

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

AUGUST 2024

Temperature (°C)		Anomaly	Rank in the past	143	years				
Mean maximum	23.6	+0.8	23rd highest						
Mean minimum	13.2	+0.6	7th highest						
Daily mean	18.4	+0.7	15th highest						
Highest maximum	32.1	on 12th	Lowest maximum	18.4	on 24th				
Highest minimum	17.4	on 9th	Lowest minimum	8.5	on 30th				
Mean grass minimum	10.1	+0.5	Lowest grass minimum	4.3	on 30th				
Mean earth @30 cm	19.3	+0.4	Earth @100 cm	18.4	+0.6				
Frost duration (hrs)	0.0		Rain duration (hrs)	18.8					
Rainfall total (mm)	22.7	42 %	18th lowest						
Highest daily fall	7.0	on 23rd	Highest rate mm/hr	41	on 24th				
Number of: Dry days (<0.2mm)	20	Wet days (>0.9mm)	6	days ≥5mm	2				
Sunshine total (hrs)	210.7	Daily mean	6.80	117 %	Sunniest day	13.6	on 16th		
N° days with: Air frost	0	Ground frost	0	Snow falling	0	Snow lying	0		
Thunder	1	Hail ≥5mm	0	Small hail/ice	0	Fog @09	0	Nil sun	2
Pressure MSL : Mean @09 GMT, mbar	1014.4	-1.4	Highest	1025.1	on 30th	Lowest	997.5	on 23rd	
Relative humidity : Mean (%)	74.0	Lowest	35	on 16th	Water vapour (g/kg), mean at 09 and 15 GMT	9.6,	9.2		
Overall mean wind speed (mph)	6.7	Windiest day	12.4	on 22nd	Max gust	37	on 23rd		
Wind direction (days)	N 1	NE 2	E 1	SE 0	S 3	SW 17	W 5	NW 2	
Least windy day (mph)	2.2	on 14th	Calm; less than 0.5 mph (minutes)					n/a	

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

Notes:

Dry, Sunny and Warm Overall

Temperature: The mean this August, while 0.7° above the current 30 year average is 1.8° above the long-term median, a stark reminder of our changing climate. The mean maximum is 2.2° above its median while the mean minimum is 1.6° above its median. The highest max is 4.1° above the median and the lowest max is 1.5° above its median. The highest min is 1.1° above the median while the lowest min is 2.1° above its median, and ranks 6th highest in 121 years. The mean grass min is 0.7° above the 45 year average. While ground frost is normally absent this month, there have been 12 Augusts in the past century to have at least one, the most recent in 2014. Earth temperature at both 30 cm and 1 m depth is above average. Anomalies for daily max were over +6° on the 1st, 11th, 12th and 28th, and exceeded -2° on the 8th, 19th, 22nd and 24th, with extreme values of +9.1° on the 12th and -3.2° on the 24th. Anomalies for daily min were above +4° on the 3rd, 6th, 9th, 23rd and 27th, and exceeded -2° on the 17th, 19th and 30th, with extreme values of +4.7° on 3rd and -2.9° on 17th.

Rainfall: The rainfall total for this August is in the dry category, and only 1.2 mm outside the very dry one. The total is lowest for the month since 2003, and before that 1998, although we only need to look back 3 more years to 1995 to find the driest August in the past 143 years when only 2.7 mm fell. Despite the low total this August, the number of dry days is only 1 above the 45 year average of 19. Rainfall accumulation compared with normal was 28 mm in deficit by the 21st, decreasing to 20 mm on the 24th, increasing to 31 mm by the 31st. A dry spell of 5 days ended on the 20th, and another was unbroken on the 31st after 7 days, but only 1.1 mm fell between the 9th and 21st, followed by two wet days when 58% of the month's total fell. **Sunshine:** This has been a sunny August, with a total sunshine 117 % above average, but in this millennium, 6 Augusts have been sunnier, including as recently as 2022. For the first 10 days sunshine struggled to reach normal, with 5 days having <30% of the maximum and 3 >50 %. There was an improvement in the 10 days to the 20th with 7 having >50% of the maximum, including 3 with >90%, and only 2 with <30%. For the remainder of the month, sunshine again struggled to reach normal, with 2 sunless days, although 5 did have >50% of the maximum. Overall 5 days had <3 hours, 17 had =>6 hours and 3 had =>12 hours. **Wind:** The Wokingham sonic anemometer failed again early in the month, and most of this month's wind data is estimated from that of Reading University, about 7km distant. This August the overall mean speed is 0.7 mph above average, but the highest gust is close to normal. Daily mean winds were fresh on the 15th, 20th, 22nd, 23rd and 25th, otherwise were light or moderate. Directions were mainly between S and W, except between N and E on 1st, 11th, 30th and 31st, and between W and N on the 16th and 17th.

