

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 2024

Temperature (°C)	Anomaly	Rank in the past 143 years
Mean maximum	11.6	+2.8 2nd highest
Mean minimum	5.3	+3.4 * Highest *
Daily mean	8.4	+3.0 * Highest *
Highest maximum	17.4	on 15th Lowest maximum 6.2 on 7th
Highest minimum	11.5	on 15th Lowest minimum -2.8 on 25th
Mean grass minimum	3.4	+4.7 Lowest grass minimum -6.3 on 24th
Mean earth @30 cm	8.4	+2.8 Earth @100 cm 8.5 +1.4
Frost duration (hrs)	19.0	Rain duration (hrs) 86.1
Rainfall total (mm)	120.1	254% 2nd highest
Highest daily fall	16.5	on 17th Highest rate mm/hr 61 on 11th
Number of: Dry days (<0.2mm)	10	Wet days (>0.9mm) 18 days ≥5mm 7
Sunshine total (hrs) 57.8	Daily mean 1.99	66 % Sunniest day 9.1 on 12th
N° days with: Air frost 3	Ground frost 8	Snow falling 0 Snow lying 0
Thunder 0	Hail ≥5mm 0	Small hail/ice 1 Fog @09 0 Nil sun 12
Pressure MSL: Mean @09 GMT, mbar 1010.0	-6.7	Highest 1035.7 on 1st Lowest 975.4 on 9th
Relative humidity: Mean (%) 87.9	Lowest 51	on 12th Water vapour (g/kg), mean at 09 and 15 GMT 6.2, 6.2
Overall mean wind speed (mph) 8.1	Windiest day 15.3	on 6th Max gust 39 on 5th&6th
Wind direction (days) N 1 NE 2 E 0 SE 1 S 6 SW 15 W 4 NW 0		
Least windy day (mph) 2.4	on 24th	Calm; less than 0.5 mph (minutes) 163

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

Notes:

Very Mild, Very Wet, Dull

Temperature: Another record breaking month, the mean this February is 0.1° above the previous highest set in 1990, and is 3.6° higher than the long-term median. The mean maximum, however, is not quite a new record, being 0.2° below the record mean in February 2019. Since the start of 2020, new temperature records have also been established in September 2023, June 2023 and August 2022, also May 2020 for mean maximum alone. The highest max this February is 4.3° above the median and ranks 4th highest in 121 years, while the lowest max is 3.8° above its median. The highest min is 3.5° above the median and is 2nd highest in 112 years, while the lowest min is 2.2° above its median. The mean grass min is a new record for the past 45 years, and is 4.7° above average. New records were also set for earth temperature at both 30cm and 1m depth, 2.8° above average at 30 cm, 1.0° above the previous highest in 2002, and 1.4° above average at 1m, 0.3° above the previous highest also in 2002. The number of days with ground frost is lowest since 1995, but the 3 days with air frost was undercut by the 2 days in 2022. The duration of air frost is 65.7 hours below average, but is lowest only since 2022. Anomalies for daily max were above normal on all but one day, the 7th, anomaly -2.2°, but were above +5° on the 6th and 14th to 19th, with an extreme value of +10.3° on the 15th. Anomalies for daily min were above +6° on 3rd to 6th, 11th, 14th to 19th, 21st, 22nd and 24th, and exceeded -3° on the 24th and 25th, with extreme values of +11.4° on the 15th and -4.3° on the 25th. **Rainfall:** A very wet month with over two and a half times the average rainfall. It is the wettest February since 1951, and the 2nd wettest in 143 years, but only just, beating 2014 by only 0.3 mm. The month began on a dry note with an 8 day dry spell ending on the 2nd, but the 39 mm that fell over the 3 days to the 8th set the scene for the wet month to come. There were 8 more wet days than average, and the 6 with =>10 mm is highest for any February since before 1976, the previous highest being 5 in 1990. In the past 49 years, the only other February to exceed 100 mm was in 2014. There was no snow in this February, but ice pellets fell on the 23rd. Rainfall accumulation compared with normal was 6 mm in deficit on the 5th, becoming a surplus of 32 mm by the 10th, decreasing to 27 mm by the 16th but increasing to 59 mm by the 25th, and to 73mm by the 29th. **Sunshine:** A very poor showing this February, dullest since 2017 and 3rd dullest in this millennium. There were only 2 days having >70% of the maximum, and 22 having <30%. The number of days with nil sun is 5 above average and most since 2011. The period 3rd to 9th saw the sun for a total of only 42 minutes. Daily accumulation compared with normal saw an 8 hour surplus on the 2nd become a 17 hours deficit by the 11th, increasing to 25 hours by the 22nd, and to a deficit of 30 hours by the 29th. **Wind:** The mean speed of 8.1 mph is exactly average, but the month's highest gust of 39 mph is 9 mph below average. The sonic anemometer has been operational for the entire month, producing over 2.5 million one-second readings. **Humidity:** The mean relative humidity is 6% above average and highest for February since before 1998. The mean water vapour content is also highest for any February in that period.

