

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

FEBRUARY 2012

Temperature (°C / °F)			Anomaly	Rank in the past 131 years				
Mean maximum	7.8	46.0	-0.4	59 th lowest				
Mean minimum	0.4	32.7	-1.1	42 nd lowest				
Daily mean	4.1	39.4	-0.8	47 th lowest				
Highest maximum	16.5	61.7	on 23 rd	Lowest maximum	0.2	32.4	on 8 th	
Highest minimum	9.1	48.4	on 24 th	Lowest minimum	-11.4	11.5	on 11 th	
Mean grass minimum	-2.3	27.9	-0.5	Lowest grass minimum	-17.1	1.2	on 11 th	
Mean earth @30 cm	4.6	40.3	-0.7	Earth @100 cm	6.7	44.1		
Frost duration (hrs)	172.9			Rain duration (hrs)	23.1			
Rainfall total (mm / in)	18.5	0.73	43 %	27 th lowest				
Highest daily fall	10.5	0.41	on 4 th					
Number of: Dry days (<0.2mm)	22	Wet days (>0.9mm)	4	days ≥5mm	1			
Sunshine total (hrs)	92.3	Daily mean	3.18	115 %	Sunniest day	9.5	on 26 th	
N° days with: Air frost	16	Ground frost	16	Snow falling	6	Snow lying	6	
Thunder	0	Hail ≥5mm	0	Small hail/ice	0	Fog @09	1	
Pressure MSL : Mean @09 GMT, mbar	1030.6	+13.2	Highest	1043.7	on 7 th	Lowest	1007.1	on 18 th
Relative humidity : Mean (%)	80.4	Lowest	36	on 2 nd	Water vapour (g/kg), mean at 09 and 15 GMT			4.3, 4.3
Overall mean wind speed (mph)	6.3	Windiest day	12.0	on 22 nd	Max gust	39	on 22 nd	
Wind direction (days)	N 4	NE 5	E 1	SE 0	S 1	SW 7	W 5	NW 6
Least windy day (mph)	1.6	on 11 th	Calm; less than 0.5 mph (minutes)		744			

Anomaly = departure from 1981 to 2010 average (degrees C, percent and mbar).

Notes:

Dry and Sunny with Mean Temperature Below Normal, and a Snowy Spell.

