

# 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

JUNE 2025

Temperature (°C )		Anomaly	Rank in the past 144 years	
Mean maximum	24.5	+3.5	2nd highest	
Mean minimum	12.9	+2.2	* <b>New Highest</b> *	
Daily mean	18.7	+2.9	* <b>New Highest</b> *	
Highest maximum	32.3	on 30th	Lowest maximum	16.9 on 7th
Highest minimum	18.4	on 28th	Lowest minimum	7.1 on 8th
Mean grass minimum	9.8	+2.0	Lowest grass minimum	3.0 on 8th
Mean earth @30 cm	18.0	+1.0	Earth @100 cm	15.9 +1.0
Frost duration (hrs)	0		Rain duration (hrs)	17.7
Rainfall total (mm)	26.2	51 %	37th lowest	
Highest daily fall	10.1	on 7th	Highest rate mm/hr	145 on 7th
Number of: Dry days (<0.2mm)	21	Wet days (>0.9mm)	6	days ≥5mm 1
Sunshine total (hrs) 257.0	Daily mean 8.57	132 %	Sunniest day	15.7 on 18th
N° days with: Air frost 0	Ground frost 0	Snow falling 0	Snow lying 0	
Thunder 0	Hail ≥5mm 0	Small hail/ice 0	Fog @09 0	Nil sun 0
Pressure MSL : Mean @09 GMT, mbar 1016.9	+0.1	Highest 1029.1	on 16th	Lowest 1000.8 on 5th
Relative humidity : Mean (%) 67.6	Lowest 28	on 2nd	Water vapour (g/kg), mean at 09 and 15 GMT 8.9, 8.7	
Overall mean wind speed (mph) 7.1	Windiest day 11.4	on 23rd	Max gust 32	on 23rd
Wind direction (days) N 0 NE 0 E 3 SE 2 S 2 SW 16 W 7 NW 0				
Least windy day (mph) 3.2	on 19th	Calm; less than 0.5 mph (minutes) n/a		

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

Notes:

### Record High Temperature with Rainfall Well Below, and Sunshine Well Above, Average

**Temperature:** This has been a record breaking June, with both the daily mean temperature and the mean minimum highest in 144 years, 0.3° and 0.5° above the previous highest respectively. Also, the mean maximum ranks 2nd highest in the same period, 0.7° below the record set in 2023. The highest max is 5.1° above the median and 5th highest in 122 years while the lowest max is 2.0° above its median and 7th highest in 113 years. The highest min is 3.3° above the median and 3rd highest in 113 years while the lowest min is 2.4° above its median and 7th highest in 122 years. The mean grass min, 2.0° above average, is highest for any June in the past 46 years. The highest grass min, 17.6° on the 29th, is also highest in the same period. Earth temperature at both 30cm and 1m depth is 1.0° above average. There were no days with a below normal max or min temperature after the 8th. There were two heat waves, 18th to 21st and 28th to 30th, with maximum temperatures over 10° above normal. Anomalies for daily max were above +10° on the 19th, 21st and 30th, and exceeded -2° on the 5th and 7th, with extreme anomalies of +10.9° on the 30th and -2.5° on the 7th. Anomalies for daily min were above +6° on the 28th and 29th, and exceeded -0.1° on the 4th, 8th and 11th with extreme anomalies of +6.9° on the 28th and -2.8° on the 8th. **Rainfall:** Another dry month, the 4th consecutive one, with both May and June having about half the average rainfall, and both March and April having less than one third. In this millennium 7 Junes have been drier including 2024. The duration of rainfall was 59% of average. There were 2 dry spells, one of 7 days ended on the 19th and one of 5 days on the 25th. The 23 day period ending on the 30th contained 20 dry days, and only 0.7mm of rain fell over the 12 days to the 19th. There was no thunder or hail this June, but there were heavy rain showers on the 3rd and 26th, and a violent one on the 7th. Estimated soil moisture deficit reached 207 mm on the 24th June, one of the highest values for this date in the past 50 years. Unirrigated shallow rooted plants have suffered severe stress continuously since mid May. Rainfall accumulation compared with normal was 10 mm in surplus on the 7th, but this became a 25mm deficit by the 30th. **Sunshine:** This is the 4th consecutive month to have well above average sunshine, and the mean daily sun has been above 8 hours for the past 3 of them. We have had 958.5 hours of sunshine over the past 4 months, which is 140% of average. In this millennium there has been only one sunnier June, that of 2023, but in the past 50 years the Junes of 1996 and 1976 were also sunnier than June 2025. In this June, the 8 day period to the 20th was particularly sunny, having a total of 102.9 hours, a daily mean of 12.9 hours. Daily accumulation compared with normal was 12 hours in deficit by the 12th, becoming a 38 hours surplus by the 20th, increasing to 61 hours by the 30th. Overall there were 3 days with <3 hours, 24 with =>6 hours and 7 with =>12 hours. **Wind:** The daily mean speed of 7.1 mph is 0.9 mph above average, making it the windiest June since 2017. However the speed on the month's windiest day is close to average, and the highest gust is 4 mph below average. Daily mean speeds were moderate until the 10th, then light or moderate, but fresh on the 22nd, 23rd and 26th. Daily mean direction was generally between S&W, except for between W& N on 18th, between N&E 19th and between E&S on 11th to 13th, 20th, 21st and 30th.

