

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 2022

Temperature (°C)	Anomaly	Rank in the past 141 years
Mean maximum	26.9	+4.1 Equal highest
Mean minimum	13.6	+1.0 4 th highest
Daily mean	20.3	+2.6 *Highest*
Highest maximum	34.5	on 12 th Lowest maximum 20.2 on 25 th
Highest minimum	19.1	on 24 th Lowest minimum 7.8 on 6 th
Mean grass minimum	10.3	+0.7 Lowest grass minimum 7.8 on 6 th
Mean earth @30 cm	20.1	+1.2 Earth @100 cm 18.8 +1.0
Frost duration (hrs)	0.0	Rain duration (hrs) 9.1
Rainfall total (mm)	30.3	56 % 33 rd lowest
Highest daily fall	21.1	on 24 th Highest rate mm/hr 156 on 16 th
Number of: Dry days (<0.2mm)	25	Wet days (>0.9mm) 3 days ≥5mm 2
Sunshine total (hrs) 239.1	Daily mean 7.71	133 % Sunniest day 14.8 on 7 th
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 0
Pressure MSL: Mean @09 GMT, mbar 1018.5	+2.7 Higest 1030.1	on 6 th Lowest 1001.8 on 15 th
Relative humidity: Mean (%) 67.1	Lowest 20 on 14 th	Water vapour (g/kg), mean at 09 and 15 GMT 10.0, 8.6
Overall mean wind speed (mph) 5.0	Windiest day 8.8 on 2 nd	Max gust 25 on 30 th
Wind direction (days) N 3 NE 10 E 2 SE 0 S 4 SW 8 W 1 NW 3		
Least windy day (mph) 2.5	on 26 th	Calm; less than 0.5 mph (minutes) 1422

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

Notes: **Dry and Very Sunny. Very Warm with a Heatwave in First Half of the Month**

