

WOKINGHAM

METEOROLOGICAL

DATA

Wokingham Climatological Station, Emmbrook, Berkshire.

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

Monthly Means and Totals

DECEMBER 2023

Temperature (°C)		Anomaly	Rank in the past 142 years						
Mean maximum	10.4	+1.9	5th highest						
Mean minimum	5.2	+2.9	4th highest						
Daily mean	7.8	+2.4	4th highest						
Highest maximum	14.9	on 24th	Lowest maximum	2.1	on 1st				
Highest minimum	11.1	on 25th	Lowest minimum	-4.6	on 1st				
Mean grass minimum	2.4	+2.8	Lowest grass minimum	-8.4	on 1st				
Mean earth @30 cm	8.1	+1.2	Earth @100 cm	9.4	+0.1				
Frost duration (hrs)	49.0		Rain duration (hrs)	77.7					
Rainfall total (mm)	85.5	132 %	29th highest						
Highest daily fall	9.4	on 8th	Highest rate mm/hr	120	on 12th				
Number of: Dry days (<0.2mm)	8	Wet days (>0.9mm)	16	days ≥5mm	9				
Sunshine total (hrs)	31.0	Daily mean	1.00	45 %	Sunniest day	4.0	on 8th		
N° days with: Air frost	5	Ground frost	9	Snow falling	0	Snow lying	0		
Thunder	0	Hail ≥5mm	0	Small hail/ice	0	Fog @09	2	Nil sun	11
Pressure MSL : Mean @09 GMT, mbar	1011.4	-4.2	Highest	1040.4	on 16th	Lowest	985.0	on 31st	
Relative humidity : Mean (%)	87.9	Lowest	56	on 21st	Water vapour (g/kg), mean at 09 and 15 GMT	6.0,	6.1		
Overall mean wind speed (mph)	8.9	Windiest day	15.8	on 24th	Max gust	50	on 21st		
Wind direction (days)	N 2	NE 0	E 1	SE 1	S 3	SW 17	W 4	NW 3	
Least windy day (mph)	3.0	on 1st	Calm; less than 0.5 mph (minutes)	n/a					

Anomaly = departure from 1991 to 2020 average (degrees C, percent and mbar).

Notes :

Very Mild, Wet, Very Dull.

This December started with a few days of cold weather, with the lowest temperatures of the month on the 1st. Values returned to normal after the 3rd, and were mostly above normal after the 8th, with a prolonged mild spell from the 17th to the 30th. **Temperature:** The mean this December is 2.4° above average, and ranks 4th highest in the past 142 years after 1934, 1974 and 2015. The record holder, 2015, had a mean of 10.9°, a remarkable 3.1° higher than this month's value. Both the mean maximum and minimum are also highest since 2015. The highest max is 1.8° above the median and ranks 5th highest in 120 years. The lowest max is 0.5° above its median. The highest min is 1.9° above the median while the lowest min is 0.5° above its median. The mean grass min is 2.8° above average and the month's lowest value is 1.8° above the average for the past 45 years. Earth temperature at 30 cm depth is 1.2° above average and is highest since 2015, but at 1 m depth the mean is close to average. There were 5 fewer air frosts than average but 3 recent years had even fewer, including 2015 when there were none. The duration of air frost, 49.0 hours, is 41.7 hours below average. Anomalies for daily max were above +5° on the 9th, 21st and 24th, and exceeded -5° on the 1st, with extreme values of +6.6 on the 24th and -6.8° on the 1st. Anomalies for daily min were above +7° on the 19th, 24th, 25th and 28th and exceeded -7° on the 1st, with extreme values of +8.5° on the 25th and -7.5° on the 1st. **Rainfall:** The total this December is 18.4 mm above average and puts the month squarely into the wet category. So far in this millennium, 6 Decembers have been wetter than this one, the last in 2019. The total of 9.4 mm on the month's wettest day is surprisingly low for a wet month, 5.5 mm below average, and 27th lowest in 120 years. The number of dry days is 8 below average, and is least for the month since 1993. Also, the 9 days with =>5 mm is equal highest with 2012 and 2000 since 1989. There was no snow, hail or thunder this December. There have been 16 Decembers without snowfall in the past 48 years, but 11 of those have been in this millennium. Daily rainfall accumulation compared with normal was 17 mm in surplus by the 11th, decreasing to 8 mm by the 17th, but increasing to 15 mm by the 19th, then back down to 4 mm by the 26th, only to increase to 20 mm by the 31st. **Sunshine:** This December has been exceptionally dull, the total of 31.0 hours being 2nd lowest in this millennium after 24.4 hours in 2010. Also, the 4.0 hours on the month's sunniest day is by far the lowest for any month in this millennium. There were no days having over 50 % of the maximum, and 23 had less than 20 %. Daily accumulation compared with normal was 9 hours in deficit by the 11th, increasing to 29 hours by the 25th and to 37 hours by the 31st. Overall there were 28 days with <3 hours and none with =>6 hours. **Wind:** The mean speed is 1.5 mph above average and highest for December since 2015. The mean speed on the windiest day is also highest since 2015. The month's highest gust is near average. Daily mean directions were mainly between S and W, except from between W and N on 1st, 5th to 7th and 13th, and between E and S on 3rd and 4th. Mean speeds were mainly light until the 7th, increasing to strong on the 9th, decreasing to fresh for the 10th and 11th, then to light or moderate until the 20th, but fresh on the 17th, becoming strong on the 21st and remaining fresh or strong until the 31st, apart from moderate on the 26th.