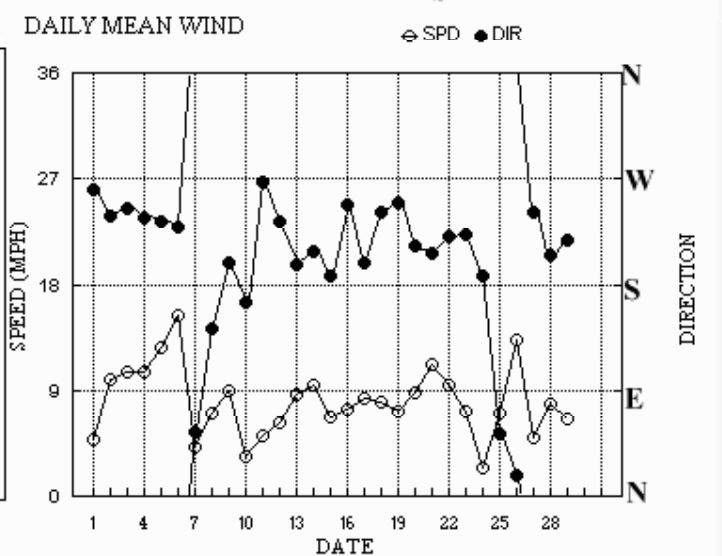
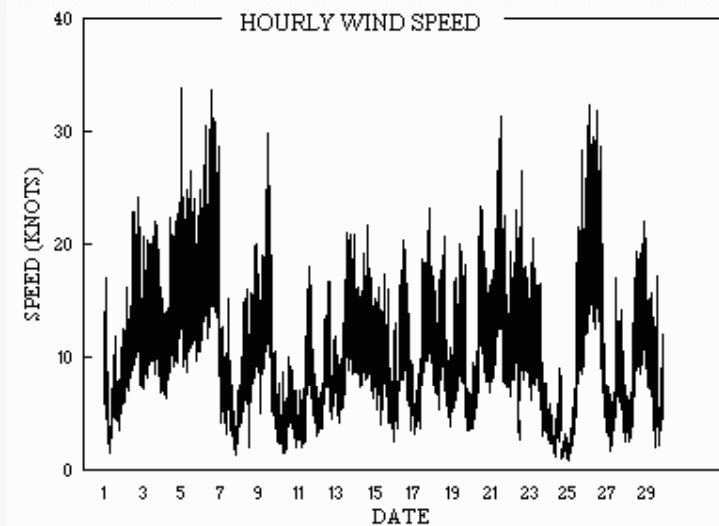
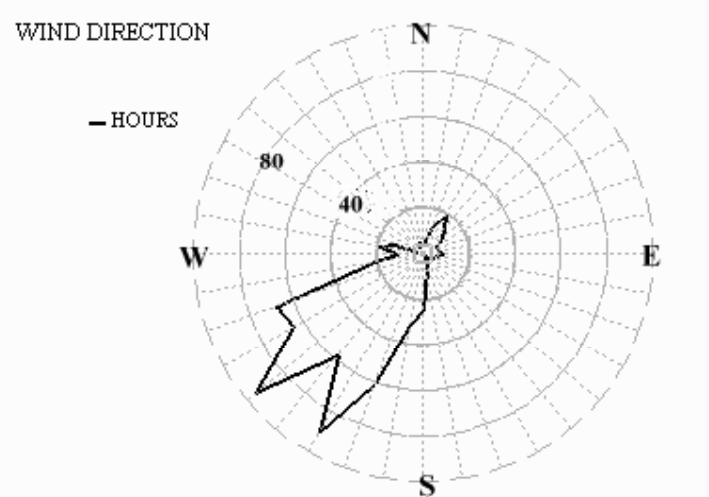
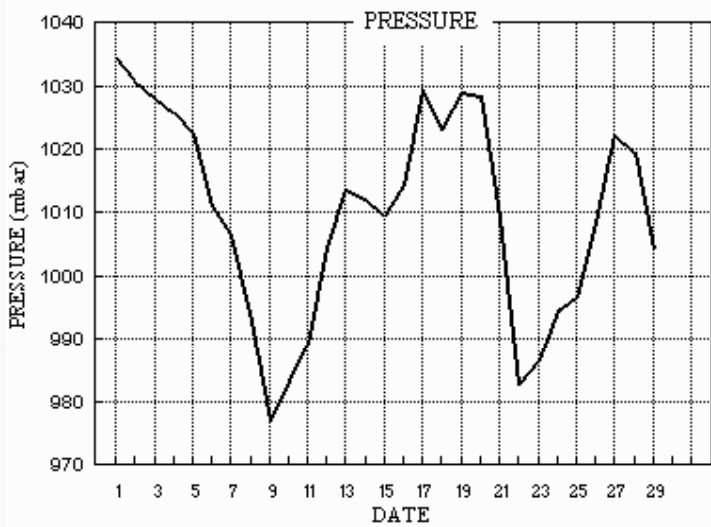
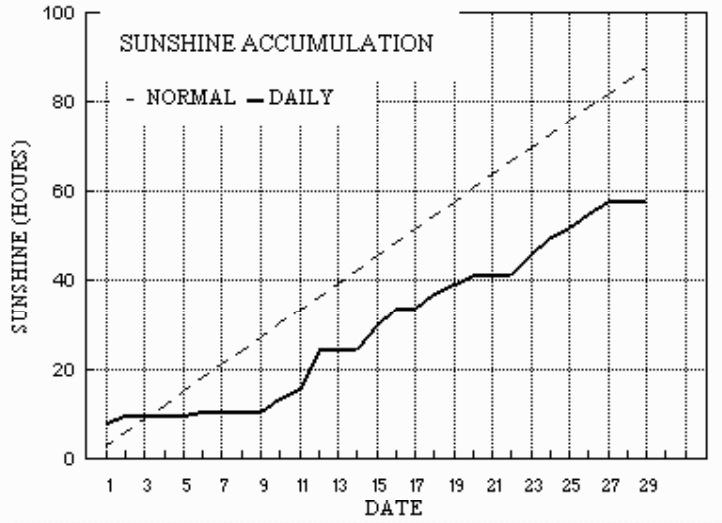
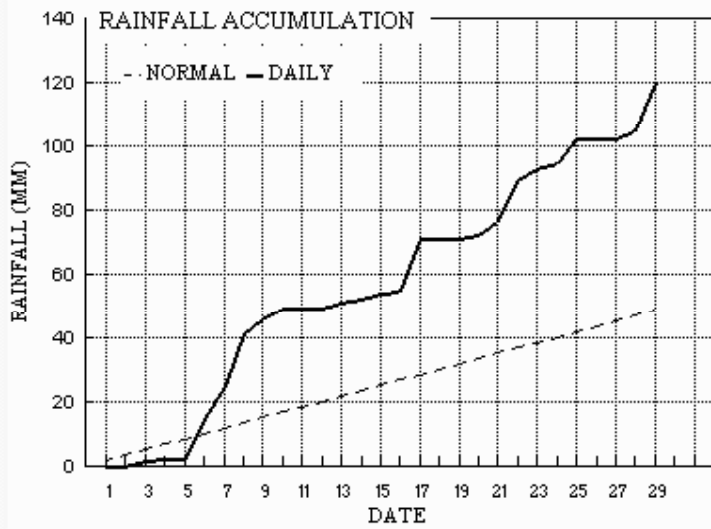
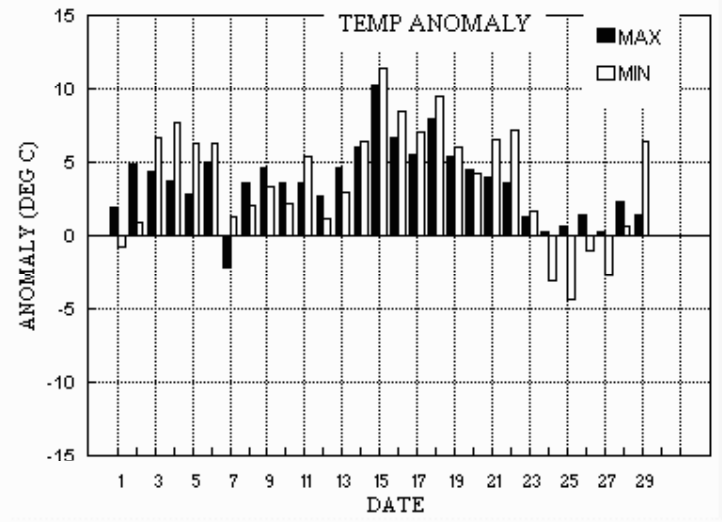
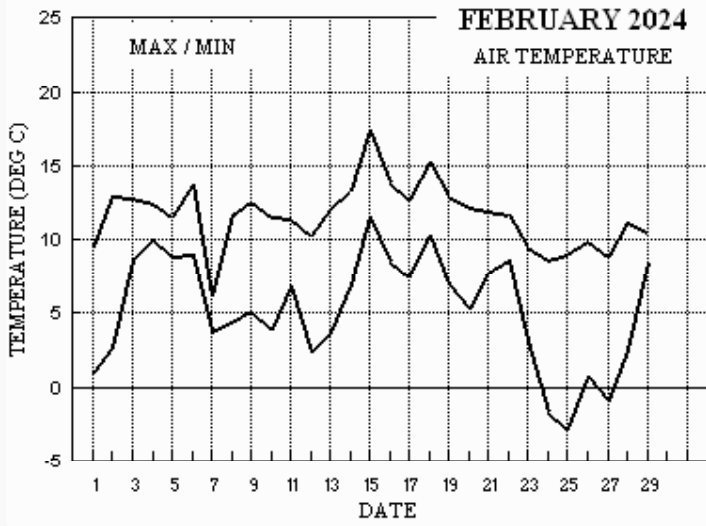
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 29 th			
+3.2°	+3.6°	295%	45%	+5.7°	+6.2°	138%	92%	+1.7°	+1.3°	318%	60%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for February 2024



