

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

DECEMBER 2009

Temperature (°C / °F)				Anomaly	Rank in the past 128 years			
Mean maximum	6.7	44.1	-1.6	33 rd lowest				
Mean minimum	0.2	32.4	-2.3	25 th lowest				
Daily mean	3.5	38.3	-1.9	29 th lowest				
Highest maximum	13.2	55.8	on 5 th	Lowest maximum	0.7	33.3	on 18 th	
Highest minimum	8.3	46.9	on 6 th	Lowest minimum	-8.3	17.1	on 23 rd	
Mean grass minimum	-2.1	28.2	-1.7	Lowest grass minimum	-13.9	7.0	on 19 th	
Mean earth @30 cm	6.5	43.7	-0.1	Earth @100 cm	9.4	48.9		
Frost duration (hrs)	129.7			Rain duration (hrs)	63.4	*		
Rainfall total (mm / in)	106.5	4.19	165 %	11 th highest				
Highest daily fall	18.4	0.72	on 21 st					
Number of: Dry days (<0.2mm)	12	Wet days (>0.9mm)	16	days ≥5mm	6			
Sunshine total (hrs)	75.3	Daily mean	2.43	121 %	Sunniest day	7.3	on 20 th	
N° days with: Air frost	15	Ground frost	19	Snow falling	8	Snow lying	9	
Thunder	1	Hail ≥5mm	0	Small hail/ice	1	Fog @09	1	Nil sun 8
Air pressure MSL : Mean @09 GMT (mbar/in)	1006.8			-8.3	29.73			
Absolute highest			1034.4			30.55	on 11 th	
Absolute lowest			983.7			29.05	on 22 nd	

Anomaly = departure from 1971 to 2000 average (degrees C, percent and mbar). * Excluding snowfall, 16th to the 24th.

Notes:

