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   MAY 2023

Temperature (°C)

		Anomaly	Rank in the past **142** years			
Mean maximum	19.1	+1.0	20th highest			
Mean minimum	7.6	-0.1	36th highest			
Daily mean	13.3	+0.4	22nd highest			
Highest maximum	23.4	on 28th	Lowest maximum	13.9	on	6th
Highest minimum	11.7	on 5th	Lowest minimum	2.8	on	3rd
Mean grass minimum	4.7	+0.2	Lowest grass minimum	-0.8	on	3rd
Mean earth @30 cm	14.3	+0.5	Earth @100 cm	12.8	+0.7	
Frost duration (hrs)	0.0		Rain duration (hrs)	23.9		
Rainfall total (mm)	40.8	91 %	62nd lowest			

Highest daily fall 12.5 on 9th Highest rate mm/hr 78 on 1st

Number of: Dry days (<0.2mm) 23 Wet days (>0.9mm) 7 days ≥5mm 3

Sunshine total (hrs) 229.4 Daily mean 7.40 118 % Sunniest day 15.1 on 24th

N° days with: Air frost 0 Ground frost 2 Snow falling 0 Snow lying 0

Thunder 2 Hail ≥5mm 0 Small hail/ice 1 Fog @09 0 Nil sun 1

Pressure MSL : Mean @09 GMT, mbar 1023.2 +6.7 Highest 1032.6 on 26th Lowest 1008.4 on 9th

Relative humidity : Mean (%) 75.5 Lowest 32 on 28th Water vapour (g/kg), mean at 09 and 15 GMT 7.0, 7.1

Overall mean wind speed (mph) 6.0 Windiest day 9.8 on 30th Max gust 30 on 4th

Wind direction (days) N 7 NE 12 E 0 SE 1 S 2 SW 0 W 5 NW 4

Least windy day (mph) 2.5 on 11th Calm; less than 0.5 mph (minutes) n/a

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

Notes: **Rainfall Below Average, both Mean Temperature and Sunshine Above Average.**

Temperature: The mean of 13.3° puts it in the mild category, and about 1.2° above the long-term median, although it is only 0.4° above the current 30 year average. In the past 10 years, 5 have been milder than this May, but in the previous 20 years, only 4 were milder. This May, the highest max is 2.0° below the median, while the lowest max is 2.8° above its median. The highest min is 0.8° below the median while the lowest min is 2.3° above its median. The mean grass min is 0.5° above the average for the past 44 years, and the lowest is equal highest with 2007 and 2000. Earth temperature at both 30cm and 1m are around 0.5° above average. Anomalies for daily max were over +4° on the 4th, 7th and 28th, and exceeded -2° on the 6th, 12th and 13th, with extreme values of +4.9° on 28th and -2.7° on 12th. Anomalies for daily min were over +4° on the 5th to 7th and 9th, and exceeded -2° on 3rd, 17th, 20th, 21st, 23rd and 28th, with extreme values of +6.2° on 5th and -3.7° on 27th. **Rainfall:** The wet conditions of March and April extended into early May with a marked change to a very dry regime after mid-month. The total this month is 9% below average, but there have been 8 drier Mays in this millennium, including the driest on record, 3.4 mm in 2020. Notably, nearly all of this month's rain fell before the 10th, and the 2 day total on 8th/9th accounted for over half the month's total. After the 10th, of the remaining 21 days, 20 were dry, and a 17 day dry spell was unbroken on the 31st. Ice pellets fell on the 1st, and there was violent rain on the 1st and 9th. Thunder also occurred on the 9th and on the 10th as well. Rainfall accumulation compared with normal was close to normal until the 7th, but by the 9th was in surplus by 22 mm, decreasing to 18 mm by the 14th, then with no further rain was slightly in deficit by the 31st. **Sunshine:** This has been quite a sunny May overall, with 2018 and 2020 the only examples of a sunnier May in this millennium. The best of this month's sunshine came in the second half, with 5 days up to the 14th having <4% of the maximum and only 1 day with >40%, compared with 14 thereafter. The period 23rd to 29th was outstanding, those 7 days producing 93.7 hours of sun, an average of 13.4 hours per day, and there was over 90% of the maximum on the 24th, 26th and 27th. Overall there were 6 days with <3 hours, 18 with =>6 hours and 6 with =>12 hours. Daily accumulation compared with normal was close to normal until the 7th, but was in deficit by 30 hours on the 13th, the deficit slowly decreasing to zero by the 24th, becoming a surplus of 40 hours by the 29th. **Wind:** The mean speed is 0.6 mph below average. The windiest day was 2.3 mph below average and the highest gust 9 mph below average. Daily mean winds were light or moderate throughout, with directions between E and S on the 4th and 6th, between S and W on 5th and 7th to 11th, between W and N on 1st, 14th to 17th, 22nd and 24th, otherwise from between N and E. Note: Due to instrument failure, some wind data is being estimated using data from nearby sites. **Pressure:** Both the mean and absolute lowest are highest for May since 1991.