**Miscellaneous:** Noctilucent cloud was seen on the 23rd and 29th.

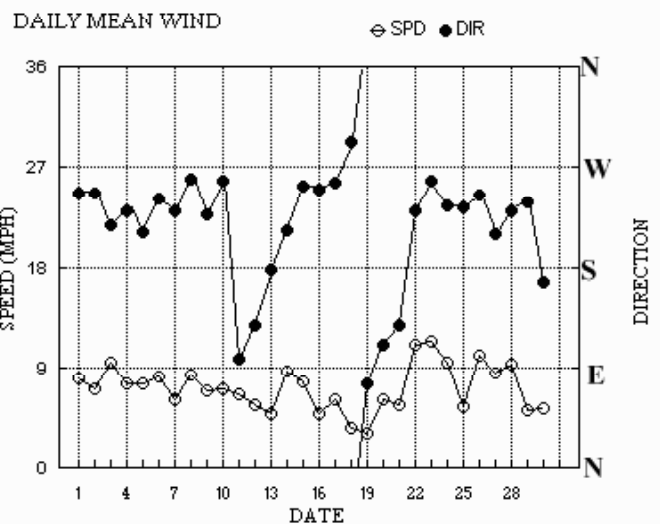
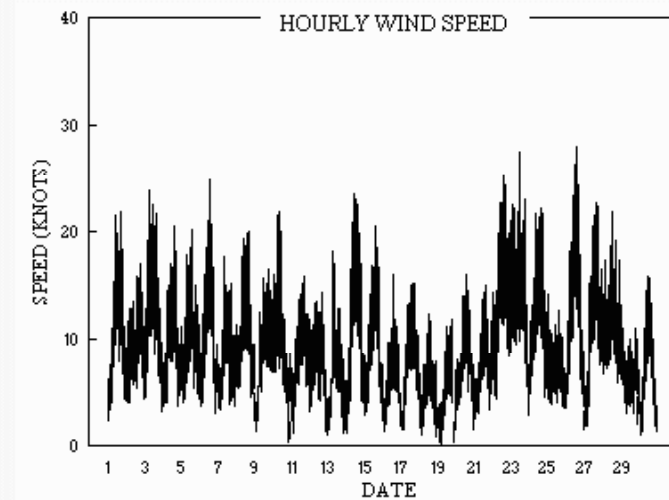
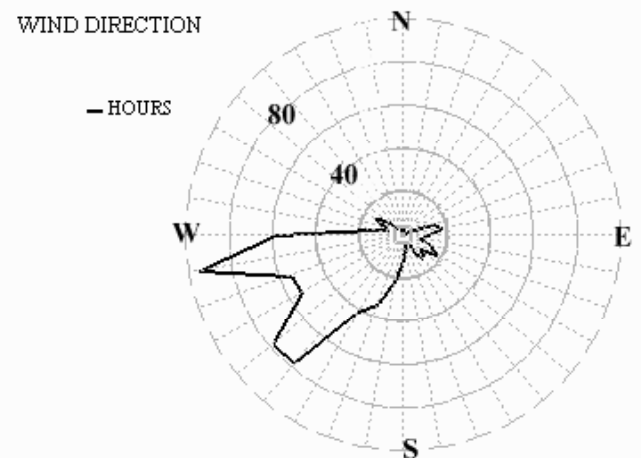
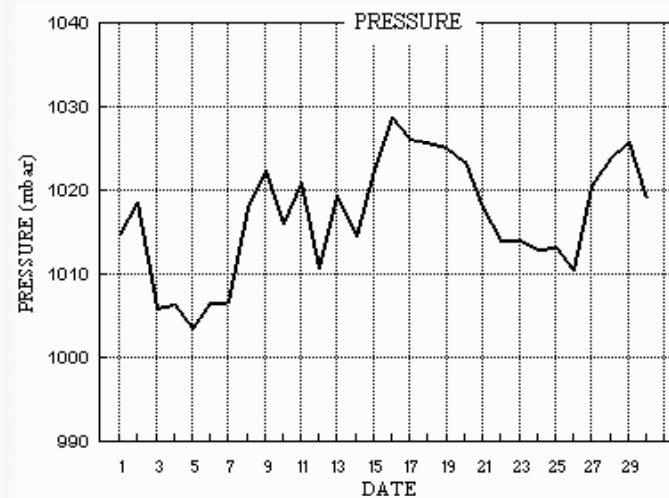