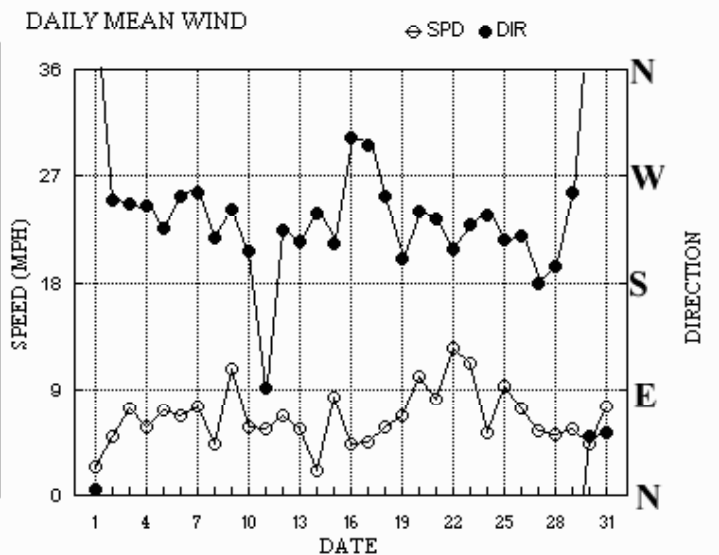
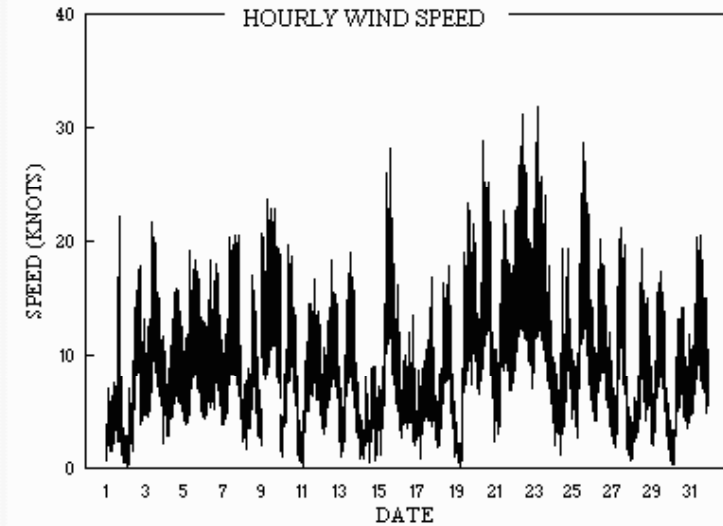
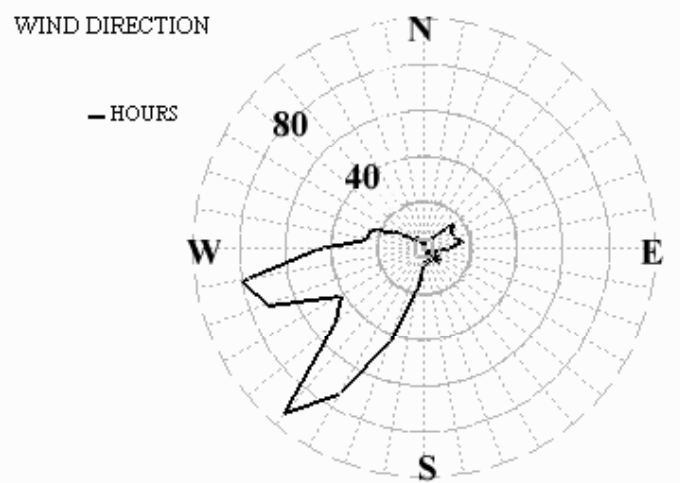
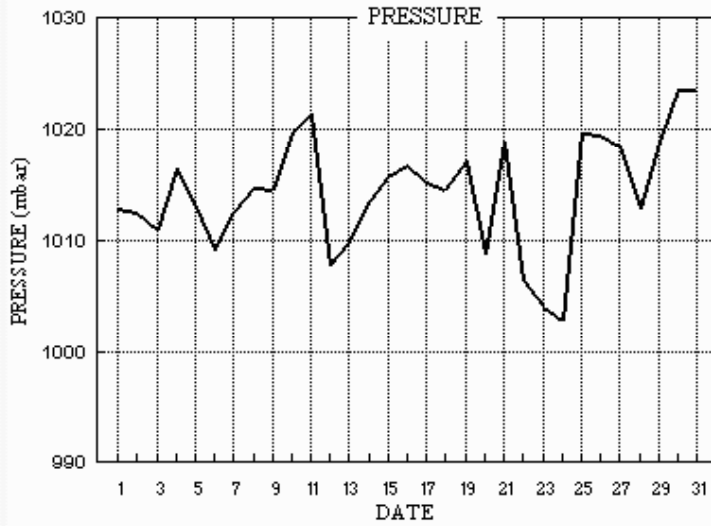
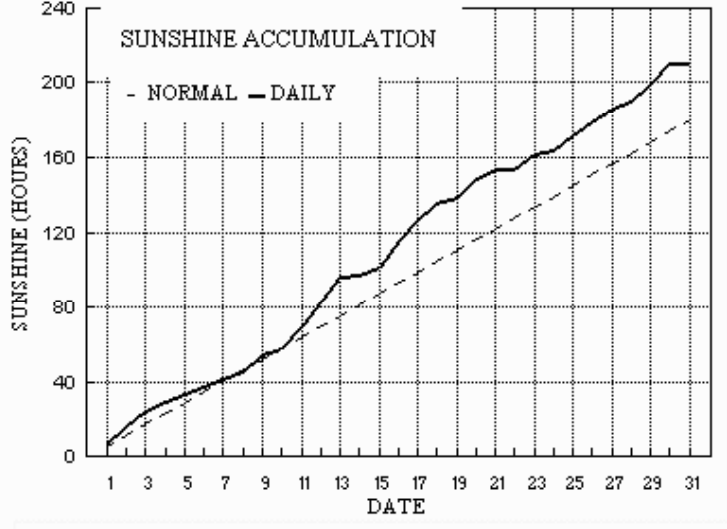
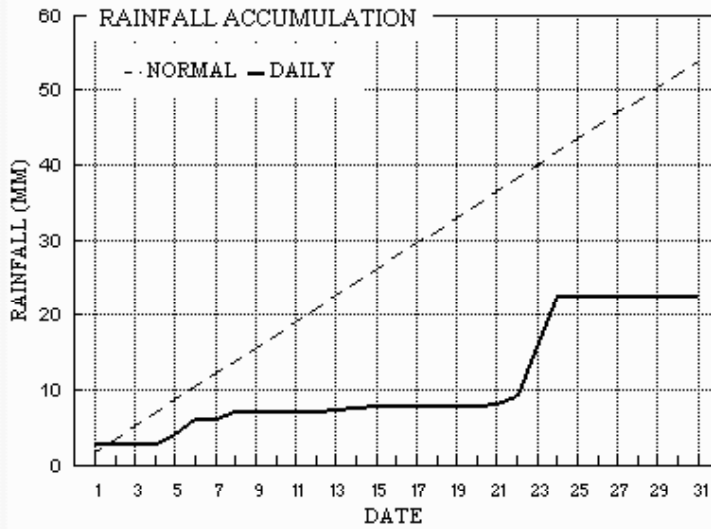
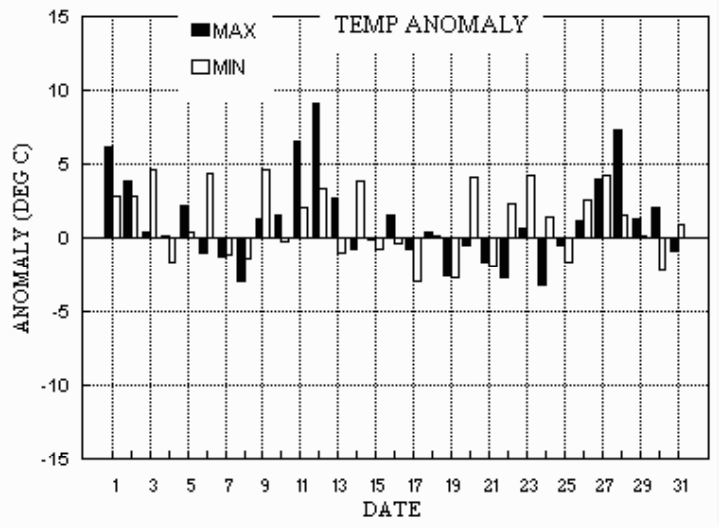
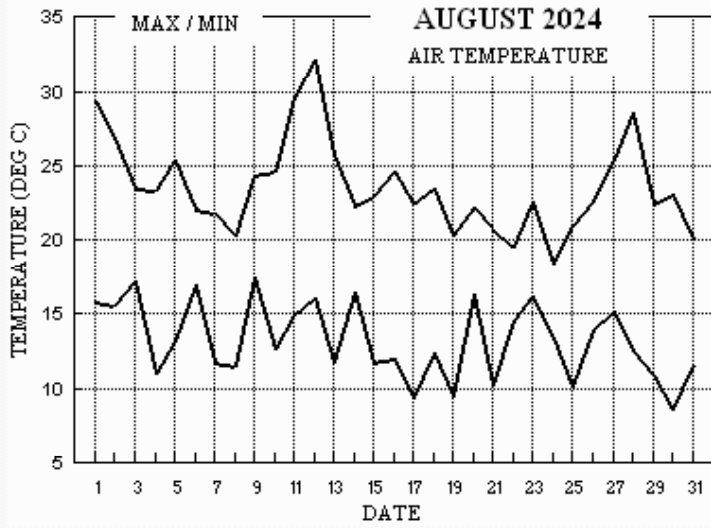
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 31 st			
+1.0°	+1.5°	41%	100%	+1.6°	+0.5°	5%	156%	+0.7°	+1.0°	77%	98%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for August 2024



