

# 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

JANUARY 2014

Temperature (°C / °F)			Anomaly	Rank in the past 133 years				
Mean maximum	9.6	49.3	+1.8	10th highest				
Mean minimum	2.6	36.7	+0.8	24th highest				
Daily mean	6.1	43.0	+1.3	15th highest				
Highest maximum	12.5	54.5	on 5 <sup>th</sup>	Lowest maximum	4.9	40.8	on 29 <sup>th</sup>	
Highest minimum	8.9	48.0	on 7 <sup>th</sup>	Lowest minimum	-4.7	23.5	on 12 <sup>th</sup>	
Mean grass minimum	0.1	32.2	+1.2	Lowest grass minimum	-9.6	14.7	on 12 <sup>th</sup>	
Mean earth @30 cm	6.3	43.3	+0.9	Earth @100 cm	7.9	46.2		
Frost duration (hrs)	27.1			Rain duration (hrs)	117.3			
Rainfall total (mm / in)	153.9	6.06	248 %	*New highest*				
Highest daily fall	20.2	0.80	on 1 <sup>st</sup>					
Number of: Dry days (<0.2mm)	6	Wet days (>0.9mm)	24	days ≥5mm	11			
Sunshine total (hrs) 89.3	Daily mean	2.88	143 %	Sunniest day	7.8	on 19 <sup>th</sup>		
N <sup>o</sup> days with: Air frost 8	Ground frost	11	Snow falling	0	Snow lying	0		
Thunder 1	Hail ≥5mm	0	Small hail/ice	4	Fog @09	1	Nil sun 7	
Pressure MSL : Mean @09 GMT, mbar	1002.1	-14.6	Highest	1025.2	on 11 <sup>th</sup>	Lowest	982.2 on 28 <sup>th</sup>	
Relative humidity : Mean (%)	86.7	Lowest	57 on 23 <sup>rd</sup>	Water vapour (g/kg), mean at 09 and 15 GMT 5.0, 5.3				
Overall mean wind speed (mph)	8.2	Windiest day	15.6 on 6 <sup>th</sup>	Max gust	51	on 25 <sup>th</sup>		
Wind direction (days)	N 1	NE 1	E 1	SE 2	S 10	SW 13	W 3	NW 0
Least windy day (mph)	1.5 on 20 <sup>th</sup>	Calm; less than 0.5 mph (minutes)				411		

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

Notes:

### Extremely Wet, but also Mild and Sunny

**Rainfall:** This has been an extraordinary January in respect of rainfall, with the highest number of rain days for over a century, and a rainfall total for the month of 153.9 mm, the highest for any January since before 1882, 15.7 mm more than the previous highest set in 1995. The current wet spell started in mid December, and the total accumulation since then is 258.7 mm, which is 40 % of the annual average, and is 154 % of the winter season's average (3 months December, January and February). There were 6 dry days this month, equal lowest with 1995 since 1988, this latter date together with 1970 holding the record for lowest number, 5, in the past century. There has been no snow this month, the first January since 2002 with none, and only the 5<sup>th</sup> such in the past 39 years. Rainfall duration is twice the average of 58.7 hours, and is highest since before 1994. Thunder occurred on the 3<sup>rd</sup>, and small hail on the 1<sup>st</sup>, 16<sup>th</sup>, 25<sup>th</sup> and 26<sup>th</sup>.

**Temperature:** Although 1.3° above average, the mean temperature is highest only since 2008. Overall it was generally mild until the 18<sup>th</sup>, then near normal with occasional mild days. Notably, there were only 4 days with a max below normal, these being the 20<sup>th</sup> and 21<sup>st</sup> and the 29<sup>th</sup> and 30<sup>th</sup>. Anomalies for daily max ranged from -2.0° on the 29<sup>th</sup> and 30<sup>th</sup>, and +4° from the 5<sup>th</sup> to the 8<sup>th</sup>, and on the 25<sup>th</sup>. Anomalies for daily min showed greater variation, ranging from -6° on the 12<sup>th</sup> to +7° on the 7<sup>th</sup>, and there were 10 days with negative anomalies, on the 5<sup>th</sup>, from the 10<sup>th</sup> to the 15<sup>th</sup>, and the 20<sup>th</sup> to 22<sup>nd</sup>. The highest max is 0.1° above the median, and the lowest max is 4.1° above its median. The highest min is 0.6° above the median and the lowest min is 1.2° above its median. Earth temperatures are above average, and the lowest reading at 30 cm depth is highest since 1990. The duration of air frost is 70.8 hours below average and lowest since 2008.