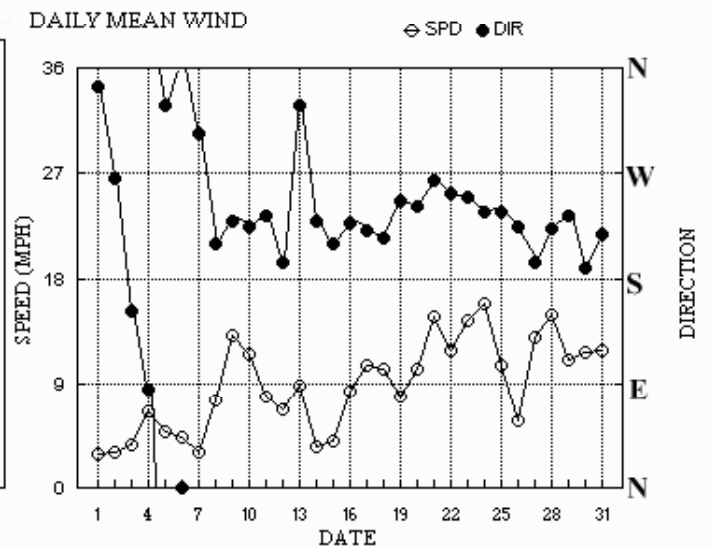
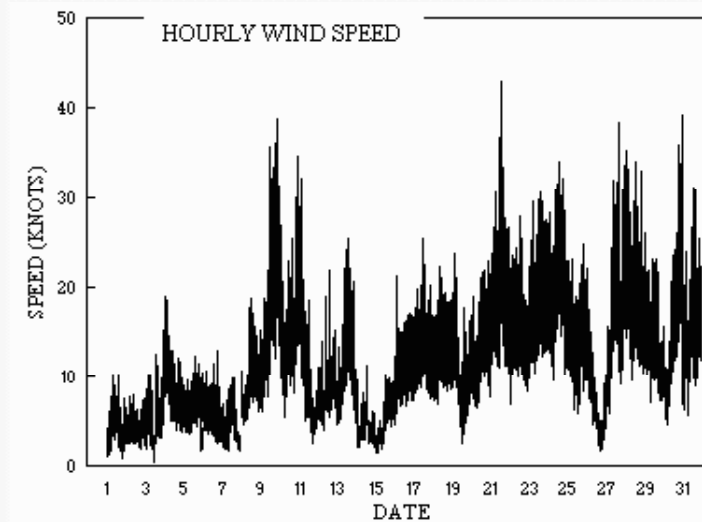
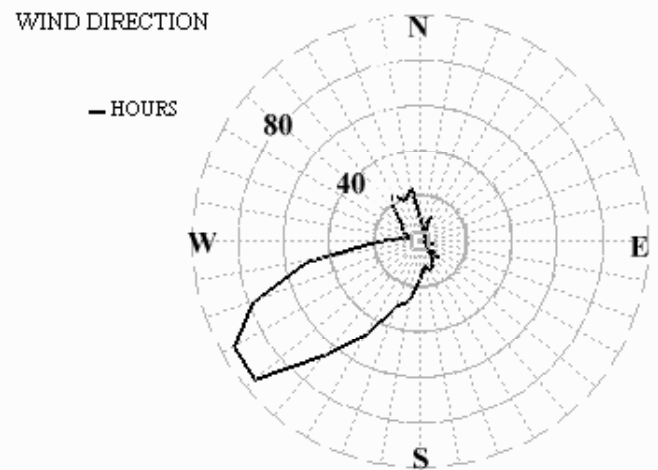
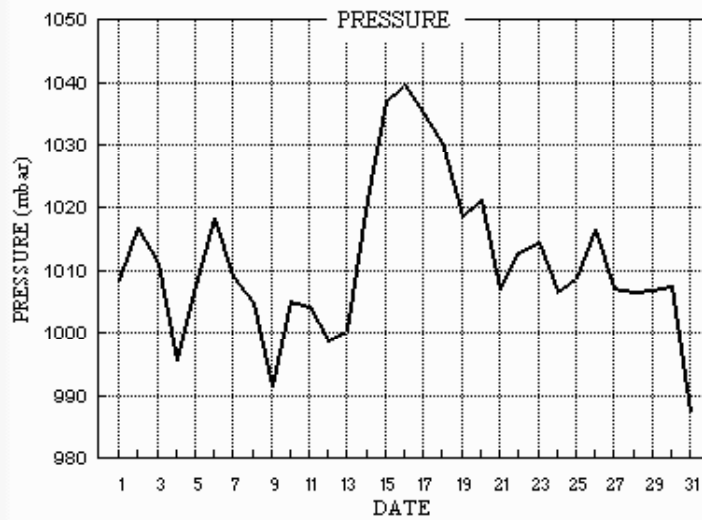
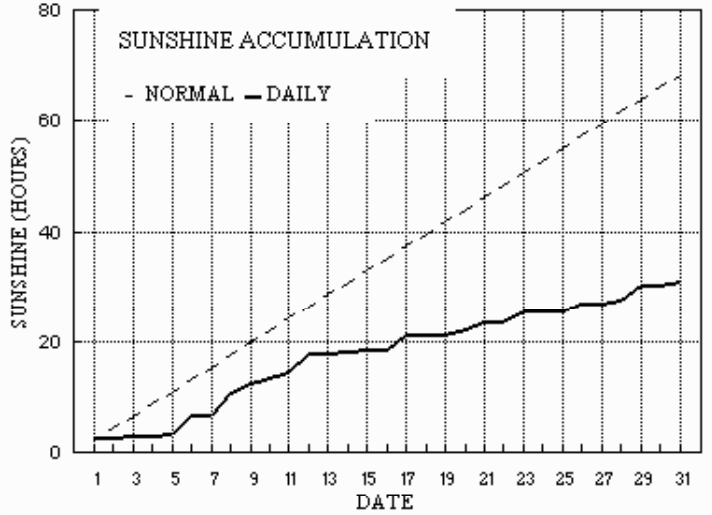
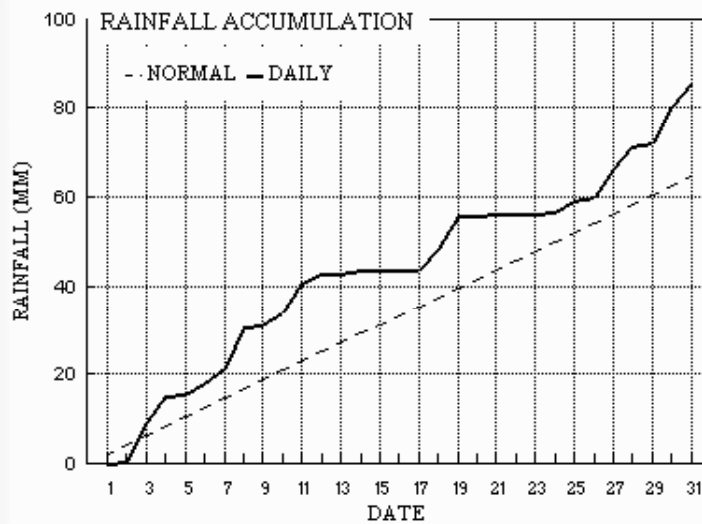
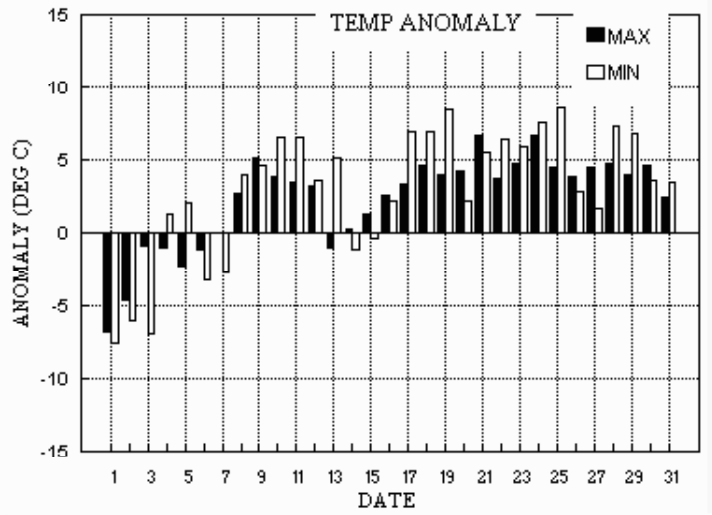
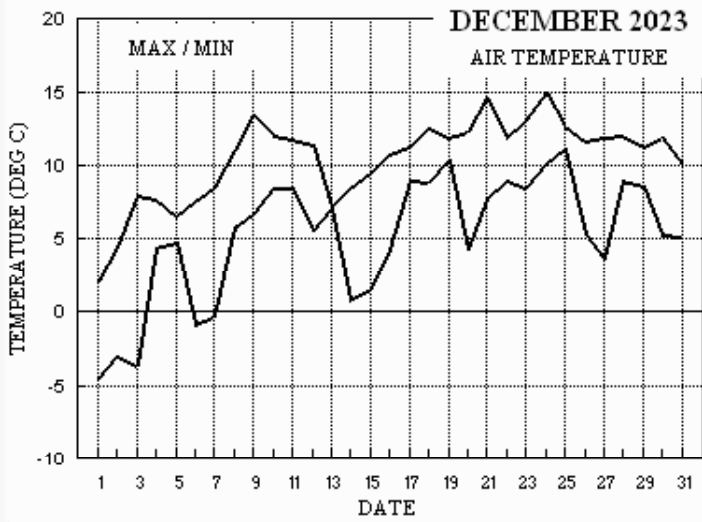
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 31 st			
-0.5°	-0.8°	163%	61%	+2.6°	+4.0°	105%	40%	+4.6°	+5.4°	130%	35%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for December 2023



Daily meteorological data.

Emmbrook, WOKINGHAM, Berkshire.