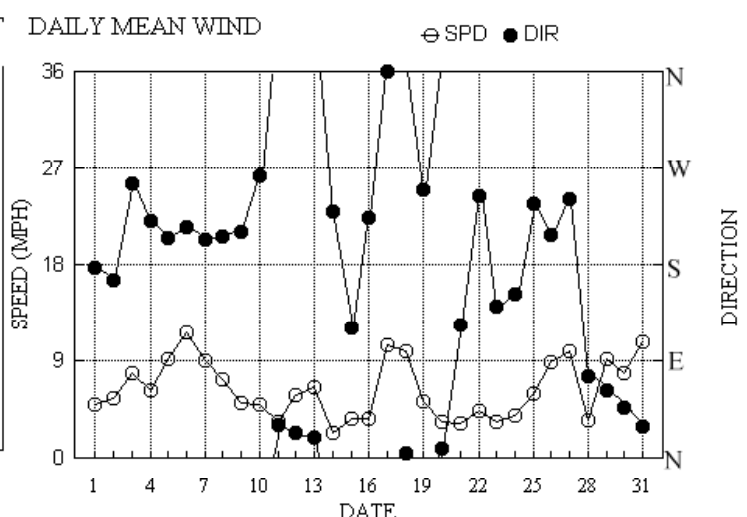
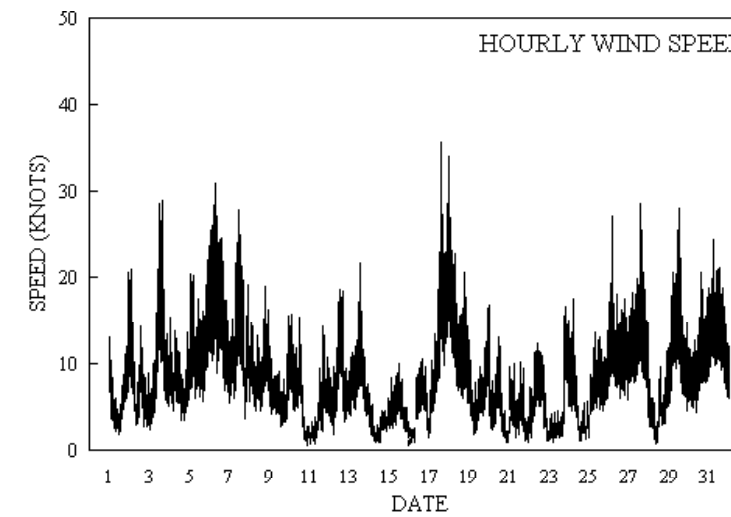
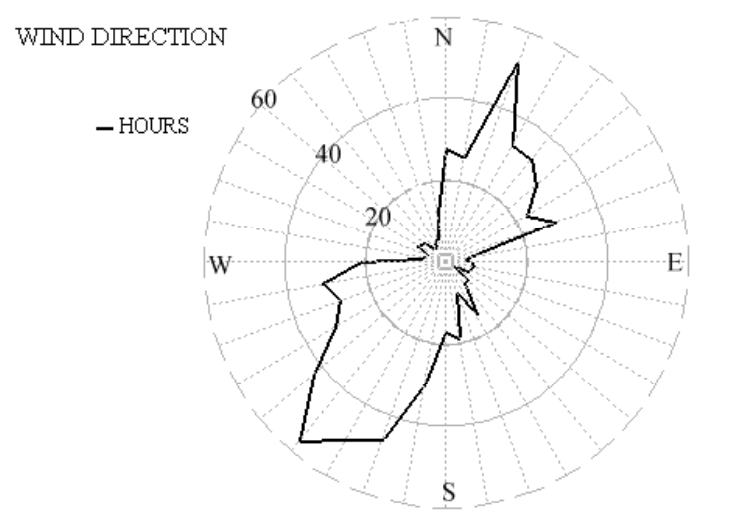
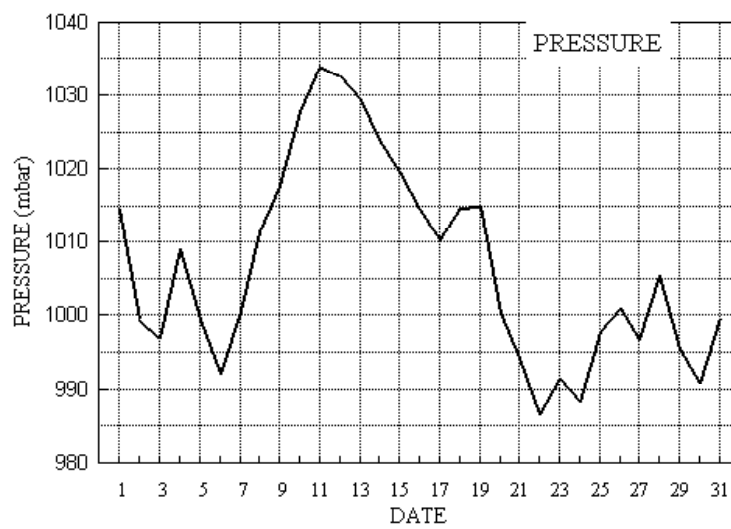
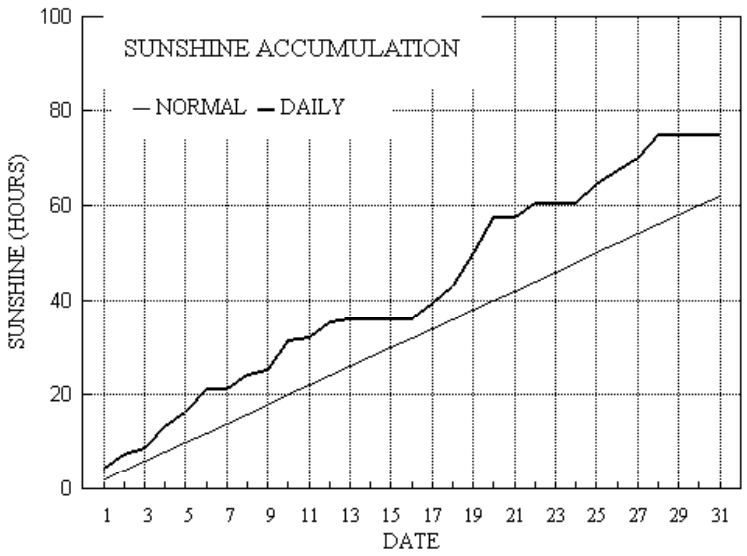
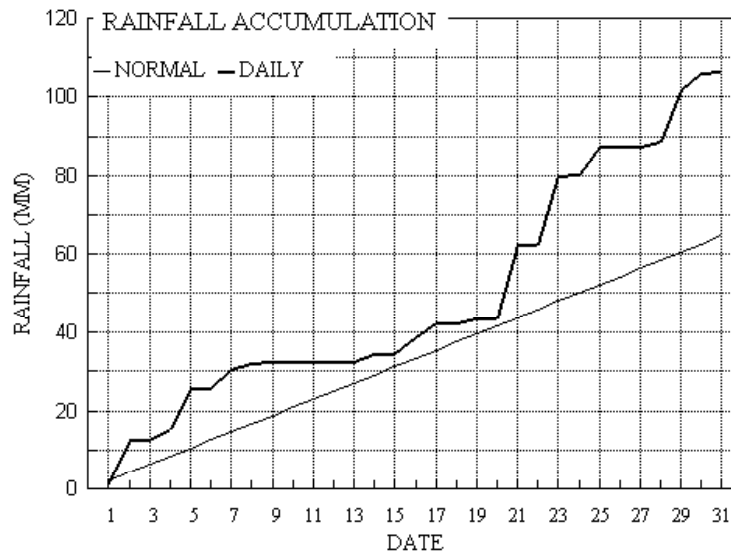
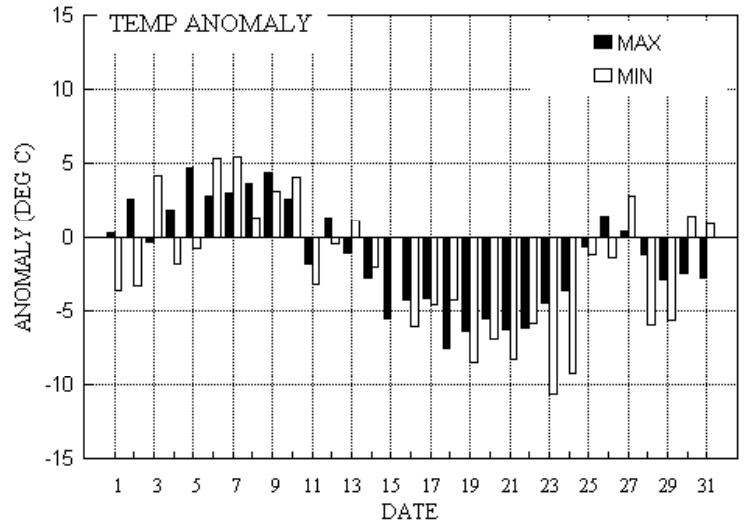
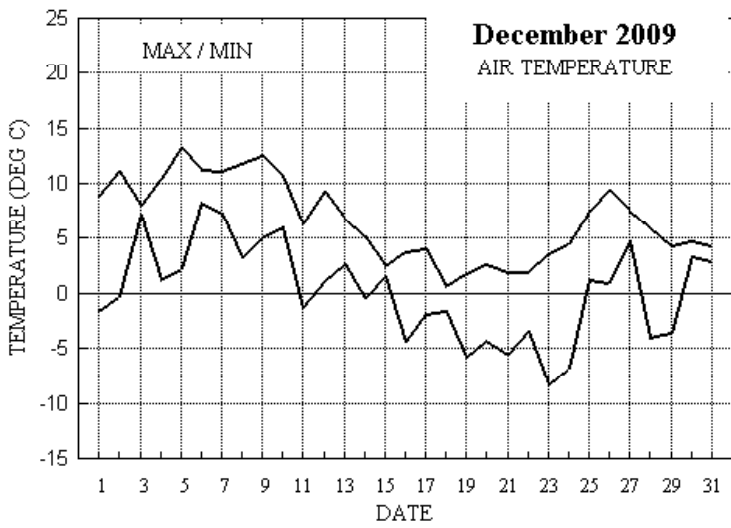
Cold and Very Wet with a Significant Snowy Period. Sunshine Above Normal