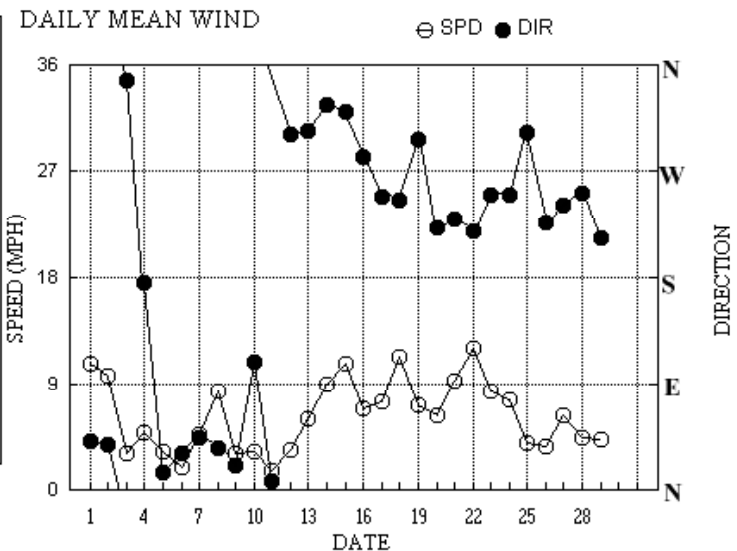
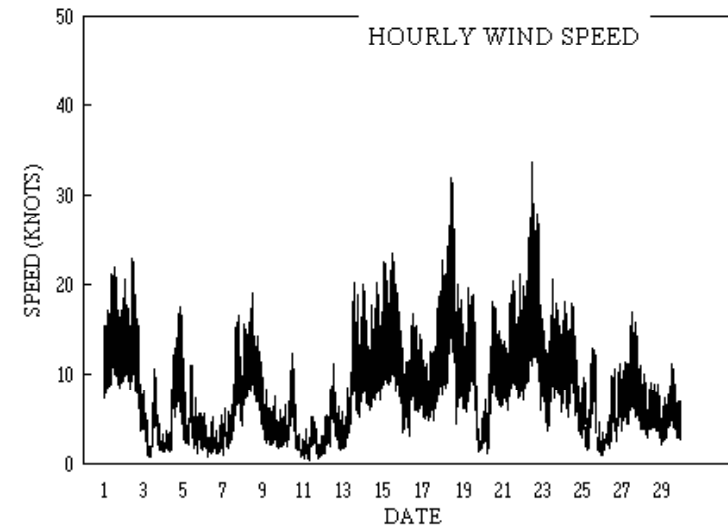
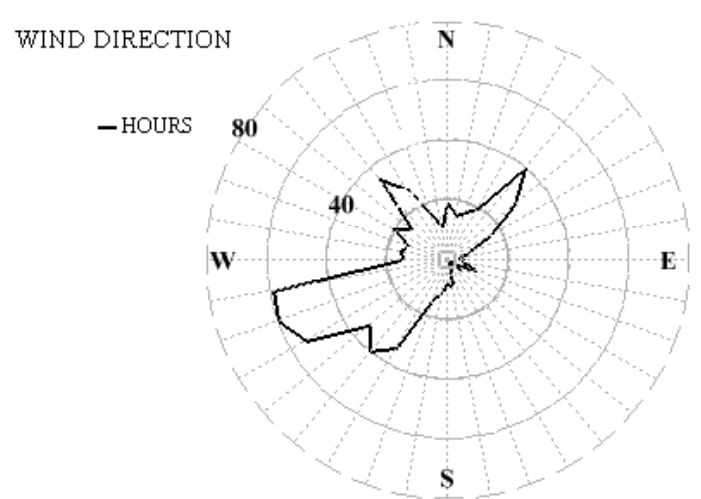
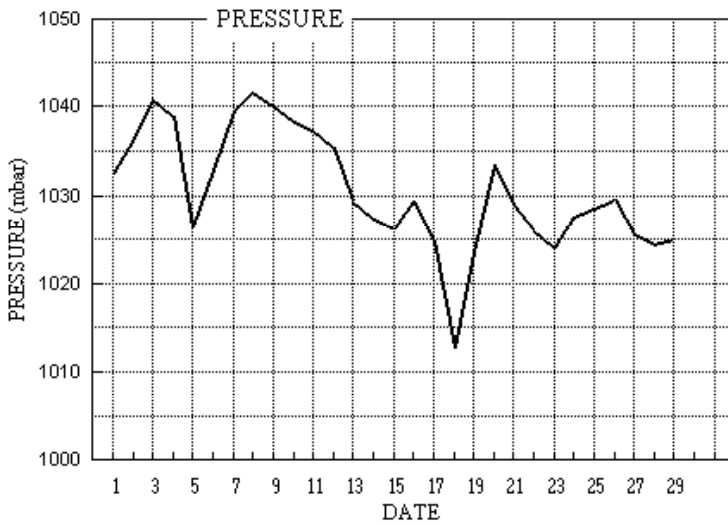
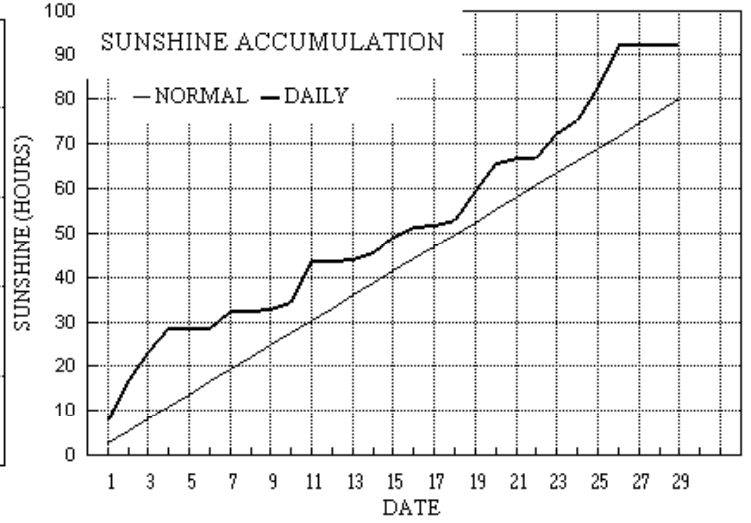
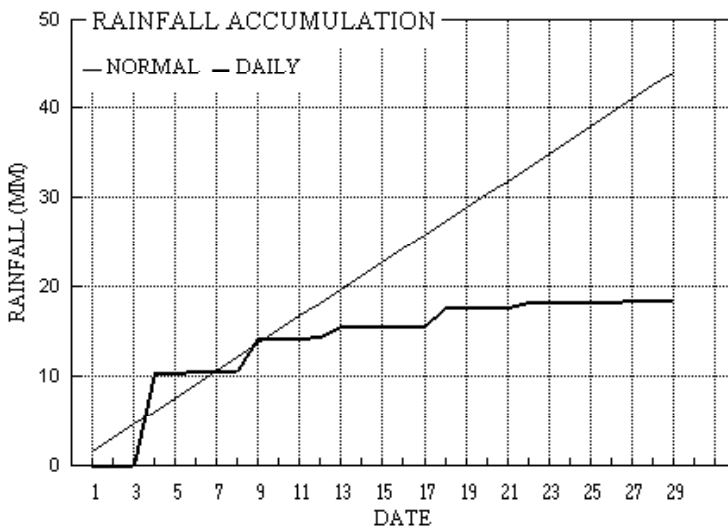
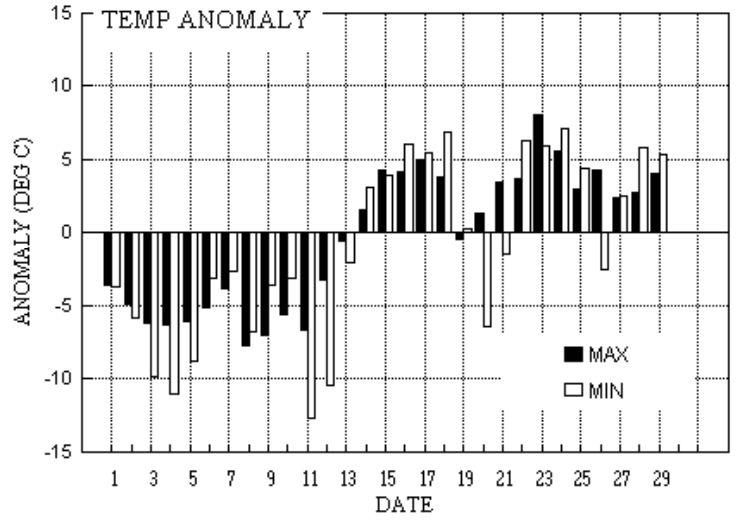
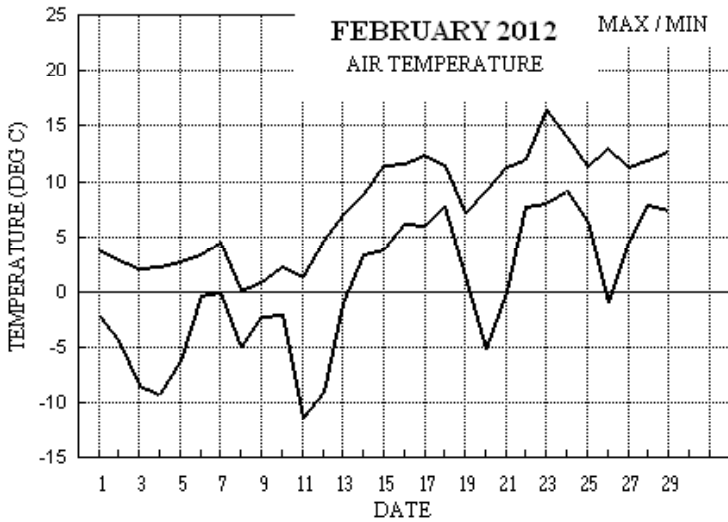
This has been a month of marked contrasts, cold and snowy followed by mild and dry. **Temperature:** No records fell this February for the month's mean temperatures, the overall mean being equal lowest with 2010 since 2006, and the mean min is lowest only since 2008. However, the absolute range (highest max to lowest min) of 27.9° is a new February record since before 1904, exceeding the previous highest in 1929 by 2.5°. The highest max is 3.5° above the median and is highest since 1998. The lowest max is 2.2° below the median and the highest min is 1.0° above its median. The lowest min is 6.3° below the median and is lowest since 1986. The lowest grass min is equal lowest with 1991 since 1986. Mean earth temperatures at both 30cm and 1m depth are below average. The number of hours with air frost is highest since 1996 and is 77.7 hours above average. **Rainfall:** The has been a dry February with the total lowest since 2005. 14.0 mm, or 76 % of the month's total, fell as snow on the 4th and 9th, the majority of the month being dry, with 7 more dry days than average and equal highest with 2008 since 1998. A 9 day dry spell ended on the 3rd and another was unbroken on the 29th after 7 days. On the days with at least 50% cover of snow the level depth at 09 GMT was; 5th/5cm, 6th/3cm, 7th/1cm, 10th/4cm, 11th/2cm, 12th/2cm. The duration of measurable precipitation is less than half the average. **Sunshine:** This has been a sunny month overall, the daily mean highest since the record breaking 2008, but with a total 57.2 hours less than in that month. After a splendid start, compared with average a surplus of 18 hours had built up by the 4th, though this had dwindled to 3 hours by the 18th, climbing again to 20 hours by the 26th. Overall there were 17 days with <3 hours, 7 with =>6 hours and 2 with =>9 hours. **Wind:** The mean speed is 1.6 mph below average, and the highest gust is 8 mph below average and equal lowest with 2009 since 1998. **Pressure:** The mean pressure is highest since 1993. **Commentary: From the 1st to the 13th:** This period was cold, with anomalies for daily max exceeding -6° on 6 days, and down to -7.7° on the 8th. For daily min, anomalies reached -12.7° on the 11th, and also exceeded -6° on 6 days. Snowfall was recorded on 6 days with significant totals on the 4th and 9th, when the depth of lying snow reached 5 cm and 4 cm respectively. Sunny until the 4th then mainly dull apart from the 11th. Light or moderate winds were mainly NE'y, but temporarily S'y on the 4th and backing NW'y on the 12th. **From the 14th to the 29th:** This period was mild in the main. Anomalies for daily max range from +8.0° on the 23rd to -0.5° on the 19th, and for daily min anomalies ranged between +7.1° on the 24th to a one-off -6.4° on the 20th. Rainfall was meagre, a total of 2.9 mm, most of which fell on the 18th, and 14 dry days. Sunshine was best on the 19th, 20th, 25th and 26th, otherwise rather poor, with the month ending with 3 sunless days. Moderate or fresh NW'y winds gradually backed SW'y by the 20th, and decreased light on the 25th.