Month: DECEMBER 2023

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf SI	Th Ha	Ic Fg	Vec mean ddd ff sp	Max gust ddd gg HHhh	High hr ddd ff	Rain HH hrs
1	2.1	-4.6	0.0	-8.4	6.7	10.2	2.9	18.6	1008.3	1 1 0 0	0 0 0 0	0 0 0 0	343 2.2 2.6	352 10 0635	13 5	13 0.0	
2	4.4	-3.0	0.3	-7.5	6.1	9.9	0.0	24.0	1016.7	1 1 0 0	0 0 0 1	265 0.6 2.7	260 8 0855	74 4	22 0.6		
3	8.0	-3.6	9.0	-5.5	6.1	9.6	0.3	2.3	1011.1	1 1 0 0	0 0 0 0	153 3.0 3.3	139 15 2325	191 6	13 10.2		
4	7.7	4.4	5.9	4.6	6.8	9.3	0.0	0.0	995.5	0 0 0 0	0 0 0 0	85 4.0 5.7	121 19 0105	120 9	02 12.9		
5	6.5	4.8	0.3	4.9	7.4	9.2	0.2	0.0	1007.5	0 0 0 0	0 0 0 0	327 4.1 4.2	348 13 1349	324 6	14 1.4		
6	7.5	-0.8	2.5	-4.8	7.3	9.2	3.4	4.1	1018.2	1 1 0 0	0 0 0 1	1 3.7 3.8	337 13 1823	352 5	14 2.2		
7	8.5	-0.4	3.3	-2.7	6.9	9.1	0.0	0.0	1009.0	1 1 0 0	0 0 0 0	304 2.3 2.8	328 10 1425	317 5	13 3.4		
8	11.0	5.8	9.4	0.3	7.2	9.1	4.0	0.0	1004.7	0 0 0 0	0 0 0 0	210 6.5 6.5	231 19 1156	226 8	11 5.9		
9	13.4	6.6	0.2	4.8	7.3	9.0	1.8	0.0	991.5	0 0 0 0	0 0 0 0	229 9.1 11.5	261 39 2147	254 18	21 0.4		
10	12.0	8.5	3.0	4.3	7.6	9.0	0.9	0.0	1005.0	0 0 0 0	0 0 0 0	224 9.4 10.0	239 35 2203	225 14	21 2.4		
11	11.8	8.5	6.6	4.4	7.8	9.0	1.2	0.0	1004.3	0 0 0 0	0 0 0 0	233 5.9 6.9	250 32 0219	242 15	01 2.6		
12	11.4	5.5	2.3	0.2	8.1	9.1	3.3	0.0	999.0	0 0 0 0	0 0 0 0	194 5.3 5.9	229 22 1314	226 8	21 1.2		
13	7.2	7.1	0.1	5.1	8.0	9.1	0.0	0.0	1000.4	0 0 0 0	0 0 0 0	328 7.2 7.6	344 26 1346	327 11	14 1.8		
14	8.5	0.8	0.5	-2.5	7.9	9.1	0.4	0.0	1021.1	0 1 0 0	0 0 0 0	228 2.7 3.2	227 11 1247	307 6	00 1.3		
15	9.5	1.6	tr	-1.8	7.7	9.2	0.2	0.0	1036.9	0 1 0 0	0 0 0 0	210 3.5 3.6	234 10 1333	220 5	13 0.0		
16	10.7	4.2	tr	0.1	7.6	9.1	0.0	0.0	1039.7	0 0 0 0	0 0 0 0	227 7.2 7.3	224 21 0321	225 8	03 0.0		
17	11.3	8.9	0.0	7.1	8.2	9.1	2.6	0.0	1035.1	0 0 0 0	0 0 0 0	221 9.1 9.2	222 26 1223	213 12	11 0.0		
18	12.5	8.8	4.9	5.1	8.4	9.1	0.0	0.0	1030.3	0 0 0 0	0 0 0 0	215 8.9 8.9	220 22 0924	209 11	10 3.5		
19	11.9	10.4	7.4	11.9	9.0	9.2	0.0	0.0	1018.6	0 0 0 0	0 0 0 0	246 5.3 6.8	225 24 0356	222 11	01 5.0		
20	12.2	4.2	tr	1.1	8.7	9.3	1.2	0.0	1021.2	0 0 0 0	0 0 0 0	241 8.8 8.9	243 23 2113	246 11	18 0.0		
21	14.6	7.7	0.4	8.0	8.6	9.3	1.2	0.0	1006.8	0 0 0 0	0 0 0 0	263 12.5 12.8	266 43 1232	281 18	12 0.7		
22	11.9	8.9	0.0	7.4	8.8	9.4	0.2	0.0	1013.0	0 0 0 0	0 0 0 0	253 10.2 10.3	270 28 1358	263 12	14 0.0		
23	13.0	8.5	tr	5.8	8.8	9.4	1.8	0.0	1014.3	0 0 0 0	0 0 0 0	249 12.4 12.5	260 31 1452	253 15	15 0.1		
24	14.9	10.1	0.7	8.5	9.0	9.5	0.0	0.0	1006.5	0 0 0 0	0 0 0 0	237 13.7 13.7	231 34 1429	237 17	13 0.7		
25	12.6	11.1	2.2	10.0	9.7	9.5	0.0	0.0	1008.7	0 0 0 0	0 0 0 0	237 9.1 9.2	246 25 1905	233 12	02 2.7		
26	11.6	5.2	1.1	-0.4	9.8	9.6	1.5	0.0	1016.4	0 1 0 0	0 0 0 0	224 3.8 5.1	254 22 0055	251 10	00 2.9		
27	11.9	3.6	6.0	-0.4	9.0	9.8	0.0	0.0	1007.1	0 1 0 0	0 0 0 0	194 10.2 11.2	213 39 1609	215 16	23 4.8		
28	12.0	9.0	5.4	6.1	9.2	9.8	0.5	0.0	1006.5	0 0 0 0	0 0 0 0	222 12.9 13.0	215 36 0130	221 17	01 2.4		
29	11.2	8.6	0.6	5.7	9.2	9.8	2.8	0.0	1006.8	0 0 0 0	0 0 0 0	234 9.5 9.6	209 26 0155	222 12	01 1.1		
30	11.9	5.2	7.9	1.1	8.8	9.8	0.0	0.0	1007.4	0 0 0 0	0 0 0 0	189 10.0 10.2	186 39 2338	184 17	23 5.1		
31	10.0	5.1	5.5	1.9	9.0	9.7	0.6	0.0	987.3	0 0 0 0	0 0 0 0	218 9.9 10.3	224 31 1448	225 13	12 2.4		
Total			85.5				31.0	49.0									77.7
Mean	10.4	5.2		2.4	8.1	9.4	1.00	1.6	1011.4					232 5.8 7.7			
Anom	+1.9	+2.9	132%	+2.8	+1.2	+0.1	45%		-4.2								
Daily mean		7.8															
Anom		+2.4															

Number of days with:

Air frost = 5 Ground frost = 9 Nil sun = 11
Snow falling = 0 Snow lying = 0 Thunder = 0
Hail=>5mm = 0 Hail<5mm or ice = 0 Fog at 09GMT = 2

Abbreviations.

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

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

Grass min = Lowest overnight temperature at grass tip level.

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

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

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

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

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

Sp = 24 hour mean wind speed in knots.

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

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

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

Maximum daily rain rate in mm/hr

All temperatures in degrees Celsius.

