot days on the 19th and 20th, temperatures were near normal. Anomalies for daily max ranged from +5.6° on the 19th to -2.3° on the 23rd. For daily min, anomalies were -3.5° on the 30th to +4.3° to on the 26th. There were 8 dry days, but the 22nd was thundery and gave the month's highest total. Apart from a sunny day on the 21st this 13 day period was rather dull, with 10 days having <50 % of the maximum possible and 6 <20 %. Light or moderate winds were SW'ly at first, temporarily veering N'ly on the 23rd, then becoming mainly W'ly.

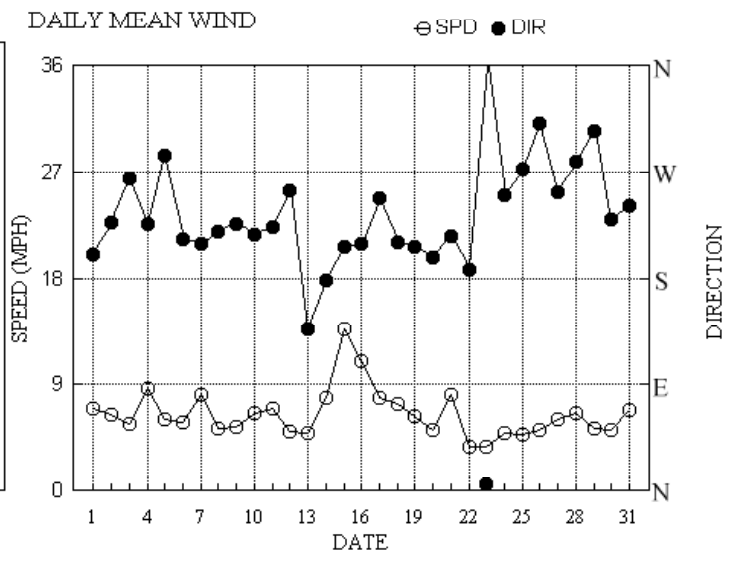
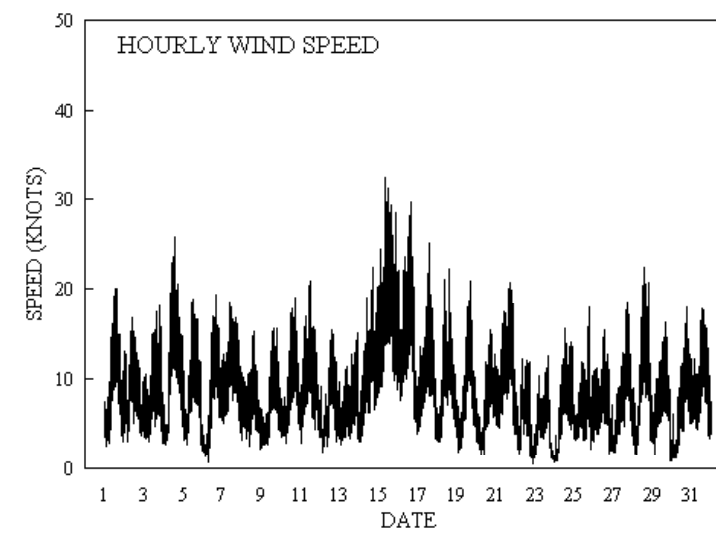
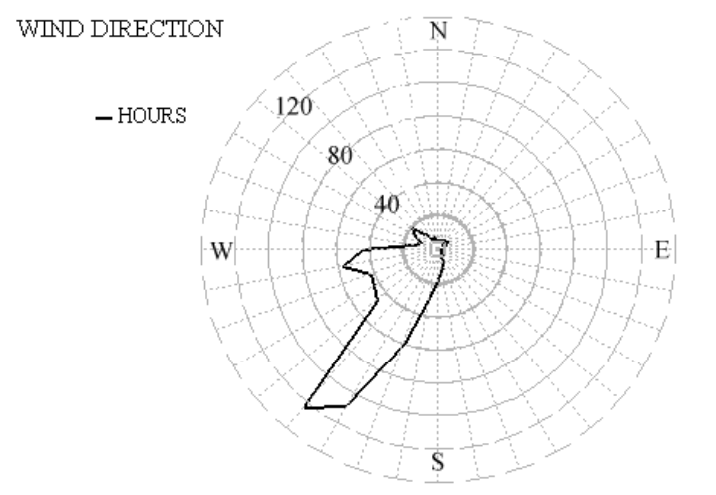
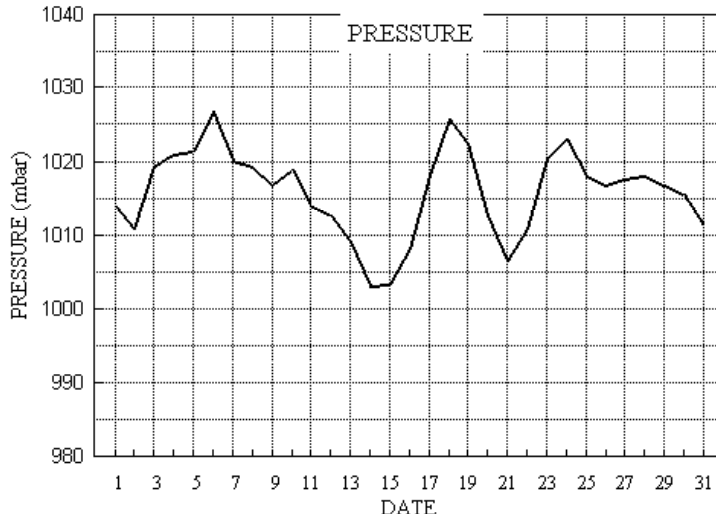
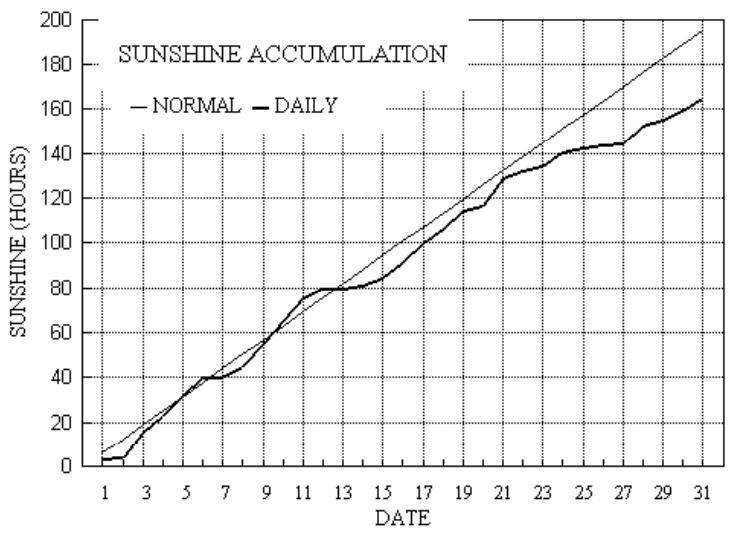
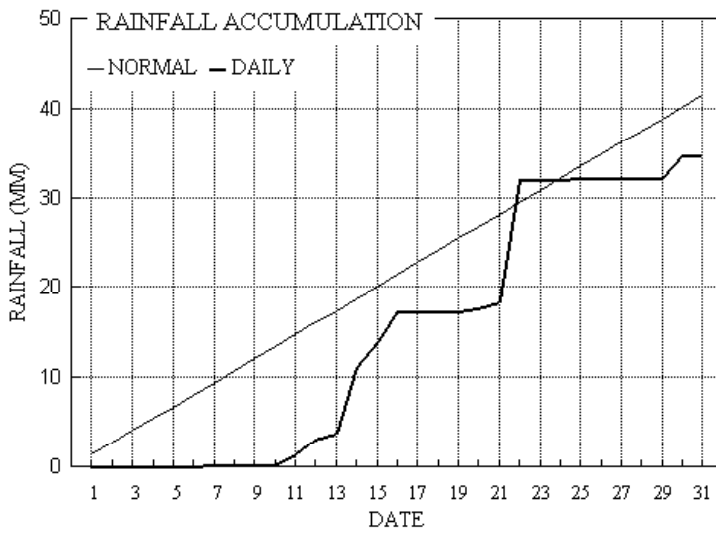
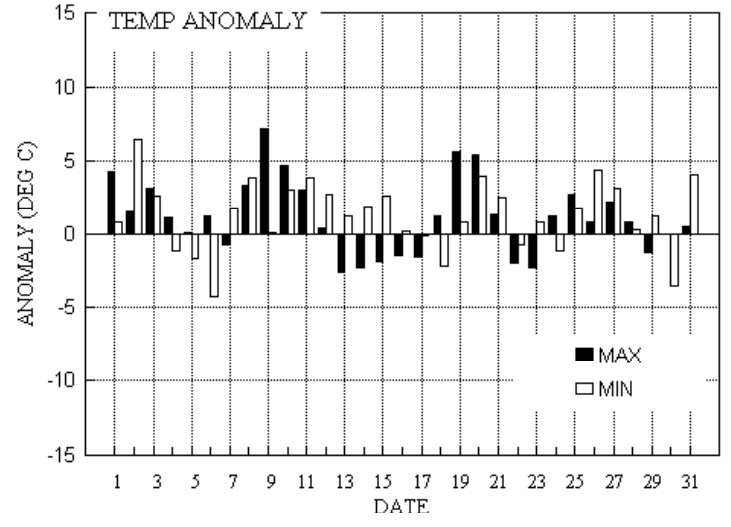
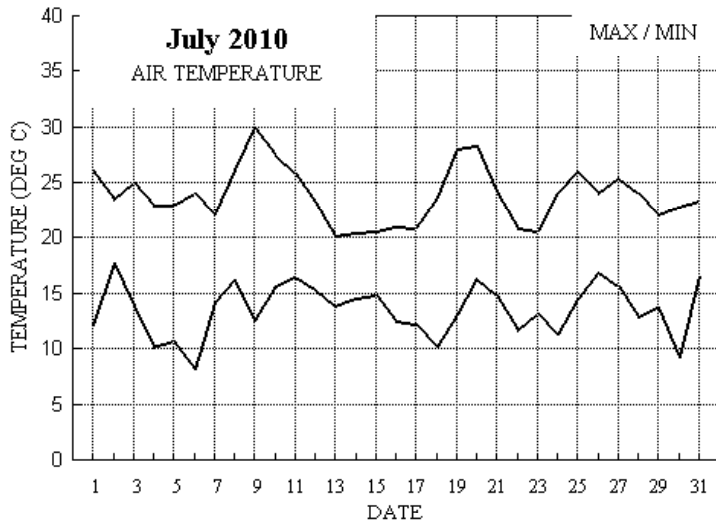
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 31 st			
+2.6°	+1.1°	1 %	105 %	+0.6°	+1.5°	134 %	77 %	+0.3°	+1.2°	112 %	70 %