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 29 th			
-5.6°	-5.8°	93%	127%	+1.0°	-0.6°	24%	112%	+4.1°	+3.7°	5%	109%

B J Burton FRMetS. Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for February 2012



Daily meteorological data.

Emmbrook, WOKINGHAM, Berkshire.

Month: FEBRUARY 2012

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf SI	Th Ha	Ic Fg	Vec ddd	mean ff	sp sp	Max gust ddd	gg gg	HHhh HHhh	High hr ddd	ff ff	HH HH	Rain hrs			
1	3.9	-2.2	0.0	-8.6	4.7	7.8	8.2	15.8	1032.5	1	1	0	0	0	0	41	9.2	9.3	53	22	1356	50	11	14	0.0	
2	2.9	-4.4	0.0	-11.0	4.1	7.6	8.8	18.3	1036.3	1	1	0	0	0	0	38	8.3	8.4	42	23	1038	52	11	11	0.0	
3	2.1	-8.4	0.0	-13.7	3.5	7.5	6.1	18.9	1040.8	1	1	0	0	0	0	346	1.6	2.7	32	11	1339	337	5	15	0.0	
4	2.3	-9.2	10.5	-13.9	3.1	7.2	5.5	11.2	1038.9	1	1	1	0	0	0	176	3.9	4.1	190	18	2031	169	8	19	10.3	
5	2.7	-6.3	tr	-0.6	2.8	7.0	0.0	0.0	1026.4	1	1	1	1	0	0	15	0.8	2.8	174	12	0027	175	5	00	0.0	
6	3.4	-0.4	0.2	-3.1	2.7	6.7	0.0	0.7	1032.9	1	1	0	1	0	0	30	0.7	1.7	196	6	0200	47	2	11	0.5	
7	4.5	-0.1	tr	-3.7	2.8	6.5	3.9	7.2	1039.5	1	1	1	1	0	0	44	3.5	4.1	66	17	1904	65	8	18	0.0	
8	0.2	-5.0	tr	-11.5	2.9	6.4	0.0	18.5	1041.6	1	1	1	0	0	0	35	7.1	7.3	56	19	1148	35	9	09	0.0	
9	0.9	-2.2	3.5	-2.0	2.8	6.3	0.4	17.9	1040.0	1	1	1	0	0	0	21	0.9	2.6	33	9	0037	271	4	14	7.5	
10	2.3	-2.1	0.0	-1.3	3.1	6.2	1.6	17.9	1038.4	1	1	1	1	0	0	108	2.5	2.8	146	13	1153	111	6	10	0.0	
11	1.4	-11.4	tr	-17.1	3.1	6.1	9.2	21.6	1037.4	1	1	0	1	0	0	8	1.0	1.4	360	5	1155	357	3	12	0.0	
12	4.7	-9.1	0.2	-14.8	2.6	6.0	0.0	9.6	1035.4	1	1	0	1	0	0	302	1.7	2.9	338	11	1324	341	5	13	0.2	
13	7.0	-1.1	1.2	-3.0	2.6	5.9	0.5	0.0	1029.3	1	1	0	0	0	0	304	4.5	5.2	290	21	1401	290	9	12	1.5	
14	8.9	3.4	tr	1.5	3.3	5.8	1.5	0.0	1027.4	0	0	0	0	0	0	326	7.4	7.8	322	20	1615	320	11	19	0.1	
15	11.5	3.9	0.0	3.6	3.9	5.8	3.5	0.0	1026.3	0	0	0	0	0	0	321	9.2	9.3	329	24	1249	326	13	12	0.0	
16	11.6	6.2	0.0	2.2	4.6	5.9	2.4	0.0	1029.3	0	0	0	0	0	0	282	5.7	6.0	298	17	1259	299	8	12	0.0	
17	12.5	6.0	tr	2.2	5.0	6.0	0.1	0.0	1024.8	0	0	0	0	0	0	248	6.4	6.5	266	19	2130	250	10	20	0.0	
18	11.5	7.8	2.2	6.0	5.7	6.2	1.3	0.0	1012.8	0	0	0	0	0	0	246	9.3	9.8	228	32	1000	233	14	10	1.8	
19	7.1	1.4	0.0	-2.9	5.6	6.4	6.8	4.7	1023.5	0	1	0	0	0	0	297	5.4	6.2	306	20	0845	315	10	12	0.0	
20	9.1	-5.2	0.0	-10.3	4.8	6.6	5.9	9.0	1033.5	1	1	0	0	0	0	223	5.3	5.5	218	18	1312	238	9	15	0.0	
21	11.4	-0.1	0.0	1.8	4.6	6.6	1.2	0.0	1029.0	1	0	0	0	0	0	230	8.0	8.1	213	21	2219	237	10	12	0.0	
22	12.0	7.8	0.6	6.5	5.4	6.6	0.1	0.0	1026.0	0	0	0	0	0	0	219	10.4	10.4	217	34	1126	219	14	11	1.0	
23	16.5	8.0	0.0	7.5	6.1	6.7	5.5	0.0	1024.0	0	0	0	0	0	0	250	7.1	7.2	258	21	1202	262	10	12	0.0	
24	14.0	9.1	tr	7.6	6.9	6.8	2.9	0.0	1027.5	0	0	0	0	0	0	250	6.4	6.5	264	18	0458	256	10	12	0.0	
25	11.4	6.3	0.0	5.1	7.4	7.0	7.4	0.0	1028.6	0	0	0	0	0	0	303	2.3	3.5	298	13	1233	279	7	14	0.0	
26	13.0	-0.9	tr	-5.1	7.1	7.2	9.5	1.6	1029.5	1	1	0	0	0	0	227	2.6	3.2	210	11	2157	210	6	21	0.0	
27	11.4	4.6	0.1	0.5	6.8	7.4	0.0	0.0	1025.7	0	0	0	0	0	0	241	5.3	5.5	267	17	1301	259	8	13	0.2	
28	11.9	7.9	tr	8.7	7.2	7.5	0.0	0.0	1024.5	0	0	0	0	0	0	251	3.8	3.9	270	10	0319	261	5	11	0.0	
29	12.8	7.4	tr	2.4	7.7	7.6	0.0	0.0	1025.0	0	0	0	0	0	0	213	3.6	3.7	223	11	1351	246	5	14	0.0	
Total			18.5				92.3	172.9																		23.1
Mean	7.8	0.4		-2.3	4.6	6.7	3.18	6.0	1030.6							277	2.2	5.5								
Anom	-0.4	-1.1	43%	-0.5	-0.7	-0.1	115%		+13.2																	
Daily mean		4.1																								
Anom		-0.8																								