Anomaly - Departure from the 1991 to 2020 climatological average

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for DECEMBER 2023

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks						
1	58	8	36	04	08	-0.8	-1.1	98	3.5	1008.3	2	013	10	2	2	8	6	3	/ /	88706	1	Hoar thk Gnd sfc frzn Wind est, 1st onwards				
2	02	9	27	05	09	-2.0	-2.1	99	3.2	1016.7	2	015	49	4	4	9	/ / / /			2	Rime slt Gnd sfc frzn					
3	50	8	14	04	08	4.4	4.0	97	5.0	1011.1	7	007	10	2	2	3	5	3	7	7	81706	83650	85462	3	1Ac60 8Cs68 COTRA	
4	50	8	12	07	13	6.9	6.5	97	6.1	995.5	6	009	50	6	5	8	5	2	/ /	87704	88615		4			
5	56	8	34	03	08	4.9	4.3	96	5.2	1007.5	2	028	61	6	6	7	5	3	2	/	83709	85618	88525	5	Wind Ok from 5th onwards	
6	01	0	18	01	02	-0.4	-0.4	100	3.7	1018.2	5	000	48	4	0	0	0	9	0	0				6	VV 150m Rime slt	
7	75	8	15	11	22	7.5	5.6	88	5.7	1009.0	7	018	01	6	2	7	5	3	1	/	82708	87640		7	/As65	
8	58	1	21	07	10	6.7	6.3	97	5.9	1004.7	2	012	10	0	0	0	0	9	0	1		81070			8	1Ci75
9	50	8	17	10	22	10.0	9.4	96	7.5	991.5	7	059	63	6	6	7	7	2	2	/	82705	87707	88520	9		
10	59	7	21	08	15	9.7	7.3	85	6.4	1005.0	7	021	05	2	2	1	6	4	7	1		81713	87362		10	1Sc25 /Ci75
11	82	7	22	06	09	9.2	6.3	82	6.0	1004.3	1	030	03	1	1	7	5	5	/	1		81625	87630		11	/Ci75
12	58	5	20	04	08	9.2	8.9	98	7.2	999.0	7	012	10	6	1	1	8	4	3	9		81810	84178		12	1Sc30 1Ac58 COTRA Cu fra/hum
13	50	8	32	10	18	7.1	5.7	91	5.8	1000.4	2	023	50	5	2	8	5	3	/ /		84706	86710	88615	13		
14	70	8	20	02	06	3.8	1.8	87	4.3	1021.1	2	010	21	6	2	8	5	5	/ /		81620	88635		14		
15	68	7	25	02	04	4.2	3.9	98	4.9	1036.9	2	035	03	1	1	7	5	6	/ /		81640	87645		15		
16	56	7	24	07	15	9.3	8.5	95	6.7	1039.7	2	008	20	5	2	7	6	2	/ /		87704			16	jp NW	
17	75	7	21	11	20	9.2	6.5	83	5.9	1035.1	3	003	02	2	2	7	5	4	/ /		87615			17		
18	82	8	22	10	18	10.4	7.1	80	6.1	1030.3	3	001	02	2	2	7	5	4	/ 8		81618	87622		18	/Cs68	
19	35	8	24	06	13	11.9	11.4	97	8.3	1018.6	6	010	61	6	6	8	7	2	/ /		87703	88705		19		
20	80	7	24	09	16	7.7	5.5	86	5.6	1021.2	0	000	03	1	1	7	5	4	/ 2		82615	86635		20	4Ci72	
21	80	7	24	12	26	11.5	9.6	88	7.4	1006.8	7	011	20	5	2	7	5	4	/ /		83612	87620		21	vv60k NW, 30k SE	
22	88	7	25	11	22	10.8	7.3	79	6.3	1013.0	1	015	02	2	2	7	5	5	/ /		85620	86630		22		
23	82	7	25	12	23	10.1	6.4	78	6.0	1014.3	5	000	02	2	2	3	8	5	0	1		81820	83635	86081	23	3Cc75 Cu fra COTRA
24	68	8	23	15	31	12.7	10.8	88	8.1	1006.5	7	004	02	5	2	8	6	4	/ /		87613	88618		24		
25	86	7	24	08	18	11.1	9.7	91	7.5	1008.7	2	013	01	6	2	5	5	3	7	8		82707	84640	86362	25	/Cs72
26	75	1	21	04	10	5.4	3.9	90	5.0	1016.4	2	038	03	0	0	1	5	6	0	5		81635			26	1Cs75 1Ci80 COTRA
27	62	8	19	13	24	11.6	9.2	85	7.2	1007.1	7	023	02	6	2	8	5	4	/ /		83610	86615	88620	27		
28	65	7	22	10	20	9.9	7.5	85	6.5	1006.5	2	015	25	8	1	2	8	4	3	1		81712	87080		28	1Cu015 2Sc035 1Ac180 COTRA Cu med jpE vv30k ex p
29	80	7	23	08	12	8.6	6.2	85	5.9	1006.8	2	010	01	8	2	3	8	4	7	1		81815	83630	87078	29	3Ac59 COTRA Cu fra/hum
30	58	8	18	08	14	9.2	8.4	95	6.9	1007.4	8	014	21	6	2	7	7	3	2	/	82706	86709	88462	30	3Sc40	
31	80	5	21	09	16	6.9	4.6	85	5.4	987.3	0	002	02	1	1	1	5	6	6	3		81635	84072		31	1Ac59 COTRA Cb tops S&SW

Mean vis = 19.5 km

Mean cloud = 6.7 84%

Mean wind speed = 7.6 kn

Mean gust = 15 kn

Mean TT = 7.6 °C

Mean TdTd = 6.1 °C

Mean RH = 90.3 %

Mean r = 6.0 g/kg

Mean PPP = 1011.4 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

r = Humidity mixing ratio at 1.2 m, g/kg

PPP = Air pressure reduced to sea level, mbar

a = Characteristic of pressure tendency (Code FM12-0200)

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

W1, W2 = Past weather code (Code FM12-4561)- covers past 3 hours.

Nh = Amount of low cloud present, oktas

Cl = Type of low cloud (Code Fm12-0513)

h = Height of low cloud (Code FM12-1600)

Cm = Type of medium cloud (Code FM12-0515)

Ch = Type of high cloud (Code FM12-0509)

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for DECEMBER 2023

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NCh	shs	NCh	shs	Date	Remarks
1	62	1	36	03	08	1.9	0.0	87	3.8	1008.8	3	003	02	1	1	1	0	8	4	0	81357						1	Wind est from 1st onwards
2	05	8	24	03	06	-1.7	-1.8	99	3.3	1017.4	2	005	48	4	4	8	6	0	/	/	88701						2	Rime slt
3	75	7	18	06	12	7.4	6.2	92	5.9	1008.6	7	017	25	8	2	6	8	5	7	/	81820	85640	87362			3	Cu med jpS	
4	58	8	06	04	09	7.0	6.6	97	6.1	994.2	6	008	61	6	2	7	7	3	2	/	87704	88520				4		
5	80	7	34	05	12	5.9	4.7	92	5.3	1011.9	2	022	61	6	2	7	5	4	1	/	82712	86620	87459			5	Wind OK from 5th onwards	
6	50	7	09	02	04	4.4	3.8	96	5.0	1017.1	7	012	10	1	1	1	5	4	0	6	81612	87278				6	1Sc45 COTRA	
7	65	8	14	12	25	6.8	5.6	92	5.7	1002.2	7	038	61	6	6	7	7	3	2	/	87708	88545				7		
8	63	7	22	07	17	10.2	6.7	79	6.1	1005.4	2	004	01	2	2	7	0	9	1	2	87467	87072				8		
9	67	2	26	13	32	11.3	6.2	71	6.0	992.8	1	030	02	1	1	1	8	5	0	1	81825					9	1Sc40 1Ci70 Cu hum	
10	72	3	24	09	21	11.7	9.8	88	7.6	997.3	5	025	01	6	1	2	2	4	3	0	82818					10	2Ac62 Cu med	
11	83	6	25	03	11	10.5	5.9	73	5.8	1006.5	2	007	02	2	2	6	5	5	0	0	86625					11		
12	84	6	21	06	13	9.3	7.9	91	6.7	994.3	7	027	01	8	2	1	8	4	6	3	81815	85071				12	1Sc35 1Ac61 Cb tops E, SE&NW	
13	50	8	33	11	23	5.9	4.7	92	5.3	1006.7	2	027	58	6	5	8	5	3	/	/	85708	87712	88618			13		
14	83	5	24	03	11	8.5	7.3	92	6.3	1022.3	2	010	21	6	2	5	5	4	0	0	81615	85635				14	jpE Rainbow part	
15	72	7	22	05	09	8.5	4.3	75	5.0	1037.8	3	002	03	2	2	7	5	6	/	/	87638					15		
16	75	8	23	06	13	10.5	9.4	93	7.1	1038.0	7	013	20	5	2	8	6	3	/	/	88707					16		
17	82	7	23	09	23	10.4	6.5	77	5.9	1032.8	6	011	03	1	1	7	5	5	/	/	87620					17		
18	64	8	21	09	20	12.0	9.2	83	7.1	1027.0	7	014	15	2	2	8	5	4	/	/	88613					18	jpN	
19	70	8	30	05	10	9.1	8.3	95	6.8	1019.5	3	008	80	6	2	7	8	3	2	/	83808	87622	88460			19	vv60k N	
20	86	8	25	10	21	10.5	7.2	80	6.3	1016.9	7	027	03	2	2	7	5	5	7	/	85620	87630				20	/Ac58	
21	86	6	27	15	36	13.1	6.0	62	5.8	1007.7	2	006	02	8	1	5	4	5	0	1	82828	84640				21	3Ci80	
22	84	7	27	13	26	11.8	5.4	65	5.6	1014.1	3	006	02	2	2	7	5	5	/	1	86628	87640				22	/Ci78	
23	86	6	26	15	31	10.9	6.6	75	6.1	1013.2	6	008	02	2	2	6	8	4	0	1	82818	85625				23	2Sc40 4Ci81 Cu hum COTRA	
24	80	8	24	16	34	13.2	10.6	84	8.0	1005.1	7	005	20	5	2	8	5	4	/	/	87614	88620				24		
25	50	8	24	08	13	11.2	10.6	96	8.0	1006.8	7	021	51	6	2	8	7	5	/	/	87706	88710				25		
26	75	7	23	02	06	8.0	4.9	81	5.4	1018.4	1	002	02	2	2	1	0	9	7	8	81369	87272				26		
27	58	8	19	18	32	11.7	10.3	91	7.9	999.5	7	044	61	6	2	7	5	3	2	/	81709	87615	88530			27		
28	63	7	22	15	34	12.1	8.0	76	6.7	1004.5	6	014	15	8	2	6	8	5	3	1	83820	85635				28	4Ac62 /Ci75 Cu fra/med jpS&SW	
29	86	7	25	09	23	10.2	6.0	75	5.8	1006.8	3	004	02	8	2	4	8	5	7	/	82820	83630	85368			29	Cu med	
30	70	8	20	12	24	11.7	8.6	81	7.0	1001.4	6	036	02	5	2	6	8	4	3	7	82816	85625	88270			30	2Ac65 Cu hum	
31	60	7	25	12	31	8.0	5.3	83	5.7	988.9	3	013	80	8	2	5	9	4	6	3	81715	85920				31	1Ac60 2Ci68	

