

# WOKINGHAM

# METEOROLOGICAL

# DATA

## Wokingham Climatological Station, Emmbrook, Berkshire.

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

### Monthly Means and Totals

### JANUARY 2024

Temperature (°C)	Anomaly	Rank in the past	143	years
Mean maximum	8.0	-0.1	49th highest	
Mean minimum	1.6	-0.4	65th highest	
Daily mean	4.8	-0.3	56th highest	
Highest maximum	13.0	on 2nd	Lowest maximum	2.6 on 17th
Highest minimum	8.6	on 3rd	Lowest minimum	-7.4 on 18th
Mean grass minimum	-0.9	+0.2	Lowest grass minimum	-11.6 on 18th
Mean earth @30 cm	6.0	+0.3	Earth @100 cm	7.9 +0.2
Frost duration (hrs)	114.1		Rain duration (hrs)	45.3
Rainfall total (mm)	58.9	89 %	69th highest	
Highest daily fall	23.8	on 4th	Highest rate mm/hr	31 on 22nd
Number of: Dry days (<0.2mm)	19	Wet days (>0.9mm)	7	days ≥5mm 3
Sunshine total (hrs) 96,8	Daily mean 3.12	133 %	Sunniest day	8.2 on 26th
N° days with: Air frost 11	Ground frost 17	Snow falling 1	Snow lying 0	
Thunder 0	Hail ≥5mm 0	Small hail/ice 1	Fog @09 0	Nil sun 6
Pressure MSL: Mean @09 GMT, mbar 1018.2	+1.9	Highest 1039.1	on 11th	Lowest 976.0 on 2nd
Relative humidity: Mean (%) 82.6	Lowest 46	on 20th	Water vapour (g/kg), mean at 09 and 15 GMT	4.4, 4.7
Overall mean wind speed (mph) 8.1	Windiest day 17.2	on 21st	Max gust 63	on 21st
Wind direction (days) N 3	NE 4	E 0	SE 0	S 7 SW 9 W 6 NW 2
Least windy day (mph) 3.9	on 16th	Calm; less than 0.5 mph (minutes)	n/a	

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

Notes:

#### Very Sunny with Temperature and Rainfall Near Average.

**Temperature:** The mean this January is 0.3° below the current 30 year climatological average, but it is 0.4° above the long-term median. The mean maximum is 0.8° above the median while the mean minimum is 0.1° above its median. In this millennium, January has been colder 12 times and milder 12 times. The highest max is 0.5° above the median and the lowest max is 1.6° above its median. The highest min is 0.1° above the median while the lowest min is 1.5° below its median. The mean grass min is 0.2° above average, but the lowest grass min is 1.0° below the 45 year average and is lowest since 2015. Mean earth temperature at both 30 cm and 1 m depth is slightly above average. There was one more day with air frost than average, and the number of hours with air frost is 16 above average, but it is 31 hours less than in January last year. Anomalies for daily max were over +5° on the 2nd, 25th, 28th and 29th, and exceeded -4° on the 8th, 17th and 18th with extreme values of +5.2° on 2nd and -4.5° on 17th and 18th. Anomalies for daily min were above +5° on the 3rd, 22nd, 24th, 26th and 30th, and exceeded -5° from the 16th to the 20th, with extreme values of +7.1° on 3rd and -8.6° on the 18th. **Rainfall:** There has been plenty of dry weather this January after a rather wet start, with 4 more dry days than average. However, in recent years, in both 2022 and 2019 the count was 6 more than average. The rainfall total is only 89% of the current 30 year average, but it is 1.1 mm above the the long-term median. Rainfall was distributed very unevenly through the month, wet to the 4th and again from 19th to 21st, otherwise mainly dry. There was an unusually high daily total for January on the 4th when 23.8 mm fell over 11.8 hours, following a 10 day period when 43.6 mm had fallen, culminating in the closure of The Emmbrook School when the Emm over-topped its banks. This daily fall is highest for any January day since 1962, ranks 5th highest in 121 years, and is 10.5 mm above the average for the past 49 years. There were 3 dry spells, 2 of 5 days ending on the 13th and 19th, and one unbroken on the 31st after 7 days. Snow fell on the 8th, though very light for most of the time, but there was also a heavy fall of snow pellets on that day that produced a covering of around 1cm which had mostly thawed by the next morning. Daily accumulation compared with normal was 30mm in surplus on the 4th, this falling to zero by the 19th, then increasing to 10 mm by the 21st, then decreasing to become a deficit of 7 mm by the 31st. **Sunshine:** This has been a very sunny January, 2nd sunniest in this millennium after 2003. At this time of year, when daylight is at a premium, just a few sunny days can make the difference between a poor month sun-wise, and a good or sunny one, as is illustrated by this January, where 8 days had over 80% of the maximum, including 6 with over 90%. The period 15th to 19th, despite having one sunless day, gave a 5 day average of 6.3 hours per day. Daily accumulation compared with normal was 6 hours in deficit by the 6th, but became a surplus of 4 hours on the 11th, increasing to 20 hours by the 19th and 29 hours by the 28th, but fell back to 23 hours by the 31st. Overall there were 17 days with <3 hours and 9 days with =>6 hours. **Wind:** The mean speed this month is 0.3 mph above average and the mean on the windiest day is 1.2 mph above average. The highest gust is 12 mph above average and highest for the month since 2018.