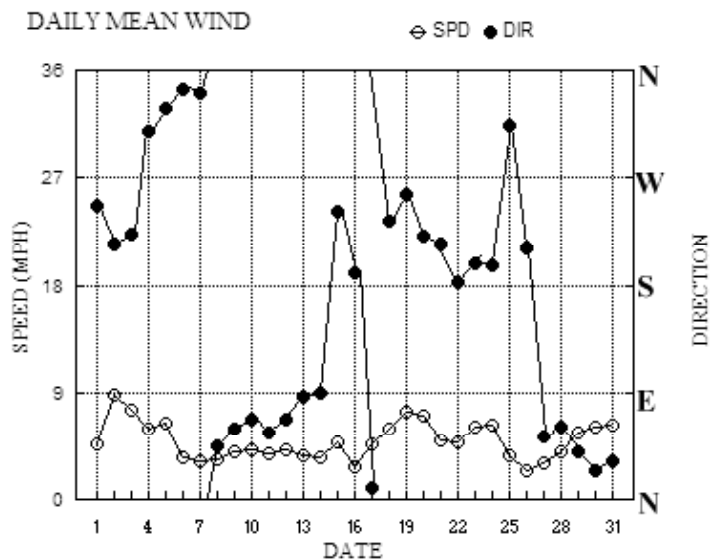
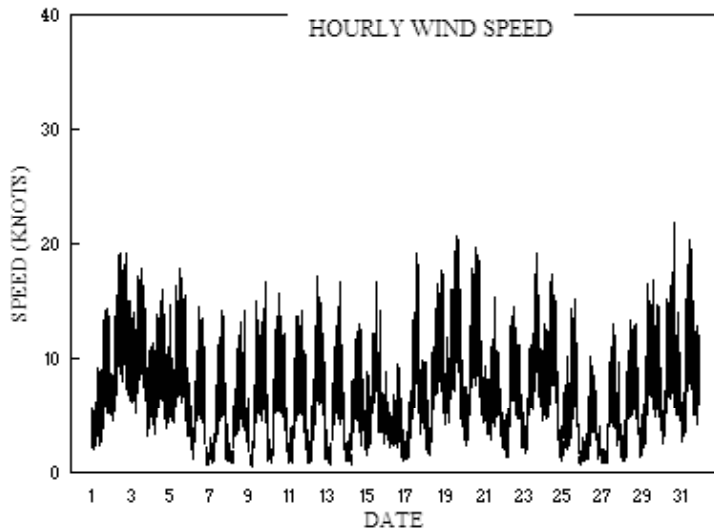
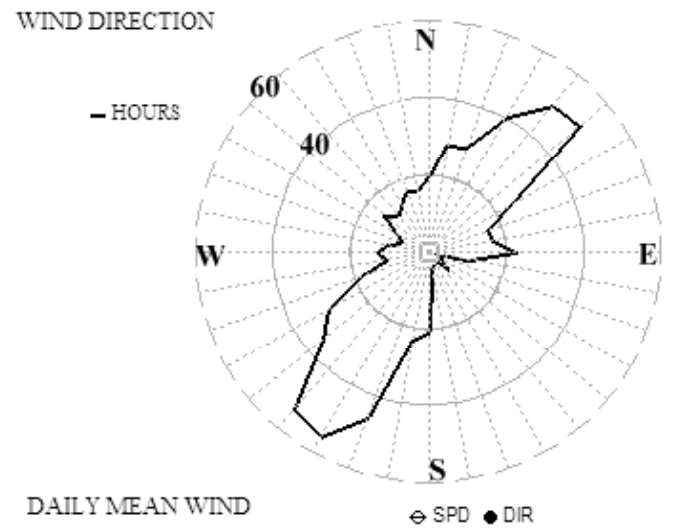
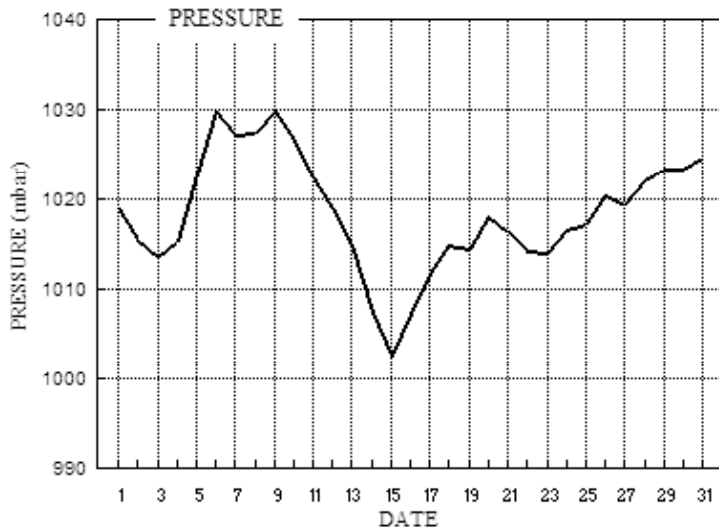
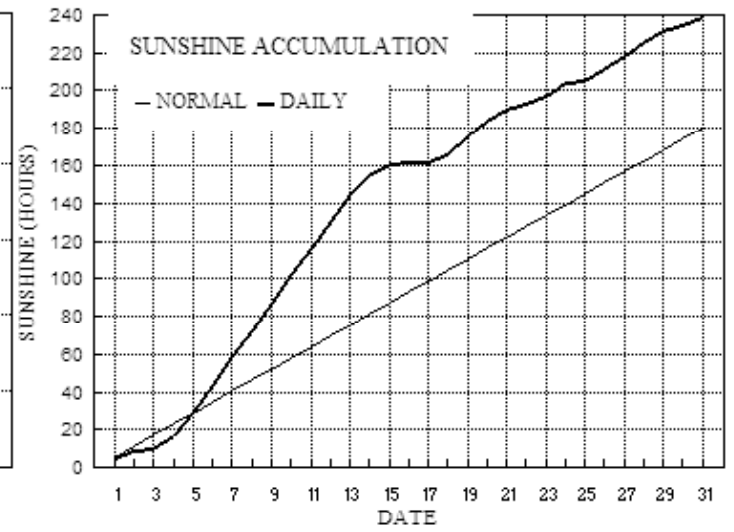
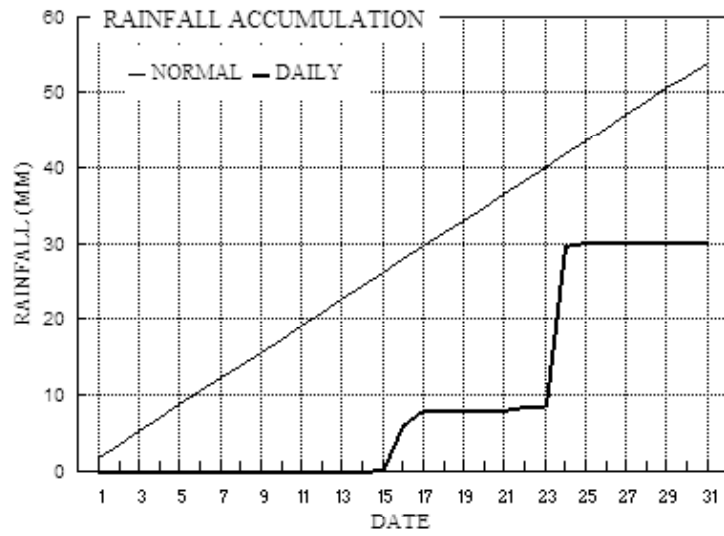
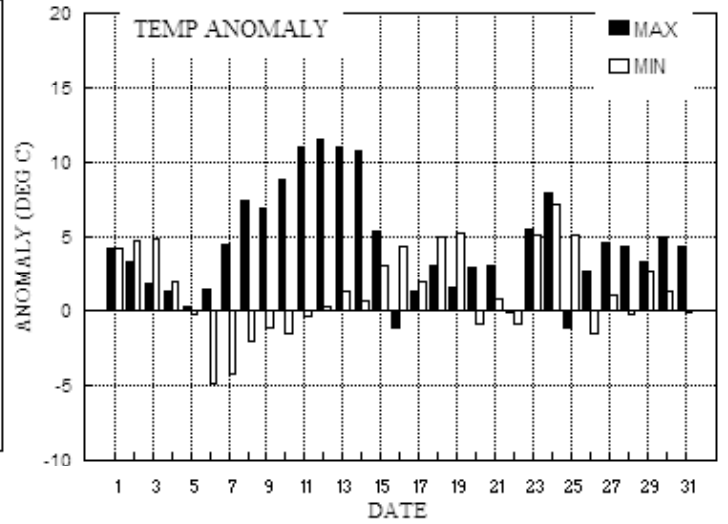
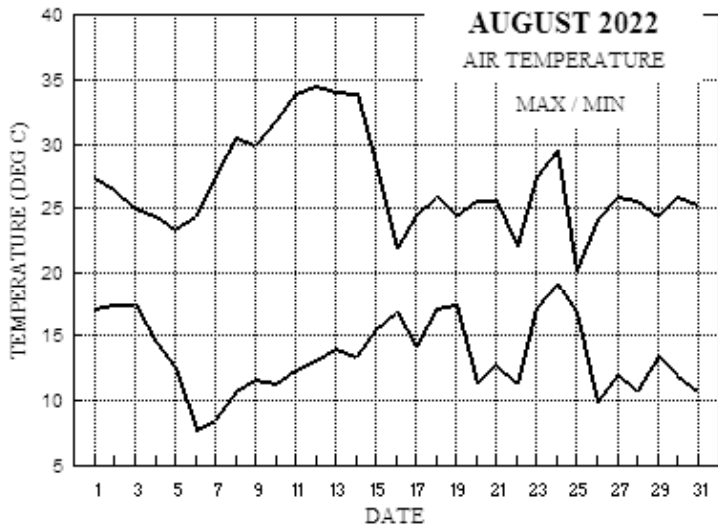
Temperature: The daily mean is a new record high for Wokingham in the past 141 years, 0.3° above the previous highest in 1997. The mean maximum is equal highest with 1947 in the same period. The mean minimum has been exceeded in only 3 Augusts since 1882, in 1997, 2004 and 2020. The highest max is 6.5° above the median and is 5th highest in 119 years, but is 2.4° below the record set in 2003. The lowest max is 3.3° above the median and 2nd highest after 1933 in the past 110 years. The highest min is 2.8° above the median and is 6th highest in 110 years while the lowest min is 1.5° above its median. The mean grass min, while 0.7° above average is highest only since 2020, and the lowest value of 2.8° is only 0.2° above average. Mean earth temperature at 30 cm is equal highest with 2003 and 1997 since 1995, but at 1m depth it is highest only since 2018. The lowest daily value at 1m is highest in over 30 years. Anomalies for daily max were over +10° from the 11th to 14th and were negative on only 2 days, with extreme values of +11.5° on 12th and -1.2° on 25th. Anomalies for daily min were above +5° on the 18th, 19th and 23rd to 25th, and exceeded -4° on the 6th and 7th, with extreme values of +7.1° on 24th and -4.9° on 6th. **Rainfall:** This has been a predominantly dry August, exacerbating the shortage of water after the previous 2 dry months. Most (70%) of this month's total fell on the 24th, while there were 6 more dry days than average, the highest number for any August since 2003. Rainfall duration is lowest since 1995. A dry spell of 20 days ended on the 14th and another of 6 days on the 31st. There was a brief but torrential rain shower on the 16th giving a rainfall rate of 156 mm/hr, and there was thunder later on the same day, but no hail this month. Rainfall accumulation compared with normal was in deficit by 27 mm on the 15th, increasing to 31 mm by the 23rd, then decreasing to 12 mm on the 24th before increasing to 23 mm by the 31st. **Sunshine:** This has been a very sunny August, the total highest since 1998, though in 2003 the total was an insignificant 0.1 less than this August's. The 14.8 hours on the month's sunniest day is equal highest with 2018 and 2003 in this millennium. The heatwave period, 5th to 14th, was also outstandingly sunny, having 8 consecutive days with an average of 97% of the maximum, and an 8 day total of 115.4 hours, a daily mean of 14.4 hours. There were a few dull days though, the 3rd, 16th, 17th and 25th all having <10% of the maximum. Daily accumulation compared with normal showed a deficit of 7 hours by the 3rd which quickly became a surplus, reaching 75 hours by the 15th, then slowly decreasing to 59 hours by the 31st. Overall there were 4 days with <3 hours, 19 with =>6 hours and 9 with =>12 hours. **Wind:** The mean speed is 1.0 mph below average and is lowest for August since 2005. The highest gust is equal lowest for the month since before 1988. The duration of calm is highest in the past 17 Augusts. Daily mean speeds were moderate on the 2nd, 3rd 18th to 20th, 23rd 24th and 31st, otherwise light. Directions were between N and E on 8th to 14th, 17th, and 27th to 31st, between S and W from 1st to 3rd, 15th, 16th, 18th to 24th and 26th, and between W and N from 4th to 7th and on 25th. **Humidity:** The mean relative humidity for this August is lowest in the past 25 years.