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

From the 1st to the 10th				From the 11th to the 20th				From the 21st to the 31st			
+1.7°	+2.3°	212%	68%	+1.0°	+0.3°	28%	98%	+2.6°	-1.4°	0 %	171%

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

Wokingham climatological graphs for May 2023

MAY 2023 — MAX / MIN
AIR TEMPERATURE
TEMPERATURE (DEG C)
DATE

TEMP ANOMALY
ANOMALY (DEG C)
■ MAX □ MIN
DATE

RAINFALL ACCUMULATION
– NORMAL — DAILY
RAINFALL (MM)
DATE

SUNSHINE ACCUMULATION
– NORMAL — DAILY
SUNSHINE (HOURS)
DATE

PRESSURE
PRESSURE (mbar)
DATE

WIND DIRECTION
— HOURS
N S E W
80 40

HOURLY WIND SPEED
SPEED (KNOTS)
DATE

DAILY MEAN WIND
SPD ● DIR
SPEED (MPH)
DIRECTION
N W S E N
DATE
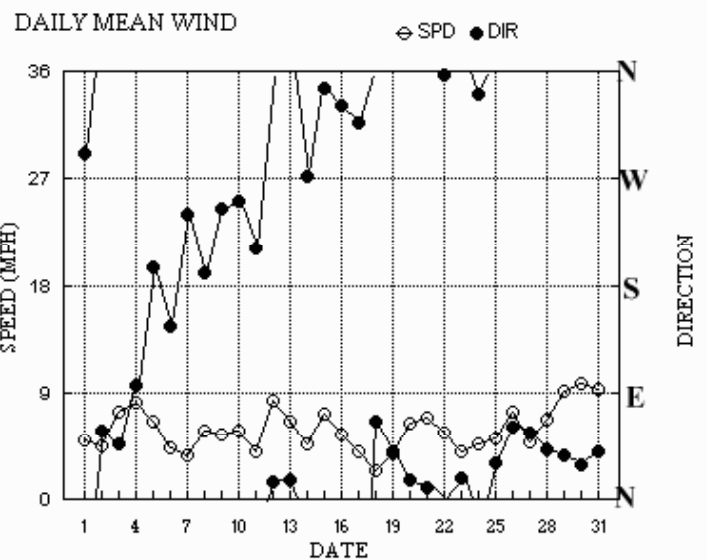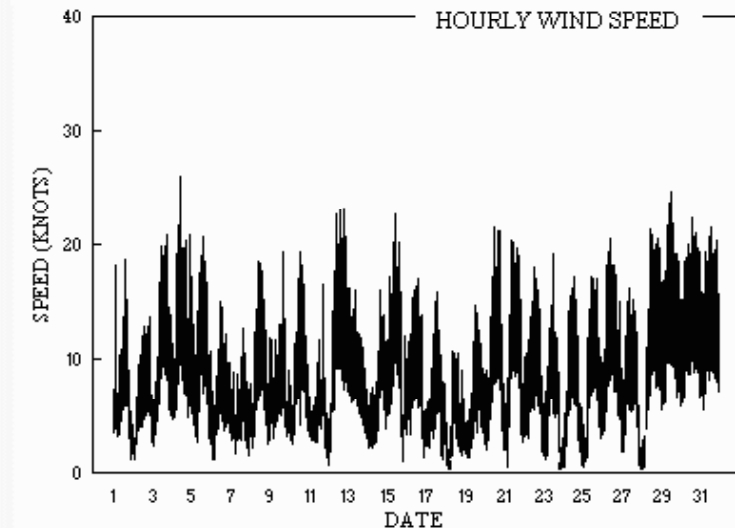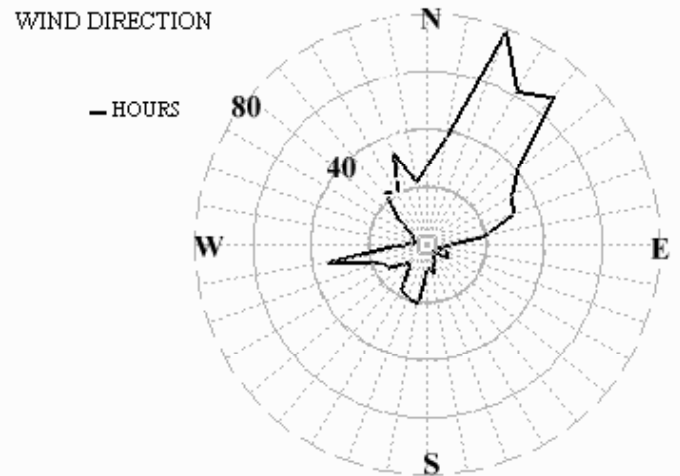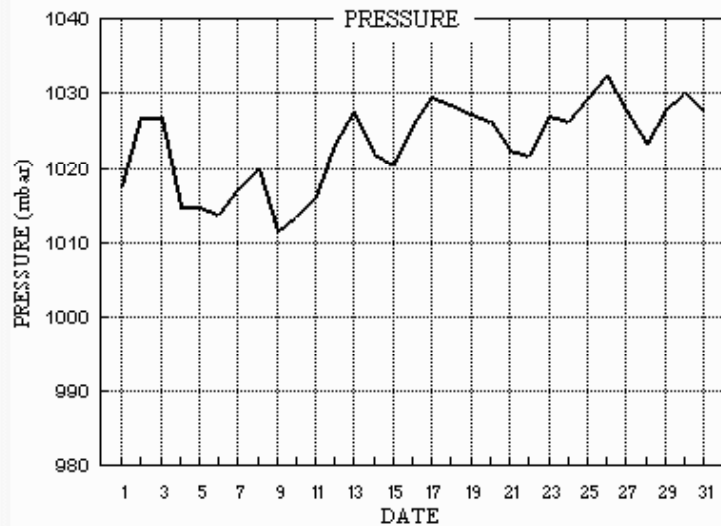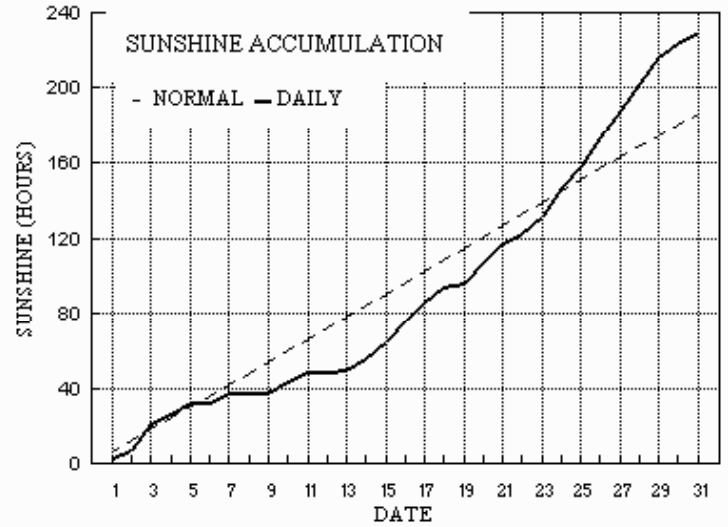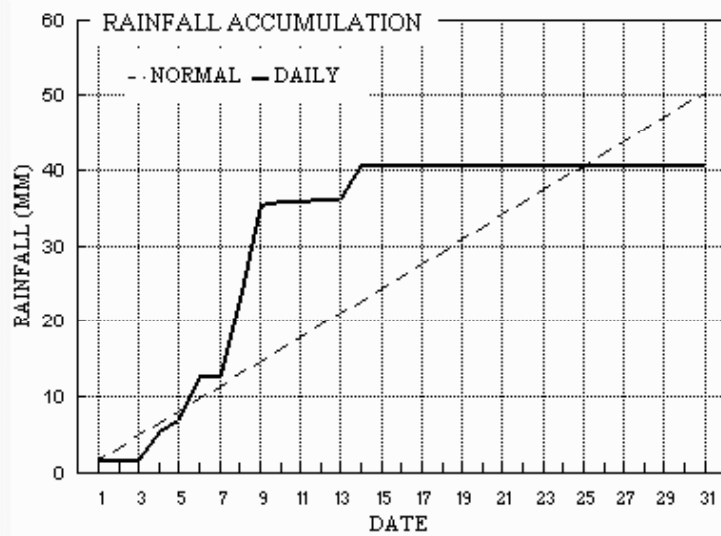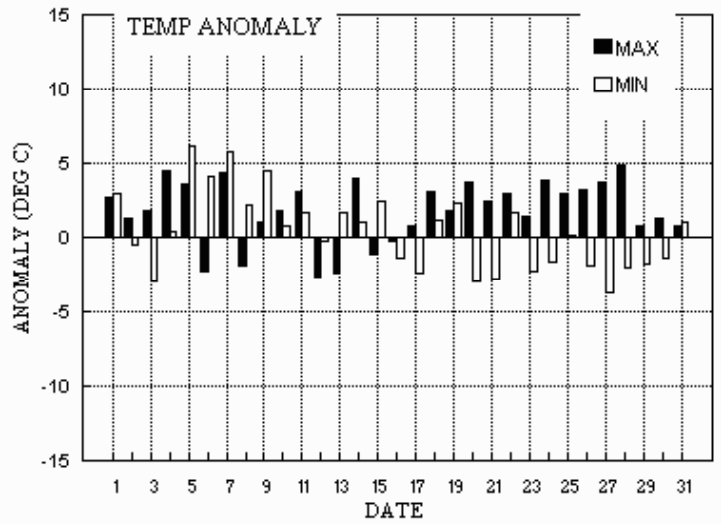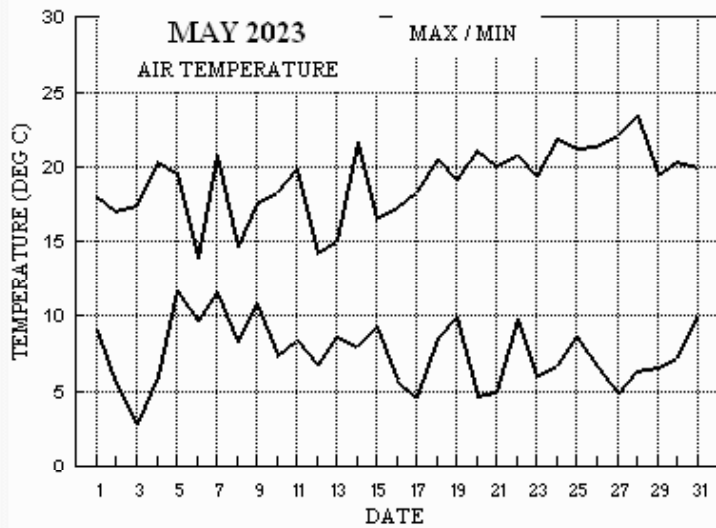
Daily meteorological data.　　　　　Emmbrook, WOKINGHAM, Berkshire.

