

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 2014

Temperature (°C / °F)				Anomaly	Rank in the past 133 years			
Mean maximum	10.0	50.0	+1.8	18 th highest				
Mean minimum	4.1	39.4	+2.6	7 th highest				
Daily mean	7.1	44.8	+2.2	8 th highest				
Highest maximum	13.7	56.7	on 24 th	Lowest maximum	7.4	45.3	on 13 th	
Highest minimum	7.9	46.2	on 25 th	Lowest minimum	1.1	34.0	on 16 th	
Mean grass minimum	0.7	33.3	+2.5	Lowest grass minimum	-4.9	23.2	on 16 th	
Mean earth @30 cm	6.1	43.0	+0.8	Earth @100 cm	7.2	45.0		
Frost duration (hrs)	0.0			Rain duration (hrs)	81.7			
Rainfall total (mm / in)	119.8	4.72	279%	2 nd highest				
Highest daily fall	26.6	1.05	on 6 th					
Number of: Dry days (<0.2mm)	8	Wet days (>0.9mm)	19	days ≥5mm	6			
Sunshine total (hrs)	99.7	Daily mean	3.56	129%	Sunniest day	9.1	on 22 nd	
N ^o days with: Air frost	0	Ground frost	14	Snow falling	0	Snow lying	0	
Thunder	0	Hail ≥5mm	2	Small hail/ice	5	Fog @09	0	Nil sun 2
Pressure MSL : Mean @09 GMT, mbar	998.3	-19.1	Highest	1016.3	on 26 th	Lowest	973.2	on 14 th
Relative humidity : Mean (%)	78.7	Lowest	45	on 26 th	Water vapour (g/kg), mean at 09 and 15 GMT 5.1, 4.8			
Overall mean wind speed (mph)	10.7	Windiest day	17.5	on 15 th	Max gust	63	on 15 th	
Wind direction (days)	N 0	NE 1	E 0	SE 1	S 9	SW 17	W 0	NW 0
Least windy day (mph)	5.5	on 18 th	Calm; less than 0.5 mph (minutes)			5		