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			
+4.0°	+0.2°	0 %	176%	+5.7°	+2.1°	47%	141%	+3.6°	+1.9°	116	87%

B J Burton FRMetS. Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for August 2022



Month: AUGUST 2022

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf Sl	Th Ha	Ic Fg	Vec ddd	mean ff	sp	Max gust ddd	gg	HHhh	High hr ddd	ff	Rain HH	hrs	
1	27.4	17.2	0.0	13.7	20.2	18.4	5.8	0.0	1018.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	247	1.8	4.1	214	14	1919	209	7	19	0.0	
2	26.5	17.5	tr	15.9	20.5	18.5	3.5	0.0	1015.7	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	215	7.6	7.6	208	19	1731	207	10	16	0.0	
3	25.0	17.4	0.0	15.5	20.5	18.6	0.6	0.0	1013.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	223	6.3	6.6	231	18	1254	223	9	12	0.0	
4	24.4	14.5	0.0	10.1	20.3	18.6	7.1	0.0	1015.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	309	4.0	5.2	342	16	1436	299	7	13	0.0	
5	23.4	12.5	0.0	9.9	20.0	18.7	12.5	0.0	1022.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	327	5.3	5.6	260	18	1132	339	8	08	0.0	
6	24.5	7.8	0.0	2.8	19.4	18.6	14.7	0.0	1029.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	344	2.7	3.2	314	15	1244	300	5	13	0.0	
7	27.5	8.6	0.0	4.4	19.4	18.6	14.8	0.0	1027.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	340	1.8	2.8	328	14	1448	352	6	17	0.0	
8	30.5	10.8	0.0	6.5	19.6	18.5	13.9	0.0	1027.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	45	2.1	3.0	94	14	1914	97	5	19	0.0	
9	30.0	11.7	0.0	7.4	20.0	18.5	14.5	0.0	1029.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	59	3.2	3.5	91	17	2030	81	6	19	0.0	
10	31.9	11.3	0.0	6.9	20.2	18.6	14.6	0.0	1026.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	67	3.3	3.7	54	16	1248	86	6	12	0.0	
11	34.0	12.4	0.0	7.8	20.4	18.7	14.5	0.0	1022.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	56	3.0	3.3	73	14	1735	81	6	17	0.0	
12	34.5	13.1	0.0	8.5	20.7	18.7	14.3	0.0	1018.9	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	67	3.3	3.6	78	17	1137	91	6	12	0.0	
13	34.1	14.0	0.0	9.5	20.9	18.8	14.1	0.0	1015.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	87	1.7	3.3	152	17	1650	160	6	17	0.0	
14	33.9	13.4	0.0	8.9	21.0	18.9	9.6	0.0	1007.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	90	1.6	3.2	62	13	1541	186	6	18	0.0	
15	28.5	15.5	0.2	10.9	21.1	19.0	6.5	0.0	1002.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	241	3.1	4.2	310	17	1319	274	8	12	0.3	
16	21.9	16.8	5.9	13.9	21.0	19.1	0.5	0.0	1007.2	0 0 0 0	0 0 0 0	1 0 0 0	0 0 0 0	191	1.5	2.5	153	10	1530	202	4	01	1.1	
17	24.4	14.2	1.9	11.2	20.5	19.2	0.6	0.0	1011.8	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	10	3.9	4.1	352	19	1449	9	8	15	0.8	
18	26.0	17.2	0.1	17.1	20.4	19.1	3.8	0.0	1015.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	234	4.0	5.1	245	18	1917	235	9	19	0.4	
19	24.4	17.4	0.0	15.3	20.7	19.1	10.1	0.0	1014.6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	255	6.1	6.5	289	21	1404	271	10	16	0.0	
20	25.7	11.4	0.0	7.4	20.3	19.1	7.9	0.0	1018.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	221	6.1	6.2	234	20	1337	214	9	17	0.0	
21	25.6	12.9	0.0	9.2	19.9	19.1	6.4	0.0	1016.5	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	215	4.1	4.3	165	15	1416	240	6	10	0.0	
22	22.1	11.3	0.4	7.6	19.8	19.0	3.0	0.0	1014.3	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	182	4.1	4.2	137	15	1354	176	7	13	1.4	
23	27.4	17.1	tr	16.2	19.7	18.9	4.2	0.0	1014.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	199	5.3	5.3	209	19	1618	208	10	16	0.1	
24	29.5	19.1	21.1	18.3	20.2	18.9	6.6	0.0	1016.7	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	197	5.2	5.4	210	17	1158	190	9	09	4.5	
25	20.2	16.9	0.7	13.8	20.5	18.9	1.1	0.0	1017.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	313	2.7	3.2	324	15	1535	324	6	14	0.5	
26	24.1	9.9	0.0	7.9	19.4	19.0	6.2	0.0	1020.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	211	1.9	2.2	260	10	1146	191	4	11	0.0	
27	26.0	12.1	0.0	9.6	19.4	18.9	7.6	0.0	1019.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	53	1.9	2.7	16	13	1458	26	5	14	0.0	
28	25.6	10.7	0.0	7.3	19.3	18.8	7.1	0.0	1022.2	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	62	3.4	3.5	65	14	1010	73	6	17	0.0	
29	24.5	13.4	0.0	11.2	19.2	18.7	5.1	0.0	1023.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	41	4.8	4.9	68	17	1515	39	7	11	0.0	
30	26.0	11.9	tr	9.0	19.0	18.7	3.5	0.0	1023.4	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	25	5.3	5.4	58	22	1633	33	8	16	0.0	
31	25.3	10.7	0.0	6.5	18.9	18.6	4.4	0.0	1024.7	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	33	5.4	5.5	20	20	1146	29	8	11	0.0	
Total			30.3				239.1	0.0																9.1
Mean	26.9	13.6		10.3	20.1	18.8	7.71	0.0	1018.5					261	0.4	4.3								
Anom	+4.1	+1.0	56%	+0.7	+1.2	+1.0	133%																	+2.7