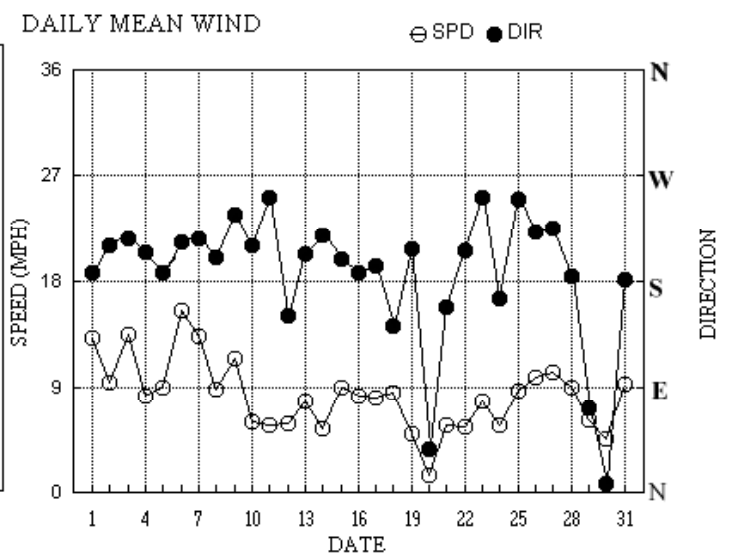
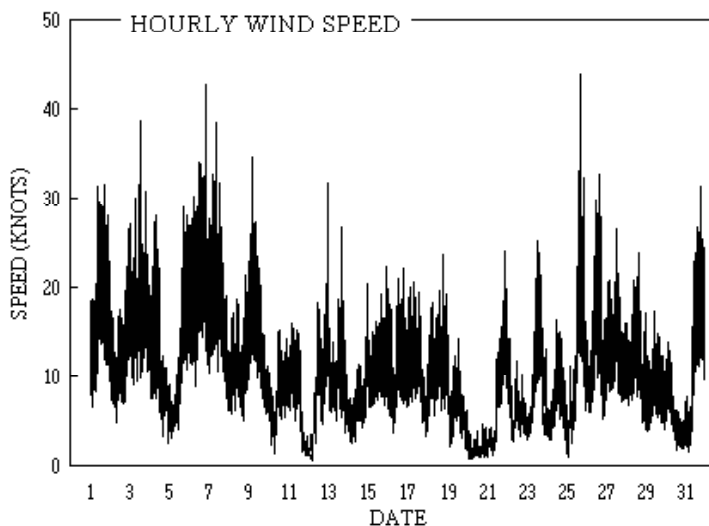
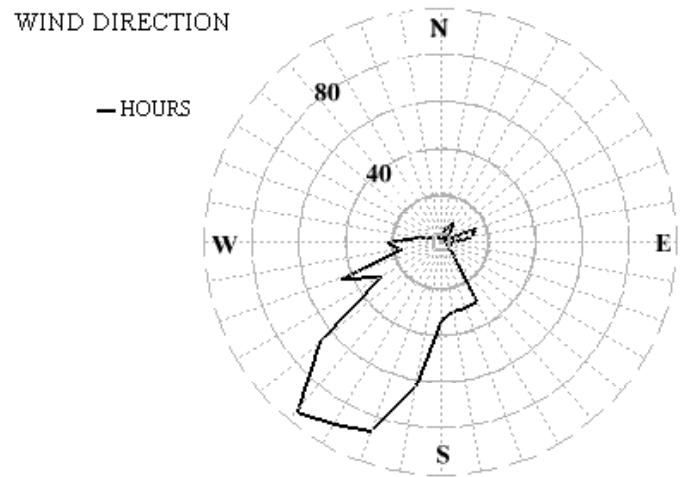
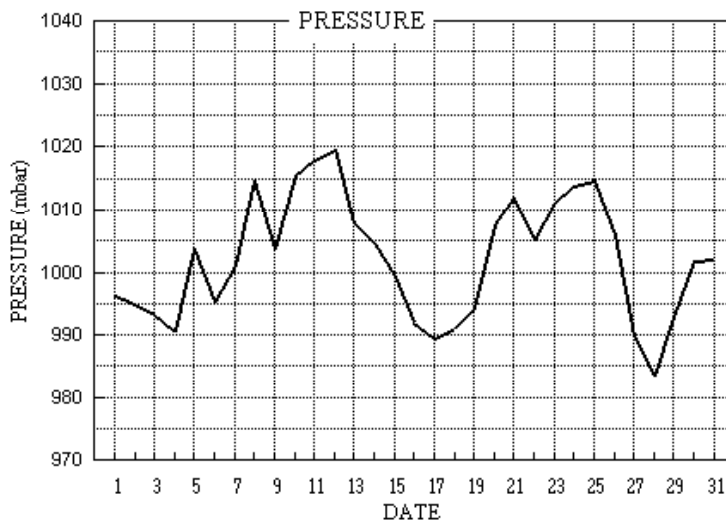
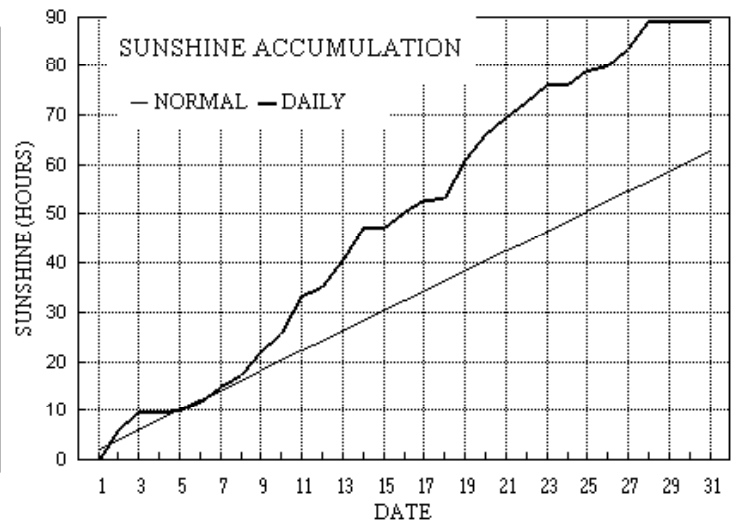
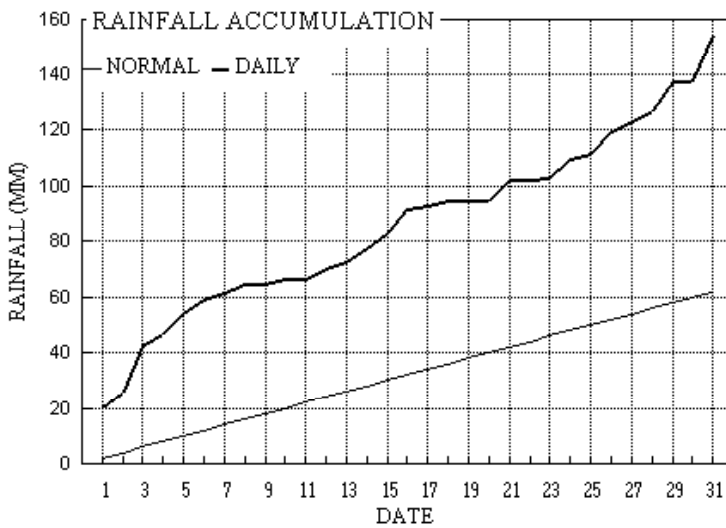
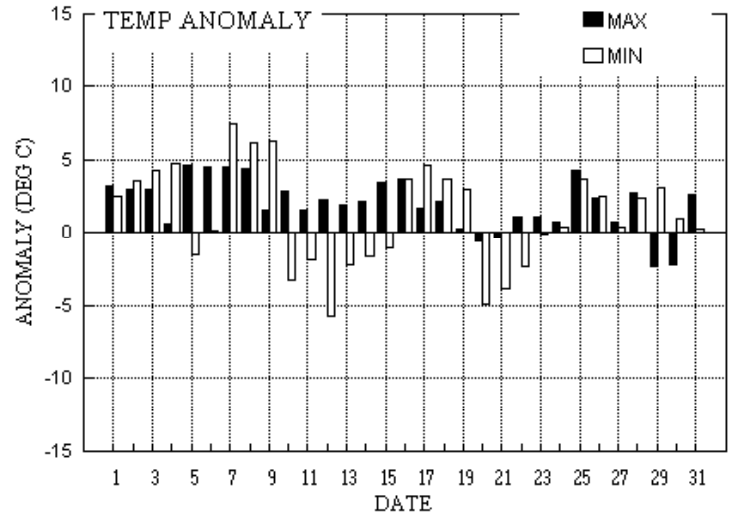
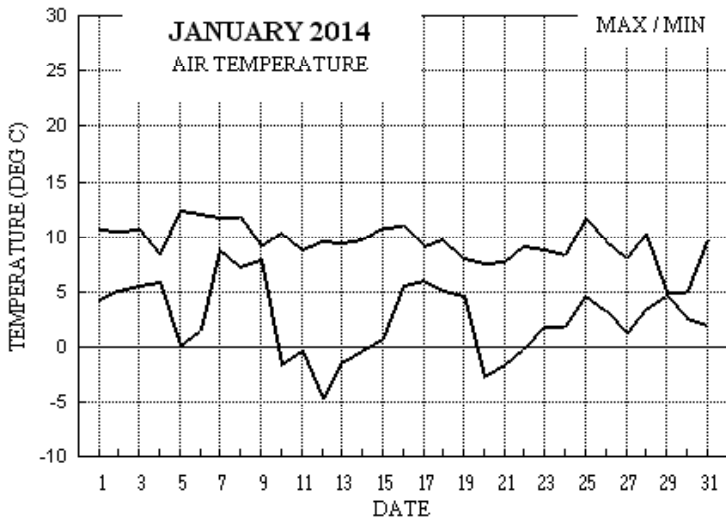
**Sunshine:** This has been a very sunny January, although this only represents a surplus of 27 hours over the month at this time of year. Since 2000 the Januarys of 2001, 2003 and 2012 have been sunnier, with 2003 holding the record. The accumulation of daily sunshine was about average up to the 8<sup>th</sup>, then some sunny days produced a surplus of 19 hours by the 14<sup>th</sup>, increasing to 29 hours by the 21<sup>st</sup> and 33 hours by the 28<sup>th</sup> before decreasing slightly after the final three days produced no sunshine. Overall there were 15 days with <3 hours and 3 days with =>6 hours. **Pressure:** The mean air pressure is lowest for January since before 1976. Also, the month's highest pressure is lowest in the same period. **Wind:** Both the month's mean wind speed and the highest gust are close to average.