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

Notes: **Very Wet, Very Mild, Quite Sunny, Very Windy at Times.**

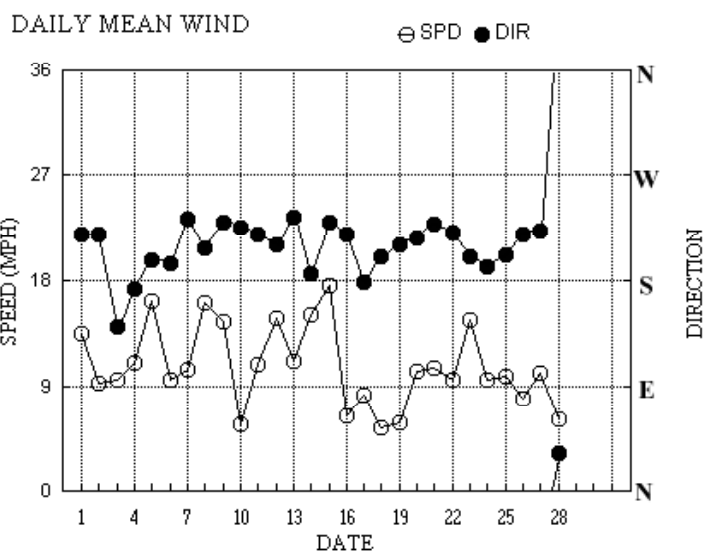
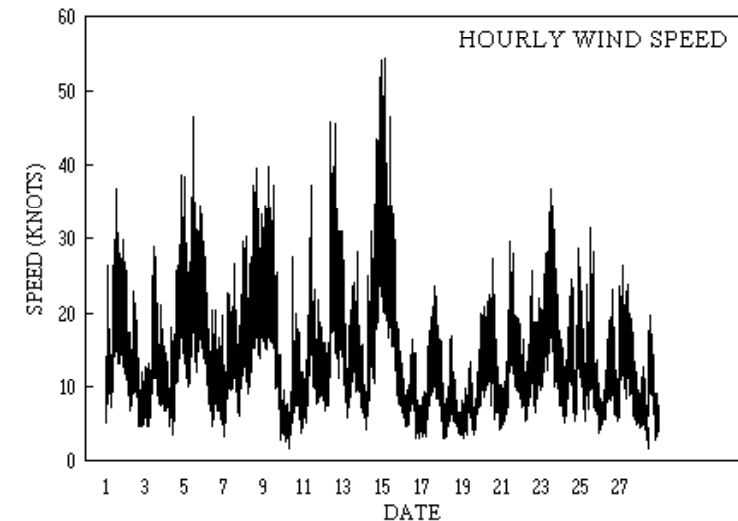
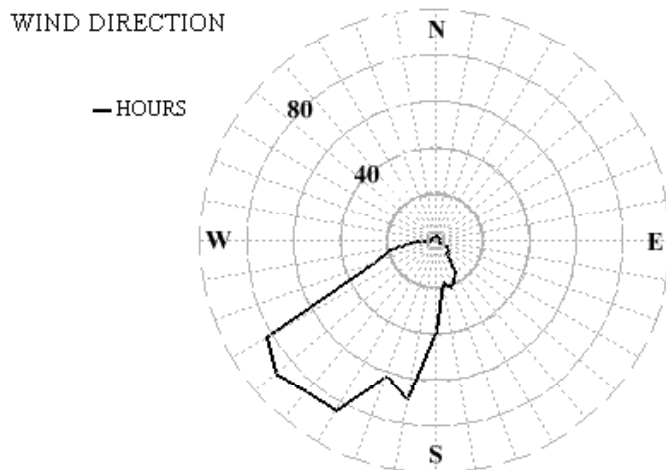
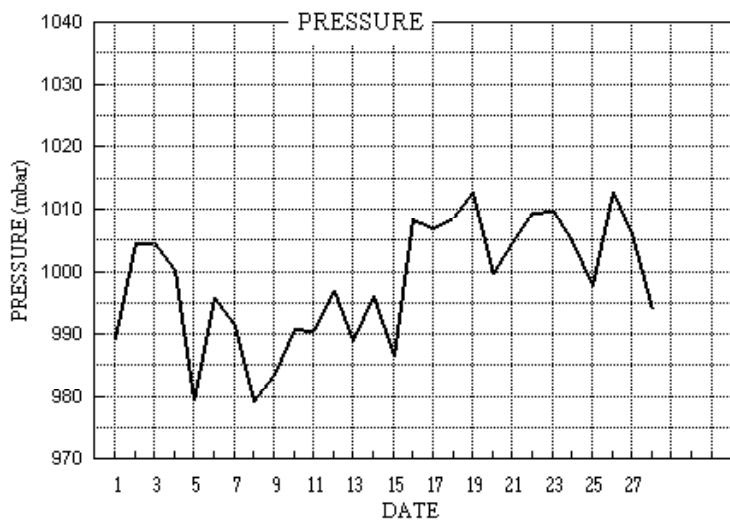
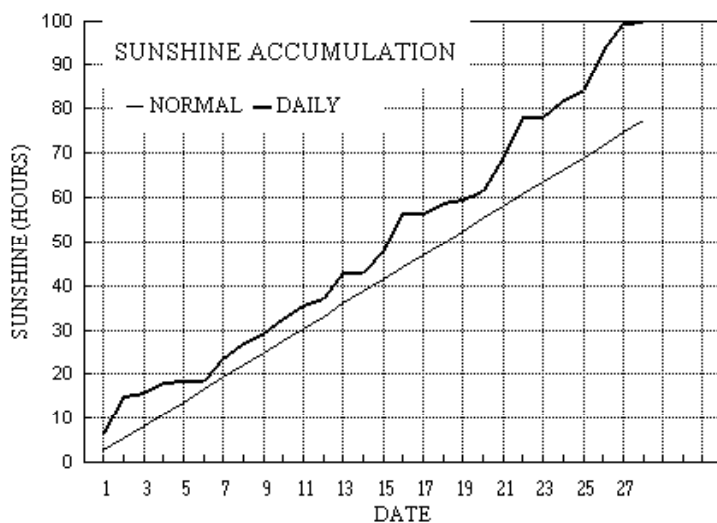
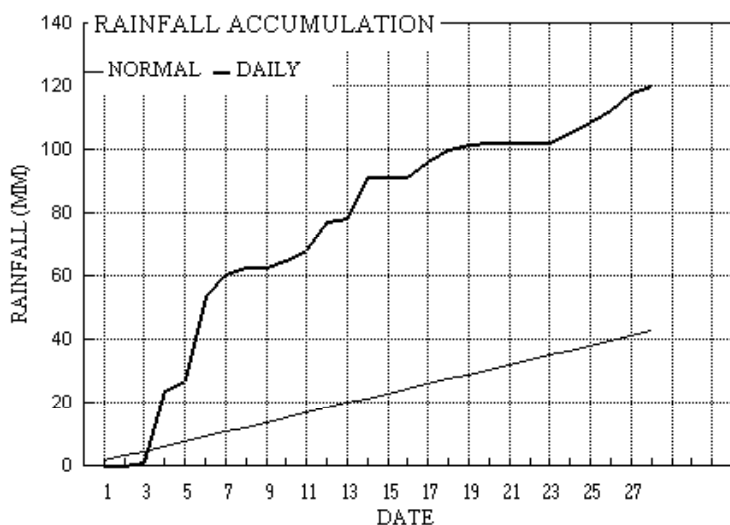
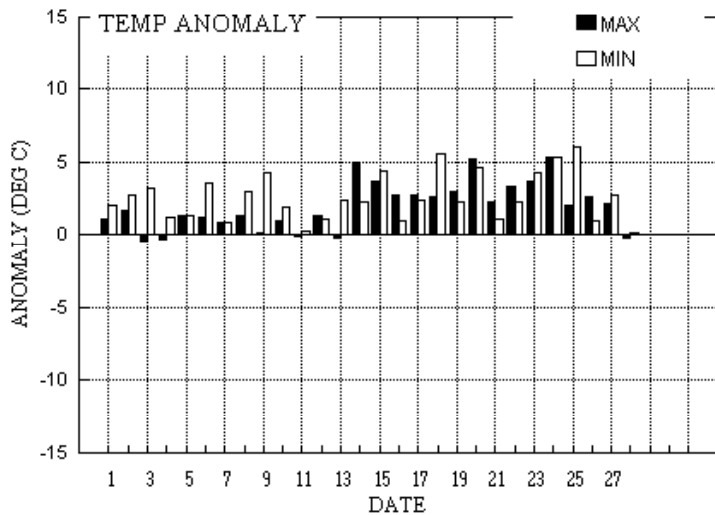
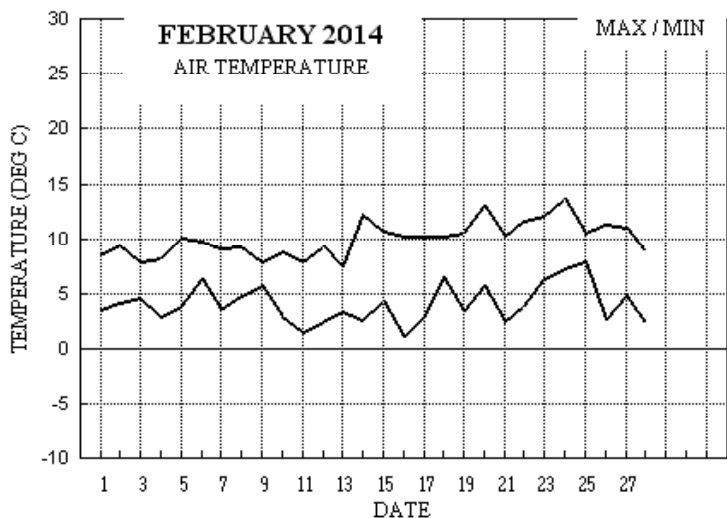
Temperature: The mean of 7.1° this February is highest since 2002, and is 2.2° above the 30 year climatological average. In the longer-term, it ranks 8th highest since before 1882. One remarkable feature this month is the complete absence of cold weather, with every day having an above normal minimum. Also, only 4 days had a maximum below normal, but none by more than 0.4°. Temperatures were near or slightly above normal up to the 13th, it then became milder with anomalies for daily max over +5° on the 14th, 20th and 24th, also over 5° for the min on the 18th, 24th and 25th. This is only the 2nd February without an air frost since before 1976, the other being 1990. The highest max is 0.7° above the median while the lowest max is 5.0° above the median and 4th highest in 102 years. The highest min is close to the median but the lowest min is 6.1° above its median and is equal highest with 1961 in the past 111 years. The lowest grass min is highest since 1990. Earth temperatures are above average at 30 cm depth, but close to average at 1 m depth. **Rainfall:** Another incredibly wet month, following on a record wet January. The rainfall total of 119.8 mm makes this the 2nd wettest February after 1951 in the past 133 years. Although the first 2 days were dry, the next 5 were very wet, producing a total of 60.3 mm, which is 17.4 mm above the average for the whole of February. Although not quite as wet in subsequent days, the accumulation reached 90 mm on the 14th. The second half of the month was somewhat drier, but even so the final 5 days produced a further 17.8 mm. Flooding was a problem in many places locally, especially in the Loddon valley. The number of wet days (days with 1 mm or more) is most since before 1976. Rainfall duration is 61 % above average. The amount of rain on the wettest day is 16.1 mm above the median and is 2nd highest in 111 years. In line with the mildness there was no snow this month, the 7th February with none in the past 39 years. The highest rainfall rate was 47 mm/hr on the 5th. Hail was recorded on 7 days, a high value for February, compared with 6 in 1990 and 1969, and an average of 1.7 days. There was no thunder. **Sunshine:** Despite all the rain the sunshine total is quite reasonable. Getting off to a good start with 2 sunny days, despite the next 4 being dull, the accumulation remained above normal, and was 4 hours above by the 14th. The second half of the month saw more frequent sunny days with a surplus of 18 hours by the 22nd and 24 hours by the 28th. Sunshine was above 80% of the maximum on the 2nd, 16th, 22nd and 26th, and below 20% on 10 mostly single days throughout the month. Overall there were 14 days with <3 hours, 7 with =>6 hours and 1 with =>9 hours. **Wind:** The mean speed of 10.7 mph makes this the windiest February since 2002, 2.6 mph above average. There were some notably windy days, especially the 14th/15th, when gusts reached 63 mph, 15mph above the February average and highest since 1990. Overall, wind speed exceeded the strong category on the 1st, 4th, 5th, 8th, 9th, 12th, 14th, 15th and 23rd. Wind direction was mostly between S and SW, except for SE on the 3rd and NE on the 28th. The duration of calm is extremely low at just 5 minutes. **Pressure:** The mean pressure is lowest for any month since before 1976. The highest pressure is lowest for February in the same period.