Daily mean 20.3 Pressure, abs highest = 1030.1 on 6

Anom +2.5 Pressure, abs lowest = 1001.8 on 15

Number of days with:

Air frost = 0 Ground frost = 0 Nil sun = 0
 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 2022

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NChshs	NChshs	NChshs	Date	Remarks	
1	81	7	34	04	09	20.0	14.4	70	10.1	1018.9	0	005	03	2	2	7	5	5	/	8	84620	85635	87272	1		
2	84	8	22	08	18	22.0	16.9	73	11.9	1015.7	3	001	02	2	2	8	5	4	/	/	86618	88625		2		
3	86	8	21	08	15	21.4	17.6	79	12.5	1013.6	0	002	01	5	2	8	5	4	/	/	87613	88618		3		
4	81	7	31	07	14	20.3	12.8	62	9.1	1015.3	2	007	03	2	2	3	1	5	0	1	83821	86080		4	2Ci78 COTRA Cu hum Ci fib	
5	84	1	35	06	16	17.8	6.7	48	6.0	1022.8	2	014	03	0	0	1	2	6	0	0		81840		5	Cu med	
6	81	1	01	05	11	18.0	7.7	51	6.4	1029.8	0	000	02	0	0	0	0	9	0	1		81080		6	COTRA Ci fib	
7	86	1	03	03	08	21.0	10.2	50	7.6	1027.4	8	003	02	0	0	0	0	9	0	1		81080		7	COTRA Ci fib	
8	84	5	02	04	07	22.1	13.5	58	9.4	1027.6	0	004	02	1	1	0	0	9	0	1		85081		8	COTRA Ci fib	
9	86	1	03	05	10	23.3	13.5	54	9.4	1029.9	1	004	02	0	0	0	0	9	0	1		81081		9	COTRA Ci fib	
10	83	2	07	05	13	23.9	15.4	59	10.7	1026.6	8	011	02	0	0	0	0	9	0	1		82082		10	COTRA Ci fib	
11	81	0	04	04	10	25.1	15.1	54	10.6	1022.3	8	008	02	0	0	0	0	9	0	0				11		
12	80	0	03	04	08	26.1	14.2	48	10.0	1018.9	7	008	02	0	0	0	0	9	0	0				12		
13	75	1	05	04	09	25.6	15.9	55	11.2	1015.0	7	003	02	0	0	0	0	9	0	1		81081		13	COTRA Ci fib	
14	80	5	03	04	08	26.1	13.6	46	9.7	1007.6	8	015	02	1	1	0	0	9	0	1		85080		14	COTRA Ci fib	
15	62	3	25	07	12	22.8	15.1	62	10.8	1002.6	3	005	02	1	1	1	0	9	8	1		81360	83073	15	COTRA Ac cas Ci unc/fib	
16	63	8	18	02	05	19.9	16.0	78	11.3	1007.2	2	012	21	6	2	8	0	9	7	/		81357	86359	88362	16	
17	30	8	03	05	13	18.4	17.6	95	12.5	1011.8	1	012	10	2	2	8	5	3	/	/		87708	88612		17	
18	60	7	26	04	08	20.8	16.2	75	11.4	1015.0	2	001	05	2	2	5	8	4	0	9		81815	83171		18	1Sc40 Cu med
19	80	6	25	06	16	20.8	13.7	64	9.7	1014.6	1	006	03	1	1	6	8	5	/	/		81822	85625		19	3Sc40 Cu hum
20	81	2	25	08	15	20.0	12.0	60	8.6	1018.2	0	001	03	1	1	1	8	5	4	0		81827		20	1Sc38 1Ac60 Cu hum	
21	75	7	27	04	08	18.3	12.7	70	9.1	1016.5	5	002	02	2	2	7	0	9	7	/		84366	87368		21	
22	82	7	19	07	11	19.1	13.3	69	9.4	1014.3	6	005	03	1	1	7	8	5	/	/		81825	87630		22	Cu hum
23	84	7	20	07	11	20.5	16.1	76	11.3	1014.2	3	007	02	2	2	7	5	4	/	/		83615	87620		23	
24	82	5	19	08	14	22.4	17.3	73	12.2	1016.7	1	007	01	6	2	5	8	4	0	1		84815		24	2Sc25 2Ci80 COTRA Cu hum	
25	30	8	36	02	08	17.2	16.7	97	11.7	1017.2	1	005	63	6	6	7	7	2	2	/		85705	83635	88550	25	
26	60	1	24	02	07	15.2	14.1	93	9.9	1020.4	2	002	05	4	0	1	6	2	0	0		81705			26	
27	68	4	35	02	04	18.7	14.4	76	10.1	1019.4	1	005	02	1	1	2	5	6	3	1		82648			27	2Ac58 1Ci80 COTRA Ac cas
28	84	7	06	04	10	19.9	13.1	65	9.3	1022.2	0	001	03	2	2	1	1	5	0	1		81825	87077		28	COTRA Cu hum Cu unc/fib U/a cont
29	85	4	04	08	17	19.2	13.4	69	9.4	1023.4	2	002	03	1	1	4	2	5	0	1		84825			29	1Ci80 Cu med
30	75	7	03	07	15	18.0	12.9	72	9.1	1023.4	0	002	03	1	1	7	8	4	/	/		81818	87645		30	Cu fra/hum
31	82	7	03	06	15	18.5	12.7	69	9.0	1024.7	4	000	25	8	1	7	8	5	/	/		81820	83830	86640	31	/Sc56 Cu hum/med