B J Burton. FRMetS.

Hon. Met Officer to Wokingham Town Council.

Wokingham Climatological Graphs for July 2010



Month: July 2010

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	26.1	12.1	0.0	7.8	18.8	16.3	3.2	0.0	1013.9	0 0 0 0	0 0 0 0	0 0 0 0	200	5.8	6.1	212	20	1420	211	10	13	0.0	
2	23.5	17.7	0.0	16.4	18.9	16.4	1.1	0.0	1010.9	0 0 0 0	0 0 0 0	0 0 0 0	227	5.1	5.6	225	17	0810	231	8	09	0.0	
3	25.0	13.9	0.0	11.6	19.0	16.5	11.6	0.0	1019.2	0 0 0 0	0 0 0 0	0 0 0 0	265	4.8	5.0	302	18	1937	299	8	19	0.0	
4	23.0	10.2	0.0	5.6	19.0	16.6	7.1	0.0	1021.0	0 0 0 0	0 0 0 0	0 0 0 0	226	7.4	7.6	214	26	1338	234	12	13	0.0	
5	22.9	10.7	0.0	5.8	18.7	16.7	8.9	0.0	1021.3	0 0 0 0	0 0 0 0	0 0 0 0	284	4.5	5.3	303	19	1146	275	9	10	0.0	
6	24.0	8.1	tr	3.3	18.5	16.7	8.1	0.0	1026.8	0 0 0 0	0 0 0 0	0 0 0 0	213	4.7	5.1	189	20	1522	202	10	15	0.0	
7	22.1	14.2	0.2	12.6	18.6	16.8	0.2	0.0	1020.1	0 0 0 0	0 0 0 0	0 0 0 0	209	7.0	7.1	204	19	0850	207	10	09	0.5	
8	26.1	16.2	0.0	14.4	18.6	16.8	5.1	0.0	1019.3	0 0 0 0	0 0 0 0	0 0 0 0	220	4.4	4.6	255	16	1402	241	7	14	0.0	
9	30.0	12.5	0.0	7.6	19.0	16.8	10.2	0.0	1016.7	0 0 0 0	0 0 0 0	0 0 0 0	226	4.6	4.8	206	16	1832	215	8	18	0.0	
10	27.5	15.7	tr	13.2	19.7	16.9	10.2	0.0	1018.9	0 0 0 0	0 0 0 0	0 0 0 0	217	5.6	5.7	199	19	1637	227	9	17	0.0	
11	25.8	16.5	1.1	12.9	20.0	17.1	10.2	0.0	1014.1	0 0 0 0	0 0 0 0	0 0 0 0	223	5.7	6.1	273	21	1223	245	9	10	0.5	
12	23.2	15.4	1.7	13.6	20.2	17.2	3.8	0.0	1012.6	0 0 0 0	0 0 0 0	0 0 0 0	255	2.5	4.4	258	16	1423	254	7	13	3.0	
13	20.2	13.9	0.8	13.8	19.9	17.4	0.1	0.0	1009.1	0 0 0 0	0 0 0 0	0 0 0 0	137	2.2	4.3	198	15	2102	197	8	20	0.7	
14	20.5	14.6	7.2	10.4	19.3	17.5	1.4	0.0	1003.1	0 0 0 0	0 0 0 0	0 0 0 0	178	6.4	6.9	176	23	1739	188	10	16	2.7	
15	20.6	14.9	3.0	13.4	18.8	17.5	3.7	0.0	1003.4	0 0 0 0	0 0 0 0	0 0 0 0	207	11.6	11.9	219	33	0732	211	15	14	3.3	
16	21.0	12.5	3.4	10.5	18.7	17.4	6.4	0.0	1008.2	0 0 0 0	0 0 0 0	0 0 0 0	209	9.5	9.6	203	30	1534	209	14	15	0.8	
17	20.9	12.2	tr	10.3	18.5	17.4	9.1	0.0	1018.1	0 0 0 0	0 0 0 0	0 0 0 0	248	6.5	6.9	294	25	1418	261	10	11	0.0	
