

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 2024

Temperature (°C)		Anomaly		Rank in the past	143	years	
Mean maximum	21.4	+0.4		36th highest			
Mean minimum	9.4	-1.3		39th lowest			
Daily mean	15.4	-0.4		58th highest			
Highest maximum	29.3	on 26th	Lowest maximum	16.5	on 11th		
Highest minimum	15.2	on 27th	Lowest minimum	4.3	on 9th		
Mean grass minimum	6.2	-1.6	Lowest grass minimum	0.3	on 9th		
Mean earth @30 cm	16.8	-0.2	Earth @100 cm	15.4	+0.5		
Frost duration (hrs)	0.0		Rain duration (hrs)	13.4			
Rainfall total (mm)	11.1	22 %	12th lowest				
Highest daily fall	3.4	on 15th	Highest rate mm/hr	39	on 15th		
Number of: Dry days (<0.2mm)	22	Wet days (>0.9mm)	4	days ≥5mm	0		
Sunshine total (hrs)	242.3	Daily mean	8.08	124 %	Sunniest day	15.4 on 2nd	
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	1015.0	-1.8	Highest	1028.9	on 2nd	Lowest	997.0 on 15th
Relative humidity : Mean (%)	70.6	Lowest	28 on 20th	Water vapour (g/kg), mean at 09 and 15 GMT	7.7,	7.3	
Overall mean wind speed (mph)	6.6	Windiest day	10.0 on 15th	Max gust	36	on 15th	
Wind direction (days)	N 4	NE 2	E 0	SE 0	S 1	SW 9	W 9
						NW 5	
Least windy day (mph)	3.8	on 3rd	Calm; less than 0.5 mph (minutes)	116			

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

Notes:

Dry and Sunny with Mean Temperature Slightly Below Average but Mean Maximum Slightly Above

Temperature: In terms of the daily mean this is the coolest June since 2013, but for the mean maximum it is coolest only since 2019. However, the mean minimum is unusually low, and we have to look back to 1996 to find a June with a lower mean. The highest max is 2.2° above the median while the lowest max is 1.7° above its median. The highest min is 0.2° above the median while the lowest min is 0.4° below its median. The mean grass min is lowest since 2010 and we just escaped having a ground frost on the 9th when the grass temperature fell to 0.3°. In the past 45 Junes, 15 have had a ground frost, the last in 2015. Mean earth temperature at 30 cm depth is a little below average, but at 1 m depth is 0.5° above average. **Rainfall:** This has been a very dry June, with 3 more dry days than average, and the lowest rainfall total since 2018, and before that, 2006. The highest daily fall of 3.4mm is 2nd lowest after 2018 for June in 49 years. There were 2 dry spells, the first of 5 days to the 20th and the second of 7 days to the 28th. However, there was only one rain day in the 9 days to the 8th June, and a total of just 0.4 mm fell in the 13 days to the 28th. There was no thunder or hail this June. Estimated soil moisture deficit indicated that shallow rooted unirrigated plants would suffer stress after mid month, and severe stress by the month's end. **Sunshine:** This has been a sunny June with a total sunshine 24 % above average. Although not quite as sunny as June last year it is, nevertheless, the 5th sunniest June in this millennium. The first half of the month had the poorest showing, the period 1st to 15th having only 2 days with >60% of the maximum, including 94% on the 2nd, the month's sunniest day. But in contrast the 16th to 30th had 9 days with >60% of the maximum and 4 with over 80%. In this period the 5 days to the 21st had a mean of 11.9 hours per day, and the 7 days to the 29th, a mean of 11.5 hours per day. There were no days with nil sun, but the 4th saw the sun for only 0.3 hours. Overall there were 5 days with <3 hours, 21 with =>6 hours and 6 with =>12 hours. **Wind:** The mean speed of 6.6 mph is close to average as is the highest gust of 36 mph on the 15th. Daily mean winds were mostly light or moderate except for fresh on the 14th, 15th, 21st and 27th. Daily mean directions were between N and E on the 1st, 19th, 20th and 25th, between W and N on the 2nd, 3rd, 8th, 10th to 12th, 18th, 26th, 29th and 30th, and between S and W for all the rest. **Miscellaneous:** Noctilucent (stratospheric) cloud was observed around 2200 GMT on the 23rd and 28th. .