Month: AUGUST 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	High hr HHhh	High ddd	ff	Rain HH	hrs	
1	29.3	15.8	3.1	13.1	20.8	18.2	6.9	0.0	1012.8	0 0 0 0	0 0 0 0	1 0 0 0	0 0 0 0	5	0.9	2.1	286	22	1619	24	5	15	1.1	
2	26.9	15.6	tr	13.1	21.0	18.4	9.4	0.0	1012.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	249	4.2	4.4	247	18	1745	263	9	16	0.1	
3	23.5	17.2	0.0	15.0	21.1	18.6	7.9	0.0	1011.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	246	6.0	6.5	235	22	0945	252	10	10	0.0	
4	23.3	10.9	0.0	7.5	20.6	18.7	5.7	0.0	1016.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	245	4.4	5.0	242	16	1421	214	8	15	0.0	
5	25.3	13.1	1.2	10.6	20.1	18.8	3.6	0.0	1013.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	225	6.1	6.3	246	19	0820	218	9	15	0.4	
6	22.1	17.0	2.0	15.6	20.2	18.7	3.9	0.0	1009.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	252	4.7	5.9	279	18	0902	282	9	18	1.7	
7	21.8	11.7	0.0	7.8	19.7	18.7	4.4	0.0	1012.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	256	6.4	6.6	257	21	1545	266	9	15	0.0	
8	20.2	11.5	0.9	7.6	19.1	18.7	3.7	0.0	1014.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	217	3.5	3.8	200	17	1156	210	7	14	0.9	
9	24.3	17.4	0.0	16.3	19.0	18.5	9.4	0.0	1014.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	241	9.3	9.4	252	24	0711	236	12	15	0.0	
10	24.6	12.6	tr	8.9	19.2	18.4	3.1	0.0	1019.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	206	7.0	5.0	223	20	0915	218	9	13	0.0	
11	29.5	14.9	0.0	12.4	19.3	18.4	11.7	0.0	1021.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	91	4.5	4.9	86	17	1820	86	8	18	0.0	
12	32.1	16.1	0.0	12.5	19.9	18.4	13.4	0.0	1007.7	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	224	2.1	5.8	256	18	1545	250	10	15	0.0	
13	25.7	11.7	0.4	7.5	20.1	18.4	13.3	0.0	1009.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	214	4.8	4.9	191	19	1310	216	8	11	2.0	
14	22.3	16.5	0.2	14.0	20.2	18.6	0.5	0.0	1013.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	239	1.1	1.9	297	9	1850	280	4	19	1.3	
15	23.0	11.7	0.2	8.6	19.9	18.6	4.6	0.0	1015.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	212	7.1	7.2	215	28	1445	211	12	11	0.7	
16	24.6	12.0	0.0	7.9	19.7	18.6	13.6	0.0	1016.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	302	2.5	3.8	332	14	0200	266	6	00	0.0	
17	22.4	9.3	0.0	4.7	19.5	18.6	11.7	0.0	1015.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	295	3.4	3.9	290	17	1840	286	7	19	0.0	
18	23.4	12.3	0.0	7.4	19.3	18.6	9.0	0.0	1014.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	252	5.1	5.1	246	18	1410	250	9	14	0.0	
19	20.3	9.4	tr	5.7	19.1	18.6	2.8	0.0	1017.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	200	5.7	5.8	196	23	1540	200	11	16	0.0	
20	22.2	16.3	tr	15.5	18.8	18.5	9.9	0.0	1008.7	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	240	8.1	8.8	240	29	1100	258	13	14	0.0	
21	20.8	10.2	0.3	6.3	18.6	18.4	5.3	0.0	1018.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	233	6.9	7.2	249	23	1150	249	10	13	0.2	
22	19.5	14.5	1.0	12.1	18.4	18.3	0.0	0.0	1006.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	208	10.8	10.8	215	31	1140	208	14	09	0.9	
23	22.6	16.2	7.0	14.6	18.4	18.2	8.4	0.0	1004.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	229	9.1	9.8	254	32	0645	255	14	08	5.7	
24	18.4	13.4	6.3	13.3	18.7	18.1	1.6	0.0	1002.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	236	3.0	4.6	248	20	1155	255	9	18	3.5	
25	20.9	10.1	tr	6.7	17.9	18.1	8.2	0.0	1019.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	216	8.1	8.1	217	29	1435	218	13	15	0.2	
26	22.5	13.9	0.0	10.9	17.9	18.0	6.8	0.0	1019.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	219	6.1	6.4	250	20	1030	248	9	10	0.0	
27	25.3	15.2	0.0	10.6	18.1	17.9	7.6	0.0	1018.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	179	4.6	4.8	193	21	1300	189	11	11	0.0	
28	28.6	12.5	0.0	10.1	18.3	17.8	4.4	0.0	1012.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	193	2.1	4.5	186	20	1415	184	8	14	0.0	
29	22.4	10.8	0.0	5.8	18.5	17.8	9.0	0.0	1018.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	256	4.9	4.9	258	17	1330	257	8	10	0.0	
30	23.1	8.5	0.1	4.3	18.1	17.9	10.9	0.0	1023.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	50	3.2	3.9	38	14	1425	26	7	16	0.1	
31	20.0	11.6	0.0	6.7	17.9	17.8	0.0	0.0	1023.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	53	6.5	6.6	64	21	1420	49	10	11	0.0	
Total			22.7				210.7	0.0																18.8
Mean	23.6	13.2		10.1	19.3	18.4	6.80	0.0	1014.4					229	3.9	5.8								
Anom	+0.8	+0.6	42%	+0.5	+0.4	+0.6	117%																	-1.4
Daily mean		18.4																						
Anom		+0.7																						