Month: FEBRUARY 2024

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf Sl	Th Ha	Ic Fg	Vec ddd	mean ff	sp	Max gust ddd	gg	HHhh	High hr ddd	ff	Rain HH	hrs				
1	9.5	0.9	0.0	-3.6	7.2	7.3	8.2	0.0	1034.4	0	1	0	0	0	0	0	260	2.9	4.3	341	17	0248	348	7	02	0.0	
2	13.0	2.6	tr	-2.1	6.9	7.4	1.8	0.0	1030.7	0	1	0	0	0	0	0	239	8.4	8.6	251	24	1753	253	11	18	0.0	
3	12.8	8.6	1.7	8.7	7.4	7.5	0.0	0.0	1028.1	0	0	0	0	0	0	0	245	9.1	9.1	260	22	1431	245	10	18	3.3	
4	12.4	10.0	0.3	10.0	8.2	7.6	0.0	0.0	1025.8	0	0	0	0	0	0	0	237	9.0	9.1	257	30	2358	250	14	23	0.4	
5	11.5	8.9	tr	7.6	8.4	7.8	0.0	0.0	1022.5	0	0	0	0	0	0	0	233	10.9	11.0	250	34	0008	231	13	17	0.0	
6	13.7	9.0	12.4	8.9	8.5	8.0	0.5	0.0	1011.0	0	0	0	0	0	0	0	229	12.7	13.3	224	34	1418	224	16	14	8.7	
7	6.2	3.8	10.3	4.5	8.9	8.1	0.0	0.0	1006.4	0	0	0	0	0	0	0	55	3.4	3.7	72	15	1000	82	6	10	4.8	
8	11.7	4.4	16.3	4.6	8.5	8.3	0.0	0.0	992.8	0	0	0	0	0	0	0	142	4.2	6.2	177	20	2223	146	10	21	14.1	
9	12.6	5.2	4.7	9.2	8.6	8.4	0.2	0.0	976.9	0	0	0	0	0	0	0	198	7.8	7.9	211	30	1108	206	13	10	2.7	
10	11.5	3.9	3.6	0.3	8.8	8.5	2.8	0.0	983.1	0	0	0	0	0	0	0	165	2.2	3.0	187	10	1450	185	5	14	1.1	
11	11.4	6.8	0.1	3.2	8.7	8.6	2.1	0.0	989.2	0	0	0	0	0	0	0	267	2.8	4.5	275	18	1508	272	8	14	0.4	
12	10.3	2.3	tr	-2.8	8.4	8.6	9.1	0.0	1004.3	0	1	0	0	0	0	0	233	5.0	5.4	245	17	1624	253	9	14	0.0	
13	12.1	3.7	1.8	-1.2	7.6	8.6	0.0	0.0	1013.5	0	1	0	0	0	0	0	197	7.2	7.5	183	21	1445	185	11	14	2.7	
14	13.3	6.9	1.1	8.4	8.0	8.5	0.0	0.0	1012.0	0	0	0	0	0	0	0	208	8.1	8.2	226	22	1601	216	10	16	1.3	
15	17.4	11.5	1.9	8.3	8.8	8.5	5.3	0.0	1009.5	0	0	0	0	0	0	0	187	5.7	5.8	205	17	1312	196	9	13	1.7	
16	13.8	8.5	0.1	6.1	9.4	8.6	3.6	0.0	1014.3	0	0	0	0	0	0	0	248	6.3	6.4	250	20	1107	254	11	11	0.4	
17	12.7	7.5	16.5	3.3	9.4	8.8	0.0	0.0	1029.3	0	0	0	0	0	0	0	199	7.1	7.3	207	23	2149	192	11	18	11.4	
18	15.2	10.2	0.1	9.9	9.7	8.9	3.7	0.0	1023.2	0	0	0	0	0	0	0	241	6.2	6.9	264	21	1535	275	10	13	0.1	
19	12.9	7.0	tr	2.8	9.8	9.1	2.1	0.0	1029.2	0	0	0	0	0	0	0	249	5.7	6.3	256	20	1033	256	10	10	0.0	
20	12.2	5.3	1.4	0.7	9.4	9.2	1.9	0.0	1028.6	0	0	0	0	0	0	0	213	7.6	7.6	215	24	1103	225	12	13	0.8	
21	11.9	7.7	3.8	7.8	9.4	9.2	0.0	0.0	1009.2	0	0	0	0	0	0	0	207	9.4	9.8	215	31	1412	200	15	12	4.1	
22	11.7	8.6	13.1	5.5	9.5	9.3	0.0	0.0	982.7	0	0	0	0	0	0	0	221	7.0	8.3	285	27	1607	256	11	15	6.4	
23	9.5	3.1	3.6	-0.3	8.9	9.3	4.9	0.0	986.6	0	1	0	0	0	1	0	223	6.2	6.3	234	21	0403	238	10	04	1.2	
24	8.6	-1.7	1.7	-6.3	8.2	9.3	3.8	9.2	994.6	1	1	0	0	0	0	0	187	0.4	2.1	223	9	1455	221	4	15	1.3	
25	9.0	-2.8	8.0	-5.7	7.6	9.1	2.1	8.5	996.5	1	1	0	0	0	0	0	54	5.5	6.2	66	29	1739	24	12	23	8.9	
26	9.9	0.7	tr	3.8	7.5	8.9	2.8	0.0	1008.3	0	0	0	0	0	0	0	19	11.5	11.6	7	33	0329	21	15	06	0.2	
27	8.9	-1.0	tr	-5.1	7.3	8.8	2.9	1.3	1022.5	1	1	0	0	0	0	0	241	3.5	4.4	262	17	1245	235	7	15	0.1	
28	11.2	2.5	1.9	1.9	7.4	8.6	0.0	0.0	1019.5	0	0	0	0	0	0	0	205	6.7	6.8	218	22	2351	218	11	23	2.1	
29	10.5	8.5	15.7	9.2	8.2	8.6	0.0	0.0	1003.9	0	0	0	0	0	0	0	218	4.8	5.8	200	21	0055	205	10	01	7.9	
Total			120.1				57.8	19.0																			86.1
Mean	11.6	5.3		3.4	8.4	8.5	1.99	0.7	1010.0								223	4.6	7.0								
Anom	+2.8	+3.4	254%	+4.7	+2.8	+1.4	66%																				-6.7
Daily mean		8.4																									
Anom		+3.0																									

Number of days with:

Air frost = 3 Ground frost = 8 Nil sun = 12
 Snow falling = 0 Snow lying = 0 Thunder = 0
 Hail=>5mm = 0 Hail<5mm or ice = 1 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.
 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 FEBRUARY 2024