Mean vis = 34.2 km

Mean cloud = 4.7 58%

Mean wind speed = 5.2 kn

Mean gust = 11 kn

Mean TT = 20.7 °C

Mean TdTd = 14.0 °C

Mean RH = 66.8 %

Mean r = 10.0 g/kg

Mean PPP = 1018.5 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 2022

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NCh	shs	NCh	shs	Date	Remarks
1	86	5	24	08	13	26.4	12.5	42	8.9	1017.2	7	016	01	2	2	1	2	6	0	8	81848	85275		1	Cu med	
2	84	7	21	08	17	25.0	17.7	64	12.5	1014.4	7	007	02	2	2	7	5	5	/	/	86628	87635		2		
3	84	7	23	08	16	23.7	17.7	69	12.5	1013.0	8	005	02	2	2	7	8	5	/	/	85822	87635		3	Cu hum	
4	88	7	35	08	16	23.2	8.1	38	6.7	1015.7	4	000	03	2	2	5	8	7	0	8	82850	84656	87271	4	Cu hum	
5	89	3	30	06	15	22.0	4.1	31	5.0	1023.8	1	005	02	0	0	2	2	7	6	0	82856			5	2Ac58 Cu med	
6	86	5	26	06	14	23.6	4.0	28	5.0	1027.6	7	014	02	1	1	0	0	9	0	1	85080			6	COTRA Ci fib	
7	88	1	31	05	14	27.0	8.4	31	6.8	1024.1	7	014	02	0	0	1	1	8	0	1	81857			7	1Ci75 Cu hum Ci unc	
8	86	2	03	05	13	28.2	12.1	37	8.7	1025.2	7	014	02	0	0	2	1	7	0	0	82856			8	Cu hum	
9	84	4	03	05	12	30.0	10.5	30	7.8	1026.9	7	017	03	0	0	0	0	9	0	2	84078			9	COTRA Ci spi	
10	85	0	07	05	11	31.8	12.1	30	8.7	1023.0	7	017	02	0	0	0	0	9	0	0				10		
11	83	0	07	05	13	33.6	10.3	24	7.7	1019.0	7	019	02	0	0	0	0	9	0	0				11		
12	80	0	09	07	15	33.8	9.1	22	7.2	1015.6	7	015	02	0	0	0	0	9	0	0				12		
13	72	1	13	04	13	33.8	8.4	21	6.9	1011.5	7	017	03	0	0	1	1	9	0	1	81858			13	1Ci81 COTRA Cu hum	
14	83	7	07	04	10	31.1	8.8	25	7.1	1004.0	6	014	03	1	1	1	8	9	6	8	81859	87278		14	1Ac60 COTRA Cu hum Halo 22°	
15	80	7	33	04	11	26.9	11.4	38	8.4	1002.3	8	002	03	1	1	7	0	9	8	/	83362	86366		15	Ac cas	
16	67	8	12	02	07	20.5	17.3	82	12.3	1007.8	7	004	25	8	2	7	8	5	7	/	83822	86640	88360	16	Cu med	
17	65	7	36	08	19	21.2	16.6	75	11.7	1012.3	3	006	15	8	2	3	3	5	6	/	82920	83360	85363	17	1Cu25 1Sc40 Cb&jp NE-SE	
18	84	8	22	08	15	23.9	12.9	50	9.2	1013.4	5	005	03	1	1	8	8	6	/	/	81840	85645	88650	18	Cu hum	
19	82	1	26	09	21	23.8	7.8	36	6.6	1014.8	7	003	02	0	0	1	4	7	0	2	81850			19	1Sc50 1Ci73 Cu hum Ci spi	
20	84	5	23	07	18	24.4	9.9	40	7.6	1015.9	8	014	02	1	1	5	8	7	0	0	84850			20	2Sc56 Cu med	
21	83	5	19	04	15	24.8	9.9	39	7.6	1014.7	7	014	02	1	1	3	4	7	3	0	82850			21	2Sc56 2Ac68 Cu hum Ac edge S	
22	56	8	18	07	13	21.3	15.4	69	10.8	1012.6	7	009	20	5	2	8	5	5	/	/	86620	88625		22	jpW vv 30k ex W	
23	86	7	18	07	13	25.6	17.3	60	12.2	1013.6	7	011	02	2	2	6	8	6	0	1	83830	85650		23	4Ci78 Cu med	
24	89	3	21	07	16	29.1	14.5	41	10.2	1015.4	7	004	02	1	1	3	2	6	0	2	83845			24	1Ci75 Cu med	
25	61	8	34	06	14	17.9	15.2	84	10.6	1018.5	2	013	02	5	2	8	5	4	/	/	86610	88615		25		
26	82	7	20	04	09	22.9	11.0	47	8.1	1018.2	7	011	03	1	1	7	8	6	/	/	81845	87650		26	Cu hum	
27	82	3	02	06	13	25.9	12.0	42	8.6	1018.2	6	002	01	1	1	2	2	7	6	1	82850			27	1Ac59 2Ci80 COTRA Cu med Ci unc	
28	88	7	06	03	12	22.9	11.6	49	8.4	1021.1	6	009	02	2	2	2	2	7	6	8	82850	83357	87270	28	COTRA Cu med Halo 22°	
29	89	6	06	06	14	21.9	10.4	48	7.7	1021.8	6	010	02	1	1	6	8	6	/	/	81848	86656		29	Cu med	
30	88	5	02	10	16	23.2	11.9	49	8.6	1022.1	8	009	02	2	2	2	2	6	3	1	82848			30	1Ac57 2Ci73 1Cc75 Cu med Ci unc	
31	86	6	06	07	20	23.1	10.5	45	7.8	1022.4	7	008	02	2	2	2	2	6	6	/	82848	85357		31	2Sc56 Cu med	