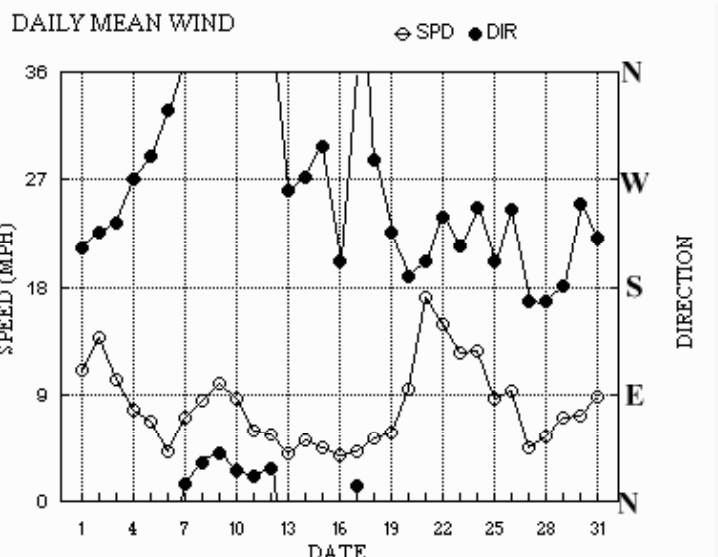
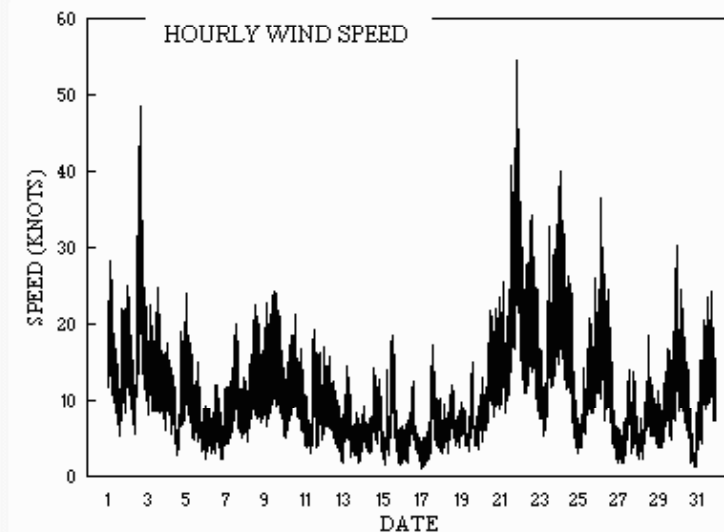
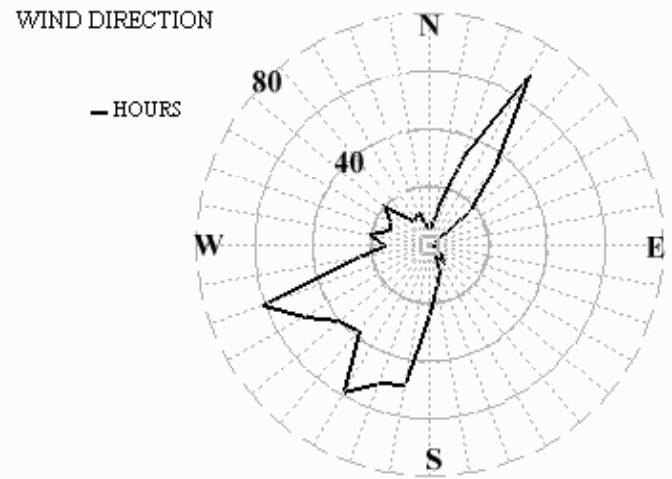
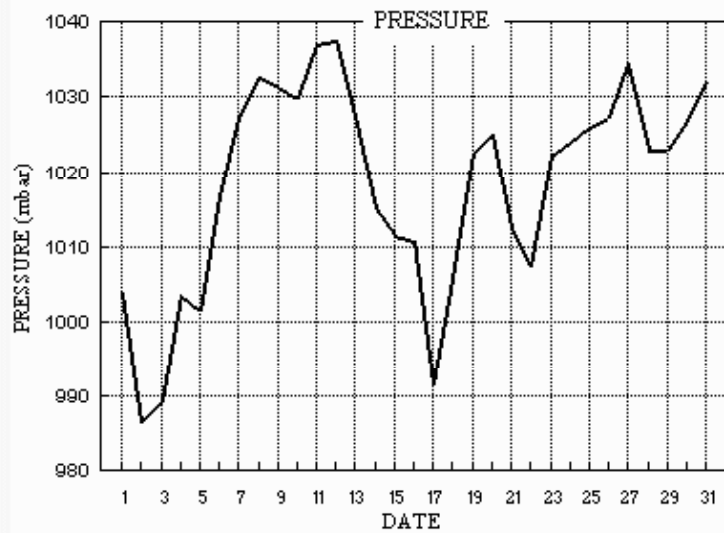
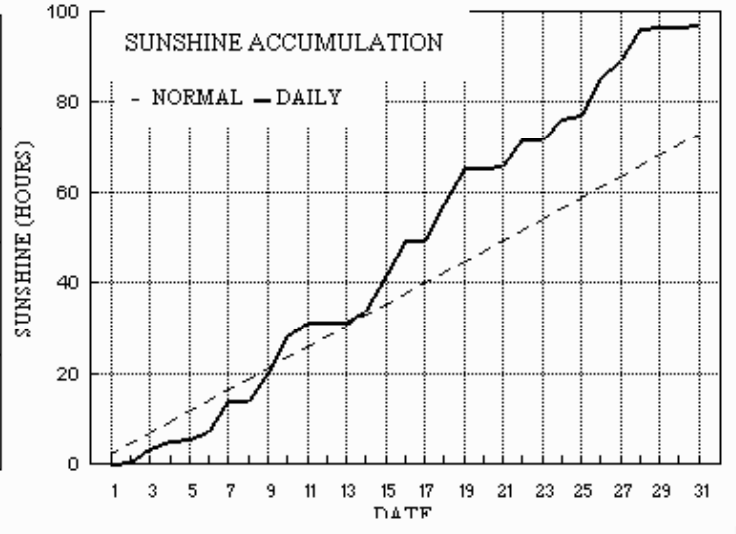
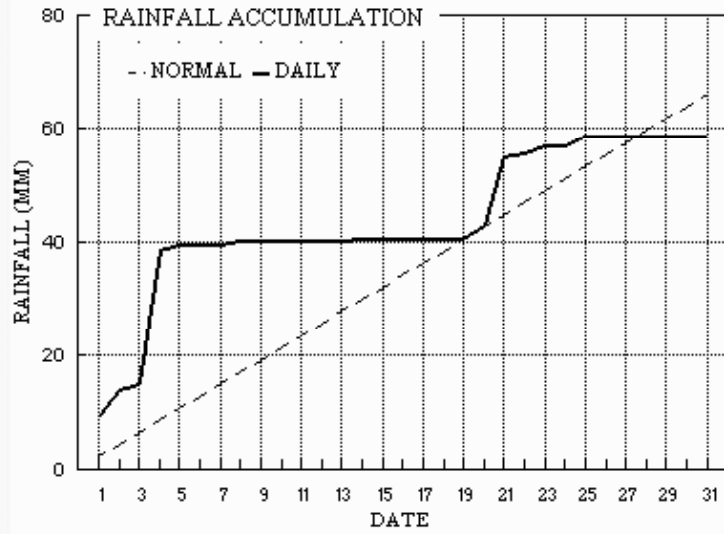
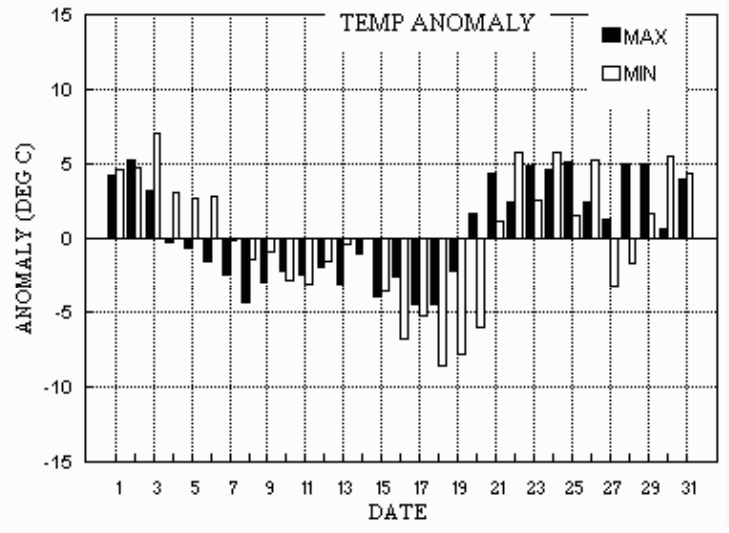
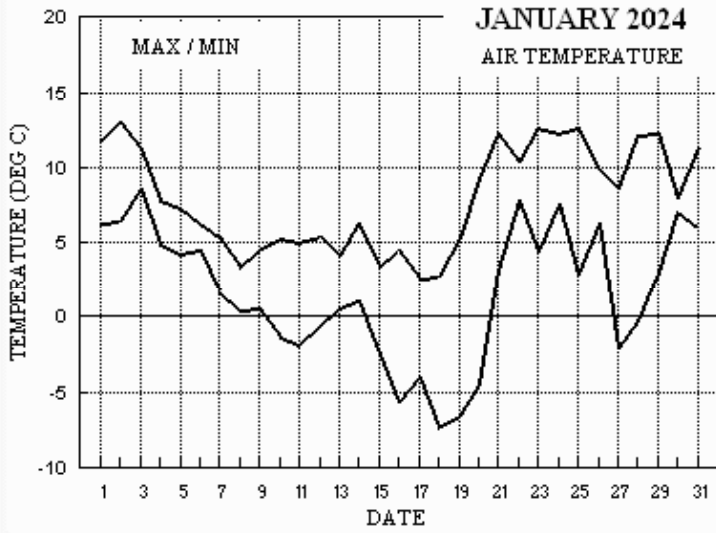
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 <sup>st</sup> to the 10 <sup>th</sup>				From the 11 <sup>th</sup> to the 20 <sup>th</sup>				From the 21 <sup>st</sup> to the 31 <sup>st</sup>			
-0.2°	+2.0°	189%	120%	-2.4°	-4.3°	14%	159%	+3.6°	+2.6°	68%	121%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