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. SI = 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 1981-2010 climatological average.

All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for February 2012

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	NChs	hshs	NChs	Date	Remarks
1	58	0	04	09	18	-1.2	-4.0	81	2.8	1032.5	2	015	05	1	1	0	0	9	0	0				1	Hoar slt Gnd frzn
2	72	1	03	10	16	-2.1	-6.7	71	2.3	1036.3	2	010	02	0	0	1	5	6	0	0				2	Hoar slt Gnd frzn
3	65	6	29	01	02	-4.8	-6.3	89	2.3	1040.8	2	015	14	2	2	6	5	6	0	0				3	Hoar mod Gnd frzn
4	56	2	25	02	04	-6.3	-7.6	90	2.1	1038.9	8	003	05	0	0	0	0	9	0	1				4	COTRA Hoar mod Gnd frzn
5	59	8	01	05	09	1.2	0.7	97	3.9	1026.4	2	023	10	5	2	8	6	2	/	/				5	Sn ly 5cm. Thaw
6	02	9	34	01	03	1.5	1.2	98	4.1	1032.9	3	010	47	5	4	9	/	/	/	/				6	Sn ly 3cm Thaw
7	35	8	12	03	06	1.0	0.8	98	3.9	1039.5	3	023	50	5	4	8	5	2	/	/				7	Sonly 1cm 70% Thaw
8	78	8	03	10	16	-0.6	-5.3	71	2.5	1041.6	3	002	02	2	2	8	5	5	/	/				8	Sonly 10% <1cm Gnd frzn
9	60	8	04	03	07	-2.0	-4.2	85	2.7	1040.0	0	003	22	7	2	8	6	4	/	/				9	Sonly tr Gnd frzn
10	40	6	10	02	06	-0.9	-2.1	91	3.2	1038.4	1	009	05	2	2	3	5	4	3	0				10	Sonly 4cm 100%
11	45	0	33	02	03	-8.3	-9.2	93	1.8	1037.4	2	005	05	0	0	0	0	9	0	0				11	Sonly 2cm 90% Hoar thk Gnd frzn
12	30	8	21	02	04	-1.1	-2.4	91	3.1	1035.4	3	002	60	6	5	8	5	4	/	/				12	Sonly 2cm 90% Gnd frzn
13	25	7	25	04	07	3.4	2.8	96	4.6	1029.3	8	019	10	1	1	1	5	6	0	8				13	COTRA Parhelion Sonly tr Gnd part frzn
14	80	8	33	08	13	3.9	-0.0	75	3.7	1027.4	3	009	02	2	2	1	5	6	7	7				14	1Ac65 COTRA
15	75	7	31	09	18	7.4	2.6	72	4.5	1026.3	2	017	01	5	2	6	5	6	0	0				15	
16	80	7	29	03	09	7.7	1.6	65	4.2	1029.3	2	010	02	2	2	7	5	6	/	/				16	
17	58	7	23	05	09	8.8	7.1	89	6.2	1024.8	4	000	05	2	2	7	5	4	/	/				17	
18	86	7	23	12	28	8.4	4.6	77	5.2	1012.8	7	015	02	6	2	7	5	5	3	2				18	2Ac69 COTRA
19	84	3	31	09	20	3.2	-2.1	68	3.2	1023.5	2	035	14	0	0	3	5	6	0	0				19	jp W
20	67	7	19	03	07	-0.1	-1.4	91	3.4	1033.5	4	000	01	1	1	4	5	7	0	1				20	COTRA Hoar mod Gnd frzn
21	81	7	22	09	16	7.9	4.7	80	5.2	1029.0	1	005	03	2	2	7	8	6	/	/				21	
22	65	7	22	11	25	8.3	4.9	79	5.3	1026.0	7	008	02	2	2	7	5	4	/	2				22	/Ci70
23	59	8	24	05	10	11.8	9.9	88	7.5	1024.0	2	020	05	2	2	8	6	3	/	/				23	
24	68	8	23	05	15	10.1	8.0	87	6.6	1027.5	1	009	02	2	2	7	6	3	7	/				24	/Ac65
25	70	6	21	02	04	7.4	4.8	84	5.3	1028.6	0	004	01	5	2	6	5	4	0	0				25	
26	63	5	20	02	04	4.6	3.3	91	4.7	1029.5	1	011	02	1	1	1	5	6	0	1				26	COTRA
27	58	8	24	05	11	8.0	6.6	91	5.9	1025.7	5	004	05	2	2	8	6	3	/	/				27	
28	58	8	26	03	06	10.4	8.6	89	6.9	1024.5	2	011	05	2	2	8	6	3	/	/				28	
29	35	8	21	05	08	9.5	8.4	93	6.7	1025.0	0	003	05	2	2	8	6	3	/	/				29	