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

From the 1 st to the 9 th				From the 10 th to the 18 th				From the 19 th to the 28 th			
+0.8°	+2.5°	460%	120%	+2.1°	+2.4°	270%	120%	+2.9°	+3.0°	132%	149%

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

Wokingham climatological graphs for February 2014



Month: FEBRUARY 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	Rain HH hrs								
1	8.6	3.6	tr	-0.1	6.0	7.2	6.8	0.0	989.2	0	1	0	0	0	219	11.6	11.7	228	37	1305	220	17	13	0.0	
2	9.5	4.2	0.0	1.7	5.9	7.2	8.2	0.0	1004.6	0	0	0	0	0	219	7.6	8.1	224	26	0137	227	13	01	0.0	
3	7.9	4.6	1.3	-0.5	5.6	7.2	1.0	0.0	1004.5	0	1	0	0	0	140	8.0	8.3	148	29	1057	152	13	13	1.5	
4	8.3	3.0	22.7	-0.2	5.6	7.2	2.2	0.0	1000.2	0	1	0	0	1	172	8.6	9.5	165	39	2100	159	17	21	8.9	
5	10.1	3.8	3.0	2.2	5.8	7.2	0.4	0.0	979.3	0	0	0	0	1	197	12.8	14.1	173	47	1048	184	18	10	1.7	
6	9.8	6.3	26.6	3.1	5.9	7.2	0.0	0.0	995.7	0	0	0	0	0	195	6.5	8.2	227	28	0210	228	14	01	17.9	
7	9.2	3.5	6.7	3.4	6.2	7.2	5.2	0.0	991.3	0	0	0	0	0	233	6.5	9.0	192	30	2347	184	14	23	6.2	
8	9.3	4.8	2.4	3.4	6.4	7.2	3.2	0.0	979.0	0	0	0	0	1	208	13.7	13.9	193	40	1622	211	18	14	1.0	
9	8.0	5.7	0.1	4.3	6.3	7.2	2.4	0.0	983.4	0	0	0	0	1	230	12.3	12.6	240	40	0658	221	17	01	0.2	
10	8.8	2.9	2.0	-0.7	6.0	7.3	3.0	0.0	990.8	0	1	0	0	1	226	3.3	5.0	246	28	1258	262	8	16	1.1	
11	8.0	1.5	3.3	-4.3	5.8	7.3	3.3	0.0	990.6	0	1	0	0	0	220	8.1	9.5	238	37	1110	200	16	10	2.4	
12	9.3	2.4	9.1	-0.7	5.5	7.2	1.3	0.0	996.8	0	1	0	0	0	210	12.4	12.8	195	46	1057	205	19	14	2.4	
13	7.4	3.4	1.2	0.0	5.4	7.2	5.9	0.0	988.9	0	0	0	0	0	234	9.4	9.7	233	31	0036	225	14	00	1.0	
14	12.3	2.6	13.0	-1.7	5.2	7.1	0.0	0.0	996.0	0	1	0	0	0	186	11.8	13.1	203	52	2119	214	25	22	9.1	
15	10.8	4.3	tr	5.9	5.6	7.0	5.1	0.0	986.4	0	0	0	0	0	230	15.1	15.2	238	55	0322	224	22	03	0.2	
16	10.2	1.1	tr	-4.9	5.6	7.0	8.6	0.0	1008.3	0	1	0	0	0	220	5.1	5.5	210	17	1244	239	8	00	0.0	
17	10.3	2.9	4.5	-2.8	5.2	7.0	0.1	0.0	1007.0	0	1	0	0	0	178	7.0	7.1	193	24	1517	184	11	15	5.3	
18	10.3	6.5	4.1	2.8	5.8	7.0	2.3	0.0	1008.6	0	0	0	0	0	201	4.5	4.8	208	17	1236	188	7	00	1.7	
19	10.5	3.4	1.5	-1.8	6.1	7.0	0.6	0.0	1012.8	0	1	0	0	0	210	4.9	5.1	168	15	2231	187	8	21	2.2	
20	13.0	5.8	0.4	6.2	6.5	7.0	1.8	0.0	999.6	0	0	0	0	0	216	8.3	8.8	218	27	1514	239	13	15	0.8	
21	10.3	2.5	tr	-1.9	6.7	7.1	7.7	0.0	1004.4	0	1	0	0	0	228	9.1	9.2	214	30	1204	235	13	12	0.1	
22	11.7	3.9	0.1	-0.6	6.3	7.2	9.1	0.0	1009.5	0	1	0	0	0	221	8.0	8.2	226	26	1552	233	11	13	0.2	
23	12.2	6.3	tr	2.7	6.6	7.2	0.1	0.0	1009.6	0	0	0	0	0	201	12.5	12.7	218	37	1208	209	18	12	0.0	
24	13.7	7.3	3.2	3.2	7.0	7.3	3.9	0.0	1004.9	0	0	0	0	0	192	8.0	8.2	205	29	2337	204	14	23	3.8	
25	10.5	7.9	3.4	5.8	7.3	7.4	2.3	0.0	997.7	0	0	0	0	1	202	8.2	8.4	200	32	1303	198	14	00	1.8	
26	11.3	2.7	3.5	-3.0	7.1	7.5	8.8	0.0	1012.8	0	1	0	0	1	220	6.4	6.9	224	23	1654	245	11	12	3.7	
27	11.1	4.8	5.3	1.2	6.9	7.5	6.1	0.0	1005.9	0	0	0	0	0	222	7.4	8.8	178	27	0446	176	12	04	4.8	
28	8.9	2.3	2.4	-1.8	6.8	7.6	0.3	0.0	993.9	0	1	0	0	0	32	3.5	5.4	30	20	1444	19	10	14	3.7	
Total			119.8				99.7	0.0																	81.7
Mean	10.0	4.1		0.7	6.1	7.2	3.56	0.0	998.3						209	7.8	9.3								
Anom	+1.8	+2.6	279%	+2.5	+0.8	+0.4	129%																		
Daily mean		7.1																							
Anom		+2.2																							
Number of days with:																									
Air frost = 0																									
Ground frost = 14																									
Nil sun = 2																									
Snow falling = 0																									
Snow lying = 0																									
Thunder = 0																									
Hail=>5mm = 2																									
Hail<5mm or ice = 5																									
Fog at 09GMT = 0																									

