

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 2010

Temperature (°C / °F)			Anomaly	Rank in the past 129 years			
Mean maximum	3.7	38.7	-4.6	3 rd lowest			
Mean minimum	-2.5	27.5	-5.0	3 rd lowest			
Daily mean	0.6	33.1	-4.8	2 nd lowest			
Highest maximum	9.2	48.6	on 29 th	Lowest maximum	-0.6	30.9	on 6 th
Highest minimum	5.9	42.6	on 30 th	Lowest minimum	-11.5	11.3	on 20 th
Mean grass minimum	-5.0	23.0	-4.6	Lowest grass minimum	-17.7	0.1	on 20 th
Mean earth @30 cm	3.8	38.8	-2.8	Earth @100 cm	7.3	45.1	
Frost duration (hrs)	329.1			Rain duration (hrs)	5.8 *		
Rainfall total (mm / in)	21.8	0.86	34 %	15 th lowest			
Highest daily fall	7.5	0.30	on 27 th				
Number of: Dry days (<0.2mm)	21	Wet days (>0.9mm)	6	days ≥5mm	1		
Sunshine total (hrs) 24.4	Daily mean 0.79	39 %		Sunniest day 5.5	on 12 th		
N ^o days with: Air frost 23	Ground frost 25	Snow falling 10		Snow lying 13			
Thunder 0	Hail ≥5mm 0	Small hail/ice 3		Fog @09 4	Nil sun 18		
Air pressure MSL : Mean @09 GMT (mbar/in)	1015.2		+0.1	29.98			
Absolute highest	1038.4			30.66		on 15 th	
Absolute lowest	989.2			29.21		on 18 th	

Anomaly = departure from 1971 to 2000 average (degrees C, percent and mbar). * excluding 14 days due to snow and ice

Notes:

Very Cold. Very Dull. Dry, but with 2 snowy episodes.

Temperature: This December is the 2nd coldest in 129 years, and coldest since 1890, though only 0.1° below the value for 1981. The mean max is lowest since 1933, and 0.3° below 1981, whilst the mean min is equal lowest with 1981 since 1890. The highest max is 3.8° below the median and is lowest since 1976. The lowest max is 2.0° below the median but is lowest only since 1996. The highest min is 3.4° below the median and is lowest since 1981. The lowest min is 6.3° below its median and is the 3rd lowest December temperature on record, after 1981 and 1908. The mean and lowest grass min are both lowest since 1981. Earth temp. at 30cm depth is lowest since before 1979, and at 1 m depth since before 1989. The duration of air frost is highest for December since before 1981, and 2nd highest after February 1986 for any month in the same period. The number of days with air frost is 12 more than average and equal highest with 2001 since before 1976. **Rainfall:** (including melted snowfall). This has been the driest December since 2001, and there have been 5 drier in the last 35 years. The number of dry days is 6 more than average, and there were 2 dry spells, one of 11 days ending on the 15th, and one of 6 days ending on the 26th. There were two significant snowfalls, one on the 1st/2nd gave 5 cm cover that lasted until the 4th, but the second on the 18th also gave 5cm cover which was reinforced by further snow on the 20th, and although the depth had decreased to 2cm by the 22nd, 1cm remained until the 27th. The total amount of melted snow came to 8.1 mm, just over a third of the month's precipitation. The Eden Winter Snow Index was 32, compared with 56 last December, and 95 in Dec 1981. **Sunshine:** This was an exceptionally dull December, ranking 3rd lowest in 103 years, after 1969 and 1956. In recent years the closest for dullness was 1998, which had 14.5 hours more than this December. The number of nil sun days is most since before 1979. Overall there were 28 days with <3 hours and none with =>6 hours.

Wind: The mean wind speed of 5.2 mph is 1.9 mph below average and lowest since before 1987. The 1st was the windiest day, mean 13.6 mph, but the month's highest gust of 36 mph was on the 16th. The 31st was the least windy day, mean 2.0 mph, and there were 880 minutes (14.7 hours) with a mean speed of 0.5 mph or less. Daily mean direction/number of days: N,7 NE,7 E,1 SE,2 S,2 SW,3 W,6 NW,3.

Humidity: The overall mean relative humidity was 89.0 %, and the lowest was 54 % on the 1st. The mean water vapour content per kg of air was 3.6 g at 0900 GMT and 3.9 g at 1500 GMT. **Commentary: From the 1st to the 15th:** This period started very cold, with anomalies for daily max down below -8° on the 1st and 2nd, and to -9.1° on the 6th, but temperatures became near normal from the 10th to 12th. Anomalies for daily min were below -8° on the 3rd and 4th, but rose briefly to +1.8° on the 11th. Snow fell on the 1st and 2nd, but there was a thaw and rain on the 4th, and it was dry after that. The best of the sun was on the 5th and 12th, and 10 days had less than 1 hour of sunshine. Winds were fresh N'ly on the 1st and 2nd, decreasing to moderate SW'ly by the 4th, then remaining light from between W'ly and N'ly up to the 15th. **From the 16th to the 31st:** Once again mostly very cold, but milder after the 26th, with anomalies for daily max down below -8° on the 18th and 19th, rising to +2.0° on the 29th, the 28th and 29th being the only days with above normal values. Anomalies for daily min were down to -12.0° on the 19th, -14.2° on the 20th and -10.0° on the 26th, rising to +3.9° on the 30th. The second snowy spell this month commenced on the 16th, with main snowfalls on the 18th and 20th, and despite a slow thaw thereafter, a covering of icy snow remained until the 27th, when 7.5 mm of rain disposed of it. Sunshine was meagre, just 2 days having more than 1 hour, and 11 days with nil. Winds were light or moderate, Wly until the 18th then N'ly until the 24th, backing to S'ly by the 26th and to NE'ly by the 30th.