18	23.7	10.1	0.0	5.1	18.4	17.3	6.0	0.0	1025.7	0 0 0 0	0 0 0 0	0 0 0 0	210	6.3	6.4	221	22	1356	216	9	09	0.0	
19	28.1	13.1	0.0	9.9	18.6	17.3	8.4	0.0	1022.4	0 0 0 0	0 0 0 0	0 0 0 0	206	5.5	5.6	205	21	1503	211	10	14	0.0	
20	28.3	16.3	0.3	13.6	19.3	17.3	2.0	0.0	1012.7	0 0 0 0	0 0 0 0	0 0 0 0	198	4.4	4.5	224	16	1744	214	7	17	0.6	
21	24.2	14.9	0.6	13.6	19.6	17.3	11.8	0.0	1006.5	0 0 0 0	0 0 0 0	0 0 0 0	216	6.9	7.1	235	21	1717	208	11	16	0.5	
22	20.9	11.7	13.6	7.5	19.5	17.4	3.9	0.0	1010.9	0 0 0 0	1 1 0 0	0 0 0 0	187	2.3	3.2	188	12	0742	198	6	07	4.4	
23	20.6	13.2	0.0	10.5	19.1	17.5	2.2	0.0	1020.4	0 0 0 0	0 0 0 0	0 0 0 0	6	2.7	3.2	346	13	1532	334	6	14	0.0	
24	24.1	11.3	0.0	7.8	18.9	17.5	6.1	0.0	1023.1	0 0 0 0	0 0 0 0	0 0 0 0	250	4.1	4.3	247	16	1214	258	6	11	0.0	
25	25.6	15.4	0.3	13.0	19.2	17.5	2.0	0.0	1018.0	0 0 0 0	0 0 0 0	0 0 0 0	272	3.2	4.2	299	18	1700	296	7	17	0.4	
26	24.1	16.9	0.0	16.2	19.4	17.6	0.8	0.0	1016.9	0 0 0 0	0 0 0 0	0 0 0 0	311	4.0	4.5	304	16	1210	307	7	12	0.0	
27	25.5	15.7	0.0	11.1	19.5	17.6	1.0	0.0	1017.7	0 0 0 0	0 0 0 0	0 0 0 0	253	5.2	5.3	281	19	1607	265	9	16	0.0	
28	24.1	12.9	0.0	6.8	19.5	17.6	8.3	0.0	1018.1	0 0 0 0	0 0 0 0	0 0 0 0	279	5.3	5.8	287	23	1316	273	10	14	0.0	
29	22.1	13.8	0.0	10.3	19.3	17.7	2.3	0.0	1016.9	0 0 0 0	0 0 0 0	0 0 0 0	305	4.2	4.6	329	17	1517	304	7	15	0.0	
30	22.8	9.2	2.5	4.1	18.9	17.7	4.4	0.0	1015.6	0 0 0 0	0 0 0 0	0 0 0 0	230	3.9	4.5	205	18	1801	220	9	16	2.3	
31	23.3	16.7	0.0	15.7	19.1	17.7	5.6	0.0	1011.2	0 0 0 0	0 0 0 0	0 0 0 0	242	5.7	6.0	280	18	1217	263	9	14	0.0	
Total			34.7				165.2	0.0															19.7
Mean	23.9	13.6		10.6	19.1	17.2	5.33	0.0	1015.9					228	4.3	5.7							
Anom	+1.4	+1.3	84%		+0.7	+0.4	85%																
Daily mean		18.7																					
Anom		+1.3																					

Number of days with:

Air frost = 0 Ground frost = 0 Nil sun = 0
Snow falling = 0 Snow lying = 0 Thunder = 1
Hail=>5mm = 1 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 July 2010