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cl	NChs	hshs	NChs	hshs	Date	Remarks
1	70	8	23	02	03	2.6	1.9	95	4.2	1034.4	1	019	03	1	1	0	0	9	0	1	81175	87082				COTRA Hoar slt
2	82	7	23	09	14	8.6	7.7	94	6.4	1030.7	8	005	01	2	2	7	6	3	/	2	87708					2 /Ci75
3	81	8	25	09	18	11.2	9.1	87	7.1	1028.1	3	005	02	2	2	8	5	4	/	/	88610					3
4	35	8	23	09	14	10.6	10.1	97	7.6	1025.8	5	002	58	6	5	7	5	2	/	/	84703	85706	87615			4 /Ci75
5	80	7	23	09	22	9.2	5.9	80	5.7	1022.5	7	007	02	2	2	7	5	4	/	/	87618					5
6	84	7	23	11	24	11.3	8.2	81	6.7	1011.0	8	003	02	5	2	7	5	4	/	8	83618	87640				6 /Cs75
7	63	7	06	03	08	4.7	4.1	96	5.1	1006.4	4	000	01	6	2	6	7	3	7	/	86708	87362				7
8	50	8	08	06	14	5.1	4.7	97	5.4	992.8	7	042	61	6	6	7	7	2	2	/	85703	87705	88520			8
9	65	7	20	11	22	10.7	9.5	92	7.6	976.9	3	013	25	8	2	7	8	3	7	/	84706	83812	85618			9 /Ac65 Cu med jpW
10	50	8	12	03	06	7.6	7.5	99	6.6	983.1	0	010	10	1	1	7	5	2	7	/	85705	87630				10 /Ac65
11	58	7	07	02	07	7.3	6.9	97	6.3	989.2	2	030	25	8	2	7	5	2	3	/	82705	85615	87650			11 3Sc30 /Ac150 jpS
12	89	0	23	04	08	4.6	3.1	90	4.8	1004.3	2	031	01	8	1	0	0	9	0	0						12
13	75	8	18	06	10	6.9	5.2	89	5.5	1013.5	1	005	60	6	2	7	5	5	7	/	82620	83635	87650			13 /As60
14	56	8	20	08	15	11.8	11.2	96	8.2	1012.0	1	006	58	6	5	8	5	3	/	/	87706	88610				14
15	75	7	18	07	14	12.4	10.3	87	7.8	1009.5	8	009	02	2	2	1	8	6	8	8	81840	87275				15 1Sc50 1Ac61 2Ac65 COTRA Ac cas vir
16	65	1	25	08	17	9.3	7.9	91	6.6	1014.3	2	038	01	1	1	1	6	3	0	0	81709					16
17	58	8	18	03	07	10.0	9.5	97	7.3	1029.3	2	016	20	5	2	8	6	2	/	/	88703					17
18	88	7	24	08	12	11.1	10.5	96	7.8	1023.2	3	008	21	6	2	7	5	3	7	/	85707	84650				18 2Sc35 3Ac60
19	68	7	24	07	15	9.5	7.6	88	6.4	1029.2	8	002	60	2	2	7	5	4	7	/	87611	85357				19
20	59	8	21	08	15	7.7	6.5	92	5.9	1028.6	5	006	05	2	2	7	5	3	1	/	85706	87612	88470			20
21	57	8	20	12	22	9.2	7.8	91	6.6	1009.2	7	040	63	6	6	7	5	4	2	/	83710	87615	88540			21
22	56	8	19	09	19	10.6	9.8	95	7.8	982.7	7	063	58	6	6	8	7	3	/	/	87706					22 /Sc30
23	82	6	24	09	18	6.0	3.2	82	4.9	986.6	2	014	03	1	1	1	5	7	6	3	81656	83362	85070			23 1Ac59 COTRA
24	50	6	03	01	02	0.9	0.8	99	4.1	994.6	2	013	40	1	1	4	0	9	7	2	81362	84465	86070			24 COTRA Hoar mod jf NW (Loddon valley)
25	11	6	05	04	07	0.2	0.2	100	3.9	996.5	7	010	28	4	2	2	6	1	7	1	82702	83366	85075			25 1Ac63 COTRA Hoar/Rime mod. jf NW
26	88	7	02	15	30	5.6	2.3	79	4.5	1008.3	2	041	60	2	2	7	5	4	0	2	86618	83628	86070			26
27	12	8	19	03	06	2.5	2.2	98	4.4	1022.5	0	008	10	1	1	7	6	0	/	6	83701	87702				27 /Cs70
28	68	8	20	04	08	8.7	7.2	90	6.2	1019.5	2	001	02	2	2	7	5	4	2	/	86610	88463				28
29	20	8	19	07	16	10.4	9.9	97	7.7	1003.9	7	015	59	6	5	7	7	2	2	/	85703	87705	88530			29 R&D mod

Mean vis = 21.6 km

Mean cloud = 6.9 87%

Mean wind speed = 6.8 kn

Mean gust = 14 kn

Mean TT = 7.8 °C

Mean TdTd = 6.6 °C

Mean RH = 92.1 %

Mean r = 6.2 g/kg