# Wokingham climatological graphs for January 2024



Month: JANUARY 2024

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf SI	Th Ha	Ic Fg	Vec ddd	mean ff	sp	Max gust ddd	gg	HHhh	High hr ddd	ff	Rain HH	hrs
1	11.8	6.3	9.5	4.0	8.7	9.7	0.2	0.0	1003.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	213	8.2	9.6	252	29	0355	247	14	03	8.8
2	13.0	6.4	4.5	7.1	8.8	9.6	0.2	0.0	986.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	226	11.1	12.0	238	49	1549	242	25	15	5.6
3	11.2	8.6	0.9	5.2	9.0	9.6	3.0	0.0	989.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	234	8.7	8.9	258	25	1352	248	12	13	0.6
4	7.8	4.9	23.8	-0.3	8.8	9.6	1.7	0.0	1003.6	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	270	1.6	6.6	336	22	2323	334	10	23	11.8
5	7.3	4.3	0.8	2.5	8.4	9.6	0.6	0.0	1001.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	290	5.7	5.9	324	24	0019	320	12	00	1.7
6	6.3	4.5	0.0	2.5	8.2	9.5	1.7	0.0	1016.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	328	3.4	3.7	314	12	1249	334	6	12	0.0
7	5.4	1.7	0.0	-2.3	7.7	9.4	6.5	0.0	1027.2	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	15	6.1	6.2	19	20	1205	18	9	12	0.0
8	3.4	0.4	0.7	-4.4	7.1	9.3	0.0	0.0	1032.6	0 1 1 0	0 0 1 0	0 0 1 0	0 0 1 0	32	7.3	7.4	39	23	1224	33	10	11	2.6
9	4.5	0.6	0.0	-0.7	6.5	9.1	6.6	4.2	1031.5	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	40	8.6	8.7	50	25	1138	46	11	11	0.0
10	5.2	-1.4	0.0	-7.1	5.8	8.9	7.7	8.5	1029.8	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	27	7.5	7.5	41	22	1257	29	10	13	0.0
11	5.0	-1.9	0.1	-7.2	5.1	8.6	3.1	9.1	1037.1	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	21	5.2	5.2	16	19	1348	25	9	13	0.7
12	5.4	-0.6	tr	3.1	5.0	8.2	0.0	0.0	1037.6	1 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	28	4.7	4.9	33	17	0059	28	7	04	0.1
13	4.1	0.5	tr	0.8	5.5	8.0	0.0	0.0	1027.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	260	2.7	3.5	325	15	0538	309	6	05	0.0
14	6.3	1.0	0.3	-1.5	5.7	7.9	2.6	0.0	1015.1	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	271	3.8	4.5	291	15	1301	298	7	13	0.5
15	3.3	-2.5	0.0	-7.1	5.6	7.8	7.9	14.3	1011.5	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	297	3.3	4.0	337	19	1322	335	9	12	0.0
16	4.5	-5.7	0.0	-9.0	4.7	7.7	7.6	16.6	1010.6	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	202	3.1	3.4	237	13	1358	216	7	13	0.0
17	2.6	-4.1	0.0	-7.6	4.0	7.5	0.0	16.4	991.6	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	13	3.5	3.7	22	17	1457	20	8	14	0.0
18	2.7	-7.4	0.0	-11.6	3.7	7.2	8.0	17.5	1005.5	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	286	4.1	4.6	302	12	1335	302	6	11	0.0
19	5.3	-6.6	0.0	-9.8	3.4	7.0	8.0	14.9	1022.5	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	225	4.7	5.1	237	15	1405	244	8	13	0.0
20	9.2	-4.6	2.5	-6.5	3.1	6.7	0.1	2.7	1024.9	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	189	8.2	8.2	188	22	1850	187	10	18	2.2
21	12.2	3.1	12.0	1.7	3.0	6.5	0.5	0.0	1012.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	201	14.8	14.9	207	55	2105	206	24	20	6.4
22	10.3	7.8	0.7	5.0	4.3	6.3	5.8	0.0	1007.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	239	12.9	13.0	207	36	0037	227	16	01	1.2
23	12.7	4.4	1.4	-0.1	4.9	6.3	0.0	0.0	1022.1	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	214	10.5	10.9	239	36	2324	224	17	21	1.1
24	12.2	7.5	tr	7.0	5.8	6.4	4.7	0.0	1024.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	246	10.8	11.0	259	40	0219	251	20	02	0.0
25	12.6	2.9	1.6	-1.4	6.1	6.6	0.5	0.0	1026.0	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	201	7.3	7.5	218	26	2141	206	12	22	1.7
26	9.9	6.3	0.0	3.2	6.8	6.7	8.2	0.0	1027.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	245	7.4	8.0	253	37	0435	256	14	05	0.0
27	8.6	-2.1	0.0	-6.1	6.2	6.9	4.0	8.8	1034.4	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	168	3.6	4.0	178	14	1426	184	7	14	0.0
28	12.1	-0.4	0.0	-3.8	5.6	7.0	6.9	1.1	1022.9	1 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	168	4.2	4.7	172	19	1336	173	7	13	0.0
29	12.2	3.0	tr	5.1	6.0	7.0	0.3	0.0	1022.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	181	6.0	6.1	211	28	2358	199	10	23	0.0
30	8.0	7.1	0.0	7.1	6.9	7.0	0.0	0.0	1026.7	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	249	4.9	6.3	205	30	0023	204	14	00	0.0
31	11.4	6.0	0.1	4.4	6.9	7.2	0.4	0.0	1032.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	220	7.5	7.7	220	25	1808	222	12	18	0.3

Total 58.9 96.8 114.1 45.3

Mean 8.0 1.6 -0.9 6.0 7.9 3.12 3.7 1018.2 236 3.0 7.0

Anom -0.1 -0.4 89% +0.2 +0.3 +0.2 133% +1.9

Daily mean 4.8 Pressure, abs highest = 1039.1 on 11

Anom -0.3 Pressure, abs lowest = 976.0 on 2

Number of days with:

Air frost = 11 Ground frost = 17 Nil sun = 6  
 Snow falling = 1 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 JANUARY 2024