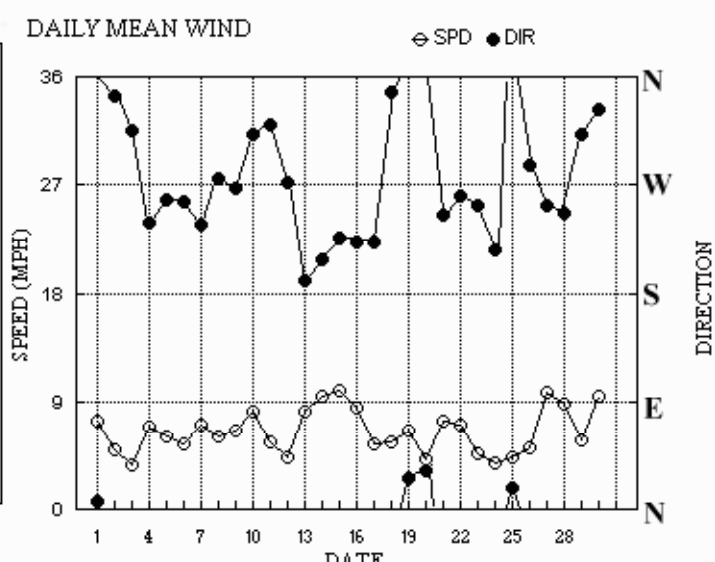
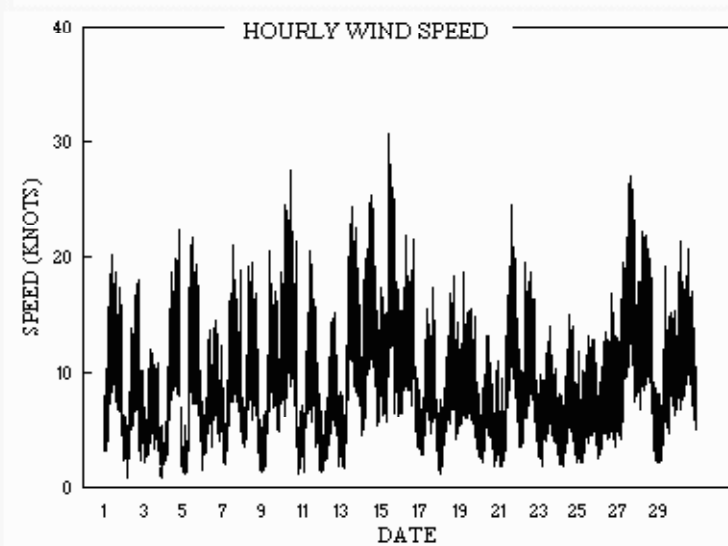
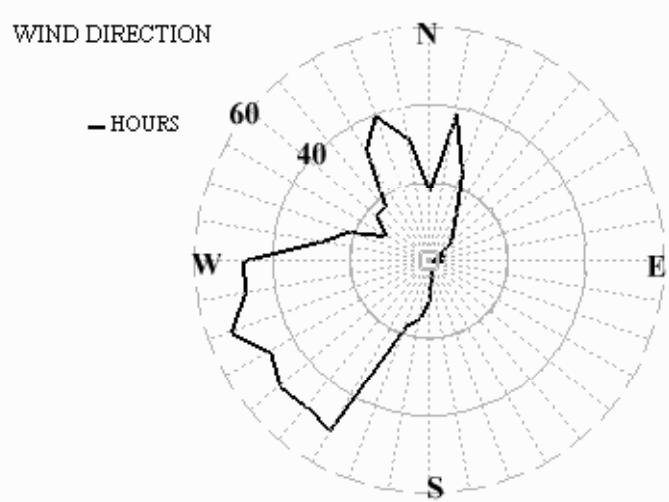
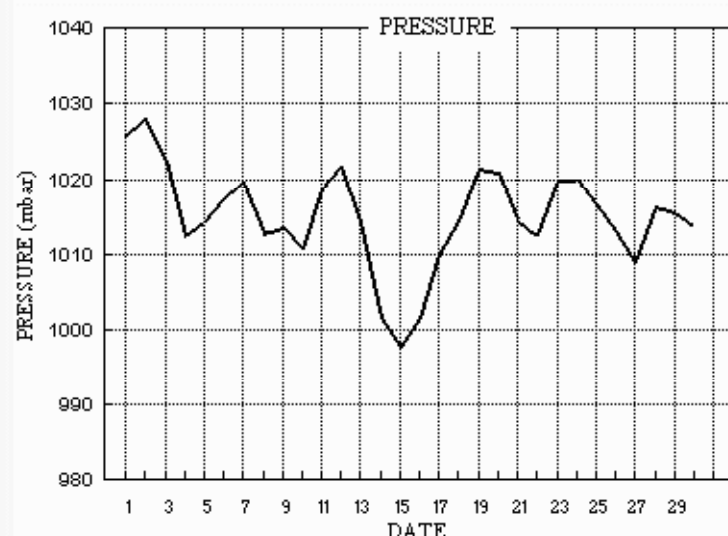
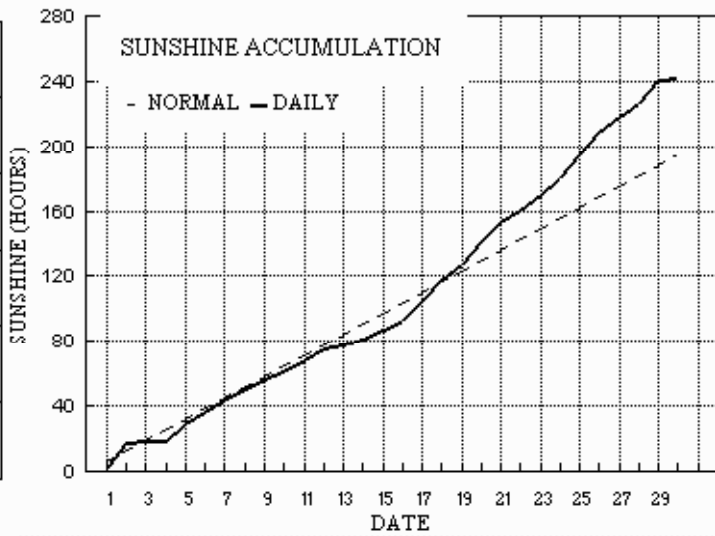
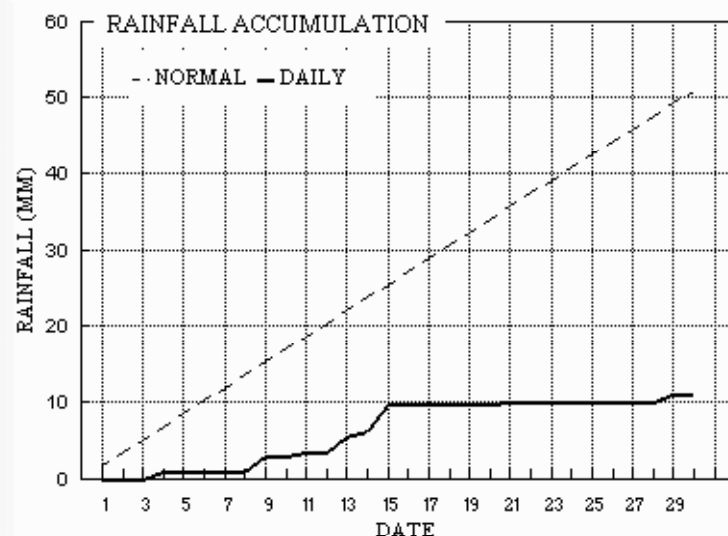