Mean vis = 16.0 km
 Mean cloud = 6.2 78%
 Mean wind speed = 5.2 kn
 Mean gust = 10 kn
 Mean TT = 3.3 °C
 Mean TdTd = 1.0 °C
 Mean RH = 85.2%
 Mean r = 4.3 g/kg
 Mean PPP = 1030.6 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 February 2012

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	70	0	05	12	21	3.2	-7.7	45	2.1	1032.9	6	004	02	0	0	0	0	0	9	0	0						1		
2	82	1	06	09	19	1.6	-11.2	38	1.5	1035.5	5	005	02	0	0	1	5	6	0	1		81645					2	1Ci80 COTRA	
3	72	3	36	05	10	1.3	-6.8	55	2.2	1039.8	5	005	03	0	0	3	5	6	0	1		83635					3	1Ci78 COTRA Hoar slt in shade	
4	63	8	17	05	14	2.0	-3.0	69	3.0	1035.0	8	028	03	2	2	7	5	5	2	/		84620	87645	88465			4		
5	60	8	29	04	08	2.1	0.6	90	3.9	1029.7	2	006	05	2	2	8	6	3	/	/		84707	88709				5	Sn ly 3cm Thaw	
6	22	8	32	01	03	3.3	2.6	96	4.5	1033.0	7	003	21	6	2	8	5	2	/	/		83705	86710	88615			6	Snly 2cm 90% Thaw	
7	60	1	05	06	12	3.6	-2.0	67	3.2	1040.5	7	003	05	1	1	1	5	5	0	0		81625					7	Snly 20% 1cm Thaw	
8	65	8	03	07	14	0.1	-3.6	76	2.8	1040.6	7	007	02	7	2	8	5	4	/	/		85615	88620				8	Snly <1cm 10% Thaw	
9	59	7	27	04	07	0.3	-3.8	74	2.8	1038.4	6	012	14	2	2	1	5	4	3	1		81618	85358	87070			9	COTRA Snly tr Rainbow Ac str vir	
10	62	7	10	03	11	0.3	-4.7	69	2.6	1037.8	7	008	02	2	2	7	5	5	/	/		87622					10	Snly 3cm 90% Thaw.	
11	58	0	04	03	04	0.4	-4.9	67	2.6	1036.4	7	010	05	0	0	0	0	9	0	0							11	Snly 2cm 90% Hoar slt in shade	
12	56	8	31	03	07	4.3	1.9	84	4.3	1034.0	6	008	05	6	2	8	5	3	/	/		82708	87710	88620			12	Snly 1cm 50% Thaw	
13	80	8	30	07	20	6.5	2.9	78	4.6	1024.7	6	025	60	6	2	8	5	5	/	/		83620	88625				13		
14	68	8	31	08	17	8.5	2.4	65	4.5	1025.0	7	020	02	2	2	7	0	9	7	7		81362	85365	86368			14	8Cs75	
15	84	7	33	08	19	10.5	2.7	58	4.5	1026.5	7	003	02	2	2	7	8	6	/	/		82835	87645				15		
16	80	7	31	06	15	10.5	2.2	56	4.3	1026.9	7	018	02	2	2	3	8	6	0	8		81835	83645	87272			16	Cu hum Halo 22° part	
17	75	7	23	05	09	12.1	7.7	74	6.5	1022.4	7	018	02	2	2	7	5	5	/	/		82620	85625	86656			17	Absent vv&cld est	
18	61	8	22	10	25	8.7	6.4	85	6.0	1007.9	7	028	61	6	2	7	5	5	2	/		83620	86630	88550			18		
19	83	2	32	08	19	6.3	-5.6	42	2.5	1027.3	2	014	01	1	1	2	4	6	0	0		82845					19	1Sc50 Cu hum	
20	84	7	24	09	18	8.0	-3.0	46	3.0	1031.2	6	018	02	2	2	4	5	7	4	1		84650	85363	87072			20	COTRA Parhelion CZ arc	
21	83	7	24	10	21	10.9	4.5	64	5.2	1028.2	6	009	02	2	2	7	8	6	/	/		83830	87645				21	Cu hum	
22	60	8	22	12	29	8.6	6.0	83	5.7	1021.6	8	026	60	6	2	8	5	4	/	/		82712	87615	88620			22		
23	70	1	26	08	14	15.8	10.0	69	7.5	1024.3	7	006	01	1	1	1	5	5	4	1		81625					23	1Ac67 1Ci75	
24	82	6	25	08	18	13.3	8.3	72	6.7	1027.6	5	002	03	1	1	2	5	5	3	1		82620	85363				24	2Ci80 COTRA	
25	80	1	27	07	13	10.8	2.0	55	4.4	1026.6	7	014	02	0	0	1	5	6	0	1		81635					25	1Ci80	
26	75	5	26	04	10	11.3	3.9	60	4.9	1028.3	7	011	02	1	1	2	1	6	0	1		82830	84080				26	COTRA Cu hum	
27	82	8	25	06	14	10.9	7.2	78	6.2	1023.8	7	014	02	2	2	8	5	4	/	/		87618	88625				27		
28	58	8	26	04	08	11.2	8.8	85	6.9	1024.1	7	011	05	2	2	8	6	4	/	/		83712	88715				28		
29	61	8	25	04	11	12.7	7.8	72	6.4	1024.0	7	010	02	2	2	1	1	5	7	/		81820	88357				29		

Mean vis = 22.6 km
 Mean cloud = 5.7 71%
 Mean wind speed = 6.4 kn
 Mean gust = 14 kn
 Mean TT = 6.9 °C
 Mean TdTd = 1.1 °C
 Mean RH = 68.0 %
 Mean r = 4.3 g/kg
 Mean PPP = 1029.4 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.

Wokingham	Hour	01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb	07-Feb	08-Feb	09-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb	16-Feb
Sunshine	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hourly analysis	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00
	8	0.56	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.49	0.00	0.02	0.00
	9	1.00	1.00	0.64	1.00	0.00	0.00	0.00	0.00	0.00	0.99	1.00	0.00	0.00	0.00	0.85	0.00
	10	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.18	1.00	0.00	0.00	0.75	1.00	0.25
	11	0.96	1.00	1.00	1.00	0.00	0.00	0.10	0.00	0.00	0.38	1.00	0.00	0.00	0.28	0.64	1.00
	12	0.97	1.00	1.00	1.00	0.00	0.00	0.55	0.00	0.13	0.00	1.00	0.00	0.00	0.00	0.71	0.73
	13	1.00	1.00	1.00	0.52	0.00	0.00	0.66	0.00	0.31	0.00	1.00	0.00	0.00	0.35	0.23	0.45
	14	1.00	1.00	0.97	0.00	0.00	0.00	0.80	0.00	0.00	0.00	1.00	0.00	0.00	0.14	0.00	0.00
	15	1.00	1.00	0.46	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.01	0.01	0.00
	16	0.72	0.75	0.01	0.00	0.00	0.00	0.75	0.00	0.00	0.08	1.00	0.00	0.00	0.00	0.00	0.00
	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot		8.20	8.77	6.07	5.54	0.00	0.00	3.86	0.00	0.44	1.64	9.17	0.00	0.49	1.53	3.46	2.43