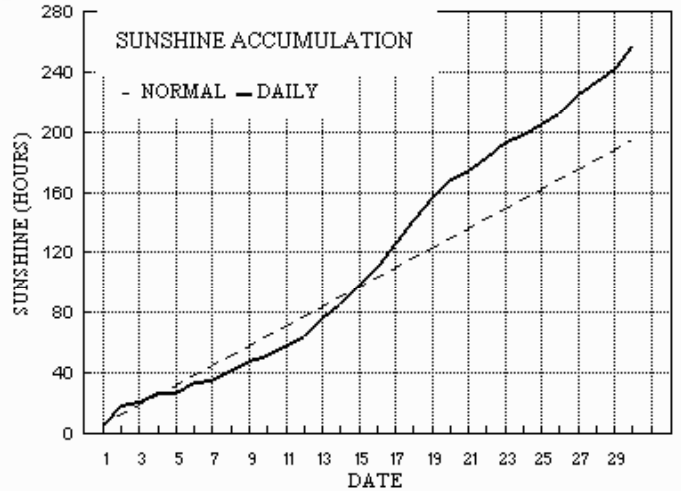
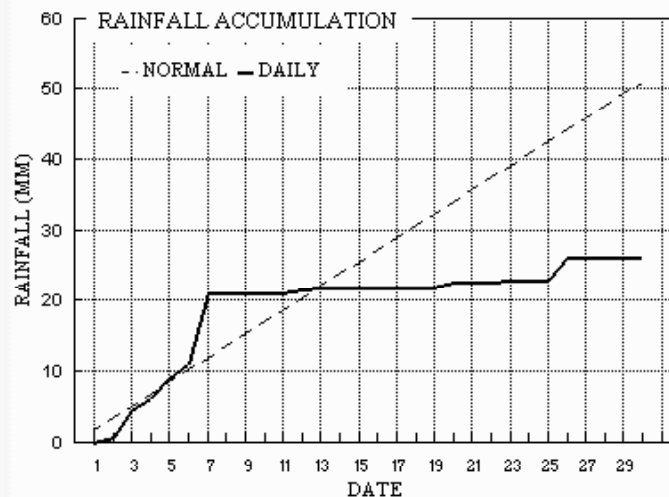
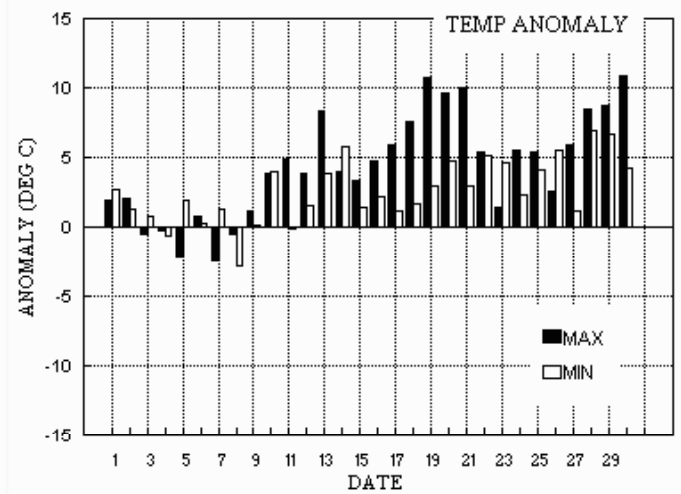
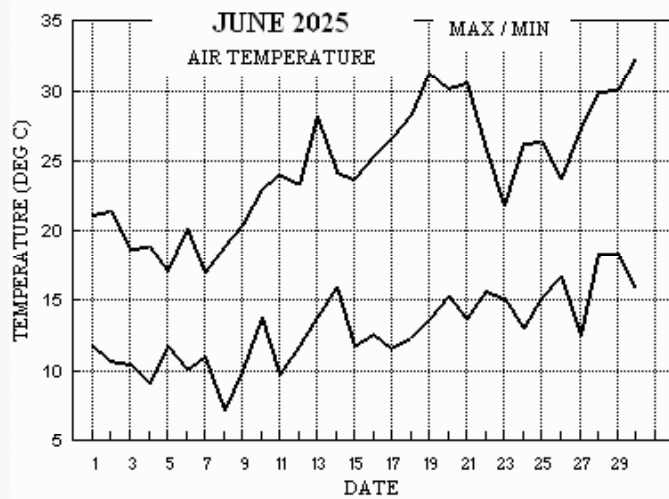
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