Month: MAY 2023

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af	Gf	Sf	Sl	Th	Ha	Ic	Fg	Vec mean ddd	ff	sp	Max gust ddd	gg	HHhh	High hr ddd	ff	Rain HH	hrs
1	18.1	9.0	1.8	5.6	12.3	11.0	3.7	0.0	1017.5	0	0	0	0	0	0	1	0	291	3.3	4.3	307	19	1318	314	8	13	0.6
2	17.0	5.4	0.0	1.5	12.4	11.1	3.7	0.0	1026.7	0	0	0	0	0	0	0	0	58	3.5	3.9	65	14	2101	80	6	19	0.0
3	17.4	2.8	0.0	-0.8	12.3	11.3	13.9	0.0	1026.9	0	1	0	0	0	0	0	0	47	6.0	6.4	77	21	1712	39	10	12	0.0
4	20.3	5.9	3.6	1.9	12.5	11.4	5.2	0.0	1014.8	0	0	0	0	0	0	0	0	97	3.6	7.1	60	26	1005	60	11	10	1.4
5	19.6	11.7	1.5	10.3	13.0	11.5	6.0	0.0	1014.7	0	0	0	0	0	0	0	0	195	5.6	5.8	190	21	1330	195	9	13	2.0
6	13.9	9.7	5.8	8.1	13.5	11.6	0.0	0.0	1013.9	0	0	0	0	0	0	0	0	146	3.2	3.8	110	15	1050	115	6	10	5.2
7	20.7	11.6	0.1	11.8	13.4	11.8	5.1	0.0	1017.0	0	0	0	0	0	0	0	0	240	3.0	3.3	240	13	1655	240	6	16	0.3
8	14.6	8.3	10.2	4.9	13.7	12.0	0.3	0.0	1019.9	0	0	0	0	0	0	0	0	190	5.0	5.1	190	19	1050	185	8	14	5.9
9	17.5	10.8	12.5	8.9	13.6	12.1	0.2	0.0	1011.5	0	0	0	0	1	0	0	0	245	4.1	4.8	259	19	1758	226	8	17	3.7
10	18.3	7.4	0.6	3.9	13.7	12.2	6.1	0.0	1013.6	0	0	0	0	1	0	0	0	251	4.9	5.1	262	19	1207	258	8	18	0.7
11	19.8	8.4	tr	4.6	13.9	12.3	4.7	0.0	1016.1	0	0	0	0	0	0	0	0	211	1.1	3.5	156	17	1626	128	9	16	0.1
12	14.3	6.7	0.1	2.4	14.0	12.5	0.3	0.0	1023.1	0	0	0	0	0	0	0	0	15	7.2	7.3	18	23	1909	16	11	15	1.0
13	15.0	8.6	0.0	9.2	13.9	12.6	0.4	0.0	1027.5	0	0	0	0	0	0	0	0	17	5.7	5.7	21	16	0005	18	8	03	0.0
14	21.6	8.0	4.5	9.2	13.9	12.7	6.1	0.0	1021.9	0	0	0	0	0	0	0	0	271	2.9	4.1	263	16	1545	251	7	17	2.8
15	16.5	9.3	0.1	9.1	14.6	12.7	9.8	0.0	1020.5	0	0	0	0	0	0	0	0	345	6.1	6.2	5	23	1009	355	10	10	0.2
16	17.3	5.7	0.0	1.7	14.4	12.9	10.5	0.0	1025.7	0	0	0	0	0	0	0	0	331	4.8	4.8	340	17	1333	337	7	08	0.0
17	18.3	4.6	0.0	1.3	14.3	13.0	10.6	0.0	1029.5	0	0	0	0	0	0	0	0	317	2.8	3.6	310	16	1312	300	6	15	0.0
18	20.5	8.5	0.0	6.1	14.4	13.1	7.3	0.0	1028.7	0	0	0	0	0	0	0	0	66	1.5	2.2	40	11	0959	80	4	10	0.0