Number of days with:
 Air frost = 0 Ground frost = 0 Nil sun = 2
 Snow falling = 0 Snow lying = 0 Thunder = 1
 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 AUGUST 2024

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks															
1	70	2	12	03	06	21.4	15.9	71	11.2	1012.8	2	001	01	8	1	1	0	9	8	1	81362	1	Ac65	2	Ci75	Wind est									
2	50	7	26	02	05	17.8	17.3	97	12.3	1012.5	0	001	10	4	2	7	6	4	/	/	87710	2				Wind est									
3	86	4	27	09	20	21.4	15.7	70	11.1	1011.0	1	002	01	1	1	3	8	5	8	0	83825	3	1	Sc45	2	Ac69	Cu hum	Ac vir							
4	82	7	24	04	08	16.9	11.2	69	8.2	1016.5	0	005	02	2	2	6	0	9	7	8	82363	85465	87270	4				Halo 22° part							
5	75	7	23	07	18	19.9	15.8	77	11.1	1013.1	6	002	02	2	2	7	5	4	/	/	83615	84630	87648	5											
6	50	8	23	06	14	18.1	17.0	93	12.0	1009.1	3	004	61	6	2	6	7	2	2	/	86705	88525		6											
7	83	7	26	08	17	19.4	11.4	60	8.4	1012.5	2	005	03	1	1	7	8	5	/	/	83825	87656		7				Absent vv&cld est							
8	75	8	20	08	17	19.6	13.8	69	9.7	1014.8	8	007	02	2	2	8	5	5	/	/	83620	85635	88656	8				Absent vv&cld est							
9	82	7	26	10	22	18.5	13.1	71	9.4	1014.5	2	031	03	2	2	7	8	5	3	/	85825	87630		9				/Ac69	Cu hum						
10	75	7	21	09	20	19.3	14.1	72	9.9	1019.6	0	002	03	2	2	7	8	5	/	/	81820	85635	87650	10					Cu hum						
11	86	1	09	06	13	21.9	14.8	64	10.3	1021.3	8	010	01	1	1	1	5	6	0	1	81640			11	1	Ci80	COTRA	Wind est until further notice							
12	82	1	15	05	11	25.4	18.3	65	13.1	1007.7	6	013	02	0	0	1	0	9	8	0	81365			12					Ac cas						
13	84	7	21	08	15	18.7	13.1	70	9.4	1009.8	0	000	02	2	2	1	1	5	4	1	81822	87080		13	1	Ac68	COTRA	Cu hum	U/a	cont					
14	15	8	07	04	07	18.0	16.9	93	11.9	1013.6	1	012	20	5	2	8	5	1	/	/	83702	86705	88612	14					VV 9k N.						
15	84	6	22	08	17	18.4	13.5	73	9.5	1015.8	7	003	03	2	2	4	8	4	0	1	81818	84625	86080	15	1	Cc75	COTRA			Cu hum					
16	86	1	02	05	09	17.9	11.9	68	8.6	1016.8	1	011	02	0	0	1	1	5	0	1	81822			16	1	Ci75	Cu hum	El	hz	lyr					
17	84	1	31	05	10	16.6	9.3	62	7.2	1015.2	0	001	02	0	0	1	5	6	0	0	81636			17					El	hz	lyr	thk			
18	82	6	27	06	14	18.3	11.4	64	8.3	1014.6	2	010	03	2	2	5	8	5	0	1	81826	83635	83650	18	2	Ci75	Cu med	El	hz	lyr	thk	Sky	turbid		
19	63	3	21	04	09	16.2	11.4	73	8.3	1017.1	7	009	02	1	1	0	0	9	0	1	83080			19					COTRA	El	hz	lyr	thk	Sky	turbid
20	84	4	23	09	16	20.0	13.7	67	9.7	1008.7	1	004	03	1	1	3	1	5	3	1	83820			20	1	Ac59	1	Ci75				Cu hum			
21	83	6	26	10	18	16.8	8.7	59	7.0	1018.9	2	005	03	2	2	1	8	6	0	8	81830	86080		21	1	Sc45	2	Cs75	COTRA			Cu hum	Sc	len	
22	65	8	20	15	28	18.0	14.3	79	10.2	1006.4	6	007	02	6	2	8	5	4	/	/	86615	83628	88650	22											
23	86	3	26	14	26	18.3	11.4	64	8.4	1004.0	2	052	03	6	1	3	1	5	0	0	83828			23						Cu hum	El	hz	lyr		
24	56	8	15	03	08	15.2	14.7	97	10.5	1002.9	6	011	63	6	6	7	7	2	2	/	87705	88556		24											
25	81	1	24	08	16	16.6	11.1	70	8.1	1019.6	1	012	03	0	0	1	2	5	0	1	81825			25	1	Ci75						Cu med			
26	72	4	23	09	17	18.0	12.5	70	8.9	1019.5	2	007	03	0	0	4	2	5	0	0	84822			26								Cu med			
27	73	7	17	07	16	19.4	14.6	74	10.3	1018.4	5	006	03	2	2	1	1	5	7	1	81820	83470	87372	27	1	Ac69	/	Ci80	COTRA			Cu hum			
28	65	7	09	03	07	19.7	14.3	71	10.1	1012.9	8	007	01	2	2	7	0	9	7	1	82363	83466	87370	28	/	Ci75						Ac vir			
29	80	1	26	07	12	17.5	12.0	70	8.6	1018.9	1	012	03	0	0	1	1	5	0	4	81820			29	1	Ci75						Cu hum			
30	65	3	05	05	09	16.6	11.1	70	8.1	1023.5	2	005	02	0	0	0	0	9	0	1	81280	83081		30								COTRA	Cs	edge	S
31	63	7	04	07	15	16.5	13.0	80	9.2	1023.6	5	005	03	2	2	5	5	4	7	/	81815	85650	87360	31									Cu fra		