Mean vis = 26.3 km

Mean cloud = 6.7 84%

Mean wind speed = 8.6 kn

Mean gust = 19 kn

Mean TT = 9.1 °C

Mean TdTd = 6.5 °C

Mean RH = 84.3 %

Mean r = 6.1 g/kg

Mean PPP = 1010.4 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

r = Humidity mixing ratio at 1.2 m, g/kg

PPP = Air pressure reduced to sea level, mbar

a = Characteristic of pressure tendency (Code FM12-0200)

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

W1, W2 = Past weather code (Code FM12-4561)- covers past 3 hours.

Nh = Amount of low cloud present, oktas

Cl = Type of low cloud (Code Fm12-0513)

h = Height of low cloud (Code FM12-1600)

Cm = Type of medium cloud (Code FM12-0515)

Ch = Type of high cloud (Code FM12-0509)

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Wokingham Sunshine Hourly analysis 2023	Hour	01-Dec	02-Dec	03-Dec	04-Dec	05-Dec	06-Dec	07-Dec	08-Dec	09-Dec	10-Dec	11-Dec	12-Dec	13-Dec	14-Dec	15-Dec	16-Dec
	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	0.00	0.00	0.00	0.17	0.00	0.36	0.00	0.00	0.19	0.54	0.00	0.00	0.00	0.00
	9	0.00	0.00	0.00	0.00	0.00	0.36	0.00	1.00	0.00	0.00	0.00	0.95	0.00	0.00	0.00	0.00
	10	0.01	0.00	0.00	0.00	0.00	0.63	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.68	0.00	0.00	0.00	0.00	0.05	0.00	1.00	0.00	0.00	0.15	0.35	0.00	0.00	0.00	0.00
	12	0.11	0.00	0.00	0.00	0.00	0.27	0.00	0.28	0.51	0.00	0.25	0.43	0.00	0.00	0.00	0.00
	13	0.33	0.00	0.29	0.00	0.15	1.00	0.00	0.32	0.36	0.01	0.15	0.00	0.00	0.00	0.00	0.00
	14	1.00	0.00	0.05	0.00	0.00	0.89	0.00	0.00	0.86	0.43	0.32	0.46	0.00	0.00	0.23	0.00
	15	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.46	0.13	0.58	0.00	0.38	0.00	0.00
	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot		2.87	0.00	0.34	0.00	0.15	3.38	0.00	3.96	1.75	0.91	1.18	3.30	0.00	0.38	0.23	0.00

Hour	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec	22-Dec	23-Dec	24-Dec	25-Dec	26-Dec	27-Dec	28-Dec	29-Dec	30-Dec	31-Dec	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	0.01	0.00	0.39	0.00	0.05	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.07	0.06
9	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00	1.00	0.00	0.03	0.16	0.00	0.18	0.14
10	0.40	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.18	0.00	0.04	0.55	0.00	0.03	0.12
11	1.00	0.00	0.00	0.12	0.00	0.00	0.28	0.00	0.00	0.02	0.00	0.00	0.74	0.00	0.22	0.15
12	0.82	0.00	0.00	0.69	0.51	0.00	0.01	0.00	0.00	0.00	0.00	0.36	0.77	0.00	0.09	0.16
13	0.34	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.02	0.00	0.01	0.11
14	0.03	0.00	0.00	0.00	0.33	0.15	0.00	0.00	0.00	0.16	0.00	0.00	0.57	0.00	0.00	0.18
15	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	2.58	0.01	0.00	1.20	1.17	0.20	1.82	0.00	0.00	1.53	0.00	0.54	2.82	0.00	0.60	30.90