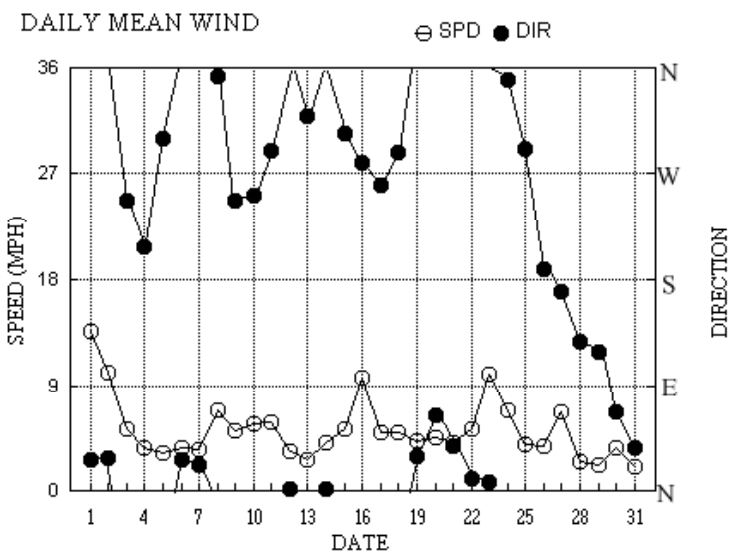
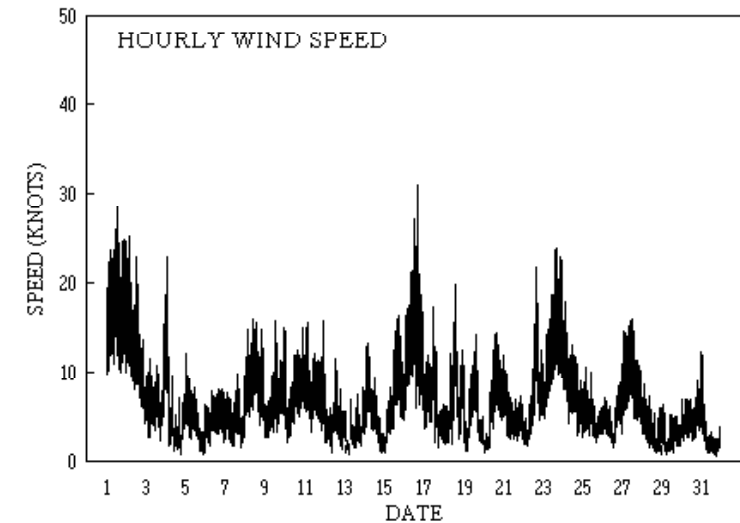
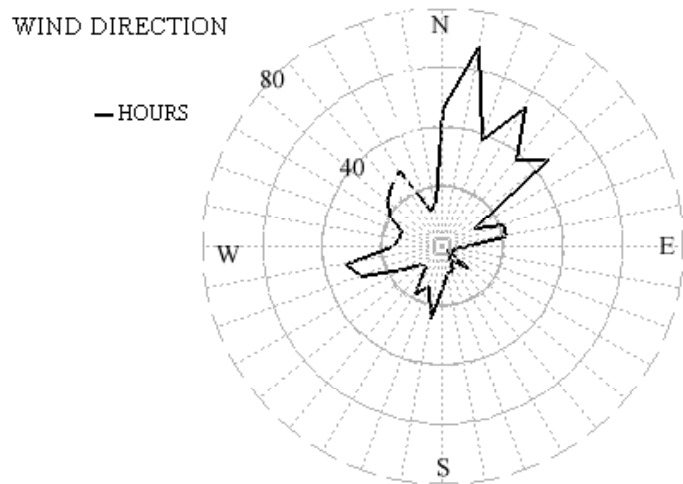
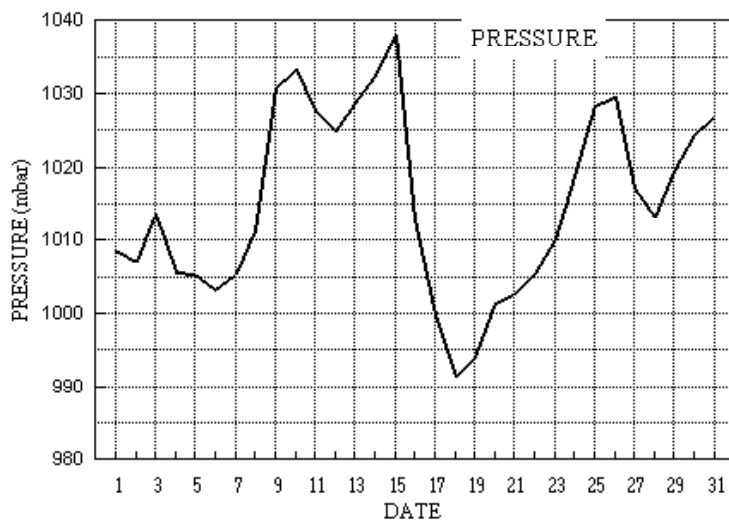
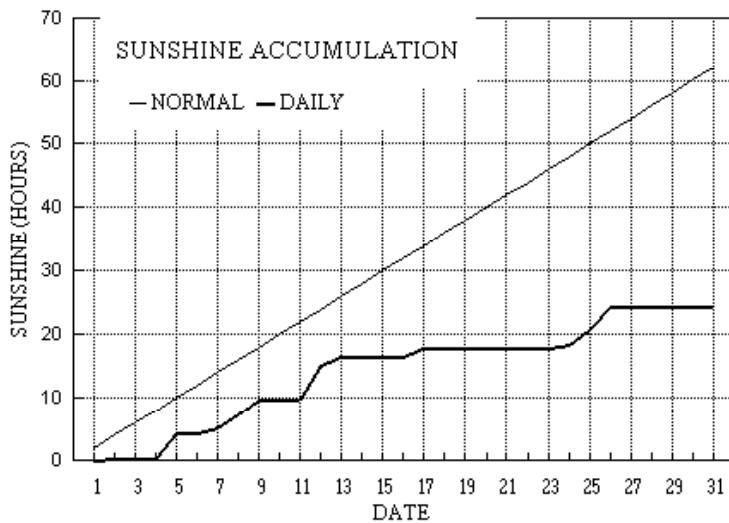
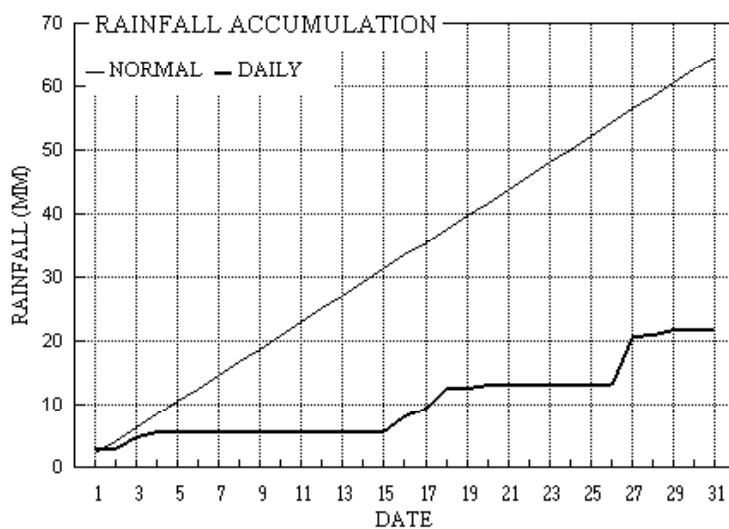