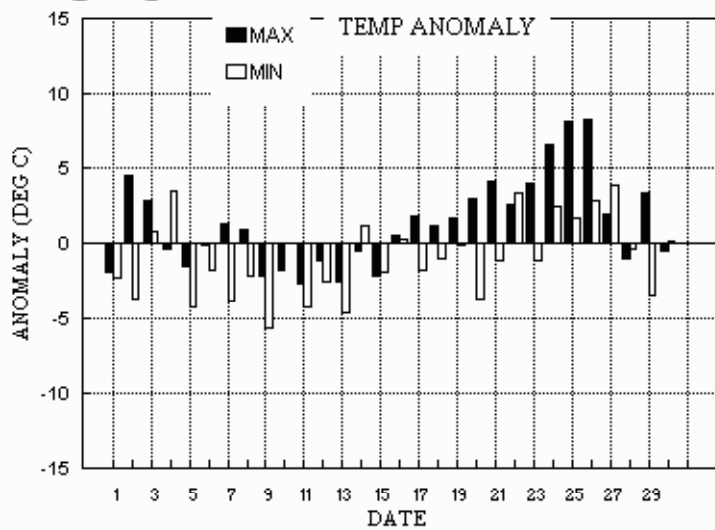
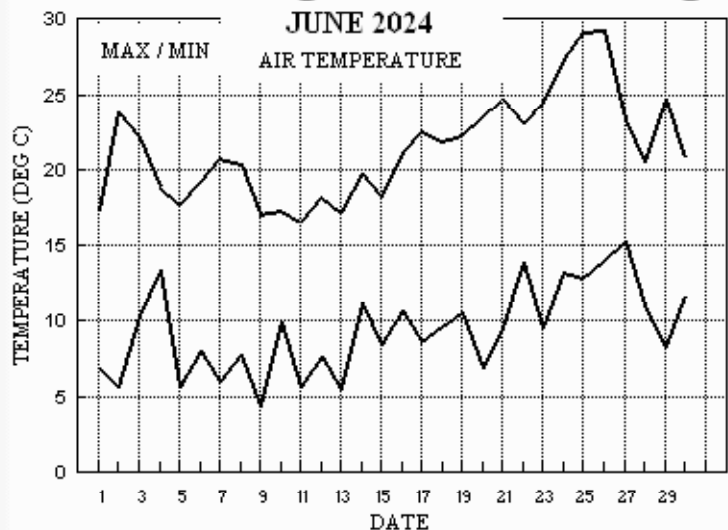
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 30 th			
+0.2°	-1.9°	18%	96%	-0.1°	-1.9°	39%	123%	+3.7°	+0.8°	8%	154%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for June 2024