Hour	17-Feb	18-Feb	19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	28-Feb	29-Feb	Mean
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.56	0.62	0.00	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.07
8	0.00	0.01	0.41	0.54	0.71	0.00	0.00	0.00	0.05	1.00	0.00	0.00	0.00	0.23
9	0.00	0.04	0.84	0.79	0.23	0.00	0.00	0.00	0.79	1.00	0.00	0.00	0.00	0.35
10	0.03	0.66	1.00	0.31	0.05	0.02	0.00	0.00	0.25	1.00	0.00	0.00	0.00	0.36
11	0.00	0.27	0.95	0.88	0.00	0.00	0.23	0.08	0.89	1.00	0.00	0.00	0.00	0.40
12	0.00	0.00	0.66	1.00	0.01	0.00	1.00	0.95	0.96	1.00	0.00	0.00	0.00	0.44
13	0.00	0.00	0.58	1.00	0.17	0.00	1.00	0.82	1.00	0.98	0.00	0.00	0.00	0.42
14	0.00	0.00	0.83	0.64	0.00	0.00	1.00	0.99	1.00	1.00	0.00	0.00	0.00	0.36
15	0.05	0.00	0.90	0.09	0.00	0.00	1.00	0.04	1.00	0.82	0.00	0.00	0.00	0.29
16	0.00	0.14	0.04	0.00	0.00	0.00	0.98	0.00	1.00	0.81	0.00	0.00	0.00	0.22
17	0.00	0.24	0.05	0.00	0.00	0.00	0.26	0.00	0.43	0.28	0.00	0.00	0.00	0.04
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	0.07	1.35	6.84	5.85	1.18	0.02	5.47	2.90	7.36	9.51	0.00	0.00	0.00	92.15

February 2012	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	-0.01	3.7	1358	-2.7	2317	68.2	83.2	250	40.9	1520	-5.36	2.53	3.0	201	1.8	1520	1032.75	1035.7	2305	1029.4	0	0.0
2	-1.79	2.4	1318	-5.1	2306	61.4	77.7	753	35.8	1404	-8.53	1.96	2.3	934	1.5	1455	1036.18	1038.3	2348	1035.0	424	0.0
3	-3.42	1.6	1252	-8.0	653	75.8	91.8	745	50.1	1338	-7.31	2.14	2.6	1015	1.8	638	1039.75	1041.0	1045	1038.1	41	0.0
4	-2.80	2.2	1323	-9.0	654	86.5	96.1	2330	66.9	1324	-4.84	2.68	3.8	2353	1.7	719	1035.26	1040.3	249	1022.9	2359	6.1
5	1.16	2.4	1320	0.0	223	95.0	97.9	739	89.7	1413	0.44	3.86	4.1	1320	3.6	223	1027.58	1031.7	2036	1021.9	143	1.4
6	1.43	3.5	1511	-0.4	235	97.4	98.3	914	95.2	1352	1.06	4.02	4.6	1513	3.5	235	1033.24	1036.4	2338	1031.3	0	0.0
7	0.18	4.4	1409	-4.8	2213	84.9	98.8	711	61.4	1520	-2.19	3.25	4.1	25	1.9	1955	1040.10	1043.7	2143	1036.3	0	0.0
8	-0.78	0.3	1351	-3.4	0	75.2	83.0	2353	69.4	913	-4.62	2.63	2.9	2353	2.1	1	1041.28	1043.4	10	1040.0	1608	0.0
9	-0.74	0.8	1517	-2.3	732	81.6	95.2	2359	70.8	1524	-3.52	2.86	3.4	2351	2.6	732	1039.33	1041.1	59	1038.0	1718	1.9
10	-1.64	1.8	1132	-8.4	2359	87.1	95.7	526	67.0	1508	-3.59	2.88	3.5	57	1.8	2359	1037.92	1038.9	1059	1037.2	1727	0.2
11	-6.08	0.7	1451	-11.3	724	86.7	94.5	2303	62.6	1604	-8.04	2.06	2.9	1152	1.4	724	1036.95	1037.8	1114	1036.1	1601	0.0
12	-0.10	4.7	1342	-9.1	140	90.1	95.5	2245	82.6	1327	-1.54	3.45	4.4	2154	1.7	140	1034.89	1037.4	41	1033.8	1716	0.0
13	4.49	7.0	1441	-0.0	207	88.7	97.5	217	71.3	1251	2.73	4.55	5.1	1654	3.6	207	1027.82	1034.2	2	1022.8	1623	1.1
14	6.20	8.9	1513	3.4	738	73.9	82.6	1	62.0	1608	1.85	4.29	4.9	2351	3.7	840	1025.44	1027.5	851	1023.5	2306	0.0
15	8.44	11.7	1318	6.4	104	70.1	83.9	138	55.4	1345	3.22	4.71	5.1	242	4.3	2359	1026.43	1029.3	2221	1023.7	121	0.1
16	8.25	11.7	1340	6.2	201	66.3	84.3	2359	51.6	1606	2.23	4.39	5.2	2359	3.9	1610	1027.85	1029.4	919	1026.1	2359	0.0
17	9.31	12.6	1510	6.1	200	82.4	92.3	421	71.8	1300	6.43	5.93	6.6	1036	5.1	1	1023.28	1026.3	23	1019.2	2356	0.0
18	7.37	11.4	1117	2.7	2353	74.9	89.0	1750	59.8	1211	3.17	4.82	6.1	1547	3.3	2359	1012.85	1019.4	0	1007.1	1533	2.1
19	2.71	7.3	1302	-2.9	2321	67.3	90.1	2354	38.9	1446	-3.05	3.01	3.7	1109	2.3	1446	1025.21	1033.2	2359	1016.2	0	0.0
20	2.39	8.8	1314	-5.0	648	74.0	95.2	757	42.0	1317	-2.29	3.19	4.5	2350	2.4	648	1032.07	1033.8	759	1030.1	2358	0.1
21	8.07	11.4	1314	4.9	7	76.9	86.7	800	61.9	1414	4.20	5.05	5.5	1836	4.4	301	1028.97	1030.1	0	1028.0	1532	0.0
22	8.84	11.2	2358	7.7	649	83.5	92.5	2144	68.9	1057	6.17	5.84	7.6	2358	5.1	1019	1023.71	1029.4	14	1019.0	2159	0.6
23	12.27	16.3	1439	9.5	2246	83.8	92.1	2	67.3	1528	9.56	7.32	8.2	1318	6.3	2245	1023.73	1026.9	2334	1019.7	18	0.0
24	10.62	14.0	1310	9.0	2034	83.8	91.0	2358	68.5	1310	7.96	6.53	7.1	1242	6.2	2002	1027.76	1029.4	2147	1026.3	347	0.0
25	7.46	11.3	1420	1.3	2348	76.2	94.1	2353	53.0	1502	3.32	4.77	6.8	1	3.8	2346	1027.85	1029.6	123	1025.8	1712	0.0
26	5.79	12.7	1426	-0.8	655	80.4	97.2	734	55.5	1430	2.42	4.48	5.5	1319	3.4	655	1028.47	1029.7	1129	1027.6	1651	0.0
27	8.72	11.4	1643	5.3	141	84.5	93.1	905	74.6	1712	6.23	5.84	6.5	2336	4.5	34	1024.99	1028.0	24	1023.1	1702	0.1
28	10.12	11.9	1418	8.0	2359	88.2	92.3	2113	82.3	1422	8.27	6.70	7.2	1330	6.0	2359	1024.28	1025.3	2146	1023.0	311	0.0
29	9.86	12.8	1426	7.1	26	85.6	94.4	43	70.8	1427	7.50	6.36	7.0	1030	5.7	2250	1024.63	1025.3	1134	1023.6	1614	0.0