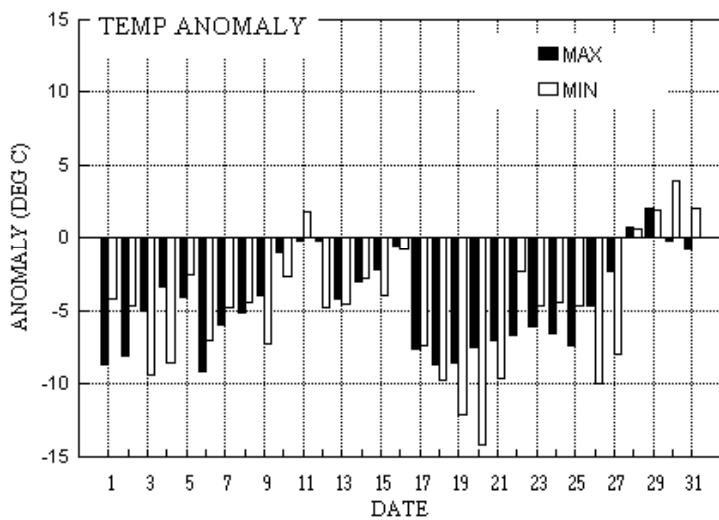
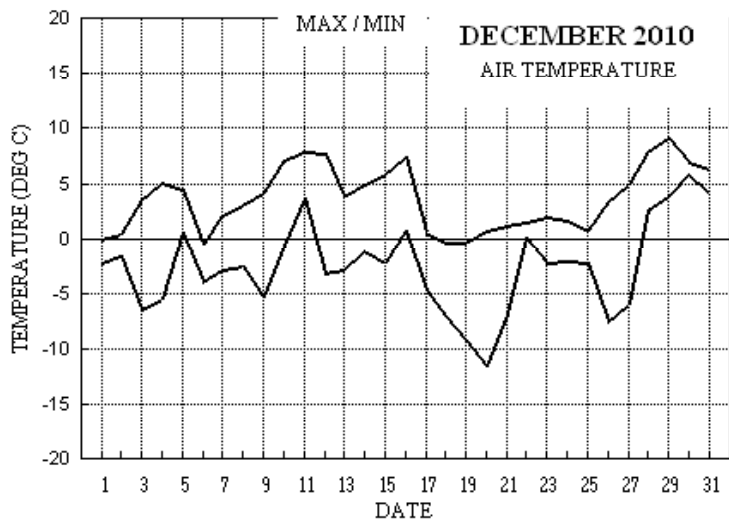
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 31 st			
-5.4°	-5.5°	27%	49%	-4.3°	-5.8°	37%	41%	-3.5°	-3.2°	37%	30%