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

From the 1 <sup>st</sup> to the 10 <sup>th</sup>				From the 11 <sup>th</sup> to the 20 <sup>th</sup>				From the 21 <sup>st</sup> to the 31 <sup>st</sup>			
+3.2°	+3.0°	335%	129%	+1.9°	-0.2°	145%	198%	+1.0°	+0.7°	265%	104%

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

# Wokingham climatological graphs for January 2014



Month: JANUARY 2014

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf Sl	Th Ha	Ic Fg	Vec mean ddd ff sp	Max gust ddd gg HHhh	High hr ddd ff HH	Rain hrs						
1	10.8	4.4	20.2	0.2	6.2	8.2	0.0	0.0	996.3	0 0 0 0	0 0 1 0	0 0 1 0	188	11.2	11.4	192	32	1707	171	15	10	11.1	
2	10.6	5.1	5.5	0.3	6.8	8.2	5.9	0.0	995.0	0 0 0 0	0 0 0 0	0 0 0 0	210	7.7	8.2	192	27	2323	184	13	23	5.2	
3	10.7	5.6	17.1	3.5	6.9	8.2	3.8	0.0	993.4	0 0 0 0	1 0 0 0	0 0 0 0	216	11.5	11.7	222	39	1347	223	14	11	6.0	
4	8.4	5.9	4.1	3.2	6.7	8.2	0.0	0.0	990.7	0 0 0 0	0 0 0 0	0 0 0 0	205	6.3	7.1	201	28	0710	201	12	07	5.5	
5	12.5	0.2	7.5	-5.5	6.5	8.2	0.6	0.0	1003.6	0 1 0 0	0 0 0 0	0 0 0 0	188	7.5	7.8	177	29	1820	187	14	20	4.5	
6	12.1	1.6	4.9	5.6	6.6	8.2	1.7	0.0	995.1	0 0 0 0	0 0 0 0	0 0 0 0	214	13.4	13.5	232	43	1943	219	17	19	3.6	
7	11.9	8.9	2.6	6.9	7.1	8.1	3.0	0.0	1001.1	0 0 0 0	0 0 0 0	0 0 0 0	217	11.5	11.6	202	39	0928	211	15	06	1.2	
8	11.8	7.3	2.9	3.2	7.2	8.2	2.4	0.0	1014.5	0 0 0 0	0 0 0 0	0 0 0 0	201	7.0	7.6	199	23	2321	208	10	23	3.0	
9	9.1	8.0	tr	5.5	7.5	8.2	4.5	0.0	1003.6	0 0 0 0	0 0 0 0	0 0 0 0	237	9.3	9.9	224	35	0557	220	15	05	0.0	
10	10.4	-1.5	1.9	-6.2	7.0	8.3	3.9	2.6	1015.4	1 1 0 0	0 0 0 0	0 0 0 0	211	5.1	5.2	228	15	1405	220	8	12	4.2	
11	8.9	-0.4	0.0	1.3	6.8	8.3	7.7	4.4	1017.8	1 0 0 0	0 0 0 0	0 0 0 0	251	3.9	4.9	218	16	0334	235	8	04	0.0	
12	9.6	-4.7	3.5	-9.6	6.0	8.3	1.6	9.5	1019.6	1 1 0 0	0 0 0 0	0 0 0 0	150	3.7	5.0	250	32	2317	246	11	23	3.0	
13	9.5	-1.4	2.9	-0.6	5.8	8.2	5.7	0.0	1007.8	1 1 0 0	0 0 0 0	0 0 0 0	204	6.4	6.7	209	27	1643	246	10	00	0.9	
14	9.8	-0.4	4.4	-6.1	5.7	8.0	6.5	0.2	1004.6	1 1 0 0	0 0 0 0	0 0 0 0	220	4.0	4.7	183	20	2342	190	9	23	6.8	
15	10.9	0.7	5.8	1.3	5.5	7.9	0.0	0.0	999.3	0 0 0 0	0 0 0 0	0 0 0 0	199	7.7	7.8	199	23	2335	192	10	00	4.5	
16	11.1	5.6	8.6	3.0	6.5	7.8	3.2	0.0	991.9	0 0 0 0	0 0 1 0	0 0 0 0	188	6.9	7.1	169	22	1948	207	10	00	4.3	
17	9.2	6.1	1.3	4.7	6.7	7.8	2.6	0.0	989.6	0 0 0 0	0 0 0 0	0 0 0 0	193	6.9	7.0	201	21	0742	198	9	13	2.6	
18	9.8	5.1	2.0	0.6	6.5	7.8	0.1	0.0	991.1	0 0 0 0	0 0 0 0	0 0 0 0	142	7.2	7.3	150	24	1905	147	10	14	1.5	
19	8.1	4.7	0.0	0.8	6.9	7.8	7.8	1.1	994.0	0 0 0 0	0 0 0 0	0 0 0 0	208	3.1	4.4	158	15	0019	156	8	00	0.0	
20	7.6	-2.7	tr	-7.2	6.2	7.9	5.0	8.9	1007.6	1 1 0 0	0 0 0 0	0 0 0 0	37	0.2	1.3	276	5	1953	203	2	23	0.0	
21	7.7	-1.6	7.3	-4.8	5.5	7.8	3.6	0.4	1011.9	1 1 0 0	0 0 0 1	0 0 0 1	158	4.4	5.0	155	24	2138	156	11	21	4.2	
22	9.1	-0.1	0.1	1.2	5.8	7.7	3.1	0.0	1005.1	1 0 0 0	0 0 0 0	0 0 0 0	206	3.8	4.8	158	17	0030	156	9	00	0.1	
23	8.8	1.9	0.4	-3.6	6.0	7.6	3.7	0.0	1011.0	0 1 0 0	0 0 0 0	0 0 0 0	252	6.0	6.8	271	26	1349	267	12	17	0.5	
24	8.4	1.8	6.7	-2.8	5.6	7.6	0.0	0.0	1013.7	0 1 0 0	0 0 0 0	0 0 0 0	165	4.7	5.0	158	17	1225	152	8	12	6.2	
25	11.7	4.7	2.2	3.6	6.0	7.5	2.5	0.0	1014.7	0 0 0 0	0 0 1 0	0 0 1 0	250	6.8	7.5	266	44	1623	271	17	16	0.5	
26	9.7	3.3	7.7	0.5	6.2	7.5	1.1	0.0	1005.9	0 0 0 0	0 0 1 0	0 0 1 0	223	7.4	8.5	270	33	1627	189	14	12	5.3	
27	8.1	1.3	3.8	-2.9	5.8	7.5	3.7	0.0	989.8	0 1 0 0	0 0 0 0	0 0 0 0	225	8.6	8.8	244	27	1324	241	12	12	1.8	
28	10.2	3.4	3.9	0.7	5.5	7.4	5.6	0.0	983.5	0 0 0 0	0 0 0 0	0 0 0 0	185	7.5	7.7	165	24	1523	196	10	11	2.9	
29	4.9	4.6	10.1	3.0	5.7	7.4	0.0	0.0	992.8	0 0 0 0	0 0 0 0	0 0 0 0	71	5.2	5.3	69	18	1142	69	8	11	17.5	
30	5.0	2.6	0.1	2.8	5.7	7.3	0.0	0.0	1001.9	0 0 0 0	0 0 0 0	0 0 0 0	8	2.7	3.9	32	14	0258	30	7	03	0.2	
31	9.8	2.0	16.4	1.3	5.8	7.3	0.0	0.0	1002.1	0 0 0 0	0 0 0 0	0 0 0 0	182	7.8	8.0	178	32	1815	179	13	15	10.2	
Total			153.9				89.3	27.1															117.3
Mean	9.6	2.6		0.1	6.3	7.9	2.88	0.9	1002.1					204	5.6	7.1							
Anom	+1.8	+0.8	248%	+1.2	+0.9	+0.4	143%																
Daily mean		6.1																					
Anom		+1.3																					

Number of days with:

Air frost = 8      Ground frost = 10      Nil sun = 7  
 Snow falling = 0      Snow lying = 0      Thunder = 1  
 Hail=>5mm = 0      Hail<5mm or ice = 4      Fog at 09GMT = 1

Abbreviations.

Max/min = highest and lowest air temperature at 1.2m in 24 hour period ending at 09 GMT

Rain = total rainfall and melted snowfall in 24 hour period ending at 09 GMT, millimetres. (Tr = trace, <.05mm).

Grass min = Lowest overnight temperature at grass tip level.

Sun = hours of bright sunshine, measured electronically. Frost = Number of hours with air temp below 0 deg C.

pp09 = Air pressure corrected to mean sea level at 0900 GMT, millibars.