Mean PPP = 1010.0 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for FEBRUARY 2024

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	NChs	hshs	NChs	hshs	Date	Remarks
1	81	7	24	06	10	8.8	0.8	57	3.9	1034.4	7	012	02	2	2	1	0	9	4	1	81363	87081	1	1	1Ci75 COTRA Parhelia	
2	84	7	25	10	23	12.1	8.6	79	6.8	1029.1	7	014	02	2	2	7	5	4	/	/	87615		2	2		
3	88	7	26	09	22	12.5	9.5	82	7.3	1027.6	6	008	02	2	2	7	5	4	/	/	87613		3	3		
4	84	7	23	09	17	11.8	10.2	90	7.6	1024.2	8	013	20	5	2	7	5	4	/	/	81712	87618	4	4		
5	86	8	24	10	22	10.6	6.7	77	6.1	1018.7	6	021	21	5	2	8	8	4	/	/	85814	88628	5	5	Cu hum	
6	65	8	22	16	34	13.3	8.8	74	7.0	1007.9	7	022	15	2	2	6	5	5	7	7	86620	85365	88272	6	6	jpNW
7	62	8	03	04	07	5.9	4.1	88	5.1	1004.9	7	008	02	2	2	8	5	4	/	/	86710	88615	7	7		
8	60	8	20	08	16	11.7	10.9	95	8.3	986.3	7	029	20	6	5	7	5	3	2	/	85708	87615	88458	8	8	WF passage 1340, veer 060 to 210
9	63	7	21	09	22	11.4	10.0	91	7.9	977.8	4	000	25	8	2	7	8	4	0	2	82813	83620	85630	9	9	4Ci70 Cu med COTRA jp all quads
10	84	7	19	06	10	11.1	6.0	71	6.0	983.6	4	000	03	2	2	2	8	5	7	8	82828	83363	87270	10	10	1Sc56 COTRA Cu med
11	70	6	27	08	17	10.6	4.3	65	5.2	993.3	2	018	15	2	2	6	8	6	0	0	82832	83640	85650	11	11	Cu med jpW vv50k ex p
12	88	1	26	08	16	8.7	-0.3	53	3.7	1008.5	2	017	02	0	0	1	4	6	0	1	81838		12	12	1Sc40 1Ci78	
13	50	8	18	11	21	9.2	7.8	91	6.6	1009.0	7	030	51	5	6	8	5	3	/	/	87707	88612	13	13		
14	80	8	22	08	17	13.3	11.7	90	8.5	1012.7	6	002	02	5	2	7	5	3	3	/	87609		14	14	/Ac65	
15	83	7	19	07	12	16.1	9.5	65	7.4	1005.8	6	020	03	2	2	6	0	9	8	1	81360	86363	86075	15	15	COTRA Ac cas
16	86	8	25	09	19	11.5	6.2	70	5.9	1018.5	3	017	03	1	1	8	5	5	/	/	85627	88633	16	16		
17	75	8	20	08	17	12.2	10.3	88	7.6	1029.5	7	005	20	5	2	8	5	3	/	/	87709	88615	17	17		
18	82	6	28	08	18	14.7	9.9	73	7.5	1025.5	2	006	15	1	1	4	8	5	6	0	83822	83357	18	18	2Sc35 jpW	
19	75	7	29	08	17	12.7	5.6	61	5.5	1029.6	3	001	03	2	2	2	4	6	0	8	81832	87268	19	19	2Sc45	
20	86	7	22	09	20	11.9	7.4	74	6.3	1023.9	7	019	14	2	2	1	1	5	7	8	81825	83363	87270	20	20	4Ac68 Cu fra/hum Ac vir
21	45	8	21	11	31	10.9	9.8	93	7.6	999.4	7	044	50	6	5	8	5	3	/	/	87706	88612	21	21		
22	70	8	26	13	23	6.6	4.9	89	5.6	977.8	5	012	61	6	6	1	8	4	2	/	81812	85540	88460	22	22	1Sc25 Cu fra vv50k NW
23	35	8	25	07	16	5.5	3.2	85	4.9	986.8	5	003	88	8	2	8	3	5	/	/	82815	86925	88656	23	23	Cu fra lce pel 2-4mm
24	65	5	22	04	09	8.3	4.3	76	5.2	995.8	3	002	25	8	2	4	4	4	6	0	83818		24	24	2Sc50 1Ac60 Cu con jpS vv50k ex S	
25	81	8	07	10	22	7.0	4.5	84	5.3	992.5	7	019	60	2	2	7	5	4	2	/	87614	88556	25	25		
26	88	6	02	13	26	8.2	1.1	61	4.1	1013.4	2	020	02	2	2	5	1	6	0	1	85835		26	26	2Ci70	
27	81	3	22	07	13	8.3	2.1	65	4.4	1019.6	7	023	01	1	1	3	0	9	4	2	83359		27	27	1Ci70	
28	65	8	21	08	19	10.8	8.2	84	6.7	1015.6	7	028	50	6	2	7	5	4	2	/	87611	88556	28	28		
29	62	8	26	04	09	8.4	7.2	92	6.3	1002.6	6	004	61	6	6	3	2	3	2	/	81707	83810	88550	29	29	Cu med vv20k NW