Total	Mean	Max	Min																			
	4.01	7.62	0.16		80.4	91.59		63.71		0.75	4.21	4.97		3.43		1030.02	1032.84		1027.05			13.7
	12.27	16.28	9.53		97.4	98.80		95.20		9.56	7.32	8.19		6.35		1041.28	1043.68		1040.03			
	-6.08	0.33	-11.25		61.4	77.70		35.79		-8.53	1.96	2.33		1.43		1012.85	1019.38		1007.10			

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

WOKINGHAM METEOROLOGICAL DATA

Wokingham Climatological Station, Emmbrook, Berkshire.

Lat 51°25'N 00°51'W NGR (SU)798701 Altitude 46m ASL

Seasonal Means and Totals

WINTER 2011/2012

Temperature (°C)

Rank in the past 130 years

Mean maximum	9.1	(+1.0)	14 th highest
Mean minimum	2.0	(+0.2)	43 rd highest
Daily mean	5.6	(+0.6)	24 th highest
Rainfall total (mm)	130.5	(78 %)	40 th lowest
Sunshine total (hours)	263.0	(133 %)	
N° of:			
Dry days	54 (+9)	Wet days	24 (-7)
Days with: Air frost	32 (+1)	Ground frost	49 (-2)
		Snow falling	9 (-1)
		Snow lying	6 (0)
Thunder	0 (-1)	Hail ≥5mm	0 (-1)
		Small hail/ice	1 (-2)
		Fog @09 GMT	2 (-4)
		Nil sun	20 (-9)
Air pressure MSL : Mean @09 GMT (mbar)	1021.3		(+4.7)

Departure from 1981 to 2010 average shown in brackets.

Notes: **Mild and Very Sunny with Rainfall Well Below Normal.**

This winter there were mild spells from the 20th December to the 27th January and from the 14th February onwards. There were near normal temperatures from the 1st to the 19th December, and by day from the 13th to 17th January, but with cold nights. The period 28th January to the 13th February saw the coldest weather of the season, together with the only significant snowfall. **Temperature:** The mean this winter is highest since 2008. February was the coldest month, mean 4.1°, and December the mildest, mean 6.5°. In an early burst of springlike warmth, the temperature reached 16.5° on the 23rd February, 2.6° above the median and the highest for the season since 1998, and 7th highest in 108 years. The lowest maximum was 0.2° on the 8th February, 0.5° above the median. The highest min was 11.2° on the 1st January, 1.3° above the median, whilst the lowest min was -11.4° on the 11th February, 3.9° below the median. The mean grass min was -1.3°, and the lowest grass min was -17.1° on the 11th February, about 4° below normal. The mean earth temperature at 30 cm depth was 6.2°, 0.4° above average, and at 1 m depth the mean was 8.6°. The number of days with air frost is close to average, and the duration of air frost is 12.7 hours or 4 % above average. February was the frostiest month and December the least frosty. **Rainfall:** This has been the driest winter since 2006, with the total 22 % below average. December was the wettest month with 74.8 mm, 119 % of average, and February the driest with 18.5 mm, 43 % of average while January was also dry with 60 % of average. The 12th December was the wettest day with 27.2 mm, the highest daily fall in winter since 1996 and 9th highest in 108 years. The total duration of measurable precipitation was 47.9 hours below average. There were 9 more dry days than average, and 5 fewer days with 5 mm or more. A 5 day dry spell ended on the 28th December, one of 6 days on the 16th January, one of 9 days on the 3rd February and an unbroken 7 days at the end of the season. Concerning the 'drought' of the past two winter seasons, taking winter as October to March inclusive, the combined 2 season average is 675 mm. At the end of February 2012 the total stands at 473 mm, giving a 2 winter rainfall of 496 mm assuming March has 50% of average. Several past winter pairs have had similar values, for example 1992/1993 had 505 mm, 1991/1992 had 478 mm, 1934/1935 had 488 mm and 1931/1932 had 473mm, so the present situation is not exceptional. Snow fell on 1 day in December, 2 in January and 6 in February, but only the February falls were enough to give a covering. This amounted to 5 cm on the 5th and 4 cm on the 10th, with 6 mornings having >50% cover at 0900 GMT. Small hail fell on the 18th December, but this was the sole example, and there was no thunder this season. Rainfall rates reached 106 mm/hr on the 13th December, and 241 mm/hr on the 3rd January. **Sunshine:** This has been a very sunny winter, the daily mean sun ranking 2nd highest after 2008. Each month had above average sunshine, with January having the greatest surplus at 149 % of average, December not far behind with 140 %, and February following on with 115 %. The sunniest day was the 26th February with 9.5 hours. The period 13th to 16th January was particularly good averaging 7.7 hours per day, in contrast to the 10 day period ending on the 1st January which had a total of 3.1 hours, 2.5 of which were on one day. The number of days with nil sun, 20, is fewest since before 1980. Overall there were 54 days with <3 hours, 17 with =>6 hours and 2 with =>9 hours. **Wind:** The mean speed of 7.6 mph is close to average. The windiest month was December, mean 8.9 mph, and the least windy February, mean 6.3 mph. The windiest day was the 5th January, mean 15.3 mph, but the highest gust of 54 mph was on the 3rd January. The 11th February was the least windy day, mean 1.6 mph, and there were 1532 min (25.5 hr) with a mean speed of 0.5 mph or less. Daily mean direction/number of days: N,5 NE,8 E,4 SE,0 S,3 SW,42 W,21 NW,8. Compared with average, SW & W winds were 24 % more frequent, at the expense of S, 13 % down, N & NE, 7 % down and E & SE, 5 % down. **Pressure:** The mean pressure is highest since 1993, though 2005's was only 0.1 mbar lower than this season's. **Humidity:** The overall mean relative humidity was 81.3 % and the lowest was 36 % on the 2nd February. The mean water vapour content per kg of air was 4.7 g at both 0900 and 1500 GMT.