Month: JUNE 2024

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf Sl	Th Ha	Ic Fg	Vec ddd	mean ff	sp	Max gust ddd	gg	HHhh	High hr ddd	ff	HH	Rain hrs	
1	17.3	6.9	0.0	2.3	15.5	14.9	2.5	0.0	1025.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	7	6.3	6.4	21	20	1021	14	9	10	0.0	
2	23.8	5.6	0.0	1.1	15.2	14.8	15.4	0.0	1028.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	344	4.1	4.3	329	18	1715	316	8	17	0.0	
3	22.1	10.3	0.0	6.3	15.8	14.8	1.0	0.0	1022.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	315	2.9	3.3	302	12	0922	325	6	09	0.0	
4	18.8	13.3	0.9	10.4	16.2	14.8	0.3	0.0	1012.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	239	5.6	6.0	337	22	2043	233	10	15	0.6	
5	17.7	5.6	0.0	2.1	16.0	14.9	10.4	0.0	1014.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	257	5.1	5.3	265	22	1112	262	9	10	0.0	
6	19.2	8.0	tr	6.0	15.9	14.9	7.0	0.0	1017.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	255	4.2	4.7	298	15	1613	267	7	16	0.0	
7	20.7	5.9	0.0	1.9	15.7	15.0	6.9	0.0	1019.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	236	6.0	6.2	226	21	1228	232	9	12	0.0	
8	20.3	7.8	0.0	4.1	15.8	15.0	7.5	0.0	1012.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	275	3.8	5.4	264	20	1108	301	9	13	0.0	
9	17.1	4.3	2.2	0.3	15.6	15.0	5.4	0.0	1013.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	267	5.3	5.7	251	21	0907	286	9	09	1.7	
10	17.3	9.9	tr	9.6	15.5	15.0	5.8	0.0	1010.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	312	5.4	7.2	340	28	1027	312	11	07	0.1	
11	16.5	5.6	0.4	1.7	15.4	14.9	6.3	0.0	1018.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	319	4.4	4.9	292	21	1148	314	8	14	0.3	
12	18.2	7.6	0.0	4.4	15.4	14.9	6.9	0.0	1021.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	271	3.2	3.7	249	15	1759	276	6	16	0.0	
13	17.2	5.4	2.0	1.3	15.6	14.9	2.8	0.0	1014.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	191	6.9	7.1	193	24	1351	193	12	12	3.2	
14	19.7	11.2	0.8	10.2	15.4	14.9	4.0	0.0	1001.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	208	8.1	8.2	196	25	1438	205	14	14	1.5	
15	18.2	8.4	3.4	6.4	15.8	14.9	5.6	0.0	997.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	225	8.2	8.7	245	31	1133	240	14	11	0.8	
16	21.1	10.7	0.1	8.3	15.9	14.9	6.1	0.0	1001.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	223	6.9	7.4	218	22	0618	219	10	06	0.3	
17	22.5	8.6	0.0	4.2	16.2	15.0	11.7	0.0	1010.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	223	4.6	4.7	193	17	1549	235	7	08	0.0	
18	21.9	9.6	0.0	5.9	16.7	15.1	12.5	0.0	1014.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	347	4.7	4.9	307	19	1703	338	8	16	0.0	
19	22.3	10.6	0.0	6.5	16.9	15.2	9.8	0.0	1021.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	27	5.4	5.7	6	19	0627	13	8	06	0.0	
20	23.5	6.8	0.0	3.3	17.1	15.4	14.2	0.0	1020.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	32	3.0	3.6	33	13	1024	29	6	08	0.0	
21	24.7	9.5	0.3	5.9	17.5	15.5	11.3	0.0	1014.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	244	5.7	6.4	258	25	1605	239	12	16	1.1	
22	23.0	13.9	tr	12.8	17.8	15.7	7.0	0.0	1012.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	260	5.7	6.1	316	20	0839	253	10	15	0.2	
23	24.4	9.5	0.0	6.2	17.8	15.9	9.4	0.0	1019.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	252	3.6	4.0	248	14	1523	257	6	15	0.0	
24	27.3	13.2	0.0	10.1	18.1	16.0	10.6	0.0	1020.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	216	2.6	3.4	189	15	1320	200	6	15	0.0	
25	29.1	12.8	0.0	8.8	18.6	16.2	14.1	0.0	1016.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	18	1.8	3.8	67	13	1429	45	5	20	0.0	
26	29.3	14.0	0.0	10.7	19.3	16.4	14.2	0.0	1013.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	286	1.1	4.5	191	17	1831	212	7	18	0.0	
27	23.3	15.2	0.0	11.6	19.8	16.7	10.2	0.0	1008.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	252	8.1	8.5	271	27	1603	266	13	17	0.0	
28	20.5	11.1	0.0	7.8	19.3	16.9	8.2	0.0	1016.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	246	7.3	7.7	213	22	0742	261	10	14	0.0	
29	24.7	8.2	1.0	4.2	18.6	17.1	13.8	0.0	1015.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	312	4.4	5.0	297	19	1149	338	8	18	3.0	
30	20.8	11.7	tr	10.2	19.1	17.1	1.4	0.0	1013.7	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	332	8.2	8.2	326	22	0551	339	10	15	0.6	
Total			11.1				242.3	0.0																13.4
Mean	21.4	9.4		6.2	16.8	15.4	8.08	0.0	1015.0					267	3.1	5.7								
Anom	+0.4	-1.3	22%	-1.6	-0.2	+0.5	124%							-1.8										
Daily mean		15.4												1028.9										
Anom		-0.4												9973.0										