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NChs	h	NChs	Date	Remarks
1	81	7	22	07	14	21.2	13.5	61	9.5	1013.9	7	013	02	2	2	2	1	6	0	2	82830	87075			1	2Ci72 COTRA Cu hum Parhelia+U&L/a cont
2	68	8	22	07	17	20.8	15.8	73	11.2	1010.9	2	016	02	2	2	7	5	4	7	/	87618	88358			2	
3	81	6	29	05	10	19.5	10.6	56	8.1	1019.2	1	010	03	1	1	1	1	6	0	2	81835	86078			3	Absent 3-4 vv&cld est
4	83	2	23	10	20	19.6	8.4	49	7.1	1021.0	7	009	03	0	0	2	1	6	0	0	82840				4	
5	80	6	29	05	12	18.7	11.3	62	8.4	1021.3	2	008	03	2	2	2	8	5	8	0	82825	85365			5	1Sc50 Cu med Ac cas vir
6	85	7	19	02	06	18.1	9.0	55	7.1	1026.8	7	002	03	2	2	1	1	6	0	1	81835	87080			6	1Cc75 COTRA Cu hum
7	65	8	21	11	19	17.1	14.3	83	10.0	1020.1	8	004	02	6	2	8	5	4	/	/	86611	88615			7	
8	68	8	25	02	11	16.8	13.2	79	9.5	1019.3	0	004	20	5	2	8	5	3	/	/	85708	88625			8	
9	80	6	26	04	06	19.2	12.3	64	8.8	1016.7	7	001	14	2	2	5	0	9	8	1	81366	85368			9	/Ci78 COTRA Ac cas vir
10	82	6	26	04	10	22.0	14.0	60	9.9	1018.9	8	003	03	1	1	3	1	5	0	1	83828	85080			10	COTRA Cu hum
11	84	3	25	07	15	19.9	13.3	66	9.4	1014.1	1	009	03	6	1	2	8	5	0	1	82825				11	1Sc40 1Ci75 Cu med
12	65	7	19	03	07	15.6	13.6	87	9.6	1012.6	3	010	21	6	2	1	8	4	7	8	81810	85656	87358		12	2Sc45 /Ac62 /Cs70 Cu fra vv30k ex SE
13	20	8	09	05	11	15.3	14.6	95	10.4	1009.1	8	002	59	6	5	8	7	2	/	/	83703	87705	88708		13	Hvy ra 0843-47
14	80	8	18	07	19	19.4	13.6	69	9.7	1003.1	7	011	03	2	2	7	8	5	/	2	81820	83635	87650		14	/Ci70 Cu hum
15	62	7	22	14	30	17.2	13.1	77	9.4	1003.4	1	021	80	8	2	7	8	4	/	/	81818	85822	87630		15	/Sc50 Cu fra/med
16	68	7	22	08	24	16.5	11.7	73	8.6	1008.2	3	015	80	8	1	7	8	5	/	/	83820	86640			16	Cu med
17	80	6	27	08	15	17.0	9.5	61	7.3	1018.1	2	020	03	1	1	4	8	5	3	1	83828	84075			17	2Sc56 1Ac58 COTRA Cu med
18	78	7	21	08	17	18.2	11.7	66	8.5	1025.7	2	003	03	6	2	7	8	5	/	/	82825	87640			18	Cu hum
19	84	6	23	06	11	21.8	10.9	50	7.9	1022.4	7	004	02	2	2	4	0	9	8	2	84364	85368			19	2Ci72 Ac cas
20	84	7	13	02	05	21.7	6.9	38	6.3	1012.7	8	016	02	2	2	4	0	9	8	8	81363	84367	87271		20	COTRA Ac flo U/a cont
21	86	1	22	06	16	19.5	10.0	54	7.6	1006.5	1	004	03	0	0	1	2	6	3	1	81835				21	1Ac60 1Ci75 Cu hum/med SW
22	60	7	26	05	12	15.1	12.6	84	9.0	1010.9	3	011	91	9	8	7	9	5	7	/	82920	81825	85550		22	T 0815-20
23	75	8	36	03	08	14.3	13.2	93	9.3	1020.4	3	008	21	6	2	8	8	4	/	/	81810	83615	85625		23	8Sc50 Cu hum
24	75	5	26	05	10	19.1	12.0	63	8.6	1023.1	7	005	03	1	1	1	2	5	3	1	81825	83078			24	2Ac65 COTRA Cu med
25	80	7	27	05	12	18.2	14.7	78	9.9	1018.0	7	005	02	2	2	7	5	4	/	/	84615	87620			25	Absent 25-29 vv&cld est
26	82	7	31	05	11	19.5	16.1	81	11.3	1016.9	2	003	02	2	2	7	5	4	/	/	82712	87618			26	
27	68	7	24	06	09	20.2	16.9	81	11.9	1017.7	0	001	02	2	2	5	5	4	3	/	81712	85650	86358		27	
28	82	4	27	07	12	19.8	11.6	59	8.4	1018.1	8	001	03	0	0	4	1	6	0	0	84830				28	
29	80	7	30	07	12	17.9	10.8	63	8.0	1016.9	5	000	03	2	2	7	8	5	/	/	83825	86656			29	
30	84	7	30	02	08	18.0	8.6	54	6.9	1015.6	7	004	03	1	1	6	8	6	3	1	82832	86635			30	1Ac58 1Ci78 COTRA Cu hum
31	84	6	22	05	11	20.5	17.4	82	12.3	1011.2	2	003	03	6	5	6	8	4	0	0	81812	85645			31	2Cu18 /Sc56 Cu fra/hum