B.J.Burton. FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for December 2010



Month: December 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 ddd	mean ff	sp	Max gust ddd	gg	HHhh	High hr ddd	ff	HH	Rain hrs				
1	0.0	-2.2	3.0	-4.5	4.4	8.9	0.1	24.0	1008.6	1	1	1	0	0	0	0	26	11.8	11.8	30	29	1324	27	14	12	x	
2	0.4	-1.6	tr	-2.2	4.3	8.7	0.2	23.9	1007.0	1	1	1	1	0	0	1	28	8.6	8.8	44	25	0458	33	12	01	x	
3	3.5	-6.4	2.0	-11.4	4.4	8.5	0.0	22.4	1013.6	1	1	1	1	0	0	0	247	2.0	4.5	196	19	2353	187	8	23	x	
4	5.1	-5.5	0.6	-9.4	4.3	8.4	0.0	0.0	1005.7	1	1	0	1	0	0	0	207	2.3	3.2	210	23	0128	200	9	01	2.1	
5	4.4	0.5	0.0	-1.1	4.7	8.2	4.0	7.7	1005.3	0	1	0	0	0	0	0	300	2.4	2.8	314	12	0141	319	5	03	0.0	
6	-0.6	-4.0	0.0	-8.8	4.4	8.1	0.0	24.0	1003.3	1	1	0	0	0	0	1	27	3.1	3.2	60	8	1924	355	4	08	0.0	
7	2.1	-2.9	0.0	-2.1	4.3	8.0	0.9	18.6	1005.4	1	1	0	0	0	0	0	22	2.8	3.0	30	10	1419	26	5	14	0.0	
8	3.0	-2.5	0.0	-6.4	4.2	7.9	2.2	13.5	1011.2	1	1	0	0	0	0	0	353	5.6	6.0	356	16	1059	359	8	14	0.0	
9	4.1	-5.3	0.0	-10.2	3.9	7.8	2.3	9.7	1030.7	1	1	0	0	0	0	0	247	4.2	4.5	267	16	1354	248	7	19	0.0	
10	7.1	-0.7	0.0	-4.5	3.5	7.7	0.0	0.0	1033.3	1	1	0	0	0	0	0	251	4.9	5.0	254	15	2242	259	7	22	0.0	
11	7.9	3.7	0.0	-0.1	4.0	7.5	0.0	0.0	1027.7	0	1	0	0	0	0	0	289	4.6	5.1	8	16	2308	285	6	02	0.0	
12	7.8	-3.2	0.0	-8.0	4.6	7.4	5.5	6.1	1024.9	1	1	0	0	0	0	0	2	2.4	2.9	28	12	1316	22	6	13	0.0	
13	3.8	-2.9	0.1	-7.6	4.3	7.4	1.5	9.8	1028.5	1	1	0	0	0	0	1	319	1.3	2.2	311	8	2336	309	4	23	0.3	
14	5.0	-1.2	0.1	-5.7	4.2	7.4	0.0	1.3	1032.3	1	1	0	0	0	0	0	1	3.4	3.6	343	13	0501	355	7	04	0.2	
15	5.8	-2.3	tr	-7.1	4.3	7.3	0.0	7.0	1038.0	1	1	0	0	0	0	0	304	4.3	4.6	324	17	1859	333	8	15	0.0	
16	7.4	0.8	2.4	1.8	4.4	7.3	0.0	2.7	1012.9	0	0	1	0	0	0	0	279	6.0	8.4	28	31	1647	266	12	13	2.3	
17	0.6	-4.7	1.2	-9.9	4.4	7.3	1.1	23.7	999.8	1	1	1	0	0	0	1	260	3.2	4.3	269	18	1224	278	8	12	x	
18	-0.4	-7.0	3.2	-12.6	3.6	7.2	0.1	24.0	991.2	1	1	1	1	0	0	1	288	1.2	4.3	252	20	1533	255	9	15	x	
19	-0.3	-9.3	0.0	-14.5	3.3	7.1	0.0	24.0	993.9	1	1	0	1	0	0	0	29	2.8	3.7	24	14	1539	25	8	15	x	
20	0.7	-11.5	0.7	-17.7	3.2	7.0	0.0	18.5	1001.5	1	1	1	1	0	0	0	64	3.6	4.0	71	15	1613	76	7	17	x	
21	1.2	-6.9	tr	-0.7	3.1	6.8	0.0	0.0	1002.6	1	1	0	1	0	0	0	38	3.6	3.6	34	12	0157	43	6	01	x	
22	1.5	0.1	tr	0.1	3.2	6.7	0.0	5.0	1005.4	0	0	1	1	0	0	0	10	4.4	4.6	28	22	1711	32	10	17	x	
23	2.0	-2.2	tr	-4.9	3.2	6.6	0.0	9.3	1010.1	1	1	1	1	0	0	0	7	8.6	8.7	3	24	1831	9	12	18	x	
24	1.6	-2.0	tr	-5.5	3.1	6.5	0.5	15.7	1018.7	1	1	1	1	0	0	0	349	5.8	6.0	13	20	0036	9	10	00	x	
25	0.7	-2.3	0.0	-4.0	2.9	6.4	2.5	24.0	1028.4	1	1	0	1	0	0	0	291	2.4	3.4	349	11	0544	345	5	00	x	
26	3.4	-7.6	0.0	-11.2	2.7	6.3	3.5	14.2	1029.5	1	1	0	1	0	0	0	189	3.2	3.3	192	9	2320	172	5	19	0.0	
27	4.9	-6.0	7.5	-3.4	2.5	6.2	0.0	0.0	1017.2	1	1	0	1	0	0	0	169	5.5	5.8	165	16	1322	172	8	11	x	
28	7.9	2.6	0.4	2.3	2.7	6.1	0.0	0.0	1013.0	0	0	0	0	0	0	1	127	1.3	2.2	133	9	0216	145	3	03	x	
29	9.2	3.9	0.6	4.6	3.5	6.0	0.0	0.0	1019.5	0	0	0	0	0	0	1	119	1.2	1.9	198	7	0136	200	4	01	0.9	
30	7.0	5.9	tr	6.0	4.3	6.0	0.0	0.0	1024.3	0	0	0	0	0	0	0	68	2.9	3.2	30	9	2024	46	4	19	0.0	
31	6.4	4.1	0.0	3.4	4.8	6.2	0.0	0.0	1027.0	0	0	0	0	0	0	0	36	1.2	1.7	59	13	0051	62	5	00	0.0	
Total			21.8				24.4	329.1																			5.8
Mean	3.7	-2.5		-5.0	3.8	7.3	0.79	10.6	1015.2								349	1.8	4.5								
Anom	-4.6	-5.0	34%		-2.8	-2.0	39%																				
Daily mean		0.6																									
Anom		-4.8																									