DECEMBER 2023	T mn	Tx	Time	Tn	Time	RHmn	RH x	Time	RH n	Time	Tdmn	r mn	r x	Time	r n	Time	p mn	p x	Time	p n	Time	R tot
1	-1.31	2.1	1324	-4.6	409	95.9	99.1	510	86.0	1521	-1.9	3.3	4.0	1130	2.7	409	1009.06	1013.6	2347	1006.1	9	0.1
2	-1.99	-0.7	141	-3.6	2145	99.0	99.9	1113	97.2	248	-2.1	3.2	3.5	143	2.9	2145	1016.20	1017.8	1654	1013.3	113	0
3	4.95	8.0	1334	-2.4	7	95.6	99.6	208	90.9	1349	4.3	5.2	6.2	1938	3.1	1	1009.64	1015.6	0	1002.3	2355	3.4
4	6.54	7.7	1151	5.2	2327	96.9	98.2	2018	94.5	130	6.1	5.9	6.4	1148	5.4	2352	996.87	1002.4	1	994.0	1439	7.4
5	5.06	6.5	1317	2.8	2131	94.0	97.8	9	87.3	1331	0.0	5.1	5.4	8	4.4	2130	1009.38	1017.1	2359	1000.6	0	2
6	2.38	4.5	2351	-0.8	651	97.3	100.0	1028	90.6	148	0.0	4.4	5.0	1307	3.5	652	1017.35	1018.8	1035	1014.8	2340	0
7	7.20	8.5	2359	4.4	0	91.2	98.1	2332	77.2	1128	5.8	5.8	6.8	2335	4.9	1	1006.05	1015.0	0	999.3	2052	4.9
8	8.24	11.0	1310	5.7	751	89.6	98.2	605	78.4	1402	6.6	6.1	6.7	1052	5.6	751	1004.50	1006.5	2152	1000.8	1	0.2
9	10.15	13.5	1241	7.7	121	81.7	97.2	1052	63.9	2131	7.0	6.4	8.9	1134	5.0	2128	996.84	1005.5	5	989.6	1131	8.7
10	9.88	12.0	1434	8.5	454	83.0	95.9	1351	67.4	1	7.1	6.3	8.3	1430	5.0	5	1001.59	1007.5	459	996.7	1408	2.8
11	9.34	11.8	1203	5.5	1827	82.5	97.4	2351	67.0	1214	6.4	6.0	6.9	2358	5.3	1828	1003.97	1006.9	1829	997.4	53	0.3
12	8.98	11.4	1218	7.0	759	94.5	99.2	808	83.1	1226	8.1	6.8	7.8	403	6.1	2145	997.30	1004.7	0	993.4	1704	7.9
13	6.72	8.0	138	5.0	2225	88.1	96.1	104	81.7	2059	4.9	5.4	6.5	118	4.5	2224	1004.46	1017.0	2358	994.5	23	0.40
14	4.86	8.5	1459	0.8	346	92.5	98.8	1822	82.7	29	3.7	5.0	6.3	1459	3.8	345	1022.41	1029.5	2359	1016.8	8	0.5
15	5.85	8.6	1334	1.6	741	87.8	98.3	804	73.6	1431	3.9	4.9	5.3	1258	4.0	741	1036.30	1040.0	2332	1029.5	0	0
16	9.64	10.7	1253	6.8	9	92.3	96.7	833	87.7	5	8.5	6.7	7.2	1417	5.2	9	1038.84	1040.4	1015	1037.5	2358	0
17	9.94	11.3	1256	8.9	531	81.3	91.3	0	72.6	1202	6.9	6.0	6.7	1	5.8	809	1034.13	1037.7	0	1031.9	2355	0
18	11.01	12.4	2333	8.8	214	83.8	90.2	2356	76.7	1040	8.4	6.7	7.9	2356	5.9	632	1028.17	1032.2	6	1022.7	2353	0
19	9.04	12.5	122	4.3	2123	92.8	97.4	1148	86.1	1537	7.9	6.7	8.4	846	4.6	2123	1020.71	1023.1	16	1018.3	842	11.3
20	8.32	10.8	2332	4.8	222	85.2	91.8	707	77.6	1220	6.0	5.8	6.9	2356	4.7	108	1018.74	1022.5	0	1012.3	2357	0.1
21	11.57	14.6	1248	9.9	2324	72.4	91.6	827	55.6	1252	6.6	6.1	7.4	830	4.7	2244	1009.22	1013.0	2338	1006.3	1129	0.2
22	10.50	11.9	1316	8.6	2352	75.9	90.2	150	64.3	1526	6.4	6.0	6.7	523	5.1	1	1013.92	1017.0	2154	1011.1	613	0.2
23	10.26	11.7	1108	8.5	9	79.1	85.7	2336	71.4	1118	6.8	6.1	6.9	2359	5.5	43	1013.51	1016.5	2	1009.3	2358	0
24	12.90	14.9	1239	11.1	6	86.5	94.6	607	76.5	1259	10.7	8.0	8.4	953	7.0	1	1006.67	1009.6	0	1004.6	1510	0
25	11.58	13.0	201	9.2	2340	90.6	97.1	1615	81.8	1100	10.1	7.7	8.2	704	6.4	2358	1007.49	1009.5	958	1005.8	1811	2.6
26	6.60	9.5	31	3.6	1947	86.8	97.3	2026	77.5	141	4.5	5.2	6.5	0	4.7	1945	1015.79	1019.4	1709	1008.6	5	0.1
27	10.06	11.9	1536	6.1	120	89.4	97.2	438	72.4	2322	8.4	6.9	8.0	1611	5.1	1	1005.85	1016.4	0	998.7	1540	4.7
28	10.50	12.0	1504	9.2	2302	82.2	92.9	1653	73.9	523	7.6	6.5	7.3	1655	5.5	2300	1005.19	1006.9	838	1002.9	113	6.3
29	8.81	11.2	1248	5.3	2319	81.0	90.8	2320	69.4	1658	5.7	5.7	6.8	1109	5.0	2318	1007.42	1011.5	2357	1005.0	446	0.1
30	9.40	11.9	2249	5.3	158	87.8	95.9	847	79.0	2309	7.5	6.5	7.5	1748	4.9	243	1003.39	1011.8	243	988.6	2329	3
31	7.56	10.0	1250	5.0	748	86.6	95.3	206	70.9	1428	5.4	5.7	6.5	200	5.0	635	989.22	996.2	2359	985.0	402	9.4
Total																						76.6
Mean	7.89	10.05		5.10		87.9	95.80		77.90		5.72	5.88	6.82		4.88		1011.30	1016.17		1006.38		
Max	12.90	14.93		11.13		99.0	100.00		97.20		10.69	8.02	8.95		7.03		1038.84	1040.37		1037.54		
Min	-1.99	-0.74		-4.57		72.4	85.70		55.59		-2.13	3.23	3.49		2.66		989.22	996.21		984.96		

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
 R tot = Rainfall from TBR, uncorrected

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 2020. For some parameters, notably wind, the climatological average is not available, and if the word average is used in the context of wind, it refers to the average for the period for which data is held, namely 1988 to present.

For sunshine, there was a change, in July 1999, in the type of instrument used to detect sunshine amount, making the climatological average based on the old instrument of little use. In general, the new instrument produces higher values in the winter half year, and lower ones in the summer half, than the old type, due to a combination of faster reaction and higher sensitivity than the old type. The average used in this case is based on a theoretical equivalent 1981 to 2010 average, drawn from comparison with the Met Office published tables of departure from climatological average sunshine in the months since 2000 for their area 'Southern England'. Users of the Wokingham Monthly Weather reports should be aware of this, and regard anomalies for sunshine published therein as a guide only, until such time has elapsed since the introduction of the new instrument that a genuine average becomes available.

Mean: The mean of the data under discussion, often the monthly mean of daily data. The mean is obtained by summation of the individual values and dividing by the number of values. The term 'daily mean' in respect of temperature is defined as '(max + min) / 2'. A true daily 24 hour (00 to 24 GMT) mean temperature is available from the Automatic Weather Station (AWS), and is currently published on page 7 of the Wokingham Monthly Weather report, on the Wokingham Weather web site, page 1. <http://www.woksat.info/wwp1.html>

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

- a): The departure of a mean from the current climatological average.
- b): The departure of a value on a particular day from the average for that day, (this need not be a climatological average).

When the word anomaly is used in respect of temperature, any values given are in °C. In respect of rainfall or sunshine, percent. In respect of wind, mph. In respect of pressure, millibars (hpa).

Categories: Reference may be made in the reports to 'categories'. Each category has a strict statistical range, as outlined below.

Temperature: The terms cold/mild are used in the winter half year, and cool/warm in the summer half. The term 'normal' is used when the individual mean (monthly, seasonal or annual) value is within 20 % of the median of all ranked values for that month/season/year.

Mild/warm: The value lies between 10 % and 30 % below the highest value in the ranked series.

Very mild/very warm: The value lies within 10 % of the highest value in the ranked series.

Cold/cool: The value lies between 10 % and 30 % above the lowest value in the ranked series.

Very cold/very cool: The value lies within 10 % of the lowest value in the ranked series.

Sunshine: The terms for sunshine are very sunny, sunny, normal, dull and very dull.

The definition of these terms follow the same rules as for temperature.

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

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

Wet: The value lies between 10 % and 30% of the highest value in the ranked series.

Very wet: The value lies within 10 % of the highest value in the ranked series.

Dry: The value lies between 10 % and 30 % above the lowest value in the ranked series.

Very dry: The value lies within 10 % of the lowest value in the ranked series.

Long-term: Mention may be made in the reports to the 'long-term'. The long-term record comprises a temperature/rainfall/sunshine data series compiled from records of various weather stations in the Wokingham area in the years prior to the establishment of the weather station at Emmbrook in 1976 together with data from this station.

In the case of monthly max, min and mean temperature and of rainfall total the series starts in 1882. For temperature extremes, the highest max and lowest min go back to 1904, and lowest max and highest min to 1913.

Rank: The word rank refers to the position of a value for a particular month/season/year in the ranked series, and may be expressed relative to either the highest or lowest value in the series. The central value in the ranked series is known as the **median**. This value may be different from the average of the whole series if the population is skewed. It can also be different from the climatological average which only refers to a 30 year period.