Mean vis = 48.3 km

Mean cloud = 4.8 60%

Mean wind speed = 6.1 kn

Mean gust = 14 kn

Mean TT = 25.6 °C

Mean TdTd = 11.6 °C

Mean RH = 44.7 %

Mean r = 8.6 g/kg

Mean PPP = 1017.0 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

Wokingham Sunshine Hourly analysis	2022	Hour01-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	0.15	0.00	0.26	0.22	0.21	0.19	0.17	0.14	0.05	0.00	0.04	0.00	0.00	0.00
5	0.12	0.00	0.00	0.99	0.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	0.45	0.00
6	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
7	0.01	0.20	0.00	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.13
8	0.01	0.00	0.00	0.49	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
9	0.04	0.00	0.00	0.84	0.70	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
10	0.13	0.00	0.00	0.64	0.79	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.41	0.00
11	0.24	0.00	0.00	0.59	0.76	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.05	0.00
12	0.81	0.00	0.01	0.40	0.61	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.24	0.00
13	0.81	0.00	0.00	0.73	0.74	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.56	0.00
14	0.84	0.00	0.00	0.31	0.81	1.00	1.00	0.68	1.00	1.00	1.00	1.00	1.00	1.00	0.10	0.58	0.00
15	1.00	0.20	0.00	0.00	0.71	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.04	0.00
16	1.00	0.84	0.00	0.00	0.92	1.00	1.00	0.72	0.87	1.00	1.00	1.00	1.00	1.00	0.00	0.14	0.00
17	0.79	1.00	0.00	0.00	1.00	1.00	0.97	0.89	0.99	1.00	1.00	1.00	1.00	1.00	0.50	0.00	0.40
18	0.00	1.00	0.20	0.03	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.02	0.00	0.00
19	0.00	0.19	0.37	0.09	0.48	0.40	0.60	0.52	0.40	0.45	0.39	0.26	0.18	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	5.80	3.45	0.58	7.13	12.46	14.66	14.79	13.92	14.45	14.62	14.54	14.32	14.10	9.55	6.48	0.54	

	Hour17-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	0.05
5	0.00	0.00	0.11	0.63	0.08	0.60	0.00	0.00	0.00	0.00	0.23	0.35	0.00	0.00	0.00	0.43
6	0.00	0.00	0.26	0.87	0.34	1.00	0.05	0.02	0.00	0.70	0.61	1.00	0.00	0.04	0.03	0.55
7	0.00	0.07	0.54	1.00	0.00	1.00	0.00	0.02	0.00	1.00	0.05	1.00	0.90	0.00	0.68	0.60
8	0.00	0.23	0.93	1.00	0.31	0.08	0.23	0.17	0.00	1.00	0.75	1.00	0.94	0.06	0.10	0.59
9	0.13	0.12	0.27	0.66	0.00	0.19	0.00	0.79	0.00	1.00	0.88	0.81	0.16	0.19	0.49	0.56
10	0.13	0.18	0.38	0.43	0.00	0.05	0.00	0.71	0.00	0.77	0.96	0.65	0.18	0.30	0.40	0.52
11	0.30	0.42	0.75	0.30	0.40	0.00	0.00	0.51	0.09	0.81	0.84	0.35	0.19	0.45	0.52	0.53
12	0.06	0.15	1.00	0.13	0.82	0.06	0.42	0.25	0.00	0.64	0.48	0.41	0.98	0.46	0.18	0.55
13	0.00	0.74	0.97	0.32	0.89	0.00	0.68	0.44	0.00	0.26	0.11	0.47	0.39	0.38	0.02	0.56
14	0.00	0.25	0.97	0.35	0.66	0.00	0.33	0.75	0.00	0.02	0.51	0.12	0.21	0.79	0.03	0.49
15	0.00	0.01	1.00	0.76	0.14	0.00	0.38	0.75	0.00	0.00	0.98	0.22	0.51	0.39	0.33	0.50
16	0.00	0.99	0.96	0.62	1.00	0.00	0.71	0.54	0.00	0.00	0.57	0.07	0.44	0.34	0.54	0.56
17	0.00	0.50	1.00	0.62	1.00	0.00	0.83	1.00	0.15	0.00	0.10	0.69	0.10	0.00	0.65	0.59
18	0.00	0.18	0.91	0.23	0.76	0.00	0.56	0.66	0.86	0.00	0.48	0.00	0.09	0.07	0.44	0.50
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	0.14
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	0.61	3.84	10.06	7.92	6.39	2.98	4.21	6.61	1.10	6.19	7.55	7.14	5.09	3.47	4.41	238.94