December: Mild, wet, very sunny, quite windy. Mean max highest since 1994 and 9th highest in 130 years. Lowest max 6th highest in 99 years, and highest since 1974. Rainfall on 12th is highest for December since 1995 and 6th highest in 108 years. Windiest since 1999.

January: Mild, dry, very sunny, windy at first. Mean max 9th highest in 131 years. Mean diurnal temperature range equal highest with 2009 since 1934. Highest min 3rd highest in 100 years. One of the 10 sunniest in 105 years.

February: Dry and sunny with mean temperature below normal and a snowy spell. Absolute temperature range, 27.9°, highest for February since before 1904. Highest max highest since 1998, lowest min lowest since 1986. Duration of frost most since 1996. 76 % of the month's precipitation fell as snow in 2 events giving 5cm and 4cm cover. Mean pressure highest since 1993.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom	Sun hrs	Anom	Wind Mn mph	Max gust	Mean pressure	Anom
December	9.8°	+1.8	3.3°	+1.2	74.8	119%	77.4	140%	8.9	46	1012.7	-3.0
January	9.7°	+1.9	2.3°	+0.5	37.2	60%	93.3	149%	7.6	54	1021.2	+4.5
February	7.8°	-0.4	0.4°	-1.1	18.5	43%	92.3	115%	6.3	39	1030.6	+13.2

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Appendix 1.

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

Average: Generally refers to the 30 year climatological average, currently 1981 to 2010. 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 instrument used to detect sunshine amount in July 1999, and the data produced by the new instrument is not strictly comparable with that obtained prior to July 1999, 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 of instrument, due to a combination of faster reaction and higher sensitivity than the old type. Thus the average used in this case is for a theoretical equivalent average for the 1981 to 2010 climatological period for this new instrument, based on comparisons with Met Office published tables of departure from the 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 the 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 "half (max+min)". A true daily 24 hour (00 to 24 GMT) mean temperature is available from the AWS, and is currently published on page 7 of the Wokingham Monthly Weather Report on the Wokingham Weather Web Site, page1. <http://www.woksat.info/wwp1.html>

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

- a): The departure of a mean from the current climatological average.
- b): The departure of a value from the a long-term average for a particular day.

When the word anomaly is used in respect to temperature, any values given are in degrees C. In respect to rainfall, percent. In respect of sunshine, percent. In respect to wind, mph. In respect to 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 mild/cold are used in the winter half year, and warm/cool in the summer half.

The term normal is defined as being 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 for sunshine follow the same rules as for temperature.

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

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

The term wet is used for values lying between 10% and 30% below the highest value in the ranked series.

the term very wet is used for values lying within 10% of the highest value in the ranked series.

The term dry is used for values lying between 10% and 30% of the lowest value in the ranked series.

The term very dry is used for values lying 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 the records of various station in the Wokingham area in the years prior to the establishment of a weather station at Emmbrook in 1976.

In the case of monthly max, min and mean temperature and of rainfall total the 'long-term' goes from the present back to 1882. For extremes of temperature, highest max and lowest min are back to 1904, and for 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 values of the entire series. The central value in the ranked series is known as the median. This value may be different from the 'average' if the population of values is skewed. Also, as the median considers all values in the series, and the average refers to a 30 year climatological period, during periods of climatic change, the median will also be expected to differ from the average.

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

The year number given when discussing 'winter' is usually the year in which the majority of the period lies, i.e. January/February

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

The climatological day : runs from 09 to 09 GMT. The max temperature and rainfall read at 0900 are attributed to the previous day, as is the duration of measurable rain calculated up to 0900 GMT. The min temperature and grass min read at 0900 are attributed to the day of reading. Pressure is read at 0900 GMT, and the monthly mean pressure is the mean of the 0900 readings. Sunshine data, wind data, rainfall rates and 24 hour data from the AWS use the normal 00 to 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 % cover of snow at the 0900 GMT observation.

Hail : A day of hail is recorded if hailstones of 5 mm diameter or more are observed or recorded on the hail pad on 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. Note, various types of other ice meteors such as ice pellets, snow grains, and some types of snow pellets are included in this category.

Fog: A day of 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.

Rainfall : Rainfall is given in mm and tenths. "tr" (trace) is entered when: a) precipitation has occurred but there is no water in the gauge. b) There is water in the gauge but it is less than 0.05 mm.

Dry Spell : A dry spell, for the purposes of the Wokingham climatological data and reports, is defined as a period of 5 or more consecutive dry days. A dry day is defined as one where the 24 hour precipitation measured at 09 GMT is not greater than 0.1 mm.

Wind: The following abbreviations may be used to denote wind directions :

Degrees are from true north

N = North = 360° and 22.5° either side.

NE = NorthEast = 045° and 22.5° either side.

E = East = 090° and 22.5° either side.

SE = SouthEast = 135° and 22.5° either side.

S = South = 180° and 22.5° either side.

SW = SouthWest = 225° and 22.5° either side.

W = West = 270° and 22.5° either side.

NW = NorthWest = 315° and 22.5° either side.

Wind – terms for speed used in monthly reports: When the following terms are used in the monthly reports, they will be based on the following unofficial criteria, (the day runs from 00 to 24 GMT) :

Term	Daily mean speed, knots		Highest hourly mean speed, knots		24 hour maximum gust, knots
Very light	3 or less	and	4 or less	and	8 or less
Light	3 to 6	or	4 to 8	or	8 to 16
Moderate	6 to 9	or	8 to 12	or	16 to 24
Fresh	9 to 12	or	12 to 16	or	24 to 32
Strong	12 to 15	or	16 to 20	or	32 to 40
Very strong	15 to 18	or	20 to 24	or	40 to 48
Near gale	18 to 21	or	24 to 28	or	48 to 56
Gale	21 to 24	or	28 to 32	or	56 to 64
Severe gale	24 to 27	or	32 to 36	or	64 to 72

B.J.Burton. 3 August 2009
 Updated 8 Sept 2009,
 4 Nov 2011

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.