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

When discussing 'winter', if a single year is given this refers to the year in which the January/February fall.

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

The climatological day: runs from 0900 to 0900 GMT. The max temperature and rainfall read at 0900 hours are attributed to the previous day (thrown back), as is the duration of measurable rain. The min temperature and grass min read at 0900 hours are attributed to the day of reading. Pressure read at 0900 GMT, and the monthly mean pressure is the mean of the 0900 GMT readings. Sunshine data, wind data, rainfall rate data and 24 hour data from the AWS use the normal 00-24 GMT day.

Frost: An air frost day is recorded when the minimum temperature read at 0900 GMT on that day is -0.1°C or below. A ground frost day is recorded when the grass minimum temperature read at 0900 GMT on that day is -0.1°C or lower.

Duration of air frost is defined as the number of minutes that the AWS one minute average temperature is below 0.0°C , and the day runs from midnight to midnight.

Snow: A day with snow falling is triggered if snow falls at any time in the 24 hours from midnight on that day. A day with snow lying is entered if there is at least 50% snow cover at the 0900 GMT observation.

Snow depth is the depth of undrifted snow. Snow that collects in the raingauge funnel is melted and the amount recorded as rainfall.

Hail: A day of hail is recorded if hailstones 5 mm or more in diameter are observed or recorded on the hail pad in a 24 hour period starting at midnight.

A day of small hail is recorded if hailstones less than 5 mm diameter are observed or recorded in a 24 hour period starting at midnight. The term small hail also includes various other types of ice meteor such as ice pellets, snow grains and some types of snow pellets.

Fog: A day with fog is recorded if the horizontal visibility at 0900 GMT is below 1000 m.

Thunder: A day of thunder is recorded if thunder is heard in the 24 hour period from midnight on that day. The appearance of lightning without thunder being heard does not qualify as a thunder day.

Trace of rainfall: A trace of rain, entered as 'tr' in the daily log, is recorded if rain is observed to fall but is of insufficient quantity to collect in the raingauge, or if the amount of rain in the gauge is less than 0.05 mm.

Dry spell: A dry spell is defined as a period of 5 or more consecutive dry days.

Dry day: A dry day is one with less than 0.2 mm of rainfall.

Rain day: A rain day is one with 0.2 mm or more of rainfall.

Wet day: A wet day is one having 1.0 mm or more of rainfall.

Appendix 2.

Explanation and decode for code figures used in the Wokingham 0900 and 1500 GMT observations

VV : Visibility.

Code figures 00 to 50 are in km and tenths e.g. 01 = 0.1 km = 100 m, 33 = 3.3 km, 50 = 5.0 km

Code figures 60 to 80. Subtract 50 to obtain visibility in km. e.g. 56 = 6 km, 65 = 15 km, 77 = 27 km.

Code figures 81 to 89. Subtract 50 and add 5 for every one above 80. e.g. 83 = 45 km, 86 = 60 km.

Code figure 89 = visibility above 70 km.

N : Total cloud amount in okta (eighths of sky covered). 9 = sky obscured (e.g. by fog or snow)

dd : Wind direction in tens of degrees from true north. Wind is measured at a height of 10 m, and the direction is the mean over a period of 10 minutes ending at the observation time.

ff : Wind speed in knots, measured at 10 m, and is the mean over a period of 10 minutes ending at observation time.

gg : Wind gust in knots at 10 m. The highest gust in the 60 minutes up to observation time.

TT : Air temperature at 1.2m, degrees C and tenths.

TdTd : Dew point temperature at 1.2m, degrees C and tenths.

RH : Relative humidity at 1.2m, %.

r : Humidity mixing ratio (amount of water vapour per kg of air), grams and tenths.

PPP : Air pressure reduced to MSL, millibars and tenths.

a : Characteristic of pressure tendency during the past 3 hours.

Code figures 0 to 3, pressure higher than 3 hours ago, 5 to 8, pressure lower than 3 hours ago

Code figure 0 = Increasing then decreasing, pressure the same as or higher than 3 hours ago

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

3 = Decreasing or steady then increasing, or increasing then increasing more rapidly

4 = Steady, pressure the same as 3 hours ago

5 = Decreasing then increasing, pressure lower than 3 hours ago

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

8 = Steady or increasing then decreasing, or decreasing then decreasing more rapidly

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

04 = Visibility reduced by smoke, e.g. veldt or forest fires, industrial smoke or volcanic ashes.

05 = Haze, visibility reduced by extremely small dry particles (RH less than appx. 95 %)

06 = Widespread dust in suspension, not raised by the wind near the station at the time of the observation

07 = Dust or sand raised by the wind at or near the station at the time of the observation, but no well-developed dust whirls or sand whirls, and no duststorm or sandstorm seen: In marine environments, blowing spray at the station.

08 = Well-developed dust or sand whirls seen at or near the station during the preceding hour or at the time of the observation, but no duststorm or sandstorm.

09 = Duststorm or sandstorm within sight at the time of the observation, or at the station during the preceding hour

10 = Mist
11 = Patches of shallow fog not deeper than 2 metres on land
12 = More or less continuous shallow fog not deeper than 2 metres on land
13 = Lightning visible, no thunder heard
14 = Precipitation within sight, not reaching the ground
15 = Precipitation within sight, reaching the ground more than 5 km from the station
16 = Precipitation within sight, reaching the ground, near to but not at the station
17 = Thunderstorm, but no precipitation at the time of the observation
18 = Squalls at or within sight of the station at the time of the observation or during the preceding hour
19 = Funnel cloud(s) at or within sight of the station at the time of the observation or during the preceding hour

20 = Drizzle (not freezing) at the station during the preceding hour but not at the time of the observation
21 = Rain (not freezing) at the station during the preceding hour but not at the time of the observation
22 = Snow at the station during the preceding hour but not at the time of the observation
23 = Rain and snow or ice pellets at the station during the preceding hour but not at the time of the observation
24 = Freezing drizzle or freezing rain at the station during the preceding hour but not at the time of the observation
25 = Shower(s) of rain at the station during the preceding hour but not at the time of the observation
26 = Shower(s) of snow or rain and snow at the station during the preceding hour but not at the time of the observation
27 = Shower(s) of hail or rain and hail at the station during the preceding hour but not at the time of the observation
28 = Fog or ice fog at the station during the preceding hour but not at the time of the observation
29 = Thunderstorm, with or without precipitation at the station during the preceding hour but not at the time of the observation

30 = Slight or moderate duststorm or sandstorm has decreased during the preceding hour
31 = Slight or moderate duststorm or sandstorm with no appreciable change during the past hour
32 = Slight or moderate duststorm or sandstorm has begun or increased during the past hour
33 = Severe duststorm or sandstorm has decreased during the preceding hour
34 = Severe duststorm or sandstorm with no appreciable change during the past hour
35 = Severe duststorm or sandstorm has begun or increased during the past hour
36 = Slight or moderate drifting snow generally below eye level
37 = Heavy drifting snow generally below eye level
38 = Slight or moderate blowing snow generally above eye level
39 = Heavy blowing snow generally above eye level

40 = Fog or ice fog at a distance at the time of the observation, but not at the station during the preceding hour, the fog extending to a level above that of the observer.
41 = Fog or ice fog in patches
42 = Fog or ice fog, sky visible has become thinner during the past hour
43 = Fog or ice fog, sky invisible has become thinner during the past hour
44 = Fog or ice fog, sky visible no appreciable change during the past hour
45 = Fog or ice fog, sky invisible no appreciable change during the past hour
46 = Fog or ice fog, sky visible has begun or become thicker during the past hour
47 = Fog or ice fog, sky invisible has begun or become thicker during the past hour
48 = Fog, depositing rime, sky visible
49 = Fog depositing rime, sky invisible

50 = Drizzle, not freezing, intermittent slight at time of observation
51 = Drizzle, not freezing, continuous slight at time of observation
52 = Drizzle, not freezing, intermittent moderate at time of observation
53 = Drizzle, not freezing, continuous moderate at time of observation
54 = Drizzle, not freezing, intermittent heavy at time of observation
55 = Drizzle, not freezing, continuous heavy at time of observation
56 = Drizzle, freezing, slight
57 = Drizzle, freezing, moderate or heavy (dense)
58 = Drizzle and rain, slight
59 = Drizzle and rain, moderate or heavy