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 30 <sup>th</sup>			
+0.4°	+0.9°	124%	80%	+6.3°	+2.5°	9%	180%	+6.4°	+4.4°	21%	136%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

# Wokingham climatological graphs for June 2025



Daily meteorological data.

Emmbrook, WOKINGHAM, Berkshire.

Month: JUNE 2025

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf Sl	Th Ha	Ic Fg	Vec mean ddd ff sp	Max gust ddd gg HHhh	High hr ddd ff HH	Rain hrs
1	21.2	11.9	0.0	7.8	17.0	14.6	6.7	0.0	1014.7	0 0 0 0	0 0 0 0	0 0 0 0	247	6.9 7.0	275 22 1710	250 12 10	0.0
2	21.4	10.7	0.7	6.3	16.6	14.8	12.2	0.0	1018.6	0 0 0 0	0 0 0 0	0 0 0 0	246	4.4 6.1	228 17 1710	212 9 17	0.9
3	18.7	10.4	3.7	7.4	16.5	14.9	2.1	0.0	1006.1	0 0 0 0	0 0 0 0	0 0 0 0	217	7.5 8.2	195 24 0620	203 12 11	0.8
4	18.9	9.1	1.8	4.6	16.0	14.9	6.9	0.0	1006.4	0 0 0 0	0 0 0 0	0 0 0 0	230	6.2 6.6	228 21 1510	221 10 14	3.2
5	17.1	11.7	2.9	9.9	16.0	14.9	0.1	0.0	1003.5	0 0 0 0	0 0 0 0	0 0 0 0	211	6.2 6.5	191 20 1320	195 11 13	3.1
6	20.1	10.1	1.9	7.2	15.8	14.9	6.2	0.0	1006.7	0 0 0 0	0 0 0 0	0 0 0 0	241	6.8 7.2	248 25 1305	258 11 15	3.5
7	16.9	11.0	10.1	10.9	16.2	14.9	1.1	0.0	1006.7	0 0 0 0	0 0 0 0	0 0 0 0	230	4.9 5.3	243 18 0945	243 8 09	3.2
8	18.9	7.1	0.0	3.0	15.9	15.0	7.5	0.0	1017.9	0 0 0 0	0 0 0 0	0 0 0 0	259	7.0 7.2	248 20 1620	258 10 14	0.0
9	20.4	10.0	0.0	6.0	16.0	15.0	5.6	0.0	1022.4	0 0 0 0	0 0 0 0	0 0 0 0	227	5.8 6.0	225 17 1950	243 9 12	0.0
10	22.9	13.8	0.0	12.3	16.4	15.0	3.5	0.0	1016.0	0 0 0 0	0 0 0 0	0 0 0 0	258	4.5 6.2	251 22 0910	235 12 06	0.0
11	24.1	9.7	0.0	6.0	16.7	15.1	7.1	0.0	1020.8	0 0 0 0	0 0 0 0	0 0 0 0	98	5.4 5.7	108 16 1650	100 9 17	0.0
12	23.3	11.7	0.6	7.5	16.9	15.2	6.6	0.0	1010.7	0 0 0 0	0 0 0 0	0 0 0 0	129	3.1 4.9	187 14 1650	195 7 17	0.4
13	28.1	13.8	0.1	9.5	17.0	15.3	11.4	0.0	1019.4	0 0 0 0	0 0 0 0	0 0 0 0	178	3.1 4.3	217 18 0735	222 9 08	0.1
14	24.2	15.9	0.0	12.3	17.9	15.4	9.8	0.0	1014.6	0 0 0 0	0 0 0 0	0 0 0 0	212	7.1 7.5	226 24 1100	217 13 12	0.0
15	23.7	11.7	0.0	8.5	18.0	15.6	12.6	0.0	1022.3	0 0 0 0	0 0 0 0	0 0 0 0	252	6.6 6.8	250 21 1500	248 11 14	0.0
16	25.3	12.6	0.0	8.6	17.9	15.8	11.5	0.0	1028.7	0 0 0 0	0 0 0 0	0 0 0 0	249	3.8 4.2	260 16 1300	256 6 14	0.0
17	26.6	11.6	0.0	7.1	18.4	15.9	15.2	0.0	1026.2	0 0 0 0	0 0 0 0	0 0 0 0	255	5.3 5.4	272 15 1615	267 9 17	0.0
18	28.3	12.3	0.0	8.8	18.5	16.1	15.7	0.0	1025.7	0 0 0 0	0 0 0 0	0 0 0 0	292	2.8 3.1	267 12 1320	262 6 12	0.0
19	31.4	13.6	0.0	9.6	19.0	16.3	15.0	0.0	1025.2	0 0 0 0	0 0 0 0	0 0 0 0	76	0.5 2.8	195 12 1850	200 6 19	0.0
20	30.2	15.3	0.8	11.0	19.6	16.5	11.7	0.0	1023.5	0 0 0 0	0 0 0 0	0 0 0 0	110	4.9 5.4	119 16 1410	124 9 14	0.2
21	30.6	13.6	0.1	9.7	19.6	16.7	6.7	0.0	1017.9	0 0 0 0	0 0 0 0	0 0 0 0	128	3.8 4.9	138 15 1615	128 8 15	0.1
22	25.8	15.7	0.0	12.5	19.6	16.9	7.3	0.0	1014.2	0 0 0 0	0 0 0 0	0 0 0 0	230	9.4 9.6	215 25 1630	218 14 16	0.0
23	21.8	15.2	0.1	13.1	19.4	17.0	10.8	0.0	1014.1	0 0 0 0	0 0 0 0	0 0 0 0	257	9.6 9.9	252 28 1215	252 12 12	0.2
24	26.2	13.0	0.0	9.7	18.9	17.1	5.6	0.0	1013.0	0 0 0 0	0 0 0 0	0 0 0 0	235	8.0 8.3	243 22 1700	253 13 17	0.0
25	26.4	15.2	0.0	11.2	19.2	17.2	6.1	0.0	1013.3	0 0 0 0	0 0 0 0	0 0 0 0	234	4.6 4.7	261 14 0230	255 6 02	0.0
26	23.7	16.7	3.4	14.9	19.8	17.2	8.0	0.0	1010.4	0 0 0 0	0 0 0 0	0 0 0 0	245	8.4 8.8	255 28 1500	254 15 14	2.0
27	27.3	12.5	0.0	11.4	19.5	17.3	12.3	0.0	1020.5	0 0 0 0	0 0 0 0	0 0 0 0	210	7.0 7.4	226 23 1705	219 13 17	0.0
28	30.0	18.4	0.0	16.5	19.9	17.4	8.1	0.0	1023.8	0 0 0 0	0 0 0 0	0 0 0 0	231	7.6 8.1	227 22 1345	228 10 14	0.0
29	30.1	18.3	0.0	17.6	20.5	17.5	9.0	0.0	1025.9	0 0 0 0	0 0 0 0	0 0 0 0	239	3.1 4.5	256 13 0150	267 7 02	0.0
30	32.3	15.8	0.0	12.2	21.0	17.7	14.6	0.0	1018.9	0 0 0 0	0 0 0 0	0 0 0 0	167	4.0 4.7	183 16 1340	205 9 15	0.0
Total			26.2				257.0	0.0									17.7
Mean	24.5	12.9		9.8	18.0	15.9	8.57	0.0	1016.9					229 4.4 6.2			
Anom	+3.5	+2.2	51%	+2.0	+1.0	+1.0	132%		+0.1								
Daily mean		18.7		Pressure, abs highest =				1029.1 on 16									
Anom		+2.9		Pressure, abs lowest =				1000.8 on 5									

Number of days with:

Air frost = 0      Ground frost = 0      Nil sun = 0  
Snow falling = 0      Snow lying = 0      Thunder = 0  
Hail=>5mm = 0      Hail<5mm or ice = 0      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 JUNE 2025