Abbreviations.

- Max/min = highest and lowest air temperature at 1.2m in 24 hour period ending at 09 GMT
- Rain = total rainfall and melted snowfall in 24 hour period ending at 09 GMT, millimetres. (Tr = trace, <.05mm).
- Grass min = Lowest overnight temperature at grass tip level.
- Sun = hours of bright sunshine, measured electronically. Frost = Number of hours with air temp below 0 deg C.
- pp09 = Air pressure corrected to mean sea level at 0900 GMT, millibars.
- Af = Air frost. Gf = Ground frost. Sf = Snow falling. Sl = Snow lying at 09 GMT.
- Th = Thunder. Ha = Hail =>5mm. Ic = Hail <5mm or ice. Fg = Fog at 09 GMT.
- Vec mean = 24 hour mean wind vector, ddd = direction in degrees from true north, ff = speed in knots.
- Sp = 24 hour mean wind speed in knots.
- Max gust = Highest gust in 24 hours, gg = speed in knots, HHhh = Time, hours and minutes, GMT.
- High hr = Highest hourly mean wind, HH = hour commencing. Rain Hrs = Duration of rain, 24 hours to 09 GMT. Excludes snow/hail.
- 30cm and 100 cm are earth temperatures at those depths, read at 09 GMT.
- Anom = Departure from 1981-2010 climatological average.
- All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for FEBRUARY 2014