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 2024

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cl	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	80	8	01	07	19	12.4	8.3	76	6.7	1025.9	1	011	03	1	1	8	5	4	/	/	87618	88625							
2	82	1	02	06	11	17.3	9.2	59	7.1	1028.0	8	007	02	0	0	0	0	0	0	0	0	0	1	81080			2	COTRA El hz lyr	
3	82	8	31	06	11	16.6	11.7	73	8.5	1022.4	8	005	03	2	2	8	8	5	/	/	81820	88635					3	Cu hum	
4	84	7	24	09	16	16.5	12.8	79	9.2	1012.5	7	017	02	2	2	7	5	4	/	/	87613	87635					4		
5	82	5	25	09	18	13.9	4.2	52	5.1	1014.2	0	001	03	1	1	5	4	6	0	0	85835						5	1Sc50 Cu med	
6	72	6	26	07	14	13.8	7.3	65	6.3	1017.3	3	001	03	1	1	6	8	5	3	/	84825	83650					6	/Ac58 Cu med	
7	80	2	28	06	13	16.6	9.1	61	7.1	1019.6	8	002	03	0	0	2	2	5	0	1	82828						7	1Ci80 COTRA Cu med	
8	86	7	25	08	15	16.0	11.0	72	8.1	1012.8	8	005	03	1	1	7	8	4	/	/	82818	87648					8	Cu med	
9	84	2	27	09	16	15.5	6.8	56	6.1	1013.5	8	009	03	0	0	2	8	6	0	1	82833						9	1Sc45 1Ci75 Cu hum	
10	88	6	34	09	22	11.4	5.9	69	5.8	1010.6	2	027	03	6	2	6	8	5	0	0	86825						10	1Sc50 Cu med	
11	84	6	32	07	15	13.3	7.3	67	6.3	1018.6	1	007	03	1	1	6	4	5	3	0	85820						11	2Sc45 1Ac62 Cu med	
12	80	6	33	03	08	14.4	5.7	56	5.6	1021.8	8	002	03	2	2	4	8	5	3	1	81828	83650					12	4Ac57 1Ci80 COTRA Cu med	
13	82	8	20	10	17	15.9	7.1	56	6.3	1014.4	7	015	03	2	2	3	2	5	0	7	83825	88268					13	Cu med Halo 22° part+U/a cont	
14	82	5	22	10	20	16.9	10.5	66	8.0	1001.5	8	001	15	2	2	5	8	4	0	0	83813	83650					14	Cu med jpNW	
15	58	8	19	08	15	13.3	11.5	89	8.6	997.6	7	020	60	6	1	8	5	4	/	/	87610	88640					15		
16	82	5	26	08	18	15.0	10.2	73	7.8	1001.6	3	012	03	2	2	5	2	5	0	1	85825						16	1Ci75 Cu con	
17	86	3	23	08	16	17.0	9.4	61	7.3	1010.0	2	010	03	0	0	3	2	5	0	1	83828						17	1Ci75 Cu med	
18	86	5	36	06	11	18.0	10.6	62	7.9	1014.3	8	001	02	2	2	1	0	9	7	8	81363	85275					18	1Ac68 Cs edge NW	
19	84	6	04	04	14	17.2	10.6	65	7.8	1021.4	2	016	01	2	2	5	5	5	0	1	85626						19	2Ci78 COTRA	
20	89	1	01	07	12	18.4	8.9	54	7.0	1020.8	8	012	03	0	0	0	0	0	0	2	81172						20	1Ci79 Cc cas	
21	84	2	25	05	09	21.4	10.9	51	8.0	1014.5	7	002	03	0	0	2	8	6	0	0	81840						21	2Sc50 Cu med	
22	56	7	31	07	20	15.7	13.2	85	9.4	1012.4	3	013	50	2	2	7	5	4	/	/	81710	85618	87635				22		
23	82	2	30	04	09	19.4	12.4	64	8.9	1019.8	1	002	03	0	0	2	1	5	0	0	82825						23	Cu hum	
24	84	2	33	04	10	20.9	14.5	67	10.2	1020.0	8	006	03	0	0	2	8	5	0	0	82828						24	1Sc35 Cu med	
25	86	1	36	03	09	22.6	15.4	64	10.8	1016.6	8	002	03	0	0	1	1	5	0	0	81825						25	Cu hum	
26	80	0	05	05	13	23.7	14.1	55	10.0	1013.0	8	008	02	0	0	0	0	0	0	0							26	El hz lyr	
27	84	5	26	09	20	20.6	12.8	61	9.2	1008.8	2	001	03	1	1	3	8	6	3	1	81830	83656					27	3Ac58 1Ci75 Cu hum	
28	80	5	25	08	17	16.4	10.5	68	7.8	1016.3	1	009	02	1	1	5	8	5	0	1	82825	84645					28	1Ci75 Cu hum	
29	82	3	26	04	12	17.4	9.1	58	7.1	1015.5	8	010	02	0	0	1	1	6	3	1	81830	83078					29	1Ac62 COTRA Cu hum	
30	56	8	34	09	18	13.3	10.5	83	7.8	1013.7	1	013	51	6	5	8	5	4	/	/	82615	88625					30		

Mean vis = 41.6 km

Mean cloud = 4.7 58%

Mean wind speed = 6.8 kn

Mean gust = 15 kn

Mean TT = 16.7 °C

Mean TdTd = 10.1 °C

Mean RH = 65.6 %

Mean r = 7.7 g/kg

Mean PPP = 1015.0 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for JUNE 2024