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	84	5	26	08	14	16.8	7.7	55	6.5	1014.7	8	003	03	1	1	3	8	6	0	1	83833	83080					1Sc40	COTRA Cu hum El hz lyr thk SE edge ovhd
2	84	4	34	07	14	15.9	6.1	52	5.8	1018.6	1	008	03	0	0	4	2	6	0	0	84833					2	Cu med	
3	40	8	21	10	21	13.3	12.2	93	8.9	1006.1	7	012	58	6	2	8	5	3	/	/	87706	88612				3		
4	80	6	26	08	16	15.1	6.4	56	6.0	1006.4	0	004	15	1	1	6	8	5	0	0	84827	83650				4	Cu med jpSW El hz lyr	
5	82	8	21	09	19	13.5	11.7	89	8.6	1003.5	7	007	21	6	2	8	5	3	/	/	84709	86625	88650			5		
6	88	7	25	08	18	15.6	9.3	66	7.3	1006.7	2	008	03	6	2	3	2	5	0	1	83822	86077				6	COTRA Cu med	
7	86	7	25	07	15	14.2	9.6	74	7.5	1006.7	1	007	03	2	2	5	8	4	7	/	85815	83360	86363			7	1Sc40 Cu med	
8	86	2	30	10	19	14.5	5.0	53	5.4	1017.9	2	021	03	0	0	2	1	6	0	0	82833					8	Cu hum El hz lyr	
9	62	7	26	06	12	16.5	9.2	62	7.1	1022.4	1	004	03	1	1	7	8	5	/	1	83825	85656				9	/Ci75 Cu med El hz lyr	
10	84	7	25	08	15	18.6	13.5	72	9.5	1016.0	1	005	01	2	2	6	8	4	/	1	84818	83630				10	/Ci75 COTRA Cu hum	
11	60	8	14	06	11	15.9	13.7	87	9.7	1020.8	0	002	05	2	2	8	6	3	/	/	88706					11		
12	65	7	10	07	13	20.9	12.9	60	9.2	1010.7	8	019	15	1	1	7	0	9	8	/	83363	87666				12	Ac cas jpN&S	
13	81	2	23	09	17	22.2	13.8	59	9.7	1019.4	1	011	01	0	0	2	0	9	3	0	82357					13	absent vv&cld est	
14	80	3	22	10	19	21.1	14.3	65	10.1	1014.6	1	015	03	0	0	3	1	5	0	0	83823					14	absent vv&cld est	
15	80	5	26	08	14	18.6	11.2	62	8.2	1022.3	1	008	03	1	1	5	2	5	0	0	85823					15	Cu med El hz lyr	
16	84	7	27	04	09	19.4	11.4	60	8.2	1028.7	0	003	03	1	1	7	8	6	/	/	82830	86638				16	Cu hum	
17	81	6	25	06	11	20.8	13.0	61	9.2	1026.2	8	003	03	1	1	1	1	5	0	1	81825	83075	85080			17	COTRA Cu hum	
18	84	6	30	04	08	21.2	13.6	62	9.6	1025.7	0	001	03	1	1	1	1	5	0	1	81823	86081				18	COTRA Cu hum	
19	82	0	18	02	06	24.2	13.4	51	9.4	1025.2	8	002	02	0	0	0	0	9	0	0						19		
20	72	7	13	07	13	24.3	14.4	54	10.1	1023.5	8	011	02	2	2	1	0	9	3	2	81369	87071				20	U/a cont	
21	84	7	12	05	09	22.8	16.1	66	11.3	1017.9	8	008	01	8	2	6	0	9	8	1	85362	86075				21	2Ac66 COTRA Ac cas	
22	86	2	25	10	21	22.3	13.4	57	9.5	1014.2	8	006	03	0	0	2	1	5	0	5	82828					22	1Cs78 Cu hum COTRA Cs edge NW	
23	86	3	28	10	19	17.4	7.2	51	6.3	1014.1	1	016	03	0	0	2	1	6	0	1	82835					23	1Cc78 2Ci80 COTRA Cu hum	
24	84	8	24	08	18	18.8	14.1	74	9.9	1013.0	5	000	02	6	2	8	5	4	/	/	88616					24		
25	86	7	25	06	10	20.1	14.0	68	9.9	1013.3	1	010	02	2	2	7	5	4	/	/	87619					25		
26	75	8	23	10	19	19.7	15.1	75	10.7	1010.4	1	003	02	2	2	8	5	4	/	/	87615	88620				26		
27	75	6	23	09	16	20.7	13.4	63	9.5	1020.5	1	004	02	2	2	6	8	5	0	1	81825	85656				27	2Sc45 2Ci75 Cu hum	
28	84	8	23	08	14	21.6	17.6	78	12.3	1023.8	1	008	02	2	2	8	5	4	/	/	88611					28		
29	86	5	30	04	07	22.9	15.2	62	10.6	1025.9	0	001	01	2	2	5	5	5	0	0	85621					29		
30	86	1	13	05	12	25.9	15.9	54	11.1	1018.9	8	016	02	1	1	1	1	5	5	0	0	81626				30	1Sc35 Sc len/cas	