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ci	Ch	shs	NCh	shs	NCh	shs	Date	Remarks
1	84	1	21	10	20	4.2	1.1	80	4.2	989.2	2	025	02	0	0	1	1	4	3	3							1	1Ac60 1Ci70 Cu fra Cb tops SE-SW	
2	70	3	23	08	15	6.3	1.7	72	4.3	1004.6	2	028	03	0	0	3	5	6	0	1							2	1Ci75	
3	68	7	15	10	19	6.7	3.7	81	5.0	1004.5	7	017	03	1	1	3	1	4	0	1							3	COTRA Cu hum	
4	70	6	18	05	18	4.6	2.5	86	4.6	1000.2	1	013	27	8	1	4	9	5	6	3							4	2Sc40 1Ac60 2Ci70 jp all quads Rainbow	
5	62	7	18	15	34	7.6	2.5	70	4.7	979.3	8	002	03	8	1	6	8	5	/								5	4Ci72	
6	65	8	19	07	12	7.4	3.6	77	5.0	995.7	2	007	15	2	2	4	8	5	2	/							6	Cu med jpS	
7	70	8	27	09	20	4.8	3.0	88	4.8	991.3	2	082	61	6	6	7	5	4	/	/							7		
8	60	7	22	09	24	6.4	3.2	80	4.9	979.0	5	003	27	8	1	7	9	4	6	/							8	2Sc40 /Ac62 jpE	
9	80	7	24	17	34	6.5	1.3	69	4.3	983.4	2	040	02	2	2	7	5	5	/	/							9		
10	60	7	15	04	07	4.5	3.5	93	5.0	990.8	1	010	21	6	2	7	5	2	/	8							10	2Sc20 COTRA	
11	64	8	18	14	28	6.7	4.0	83	5.2	990.6	7	052	61	6	2	7	5	4	2	/							11		
12	68	8	19	13	27	7.2	4.1	81	5.2	996.8	8	038	21	6	2	6	5	4	2	/							12		
13	75	5	23	08	15	5.5	1.8	77	4.4	988.9	7	002	01	2	2	1	9	6	6	3							13	1Sc50 1Ac62 Cb S	
14	58	8	15	08	15	4.5	2.8	89	4.7	996.0	8	029	63	6	2	6	7	3	2	/							14		
15	80	6	23	19	35	8.0	2.1	67	4.5	986.4	1	040	15	8	2	5	8	5	3	1							15	2Ac65 2Ci70 jpS	
16	65	0	23	06	09	3.4	1.7	88	4.3	1008.3	1	019	02	0	0	0	0	9	0	0							16	Hoar slt	
17	61	8	18	07	16	7.8	6.7	93	6.1	1007.0	2	014	60	6	2	8	5	4	/	/							17		
18	65	7	19	05	09	8.1	7.3	94	6.4	1008.6	2	004	15	8	2	6	8	3	3	1							18	1Cu12 3Sc50 2Ac65 /Ci72 jpSW&S	
19	58	7	21	04	07	5.8	5.1	95	5.5	1012.8	3	012	10	2	2	2	5	6	7	/							19	1Sc56 2Ac62	
20	50	8	20	12	22	10.5	9.4	93	7.4	999.6	7	021	51	5	5	8	5	3	/	/							20		
21	82	1	24	09	16	5.4	1.9	79	4.4	1004.4	3	015	02	0	0	1	5	7	0	1							21	1Ci75 COTRA	
22	75	1	23	07	13	6.3	2.9	79	4.7	1009.5	3	029	02	0	0	1	8	4	0	1							22	1Sc30 1Ci80 Cu fra	
23	60	8	20	12	29	10.3	7.0	80	6.2	1009.6	0	004	60	6	2	7	5	4	/	/							23	/Sc50	
24	78	2	20	07	14	9.5	5.9	78	5.8	1004.9	1	003	03	1	1	1	8	4	5	5							24	1Sc40 1Ac68 1Cs70 2Ci80 COTRA Cu fra	
25	56	8	19	11	19	8.3	5.6	83	5.7	997.7	5	000	81	8	2	8	8	4	/	/							25	Cu med Sh mod	
26	62	1	23	08	13	6.5	3.8	83	5.0	1012.8	2	025	02	0	0	1	5	6	0	0							26		
27	70	5	25	08	17	6.9	3.7	80	5.0	1005.9	3	021	01	6	2	1	8	5	1	8							27	1Sc50 2As68 COTRA Cu med Cs edge N-S	
28	59	8	05	04	10	5.1	4.4	96	5.3	993.9	5	002	21	6	2	8	7	3	/	/							28		

Mean vis = 18.0 km

Mean cloud = 5.7 71%

Mean wind speed = 9.1 kn

Mean gust = 18 kn

Mean TT = 6.6 °C

Mean TdTd = 3.8 °C

Mean RH = 82.6 %

Mean r = 5.1 g/kg

Mean PPP = 998.3 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 2014

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ci	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	80	6	22	14	33	8.1	1.9	65	4.5	991.1	3	003	03	1	1	6	8	5	/	/	86828						1	1Sc35 Cu hum	
2	80	2	23	09	19	9.2	1.6	59	4.3	1008.0	2	010	01	1	1	1	1	6	3	1	81832						2	1Ac68 2Ci73 Cu hum	
3	80	7	14	11	24	7.6	1.1	63	4.2	1000.5	7	028	02	2	2	2	8	5	0	8	82828	84275	87078			3	COTRA Cu hum Halo 22° part Parhelia U/a cont		
4	84	3	18	11	22	7.7	1.6	66	4.3	996.9	7	032	02	1	1	3	2	5	0	5	83825						4	1Cs78	
5	59	7	20	16	31	9.6	6.4	80	6.2	976.1	5	015	25	8	6	7	8	4	/	/	81715	84820	87640			5	Cu med jpNW		
6	59	8	10	07	18	5.8	4.5	91	5.4	986.5	7	065	63	6	6	7	5	4	2	/	85710	87615	88525			6			
7	82	1	24	10	21	8.9	-0.0	53	3.8	996.5	1	015	01	1	1	1	1	6	0	1	81835						7	1Ci80 Cu hum	
8	62	5	21	17	36	8.3	1.2	61	4.3	975.9	7	017	15	8	1	2	8	6	6	1	82830	84070				8	1Sc50 1Ac62 COTRA Cu med jpNW vv25k ex p		
9	65	5	25	09	21	5.6	1.9	77	4.4	988.3	2	017	27	8	2	3	9	6	6	3	82930	82835				9	1Ac62 2Ci68 jpN&E vv20k ex p Rainbow		
10	86	6	26	09	16	7.5	2.4	70	4.6	992.1	2	008	25	8	1	6	8	5	0	1	82820	85645				10	1Sc56 1Ci72 Cu med jpE		
11	81	1	26	10	21	7.9	-1.0	53	3.6	995.0	1	036	02	1	1	1	2	6	0	0	81835						11	Cu med	
12	62	5	21	18	46	8.9	4.9	76	5.5	984.9	6	055	21	6	2	1	8	5	7	/	81820	85362				12	1Sc40 2Sc50 jpE		
13	84	3	25	11	24	6.8	-1.0	58	3.6	993.5	2	028	02	0	0	3	1	6	0	1	83835						13	1Ci70 Cu hum	
14	68	8	19	10	24	9.4	8.4	94	7.1	983.2	5	065	61	6	6	8	5	4	/	/	82710	87615	88625			14	Veer 140-190 1450		
15	80	5	24	15	30	8.4	2.8	68	4.7	991.9	3	027	25	8	1	4	9	6	6	3	81930	81835	83650			15	2Ac58 1Ci70 jpW		
16	83	2	23	07	14	9.9	0.3	51	3.9	1007.2	8	015	02	0	0	2	2	6	0	1	82838						16	1Ci78 Cu med	
17	80	7	18	10	21	10.3	4.3	66	5.2	1007.2	8	005	15	2	2	1	8	5	7	1	81825	87362				17	1Sc40 /Ci75 Cu med jpN		
18	65	6	21	06	12	9.6	6.6	81	6.1	1007.4	7	009	15	8	1	3	9	4	6	3	82915	83070				18	1Cu20 1Sc45 1Ac60 jpNW		
19	65	8	20	04	09	9.1	6.6	84	6.0	1012.2	8	010	50	6	5	7	5	4	/	/	82715	87620	88625			19			
20	70	6	23	09	20	12.1	4.9	62	5.5	998.2	7	005	15	1	1	4	9	5	6	/	81925	83830				20	1Sc50 2Ac60 jpNW vv50k ex p		
21	82	2	24	11	22	9.7	0.4	52	4.1	1003.5	7	009	02	0	0	2	8	6	0	1	82840					21	1Sc50 1Ci75		
22	82	4	22	09	22	10.3	1.0	53	4.1	1010.8	2	003	02	1	1	2	1	6	0	1	82838	83080				22	COTRA Cu hum		
23	75	7	21	18	35	11.9	6.0	67	5.8	1008.9	7	005	02	2	2	7	5	5	/	1	87625						23	/Sc45 /Ci75	
24	57	8	20	08	21	11.0	7.0	76	6.2	1004.5	6	004	50	5	2	8	8	4	/	/	81715	85820	88630			24			
25	65	6	20	12	25	10.6	3.7	62	5.0	999.4	0	000	25	8	1	2	9	5	6	3	82925	81830	85075			25	1Sc45 1Ac60 jpW to N		
26	82	3	23	08	20	11.2	-0.3	45	3.7	1014.8	1	005	27	8	1	1	2	6	6	2	81845						26	1Ac57 2Ci72 Cu med jpW	
27	80	5	25	09	20	10.1	1.1	53	4.1	1006.3	5	005	15	1	1	1	9	6	6	3	81930	81840	83070			27	1Sc50 2Ac65 jp SW&SE vv60k ex p		
28	68	8	02	11	20	6.1	2.8	79	4.7	999.1	3	030	15	2	2	8	8	4	/	/	86818	88625				28	jpN		