Af = Air frost. Gf = Ground frost. Sf = Snow falling. Sl = Snow lying at 09 GMT.

Th = Thunder. Ha = Hail =>5mm. Ic = Hail <5mm or ice. Fg = Fog at 09 GMT.

Vec mean = 24 hour mean wind vector, ddd = direction in degrees from true north, ff = speed in knots.

Sp = 24 hour mean wind speed in knots.

Max gust = Highest gust in 24 hours, gg = speed in knots, HHhh = Time, hours and minutes, GMT.

High hr = Highest hourly mean wind, HH = hour commencing. Rain Hrs = Duration of rain, 24 hours to 09 GMT. Excludes snow/hail.

30cm and 100 cm are earth temperatures at those depths, read at 09 GMT.

Anom = Departure from 1981-2010 climatological average.

All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for JANUARY 2014

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NCh	shs	NCh	shs	Date	Remarks
1	65	8	18	11	24	8.6	5.8	83	5.8	996.3	8	031	60	8	2	7	5	4	2	/	87618	88550		1		
2	84	1	23	06	10	5.6	4.3	91	5.3	995.0	2	043	02	0	0	1	5	6	3	1	81635			2	1Ac65 1Ci70	
3	84	1	21	10	19	7.1	3.6	79	5.0	993.4	1	021	01	6	1	1	5	6	7	0	81640			3	1Ac62	
4	57	8	21	07	17	7.5	6.4	92	6.1	990.7	7	022	65	6	6	7	5	3	2	/	83709	87618	88530	4		
5	68	5	19	06	10	1.6	1.0	95	4.1	1003.6	1	014	03	1	1	5	0	9	3	1	85368			5	1Ci70 Hoar slt	
6	60	7	21	12	29	9.2	6.5	83	6.1	995.1	3	022	80	8	2	6	8	5	6	/	83825	85656	86359	6	Cu med	
7	58	7	21	14	27	9.8	7.4	85	6.5	1001.1	2	012	80	8	2	6	8	5	6	/	85820	83640	86367	7		
8	61	6	21	08	14	8.4	6.8	89	6.1	1014.5	2	022	03	1	1	2	0	9	3	2	82368	86072		8	COTRA	
9	82	7	25	12	27	8.4	4.7	77	5.3	1003.6	2	037	25	8	1	7	8	4	/	/	81715	84820	87630	9	Cu med	
10	80	3	20	03	05	-0.4	-0.8	97	3.5	1014.5	2	007	03	0	0	1	0	9	3	1	81368	83072		10	COTRA Hoar slt Gnd sfc frzn	
11	86	1	28	04	11	5.2	3.0	86	4.7	1017.8	2	035	02	6	1	0	0	9	0	1	81075			11		
12	58	7	07	04	06	-1.4	-1.8	97	3.3	1019.6	7	019	10	2	2	1	0	9	3	1	81368	87075		12	COTRA Hoar thk. Gnd frzn	
13	83	1	21	05	10	4.9	3.1	89	4.8	1007.8	0	000	02	0	0	1	8	6	3	3	81825			13	1Sc35 1Ac58 1Ci70 Cb top S	
14	70	1	23	02	06	0.7	0.1	96	3.9	1004.6	1	022	02	0	0	1	0	9	3	1	81365			14	1Ci75 COTRA Hoar slt. lcy patches	
15	58	7	20	08	15	9.8	8.4	91	6.9	999.3	8	003	05	2	2	4	6	3	7	1	83708	83365	87075	15	2Sc45 COTRA	
16	75	4	18	05	09	6.2	5.1	93	5.6	991.9	6	001	15	8	1	2	9	5	1	3	81920	81825		16	1Sc35 1As68 2Ci72 jpW Rainbow part vv40k ex p	
17	84	7	19	08	18	6.7	4.8	87	5.4	989.6	2	015	25	8	2	6	8	4	3	1	81715	84635		17	2Cu20 2Ac65 2Ci70 COTRA Cu med	
18	61	8	13	07	13	7.5	6.4	93	6.1	991.1	7	002	61	6	2	7	8	4	2	/	83812	87630	88540	18		
19	65	2	23	04	09	4.7	3.0	89	4.8	994.0	2	027	01	1	1	1	5	3	0	1	81708			19	1Sc45 2Ci75 COTRA	
20	30	2	05	01	03	-1.6	-1.9	98	3.3	1007.6	2	025	10	0	0	1	0	9	3	1	81365			20	2Ci75 Hoar mod Gnd frzn	
21	01	3	04	02	04	-0.0	-0.2	99	3.7	1011.9	2	003	42	4	4	0	0	9	0	1	83075			21	vv180	
22	57	7	22	02	05	6.8	6.3	97	6.0	1005.1	3	018	10	2	2	7	6	2	3	1	83705	86708		22	1Ac68 1Ci75	
23	58	7	20	07	13	4.6	4.0	96	5.1	1011.0	7	014	80	8	1	7	5	2	7	/	81705	83625	87640	23	/Ac59 jfNW?	
24	60	8	14	04	07	4.7	2.8	88	4.6	1013.7	6	007	05	2	2	3	5	7	2	/	83656	88557		24		
25	30	5	21	04	08	7.7	7.3	97	6.3	1014.7	2	012	10	2	2	2	6	2	7	1	82703	83360		25	3Ci75 COTRA	
26	62	8	19	10	18	6.3	2.4	76	4.5	1005.9	7	057	60	6	2	3	5	6	2	/	83640	88556		26		
27	80	7	22	09	17	3.7	2.0	88	4.5	989.8	6	008	02	8	2	2	8	4	3	1	81815	87070		27	2Sc25 1Ac58 Cu fra	
28	68	4	19	09	17	5.5	2.9	83	4.8	983.5	6	007	02	1	1	1	5	7	3	2	81650	84072		28	1Ac65 COTRA	
29	75	7	06	05	12	4.7	3.8	94	5.1	992.8	1	021	60	6	2	7	5	3	/	/	82709	86612	87630	29		
30	32	8	02	05	08	3.0	2.2	95	4.5	1001.9	1	011	50	6	5	8	7	3	/	/	86707	88709		30		
31	56	7	16	08	15	3.6	2.9	96	4.7	1002.1	7	021	28	4	2	2	6	2	1	6	82705	87270		31	1Sc45 2As65 vv600m until 0810	