Mean vis = 31.7 km

Mean cloud = 6.3 79%

Mean wind speed = 5.8 kn

Mean gust = 13 kn

Mean TT = 18.6 °C

Mean TdTd = 12.4 °C

Mean RH = 68.3 %

Mean r = 9.0 g/kg

Mean PPP = 1015.9 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

covers past 3 hours.

Nh = Amount of low cloud present, oktas

Cl = Type of low cloud (Code FM12-0513)

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs = Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation

trails present.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for July 2010

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NChs	hNChs	Date	Remarks
1	83	7	22	10	20	24.2	10.7	43	8.1	1011.8	6	009	03	2	2	1	1	7	7	2	81850	86366	87070	1	1Ac63 Cu hum
2	81	7	23	04	13	22.1	14.8	63	10.3	1012.7	1	008	02	2	2	7	8	5	/	/	82828	87640		2	Absent 2-4, cld&vis est
3	82	4	25	05	18	23.7	7.2	34	6.7	1019.0	8	001	02	1	1	3	1	7	0	2	83856			3	2Ci78
4	82	7	23	10	22	20.6	12.0	57	8.6	1018.8	7	008	02	2	2	7	8	6	/	/	84832	85650		4	
5	83	3	31	08	16	21.2	5.2	35	5.3	1021.7	2	004	02	0	0	3	4	7	0	0	83656			5	Sc cugen
6	83	8	21	08	18	22.1	7.3	38	6.3	1023.8	7	016	03	2	2	2	4	7	7	/	81856	88465		6	2Sc56 2Ac63 Cu hum
7	82	7	21	08	16	21.3	15.0	67	10.5	1018.9	7	008	02	2	2	7	5	5	/	/	86624	87645		7	
8	84	6	24	07	15	25.2	13.1	47	9.7	1017.5	8	010	02	2	2	1	1	6	3	2	81845	86075		8	1Ac68 1Cc72 Cu hum
9	86	6	24	07	15	29.3	11.3	33	8.4	1015.4	6	008	02	1	1	1	1	7	4	1	81856	85081		9	1Ac68 COTRA Cu hum
10	83	4	23	07	17	26.6	12.6	42	8.9	1016.0	7	015	02	1	1	1	1	7	3	1	81850	83080		10	2Ac68 COTRA Cu hum
11	84	6	24	05	14	24.9	8.0	34	6.8	1014.5	7	002	02	2	2	1	1	7	0	1	81856	86080		11	1Ci72 COTRA Absent vv&cld est
12	82	6	26	08	16	21.0	9.1	46	7.3	1011.1	8	003	01	8	2	4	8	6	3	2	82845	83650		12	1Ac60 2Ci75 Cu med
13	66	8	20	06	11	19.9	15.4	75	11.0	1007.0	8	012	15	8	2	8	8	4	/	/	83818	84640	88650	13	Cu med jpNW
14	70	7	19	09	19	19.4	14.7	74	10.5	1000.6	6	011	80	8	2	6	8	5	7	2	82820	85650	86360	14	/Ci70 Cu med vv40k exp
15	78	4	22	15	29	19.9	10.0	53	7.5	1007.3	1	015	01	2	2	4	2	6	0	0	84840			15	Cu med
16	75	3	21	15	28	20.8	10.8	53	7.9	1009.5	3	003	01	1	1	3	2	6	0	2	83840			16	1Ci70 Cu med
17	82	5	27	10	24	20.9	7.1	41	5.8	1021.2	2	012	01	2	2	2	2	7	6	1	82850			17	2Ac57 1Ac67 1Ci72 Cu med
18	80	2	21	09	17	23.0	12.2	51	8.6	1024.3	7	013	01	1	1	2	8	6	0	1	81835			18	1Sc40 1Sc50 1Ci78 Cu hum Sc len
19	83	5	22	10	19	27.3	9.0	32	7.1	1018.9	7	018	03	1	1	1	0	9	3	1	81365	85075		19	2Ci72 COTRA
20	82	6	18	05	11	27.6	9.9	33	7.7	1008.0	7	023	02	2	2	3	0	9	8	1	81363	83366	85078	20	COTRA Ac cas
21	86	3	22	10	18	22.9	9.0	41	7.2	1005.4	5	004	02	0	0	3	8	7	0	0	83850			21	1Sc56 Cu med
22	62	7	17	03	09	19.7	12.5	63	9.1	1012.3	2	006	17	9	8	4	9	5	6	3	82922	83828	85072	22	1Ac62 jp all quads U/a cont
23	82	7	36	05	11	19.6	8.8	50	6.9	1021.2	3	007	02	2	2	7	8	6	/	/	81840	87650		23	
24	84	7	24	05	14	22.0	8.4	42	6.7	1021.0	7	012	03	1	1	5	4	7	3	1	81850	85650		24	3Ac63 /Ci75 Cu hum
25	82	7	29	05	10	24.2	11.5	45	8.2	1015.9	7	013	02	2	2	7	8	6	/	/	83848	86656		25	Absent 25-29 vv&cld est
26	82	7	01	06	12	23.1	15.6	63	11.0	1016.3	8	007	02	2	2	7	8	5	/	/	84825	85650		26	
27	80	7	24	08	15	24.7	15.1	55	10.6	1016.2	7	013	02	2	2	7	8	6	3	/	83838	85650	85368	27	
28	82	6	27	11	19	22.8	7.7	38	6.5	1015.7	7	012	03	1	1	6	8	7	0	0	83850	84656		28	
29	84	7	33	09	15	21.5	8.6	44	6.9	1015.6	8	007	02	2	2	7	8	6	/	/	83845	87656		29	
30	84	8	23	07	15	21.7	10.2	48	7.9	1013.8	7	013	03	2	2	1	8	6	7	/	81845	85656	88357	30	Cu hum
31	86	7	26	09	18	21.7	10.3	48	7.5	1011.6	3	005	01	2	2	1	4	6	8	2	81845	83465		31	1Sc48 3Ac69 2Ci75 COTRA Cu hum