Mean vis = 27.5 km

Mean cloud = 5.1 64%

Mean wind speed = 10.7 kn

Mean gust = 23 kn

Mean TT = 9.0 °C

Mean Td = 2.9 °C

Mean RH = 66.6 %

Mean r = 4.8 g/kg

Mean PPP = 997.9 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

Td = 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 Sunshine Hourly analysis 2014	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
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	0.45	0.93	0.18	0.11	0.18	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.55	0.00	0.10
9	1.00	1.00	0.27	0.00	0.02	0.00	0.20	0.50	0.15	0.31	0.00	0.00	1.00	0.00	0.41	
10	1.00	1.00	0.00	0.00	0.10	0.00	1.00	0.65	0.07	0.07	0.00	0.00	0.62	0.00	0.34	
11	1.00	1.00	0.00	0.35	0.00	0.00	0.87	0.61	0.08	0.75	0.05	0.00	0.63	0.00	0.43	
12	0.88	0.95	0.03	0.60	0.00	0.00	0.65	0.82	0.24	0.22	0.00	0.00	0.74	0.00	0.71	
13	0.82	0.98	0.08	0.52	0.00	0.00	0.65	0.14	0.10	0.62	0.54	0.00	0.59	0.00	0.62	
14	0.62	0.78	0.23	0.44	0.00	0.00	0.62	0.26	0.16	0.33	0.96	0.16	0.95	0.00	0.66	
15	0.80	1.00	0.25	0.23	0.11	0.00	0.94	0.19	0.94	0.23	1.00	0.90	0.60	0.00	0.78	
16	0.24	0.58	0.00	0.00	0.00	0.00	0.28	0.00	0.61	0.44	0.71	0.21	0.18	0.00	1.00	
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	0.02	
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	
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	
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	
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	
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	
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	
Tot	6.82	8.21	1.04	2.25	0.42	0.00	5.21	3.16	2.39	2.97	3.27	1.25	5.86	0.00	5.05	

Hour	16-Feb	17-Feb	18-Feb	19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	28-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	0.45	0.00	0.00	0.00	0.00	0.56	0.54	0.00	0.35	0.00	0.72	0.00	0.00	0.09
8	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	0.12	0.00	0.27
9	1.00	0.00	0.11	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.39
10	1.00	0.00	0.01	0.26	0.00	1.00	1.00	0.00	0.74	0.15	1.00	0.93	0.00	0.39
11	1.00	0.00	0.06	0.09	0.00	0.69	1.00	0.00	0.44	0.46	0.89	0.70	0.14	0.40
12	1.00	0.05	0.00	0.00	0.06	0.84	0.98	0.00	0.36	0.11	0.80	0.87	0.02	0.39
13	0.91	0.00	0.71	0.00	0.41	0.81	0.88	0.00	0.01	0.03	0.72	0.47	0.10	0.38
14	0.91	0.00	0.78	0.00	0.66	0.67	1.00	0.00	0.00	0.51	0.94	0.68	0.00	0.44
15	0.96	0.00	0.43	0.00	0.44	0.52	0.74	0.00	0.00	0.12	0.93	0.60	0.00	0.45
16	0.37	0.00	0.20	0.22	0.10	0.43	0.99	0.00	0.00	0.74	0.59	0.70	0.00	0.31
17	0.04	0.00	0.00	0.00	0.18	0.20	0.00	0.00	0.00	0.17	0.16	0.00	0.00	0.03
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	8.62	0.05	2.32	0.57	1.85	7.71	9.13	0.00	3.90	2.29	8.75	6.07	0.26	99.44