Mean vis = 41.4 km

Mean cloud = 5.6 70%

Mean wind speed = 7.3 kn

Mean gust = 14 kn

Mean TT = 19.2 °C

Mean TdTd = 12.1 °C

Mean RH = 64.7 %

Mean r = 8.9 g/kg

Mean PPP = 1016.9 mbar

## See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

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 JUNE 2025

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppwwW1W2	NhCl	hCrCfNChshs	NChshs	NChshs	Date	Remarks			
1	86	5	25	07	18	19.4	7.2	45	6.3	1013.3	7	005 02	2	2	5	8 6 0 1	83845	1	2Sc56 2Ci78 COTRA Cu med		
2	85	2	23	07	17	21.0	3.7	32	4.9	1015.8	8	022 01	0	0	2	4 7 0 0	81856	2	2Sc56 Cu hum		
3	83	3	24	11	23	17.7	11.5	67	8.5	1004.7	8	003 25	8	1	3	8 5 0 0	83826	3	1Sc45 Cu med El hz lyr		
4	70	7	23	09	20	16.8	7.4	54	6.4	1006.1	6	003 25	8	2	3	2 6 6 /	83835	86357	87359	4	Cu med jp N,S&W
5	80	7	22	10	22	15.5	12.8	84	9.3	1001.5	7	013 20	5	2	7	5 4 / /	85611	87615	5		
6	88	7	27	11	20	18.4	4.6	40	5.3	1007.9	1	006 02	2	2	2	2 7 4 1	82850	87071	6	1Ac67 Cu med	
7	56	8	22	07	15	14.0	12.6	91	9.1	1005.8	6	004 62	6	2	5	5 4 2 /	81712	83645	88550	7	
8	84	4	27	11	21	17.8	5.7	44	5.5	1019.7	2	006 02	1	1	4	4 6 0 0	82848	83656	8	Cu med El hz lyr thk	
9	59	7	24	07	15	20.2	8.5	47	6.8	1020.8	7	007 05	2	2	7	8 6 / 1	83843	86650	9	/Ci75 Cu med Sky turbid	
10	87	5	32	06	13	20.9	12.6	59	9.0	1017.4	1	004 01	2	2	4	4 6 0 1	84833	10	1Sc48 1Ci80 Cu med El hz lyr		
11	82	3	13	08	14	23.8	13.1	51	9.3	1017.9	7	019 01	1	1	2	1 6 0 1	82835	11	2Ci73 Cu hum		
12	84	7	19	05	11	21.8	16.3	71	11.5	1011.9	2	012 03	2	2	7	8 5 / /	83825	87648	12	/Ac57 Absent vv&cld est	
13	84	6	14	07	12	27.3	14.7	46	10.3	1017.1	7	014 03	1	1	1	4 7 0 5	81650	85078	13	2Cs75 absnet vv&cld est	
14	81	2	23	12	21	23.1	11.5	48	8.4	1016.4	1	005 02	0	0	2	2 6 0 1	82846	14	1Ci75 Cu med		
15	84	2	26	12	22	23.6	8.5	38	6.8	1022.7	3	002 01	0	0	2	2 7 0 0	82850	15	Cu hum, med dist NE&S El hz lyr		
16	83	2	24	06	11	25.2	12.1	44	8.6	1027.0	6	010 01	1	1	2	4 6 0 0	81847	16	2Sc49 Cu hum El hz lyr		
17	88	6	25	06	15	26.1	11.5	40	8.3	1024.2	8	010 02	2	2	1	1 7 0 1	81850	86080	17	COTRA Cu hum	
18	86	1	31	05	09	27.7	10.9	35	8.0	1023.8	7	013 02	0	0	1	1 7 0 0	81850	18	Cu hum El hz lyr		
19	80	1	34	04	10	31.0	11.9	31	8.5	1023.0	7	014 03	0	0	1	1 8 0 0	81857	19	Cu hum		
20	80	4	14	09	17	30.2	12.6	34	9.0	1021.1	8	016 01	1	1	2	0 9 8 8	82364	20	1Ac66 2Cs69 2Ci78 Ac cas/flo		
21	82	6	13	07	13	28.5	14.3	42	10.1	1015.5	8	016 01	8	2	6	0 9 8 /	82362	86365	21	/Ac68 Clearance SW	
22	84	7	23	12	22	23.4	13.9	55	9.8	1012.6	7	008 02	2	2	3	8 6 7 /	83833	87465	22	1Sc50 /Ac67	
23	84	4	28	11	22	21.7	6.4	37	5.9	1014.7	6	007 02	1	1	4	4 7 0 0	84650	23			
24	86	6	25	12	22	24.1	16.1	61	11.4	1011.3	7	010 02	2	2	5	2 6 0 9	85833	24	1Cc72 Cu med Iridescence		
25	88	6	24	04	09	25.4	15.1	53	10.7	1011.1	7	007 03	2	2	1	1 6 8 8	81833	84364	85075	25	1Ac61 2Cs71 Cu hum Ac cas Ac str ra
26	82	7	27	15	28	22.9	10.0	44	7.6	1013.6	2	023 03	1	1	1	1 7 0 5	81850	86075	26	2Cc72 2Cs74 Cu hum	
27	86	2	22	12	22	26.9	15.6	50	10.9	1019.6	6	002 01	1	1	1	1 6 4 1	81835	27	1Ac60 2Ci75 Cu hum Ac len		
28	88	1	23	10	18	29.7	16.8	46	11.8	1022.7	5	006 02	0	0	1	1 6 0 0	81845	28	Cu hum		
29	88	5	27	03	09	29.6	15.0	41	10.4	1023.2	7	016 02	1	1	1	1 6 0 4	81845	84078	29	Cu hum	
30	86	1	20	08	16	32.0	15.9	38	11.2	1015.6	7	018 02	0	0	1	1 7 4 0	81850	30	1Ac58 Cu hum Ac len		