August 2022	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	21.45	27.4	1514	17.2	424	63.9	88.3	28	32.0	1650	13.7	9.7	10.9	1147	6.9	1828	1017.91	1019.4	954	1016.2	1817	0
2	21.55	26.5	1557	17.5	412	73.7	88.2	441	59.5	1557	0.0	11.6	13.0	1549	9.6	3	1014.99	1016.9	31	1013.4	1743	0
3	20.69	25.0	1318	17.4	59	77.7	90.5	103	64.3	1319	16.6	11.7	13.1	1315	9.0	2229	1013.47	1014.2	2345	1012.5	1540	0
4	19.18	24.4	1326	14.5	507	57.2	87.5	508	36.6	1614	10.0	7.7	9.4	955	5.6	2226	1015.78	1019.2	2358	1013.7	343	0
5	17.45	23.4	1525	12.3	2357	49.8	74.1	532	28.9	1623	6.2	5.8	6.7	852	4.8	1753	1023.22	1028.3	2357	1019.0	0	0
6	16.59	24.5	1652	7.8	438	54.5	89.8	507	26.6	1533	6.1	5.7	6.9	837	4.8	1409	1028.47	1030.1	815	1026.6	1725	0
7	18.55	27.5	1612	8.6	522	56.1	89.1	400	29.4	1630	8.3	6.7	8.0	806	6.0	1849	1025.87	1028.0	905	1023.2	1657	0
8	20.47	30.5	1536	10.8	453	59.2	89.2	428	30.5	1434	11.2	8.2	9.7	1258	7.0	247	1026.51	1028.7	2353	1024.8	1600	0
9	21.01	30.0	1449	11.7	454	60.4	95.1	528	28.3	1528	11.7	8.4	10.5	826	7.2	1635	1028.29	1030.1	715	1026.2	1753	0
10	21.89	31.9	1501	11.3	501	59.5	94.3	521	28.5	1442	12.2	8.7	11.3	916	7.5	1905	1025.00	1028.0	2	1022.0	1759	0
11	23.21	34.0	1451	12.4	512	54.5	93.8	515	22.2	1529	11.6	8.4	11.1	826	7.1	1529	1021.10	1023.7	43	1018.1	1720	0
12	23.88	34.5	1411	13.1	508	49.7	85.5	518	21.0	1333	10.8	8.0	10.6	820	6.8	1428	1017.61	1020.9	8	1015.0	1801	0
13	23.83	34.1	1523	14.0	437	49.3	84.5	524	21.0	1502	10.7	8.1	11.3	850	5.9	1812	1013.40	1016.3	0	1010.7	1620	0
14	24.14	33.9	1340	13.4	457	47.2	83.2	515	20.5	1159	10.4	7.9	10.5	919	6.4	1728	1006.26	1011.0	0	1003.0	1755	0
15	22.18	28.5	1401	15.5	500	57.9	81.4	2358	34.5	1340	12.9	9.3	11.1	828	7.8	1825	1003.11	1006.2	2331	1001.8	443	0.2
16	18.83	21.9	1755	15.4	2355	86.5	98.6	2359	71.3	1753	16.5	11.7	13.6	1330	10.5	2	1007.49	1010.2	2348	1005.2	246	5.5
17	18.23	24.4	1146	14.2	206	88.5	99.3	446	59.0	1147	16.2	11.4	13.0	1712	9.9	206	1012.17	1015.3	2335	1009.6	127	1.9
18	20.55	26.0	1350	17.2	358	73.7	92.3	547	45.6	1610	15.3	10.8	11.9	1105	9.1	1610	1013.99	1015.3	40	1012.4	1647	0
19	19.73	24.4	1429	14.1	2338	63.6	95.1	433	32.7	1303	11.7	8.7	12.5	318	5.9	1303	1015.04	1018.1	2304	1012.6	207	0.1
20	18.35	25.7	1536	11.4	425	67.2	93.0	428	36.0	1512	11.5	8.4	9.2	1016	7.2	1512	1017.14	1018.6	745	1015.4	1635	0
21	18.20	25.6	1425	12.9	359	69.7	95.1	412	37.2	1425	11.9	8.6	9.3	833	7.1	1511	1015.70	1016.7	556	1014.4	1702	0
22	17.25	22.1	1237	11.3	504	84.7	97.9	549	63.8	1240	14.5	10.3	12.3	1825	8.0	504	1013.63	1015.8	0	1012.0	1730	0.3
23	20.76	27.4	1552	17.1	102	81.4	97.0	112	53.0	1552	17.2	12.2	13.6	1222	10.8	758	1013.94	1016.0	2047	1012.3	139	0
24	22.44	29.5	1502	17.1	2348	69.9	91.7	2358	39.2	1451	16.1	11.3	12.6	805	9.8	1451	1016.08	1017.3	2335	1015.1	1556	0
25	16.95	20.2	1203	11.4	2356	91.1	98.8	2321	76.8	1717	15.4	10.9	12.3	1145	8.1	2356	1017.86	1020.1	2245	1015.4	346	20.8
26	16.49	24.1	1323	9.9	458	78.1	99.8	723	44.4	1328	12.0	8.6	10.1	1010	7.4	458	1019.23	1020.6	851	1017.5	1735	0.1
27	18.18	26.0	1543	12.1	500	73.0	98.1	514	36.4	1526	12.4	8.9	10.6	942	7.4	1526	1018.96	1021.2	2346	1017.8	1555	0
28	17.60	25.6	1344	10.7	518	72.3	98.7	547	41.2	1343	11.9	8.5	9.9	922	7.7	1829	1021.74	1023.1	2340	1020.8	1709	0
29	17.80	24.5	1302	13.2	2359	68.9	92.8	432	40.1	1257	11.5	8.3	9.8	855	7.3	1257	1022.72	1023.6	2326	1021.3	1655	0
30	17.71	26.0	1450	11.9	543	72.1	93.7	545	41.2	1448	12.2	8.7	9.7	1021	7.6	221	1023.15	1024.8	2359	1021.5	1545	0
31	17.42	25.3	1530	10.7	423	68.4	96.4	442	38.3	1528	11.0	8.0	9.5	904	6.8	1810	1023.49	1025.0	129	1021.5	1639	0
Total																						28.9
Mean	19.76	26.93		13.16		67.1	92.03		40.00		11.92	9.08	10.78		7.52		1017.85	1020.08		1015.84		
Max	24.14	34.48		17.54		91.1	99.80		76.80		17.23	12.17	13.65		10.81		1028.47	1030.12		1026.55		
Min	16.49	20.18		7.81		47.2	74.10		20.49		0.00	5.74	6.72		4.76		1003.11	1006.20		1001.81		

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 2022

Temperature (°C)		Rank in the past 141 years	
Mean maximum	25.3 (+3.0)	*Highest*	
Mean minimum	12.4 (+0.4)	10th highest	
Daily mean	18.9 (+1.7)	2nd highest	
Rainfall total (mm)	70.6 (46%)	8th lowest	
Sunshine total (hours)	714.7 (124%)		
N° of: Dry days	67 (+11)	Wet days	12 (-13)
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	1 (-2)
Air pressure MSL : Mean @09 GMT (mbar)	1018.6 (+2.4)		

Departure from 1991 to 2020 average shown in brackets.