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks					
1	82	7	01	07	16	15.4	8.9	65	7.0	1026.6	5	001	02	2	2	7	5	5	/ /	85625	87630	1			
2	81	3	33	07	17	23.4	8.7	39	6.9	1025.3	7	017	02	0	0	1	1	7	0	1	81850	83080	2	COTRA Cu hum	
3	84	7	35	03	10	19.6	12.8	65	9.1	1020.4	7	017	02	2	2	7	8	5	3	2	82828	87638	3	/Ac68 /Ci72 Cu hum	
4	82	8	22	09	18	17.1	12.6	75	9.1	1009.3	7	013	61	6	2	5	8	4	7	/	81818	85640	88462	4	3Ac58 Cu hum
5	81	5	27	07	17	15.6	3.7	45	4.9	1015.0	2	001	02	1	1	3	4	7	6	0	81850	83656		5	4Ac57 Cu hum
6	81	5	26	07	14	17.6	7.4	51	6.3	1017.5	8	003	01	2	2	1	2	6	6	0	81845	85357		6	Cu med
7	82	8	23	09	18	17.9	8.5	54	6.8	1017.4	6	014	03	1	1	8	8	6	/ /	84845	88650		7	Cu hum	
8	88	6	32	09	17	18.3	7.7	50	6.5	1013.0	3	002	01	2	2	6	8	6	0	0	83845	85656		8	Cu med
9	88	7	28	07	14	15.4	7.2	58	6.3	1012.4	8	008	02	2	2	7	8	6	/ /	83835	87645		9	Cu med	
10	82	5	36	09	21	16.5	5.5	48	5.6	1013.4	3	008	25	8	2	4	4	7	6	0	82848	83656		10	2Ac58 Cu con Cb top NE jpE vv80k ex p
11	70	7	31	09	16	15.6	5.8	52	5.7	1019.3	1	002	15	8	2	3	4	6	6	1	82835	86358		11	2Sc45 /Ci78 Cu con jpN vv40k ex p
12	84	6	27	07	14	17.9	4.5	41	5.2	1020.1	6	012	01	2	2	6	8	7	/	1	82850	85656		12	/Ci80 COTRA Cu med
13	60	8	19	10	22	14.6	8.8	68	7.0	1010.4	7	021	60	6	2	3	8	5	7	/	81825	83640	88458	13	2Ac57 Cu hum
14	80	5	20	12	25	18.3	8.6	53	7.0	1000.1	6	006	15	2	2	4	8	6	3	/	83835	83367		14	2Sc56 Cu med jpN
15	65	5	26	11	26	17.9	9.3	57	7.3	999.7	2	015	25	8	2	3	9	6	6	0	81935	83358		15	2Cu40 2Sc56 jp SE&E vv40k ex p
16	84	6	25	06	15	20.0	6.7	42	6.1	1002.9	1	007	02	2	2	3	2	7	6	1	83850	85357		16	2Ci75 Absent vv&cld est
17	86	3	24	05	12	21.0	8.3	44	6.8	1010.7	2	002	02	0	0	2	4	7	0	1	82850			17	1Sc56 1Ci78 Cu hum
18	81	5	34	06	14	20.0	10.4	54	7.8	1014.1	1	004	02	2	2	4	2	6	3	0	84838			18	2Ac68 Cu con
19	89	4	04	06	16	21.0	8.6	45	6.9	1021.0	8	008	01	1	1	1	1	6	0	1	81845	84078		19	Cu hum COTRA U/a cont
20	89	1	06	04	11	22.9	7.5	37	6.4	1017.9	7	014	02	0	0	1	1	7	0	2	81856			20	1Ci72 1Ci78 Cu hum
21	84	5	24	10	19	23.2	10.9	46	8.1	1010.9	7	019	02	1	1	3	8	6	4	5	82848			21	2Sc56 1Ac68 1Cs75 Cu med Cs edge W
22	86	3	26	08	18	21.8	10.0	47	7.6	1013.8	2	002	01	1	1	3	1	7	0	0	83850			22	Cu hum
23	84	4	28	06	13	23.6	15.1	59	10.6	1019.8	8	004	01	1	1	4	8	6	0	0	82830	83640		23	Cu hum
24	84	5	24	07	12	26.4	16.3	54	11.5	1017.4	7	015	01	2	2	5	8	6	0	0	81838	85645		24	Cu hum
25	84	3	01	05	13	27.6	15.9	49	11.2	1013.8	7	016	02	0	0	3	4	7	0	0	82850			25	1Sc56 Cu hum El hz lyr
26	81	2	24	05	13	28.6	11.6	35	8.5	1009.8	7	018	02	0	0	2	4	7	0	0	82656			26	El hz lyr
27	82	3	26	10	25	22.3	9.1	43	7.2	1009.0	7	001	02	1	1	1	1	7	0	9	81850	83172		27	Cu hum COTRA Irisation
28	86	7	25	09	21	19.2	8.2	49	6.7	1017.0	0	001	02	2	2	7	5	6	3	/	87644			28	/Ac65
29	85	6	29	05	14	24.1	7.3	34	6.3	1011.1	8	025	03	1	1	1	0	9	4	6	81363	83272	86078	29	COTRA Cs edge SE
30	84	7	35	08	21	18.5	9.6	56	7.4	1014.1	5	001	02	1	1	6	8	6	/	2	82835	86645		30	/Ci75 Cu hum

Mean vis = 45.8 km

Mean cloud = 5.2 65%

Mean wind speed = 7.4 kn

Mean gust = 17 kn

Mean TT = 20.0 °C

Mean TdTd = 9.2 °C

Mean RH = 50.5 %

Mean r = 7.3 g/kg

Mean PPP = 1014.1 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-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
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	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	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	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	0.00
4	0.43	0.49	0.00	0.00	0.54	0.00	0.53	0.54	0.51	0.00	0.49	0.00	0.49	0.00	0.49	0.00	0.00
5	1.00	1.00	0.12	0.00	1.00	0.29	1.00	0.76	1.00	0.00	0.58	0.00	0.92	0.53	1.00	0.29	0.29
6	0.75	1.00	0.00	0.00	1.00	0.84	1.00	1.00	1.00	0.11	0.72	0.00	1.00	0.30	0.36	0.90	0.90
7	0.21	1.00	0.00	0.00	1.00	1.00	1.00	0.13	1.00	0.21	0.88	0.08	0.42	0.01	0.00	0.16	0.16
8	0.00	1.00	0.01	0.00	0.85	0.36	1.00	0.00	0.95	0.31	0.85	0.55	0.00	0.69	0.00	0.36	0.36
9	0.00	1.00	0.00	0.00	0.59	0.39	0.78	0.01	0.45	0.05	0.59	0.71	0.00	0.23	0.03	0.60	0.60
10	0.00	0.99	0.03	0.11	0.78	0.03	0.42	0.01	0.26	0.06	0.31	0.01	0.00	0.47	0.11	0.76	0.76
11	0.06	1.00	0.00	0.03	0.46	0.00	0.34	0.00	0.03	0.07	0.21	0.00	0.00	0.26	0.71	0.72	0.72
12	0.00	1.00	0.00	0.01	0.18	0.00	0.71	0.11	0.01	0.61	0.32	0.69	0.00	0.23	0.14	0.75	0.75
13	0.00	1.00	0.00	0.00	0.36	0.12	0.03	0.46	0.00	0.29	0.36	0.66	0.00	0.36	0.41	0.27	0.27
14	0.01	1.00	0.10	0.00	0.06	0.39	0.04	0.34	0.00	0.70	0.09	0.60	0.00	0.72	0.56	0.34	0.34
15	0.01	1.00	0.31	0.00	0.52	0.43	0.00	0.61	0.00	0.59	0.20	0.49	0.00	0.15	0.64	0.00	0.00
16	0.00	1.00	0.29	0.00	0.95	0.34	0.00	0.64	0.00	0.16	0.00	0.95	0.00	0.07	0.54	0.25	0.25
17	0.00	1.00	0.07	0.00	0.82	0.94	0.00	0.82	0.07	0.61	0.21	0.59	0.00	0.00	0.35	0.00	0.00
18	0.00	1.00	0.09	0.00	0.99	0.88	0.00	0.87	0.00	0.96	0.46	0.52	0.00	0.00	0.27	0.16	0.16
19	0.00	0.92	0.00	0.20	0.25	0.97	0.00	1.00	0.06	0.88	0.00	1.00	0.00	0.00	0.00	0.41	0.41
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.22	0.00	0.09	0.00	0.00	0.00	0.12	0.12
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	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	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	0.00
Tot	2.48	15.40	1.02	0.34	10.35	6.97	6.85	7.47	5.35	5.82	6.28	6.94	2.83	4.02	5.59	6.10	