Temperature: In terms of the mean, this has been the coldest December since 2001, and since 1996 if just the mean maximum is considered. In the past 10 years 6 Decembers have been milder than the long-term median, and 4, like this one, have been colder. The highest maximum is close to the median while the lowest max is 0.7° below the median. The highest min is 1.0° below the median, and the lowest min is 3.1° below its median, and is the lowest December air temperature since 1991. The lowest grass min is lowest since 1995. Earth temperatures are close to normal. The duration of air frost is 37.5 hours above average, but is highest only since 2005. The number of days with air frost is 6 more than average. **Rainfall:** This has been the wettest December since 2002, with the total 46.1 mm more than the long-term median, but the number of days with falls of 10 mm or more is most since 1989. The coincidence of a month both wet and cold duly included a period of significant snowfall, arriving firstly on the 17th/18th and augmented on the 21st, the latter fall leading to traffic chaos. On the days with snow lying, the depth at 0900 hours was : 18th /7cm, 19th /6cm, 20th /5cm, 21st /4cm, 22nd /11cm, 23rd /10cm, 24th /7cm, 25th /5cm and 26th /1cm. The number of days with snow falling is most for December since 1995, and with snow lying is most since 1981. The maximum snow depth is most for the month since 1986. Thunder occurred on the 23rd, and there was a fall of ice pellets on the 16th. **Sunshine:** This has been quite a sunny December with 3 fewer sunless days than average. In the past 10 Decembers 6 have had less sun and 4 have had more. Overall there were 17 days with <3 hours and 3 with =>6 hours. **Wind:** The overall mean wind speed of 6.3 mph is 1.0 mph below average. The 6th was the windiest day, mean 11.6 mph, but the month's highest gust of 41 mph was on the 17th. The 14th was the least windy day, mean 2.3 mph, and there were 733 minutes, (12.22 hours) with a mean speed of 0.5 mph or less. Daily mean direction/number of days: N,4 NE,5 E,1 SE,4 S,2 SW,12 W,3 NW,0. **Humidity:** The mean relative humidity was 89.4 % and the lowest value of 61 % was on the 6th. The mean water vapour content per kg of air was 4.4 g at 0900 and 4.6 g at 1500 GMT. **Pressure:** The mean pressure is lowest for the month since 2000. **Commentary: From the 1st to the 13th:** Temperatures were near or above normal, with anomalies for the daily max between -1.8° on the 11th to +4.7° on the 5th, and for daily min between -3.6° on the 1st and +5.4° on the 7th. Wet at first, with falls over 10 mm on the 2nd and 5th, but drier after the 8th. Sunshine was near or above normal. Winds were generally light or moderate, but fresh on the 6th, S'y or SW'y, becoming N'y on the 11th. **From the 14th to the 24th:** Temperatures were below normal throughout this cold spell, with anomalies for daily max between -7.5° on the 18th to -2.8° on the 14th, and for daily min between -10.7° on the 23rd and 0.0° on the 15th. Some rain fell at first, but wetter after the 20th with falls over 15 mm on the 21st and 23rd. Much of the precipitation until the 21st fell as snow, and conditions under foot became very icy locally. A thaw set in on the 23rd, with heavy rain and thunder that evening. Sunshine was variable with the period 17th to 20th having most. Light SW'y winds on the 24th became fresh N'y on the 17th, dropping light by the 20th and veering S'y by the 22nd. **From the 25th to the 31st :** Temperatures were near or below normal with anomalies for daily max between -2.9 on the 29th and +1.4° on the 26th, and for daily min between -5.9° on the 28th and +2.8° on the 27th. Dry only on the 26th and 27th, but over 10 mm again on the 29th. Some sunshine until the 28th, but only 0.2 hours over the final 3 days. Light or moderate winds were SW'y at first, becoming NE'y on the 28th and increasing fresh on the 31st.