Notes: **Very Warm, Very Dry, Very Sunny with Two Notable Heatwaves.**

Temperature: This remarkable summer has seen record heat, with national records for daily maximum temperature broken in many places. Here in Wokingham our hottest day, the 19th July, gave a reading of 38.8°, a full 1.9° above the previous highest temperature recorded in 2020 and 2003. In terms of monthly mean temperature, June was the coolest month with a mean of 16.3°, anomaly +0.5°, and August the hottest with 20.3°, anomaly +2.6°, but July was only slightly cooler with 19.9°, anomaly +2.0°. Overall there were 13 days when the maximum exceeded 30°, 1 in June, 5 in July and 7 in August.. Compared with previous hot summers, the tally for similar years since 1976 is 14 in 2018, 11 in 2006, 13 in 1995 and 15 in 1976. This summer's highest max of 38.8° is 8.5° above the median, the lowest max of 15.2° was on the 5th June, 0.7° above its median. The highest min of 20.2° was on the 13th July, 3.0° above the median and a new highest, 0.5° above the previous record. The lowest min of 4.9°, 0.5° above the median, was on the 2nd June. The mean daily temperature range of 12.9° is a new record high for the past 46 years. The mean grass min of 9.3° is 0.3° above average and the lowest value of 1.4° is 0.9° above average. Mean earth temperature at 30 cm depth was 18.9°, anomaly +0.7°, and at 1 m depth, 17.4°, anomaly +0.9°.

Rainfall: This has been a very dry summer with just under half the average rainfall, although in recent years both 2018 and 2013 had drier summers. Each of the summer months had well below average rainfall, with July the driest, 11.8 mm, 25%, then June, 28.5 mm, 56%, and August 30.3 mm, 56%. There were 11 more dry days than average and several dry spells, 8 days to 17th June, 17 days to 19th July, 20 days to 14th August and 6 days to 31st August. The 45 day period 2nd July to 15th August saw 1 day with 8.4 mm of rain and 3 with 0.2 mm, the other 41 days being dry. The 24th August was the season's wettest day with 21.1 mm. The duration of rain, 41.4 hours, is 46% of average. Rainfall rate was in the violent category twice, 97 mm/hr on the 25th June and 156 mm/hr on the 16th August. Thunder was heard on the 25th and 30th June and 16th August but there was no hail this summer. Estimated soil moisture deficit indicated that unirrigated shallow rooted plants would suffer severe stress continuously after mid June. An index of plant stress gave a value of 1083 this summer, median 621, and highest since 1995. Other summers with a stress index over 1000 in the past 47 years were 1976, 1989, 1990, 1995, 2003, 2018, 2020 and 2022.

Sunshine: This has been a very sunny summer, ranking in the top 10% sunniest in over 100 years, and in this millennium only 2018 has been sunnier. In terms of daily mean sun, June with 7.94 hours was sunniest, then August with 7.71 hours and July with 7.66 hours. The 21st June was the sunniest day with 15.5 hours. There were several outstandingly sunny periods, June 14th to 22nd, 7 days having over 75% of the maximum and 3 over 90%, July 8th to 18th, 9 days with over 75 % and 4 over 90%, and 5th to 13th August, 8 days had over 90% and 3 had 98% of the maximum. There were no exceptionally dull periods, but the 5th and 6th June together only managed 0.1 hours. Overall there were 18 days with <3 hours, 56 with =>6 hours and 26 with =>12 hours.

Wind: The mean speed of 5.6 mph is 0.6 mph below average and equal lowest since 2005. The windiest day was 24th July, mean 11.5 mph, but the season's highest gust of 35 mph was on the 8th June, a value equal lowest in the past 35 years. Daily mean direction/number of days: N,8 NE,17 E,5 SE,1 S,15 SW,28 W,9 NW,9. Compared with average, NE winds were 9.6% more frequent and S 2.6% more frequent, at the expense of SE, 2.7% down and SW and W combined, 9.4% down.

Humidity: The overall mean relative humidity was 67.0% and the lowest was 17% on the 19th July. The mean amount of water vapour per kg of air was 8.9g at 0900 GMT and 8.2g at 1500 GMT.

Pressure: The season's highest was 1033.5 mbar on 8th July and the lowest was 1001.8 mbar on the 15th August, a span of 31.7 mbar, anomaly -3.6 mbar.

June: Warm, sunny and quite dry. Mean max 11th highest in 141 years, but mean min 51st highest. Daily mean temperature range highest since 2010.

July: Very hot, very dry and sunny. Record breaking heat near mid-month. New all time record temperature of 38.8° on 19th, 1.9° above the previous highest. Mean max ranks 5th highest and daily mean 4th highest in 141 years. The lowest max is 2nd highest in 110 years. The highest min, 20.2°, a new all time record. Driest since 1994. All but 0.4 mm fell in just 2 days. Rainfall duration lowest since before 1993.

August: Dry and very sunny. Very warm with a heatwave in the first half of the month. Mean max equal highest and daily mean temperature highest in the past 141 years, 0.3° above the previous highest in 1997. Highest max 5th highest in 119 years. Lowest max 2nd highest in 110 years. Highest min 6th highest in 110 years. Most dry days since 2003. Rain duration lowest since 1995. Sunniest since 1998. Mean relative humidity lowest in past 25 years.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom	Sun hrs	Anom	Mean Wind mph	Max gust	Mean pressure	Anom
Jun	22.4°	+1.4°	10.2°	-0.5°	28.5	56%	238.2	122%	6.2	35	1015.9	-0.9
Jul	26.4°	+3.2°	13.4°	+0.6°	11.8	25%	237.4	119%	5.8	33	1021.4	+5.5
Aug	26.9°	+4.1°	13.6°	+1.0°	30.3	56%	239.1	133%	5.0	25	1018.5	+2.7

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 or sand or other similar phenomena, or more often because of the presence of a continuous layer of lower clouds.

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

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

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

00 to 50 = Height in hundreds of feet

51 to 55 Not used

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

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