Mean vis = 48.0 km

Mean cloud = 4.5 56%

Mean wind speed = 8.5 kn

Mean gust = 17 kn

Mean TT = 23.5 °C

Mean TdTd = 11.6 °C

Mean RH = 48.9 %

Mean r = 8.7 g/kg

Mean PPP = 1015.9 mbar

## See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

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-Jun	02-Jun	03-Jun	04-Jun	05-Jun	06-Jun	07-Jun	08-Jun	09-Jun	10-Jun	11-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun
Sunshine	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hourly	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
analysis	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
2025	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	0.46	0.00	0.46	0.00	0.00	0.00	0.03	0.00	0.00	0.25	0.22	0.51	0.00	0.50	0.50
	5	0.31	1.00	0.21	1.00	0.00	0.00	0.17	1.00	0.63	0.00	0.00	0.98	1.00	0.00	0.99	0.93
	6	0.94	1.00	0.01	1.00	0.00	0.00	0.44	1.00	1.00	0.04	0.00	0.20	1.00	0.00	1.00	0.50
	7	1.00	1.00	0.00	0.99	0.00	0.11	0.10	0.97	1.00	0.00	0.00	0.20	1.00	0.13	0.81	0.42
	8	0.91	0.70	0.00	0.66	0.00	0.62	0.20	0.98	0.57	0.15	0.00	0.13	1.00	0.57	0.46	0.31
	9	0.18	0.73	0.00	0.53	0.00	0.51	0.07	0.63	0.05	0.09	0.00	0.02	1.00	0.86	0.34	0.14
	10	0.28	0.50	0.00	0.24	0.00	0.62	0.00	0.57	0.00	0.15	0.01	0.00	1.00	0.95	0.65	0.36
	11	0.57	0.33	0.00	0.49	0.00	0.72	0.04	0.61	0.18	0.00	0.22	0.00	1.00	0.86	0.47	0.66
	12	0.39	0.49	0.00	0.17	0.00	0.52	0.01	0.49	0.47	0.06	0.39	0.04	1.00	0.74	0.59	0.90
	13	0.06	0.32	0.00	0.38	0.00	0.96	0.00	0.42	0.14	0.43	0.66	0.37	0.98	0.79	0.68	0.73
	14	0.17	0.87	0.23	0.14	0.00	0.42	0.00	0.42	0.27	0.43	0.96	0.04	0.77	0.87	1.00	1.00
	15	0.20	1.00	0.68	0.03	0.06	0.80	0.00	0.28	0.62	0.57	0.74	0.64	0.94	0.65	1.00	1.00
	16	0.06	1.00	0.44	0.38	0.00	0.82	0.00	0.11	0.66	0.44	0.96	0.87	0.19	0.94	1.00	1.00
	17	0.49	0.97	0.49	0.07	0.00	0.03	0.05	0.00	0.00	0.35	1.00	0.96	0.06	0.90	1.00	1.00
	18	0.74	1.00	0.00	0.27	0.00	0.05	0.00	0.00	0.00	0.50	1.00	1.00	0.00	1.00	1.00	1.00
	19	0.35	0.80	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.26	0.93	0.90	0.00	0.56	1.00	0.96
	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	0.06	0.08
	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>6.65</b>	<b>12.18</b>	<b>2.06</b>	<b>6.86</b>	<b>0.06</b>	<b>6.17</b>	<b>1.07</b>	<b>7.53</b>	<b>5.59</b>	<b>3.48</b>	<b>7.12</b>	<b>6.57</b>	<b>11.44</b>	<b>9.83</b>	<b>12.55</b>	<b>11.48</b>
Hour		17-Jun	18-Jun	19-Jun	20-Jun	21-Jun	22-Jun	23-Jun	24-Jun	25-Jun	26-Jun	27-Jun	28-Jun	29-Jun	30-Jun	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	0.48	0.52	0.48	0.47	0.49	0.45	0.37	0.00	0.00	0.00	0.39	0.00	0.00	0.28	0.23	0.23
	5	1.00	1.00	1.00	1.00	0.38	0.70	0.90	0.00	0.00	0.00	0.95	0.00	0.00	0.81	0.53	0.53
	6	1.00	1.00	1.00	1.00	0.16	1.00	0.73	0.00	0.37	0.10	0.88	0.00	0.05	0.96	0.55	0.55
	7	1.00	1.00	1.00	0.55	0.10	1.00	0.95	0.00	0.00	0.16	0.88	0.00	0.00	1.00	0.51	0.51
	8	1.00	1.00	1.00	0.80	0.22	1.00	0.82	0.00	0.00	0.01	0.80	0.00	0.65	1.00	0.52	0.52
	9	0.91	1.00	1.00	0.49	0.98	0.79	0.61	0.00	0.15	0.00	0.08	0.00	0.22	1.00	0.41	0.41
	10	0.78	1.00	1.00	0.32	0.57	0.62	0.40	0.02	0.44	0.01	0.60	0.03	0.33	0.96	0.41	0.41
	11	1.00	1.00	1.00	0.72	0.00	0.58	0.45	0.05	0.66	0.42	1.00	0.82	0.27	0.97	0.50	0.50
	12	1.00	1.00	1.00	0.00	0.00	0.00	0.58	0.30	0.01	0.88	0.26	0.77	0.87	0.98	0.46	0.46
	13	1.00	1.00	1.00	0.22	0.00	0.00	0.37	0.46	0.13	0.99	0.63	0.99	1.00	1.00	0.52	0.52
	14	1.00	1.00	1.00	0.96	0.07	0.00	0.51	0.58	0.36	0.97	0.90	1.00	0.99	1.00	0.60	0.60
	15	1.00	1.00	1.00	1.00	0.68	0.08	0.33	0.48	0.53	0.99	1.00	0.98	1.00	1.00	0.68	0.68
	16	1.00	1.00	1.00	1.00	1.00	0.30	0.92	0.79	1.00	1.00	1.00	0.97	0.95	1.00	0.73	0.73
	17	1.00	1.00	1.00	1.00	0.91	0.55	1.00	0.85	0.96	1.00	1.00	1.00	0.85	1.00	0.68	0.68
	18	1.00	1.00	1.00	1.00	0.82	0.22	1.00	0.92	0.66	1.00	1.00	0.89	1.00	1.00	0.67	0.67
	19	1.00	1.00	0.50	1.00	0.28	0.00	0.65	0.94	0.80	0.42	0.91	0.70	0.82	0.67	0.52	0.52
	20	0.00	0.16	0.00	0.14	0.00	0.00	0.22	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03
	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>15.18</b>	<b>15.67</b>	<b>14.97</b>	<b>11.67</b>	<b>6.66</b>	<b>7.29</b>	<b>10.81</b>	<b>5.64</b>	<b>6.08</b>	<b>7.95</b>	<b>12.29</b>	<b>8.14</b>	<b>9.00</b>	<b>14.62</b>	<b>256.61</b>	