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°	+1.4°	159 %	160 %	-3.8°	-3.5°	53 %	130 %	-2.6°	-3.9°	274 %	80 %

Wokingham Climatological Graphs for December 2009



Month: December 2009

Date	Max	Min	Rain	Grass	30cm	100cm	Sun	Frost	pp09	Af	Sf	Th	Ic	Vec mean			Max gust			High hr			Rain			
	C	C	mm	Min	C	C	hrs	hrs	mbar	Gf	SI	Ha	Fg	ddd	ff	sp	ddd	gg	HHhh	ddd	ff	HH	hrs			
1	8.9	-1.6	1.0	-7.0	8.4	11.3	4.6	5.0	1014.5	1	1	0	0	0	0	0	177	2.2	4.3	185	21	2208	179	9	22	1.2
2	11.1	-0.3	11.6	2.8	8.0	11.1	3.0	0.0	999.5	1	0	0	0	0	0	0	166	4.5	4.8	174	21	0105	173	8	00	7.3
3	8.1	7.2	tr	5.3	8.4	10.9	1.2	0.0	997.0	0	0	0	0	0	0	0	255	6.4	6.8	271	29	1415	267	12	11	0.0
4	10.4	1.2	2.8	-3.4	8.0	10.8	4.7	0.0	1009.1	0	1	0	0	0	0	0	221	4.0	5.5	264	15	0029	259	7	00	4.6
5	13.2	2.2	10.3	3.3	7.9	10.7	3.1	0.0	999.5	0	0	0	0	0	0	0	205	7.7	8.0	214	24	2346	201	12	23	7.9
6	11.3	8.3	0.1	8.3	8.5	10.5	4.9	0.0	992.0	0	0	0	0	0	0	0	215	9.6	10.1	205	31	0615	204	14	06	0.2
7	11.1	7.3	4.7	3.6	8.6	10.5	0.0	0.0	1000.6	0	0	0	0	0	0	0	203	7.2	7.9	184	28	1051	195	12	12	3.7
8	11.8	3.2	1.7	-0.7	8.4	10.4	2.9	0.0	1011.4	0	1	0	0	0	0	0	206	5.8	6.3	168	19	1854	173	9	18	1.8
9	12.5	5.0	0.4	4.8	8.5	10.4	0.9	0.0	1017.6	0	0	0	0	0	0	0	211	4.3	4.4	243	16	2339	236	9	23	0.3
10	10.7	6.0	0.1	1.2	8.7	10.3	6.3	1.0	1027.6	0	0	0	0	0	0	0	263	3.5	4.3	248	16	0243	248	8	02	0.0
11	6.3	-1.3	tr	-5.7	8.0	10.3	0.6	7.2	1033.9	1	1	0	0	0	0	1	30	2.5	3.0	56	14	1644	38	6	17	0.0
12	9.3	1.1	0.0	-2.9	7.7	10.2	3.5	0.0	1032.6	0	1	0	0	0	0	0	24	4.8	5.0	33	19	1205	37	9	14	0.0
13	6.9	2.7	tr	-3.1	7.4	10.1	0.7	0.0	1029.4	0	1	0	0	0	0	0	19	5.6	5.6	29	22	1334	26	9	14	0.0
14	5.2	-0.4	1.7	-4.5	7.2	10.0	0.0	1.6	1023.9	1	1	0	0	0	0	0	230	0.9	2.0	4	7	0015	212	3	22	6.6
15	2.5	1.6	tr	0.7	7.1	9.8	0.0	4.2	1019.5	0	0	1	0	0	0	0	121	2.7	3.1	100	10	1101	127	5	07	0.0
16	3.8	-4.4	4.6	-9.2	6.6	9.7	0.0	12.1	1014.6	1	1	1	0	0	0	1	223	2.9	3.2	224	11	1514	198	5	08	x
17	4.1	-1.9	3.4	-3.0	6.2	9.6	3.2	3.6	1010.2	1	1	1	0	0	0	0	360	9.0	9.1	5	36	1456	353	15	21	x
18	0.7	-1.6	tr	-2.0	5.8	9.4	3.6	14.9	1014.8	1	1	1	1	0	0	0	5	8.5	8.6	353	27	0007	3	14	00	x
19	1.8	-5.8	1.4	-13.9	5.7	9.1	7.1	16.6	1014.9	1	1	0	1	0	0	0	249	3.3	4.5	235	17	2346	227	8	23	x
20	2.7	-4.2	0.0	-6.6	5.6	9.0	7.3	10.4	1000.4	1	1	1	1	0	0	0	9	2.4	2.9	3	13	1021	19	6	10	x
21	1.9	-5.5	18.4	-11.3	5.3	8.8	0.0	12.5	994.2	1	1	1	1	0	0	0	123	0.8	2.8	151	10	1250	218	5	00	x
22	2.0	-3.4	0.0	-0.1	5.0	8.6	3.0	15.7	986.5	1	1	1	1	0	0	0	244	2.9	3.7	223	12	0917	233	6	09	x
23	3.6	-8.3	17.6	-11.2	4.8	8.4	0.2	16.1	991.4	1	1	1	1	1	0	0	141	1.2	3.0	244	17	1903	203	8	19	x
24	4.5	-6.8	0.4	-1.6	4.5	8.2	0.0	0.0	988.3	1	1	0	1	0	0	0	153	1.5	3.4	193	18	0529	187	7	05	x
25	7.4	1.2	7.3	0.5	4.4	8.0	4.0	0.0	997.7	0	0	0	1	0	0	0	236	4.2	5.2	200	15	2329	200	7	23	2.7
26	9.5	1.0	tr	-3.1	4.4	7.8	2.7	0.0	1000.9	0	1	0	1	0	0	0	208	7.7	7.7	234	27	0427	220	9	04	0.0
27	7.6	4.8	tr	2.1	4.7	7.7	2.7	0.0	996.8	0	0	0	0	0	0	0	241	8.0	8.5	278	29	1340	268	12	13	0.0
28	6.0	-3.9	1.2	-8.1	4.6	7.6	4.9	8.8	1005.3	1	1	0	0	0	0	0	75	1.8	3.1	68	12	2210	62	6	22	1.2
29	4.3	-3.6	13.2	-5.3	4.0	7.5	0.0	0.0	995.5	1	1	0	0	0	0	0	63	7.9	7.9	55	28	1145	63	11	09	14.1
30	4.8	3.4	4.3	3.3	4.4	7.3	0.0	0.0	990.8	0	0	0	0	0	0	0	46	6.7	6.8	56	21	1411	43	9	22	11.5
31	4.4	2.9	0.3	2.0	4.7	7.2	0.2	0.0	999.7	0	0	0	0	0	0	0	29	9.3	9.3	33	24	0450	35	12	10	0.3
Total			106.5				75.3	129.7																		63.4
Mean	6.7	0.2		-2.1	6.5	9.4	2.43	4.2	1006.8								233	0.9	5.5							
Anom	-1.6	-2.3	165%		-0.1	+0.1	121%		-8.3																	
Daily mean		3.5																								
Anom		-1.9																								