Mean vis = 31.7 km

Mean cloud = 5.1 63%

Mean wind speed = 6.9 kn

Mean gust = 14 kn

Mean TT = 18.6 °C

Mean TdTd = 13.5 °C

Mean RH = 72.6 %

Mean r = 9.6 g/kg

Mean PPP = 1014.4 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for AUGUST 2024

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NCh	shs	NChshs	Date	Remarks
1	62	5	28	04	08	28.9	15.1	43	10.6	1011.1	8	010	15	1	1	3	9	6	6	3	81940	82850	83075	1	1Ac58 Cu med/con Cb&jp NW Wind est
2	78	3	26	08	18	26.2	13.3	45	9.5	1011.2	8	005	02	0	0	1	1	7	0	9	81850			2	2Cc70 1Ci78 COTRA Cu hum Cc cas vir Wind est
3	83	7	27	08	16	22.5	10.3	46	7.8	1011.3	0	001	02	2	2	1	8	6	8	/	81845	87367		3	1Sc56 Cu hum Ac cas vir
4	82	7	22	07	16	22.9	11.0	47	8.1	1014.6	8	015	02	2	2	2	4	6	3	1	81847	85365	87072	4	2Sc48 COTRA Cu hum
5	82	7	23	09	18	25.0	15.9	57	11.2	1011.3	8	012	02	2	2	7	8	6	/	/	81832	83635	87645	5	Cu hum
6	84	6	27	07	17	20.4	13.8	66	9.8	1009.0	8	003	01	2	2	6	8	5	0	0	83825	85645		6	Absent vv&cld est
7	84	7	27	07	20	20.2	10.6	54	7.9	1012.5	5	000	03	2	2	7	8	6	/	/	82832	86650		7	Absent vv&cld est
8	60	8	21	10	19	17.8	16.5	92	11.6	1012.4	7	014	50	5	2	8	5	3	/	/	86708	88612		8	Absent vv&cld est
9	83	2	26	10	25	23.2	11.9	49	8.6	1016.0	2	009	01	1	1	1	1	6	0	1	81845			9	2Ci78 COTRA Cu hum
10	84	7	24	10	21	23.3	16.4	65	11.4	1019.9	2	002	02	2	2	7	5	5	/	1	87625			10	/Ci81 COTRA Wind est until further notice
11	84	2	13	07	16	29.0	17.5	50	12.4	1017.3	7	019	02	0	0	2	4	6	0	1	81842			11	2Sc45 1Ci80 Cu hum Sc cugen
12	75	1	26	10	18	31.0	19.7	51	14.3	1005.6	7	005	02	0	0	1	1	6	8	1	81840			12	1Ac65 1Ci80 COTRA Cu hum Ac cas EI hz lyr
13	84	3	21	10	17	25.3	12.9	46	9.2	1008.5	7	006	02	1	1	1	1	6	0	2	81845			13	1Cc75 2Ci80 COTRA Cu hum Cc cas vir
14	62	7	13	02	05	22.2	17.3	74	12.3	1014.3	0	005	25	8	2	7	8	4	/	/	85813	87625		14	Cu med jp SW&W
15	83	7	22	15	29	21.4	16.6	74	11.7	1013.2	7	012	02	2	2	7	5	4	/	/	87618			15	
16	88	2	27	04	09	23.8	8.6	38	6.9	1014.3	7	012	02	0	0	1	1	7	0	9	81850			16	2Cc77 Cu hum Cc cas vir
17	84	2	31	05	11	22.2	8.0	40	6.6	1012.8	7	013	02	0	0	1	4	7	0	4	81650			17	2Ci75 COTRA EI hz lyr thk Sky turbid
18	80	0	27	10	18	22.8	8.9	41	7.0	1014.8	2	001	02	0	0	0	0	9	0	0				18	EI hz lyr thk. Sky turbid.
19	58	7	19	09	17	19.1	13.1	68	9.3	1013.6	7	029	05	2	2	7	5	5	/	/	87623			19	/Ac67
20	83	2	27	14	24	21.3	7.5	41	6.5	1009.7	1	006	02	0	0	2	1	7	0	0	82850			20	Cu hum EI hz lyr
21	82	7	24	09	21	19.0	9.8	55	7.5	1017.0	8	013	02	2	2	7	8	6	/	/	81840	87645		21	Cu hum
22	58	8	21	13	26	19.0	16.6	86	11.8	1004.9	7	008	50	5	2	8	5	3	/	/	87708	88612		22	
23	84	7	25	12	24	20.9	9.2	47	7.2	1007.4	1	012	03	1	1	1	4	6	0	9	81648	86175		23	/Ci80 COTRA Cc cas vir
24	81	5	27	06	09	17.1	14.6	85	10.4	1004.5	1	027	01	6	2	2	2	4	8	8	82815			24	2Ac59 1Cs77 Cu med Ac cas Cb top NW
25	80	5	21	14	28	20.5	8.8	47	7.0	1018.3	8	007	01	2	2	2	8	6	7	1	82845	83361		25	1Sc50 1Ac58 1Ci80 COTRA Cu hum
26	70	7	22	09	18	21.4	11.1	52	8.2	1019.2	7	003	02	2	2	7	8	6	/	1	81838	87645		26	/Ci75 Cu hum
27	80	2	18	08	18	24.6	11.5	44	8.4	1015.8	7	014	01	1	1	1	0	9	4	2	81368			27	2Ci75 COTRA EI hz lyr
28	82	7	17	07	19	26.0	13.5	46	9.6	1010.9	6	018	15	1	1	1	4	6	7	/	81645	83463	86366	28	/Ac69 Ac vir jpSW
29	82	2	27	09	16	21.5	9.1	45	7.1	1019.0	0	003	02	0	0	2	4	6	0	1	81845			29	2Sc50 1Ci75 Cu hum
30	72	5	06	07	14	21.4	9.9	48	7.5	1022.5	6	006	03	1	1	1	4	7	0	6	81650	85277		30	
31	75	8	05	08	21	19.0	11.3	61	8.2	1020.8	7	014	02	2	2	8	5	6	/	/	88642			31	