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
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.48	0.44	0.00	0.47	0.47	0.00	0.46	0.46	0.45	0.44	0.07	0.50	0.44	0.00	0.31
5	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.99	0.00	1.00	1.00	0.00	0.65
6	1.00	1.00	0.00	1.00	1.00	0.08	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.67
7	0.99	1.00	0.00	1.00	1.00	0.38	1.00	1.00	1.00	1.00	0.61	0.82	1.00	0.00	0.60
8	0.88	1.00	0.48	1.00	1.00	0.00	1.00	0.97	1.00	1.00	0.98	0.29	1.00	0.01	0.58
9	0.72	1.00	0.44	1.00	0.71	0.01	0.84	0.13	1.00	1.00	0.24	0.58	1.00	0.01	0.47
10	0.64	0.52	0.62	1.00	0.54	0.00	0.35	0.01	1.00	1.00	0.01	0.03	1.00	0.00	0.37
11	1.00	0.44	0.92	1.00	0.55	0.00	0.00	0.37	0.62	1.00	0.54	0.00	1.00	0.00	0.38
12	0.64	0.37	0.65	0.42	0.64	0.08	0.00	0.29	0.61	1.00	0.96	0.01	1.00	0.34	0.39
13	0.60	0.66	0.99	0.12	0.59	0.83	0.00	0.45	0.55	0.98	0.76	0.06	1.00	0.77	0.42
14	0.55	0.70	1.00	1.00	0.35	0.68	0.53	0.82	0.91	1.00	0.99	0.23	1.00	0.23	0.50
15	0.62	0.39	0.98	1.00	0.78	1.00	0.97	0.94	1.00	0.96	1.00	0.02	0.77	0.02	0.51
16	0.85	0.87	0.85	1.00	0.92	0.96	0.53	0.98	1.00	1.00	1.00	0.40	0.97	0.00	0.55
17	0.87	1.00	0.83	1.00	1.00	0.93	0.41	1.00	0.98	1.00	0.97	1.00	1.00	0.00	0.58
18	0.45	1.00	0.93	1.00	0.75	0.82	0.37	0.25	1.00	0.81	1.00	1.00	0.60	0.00	0.54
19	0.25	1.00	1.00	0.88	0.00	1.00	0.71	0.79	0.98	0.00	0.99	1.00	0.00	0.00	0.48
20	0.16	0.12	0.06	0.26	0.00	0.26	0.17	0.12	0.00	0.00	0.10	0.22	0.00	0.00	0.07
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	11.70	12.52	9.75	14.15	11.30	7.02	9.35	10.59	14.09	14.18	10.22	8.15	13.77	1.38	241.96