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks												
1	68	6	23	11	18	6.4	3.4	81	4.9	1003.9	2	025	02	2	2	3	0	9	7	2	83365	86070										
2	50	8	14	06	11	10.5	9.9	96	7.8	986.4	7	038	63	6	2	5	7	2	2	83705	83620	88540	2									
3	65	4	21	09	17	9.1	6.7	85	6.2	989.3	7	002	02	1	1	3	8	5	7	1	81825	83635		3	1Ac60	2Ci75	Cu	hum				
4	68	6	21	07	12	5.7	3.7	87	5.0	1003.6	1	007	02	1	1	0	0	9	0	1	82072	85080		4	COTRA							
5	82	7	28	04	12	4.5	3.0	90	4.8	1001.6	2	023	02	2	2	1	5	6	1	2	81645	85464	87270	5	COTRA	U/a	cont					
6	50	7	34	04	08	4.9	4.0	94	5.0	1016.5	2	032	80	8	2	7	5	3	1	81706	85612	86625	6	/Sc40								
7	84	7	36	06	12	2.9	0.0	81	3.7	1027.2	2	016	02	2	2	7	5	6	1	81635	87642		7	Edge	Sc	sheet	E					
8	86	7	02	07	16	2.4	-3.3	66	2.9	1032.6	1	002	14	2	2	7	5	6	1	87645			8	Sc	vir	Hoar	slt					
9	78	7	05	09	20	1.4	-2.4	76	3.1	1031.5	3	008	02	2	2	6	5	5	4	86522			9	2Ac66	Ac	len	Sn	ly	<10%<1cm			
10	82	0	03	08	16	0.3	-2.7	80	3.0	1029.8	2	005	02	0	0	0	0	9	0	0				10	Hoar	mod	Gnd	sfc	frzn			
11	70	1	02	03	07	-0.6	-1.0	97	3.4	1037.1	2	017	03	0	0	1	5	4	0	0	81618			11	Hoar	mod	Gnd	sfc	frzn			
12	70	8	02	06	13	4.6	2.3	85	4.4	1037.6	4	000	50	5	2	8	5	4	1	88614			12									
13	57	8	24	03	11	1.0	-0.8	88	3.5	1027.5	7	017	05	2	2	8	6	3	1	88709			13									
14	50	6	22	04	08	1.9	1.0	94	4.1	1015.1	7	008	10	1	1	6	5	6	1	86635			14	1Ci75								
15	82	3	25	05	08	-0.4	-2.6	85	3.1	1011.5	3	015	03	0	0	3	5	6	0	81635	83650		15	Hoar	slt	Gnd	sfc	frzn				
16	63	1	19	03	07	-4.1	-4.9	94	2.6	1010.6	8	008	01	1	1	1	5	7	0	81650			16	Hoar	mod							
17	75	8	05	02	05	-1.1	-3.0	87	3.1	991.6	7	017	02	2	2	7	5	6	2	84630	86638	88464	17	Hoar	slt	Gnd	sfc	frzn				
18	75	0	26	03	08	-4.6	-7.2	82	2.2	1005.5	2	031	02	0	0	0	0	9	0				18	Hoar	mod	Gnd	frzn					
19	82	1	26	03	06	-4.7	-5.4	95	2.5	1022.5	1	015	02	0	0	0	0	9	0	81075			19	Hoar	mod.	Gnd	frzn	Wind	est	until	further	notice
20	82	8	19	07	14	3.1	-0.4	78	3.6	1024.9	7	002	03	2	2	6	0	9	1	7	86461	88268		20	COTRA	Hoar	slt	Gnd	frzn			
21	60	7	22	11	21	9.1	7.9	92	6.6	1012.6	1	012	05	6	2	1	6	4	7	81710	83363	86366	21	/Ci72								
22	68	2	23	10	27	7.9	4.3	78	5.2	1007.4	2	042	02	0	0	2	8	5	0	0	82827			22	1Sc56	Cu	fra	Wind	OK			
23	56	8	18	06	11	7.5	6.6	94	6.0	1022.1	8	025	61	6	2	7	5	3	2	83708	85615	88550	23									
24	60	8	24	12	33	9.4	5.4	76	5.5	1024.1	2	036	05	2	2	0	0	9	0	7	88275			24	COTRA							
25	62	8	19	06	10	9.6	8.8	95	6.9	1026.0	6	007	60	5	2	7	8	3	2	83706	83812	85640	25	8As65	Cu	med						
26	86	1	26	08	18	6.6	0.7	66	3.9	1027.2	2	062	02	0	0	0	0	9	0	81075			26	Parhelion								
27	62	7	16	02	07	-0.2	-0.5	98	3.6	1034.4	0	002	03	2	2	7	0	9	7	87464			27	/Ac66	COTRA	Hoar	mod					
28	67	7	14	05	08	2.8	2.5	98	4.5	1022.9	7	011	02	2	2	1	0	9	4	81365	83075	87080	28	COTRA	Parhelion	Hoar	slt					
29	56	8	19	06	12	10.1	8.9	92	7.0	1022.9	3	011	05	2	2	8	6	2	1	86705	88708		29									
30	88	7	26	06	20	7.7	4.1	78	5.0	1026.7	2	035	02	2	2	7	5	4	1	82618	87622		30									
31	86	7	23	09	17	6.7	1.8	71	4.2	1032.1	6	011	02	2	2	8	5	5	1	87625			31	/Ci72								