Mean vis = 19.6 km

Mean cloud = 5.3 66%

Mean wind speed = 6.5 kn

Mean gust = 13 kn

Mean TT = 5.1 °C

Mean TdTd = 3.6 °C

Mean RH = 90.3 %

Mean r = 5.0 g/kg

Mean PPP = 1002.0 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

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 JANUARY 2014

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	NChs	NChshs	NChshs	Date	Remarks	
1	30	8	19	15	29	10.3	9.2	92	7.4	986.4	6	033	58	6	5	7	7	3	2	/	82708	87710	88520	1		
2	80	4	21	06	17	9.4	5.1	74	5.5	997.5	2	008	15	0	0	2	8	5	5	1		82820		2	1Sc40 2Ac68 1Ci70 Cu med jpE	
3	80	5	23	14	31	7.1	2.9	75	4.8	994.1	3	006	25	9	8	1	9	5	6	3		81920	81825	83068	3	1Sc40 1Ac62 jpS
4	50	8	25	07	12	6.1	4.9	92	5.5	989.9	3	018	61	6	6	5	7	3	2	/	85708	88525		4		
5	65	7	17	10	18	7.5	5.8	89	5.8	1000.2	8	020	21	6	2	7	5	4	/	/	85710	86620		5	/Sc45	
6	62	5	21	15	31	10.1	6.0	76	5.9	994.0	5	001	80	8	1	2	9	5	6	3		82920	83065		6	1Cu25 2Ac63
7	65	3	22	13	27	10.5	5.5	71	5.7	1003.6	3	008	15	1	1	1	9	5	0	3		81925			7	1Cu28 2Ci75 jpW
8	67	8	18	05	13	10.5	7.0	79	6.2	1013.3	8	015	60	6	2	7	8	4	7	/	81815	87645		8	/Ac65 Cu fra/hum	
9	82	2	25	11	21	8.4	2.3	65	4.5	1009.0	1	020	02	1	1	2	8	5	0	0		82828			9	1Sc40 Cu med
10	75	8	21	03	15	8.5	6.3	86	5.9	1013.5	6	009	25	8	2	7	8	4	7	/	82818	87640	88360	10	Cu med jpW vv50k ex p	
11	86	2	30	06	13	7.1	0.9	64	4.0	1021.3	2	013	02	0	0	1	4	6	0	1		81630			11	1Ci73 2Ci80 COTRA
12	25	8	14	08	14	5.7	4.9	95	5.4	1012.3	6	042	51	5	2	8	7	2	/	/	83705	87707	88710	12		
13	80	2	18	07	13	7.5	4.9	83	5.4	1002.6	7	030	25	8	1	2	9	5	6	3		81920	82825		13	1Sc40 1Ac60 1Ci70 jpE&S
14	84	7	23	05	12	6.0	0.1	66	3.8	1006.6	2	007	03	1	1	3	0	9	7	2		83363	86072		14	COTRA
15	75	7	20	08	16	10.6	8.5	87	7.0	996.8	6	013	15	6	2	7	5	3	/	/	81708	85612	86625	15	/Sc56 jpSW	
16	60	7	19	10	17	8.4	6.2	85	6.0	988.1	6	020	80	8	1	7	9	4	/	/	83918	82825	84640	16		
17	70	3	20	08	17	7.9	5.2	83	5.6	990.9	2	007	15	8	1	2	9	4	6	3		81715	81920		17	1Cu25 1Sc45 1Ac60 2Ci70 jp W, S&E
18	72	7	14	09	19	9.5	6.1	79	6.0	988.7	7	012	02	8	2	7	8	4	/	/	85818	87630		18		
19	83	1	22	06	13	7.6	1.2	64	4.2	997.4	2	012	02	0	0	1	2	5	0	1		81825			19	1Ci75 Cu med
20	68	7	19	01	02	7.5	4.1	79	5.1	1009.3	3	008	03	1	1	7	8	5	/	/	81820	87645		20	1Sc35 Cu med	
21	70	6	16	07	13	7.6	4.1	78	5.1	1008.1	7	022	02	2	2	1	1	4	7	1		81815	86073		21	1Ac63 1Ac68 Cu hum U/a cont
22	70	6	21	04	08	8.7	6.2	84	5.9	1007.1	3	006	25	8	2	6	8	4	/	/	82815	85635		22	Cu med	
23	80	3	28	08	24	8.1	0.7	59	4.0	1011.9	1	011	02	1	1	2	8	6	7	0		82830			23	1Sc45 1Ac68 Cu med
24	84	8	15	08	15	7.8	4.2	78	5.1	1011.8	7	015	02	2	2	7	5	4	2	/	83615	85640	88458	24		
25	72	7	24	15	27	11.3	4.4	63	5.2	1008.2	8	046	03	2	2	3	5	6	0	2		83635	87075		25	1Sc56
26	65	5	25	09	28	8.9	4.9	76	5.5	990.6	6	053	21	6	2	3	8	4	7	0		81815	83645		26	3Ac57
27	58	7	23	06	22	5.0	3.2	88	4.9	988.6	7	006	80	8	2	7	8	4	7	1		81715	85825		27	4Sc35 /Ac57 /Ci70
28	82	4	19	08	17	7.9	2.9	71	4.8	982.7	7	001	25	8	1	1	8	5	6	3		81825	84070		28	1Sc40 1Ac58 Cu med jpE
29	58	8	07	05	15	3.2	2.4	94	4.6	995.0	2	012	61	6	6	7	5	3	2	/	82709	87611	88520	29		
30	56	8	32	04	06	4.5	2.9	89	4.7	1001.7	5	001	05	5	2	8	5	3	/	/	81707	86711	88620	30		
31	50	8	18	13	27	6.2	4.5	89	5.3	994.7	7	038	63	6	6	7	7	4	2	/	81710	87713	88520	31		