Mean vis = 35.3 km

Mean cloud = 5.0 63%

Mean wind speed = 8.6 kn

Mean gust = 18 kn

Mean TT = 22.5 °C

Mean TdTd = 12.6 °C

Mean RH = 54.9 %

Mean r = 9.2 g/kg

Mean PPP = 1013.3 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

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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-Aug	02-Aug	03-Aug	04-Aug	05-Aug	06-Aug	07-Aug	08-Aug	09-Aug	10-Aug	11-Aug	12-Aug	13-Aug	14-Aug	15-Aug	16-Aug
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	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.06	0.14	0.00	0.00	0.00	0.12	0.00	0.00	0.04	0.00
5	0.00	0.00	0.00	0.00	0.34	0.30	1.00	1.00	0.00	0.01	0.00	0.62	0.97	0.00	0.39	0.75	
6	0.00	0.00	0.00	0.24	0.00	0.00	1.00	1.00	0.02	0.00	0.32	1.00	1.00	0.00	0.82	1.00	
7	0.04	0.00	0.17	0.00	0.00	0.00	1.00	1.00	0.56	0.00	1.00	1.00	1.00	0.00	1.00	1.00	
8	0.77	0.13	0.59	0.06	0.00	0.00	0.93	0.48	0.16	0.08	1.00	1.00	1.00	0.00	0.90	1.00	
9	1.00	0.97	0.84	0.21	0.00	0.00	0.30	0.04	0.06	0.00	1.00	1.00	1.00	0.05	0.55	1.00	
10	1.00	0.91	0.96	0.07	0.22	0.00	0.08	0.00	0.67	0.00	1.00	0.37	1.00	0.29	0.13	1.00	
11	1.00	1.00	0.55	0.11	0.16	0.00	0.00	0.00	0.77	0.00	0.79	0.98	1.00	0.04	0.00	1.00	
12	0.99	0.78	0.00	0.25	0.04	0.00	0.00	0.00	0.88	0.01	0.53	0.98	1.00	0.00	0.06	1.00	
13	0.64	1.00	0.06	0.39	0.23	0.06	0.01	0.00	0.79	0.23	0.77	1.00	1.00	0.00	0.71	1.00	
14	0.73	1.00	0.48	0.64	0.24	0.11	0.00	0.00	1.00	0.13	0.97	1.00	1.00	0.06	0.01	0.59	
15	0.17	1.00	0.98	0.69	0.71	0.35	0.00	0.00	0.99	0.19	0.98	0.98	1.00	0.04	0.00	1.00	
16	0.13	0.90	1.00	1.00	0.21	0.64	0.00	0.00	0.99	1.00	1.00	1.00	1.00	0.00	0.00	1.00	
17	0.16	0.95	1.00	1.00	0.71	0.89	0.00	0.00	1.00	0.61	1.00	1.00	0.73	0.00	0.00	1.00	
18	0.08	0.49	0.99	0.68	0.48	0.99	0.00	0.00	1.00	0.82	1.00	1.00	0.64	0.00	0.00	1.00	
19	0.16	0.30	0.24	0.40	0.08	0.58	0.00	0.00	0.47	0.00	0.35	0.35	0.00	0.00	0.00	0.27	
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tot	6.87	9.43	7.86	5.74	3.61	3.92	4.38	3.66	9.36	3.08	11.71	13.40	13.34	0.48	4.62	13.60	

Hour	17-Aug	18-Aug	19-Aug	20-Aug	21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug	Mean
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
5	0.49	0.00	0.00	0.16	0.58	0.00	0.00	0.00	0.75	0.46	0.00	0.00	0.48	0.41	0.00	0.28
6	1.00	0.00	0.03	0.37	1.00	0.00	0.32	0.00	1.00	1.00	0.22	0.00	1.00	1.00	0.00	0.43
7	1.00	0.30	0.66	0.93	1.00	0.00	1.00	0.00	1.00	1.00	0.34	0.01	1.00	1.00	0.01	0.55
8	1.00	0.70	0.97	0.81	1.00	0.00	0.82	0.00	1.00	0.61	0.20	0.56	1.00	1.00	0.00	0.57
9	1.00	0.56	0.89	0.48	0.93	0.00	0.70	0.00	0.63	0.68	0.00	0.54	0.88	1.00	0.00	0.53
10	0.89	0.54	0.05	0.15	0.44	0.00	0.89	0.00	0.93	0.71	0.17	0.51	0.74	1.00	0.00	0.47
11	1.00	0.60	0.00	0.55	0.08	0.00	1.00	0.00	0.81	0.48	0.88	1.00	0.71	0.94	0.00	0.50
12	1.00	0.94	0.00	0.90	0.08	0.00	1.00	0.01	0.41	0.23	0.62	0.98	0.14	0.42	0.00	0.43
13	1.00	1.00	0.00	0.94	0.21	0.00	1.00	0.00	0.00	0.11	1.00	0.49	0.92	1.00	0.00	0.50
14	1.00	1.00	0.00	0.85	0.00	0.00	0.52	0.37	0.43	0.36	1.00	0.22	0.37	0.62	0.00	0.47
15	1.00	1.00	0.00	0.78	0.00	0.00	0.50	0.56	0.80	0.08	1.00	0.01	0.58	0.88	0.00	0.53
16	1.00	1.00	0.16	1.00	0.00	0.00	0.62	0.25	0.37	0.22	1.00	0.02	0.17	0.75	0.00	0.53
17	0.35	1.00	0.07	1.00	0.00	0.00	0.03	0.20	0.05	0.81	1.00	0.00	0.69	0.53	0.00	0.51
18	0.00	0.38	0.00	0.94	0.00	0.00	0.00	0.24	0.00	0.00	0.18	0.04	0.37	0.35	0.00	0.38
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	11.73	9.01	2.83	9.85	5.33	0.00	8.40	1.63	8.17	6.76	7.60	4.37	9.03	10.91	0.01	210.73