60 = Rain, not freezing, intermittent slight at time of observation
61 = Rain, not freezing, continuous slight at time of observation
62 = Rain, not freezing, intermittent moderate at time of observation
63 = Rain, not freezing, continuous moderate at time of observation
64 = Rain, not freezing, intermittent heavy at time of observation
65 = Rain, not freezing, continuous heavy at time of observation
66 = Rain, freezing, slight
67 = Rain, freezing, moderate or heavy
68 = Rain or drizzle and snow, slight
69 = Rain or drizzle and snow, moderate or heavy

70 = Intermittent fall of snowflakes slight at time of observation
71 = Continuous fall of snowflakes slight at time of observation
72 = Intermittent fall of snowflakes moderate at time of observation
73 = Continuous fall of snowflakes moderate at time of observation
74 = Intermittent fall of snowflakes heavy at time of observation
75 = Continuous fall of snowflakes heavy at time of observation
76 = Diamond dust (with or without fog)
77 = Snow grains (with or without fog)
78 = Isolated star-like snow crystals (with or without fog)
79 = Ice pellets

80 = Rain shower(s), slight
81 = Rain shower(s), moderate or heavy
82 = Rain shower(s), violent
83 = Shower(s) of rain and snow mixed, slight
84 = Shower(s) of rain and snow mixed, moderate or heavy
85 = Snow shower(s), slight
86 = Snow shower(s), moderate or heavy
87 = Shower(s) of snow pellets or small hail, with or without rain or rain and snow mixed, slight
88 = Shower(s) of snow pellets or small hail, with or without rain or rain and snow mixed, moderate or heavy
89 = Shower(s) of hail, with or without rain or rain and snow mixed, not associated with thunder, slight
90 = Shower(s) of hail, with or without rain or rain and snow mixed, not associated with thunder, moderate or heavy

91 = Slight rain at time of observation, thunderstorm during the past hour but not at time of observation
92 = Moderate or heavy rain at time of observation, thunderstorm during the past hour but not at time of observation
93 = Slight snow, or rain and snow mixed, or hail at time of observation, thunderstorm during the past hour but not at time of observation
94 = Moderate or heavy snow, or rain and snow mixed, or hail at time of observation, thunderstorm during the past hour but not at time of observation
95 = Thunderstorm, slight or moderate, without hail but with rain and or snow at time of observation
96 = Thunderstorm, slight or moderate, with hail at time of observation
97 = Thunderstorm, heavy, without hail but with rain and or snow at time of observation
98 = Thunderstorm combined with duststorm or sandstorm at time of observation
99 = Thunderstorm, heavy, with hail at time of observation

Hail includes large hail, small hail and snow pellets.

W1, W2 : Past weather (for 0900 and 1500 GMT observations, the period covered is 3 hours)

Code figures:

- 0 = Cloud covering half or less of the sky throughout the period
- 1 = Cloud covering more than half the sky during only part of the period
- 2 = Cloud covering more than half the sky throughout the period
- 3 = Sandstorm, duststorm or blowing snow
- 4 = Fog or ice fog or thick haze (visibility less than 1000 m)
- 5 = Drizzle
- 6 = Rain
- 7 = Snow or rain and snow mixed
- 8 = Shower(s)
- 9 = Thunderstorm(s) with or without precipitation

Nh : Amount of low cloud, or medium cloud if no low cloud present, okta

Cl : Type of low cloud

- 0 = No low cloud
- 1 = Cumulus with little vertical extent and seemingly flattened, or ragged Cumulus other than bad weather, or both
- 2 = Cumulus of moderate or strong vertical extent, either accompanied or not by other Cumulus or Stratocumulus all having their bases at the same level
- 3 = Cumulonimbus whose summits, at least partially, lack sharp outline, but are neither clearly fibrous (cirriform), nor in the form of an anvil; Cumulus, Stratocumulus or Stratus may also be present
- 4 = Stratocumulus formed by the spreading out of Cumulus; Cumulus may also be present
- 6 = Stratus in a more or less continuous sheet or layer, or ragged shreds, or both, but no Stratus fractus of bad weather
- 7 = Stratus fractus of bad weather or Cumulus fractus of bad weather or both (pannus), usually below Altostratus or Nimbostratus
- 8 = Cumulus and Stratocumulus other than that formed by the spreading out of Cumulus, the bases of the Cumulus and Stratocumulus are not at the same level.
- 9 = Cumulonimbus, the upper part of which is clearly fibrous (cirriform), often in the form of an anvil, either accompanied or not by any other type(s) of low cloud
- / = Types of low cloud invisible due to darkness, fog, blowing dust or sand or other similar phenomena.

'Bad weather' denotes the conditions which generally exist during precipitation and a short time before and after.

Cm : Type of medium cloud.

- 0 = No medium cloud.
- 1 = Altostratus, the greater part of which is semi-transparent; through this part the sun or moon may be weakly visible, as through ground glass
- 2 = Altostratus, the greater part of which is sufficiently dense to hide the sun or moon, or Nimbostratus
- 3 = Altocumulus, the greater part of which is semi-transparent; the various elements of the cloud change only slowly and are all at a single level
- 4 = Altocumulus in patches (often in the form of almonds or fishes), the greater part of which is semi-transparent ; the clouds occur at one or more levels and the elements are continually changing in appearance
- 5 = Altocumulus in bands semi-transparent, of Altocumulus in one or more fairly continuous layers (semi-transparent or opaque), progressively invading the sky; these Altocumulus clouds generally thicken as a whole
- 6 = Altocumulus resulting from the spreading out of Cumulus (or Cumulonimbus)
- 7 = Altocumulus in two or more layers, usually opaque in places, and not progressively invading the sky; or opaque layer of Altocumulus not progressively invading the sky; or Altocumulus together with Altostratus or Nimbostratus
- 8 = Altocumulus with sproutings in the form of small towers or battlements, or Altocumulus having the appearance of cumuliform tufts
- 9 = Altocumulus of a chaotic sky, generally at several levels
- / = Types of medium cloud invisible owing to darkness, fog, blowing dust or sand or other similar phenomena, or more often because of the presence of a continuous layer of lower clouds.

Ch : Type of high cloud

0 = No high cloud

1 = Cirrus in the form of filaments, strands or hooks, not progressively invading the sky.

2 = Dense cirrus, in patches or entangled sheaves, which usually do not increase and sometimes seem to be the remains of the upper part of a Cumulonimbus; or Cirrus with sproutings in the form of small turrets or battlements, or Cirrus having the appearance of cumuliform tufts

3 = Dense Cirrus, often in the form of an anvil, being the remains of the upper part of Cumulonimbus, or where the rest of the Cumulonimbus is below the horizon

4 = Cirrus in the form of hooks or filaments, or both, progressively invading the sky; they generally become denser as a whole

5 = Cirrus (often in bands converging towards one or two opposite points on the horizon) and Cirrostratus, or Cirrostratus alone; in either case they are progressively invading the sky, and generally growing denser as a whole, but the continuous veil does not reach 45 degrees above the horizon.

6 = Cirrus (often in bands converging towards one or two opposite points on the horizon) and Cirrostratus, or Cirrostratus alone; in either case they are progressively invading the sky, and generally growing denser as a whole; the continuous veil extends more than 45 degrees above the horizon, without the sky being totally covered

7 = Veil of Cirrostratus covering the celestial dome.

8 = Cirrostratus not progressively invading the sky and not completely covering the celestial dome

9 = Cirrocumulus alone, or accompanied by Cirrus or Cirrostratus, or both, but Cirrocumulus is predominant.

/ = Types of high cloud invisible owing to darkness, fog, blowing dust or sand or other similar phenomena, or more often because of the presence of a continuous layer of lower clouds.

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

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

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

00 to 50 = Height in hundreds of feet

51 to 55 Not used

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

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