Number of days with:

Air frost = 23 Ground frost = 25 Nil sun = 18
Snow falling = 10 Snow lying = 13 Thunder = 0
Hail=>5mm = 0 Hail<5mm or ice = 3 Fog at 09GMT = 4

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 2010

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1	W2	Nh	Cl	h	Cr	Ch	NCh	shs	NCh	shs	Date	Remarks
1	84	7	02	12	21	-1.3	-6.5	68	2.3	1008.6	2	001	02	2	2	7	5	6	/	/	87635		1	Gnd frzn Slnly Tr <0.5cm	
2	61	8	03	09	16	-1.1	-2.8	88	3.1	1007.0	3	010	71	7	7	8	5	3	/	/	85708	88612	2	Sn ly 5cm	
3	35	8	30	03	08	-3.4	-4.0	96	2.8	1013.6	2	010	10	2	2	8	6	2	/	/	88704		3	Hoar slt Slnly 4cm 100%	
4	02	8	21	03	07	2.2	1.9	98	4.4	1005.7	3	006	46	4	2	8	6	0	/	/	88701		4	Slnly <1cm 60% Thaw Gnd part frzn	
5	11	8	27	03	08	0.5	0.0	97	3.8	1005.3	3	008	10	2	2	8	6	0	/	/	88701		5	Slnly tr	
6	04	8	35	04	08	-2.8	-2.9	99	3.1	1003.3	3	001	48	4	4	8	6	0	/	/	88701		6	Rime slt. Gnd frzn	
7	22	7	35	03	06	-1.0	-1.1	99	3.5	1005.4	1	007	10	2	2	6	6	2	/	/	86703	86075	7	COTRA Rime slt Gnd part frzn	
8	45	8	01	06	13	0.1	-0.6	95	3.6	1011.2	3	023	10	2	2	8	6	2	/	/	86704	88705	8	Hoar slt	
9	86	7	23	04	08	-0.6	-3.2	82	2.9	1030.7	1	016	03	1	1	7	5	6	/	/	81640	87645	9	/Ci75 Hoar mod. Gnd frzn	
10	70	8	23	05	08	4.0	2.4	89	4.4	1033.3	0	004	02	2	2	8	5	5	/	/	81625	88630	10		
11	77	8	27	03	09	6.1	3.6	84	4.9	1027.7	0	004	02	2	2	8	5	4	/	/	82612	88615	11		
12	59	1	22	02	03	-2.1	-2.3	98	3.1	1024.9	2	014	10	0	0	0	0	9	0	1	81075		12	Hoar mod Gnd frzn	
13	01	9	03	02	07	-0.0	-0.2	99	3.7	1028.5	2	014	47	4	2	9	/	/	/	/			13	Vis 150 Hoar/rime slt Gnd frzn	
14	60	7	36	04	08	3.7	2.4	91	4.4	1032.3	2	021	01	6	2	7	6	3	7	/	86708	83620	87358	14	
15	25	8	36	04	08	0.8	0.3	96	3.8	1038.0	8	001	10	1	1	8	6	2	/	/	88703		15	Hoar slt	
16	75	8	25	11	21	5.7	3.1	83	4.7	1012.9	7	048	60	6	2	7	5	4	2	/	83615	86620	88460	16	
17	86	7	24	05	09	-2.0	-4.7	82	2.7	999.8	6	011	14	2	2	7	0	9	7	2	86460		17	2Ac62 /Ci70 Hoar slt Gnd frzn Parhelion	
18	10	9	06	05	07	-3.1	-3.8	95	2.9	991.2	7	010	73	7	2	9	/	/	/	/			18	Gnd frzn Slnly 1cm	
19	62	8	05	04	08	-4.7	-5.3	96	2.6	993.9	7	017	02	2	2	1	5	6	7	/	81630	88463	19	1Ac60 Slnly 5cm 100%	
20	50	8	06	04	05	-6.9	-7.5	95	2.2	1001.5	3	006	10	1	1	5	5	7	7	85625	85467	88270	20	2Ac65 Slnly 4cm Hoar mod	
21	40	8	03	04	07	0.2	-0.5	95	3.7	1002.6	2	011	10	2	2	8	6	3	/	/	88706		21	Slnly 5cm 100%	
22	20	8	35	04	07	0.3	-0.3	96	3.7	1005.4	2	010	50	5	2	8	6	2	/	/	88703		22	Thaw Slnly 2cm 95%	
23	72	8	36	08	15	-0.2	-3.3	79	3.0	1010.1	2	008	02	2	2	7	5	6	/	8	87645		23	/Cs70 Slnly 1cm 90% Hoar slt Gnd frzn	
24	58	7	35	06	11	-0.9	-2.3	90	3.2	1018.7	2	012	05	2	2	5	6	3	0	1	85706	87070	24	COTRA Slnly 1cm Gnd frzn Parhelion	
25	25	8	27	03	06	-1.7	-2.4	95	3.1	1028.4	2	016	10	2	2	8	6	2	/	/	88704		25	Slnly 1cm 80% Gnd frzn	
26	64	7	17	02	06	-6.0	-6.8	94	2.2	1029.5	2	001	02	2	2	0	0	9	0	1	87078		26	COTRA Slnly 1cm 80% Hoar mod Gnd frzn	
27	78	8	18	08	15	3.3	-0.3	77	3.7	1017.2	7	012	02	2	2	8	0	8	7	/	87357	88462	27	Slnly 1cm 80% Gnd frzn Thaw	
28	07	8	14	03	06	4.1	3.8	98	5.0	1013.0	2	012	50	5	4	8	6	0	/	/	88701		28	Slnly tr Gnd part frzn	
29	04	8	01	01	03	5.9	5.8	99	5.7	1019.5	2	014	50	5	4	8	6	0	/	/	88701		29		
30	35	7	11	03	07	5.9	5.8	99	5.7	1024.3	2	006	10	2	2	7	6	2	/	/	83703	87705	30		
31	35	7	09	01	02	4.4	3.9	97	5.0	1027.0	0	008	10	2	2	7	5	5	/	/	87625		31		