Mean vis = 32.9 km

Mean cloud = 7.0 87%

Mean wind speed = 8.6 kn

Mean gust = 18 kn

Mean TT = 10.5 °C

Mean TdTd = 6.7 °C

Mean RH = 78.0 %

Mean r = 6.2 g/kg

Mean PPP = 1008.8 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Wokingham	Hour	01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb	07-Feb	08-Feb	09-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb
Sunshine	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hourly analysis	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	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
	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
2024	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
	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
	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
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00
	8	0.91	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.13	0.00	1.00	0.00	0.00	0.29
	9	1.00	0.22	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.01	1.00	0.00	0.00	0.00	1.00
	10	1.00	0.65	0.00	0.00	0.00	0.09	0.00	0.00	0.06	0.00	0.16	1.00	0.00	0.00	0.55
	11	1.00	0.44	0.00	0.00	0.00	0.25	0.00	0.00	0.05	0.38	0.59	1.00	0.00	0.00	0.81
	12	1.00	0.03	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.82	0.62	1.00	0.00	0.00	0.62
	13	1.00	0.11	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.98	0.35	1.00	0.00	0.00	1.00
	14	1.00	0.33	0.00	0.00	0.00	0.03	0.00	0.00	0.03	0.17	0.31	0.87	0.00	0.00	1.00
	15	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.04
	16	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.93	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
	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		8.18	1.78	0.00	0.00	0.00	0.51	0.00	0.00	0.15	2.83	2.06	9.06	0.00	0.00	5.30

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	29-Feb	Mean
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
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
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
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
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
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
7	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.74	0.00	0.00	0.35	0.00	0.00	0.07
8	0.88	0.00	0.00	0.01	0.00	0.00	0.00	0.94	0.67	0.54	0.00	0.00	0.00	0.00	0.19
9	1.00	0.00	0.13	0.01	0.00	0.00	0.00	0.84	0.03	1.00	0.17	0.00	0.00	0.00	0.22
10	0.72	0.01	0.61	0.50	0.06	0.00	0.00	0.97	0.00	0.31	0.00	0.12	0.00	0.00	0.23
11	0.78	0.00	0.24	0.50	0.04	0.00	0.00	0.50	0.00	0.15	0.32	0.71	0.00	0.00	0.27
12	0.06	0.00	0.27	0.00	0.04	0.00	0.00	0.84	0.31	0.06	0.53	0.07	0.00	0.00	0.22
13	0.03	0.00	0.66	0.40	0.41	0.00	0.00	0.20	0.06	0.00	0.63	0.00	0.00	0.00	0.24
14	0.00	0.00	0.54	0.07	0.73	0.00	0.00	0.11	0.41	0.00	0.32	0.69	0.00	0.00	0.23
15	0.00	0.00	0.21	0.48	0.48	0.00	0.00	0.00	1.00	0.00	0.32	0.94	0.00	0.00	0.19
16	0.00	0.00	0.82	0.15	0.11	0.00	0.00	0.02	0.51	0.00	0.51	0.01	0.00	0.00	0.13
17	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.01
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	3.64	0.01	3.66	2.11	1.88	0.00	0.00	4.90	3.78	2.07	2.81	2.87	0.00	0.00	57.59