Number of days with:

Air frost = 15 Ground frost = 19 Nil sun = 8
Snow falling = 8 Snow lying = 9 Thunder = 1
Hail=>5mm = 0 Hail<5mm or ice = 1 Fog at 09GMT = 1

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 December 2009

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks					
1	58	7	20	03	05	-0.3	-0.8	96	3.6	1014.5	1	010	10	1	1	0	0	9	0	1	82075	87080	1	COTRA Hoar mod Gnd part frzn	
2	56	4	20	03	06	8.7	8.1	96	6.8	999.5	5	000	10	6	1	3	8	4	3	1	83812		2	1Sc20 1Ac65 2Ci75 COTRA Cu con SE Parhelion	
3	60	7	25	08	18	7.7	6.8	94	6.2	997.0	2	016	60	6	2	6	5	4	7	/	83712	85640	87362	3	
4	86	1	25	06	10	2.2	0.3	87	3.9	1009.1	2	018	02	0	0	1	0	9	3	0	81365			4	Hoar slt
5	82	2	25	06	10	8.2	5.4	82	5.7	999.5	3	006	03	1	1	1	5	7	3	5	81650			5	1Ac58 1Ci70 1Cs75 Cs edge SW
6	70	7	23	08	28	9.2	7.4	88	6.5	992.0	3	016	21	6	2	2	5	6	2	/	81640	87557		6	2Sc50 vv 50K exE CF 0800
7	70	8	19	08	24	10.0	7.6	85	6.6	1000.6	6	014	25	8	2	5	8	4	7	/	81712	83818	88465	7	3Sc40 3Ac58 Cu med
8	68	3	23	06	12	5.2	3.9	91	5.0	1011.4	2	028	03	0	0	1	0	9	5	1	81367	83080		8	COTRA Ac edge W
9	30	7	19	05	09	9.0	8.6	97	6.9	1017.6	2	016	10	2	2	1	6	1	3	1	81702	87080		9	2Ac67 COTRA
10	80	1	25	04	11	6.2	4.9	91	5.3	1027.6	2	031	02	0	0	1	5	6	0	1	81635			10	1Ci80 COTRA CiSW
11	01	9	36	02	04	1.9	1.8	99	4.2	1033.9	3	005	45	4	4	9	/	/	/	/				11	VV190
12	61	5	01	03	12	4.9	4.4	96	5.1	1032.6	2	001	03	1	1	5	4	0	0		82710	83640		12	1Sc18
13	86	7	02	07	12	4.6	2.4	85	4.4	1029.4	5	000	03	2	2	3	5	6	3	1	81635	83650	87362	13	/Ci75
14	35	7	23	01	03	1.6	1.3	98	4.1	1023.9	5	001	10	2	2	4	6	2	7	/	83703	87358		14	2Sc50 /Ac62 ice on grass
15	40	8	12	03	07	2.1	0.7	90	4.0	1019.5	1	009	60	6	2	8	5	5	/	/	85625	88635		15	pptn v slt
16	35	7	20	06	09	-1.9	-2.6	95	3.1	1014.6	6	018	10	1	1	7	5	5	3	/	87620			16	/Ac59 Hoar mod Gnd frzn
17	84	3	36	07	13	1.2	-0.1	91	3.8	1010.2	2	007	03	0	0	3	8	5	0	0	81820	83640		17	Cu med Hoar slt. icy patches
18	80	6	01	09	15	-0.6	-2.7	86	3.1	1014.8	3	021	03	1	1	6	5	3	/	/	81708	83630	85656	18	Sn lyng 7cm 100%
19	68	0	28	03	05	-4.2	-5.2	93	2.6	1014.9	6	001	02	0	0	0	0	9	0	0				19	Sn ly 6cm
20	84	0	31	02	07	-2.9	-6.2	78	2.4	1000.4	2	008	02	0	0	0	0	9	0	0				20	Sn ly 5cm
21	82	7	30	02	03	-3.6	-4.4	94	2.8	994.2	6	012	15	1	1	6	8	5	3	1	81825	86645		21	1Ac68 /Ci75 Sn ly 4cm
22	18	8	23	06	11	-0.7	-0.9	99	3.6	986.5	2	015	10	2	2	8	6	0	/	/	82701	88702		22	Sn ly 11cm
23	30	5	02	01	03	-6.8	-7.4	95	2.2	991.4	7	002	10	1	1	8	6	0	1		81830	84070		23	1Sc45 Cu med Sn ly 10cm Hoar slt
24	84	7	17	06	09	2.8	2.3	96	4.6	988.3	5	006	25	8	2	7	8	5	7	/	81825	83358	85459	24	1Sc40 Sn ly 7cm Thaw
25	58	8	27	05	11	1.2	1.0	99	4.1	997.7	2	043	10	2	2	8	6	2	/	/	88705			25	Sn ly 5cm 90% Thaw
26	65	7	21	07	18	5.9	4.5	91	5.3	1000.9	3	005	80	8	1	7	9	5	6	/	82920	85640		26	3Ac60 vv50k NW Sn ly 1cm 50% Thaw
27	86	2	23	07	18	5.3	2.0	79	4.4	996.8	3	006	02	1	1	2	5	4	6	0	82615			27	1Sc40 1Ac65 Sn ly <10% Thaw
28	30	7	06	01	03	-3.4	-3.7	98	2.9	1005.3	7	001	10	1	1	1	0	9	3	1	81366	83072	86078	28	COTRA Hoar mod Gnd sfc frzn Parhelion
29	50	8	07	10	20	3.8	2.6	92	4.6	995.5	8	010	63	6	2	7	5	4	2	/	83712	85618	88535	29	Sn ly tr
30	15	8	05	04	09	4.1	3.9	99	5.1	990.8	3	011	51	6	5	8	6	1	/	/	86702	88703		30	
31	65	7	03	11	18	3.2	1.2	87	4.2	999.7	2	015	80	8	2	7	8	4	3	1	83815	85630		31	/Ac62 /Ci70