Mean vis = 25.6 km

Mean cloud = 5.6 70%

Mean wind speed = 6.2 kn

Mean gust = 13 kn

Mean TT = 3.9 °C

Mean TdTd = 1.6 °C

Mean RH = 85.8 %

Mean r = 4.4 g/kg

Mean PPP = 1018.2 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for JANUARY 2024

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	64	8	17	07	11	8.7	5.8	82	5.8	1002.5	6	025	60	6	2	4	5	5	2	/	81620	84635	88556			1		
2	80	3	24	22	43	11.1	7.0	76	6.4	978.1	5	021	25	8	6	2	1	5	8	0	82820					2	2Ac62 Ac flo	
3	65	6	27	09	22	9.9	7.8	87	6.7	990.4	3	011	80	8	1	3	4	4	3	83818	83068				3	1Sc45 1Ac59 Cu med Ac len Cb top SW		
4	40	8	09	04	07	7.1	6.2	94	6.0	998.9	7	034	65	6	2	6	7	4	2	/	86712	88530			4			
5	84	7	29	07	13	7.2	4.3	82	5.2	1004.4	2	011	02	2	2	7	8	4	/	/	81815	87635			5	Cu fra		
6	80	2	35	04	10	5.6	2.8	82	4.6	1018.8	3	009	01	1	1	2	8	4	0	0	81815				6	2Sc35 Cu hum		
7	81	3	02	08	18	3.6	-2.1	66	3.2	1028.6	3	003	03	0	0	3	5	6	0	0	83645				7			
8	15	8	06	10	21	0.7	-1.1	88	3.4	1031.9	5	007	72	7	2	8	5	4	/	/	83615	86625	88640		8	Sn+sn pel. Snly 60%<1cm		
9	82	1	04	10	24	2.8	-2.1	70	3.2	1030.3	6	010	01	0	0	1	1	5	0	0	81825				9	Cu fra		
10	86	1	02	10	19	4.0	-1.6	67	3.3	1028.6	6	009	02	0	0	1	1	5	4	1	81820				10	1Ac66 1Ci75 Cu fra		
11	83	8	02	05	17	4.1	0.8	79	3.9	1038.4	6	001	03	2	2	8	5	4	/	/	88617				11			
12	82	8	04	04	10	5.3	2.5	82	4.4	1034.9	6	020	02	2	2	8	5	4	/	/	88615				12			
13	72	8	21	02	06	4.1	1.3	82	4.1	1023.4	7	024	02	2	2	8	5	4	/	/	88614				13			
14	82	7	29	05	14	6.0	1.0	70	4.1	1011.4	7	020	15	1	1	7	8	5	/	/	82825	87650			14	Cu hum jpNW		
15	88	3	32	08	16	1.9	-7.2	51	2.2	1012.2	5	003	02	0	0	0	0	9	0	1	83080				15	COTRA Parhelia Hoar slt in shade		
16	83	3	24	05	12	3.5	-4.2	57	2.8	1006.3	7	029	03	0	0	1	5	7	0	5	81650	83280			16	COTRA Hoar slt in shade		
17	68	8	02	08	17	2.1	-1.0	80	3.6	990.7	5	001	02	2	2	8	5	4	/	/	88615				17			
18	86	0	33	06	13	2.5	-3.8	63	2.9	1010.8	2	018	02	0	0	0	0	9	0	0					18	Hoar slt in shade. Anemo failed, wind est until further notice		
19	82	1	24	07	17	4.1	-1.3	68	3.4	1022.9	7	002	02	0	0	0	0	9	0	1	81078				19	Hoar mod in shade		
20	84	7	20	11	21	5.9	-2.4	55	3.1	1022.2	7	021	02	2	2	1	5	5	7	2	81520	83359	86365		20	/Ci70 Ac vir		
21	59	8	21	18	38	11.7	8.4	80	6.8	1009.8	7	023	05	2	2	6	5	4	3	7	86617	83363	88270		21			
22	75	3	25	14	33	9.5	4.1	69	5.1	1011.0	2	013	15	1	1	3	4	6	0	0	82830				22	1Sc50 Cu med jpW Wind OK		
23	40	8	20	10	22	10.9	10.3	96	7.7	1015.0	6	028	51	5	5	8	7	2	/	/	87705	88708			23			
24	65	7	25	11	25	11.3	4.7	64	5.2	1026.8	1	008	03	2	2	2	1	6	7	1	82832	87362			24	/Ci75 Cu hum		
25	84	7	21	09	21	12.5	9.3	81	7.2	1022.9	7	018	03	2	2	7	5	4	/	1	87615				25	/Ci75		
26	83	1	27	07	20	8.9	-0.1	53	3.7	1032.0	2	012	02	0	0	1	1	6	0	1	81835				26	1Ci80 COTRA Cu fra		
27	80	7	18	08	14	8.0	3.1	71	4.6	1031.4	6	023	02	2	2	1	4	5	4	7	81628	87272			27	1Ac65 COTRA		
28	84	7	15	08	14	11.3	6.8	71	6.1	1019.5	7	020	02	2	2	2	0	9	4	1	82369	83073	87078		28	COTRA Parhelia		
29	65	8	19	06	17	11.4	8.6	83	6.9	1021.1	7	014	03	2	2	1	6	4	7	7	81712	85368	88272		29	1Ac63 St fra		
30	88	8	30	07	14	8.0	3.1	71	4.6	1030.8	1	014	02	2	2	8	8	5	/	/	83824	88628			30	Cu hum		
31	80	8	21	11	24	9.8	6.3	79	5.8	1027.2	6	031	03	2	2	8	5	4	/	/	86618	88625			31			