FEBRUARY 2024	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	6.04	10.7	1	0.9	754	76.8	96.9	839	55.2	1338	2.1	4.4	7.0	57	3.7	755	1033.29	1035.7	1153	1027.4	4	0
2	9.48	13.0	1350	3.5	57	87.1	96.1	735	75.0	1351	7.4	6.3	7.2	2227	4.2	6	1030.37	1033.2	1	1028.7	1622	0
3	11.56	12.8	1351	10.4	627	86.3	91.4	22	82.4	1404	9.4	7.2	7.6	1709	6.7	215	1027.87	1029.1	8	1026.7	1638	0
4	11.02	12.4	1559	10.2	654	89.9	97.5	822	77.6	2328	9.4	7.2	7.9	1400	6.0	0	1025.56	1027.5	48	1023.9	1524	1.9
5	10.01	11.0	1359	8.7	711	79.1	82.7	739	74.2	1744	6.5	6.0	6.7	2359	5.5	915	1020.41	1025.6	44	1015.0	2359	0
6	11.69	13.7	1353	5.7	2359	82.2	96.3	2359	71.7	1208	8.7	7.0	7.7	2301	5.5	2346	1009.28	1015.3	10	1003.9	2228	7.4
7	5.16	6.2	1426	4.0	613	93.0	97.6	535	86.2	1414	4.1	5.1	5.6	0	4.9	1125	1005.49	1006.7	926	1003.1	2359	4.8
8	7.65	11.7	1429	4.6	522	95.5	99.5	1406	89.6	415	7.0	6.4	8.6	1429	4.9	415	990.11	1003.2	0	977.8	2359	20.3
9	10.59	12.6	1122	8.7	2354	92.8	97.8	2358	82.4	1116	9.5	7.6	8.2	1220	7.0	2354	977.42	979.9	2357	975.4	552	6
10	8.13	11.5	1315	3.9	634	91.0	99.7	646	69.7	1435	6.7	6.3	7.4	1146	5.1	634	983.11	984.9	2345	979.8	2	0.6
11	7.74	11.4	1331	4.2	2358	89.0	97.5	922	63.2	1420	5.9	5.9	6.8	959	4.9	2358	991.29	999.1	2358	984.7	342	2.6
12	5.47	10.3	1318	2.1	316	79.0	97.3	144	51.3	1455	1.8	4.3	5.1	1015	3.8	1455	1006.22	1013.1	2354	998.9	2	0.1
13	8.22	11.9	1933	3.9	557	90.7	96.0	1754	83.8	3	6.8	6.2	7.9	1842	4.5	549	1011.35	1013.6	819	1008.2	1654	1.1
14	12.12	13.3	1447	11.0	104	93.6	97.0	2300	89.3	1501	11.1	8.2	8.7	1142	7.6	102	1012.28	1014.1	1859	1010.8	0	0.9
15	13.15	17.4	1258	11.0	2333	85.5	97.0	211	62.4	1304	10.6	8.0	9.0	505	7.5	1830	1008.18	1012.4	36	1005.2	1738	0.6
16	10.55	13.8	1155	8.3	804	83.2	96.7	558	66.8	1329	7.7	6.5	7.8	109	5.7	1527	1016.14	1026.2	2359	1005.9	0	1.4
17	10.55	12.7	1325	7.7	218	91.3	97.6	833	81.2	40	9.2	7.1	8.1	1135	5.7	210	1028.37	1030.5	1126	1026.1	0	3.7
18	11.52	15.2	1558	7.8	2359	90.1	97.6	721	70.9	1526	9.9	7.5	8.4	1022	6.0	2356	1025.86	1031.3	2359	1021.5	710	10
19	9.33	12.9	1456	6.9	148	82.5	98.3	343	58.0	1623	6.3	5.8	6.9	1056	4.9	1637	1030.18	1031.5	2125	1028.8	450	0.2
20	8.74	12.2	1309	5.3	500	86.9	96.5	513	72.7	1440	6.6	6.0	7.0	1207	5.2	450	1026.17	1031.3	8	1020.4	2358	0
21	10.19	11.9	1652	9.2	2350	89.5	95.5	1652	84.5	156	8.5	7.0	8.3	1652	6.2	515	1006.30	1020.6	4	997.8	2356	3.7
22	7.12	11.7	1005	3.1	2244	91.0	96.0	1231	84.6	2013	5.7	5.9	8.2	1004	4.2	2243	985.60	997.9	4	976.5	1322	12.2
23	4.71	9.5	1228	0.8	2353	86.2	97.9	2338	63.4	1331	2.5	4.7	5.4	1043	4.0	2353	987.10	991.2	2356	983.9	339	3.1
24	1.89	8.6	1456	-1.9	626	95.4	99.7	629	67.5	1551	1.2	4.2	5.8	1446	3.3	626	995.24	999.0	2254	991.0	7	1.6
25	3.02	8.9	1200	-2.6	548	95.0	100.1	449	79.1	1314	2.3	4.6	6.5	1154	3.2	627	995.44	998.7	40	992.4	1507	6.8
26	5.54	9.9	1355	2.5	2359	77.5	94.1	5	54.6	1353	0.0	4.3	5.0	0	3.9	1533	1010.45	1021.8	2358	996.5	0	0.1
27	4.65	8.8	1535	-1.0	558	86.1	99.0	636	63.5	1537	2.4	4.5	5.6	2344	3.4	558	1021.03	1023.0	816	1019.1	1655	0.1
28	9.36	11.2	1241	6.6	127	90.3	96.5	408	74.8	1318	7.8	6.5	7.6	2126	5.6	126	1016.68	1020.5	26	1010.0	2343	0.1
29	8.38	10.7	0	4.2	2357	91.2	97.0	912	70.1	1633	7.0	6.3	7.7	911	4.3	1654	1004.08	1010.2	0	1001.1	2352	6.8

Total																						96.1
Mean	8.40	11.64		5.16		87.9	96.65		72.62		6.35	6.11	7.23		5.08		1009.69	1014.73		1004.84		
Max	13.15	17.38		11.04		95.5	100.10		89.60		11.12	8.20	8.98		7.55		1033.29	1035.70		1028.85		
Min	1.89	6.18		-2.62		76.8	82.70		51.26		0.00	4.24	4.98		3.16		977.42	979.90		975.37		

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

WOKINGHAM METEOROLOGICAL DATA

Wokingham Climatological Station, Emmbrook, Berkshire.