Mean vis = 12.7 km
 Mean cloud = 7.5 94%
 Mean wind speed = 4.5 kn
 Mean gust = 9 kn
 Mean TT = 0.3 °C
 Mean TdTd = -0.9 °C
 Mean RH = 91.9 %
 Mean r = 3.6 g/kg
 Mean PPP = 1015.2 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.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for December 2010

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks				
1	82	7	03	11	24	-0.8	-7.5	61	2.2	1006.9	6	006	02	2	2	7	5	5	//	82628	87635	1	Gnd frzn Snly tr	
2	65	7	04	10	20	-0.6	-4.4	76	2.7	1008.3	3	001	26	8	2	3	8	4	3	8	82818	87270	2	2Sc45 1Ac65 COTRA Snly 4cm
3	35	7	20	05	10	-4.3	-5.1	94	2.6	1012.5	6	009	10	2	2	7	6	2	//	87704		3	Snly 3cm	
4	30	8	11	02	04	4.1	3.8	98	5.1	1003.1	7	019	40	6	2	7	5	4	2	//	81712	86625 87645	4	8As60 jfNW vv10k ex NW Snly 10%
5	70	1	30	03	05	3.5	0.1	78	3.8	1004.2	5	008	02	1	1	1	1	4	0	2	81815		5	1Ci75 Cu hum
6	07	8	05	04	08	-2.0	-2.1	99	3.3	1001.9	7	008	48	4	4	8	6	0	//	88701		6	Rime slt Gnd frzn	
7	50	7	02	04	10	1.0	-0.4	90	3.7	1005.2	5	000	15	2	2	7	8	4	//	81818	86645	7	2Sc30 4Ci75 jpNW vv12k ex NW	
8	75	1	36	08	15	2.1	-1.2	79	3.4	1014.4	2	023	03	1	1	1	8	4	0	1	81815		8	1Sc25 1Ci75 Cu fra
9	82	2	26	04	13	3.6	-1.6	69	3.3	1031.4	4	000	02	1	1	1	5	6	3	0	81630		9	1Ac65
10	81	7	26	07	11	6.7	3.3	79	4.7	1031.5	7	018	02	2	2	7	5	5	//	87620		10		
11	78	7	31	06	11	7.5	3.5	76	4.8	1025.2	7	015	02	2	2	7	5	5	//	87620		11	/Ci75	
12	68	7	02	04	10	5.6	1.9	77	4.3	1024.8	7	005	03	1	1	7	8	4	//	81815	87630	12	Cu fra	
13	59	2	22	04	06	2.1	1.5	96	4.2	1028.0	6	003	10	1	1	2	5	6	0	0	82635		13	
14	59	7	36	03	06	4.2	1.4	82	4.1	1034.2	3	007	21	6	2	2	8	4	7	//	81815	87358	14	2Sc56 Cu med
15	61	7	33	07	15	5.0	3.3	89	4.7	1024.4	7	016	02	2	2	7	5	3	/2		83708	87610	15	/Ci70
16	75	7	27	05	24	4.6	2.1	83	4.4	1003.1	8	036	61	6	6	7	5	4	7	//	81715	83630 86656	16	7Ac58
17	40	6	30	03	08	-0.2	-3.8	77	2.9	997.1	7	010	87	8	1	6	8	4	//	86815		17	1Sc30 /Ci70 vv 50k ex pptn Snly 0.5cm	
18	60	7	25	09	16	-1.4	-2.9	89	3.1	989.4	5	001	05	7	2	7	5	3	//	86707	87620	18	Snly 5cm 100 %	
19	65	8	02	08	12	-1.0	-3.1	86	3.1	992.1	3	002	01	2	2	3	5	6	3	7	83635	88270	19	1Ac65 COTRA Snly4cm 100%
20	57	8	06	05	11	-0.3	-1.5	91	3.4	1001.1	6	007	05	7	2	5	5	6	2	//	85645	88557	20	Snly 4cm 100%
21	40	8	04	03	05	0.8	-0.1	93	3.8	1003.3	5	001	20	5	2	8	6	2	//	88705		21	Thaw Snly3cm	
22	57	8	36	05	12	1.0	-0.3	91	3.7	1006.1	3	001	50	5	2	8	6	3	//	87707	88710	22	Snly1cm 90% Thaw	
23	78	8	01	10	20	1.6	-2.3	75	3.2	1011.1	3	006	02	7	2	8	8	5	//	82820	88645	23	Cu fra Snly 1cm 90%	
24	59	8	33	06	12	0.9	-1.2	86	3.4	1020.3	3	007	70	7	2	8	5	4	//	87612	88645	24	Snly1cm 80% Pptn v slt	
25	60	0	27	03	06	-0.3	-3.0	82	3.0	1029.4	5	002	05	1	1	0	0	9	0	0			25	Snly1cm 80% Gnd frzn
26	60	8	16	02	04	0.8	-3.2	75	3.0	1026.6	6	027	05	2	2	3	0	9	3	7	83365	88270	26	COTRA Snly1cm 80%
27	75	7	18	05	15	4.4	-1.4	66	3.4	1014.4	6	013	02	2	2	7	0	9	7	8	81359	87361 87275	27	Snly<1cm<50% Thaw
28	05	8	12	02	05	5.4	5.1	98	5.4	1014.3	3	006	51	5	4	8	6	0	//	88701		28		
29	07	8	07	01	02	8.3	8.2	99	6.7	1019.3	5	003	50	5	4	8	6	1	//	81702	85703 88705	29	Fog patches, vv3km E	
30	40	8	05	03	06	6.5	6.4	99	5.9	1024.5	6	005	10	2	2	8	6	2	//	83705	88706	30		
31	58	8	02	01	03	6.1	4.6	90	5.2	1026.5	5	005	05	2	2	8	5	5	//	88620		31		