Mean vis = 40.4 km

Mean cloud = 5.9 74%

Mean wind speed = 7.9 kn

Mean gust = 17 kn

Mean TT = 22.7 °C

Mean TdTd = 10.7 °C

Mean RH = 48.0 %

Mean r = 8.1 g/kg

Mean PPP = 1014.9 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

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.

July 2010	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	19.49	26.2	1319	11.9	357	64.7	95.5	408	37.8	1411	12.04	8.73	10.3	1002	7.3	1616	1012.79	1016.6	3	1009.3	2357	0.0
2	20.27	23.7	1542	17.6	428	67.6	79.5	1116	54.2	1819	14.02	9.96	12.3	1127	8.2	1931	1011.73	1016.0	2341	1008.6	238	0.0
3	19.36	25.3	1600	14.0	2359	54.3	86.1	518	30.4	1600	9.18	7.22	9.5	659	5.8	2047	1019.06	1022.2	2202	1015.5	18	0.0
4	17.41	23.2	1248	10.0	337	66.6	87.4	2146	41.1	1157	10.80	8.06	10.9	2135	6.3	8	1020.06	1022.3	47	1017.6	1745	0.0
5	17.26	23.2	1438	10.6	423	59.5	96.4	516	30.9	1414	8.08	6.75	9.7	726	4.9	1746	1021.80	1025.9	2359	1019.5	111	0.0
6	16.65	24.1	1403	8.1	330	58.6	92.1	438	31.6	1308	7.63	6.42	8.1	2357	5.3	1312	1024.87	1027.3	552	1022.0	2346	0.0
7	18.00	22.1	1546	14.0	223	78.1	89.8	2358	64.9	1549	14.08	9.92	11.2	1013	8.0	3	1019.42	1022.3	12	1017.5	1903	0.0
8	19.85	26.3	1622	15.6	2351	71.1	94.4	731	40.3	1700	13.94	9.83	11.3	1116	8.1	1718	1017.78	1019.5	830	1015.6	1736	0.2
9	21.37	30.2	1512	12.4	414	63.5	96.3	437	31.1	1602	12.90	9.24	11.2	2246	6.2	1030	1016.45	1018.7	2355	1014.7	1704	0.0
10	21.23	27.7	1206	15.5	428	65.6	95.8	519	37.9	1425	13.84	9.79	11.7	657	8.4	1434	1017.15	1019.7	707	1014.4	2352	0.0
11	20.66	26.0	1426	16.5	116	59.3	86.8	707	30.8	1531	11.59	8.57	11.6	724	5.8	1753	1014.28	1015.3	2118	1012.8	319	0.0
12	18.28	23.3	1652	14.9	841	65.5	88.6	837	38.6	1617	11.25	8.32	10.7	1010	6.3	1118	1011.83	1014.4	6	1010.3	1721	1.0
13	16.59	20.2	1446	13.7	348	87.9	96.5	452	72.9	1523	14.52	10.31	12.6	1145	8.7	31	1008.22	1011.2	3	1005.7	1936	2.6
14	17.36	20.8	1550	14.5	18	81.2	95.7	131	66.7	1638	14.00	10.02	11.9	1407	8.7	2145	1001.91	1006.1	7	998.7	1703	3.7
15	17.40	20.9	1246	14.8	314	72.4	93.1	20	43.2	1554	12.07	8.85	10.1	2358	6.3	1605	1003.93	1007.7	1621	999.0	8	4.9
16	16.51	21.3	1443	12.3	451	76.1	93.5	57	51.8	1500	12.10	8.80	11.0	1038	7.6	451	1008.88	1014.3	2337	1003.5	22	3.7