August 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	20.83	29.3	1431	15.8	413	76.5	99.0	2357	43.4	1434	16.1	11.4	14.8	1109	8.2	40	1012.61	1013.7	657	1010.6	1557	3
2	20.51	26.9	1339	15.4	257	75.4	99.9	711	38.4	1405	15.2	10.7	13.3	943	8.1	1405	1012.04	1013.4	14	1010.8	1602	0
3	19.62	23.5	1509	13.8	2359	66.3	90.2	218	40.7	1112	12.6	9.1	12.3	757	7.1	1112	1011.75	1015.2	2358	1010.5	441	0.1
4	17.05	23.3	1521	10.9	505	69.3	90.0	518	45.8	1448	11.1	8.1	9.3	1558	6.8	148	1015.35	1017.0	842	1013.9	1740	0
5	19.20	25.3	1503	13.1	250	76.3	95.2	409	54.7	1503	14.7	10.3	11.9	1326	8.7	30	1012.31	1014.6	3	1010.6	2356	0.0
6	18.05	22.1	1544	13.4	2347	78.0	95.9	1015	46.0	1757	13.9	9.9	12.7	1340	7.1	1808	1009.63	1011.8	2333	1008.4	827	2.9
7	16.65	21.8	1340	11.6	322	71.7	93.0	327	49.4	1338	11.2	8.2	9.4	1050	7.7	1214	1012.80	1015.4	2359	1011.3	115	0
8	17.09	20.2	905	11.5	520	85.5	96.5	532	62.3	1006	14.5	10.3	12.4	1934	7.8	0	1013.37	1015.7	654	1010.2	2359	0.8
9	19.53	24.3	1359	14.6	2359	68.7	93.2	521	44.7	1725	13.2	9.4	12.0	0	7.4	1738	1014.61	1019.2	2359	1009.8	114	0
10	18.73	24.6	1653	12.6	259	79.2	96.7	2346	61.5	1651	14.9	10.5	12.3	1303	8.1	258	1019.75	1021.7	2357	1018.7	329	0
11	21.79	29.5	1517	14.9	522	73.0	99.3	446	47.6	1519	16.1	11.2	13.1	1215	9.8	854	1018.70	1022.3	557	1013.3	2357	0.1
12	23.05	32.1	1332	15.5	2359	69.8	96.4	404	48.3	1404	16.8	12.0	15.6	1217	8.1	2259	1008.34	1013.4	3	1005.5	1454	0
13	18.70	25.7	1509	11.7	525	70.3	94.6	527	39.1	1527	12.6	9.1	10.3	1208	7.8	1527	1009.68	1011.4	2335	1008.3	1516	0
14	18.33	22.3	1457	14.4	2358	88.4	96.9	2313	73.9	1007	16.3	11.5	13.1	1659	9.7	2358	1013.90	1016.9	2144	1011.0	34	0.7
15	17.55	23.0	1324	11.7	436	84.2	95.8	1	65.1	1004	14.7	10.4	12.5	2152	8.0	409	1014.52	1016.6	55	1012.3	1806	0
16	18.26	24.6	1537	12.0	526	66.7	96.0	539	35.2	1538	11.1	8.2	12.2	0	6.5	1707	1014.75	1016.9	838	1012.7	1817	0.2
17	16.39	22.4	1444	9.3	534	66.7	96.1	611	36.7	1535	9.4	7.3	8.2	1019	6.0	1229	1014.00	1015.7	737	1012.0	1804	0.1
18	17.54	23.4	1420	12.2	2358	67.5	92.4	2359	39.4	1534	10.8	8.0	9.0	1139	6.8	1534	1015.00	1019.0	2300	1012.7	223	0
19	15.75	20.3	1617	9.4	518	79.1	97.7	605	59.5	1003	11.9	8.6	10.4	2359	7.0	518	1015.25	1018.9	111	1009.8	2355	0
20	18.14	22.2	1451	12.8	2359	68.1	94.2	431	37.8	1603	11.6	8.6	11.6	337	5.9	1604	1010.36	1016.0	2353	1007.8	501	0.1
21	15.87	20.8	1328	10.2	328	68.9	90.7	507	46.0	1333	9.8	7.5	8.5	2315	6.6	1101	1016.80	1019.2	933	1012.2	2359	0
22	17.25	19.5	1231	14.5	39	82.5	92.9	1739	73.1	513	14.2	10.1	12.0	1739	8.3	420	1006.20	1012.4	0	1002.1	2358	0.3
23	18.27	22.6	1404	15.2	2339	67.1	94.7	608	35.8	1330	11.5	8.6	11.7	609	5.8	1330	1004.33	1008.1	2028	997.5	455	1
24	14.93	18.4	1605	11.5	2359	87.0	97.3	730	63.8	1805	12.7	9.2	11.2	1146	7.3	2330	1005.83	1014.6	2357	1000.8	1010	11.1
25	15.50	20.9	1443	10.1	502	73.3	94.2	522	43.7	1524	10.3	7.7	9.2	2054	6.5	1524	1018.09	1019.9	956	1014.4	0	0.1
26	17.75	22.5	1427	14.2	549	73.7	93.2	530	46.4	1214	12.6	9.0	10.0	2347	7.4	1127	1019.18	1020.3	2237	1017.8	311	0.1
27	18.89	25.3	1334	13.9	2359	72.2	94.9	130	42.1	1538	13.2	9.3	10.6	657	7.7	1538	1017.39	1019.8	2	1015.3	1648	0
28	19.68	28.6	1256	12.5	453	70.7	95.0	509	38.6	1258	13.5	9.6	11.3	1215	8.4	405	1012.98	1016.1	0	1010.6	1525	0
29	16.16	22.4	1532	10.4	2348	70.4	97.3	554	39.3	1618	10.1	7.6	9.0	956	6.1	1618	1018.73	1022.1	2333	1014.9	1	0
30	15.75	23.1	1637	8.5	531	71.4	97.0	625	40.7	1324	9.9	7.5	8.6	931	6.5	1324	1023.15	1025.1	2225	1021.9	2	0
31	16.35	20.0	1333	11.6	207	77.5	93.9	220	57.3	1543	12.2	8.7	9.9	1104	7.6	148	1021.95	1025.0	33	1018.0	2347	0.1
Total																						20.7
Mean	18.04	23.58		12.56		74.0	95.16		48.25		12.87	9.28	11.24		7.46		1013.98	1017.01		1011.15		
Max	23.05	32.07		15.80		88.4	99.90		73.90		16.77	11.98	15.65		9.85		1023.15	1025.10		1021.86		
Min	14.93	18.43		8.53		66.3	90.00		35.18		9.38	7.28	8.25		5.84		1004.33	1008.14		997.51		

Wokingham Automatic Weather Station
 AWS samples taken every 0.5 seconds
 x and n refer to maximum and minimum respectively

Readings taken at Wokingham Climatological Station, Emmbrook, Berkshire
Lat 51.425 N, Long 0.853 W, NGR (SU) 798701
Altitude 45 m ASL.

Tmn = 00 to 24 GMT mean air temperature at 1.2 m, deg C
 RHmn = 00-24 GMT mean relative humidity at 1.2 m, percent
 Tdmn = 00-24 GMT mean dew point at 1.2 m, deg C
 rmn = 00-24 GMT mean humidity mixing ratio, g/kg
 pmn = 00-24 GMT mean air pressure reduced to mean sea level, mbar
 Time = hours and minutes in GMT of extreme values

Temperature and humidity are from an aspirated Vaisala HMP45 unit
 Pressure is from a Setra CS100 sensor
 Data is logged on a Campbell Scientific CR10X measurement and control system
 R tot = Rainfall from TBR, uncorrected

WOKINGHAM METEOROLOGICAL DATA

Wokingham Climatological Station, Emmbrook, Berkshire.