Mean vis = 13.9 km
 Mean cloud = 6.5 81%
 Mean wind speed = 4.9 kn
 Mean gust = 11 kn
 Mean TT = 2.4 °C
 Mean TdTd = 0.0 °C
 Mean RH = 84.6 %
 Mean r = 3.9 g/kg
 Mean PPP = 1014.0 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
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 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 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	-0.94	0.0	2032	-2.2	233	69.4	88.4	2358	54.5	1749	-5.92	2.47	3.2	2359	2.0	1749	1007.86	1010.9	4	1005.5	2303	0.8
2	-1.29	0.1	1341	-3.7	2346	82.4	92.2	626	72.8	1408	-3.93	2.86	3.2	44	2.4	1854	1008.07	1012.2	2359	1005.4	103	0.6
3	-3.48	2.6	2358	-6.7	420	93.0	97.3	710	80.9	2239	-4.47	2.74	4.0	2358	2.2	420	1011.85	1013.7	917	1006.7	2359	0.0
4	2.96	5.1	1254	0.4	634	96.5	98.6	1014	85.2	7	2.47	4.58	5.3	1254	3.9	624	1004.39	1006.9	0	1002.4	1841	1.3
5	0.73	4.1	0	-3.7	2148	93.2	98.4	2218	77.2	1450	-0.27	3.78	5.0	0	2.8	2144	1004.64	1005.6	1024	1003.9	1414	0.0
6	-1.91	-0.6	23	-2.9	821	99.1	99.5	1539	98.1	0	-2.01	3.30	3.6	23	3.1	858	1003.11	1004.4	0	1001.8	1440	0.0
7	-0.95	1.8	1415	-2.6	1944	95.6	99.7	414	87.1	2134	-1.58	3.41	4.1	1331	2.8	2102	1005.58	1007.7	2337	1004.0	17	0.0
8	-0.09	2.9	1330	-2.6	2356	87.4	95.9	426	75.3	2136	-1.97	3.30	3.9	1326	2.4	2348	1014.16	1025.6	2358	1007.4	7	0.0
9	0.10	3.9	1249	-5.2	651	81.1	93.8	705	65.8	1244	-2.82	3.06	3.9	2356	2.2	236	1030.60	1032.9	1842	1025.6	0	0.0
10	4.26	7.0	1521	1.0	319	87.1	94.4	321	77.2	1522	2.29	4.39	4.8	1344	3.7	134	1031.91	1033.7	751	1029.1	2358	0.0
11	6.43	7.9	1258	4.2	9	79.0	88.3	12	72.1	2015	3.04	4.65	5.1	1225	4.3	401	1026.06	1029.2	0	1022.6	2259	0.0
12	2.37	7.3	1323	-2.8	816	89.2	98.6	659	71.7	1309	0.71	3.97	4.6	1322	3.0	816	1024.84	1026.7	2327	1022.7	56	0.0
13	0.59	3.7	0	-2.7	503	96.8	99.3	1041	89.9	7	0.14	3.79	4.4	1	3.0	503	1028.01	1029.2	2242	1026.3	32	0.1
14	3.06	5.0	1309	-1.9	2358	89.6	97.3	2353	80.6	1442	1.50	4.15	4.5	939	3.1	2359	1033.29	1038.1	2359	1028.8	25	0.2
15	2.16	5.3	1530	-2.0	0	89.7	98.1	304	74.4	2202	0.59	3.89	4.7	1430	3.1	0	1035.22	1038.4	733	1027.1	2351	0.0
16	3.59	7.4	1319	-2.4	2359	83.4	93.3	1735	72.8	2301	1.04	4.16	5.4	1336	2.4	2313	1010.59	1027.3	0	1001.6	1620	2.3
17	-2.87	0.6	1228	-6.5	2224	82.9	96.3	2316	70.0	1230	-5.43	2.58	3.0	1529	2.2	319	998.91	1003.7	8	995.2	2359	0.6
18	-3.03	-0.5	2135	-6.8	211	93.9	96.8	1050	88.4	1529	-3.88	2.93	3.5	1222	2.2	211	991.96	995.2	3	989.2	1338	2.3