17	16.18	21.1	1559	12.1	350	62.0	95.3	258	33.8	1729	7.98	6.72	9.4	0	4.7	1937	1019.56	1025.5	2355	1014.1	5	0.1
18	17.60	23.9	1605	9.8	113	67.3	86.8	416	47.1	1528	11.18	8.17	10.1	1257	5.6	2	1024.77	1026.0	728	1023.2	1725	0.0
19	20.92	28.2	1420	12.9	325	55.0	90.9	326	29.1	1425	10.49	7.82	9.2	551	6.6	1247	1020.41	1023.8	4	1016.6	2352	0.0
20	21.36	28.4	1448	16.2	434	53.6	89.8	2359	31.4	1457	10.69	8.05	11.3	2355	5.1	1955	1010.69	1016.8	8	1005.9	2359	0.2
21	18.68	24.2	1253	13.7	2348	64.4	90.7	21	35.3	1302	11.09	8.33	11.4	23	6.3	1139	1006.28	1008.6	2253	1005.2	33	0.0
22	15.66	20.9	1414	11.5	429	85.5	97.9	2322	56.2	1416	13.09	9.37	11.3	1151	7.9	833	1011.97	1016.8	2355	1008.1	15	7.5
23	15.93	20.6	1337	13.2	103	78.1	98.0	147	47.3	1350	11.60	8.45	10.3	1031	6.6	1721	1020.47	1023.7	2303	1016.6	2	5.8
24	17.49	24.1	1347	11.3	356	69.6	97.2	410	33.5	1350	11.22	8.16	9.8	719	6.0	1351	1022.06	1023.7	55	1020.1	1812	0.0
25	19.74	26.0	1456	15.3	507	66.3	88.1	525	37.0	1456	12.81	9.14	11.2	1045	7.4	1524	1017.25	1020.0	0	1015.2	1454	0.0
26	20.02	24.1	1513	16.9	516	75.9	91.2	549	59.2	1555	15.55	10.92	12.1	1055	9.2	55	1016.81	1018.1	2240	1015.9	1626	0.2
27	20.23	25.5	1515	15.7	211	74.3	94.6	220	48.7	1602	15.20	10.68	12.5	1005	8.9	1552	1017.30	1018.2	2359	1015.7	1637	0.0
28	18.50	24.1	1335	12.9	435	63.0	95.3	456	35.4	1445	10.65	7.99	10.3	12	6.1	1534	1017.19	1018.6	728	1015.2	1526	0.0
29	17.32	22.1	1504	11.9	2341	62.9	87.2	2253	40.4	1503	9.82	7.50	8.7	1012	6.5	1425	1016.24	1017.0	852	1014.9	1837	0.0
30	16.81	22.8	1513	9.2	208	68.7	94.4	212	43.1	1516	10.54	7.93	10.5	2354	6.4	938	1014.55	1016.2	4	1012.1	2359	0.0
31	19.07	23.5	1053	14.5	2346	70.1	96.1	707	43.6	1411	13.04	9.45	12.9	858	7.1	1653	1011.63	1013.3	2327	1010.7	1053	2.3
Total																						32.2
Mean	18.49	23.99		13.34		68.0	92.29		42.75		11.84	8.69	10.80		6.85		1015.40	1018.26		1012.72		
Max	21.37	30.19		17.63		87.9	98.00		72.90		15.55	10.92	12.94		9.22		1024.87	1027.30		1023.21		
Min	15.66	20.15		8.11		53.6	79.50		29.10		7.63	6.42	8.09		4.69		1001.91	1006.10		998.74		

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.