FEBRUARY 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	6.87	9.9	2	3.7	805	74.2	94.4	159	55.7	1209	2.45	4.68	7.1	113	3.7	1209	990.06	996.8	2359	982.4	136
2	6.82	9.6	1402	4.5	2138	73.4	90.4	2320	57.0	1407	2.28	4.50	5.0	2311	4.1	1415	1005.57	1010.7	2115	996.5	2
3	6.19	8.0	1412	4.5	328	78.6	91.8	336	62.4	1357	2.66	4.64	5.1	2359	4.1	1658	1002.53	1009.5	4	996.1	2343
4	5.97	8.4	1920	3.0	555	81.1	91.3	1131	65.0	1510	2.90	4.76	5.5	1236	4.2	553	995.69	1001.0	935	984.3	2348
5	7.64	10.1	1529	3.6	522	77.3	90.4	542	61.4	2011	3.82	5.16	6.4	1434	4.3	2234	981.20	990.6	2358	975.5	1457
6	7.32	9.9	1819	5.5	1533	84.9	95.9	1743	68.3	109	4.87	5.55	7.4	1756	4.4	110	989.08	996.0	933	979.7	2359
7	7.13	9.4	302	3.4	651	81.0	96.1	411	52.9	1503	3.89	5.20	7.2	302	3.7	1626	989.03	996.8	1509	977.1	359
8	7.58	9.5	1240	5.6	1001	75.3	91.2	239	57.9	2213	3.39	5.05	6.7	301	3.8	2228	978.16	985.3	9	975.0	1526
9	6.04	8.1	1330	3.0	2146	67.7	79.1	2213	48.6	1601	0.47	4.05	4.6	516	3.1	1609	985.09	991.0	2317	977.7	323
10	4.88	8.9	1207	1.4	2235	82.9	93.5	839	65.3	1256	2.15	4.53	5.7	1119	3.6	2235	993.15	1001.1	2351	989.2	444
11	4.97	8.1	1507	2.1	0	76.9	90.2	28	49.0	1518	1.11	4.21	5.9	1038	3.2	1553	996.46	1001.8	2351	988.4	1024
12	5.95	9.4	1523	2.4	29	75.1	88.7	1435	59.5	1628	1.80	4.44	5.9	1438	3.4	2320	993.33	1002.9	301	984.4	1518
13	4.88	7.5	1023	2.7	2305	69.6	79.8	2345	55.4	1556	-0.27	3.80	4.6	1023	3.4	1716	992.86	1000.4	2341	988.5	641
14	6.61	12.4	1714	2.6	403	83.3	94.4	1450	65.2	1925	3.93	5.25	7.6	1542	3.7	23	988.48	1000.5	1	973.2	2114
15	7.82	10.9	1317	4.2	2359	69.3	84.8	2359	56.5	1333	2.48	4.64	5.3	1220	4.3	2325	989.39	1002.8	2359	976.1	6
16	5.11	10.3	1444	1.2	739	78.7	95.0	2358	48.6	1521	1.45	4.24	5.0	2026	3.7	1514	1006.89	1009.0	1113	1002.7	1
17	7.29	10.4	1410	3.1	112	84.9	96.6	321	63.1	1443	4.79	5.38	6.2	833	4.5	2	1007.18	1008.9	2237	1005.6	502
18	7.59	10.4	1450	3.8	2247	91.5	96.2	634	79.0	1453	6.29	5.96	6.8	1004	4.7	2243	1008.49	1010.8	2356	1007.1	1449
19	7.17	9.6	1627	3.2	259	91.1	96.7	431	82.3	1828	5.79	5.75	7.0	2346	4.5	259	1011.48	1013.3	1158	1007.9	2356
20	9.19	13.1	1404	4.4	2341	85.1	95.4	412	57.5	1437	6.73	6.26	7.8	1158	4.5	1947	1001.04	1008.1	0	998.0	1514
21	6.03	10.4	1419	2.5	554	74.1	89.8	254	48.0	1408	1.54	4.28	4.7	2150	3.6	1413	1003.52	1004.9	1109	1001.3	0
22	7.49	11.8	1433	3.7	649	71.5	86.1	653	45.3	1523	2.46	4.56	5.5	2314	3.7	1546	1009.28	1012.5	1958	1004.1	5
23	10.33	12.3	1439	8.2	123	75.6	88.0	403	64.2	1634	6.17	5.89	6.3	917	5.3	20	1009.48	1011.5	0	1007.9	0
24	9.82	13.8	1208	7.2	720	78.5	92.9	2005	59.8	1221	6.19	5.95	6.8	2108	5.0	334	1004.31	1008.1	0	999.8	2314
25	7.72	10.6	1458	4.7	2359	80.8	90.8	1022	61.4	1458	4.59	5.34	6.1	339	4.5	1518	1000.29	1006.6	2359	997.3	851
26	6.34	11.4	1454	2.7	451	77.7	94.1	647	44.6	1459	2.42	4.52	5.4	1037	3.6	1337	1012.87	1016.3	1817	1006.5	0
27	7.09	11.2	1240	2.5	2344	75.3	92.7	657	48.8	1247	2.78	4.69	6.0	702	3.7	1625	1006.51	1013.2	0	1003.0	2355
28	4.93	9.0	1302	2.3	51	89.1	96.4	955	71.6	1218	3.26	4.87	6.0	1043	4.1	23	998.83	1004.4	2350	993.4	739

Mean	6.89	10.15		3.63		78.7	91.53		59.07		3.30	4.93	6.06		4.01		998.22	1004.10		992.10	
Max	10.33	13.81		8.23		91.5	96.70		82.30		6.73	6.26	7.80		5.27		1012.87	1016.26		1007.95	
Min	4.88	7.49		1.23		67.7	79.10		44.56		-0.27	3.80	4.59		3.11		978.16	985.29		973.21	

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

WOKINGHAM METEOROLOGICAL DATA

Wokingham Climatological Station, Emmbrook, Berkshire.

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

WINTER 2013/14

Rank in the past 132 years

Seasonal Means and Totals

Temperature (°C)		Rank in the past 132 years	
Mean maximum	9.8	(+1.7)	5 th highest
Mean minimum	3.1	(+1.3)	7 th highest
Daily mean	6.4	(+1.4)	7 th highest
Rainfall total (mm)	378.5	(225 %)	*New highest*
Sunshine total (hours)	256.3	(131 %)	
N° of:			
Dry days	26 (-19)	Wet days	58 (+27)
Days with: Air frost	14 (-17)	Ground frost	44 (-7)
		Snow falling	0 (-10)
		Snow lying	0 (-5)
Thunder	1 (0)	Hail ≥5mm	2 (+1)
		Small hail/ice	9 (+6)
		Fog @09 GMT	3 (-3)
		Nil sun	18 (-11)
Air pressure MSL : Mean @09 GMT (mbar)	1005.5		(-11.1)

Departure from 1981 to 2010 average shown in brackets.