JUNE 2025	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	15.99	21.5	1232	11.9	358	64.1	90.7	359	37.3	1208	8.6	6.9	7.9	504	5.5	1212	1014.26	1015.6	2349	1012.8	1712	0
2	15.60	22.0	1352	10.5	2353	56.7	89.9	149	28.5	1522	6.2	5.9	7.6	150	4.5	1522	1016.16	1018.8	834	1012.2	2358	0
3	14.17	19.1	1615	10.4	12	75.5	96.1	1309	47.3	1619	9.7	7.5	10.8	1330	6.1	2043	1006.58	1012.3	1	1004.4	1558	4.2
4	14.12	19.4	1334	9.1	400	70.0	89.2	403	43.3	1334	8.5	6.9	8.5	1429	5.8	1232	1006.23	1006.8	744	1005.6	240	0.2
5	13.71	17.6	1523	11.7	154	87.3	96.8	1138	74.5	1525	11.6	8.6	10.2	1619	7.2	2041	1003.26	1006.1	40	1000.8	1625	4.3
6	14.97	20.4	1311	10.1	400	66.1	92.8	407	33.6	1412	8.0	6.7	9.0	800	4.8	1412	1006.95	1008.8	2052	1004.1	0	0.4
7	12.94	17.1	1205	10.1	2359	87.4	97.6	505	58.2	1110	10.7	8.0	9.3	1800	6.7	1110	1006.63	1010.5	2359	1004.0	1624	10.5
8	13.47	19.3	1402	7.1	337	66.5	96.9	11	39.1	1414	6.8	6.1	7.5	24	4.9	1414	1017.94	1021.9	2319	1010.4	0	0.1
9	15.59	21.3	1550	10.0	203	66.7	87.2	418	42.4	1552	9.1	7.1	8.4	1102	6.2	1256	1020.77	1022.5	916	1017.5	2359	0
10	17.61	23.4	1530	13.7	2359	70.1	84.9	2301	48.5	1654	11.9	8.6	10.0	1305	7.6	158	1017.22	1020.4	2359	1015.2	655	0
11	16.83	24.5	1503	9.7	357	75.6	98.0	454	49.4	1457	12.1	8.7	10.7	1146	6.8	2233	1018.79	1021.0	820	1015.4	1813	0
12	18.22	23.8	1719	11.7	304	75.9	97.9	2358	53.0	946	13.6	9.7	12.1	1339	7.8	3	1012.98	1016.2	2359	1010.1	1016	0.6
13	21.30	28.5	1423	13.8	127	68.6	98.7	202	38.6	1540	14.5	10.1	12.0	2210	8.4	1143	1016.98	1019.6	937	1013.3	2330	0.1
14	19.27	24.6	1258	13.6	2359	67.6	95.7	26	37.5	1311	12.6	9.1	11.7	37	6.9	1312	1015.88	1020.3	2359	1012.7	508	0
15	17.83	24.1	1434	11.7	342	66.6	96.4	413	36.0	1537	10.7	7.9	9.1	743	6.2	1537	1022.81	1027.3	2355	1019.8	221	0
16	19.44	25.7	1436	12.6	213	66.0	96.3	221	40.7	1600	12.2	8.7	9.6	1414	7.7	1623	1027.45	1029.1	749	1025.8	1821	0
17	19.76	27.0	1515	11.6	427	63.4	97.7	346	36.3	1520	11.8	8.5	10.0	858	7.4	1322	1025.38	1027.2	9	1023.5	1626	0
18	20.85	28.6	1614	12.3	427	62.1	97.5	435	34.1	1615	12.3	8.7	10.1	842	7.8	1627	1024.70	1025.9	816	1022.9	1730	0
19	23.00	31.8	1515	13.6	402	59.9	97.4	440	29.6	1521	13.5	9.4	11.0	1230	8.2	1555	1024.24	1025.9	736	1022.0	1809	0
20	23.18	30.6	1455	15.3	404	58.6	94.8	421	33.2	1459	13.6	9.6	11.2	728	8.6	1634	1022.57	1024.7	619	1020.3	1844	0
21	23.33	31.0	1038	13.6	356	61.0	95.5	636	35.5	1625	14.4	10.1	12.4	715	9.0	1551	1016.57	1020.6	0	1012.4	2158	0.9
22	20.40	26.1	1140	15.7	357	64.7	83.5	457	43.7	1144	13.3	9.4	10.8	109	8.4	1223	1013.00	1015.1	633	1011.1	2356	0
23	17.83	22.2	1511	13.1	2352	55.6	82.6	211	36.5	1221	8.3	6.8	9.9	102	5.7	1239	1013.89	1016.1	2120	1010.1	250	0
24	19.59	26.5	1310	13.0	34	70.0	85.6	2201	43.4	1741	13.7	9.8	11.8	1220	7.0	5	1012.58	1015.8	0	1010.6	1651	0
25	20.86	27.0	1601	15.2	201	68.8	93.7	211	48.4	1601	14.6	10.2	11.2	1433	9.5	2116	1011.48	1013.5	834	1009.2	2144	0
26	19.51	24.1	1353	14.6	2354	65.6	90.4	1118	40.8	1507	12.4	9.0	13.3	1127	6.2	1909	1012.89	1019.6	2340	1009.4	12	2
27	19.94	27.9	1431	12.5	142	71.7	98.3	526	47.3	1213	14.1	9.9	11.6	1429	7.5	7	1020.25	1022.4	2231	1018.9	0	1.3
28	23.39	30.4	1507	18.6	15	70.2	90.2	549	44.6	1418	17.2	12.0	13.3	1155	11.1	1447	1023.20	1025.4	2358	1021.8	409	0
29	23.43	30.4	1544	18.3	458	64.4	83.8	2332	37.5	1551	15.8	11.0	12.2	1321	9.8	1551	1024.07	1026.2	734	1021.3	1809	0
30	25.11	32.7	1437	15.8	427	62.1	98.5	437	34.2	1528	16.3	11.4	12.5	2113	10.1	1528	1017.39	1022.5	23	1013.4	1809	0
Total																						24.6
Mean	18.71	24.94		12.69		67.6	93.15		41.77		11.93	8.74	10.52		7.31		1016.44	1019.28		1013.70		
Max	25.11	32.73		18.55		87.4	98.68		74.52		17.17	11.97	13.26		11.10		1027.45	1029.06		1025.79		
Min	12.94	17.13		7.09		55.6	82.61		28.45		6.19	5.87	7.47		4.46		1003.26	1006.13		1000.76		

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  $(\text{max} + \text{min}) / 2$ . 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 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.