Mean vis = 20.9 km

Mean cloud = 5.5 69%

Mean wind speed = 5.2 kn

Mean gust = 11 kn

Mean TT = 2.7 °C

Mean TdTd = 1.5 °C

Mean RH = 91.8 %

Mean r = 4.4 g/kg

Mean PPP = 1006.8 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 December 2009

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NChs	shs	NChs	Date	Remarks
1	65	7	16	04	08	5.8	1.3	73	4.2	1011.2	7	022	03	2	2	5	0	9	7	2	81360	85362	85070	1	COTRA		
2	60	7	13	05	12	8.9	7.6	92	6.6	995.3	7	025	21	6	2	3	9	3	7	2	81708	82915	87070	2	2Sc40 3Ac65 jpW vv 30k exW		
3	84	5	27	11	29	5.9	0.9	70	4.1	999.8	2	012	02	8	2	3	8	5	7	3	81825	83635		3	2Ac60 1Ci70 Cu con N Cb top NW		
4	75	7	21	05	09	5.9	2.5	78	4.5	1008.7	6	007	03	1	1	1	5	7	7	/	81650	83362	87364	4	Cld edge E		
5	62	8	21	05	09	10.5	7.4	81	6.5	1000.0	8	006	60	6	2	5	8	5	2	/	81825	85640	88550	5			
6	82	1	22	11	23	9.8	3.4	64	4.9	998.5	1	024	02	0	0	1	8	5	6	0	81825			6	1Sc35 1Ac60 Cu med		
7	57	8	18	09	21	9.9	8.3	90	6.9	994.6	7	032	63	6	6	7	5	4	2	/	81712	83615	87620	7	8Ns45		
8	65	8	21	06	11	9.2	6.2	82	5.9	1012.0	5	005	60	6	2	3	5	4	2	/	81712	83645	88556	8			
9	60	7	19	03	07	12.3	10.4	88	7.8	1018.8	1	001	05	2	2	5	8	4	0	1	81812	85656	87075	9	1Ci72 Cu fra		
10	83	4	32	04	11	9.3	4.4	71	5.1	1030.3	3	009	02	0	0	2	5	0	1		82625	83080		10	COTRA		
11	70	7	36	01	06	6.0	5.8	98	5.6	1032.8	6	012	03	4	1	7	8	4	/	/	81812	87615		11	Cu hum		
12	80	2	04	07	17	6.5	3.3	80	4.7	1031.4	6	008	15	0	0	2	8	5	0	0	81825			12	2Sc45 Cu med jpSW		
13	86	6	02	09	16	6.2	2.2	76	4.4	1027.0	6	012	02	1	1	6	8	5	0	0	82825	83640	85650	13	Cu med		
14	58	8	21	02	05	4.8	3.1	89	4.7	1021.3	6	015	60	6	2	7	8	4	7	/	82815	87635		14	/Ac58 Cu med		
15	50	8	09	05	08	1.8	-0.9	82	3.5	1019.1	4	000	77	7	2	8	5	6	/	/	88630			15	Pptn v slt		
16	50	8	23	05	10	0.8	0.2	96	3.9	1010.2	7	026	68	7	6	7	7	2	2	/	87705	88515		16	Sn ly 40% 1cm		
17	30	7	36	17	36	2.5	-1.8	73	3.4	1011.1	3	001	85	8	1	7	8	4	6	/	85815	86640		17	/Ac58 No sn lnyg		
18	70	2	36	09	16	0.5	-2.0	83	3.3	1016.4	2	004	03	0	0	2	8	4	0	0	81815			18	2Sc30 Sn ly 6cm		
19	67	3	24	04	09	0.0	-4.4	72	2.8	1010.5	7	026	03	0	0	1	0	9	7	1	81358	83080		19	COTRA Sn ly 6cm		
20	86	1	23	07	13	1.5	-3.5	69	2.9	998.8	6	003	02	0	0	1	1	5	3	0	81825			20	1Ac62 Cu hum Sn ly 4cm		
21	13	8	05	04	06	0.2	-0.2	97	3.8	988.8	7	027	73	7	6	5	7	2	2	/	85705	88508		21	Sn ly 4cm 90%		
22	56	1	22	06	11	-0.1	-0.6	96	3.7	988.4	3	002	10	1	1	1	6	2	0	3	81705			22	1Ci70 Cb top W Sn ly 11cm		
23	12	7	04	02	04	-0.3	-0.4	99	3.8	990.0	7	013	10	4	2	7	8	0	/	2	83701	87640		23	1Cu020 /Ci250 Cu med Sn ly 10cm		
24	20	8	33	02	03	3.6	3.2	97	4.9	987.1	6	008	10	2	2	1	5	4	2	/	81715	88460		24	1Sc35 Sn ly 6cm Thaw		
25	65	1	25	05	12	4.1	1.4	83	4.2	1002.3	2	014	02	1	1	1	5	4	0	0	81618			25	Sn ly 4cm 80% Thaw		
26	80	7	21	08	16	8.3	5.2	81	5.6	1000.0	5	007	80	8	2	4	8	5	6	1	83820	83075		26	2Sc45 2Ac62 COTRA Cu con S Sn ly 10% 1cm Thaw		
27	89	2	27	09	23	6.7	0.6	65	4.0	1000.4	2	019	01	1	1	2	8	5	0	1	82828			27	1Sc35 1Ci75 Cu hum		
28	62	7	06	04	07	2.8	0.7	86	4.0	1003.6	6	013	02	2	2	1	1	5	3	2	81820	83367	85075	28	2Ci72 COTRA Cu fra Ac str vir		
29	30	8	07	07	19	4.0	3.4	96	4.9	992.3	6	011	63	6	6	7	7	3	2	/	84708	87712	88530	29			
30	58	8	05	09	21	3.9	3.6	98	5.0	992.6	2	009	58	6	5	7	7	3	2	/	83706	87708	88520	30			
31	82	7	03	10	18	3.8	0.0	76	3.8	999.9	6	002	25	8	2	7	8	5	/	1	82822	87650		31	1Sc40 /Ci72 Cu hum/med		