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

Seasonal Means and Totals

WINTER 2023/24

Seasonal Means and Totals		WINTER 2023/24		Rank in the past 142 years					
Temperature (°C)									
Mean maximum	10.0	(+1.6)		2nd highest					
Mean minimum	4.0	(+1.9)		3rd highest					
Daily mean	7.0	(+1.7)		2nd highest					
Rainfall total (mm)	264.5	(149 %)		7th highest					
Sunshine total (hours)	185.6	(82 %)							
N° of:									
Dry days	37 (-7)		Wet days	41 (+8)					
Days with: Air frost	19 (-11)	Ground frost	34 (-16)	Snow falling	1 (-8)	Snow lying	0 (-4)		
Thunder	0 (-1)	Hail ≥5mm	0 (0)	Small hail/ice	2 (-2)	Fog @09 GMT	2 (-3)	Nil sun	29 (+2)
Air pressure MSL : Mean @09 GMT (mbar)	1013.3	(-3.1)							

Departure from 1991 to 2020 average shown in brackets.

Notes: **Very Wet with Near Record Temperature and Well Below Average Sunshine**

Temperature: This has been a very mild winter overall with the mean temperature equal second highest with 2007 and 1990 in the past 142 years, 0.5° below the record set in 2016. After a cold start to the season, with daily temperature over 5° below normal, it became generally mild after the 8th December, dropping back below normal after the 4th January, and the coldest nights of the season were between the 16th and 20th, after which it again became mild, and remained that way for most of February, especially between the 14th and 19th with temperatures 5° to 10° above normal, finally dropping back to near normal after the 22nd. The highest max was 17.4° on the 15th February, 3.4° above the median and 4th highest winter value in 120 years. The lowest max was 2.1° on the 1st December, 2.3° above its median. The highest min was 11.5° on the 15th February, 1.6° above the median, and the lowest min was -7.4° on the 18th January, exactly on the median. The mean grass min was 1.6°, 2.4° above average, and the lowest was -11.6° on the 18th January. Mean earth temperature at 30 cm depth was 7.5°, anomaly +1.5°, and at 1 m depth the mean was 8.6°, anomaly +0.5°. Air frost duration of 182.1 hours is 66 % of average. January was the coldest month, mean 4.8°, anomaly -0.3°, February the mildest, 8.4°, anomaly +3.0°, and December 7.8°, anomaly +2.4°. **Rainfall:** This has been the wettest winter since 2014, the current record holder, and only 5 other winters have been wetter since before 1883, none of which are in this millennium. February was by far the wettest month with 120.1 mm, 254% of average, and January the driest with 58.9 mm, 89% of average, and December in between, 85.5 mm, 132% of average. The number of dry days is 7 fewer than average, and the number of days with 10 mm or more, 8, is twice the average. There were 3 dry spells, 5 days to the 13th and 5 days to the 19th January, and 8 days to the 2nd February. The duration of measurable rain was 209.1 hours, 126% of average. The wettest day was the 4th January when 23.8 mm fell. This is the highest daily fall for any January since 1962. The longest duration in a rainfall day was 14.1 hours on the 8th February. The highest rainfall rate was 120 mm/hr at 0412 GT on 12th December, and the rate reached the violent category on one other day, 11th February with 61 mm/hr. Snow fell on just one day, 8th January, but although it continued from 1230 to 2030 GMT, it was always just a few flakes. However, on the same day there was a shower of ice pellets and snow which did produce a 1cm covering, though it was mostly gone by the next morning. There was no thunder or large hail this winter. Notable wet spells were the 9 days to the 4th January when 64.1 mm accumulated, and the 6th to 10th February, 47.3 mm. **Sunshine:** Sunshine was sparse this season giving the dullest winter since 2011, and the 2nd dullest this millennium. The sunniest day was the 12th February with 9.1 hours, and the sunniest month was January, daily mean 3.12 hours, anomaly 133%, then February, 1.99 hours, 66%, and lastly December, 1.00 hours, 45%. There were two notable dull periods, 7 days to the 19th December saw a total of just 0.6 hours over 6 of those days, and the 7 days to the 19th February had a total of 0.7 hours. Overall there were 67 days with <3 hours and 11 with =>6 hours. **Wind:** The overall mean speed was 8.4 mph, 0.7 mph above average. The windiest day was the 21st January, mean 17.2 mph, and the highest gust of 63 mph was also on the 21st January. Daily mean direction/number of days: N,6 NE,6 E,1 SE,2 S,16 SW,41 W,14 NW,5. Compared to average, winds from SW and W combined were 12.1 % more frequent, chiefly at the expense of NE and E combined, 9.1% less frequent. December was the windiest month, mean 8.9 mph, and January and February were equally lowest with 8.1 mph. Daily winds were light or very light on 23 days, moderate on 38 days, fresh on 18 days, strong on 10 days and very strong on 3 days. **Humidity:** The mean relative humidity was 86.1% and the lowest value was 46% on the 20th January. Mean water vapour content per kg of air was 5.5 g at 09 GMT and 5.7g at 15 GMT, both values are the season's highest for the past 28 years. **Pressure:** The highest was 1040.4 mbar on the 16th December and the lowest was 975.4 mbar on the 9th February, span 65.0 mbar, average 64.1 mbar. **December:** Very mild, wet and very dull. Mean temperature 4th highest in 142 years. Highest max 5th highest in 120 years. Fewest dry days since 1993. 2nd dullest in this millennium. 4.0 hours on the month's sunniest day is the lowest for any month in this millennium. **January:** Very sunny with temperature and rainfall near average. Highest daily rainfall of 23.8 mm is highest for the month since 1962. Sunniest since 2003. **February:** Very mild, very wet, dull. Mean temperature a new record high. Highest max 4th highest in 121 years. Highest min 2nd highest in 112 years. Mean grass min highest in the past 45 years. Earth temperature at both 30cm and 1m depth are new record highs. Number of days with ground frost lowest since 1995. 3rd dullest in this millennium.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom	Sun hrs	Anom	Mean Wind mph	Max gust	Mean pressure	Anom
Dec	10.4°	+1.9°	5.2°	+2.9°	85.5	132%	31.0	45%	8.9	50	1011.4	-4.2
Jan	8.0°	-0.1°	1.6°	-0.4°	58.9	89%	96.8	133%	8.1	63	1018.2	+1.9
Feb	11.6°	+2.8°	5.3°	+3.4°	120.1	254%	57.8	66%	8.1	39	1010.0	-6.7

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 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 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.