Mean vis = 34.0 km

Mean cloud = 5.5 69%

Mean wind speed = 8.4 kn

Mean gust = 18 kn

Mean TT = 6.9 °C

Mean TdTd = 2.5 °C

Mean RH = 74.2 %

Mean r = 4.7 g/kg

Mean PPP = 1017.2 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  2024	Hour	01-Jan	02-Jan	03-Jan	04-Jan	05-Jan	06-Jan	07-Jan	08-Jan	09-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan
	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	0.26	0.44	0.00	0.00	0.45	0.00	0.00	0.53	0.53	0.00	0.00	0.25	0.60	0.63
	9	0.00	0.00	0.53	1.00	0.10	0.08	1.00	0.00	0.53	1.00	1.00	0.00	0.00	0.00	1.00	1.00
	10	0.17	0.00	0.50	0.29	0.00	0.00	0.91	0.00	0.97	1.00	0.72	0.00	0.00	0.00	1.00	1.00
	11	0.04	0.00	0.11	0.00	0.00	0.00	0.94	0.00	1.00	1.00	0.14	0.00	0.00	0.12	1.00	1.00
	12	0.00	0.00	0.09	0.00	0.11	0.07	0.78	0.00	1.00	1.00	0.48	0.00	0.00	0.88	1.00	1.00
	13	0.00	0.01	0.92	0.00	0.39	0.34	1.00	0.00	1.00	1.00	0.26	0.00	0.00	0.84	1.00	1.00
	14	0.00	0.17	0.30	0.00	0.00	0.56	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.50	1.00	1.00
	15	0.00	0.01	0.26	0.00	0.00	0.68	0.39	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.97
	16	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.08	0.13	0.00	0.00	0.00	0.00	0.25	0.00
	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot		<b>0.21</b>	<b>0.19</b>	<b>2.96</b>	<b>1.73</b>	<b>0.60</b>	<b>1.72</b>	<b>6.49</b>	<b>0.00</b>	<b>6.58</b>	<b>7.65</b>	<b>3.13</b>	<b>0.00</b>	<b>0.00</b>	<b>2.60</b>	<b>7.85</b>	<b>7.60</b>

Hour	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan	Mean
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.67	0.69	0.00	0.09	0.44	0.00	0.00	0.00	0.70	0.00	0.35	0.00	0.00	0.00	0.21
9	0.00	1.00	1.00	0.00	0.00	0.76	0.00	0.80	0.00	1.00	0.26	1.00	0.00	0.00	0.00	0.42
10	0.00	1.00	1.00	0.00	0.02	0.88	0.00	1.00	0.00	1.00	0.02	0.78	0.00	0.00	0.00	0.40
11	0.00	1.00	1.00	0.03	0.24	0.72	0.00	1.00	0.08	1.00	0.52	1.00	0.00	0.00	0.00	0.38
12	0.00	1.00	1.00	0.00	0.09	0.86	0.00	1.00	0.33	1.00	1.00	1.00	0.02	0.00	0.00	0.44
13	0.00	1.00	1.00	0.00	0.07	0.48	0.00	0.73	0.04	1.00	1.00	0.75	0.27	0.00	0.29	0.46
14	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.05	0.03	1.00	1.00	1.00	0.00	0.00	0.11	0.41
15	0.00	1.00	1.00	0.01	0.00	0.51	0.00	0.11	0.00	1.00	0.19	0.74	0.00	0.00	0.00	0.32
16	0.00	0.31	0.33	0.00	0.00	0.18	0.00	0.00	0.00	0.48	0.00	0.25	0.00	0.00	0.00	0.07
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	<b>0.00</b>	<b>7.98</b>	<b>8.02</b>	<b>0.05</b>	<b>0.51</b>	<b>5.83</b>	<b>0.00</b>	<b>4.69</b>	<b>0.48</b>	<b>8.17</b>	<b>3.98</b>	<b>6.88</b>	<b>0.29</b>	<b>0.00</b>	<b>0.40</b>	<b>96.61</b>