Mean vis = 20.9 km
 Mean cloud = 5.7 72%
 Mean wind speed = 6.3 kn
 Mean gust = 13 kn
 Mean TT = 5.0 °C
 Mean TdTd = 2.3 °C
 Mean RH = 83.3 %
 Mean r = 4.6 g/kg
 Mean PPP = 1006.2 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)
 N = Total cloud amount, oktas
 dd = Direction from which wind is blowing, tens of degrees true
 ff = 10 minute mean wind speed, knots
 gg = Highest gust in past hour, knots
 TT = Air temperature at 1.2 m, deg Celsius
 TdTd = Dew point temperature at 1.2 m, deg Celsius
 RH = Relative humidity at 1.2 m
 r = Humidity mixing ratio at 1.2 m, g/kg
 PPP = Air pressure reduced to sea level, mbar
 a = Characteristic of pressure tendency (Code FM12-0200)
 ppp = 3 hr pressure tendency, tenths of mbar
 ww = Present weather code (Code FM12-4677)
 W1, W2 = Past weather code (Code FM12-4561)-
 covers past 3 hours.
 Nh = Amount of low cloud present, oktas
 Cl = Type of low cloud (Code Fm12-0513)
 h = Height of low cloud (Code FM12-1600)
 Cm = Type of medium cloud (Code FM12-0515)
 Ch = Type of high cloud (Code FM12-0509)
 8 groups. 8 = indicator for cloud detail
 N = Amount of cloud, oktas
 C = Type of cloud (FM12-0500)
 hshs= Height of cloud (FM12-1677)
 Remarks : COTRA = persistent condensation
 trails present.