Mean vis = 22.5 km

Mean cloud = 5.8 72%

Mean wind speed = 8.2 kn

Mean gust = 18 kn

Mean TT = 7.9 °C

Mean TdTd = 4.4 °C

Mean RH = 79.1 %

Mean r = 5.3 g/kg

Mean PPP = 1000.5 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-Jan	02-Jan	03-Jan	04-Jan	05-Jan	06-Jan	07-Jan	08-Jan	09-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan
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
2014	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	0.00	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
	8	0.00	0.37	0.27	0.00	0.00	0.00	0.00	0.33	0.00	0.48	0.54	0.52	0.42	0.54	0.00	0.19
	9	0.00	1.00	0.98	0.00	0.53	0.56	0.00	0.81	0.00	1.00	1.00	1.00	0.89	1.00	0.00	0.98
	10	0.00	1.00	0.98	0.00	0.00	0.28	0.00	0.86	0.45	1.00	1.00	0.11	1.00	1.00	0.00	0.70
	11	0.00	1.00	0.35	0.00	0.11	0.18	0.76	0.27	0.98	1.00	1.00	0.00	1.00	1.00	0.00	0.31
	12	0.00	0.98	0.00	0.00	0.00	0.00	0.88	0.10	0.65	0.29	0.98	0.00	0.76	1.00	0.00	0.53
	13	0.00	0.65	0.32	0.00	0.00	0.37	0.74	0.00	0.80	0.17	1.00	0.00	0.70	0.99	0.00	0.36
	14	0.00	0.74	0.81	0.00	0.00	0.19	0.36	0.00	0.67	0.00	1.00	0.00	0.54	0.46	0.00	0.00
	15	0.00	0.16	0.03	0.00	0.00	0.10	0.25	0.00	0.78	0.00	1.00	0.00	0.38	0.47	0.00	0.08
	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.15	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		<b>0.00</b>	<b>5.90</b>	<b>3.76</b>	<b>0.00</b>	<b>0.63</b>	<b>1.70</b>	<b>2.99</b>	<b>2.37</b>	<b>4.46</b>	<b>3.93</b>	<b>7.67</b>	<b>1.63</b>	<b>5.68</b>	<b>6.46</b>	<b>0.00</b>	<b>3.15</b>

Hour	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan	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	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	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
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	0.00	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
8	0.00	0.00	0.68	0.31	0.00	0.00	0.00	0.00	0.10	0.00	0.14	0.75	0.00	0.00	0.00	0.18
9	0.11	0.00	1.00	0.90	0.01	0.01	0.00	0.00	0.27	0.00	0.72	1.00	0.00	0.00	0.00	0.44
10	0.00	0.01	0.90	1.00	0.15	0.45	0.35	0.00	0.02	0.00	0.97	0.31	0.00	0.00	0.00	0.40
11	0.12	0.00	1.00	0.93	0.24	0.95	0.12	0.00	0.64	0.00	0.93	0.98	0.00	0.00	0.00	0.45
12	0.27	0.00	0.98	1.00	0.67	0.74	0.99	0.00	0.48	0.00	0.86	0.76	0.00	0.00	0.00	0.42
13	0.84	0.00	0.96	0.53	0.92	0.39	0.77	0.00	0.76	0.00	0.04	0.34	0.00	0.00	0.00	0.38
14	0.37	0.02	1.00	0.00	1.00	0.00	0.87	0.00	0.23	0.21	0.00	0.79	0.00	0.00	0.00	0.30
15	0.83	0.00	1.00	0.36	0.62	0.58	0.52	0.00	0.00	0.78	0.00	0.71	0.00	0.00	0.00	0.28
16	0.05	0.00	0.33	0.00	0.00	0.00	0.04	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.02
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	<b>2.61</b>	<b>0.03</b>	<b>7.84</b>	<b>5.03</b>	<b>3.62</b>	<b>3.11</b>	<b>3.65</b>	<b>0.00</b>	<b>2.50</b>	<b>1.06</b>	<b>3.66</b>	<b>5.64</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>89.05</b>