June 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	12.06	16.1	1445	6.9	352	77.3	95.1	359	63.0	1443	8.1	6.6	7.8	1130	5.7	433	1026.22	1028.5	2155	1023.7	0	0	
2	15.59	23.8	1452	5.6	401	67.6	98.6	534	33.6	1625	8.6	6.9	8.9	1157	5.4	359	1026.62	1028.9	650	1023.9	1930	0	
3	15.99	22.1	1615	10.3	352	76.8	94.3	355	54.3	1616	11.7	8.4	9.6	1545	7.1	330	1021.21	1024.9	5	1017.1	2355	0	
4	14.76	18.8	1230	8.9	2359	82.9	97.3	2348	62.6	1227	11.8	8.5	9.5	1450	6.8	2359	1011.92	1017.3	0	1008.5	1750	0.9	
5	12.06	17.7	1347	5.6	420	66.6	99.5	450	37.5	1342	5.2	5.5	6.9	730	4.3	1027	1014.62	1016.8	2244	1012.0	12	0	
6	13.39	19.2	1525	8.0	346	65.7	88.2	352	41.8	1530	6.7	6.0	7.2	1312	5.3	1758	1017.49	1019.6	2358	1015.7	241	0	
7	13.82	20.7	1228	5.9	354	71.0	96.6	404	41.9	1232	8.3	6.7	8.0	2045	5.5	354	1018.29	1020.1	752	1015.7	2359	0	
8	13.57	20.3	1601	7.1	2349	70.2	95.5	416	38.3	1622	7.7	6.5	8.4	912	5.3	1622	1013.82	1016.2	2336	1012.3	1021	0	
9	12.38	17.1	1049	4.3	414	69.9	96.4	447	45.0	1031	6.6	6.1	7.4	2353	4.8	356	1013.07	1016.0	5	1009.5	2359	0	
10	12.17	17.3	1550	7.8	2234	75.2	95.7	343	42.7	1539	7.5	6.4	8.1	425	4.8	1514	1011.98	1017.1	2347	1006.5	411	2	
11	11.18	16.5	1450	5.6	422	73.3	92.8	502	48.3	1533	6.3	5.9	7.3	1224	5.0	1533	1019.07	1021.8	2224	1016.7	212	0.3	
12	12.44	18.2	1445	7.6	140	66.3	94.3	204	38.0	1745	5.7	5.6	6.6	857	4.4	1745	1020.73	1022.2	752	1018.8	2359	0	
13	11.98	17.2	1303	5.4	341	79.0	96.1	2359	46.3	924	8.1	6.7	8.5	2356	5.2	924	1012.05	1019.1	24	1003.1	2359	1.4	
14	14.58	19.7	1416	10.6	2327	76.5	97.3	143	49.6	1451	10.2	7.8	8.9	1028	6.7	1547	1000.62	1003.3	0	997.9	2346	1	
15	13.22	18.2	1418	8.4	437	78.5	93.9	141	51.2	1425	9.3	7.4	9.5	1006	6.4	1538	999.43	1001.8	2144	997.0	1012	3.5	
16	15.07	21.1	1418	10.7	256	72.4	91.0	2309	39.9	1420	9.7	7.5	9.1	1738	5.8	1456	1002.66	1007.1	2352	1000.0	414	0.2	
17	15.98	22.5	1548	8.6	403	67.1	94.0	411	39.0	1545	9.2	7.2	8.3	1201	6.1	1615	1010.34	1013.9	2359	1007.0	2	0.1	
18	15.84	21.9	1335	9.6	416	71.3	97.5	500	49.4	1433	10.2	7.7	9.6	1036	7.1	1840	1014.67	1018.1	2356	1013.2	311	0	
19	15.77	22.3	1534	10.6	2359	69.4	94.6	131	41.6	1554	9.7	7.4	8.8	1406	6.3	1545	1021.01	1023.9	2311	1017.8	1	0	
20	16.06	23.5	1441	6.8	358	64.3	96.9	508	28.3	1603	8.3	6.7	8.5	1436	4.8	1603	1019.62	1023.4	0	1016.6	1939	0	
21	17.06	24.7	1345	9.5	414	68.5	98.1	419	38.5	1542	10.5	7.8	9.1	1130	6.9	1546	1013.30	1017.4	2	1010.6	1532	0	
22	17.07	23.0	1404	12.9	2359	70.3	94.8	249	40.5	1353	11.1	8.2	10.0	705	6.7	1353	1013.41	1018.0	0	1010.5	333	0.4	
23	17.81	24.4	1529	9.5	409	73.2	95.3	428	50.2	1554	12.6	9.0	10.8	1449	6.8	348	1019.65	1021.0	2336	1017.7	12	0	
24	20.56	27.3	1533	13.2	426	71.9	97.6	452	46.9	1244	14.8	10.3	11.8	1342	9.0	426	1018.86	1021.1	34	1016.5	1721	0	
25	21.66	29.1	1546	12.8	414	67.8	98.1	451	35.6	1527	14.6	10.2	12.2	1320	8.6	1527	1015.30	1017.5	0	1012.9	1845	0	
26	22.27	29.3	1624	14.0	354	62.9	93.8	435	32.7	1625	14.0	9.9	11.3	1234	8.0	1540	1011.47	1014.7	8	1008.3	1816	0	
27	18.38	23.3	1351	13.6	2252	66.4	90.5	603	41.3	1435	11.6	8.6	10.6	1102	6.3	2117	1009.56	1013.2	2355	1007.8	507	0	
28	15.69	20.5	1425	11.1	342	64.3	83.6	450	44.6	1735	8.7	6.9	8.3	909	6.1	1736	1016.18	1018.1	2229	1013.0	1	0	
29	17.60	24.7	1727	8.2	428	60.5	94.7	430	32.9	1535	9.0	7.1	8.8	1154	6.2	1248	1013.65	1017.7	4	1010.1	1855	0	
30	15.77	20.8	1356	11.7	648	72.2	95.6	657	47.4	1401	10.5	7.9	10.1	546	6.6	1347	1013.87	1017.2	2347	1010.7	259	1	
Total																						10.8	
Mean	15.39	21.37		9.03		70.6	94.92		43.42		9.55	7.45	8.99		6.14	1014.69	1017.86		1011.71				
Max	22.27	29.27		14.01		82.9	99.50		62.99		14.79	10.33	12.22		9.02	1026.62	1028.85		1023.94				
Min	11.18	16.14		4.26		60.5	83.60		28.33		5.15	5.46	6.57		4.25	999.43	1001.80		996.95				

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

Appendix 1.

Explanation and definition of some of the terms used in the Wokingham Weather Reports.

Average: Generally refers to the 30 year climatological average, currently 1981 to 2010. This will be next updated in 2020. For some parameters, notably wind, the climatological average is not available, and if the word average is used in the context of wind, it refers to the average for the period for which data is held, namely 1988 to present.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix 2.

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

VV : Visibility.

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

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

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

Code figure 89 = visibility above 70 km.

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

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

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

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

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

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

RH : Relative humidity at 1.2m, %.

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

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

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

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

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

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

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

4 = Steady, pressure the same as 3 hours ago

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

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

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

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hail includes large hail, small hail and snow pellets.

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

Code figures:

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

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

Cl : Type of low cloud

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

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

Cm : Type of medium cloud.

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

Ch : Type of high cloud

0 = No high cloud

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

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

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

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

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

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

7 = Veil of Cirrostratus covering the celestial dome.

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

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

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

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

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

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

00 to 50 = Height in hundreds of feet

51 to 55 Not used

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

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