December 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	3.04	6.8	2206	-1.7	802	83.2	97.1	822	68.8	1825	0.38	3.92	5.4	2359	3.2	735	1011.10	1014.5	900	1004.0	2359	0.6
2	8.29	10.6	1215	6.2	2	93.0	97.0	840	81.5	1308	7.22	6.41	6.9	953	5.3	0	997.60	1004.1	0	993.2	2350	9.7
3	5.73	7.9	903	1.7	2237	85.3	97.4	231	64.6	1357	3.37	5.00	6.4	29	3.7	2312	998.53	1004.3	2354	993.1	51	0.3
4	4.51	9.0	2357	1.0	804	84.7	96.4	2355	68.6	1231	2.13	4.51	6.9	2357	3.6	435	1006.97	1010.1	1002	1000.9	2359	1.1
5	9.90	12.4	2301	7.5	650	87.3	96.7	38	75.9	1126	7.87	6.72	7.9	1852	5.4	839	999.00	1001.0	0	996.0	2357	3.7
6	10.05	13.2	242	7.0	1857	79.5	93.3	513	60.8	1328	6.60	6.25	8.5	548	4.8	1357	996.86	1004.2	2311	989.9	605	6.4
7	8.36	11.1	1109	4.7	2352	84.6	93.0	1809	77.4	814	5.92	5.88	7.1	1335	4.6	2331	999.76	1004.4	29	994.3	1457	4.5
8	7.57	11.8	2346	2.8	709	87.8	96.6	2339	71.4	1203	5.63	5.75	8.3	2346	4.3	700	1010.22	1012.6	2359	1002.8	2	1.5
9	10.34	12.5	1413	8.1	751	94.8	97.8	828	87.8	1508	9.55	7.35	8.2	15	6.5	751	1017.95	1021.0	2317	1012.4	1	0.1
10	6.43	10.8	2	-0.7	2359	87.2	98.5	2351	66.4	1339	4.35	5.16	7.3	2	3.5	2359	1028.23	1033.0	2039	1020.7	21	0.4
11	2.80	6.2	1503	-1.3	324	98.9	99.7	600	97.9	2358	2.64	4.56	5.7	1426	3.3	104	1033.49	1034.4	1111	1032.6	1459	0.2
12	4.76	8.8	1302	0.8	543	91.7	98.8	546	74.1	1359	3.47	4.78	5.6	1034	3.9	543	1032.13	1033.8	25	1031.0	2354	0.0
13	4.59	6.8	1139	2.4	156	86.2	95.7	208	73.6	1447	2.46	4.46	5.0	904	4.1	617	1028.16	1031.2	1	1025.9	2344	0.1
14	3.05	5.1	1354	-0.6	547	93.6	98.2	839	87.5	1315	2.10	4.38	4.9	1236	3.5	547	1022.57	1026.1	2	1019.5	2350	0.9
15	1.42	3.2	13	-2.8	2359	89.0	96.6	2346	77.9	1746	-0.22	3.73	4.5	31	2.9	2359	1019.20	1019.7	2103	1018.4	515	0.4
16	-0.54	3.5	2342	-4.5	340	96.1	97.9	352	88.5	1052	-1.08	3.56	4.7	2345	2.6	340	1012.74	1019.3	28	1007.4	2319	3.1
17	1.66	4.1	1315	-0.9	2340	83.3	97.8	45	61.4	1410	-0.99	3.59	4.9	126	2.4	1850	1010.48	1012.6	1706	1007.5	5	0.6
18	-0.24	0.8	1227	-2.5	2359	87.4	96.5	418	80.4	1200	-2.10	3.25	3.6	330	2.6	2359	1014.97	1017.2	1920	1010.2	16	2.1
19	-1.80	1.5	2358	-6.2	550	82.7	94.7	802	69.8	1349	-4.39	2.77	3.7	2357	2.2	548	1011.27	1016.6	7	1000.9	2358	0.0
20	-0.01	2.0	1355	-3.2	707	78.6	95.6	224	64.2	1229	-3.34	3.03	3.9	232	2.3	737	999.49	1001.0	0	998.1	2339	1.0
21	-1.32	1.9	1247	-5.8	935	94.0	99.3	2357	78.2	11	-2.18	3.35	4.1	1247	2.4	733	991.13	998.3	0	984.4	2254	13.2
22	-1.22	0.6	1332	-7.3	2352	98.3	99.4	107	94.8	2350	-1.46	3.53	4.0	313	2.1	2352	987.36	990.9	2359	983.7	208	0.6
23	-3.38	2.8	1858	-8.7	222	96.9	99.7	1649	93.1	221	-3.79	3.06	4.7	1858	1.9	222	990.66	992.1	321	988.6	1738	12.8
24	2.87	4.1	1306	1.6	3	96.9	99.4	2348	93.8	534	2.42	4.63	5.1	1429	4.2	0	987.74	989.2	0	985.5	1731	1.6
25	2.44	6.0	2355	0.9	742	94.3	99.6	325	80.1	1428	1.60	4.32	5.3	2316	3.8	1852	998.34	1003.3	1749	988.3	1	0.1
26	6.56	9.0	1328	5.2	2123	88.4	94.2	937	79.6	1415	4.78	5.40	6.1	1313	4.7	2008	1000.19	1002.3	12	998.2	2358	5.8
27	5.10	7.6	1338	0.1	2343	76.7	90.9	2347	63.2	1507	1.30	4.23	5.0	24	3.4	2342	999.86	1006.1	2251	996.0	738	0.0
28	0.31	5.3	1333	-4.0	807	93.6	98.5	614	74.6	1339	-0.63	3.68	4.4	1310	2.8	807	1004.24	1005.6	158	1001.1	2358	0.1
29	3.36	4.2	1358	0.7	2	94.1	98.2	10	81.6	728	2.49	4.63	5.0	1303	4.0	4	994.39	1001.2	0	990.4	2345	8.1
30	3.57	4.8	1100	2.6	1909	98.2	99.1	914	96.2	2352	3.30	4.90	5.4	1052	4.5	1925	992.48	997.4	2352	989.5	619	4.5
31	2.89	4.3	1407	0.3	2336	85.4	96.8	6	73.7	1421	0.65	4.04	4.7	42	3.3	2336	999.70	1001.8	2315	997.2	100	0.3
Total																						83.8
Mean	3.58	6.40		0.12		89.4	97.11		77.66		1.94	4.54	5.58		3.60		1006.35	1009.98		1001.99		
Max	10.34	13.17		8.13		98.9	99.70		97.90		9.55	7.35	8.51		6.49		1033.49	1034.36		1032.64		
Min	-3.38	0.56		-8.65		76.7	90.90		60.83		-4.39	2.77	3.60		1.88		987.36	989.16		983.65		

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

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.