JANUARY 2014	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	
1	8.75	10.9	1917	6.2	19	88.0	92.6	1459	81.9	609	6.88	6.33	7.6	1901	5.1	216	991.60	1001.5	203	983.1	2035	
2	8.37	10.5	2234	5.1	801	83.7	92.4	302	68.7	1356	5.73	5.82	7.1	2359	5.0	801	993.21	997.6	1505	984.1	29	
3	7.95	10.8	1141	5.7	1252	78.4	93.1	101	63.5	2052	4.38	5.35	7.6	132	4.0	2053	994.27	1000.2	2357	990.3	110	
4	6.47	8.7	624	1.3	2359	88.9	94.9	2349	73.1	10	4.75	5.45	6.5	612	4.0	2356	993.29	1000.2	0	987.9	1212	
5	5.42	12.6	2352	0.2	444	92.1	96.4	826	85.3	1320	4.24	5.36	8.5	2359	3.7	444	999.31	1003.9	825	992.0	2350	
6	10.71	12.6	8	8.5	822	78.2	92.8	6	66.7	703	7.03	6.37	8.5	8	5.4	713	994.18	998.7	2359	991.3	102	
7	9.85	12.0	1310	7.3	1000	78.9	87.8	754	67.3	1308	6.34	6.00	6.6	752	5.4	951	1002.96	1008.5	2356	998.5	0	
8	9.30	11.7	2331	7.2	744	87.1	93.7	2359	74.0	1148	7.25	6.35	8.0	2331	5.5	8	1011.47	1015.4	1108	1004.9	2359	
9	7.93	11.9	202	3.6	2253	78.2	93.9	14	63.1	1355	4.30	5.28	8.0	17	4.1	1633	1006.82	1014.1	2329	999.2	531	
10	5.51	10.5	1210	-1.1	827	88.2	97.3	928	72.3	1212	3.66	5.00	6.1	2034	3.4	827	1014.15	1015.6	906	1013.0	2351	
11	4.89	8.9	1301	-2.5	2358	84.8	97.5	2352	58.3	1336	2.39	4.58	6.4	247	3.0	2358	1019.04	1025.2	2251	1012.3	350	
12	2.62	9.7	2307	-4.2	523	95.3	97.8	426	87.2	2357	1.93	4.57	7.1	2307	2.7	523	1015.46	1024.9	35	1004.3	2249	
13	6.09	9.6	1224	3.7	1916	86.2	93.2	456	66.8	1226	3.92	5.06	5.9	1	4.5	1916	1004.64	1008.0	810	1000.3	2206	
14	3.84	7.2	1303	-0.3	528	85.4	96.5	758	62.0	1419	1.50	4.28	5.6	2357	3.6	526	1004.46	1007.4	1645	1000.5	40	
15	9.61	11.0	1150	6.3	4	90.9	96.1	358	83.5	1846	8.19	6.85	7.5	1302	5.6	4	997.65	1002.8	4	991.7	2337	
16	7.74	11.2	1254	5.5	738	87.7	93.3	753	68.6	1257	5.82	5.87	7.0	16	5.3	723	989.65	992.8	245	986.3	2333	
17	6.94	9.3	1225	5.1	2120	87.6	95.6	2356	78.1	1355	5.01	5.54	6.1	1240	5.1	2042	990.39	994.2	2209	986.6	1	
18	8.21	9.9	1414	6.7	8	88.2	95.9	52	77.5	1554	6.35	6.08	6.6	329	5.6	1639	990.54	993.9	0	988.5	1423	
19	5.27	8.4	17	-0.6	2303	85.3	96.7	2348	62.7	1326	2.91	4.81	6.1	302	3.5	2303	995.73	1002.6	2357	989.6	17	
20	1.81	7.7	1533	-2.3	751	94.0	98.2	705	78.3	1513	0.90	4.12	5.5	1342	3.1	806	1007.98	1012.2	2333	1002.5	35	
21	3.93	7.8	1458	-0.2	619	90.7	98.7	1012	71.4	1614	2.48	4.58	5.9	1317	3.7	619	1009.47	1012.3	333	1004.6	2358	
22	7.20	9.2	1320	4.7	2355	91.2	96.8	726	81.1	1322	5.84	5.78	6.5	1113	4.9	2355	1006.73	1012.1	2349	1002.7	411	
23	4.91	8.9	1259	1.8	344	81.9	96.8	352	57.1	1543	1.87	4.37	5.8	1022	3.6	1947	1012.93	1015.9	2348	1010.6	1158	
24	5.63	8.0	1555	1.7	132	87.0	95.5	2357	76.3	1553	3.61	4.94	6.2	2359	3.7	56	1013.46	1015.9	57	1011.5	2235	
25	7.97	11.8	1435	4.1	2353	82.7	97.7	713	58.4	1434	5.01	5.53	7.2	1133	3.5	2204	1012.95	1016.4	2356	1007.6	1614	
26	5.11	9.8	1428	1.2	2059	82.4	93.8	1401	70.8	3	2.34	4.61	7.2	1416	3.6	6	1001.50	1016.8	248	990.5	1454	
27	4.21	8.2	1253	1.6	259	84.0	89.1	818	67.8	1254	1.73	4.41	5.1	1634	3.6	404	989.68	993.9	6	986.8	2358	
28	6.09	10.3	1205	4.5	506	82.9	91.7	2031	62.6	1207	3.34	4.96	5.5	1424	4.5	1522	984.54	988.0	2359	982.2	1324	
29	4.01	5.1	346	2.7	1816	94.2	96.0	2357	91.3	0	3.17	4.85	5.3	346	4.4	1816	993.97	999.8	2359	987.9	0	
30	3.58	5.0	1337	2.5	517	93.6	96.2	151	86.6	1401	2.65	4.64	5.0	1231	4.4	517	1002.08	1005.4	2359	999.8	26	
31	5.42	9.9	2336	1.8	702	91.5	96.6	815	79.6	1221	4.14	5.24	7.2	2304	4.2	702	997.11	1005.5	314	983.9	2359	
Total																						
Mean	6.30	9.65		2.83		86.7	94.99		72.31		4.18	5.26	6.61		4.24		1001.33	1006.50		995.97		
Max	10.71	12.58		8.45		95.3	98.70		91.30		8.19	6.85	8.54		5.57		1019.04	1025.18		1013.01		
Min	1.81	5.05		-4.21		78.2	87.80		57.12		0.90	4.12	5.02		2.67		984.54	988.00		982.16		

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  
 Time = hours and minutes in GMT of extreme values

Temperature and humidity are from an aspirated Vaisala HMP45 unit  
 Pressure is from a Setra CS100 sensor  
 Data is logged on a Campbell Scientific CR10X measurement and control system

## 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, 1<sup>st</sup> January to 31<sup>st</sup> 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  $-0.1^{\circ}\text{C}$  or below. A ground frost day is recorded when the grass minimum temperature read at 0900 GMT on that day is  $-0.1^{\circ}\text{C}$  or lower.

Duration of air frost is defined as the number of minutes that the AWS one minute average temperature is below  $0.0^{\circ}\text{C}$ , 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 =  $360^{\circ}$  and  $22.5^{\circ}$  either side.

NE = NorthEast =  $045^{\circ}$  and  $22.5^{\circ}$  either side.

E = East =  $090^{\circ}$  and  $22.5^{\circ}$  either side.

SE = SouthEast =  $135^{\circ}$  and  $22.5^{\circ}$  either side.

S = South =  $180^{\circ}$  and  $22.5^{\circ}$  either side.

SW = SouthWest =  $225^{\circ}$  and  $22.5^{\circ}$  either side.

W = West =  $270^{\circ}$  and  $22.5^{\circ}$  either side.

NW = NorthWest =  $315^{\circ}$  and  $22.5^{\circ}$  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 of 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.