19	-4.73	-0.4	1432	-9.6	2352	91.5	96.6	643	81.7	1730	-5.92	2.51	3.3	1405	1.7	2352	995.10	1000.9	2359	991.6	1407	0.0
20	-4.45	0.6	1709	-11.4	228	92.7	96.3	2359	87.1	1715	-5.47	2.69	3.8	2304	1.5	228	1000.91	1002.0	1027	1000.1	2057	0.2
21	0.48	1.0	1408	-0.1	119	95.6	97.5	511	92.7	1315	-0.14	3.79	4.0	2135	3.7	842	1002.75	1004.6	2334	1000.2	22	0.0
22	0.31	1.4	1356	-1.7	2315	92.4	96.9	0	81.8	1901	-0.78	3.62	3.9	3	3.0	2211	1006.18	1009.8	2314	1004.2	524	0.0
23	0.15	1.9	1341	-2.4	601	78.9	93.2	314	70.3	1809	-3.14	3.02	3.2	1510	2.7	631	1011.15	1015.0	2321	1008.9	528	0.0
24	-0.38	1.5	1309	-2.0	640	82.3	92.0	830	70.6	20	-3.05	3.02	3.5	1454	2.7	415	1019.59	1024.3	2351	1014.8	14	0.0
25	-2.24	-0.2	1440	-5.6	2242	87.8	94.8	853	79.9	1525	-4.00	2.79	3.2	930	2.2	2236	1028.36	1030.3	1817	1024.2	0	0.0
26	-2.24	2.2	2347	-7.6	745	83.6	94.7	840	68.3	1409	-4.70	2.67	3.4	2051	2.0	745	1027.52	1030.4	207	1022.1	2359	0.0
27	3.48	4.7	1321	1.7	3	74.2	90.2	2359	64.8	1523	-0.72	3.59	4.2	2354	3.1	159	1016.11	1022.2	2	1011.8	2335	3.4
28	4.46	7.4	1327	2.6	17	97.2	99.0	2336	90.0	0	4.06	5.08	6.2	1327	4.2	0	1013.86	1017.6	2358	1011.0	310	3.3
29	7.17	9.1	1331	5.0	8	99.2	99.7	2307	98.7	9	7.08	6.22	7.1	1331	5.3	10	1019.54	1022.5	2358	1017.2	105	0.5
30	6.21	7.3	13	4.9	2358	99.2	99.7	25	98.1	2358	6.10	5.77	6.2	15	5.2	2358	1024.32	1025.9	2334	1022.2	103	0.1
31	5.14	6.5	1326	4.0	818	94.2	98.4	0	86.6	2350	4.28	5.08	5.3	1417	4.6	2350	1026.53	1027.5	1027	1025.7	0	0.0
Total																						15.7
Mean	0.81	3.43		-2.30		89.0	95.97		79.50		-0.87	3.67	4.31		2.99		1014.93	1018.53		1011.58		
Max	7.17	9.07		5.05		99.2	99.70		98.70		7.08	6.22	7.07		5.34		1035.22	1038.40		1029.12		
Min	-4.73	-0.64		-11.35		69.4	88.30		54.45		-5.92	2.47	3.01		1.47		991.96	995.23		989.17		

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

Change to the Wokingham Monthly Report pages.

With effect from the August 2010 report, page 6 containing RH statistics from the 1 minute AWS readings will be replaced with a page containing hourly values of sunshine for each day of the month, derived from the R&D electronic sunshine detector.

If any user of these reports has a requirement for the monthly table of RH statistics, they should notify me by e-mail to b.j.burton@btinternet.com

Bernard Burton 1 September 2010

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.