Notes: **New Highest Rainfall, Very Mild, Quite Sunny, Windy at Times**

Temperature: In terms of the mean temperature, this is the mildest winter since the record breaking 2007, and is 0.6° below that record. The mean maximum is 0.2° below the record set in 2008, while the mean minimum is 1.1° below the record set in 2007. Each of this winter's months were mild, and in the case of February, very mild. Interestingly, in terms of the mean maximum, the anomaly for each of the months was within 0.1° (see table below), but in terms of the mean minimum the anomalies for December and January were a modest +0.5° and +0.8° respectively, whilst that of February was much larger at +2.6°. The season's highest max, 13.7° on the 24th February, is 0.2° below the median. The lowest max, 4.9° on the 29th January, is 5.2° above the median and is a new record for the past 101 years. The highest min, 8.9° on the 7th January is 1.0° below the median, and the lowest min -4.7° on the 12th January is 2.8° above the median and highest since 1998. The mean grass min, 0.1°, is 1.3° above average and highest since 1995, while the lowest grass min -9.6° on the 12th January, is highest since 1998. The mean earth temperature at 30 cm depth is 6.5°, 0.8° above average, whilst at 1 m depth the mean of 8.1° is close to average. However, the lowest value at 30 cm, 5.2°, is 2.2° above average and highest since before 1980. The number of air frosts is lowest since 1990, but ground frosts are only lowest since 2007. **Rainfall:** This has been an exceptionally wet winter season, the rainfall total of 378.5 mm being the highest since before 1882, and 42.7 mm above the previous highest in 1915. The total this winter represents 58% of the annual average, instead of a normal just over 25 %. Each of this season's months had an excess of rain, and each had over a 100 mm, but December with 104.8 mm was the least wet, February with 119.8 mm the next wettest, and January with 153.9 mm the wettest. The season's highest daily total was 28.1 mm on the 23rd December, but falls over 20 mm also occurred on the 1st January and the 4th and 6th of February. The 4 days to the 7th February alone were particularly wet, with 59.0 mm, 138 % of the average for the whole of February. It is not surprising to see the number of dry days, 26, is the lowest in the past 37 years. Rainfall duration at 279.6 hours is 118 hours above normal. Flooding has been an ongoing problem in the Borough this winter, especially since the New Year. This is the first winter without any snowfall since before 1909, though there was only 1 day in 4 other years, the last 1989. Hail was more frequent than average, with the 11 days only 1 below the record set in 1970. Thunder was heard on just one day, the 3rd January. The highest rainfall rate was 115 mm/hr on the 1st January. **Sunshine:** The daily mean this season ranks 3rd highest in the past 16 years (since the current sunshine recorder has been in use). Sunshine was above average in each of this season's months. February had the highest daily mean, 3.56 hours, and December the lowest, 2.17 hours. The sunniest day was the 22nd February with 9.1 hours. There were 18 days with nil sun, 2 below the previous lowest in 2012. The daily sunshine distribution shows that there were 50 days with 0 to 3 hours, 26 with 3 to 6 hours, 13 with 6 to 9 hours and 1 with 9 to 12 hours. **Wind:** The mean speed of 8.9 mph this winter makes it windiest since 1995. The windiest day was the 15th February, mean speed 17.5 mph, and the season's highest gust of 63 mph was also on that day. Although 7 mph above average this gust is nowhere near the record of 81 mph which occurred on the 25th January 1990. The least windy day was the 20th January, mean 1.5 mph, and there were 987 minutes (16.5 hours) of calm. Daily mean direction/number of days: N,1 NE,5 E,1 SE,3 S,27 SW,46 W,7 NW,0. Compared with average, winds from S and SW combined were 30.5% more frequent, at the expense of all other directions, but especially for NW, N and NE combined, 21.6% less frequent. **Pressure:** The mean air pressure at 0900 GMT has been exceptionally low this winter, with only December being anywhere near normal. The season's mean of 1005.5 mbar is the lowest since before 1976. The highest pressure was on the 2nd December, 1035.8 mbar, and the lowest 973.2 mbar on the 14th February, a span of 62.6 mbar, 1.2 mbar below average. **Humidity:** The mean relative humidity was 83.8 %, and the lowest value was 45 % on the 26th February. The mean water vapour content per kg of air was 5.1 g at 0900 GMT and 5.2 g at 1500 GMT. **December:** Mild and very wet with above average sunshine and windy at times. Mean max highest since 1994. Lowest max a new record high. 12th wettest in 132 years. 7 days with strong winds. Gust of 56 mph on 23rd. **January:** Extremely wet but also mild and sunny. Mean max 10th highest in 133 years. Rainfall a new high record. Rainfall duration twice the average. Mean pressure lowest since before 1976. **February:** Very wet, very mild, quite sunny, very windy at times. Mean temperature 8th highest in 133 years. Lowest max 4th highest in 102 years. Lowest min equal highest with 1961 in 111 years. 2nd wettest after 1951 in 133 years. 9 days with strong winds. Gust of 63 mph on 15th. Mean pressure lowest for any month since before 1976.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom	Sun hrs	Anom	Mean Wind mph	Max gust	Mean pressure	Anom
December	9.9°	+1.9°	2.6°	+0.5°	104.8	167%	67.3	122%	7.9	56	1015.5	-0.2
January	9.6°	+1.8°	2.6°	+0.8°	153.9	248%	89.3	143%	8.2	51	1002.1	-14.6
February	10.0°	+1.8°	4.1	+2.6°	119.8	279%	99.7	129%	10.7	63	998.3	-19.1

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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 of sand or other similar phenomena, or more often because of the presence of a continuous layer of lower clouds.

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

/ = Cloud type not visible owing to darkness, fog, duststorm, or other analogous phenomena.

hshs = Height of cloud above station level reported by type C

00 to 50 = Height in hundreds of feet

51 to 55 Not used

56 to 80 = Subtract 50 to obtain cloud height in thousands of feet

81 to 88 = Height of cloud between 35000 and 70000 ft in 5000 ft steps.