JANUARY 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	8.21	11.4	2356	6.3	845	84.2	96.1	2205	72.2	359	5.7	5.8	8.2	2356	4.8	845	999.17	1005.1	1104	988.5	2348	6.7
2	11.04	13.0	1342	9.1	2357	87.1	97.4	1011	73.4	1525	9.0	7.3	8.9	1247	6.1	1944	985.91	991.1	352	976.0	1401	4.9
3	9.19	11.2	1025	7.2	2140	84.9	91.4	2143	76.3	1025	6.8	6.2	6.8	1507	5.8	2138	991.49	999.7	2356	988.2	256	0.9
4	6.39	8.4	126	4.3	2335	90.6	97.3	1656	82.6	1200	4.9	5.5	6.1	115	4.8	810	999.13	1003.7	820	992.3	2054	18.9
5	5.76	7.3	1441	4.3	800	88.1	94.3	231	80.8	1443	3.9	5.1	5.3	2136	4.7	819	1003.04	1010.4	2359	994.5	3	1
6	5.00	6.3	1305	2.6	2107	90.2	95.7	2115	81.0	1507	3.5	4.9	5.3	539	4.3	2107	1017.17	1023.1	2359	1010.2	1	0.8
7	3.12	5.4	1155	1.6	612	76.4	89.4	28	61.9	1258	-0.7	3.6	4.4	2	3.1	1507	1027.92	1032.3	2328	1022.9	3	0
8	1.65	3.4	1115	0.3	222	74.3	90.9	1506	62.8	939	-2.5	3.1	3.5	1506	2.7	836	1032.05	1033.0	1037	1031.1	2322	0.1
9	1.46	4.5	1249	-0.8	2313	74.7	83.6	2353	63.6	1305	-2.6	3.1	3.4	1051	2.8	1857	1030.65	1031.6	1046	1029.7	1804	0.5
10	1.25	5.2	1224	-1.4	433	77.8	87.5	336	57.9	1244	-2.3	3.2	3.6	1659	2.8	620	1029.75	1032.2	2359	1028.4	1412	0.2
11	2.04	5.0	1920	-1.9	758	88.9	97.7	850	72.9	1224	0.4	3.8	4.7	1819	3.1	746	1037.04	1039.1	2042	1032.1	8	0.3
12	4.52	5.4	1417	3.3	2353	84.7	90.9	54	80.4	1433	2.2	4.3	4.6	55	4.0	2353	1036.07	1038.8	0	1031.9	2355	0
13	2.69	4.1	1442	0.5	755	85.8	93.2	2358	80.5	1353	0.5	3.9	4.2	2106	3.4	751	1025.63	1032.0	1	1019.2	2359	0
14	3.29	6.3	1318	0.3	0	84.9	94.8	846	67.6	1325	0.9	4.0	4.6	1726	3.3	2359	1013.88	1019.3	2	1010.9	1646	0.3
15	-0.39	3.3	1320	-4.6	2359	76.9	95.4	352	49.3	1444	-4.2	2.8	3.4	212	2.1	1706	1012.05	1014.3	2156	1009.8	457	0
16	-1.67	4.5	1258	-5.7	511	81.3	95.6	839	55.2	1448	-4.7	2.7	3.0	1110	2.3	511	1007.96	1014.0	0	999.9	2359	0.1
17	-0.75	2.6	1306	-4.3	2357	83.7	90.9	558	74.9	1125	-3.2	3.1	3.7	1306	2.5	2357	993.73	1000.0	0	990.3	1426	0
18	-2.54	2.7	1309	-7.4	458	79.6	94.0	519	61.3	1524	-5.7	2.5	3.0	1346	2.0	435	1008.34	1018.4	2356	997.8	0	0
19	-1.24	5.3	1320	-6.6	810	84.0	96.3	847	62.4	1322	-3.7	2.9	3.5	1221	2.2	810	1022.61	1025.5	2322	1018.3	17	0.1
20	3.45	6.5	1317	-1.9	143	69.0	90.6	147	46.4	2253	-1.9	3.3	3.9	1159	2.5	2253	1022.64	1025.5	301	1015.1	2355	0.1
21	9.34	12.1	1943	3.7	121	85.7	96.5	640	50.4	0	7.0	6.3	7.9	2342	2.7	0	1009.23	1015.4	1	997.9	2329	10.6
22	9.06	12.2	139	6.4	2344	77.8	94.7	101	65.9	1519	5.3	5.6	8.2	121	4.4	2213	1009.00	1021.9	2357	997.0	127	3.2
23	9.10	12.7	2231	4.4	446	90.2	96.3	1515	74.1	47	7.6	6.6	8.2	2254	4.3	112	1018.32	1024.6	600	1011.4	2207	1.8
24	9.80	12.2	1333	4.0	2305	73.9	95.8	2323	61.9	1338	5.3	5.4	6.7	1	4.7	2259	1024.33	1030.5	2256	1014.1	0	0
25	9.62	12.6	1443	2.9	115	91.1	97.7	122	78.2	1413	8.2	6.7	8.0	2359	4.4	113	1024.55	1030.4	0	1018.4	2351	0
26	7.67	12.0	304	0.6	2358	72.7	96.0	53	49.0	1154	2.8	4.8	8.1	245	3.4	1154	1028.06	1035.7	2256	1016.8	353	1.4
27	2.96	8.6	1304	-2.1	641	88.9	98.3	827	65.6	1429	1.2	4.1	5.3	1140	3.1	641	1032.65	1035.5	11	1027.7	2347	0.1
28	6.17	12.1	1450	-0.4	503	88.5	99.0	843	65.4	1306	4.3	5.2	6.8	2322	3.6	503	1022.48	1028.1	8	1019.3	1501	0.1
29	10.78	12.2	2100	9.3	36	88.3	94.7	346	80.2	2025	8.9	7.0	7.5	2333	6.6	35	1021.70	1023.1	1012	1020.2	2336	0
30	7.82	11.6	0	6.0	2237	80.8	94.3	301	69.3	1841	4.7	5.2	7.4	4	4.4	1841	1028.29	1035.1	2359	1020.0	38	0
31	8.42	11.4	2034	6.0	451	76.9	91.6	2242	66.1	1229	4.6	5.3	7.0	2243	4.0	310	1029.82	1035.4	9	1024.8	1838	0.1
Total																						52.2
Mean	4.94	8.11		1.48		82.6	94.13		67.41		2.13	4.62	5.65		3.71		1017.57	1022.73		1011.44		
Max	11.04	13.04		9.25		91.1	99.00		82.60		8.95	7.33	8.89		6.61		1037.04	1039.09		1032.12		
Min	-2.54	2.58		-7.41		69.0	83.60		46.40		-5.72	2.50	2.97		2.02		985.91	991.05		975.99		

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

Duration of air frost is defined as the number of minutes that the AWS one minute average temperature is below  $0.0^{\circ}\text{C}$ , and the day runs from midnight to midnight.

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