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

Seasonal Means and Totals

SUMMER 2024

Temperature (°C)					Rank in the past 143 years				
Mean maximum	22.6	(+0.3)			25th highest				
Mean minimum	11.7	(-0.3)			35th highest				
Daily mean	17.2	(0.0)			25th highest				
Rainfall total (mm)	88.9	(58 %)			17th lowest				
Sunshine total (hours)	637.9	(111 %)							
N° of:	Dry days	64 (+8)	Wet days	17 (-8)					
Days with:	Air frost	0 (0)	Ground frost	0 (-1)	Snow falling	0 (0)	Snow lying	0 (0)	
Thunder	3 (-4)	Hail ≥5mm	0 (0)	Small hail/ice	0 (0)	Fog @09 GMT	0 (0)	Nil sun	3 (0)
Air pressure MSL : Mean @09 GMT (mbar)	1014.5	(-1.7)							

Departure from 1991 to 2020 average shown in brackets.

Notes: **Dry with Average Mean Temperature and Above Average Sunshine**

Temperature: The mean this summer is exactly equal to the current 30 year average, however in the longer-term it is 0.9° above the 143 year median. All recent summers back to 2016 have been warmer than this year's, though this does not apply to the mean maximum, as summer 2021 was cooler in this respect. Compared with the longer-term, the mean maximum is 1.5° above the median, but is 2.7° below the current record set in 2022. This summer's hottest day had a maximum of 32.1° on the 12th August, 1.7° above the median, and the coolest day was 16.5° on the 11th June, 2.0° above its median, and 8th highest in 112 years. The highest minimum was 17.4° on the 9th August, 0.2° above the median while the lowest minimum was 4.3° on the 9th June, 0.1° below its median. The mean grass min was 8.7°, 0.3° below average and the lowest was 0.3° on the 9th June. Mean earth temperature at 30 cm depth was 18.3°, anomaly +0.1°, but lowest since 2015, and at 1 m depth the mean was 17.0°, anomaly +0.5°. August was the warmest month, mean 18.4°, anomaly +0.7°, then July with 17.6°, anomaly -0.3°, then June was the coolest, mean 15.4°, anomaly -0.4°. **Rainfall:** This has been a dry summer season overall with just over half the average rainfall. It ranks 5th driest in this millennium, but we had a drier summer as recently as 2022. Both June and August were dry but July had above average rainfall. The season's highest daily fall was 19.9 mm on the 5th July. July's total was 55.1 mm, anomaly 117 %, August was drier with 22.7 mm, anomaly 42 %, while June had only 11.1 mm, anomaly 22%. The number of wet days is 8 fewer than average, and there were only 2 days having 10 mm or more, which is 2 fewer than average. The number of dry days is 8 more than average and there were 6 dry spells, 5 days to the 20th June, 7 days to the 28th June, 5 days to the 14th July, 8 days to the 23rd July, 6 days to the 30th July and 5 days to the 20th August, with another unbroken at the end of the season after 7 days. Also only 1.4 mm fell in the 18 days to the 3rd July, 1.0 mm in the 16 days to the 31st July and 1.1 mm in the 13 days to the 21st August. There were no exceptionally wet episodes, but the wettest period was 37.5 mm over 5 days to the 8th July. The rainfall rate reached the violent category only once this summer, on the 15th July when 116 mm/hr was recorded at 1945 GMT. There was no hail this summer, but thunder was heard on the 6th and 7th July and the 1st August. Estimated soil moisture deficit indicated that unirrigated shallow rooted plants suffered stress after the 14th June, but it did not become severe until after the 24th July. An index of severe stress for the summer season gives a figure of 693, close to the average of 647 in a 49 year range of 57 to 1083, the larger the figure the greater the stress. **Sunshine:** This has been quite a sunny season overall, only 5 summers in this millennium have been sunnier, the last as recently as 2022. June was the sunniest month, daily mean 8.08 hours, anomaly 124 %, then August, 6.80 hours, anomaly 117 %, then July, 5.96 hours, anomaly 92 %. The season's sunniest day was the 2nd June with 15.4 hours, and the only day this summer to exceed 15 hours. The period 17th to 29th June was outstanding, giving a 13 day total of 147.0 hours, daily mean 11.31 hours, also the 4 days to the 31st July had a mean of 13.53 hours. At the other extreme, there were 12 days with 1 hour of less during the season, 2 in June, 7 in July and 3 in August. Overall there were 20 days with <3 hours, 52 with =>6 hours and 13 with =>12 hours. **Wind:** Failure of the Wokingham sonic anemometer early in August means that some wind data for this summer has been estimated from data at Reading University, 7 km distant. The overall mean wind speed of 6.7 mph is 0.5 mph above average. The windiest day was the 22nd August, mean 12.4 mph, and the highest gust of 37 mph was on the 23rd August. The 14th August was the least windy day, mean 2.2 mph. Daily mean direction/number of days: N,7 NE,6 E,2 SE,1 S,5 SW,36 W,22 NW,13. Compared with average, winds from W were 9.6% more frequent, and those from SW and NW combined were 7.8 % more frequent, while S winds were 8.0 % less frequent, and the rest combined were 9.4% less frequent. **Humidity:** The overall mean relative humidity was 73.2% and the lowest value was 28 % on the 20th June. The mean water vapour content per kg of air was 8.9 g at 0900 GMT and 8.6 g at 1500 GMT. **Pressure:** The highest value of MSL pressure this season was 1028.9 mbar on the 2nd June, and the lowest was 996.6 mbar on the 6th July, span 32.3 mbar, anomaly -3.1 mbar. **June:** Dry and sunny with mean temperature slightly below average. Coolest June since 2013. Mean minimum lowest since 1996. Mean grass min lowest since 2010. Highest daily rainfall 2nd lowest after 2018 in 49 years. 5th sunniest June this millennium. Noctilucent cloud observed on 23rd and 28th. **July:** Temperature and sunshine below average, rainfall above. A month of contrasting halves, cool, wet and dull up to mid-month, then dry, sunnier and with 2 short hot spells. 14 of the final 16 days were dry. **August:** Dry, sunny and warm overall. The lowest minimum is 6th highest in 121 years. Driest since 2003.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom	Sun hrs	Anom	Mean Wind mph	Max gust	Mean pressure	Anom
June	21.4°	+0.4°	9.4°	-1.3°	11.1	22%	242.3	124%	6.6	36	1015.0	-1.8
July	22.9°	-0.3°	12.4°	-0.4°	55.1	117%	184.9	92%	6.7	35	1014.1	-1.8
August	23.6°	+0.8°	13.2°	+0.6°	22.7	42%	210.7	117%	6.7	37	1014.4	-1.4

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.