19	19.1	9.9	tr	8.4	14.9	13.2	1.9	0.0	1027.4	0	0	0	0	0	0	0	0	40	3.0	3.4	320	15	1354	60	6	12	0.0
20	21.1	4.7	0.0	-0.1	14.8	13.3	11.4	0.0	1026.4	0	1	0	0	0	0	0	0	17	5.6	5.6	10	22	1212	15	9	16	0.0
21	20.1	5.0	0.0	1.1	14.8	13.4	10.5	0.0	1022.5	0	0	0	0	0	0	0	0	11	5.8	6.0	40	20	0932	25	10	11	0.0
22	20.7	9.8	0.0	5.0	14.9	13.5	5.1	0.0	1021.7	0	0	0	0	0	0	0	0	356	4.5	4.9	345	18	1208	15	7	16	0.0
23	19.3	6.0	0.0	2.2	14.7	13.6	9.3	0.0	1027.1	0	0	0	0	0	0	0	0	19	3.2	3.5	20	19	1208	40	7	09	0.0
24	21.9	6.7	0.0	2.6	14.8	13.6	15.1	0.0	1026.4	0	0	0	0	0	0	0	0	341	3.7	4.0	350	17	1437	325	7	11	0.0
25	21.2	8.6	0.0	4.8	15.2	13.7	11.1	0.0	1029.4	0	0	0	0	0	0	0	0	31	4.3	4.5	20	17	1113	40	8	14	0.0
26	21.4	6.6	0.0	2.9	15.6	13.8	15.0	0.0	1032.4	0	0	0	0	0	0	0	0	62	6.3	6.4	72	21	1117	65	9	10	0.0
27	22.1	4.8	0.0	0.7	15.8	14.0	15.0	0.0	1027.7	0	0	0	0	0	0	0	0	56	4.1	4.2	25	16	1040	52	7	14	0.0
28	23.4	6.4	0.0	2.5	16.1	14.2	14.0	0.0	1023.3	0	0	0	0	0	0	0	0	42	5.6	5.9	50	22	1135	40	9	17	0.0
29	19.5	6.6	0.0	3.5	16.3	14.3	14.2	0.0	1027.8	0	0	0	0	0	0	0	0	37	7.9	8.0	35	25	1200	40	10	07	0.0
30	20.4	7.2	0.0	3.9	16.4	14.5	7.1	0.0	1030.1	0	0	0	0	0	0	0	0	29	8.5	8.5	30	22	1420	30	10	14	0.0
31	20.0	10.0	0.0	9.3	16.7	14.7	5.8	0.0	1027.6	0	0	0	0	0	0	0	0	40	8.1	8.1	40	22	1500	35	10	21	0.0
Total			40.8				229.4	0.0																			23.9
Mean	19.1	7.6		4.7	14.3	12.8	7.40	0.0	1023.2									20	2.4	5							
Anom	+1.0	-0.1	91%	+0.2	+0.5	+0.7	118%		+6.7																		

Daily mean　　　13.3　　　　Pressure, abs highest =　　1032.6 on 26
Anom　　　　　+0.4　　　　Pressure, abs lowest =　　1008.4 on 9
Number of days with:
Air frost = 0　　　　　Ground frost = 2　　　　Nil sun = 1
Snow falling = 0　　　　Snow lying = 0　　　　Thunder = 2
Hail=>5mm = 0　　　　Hail<5mm or ice = 1　　　Fog at 09GMT = 0
Abbreviations.
Max/min = highest and lowest air temperature at 1.2m in 24 hour period ending at 09 GMT
Rain = total rainfall and melted snowfall in 24 hour period ending at 09 GMT, millimetres. (Tr = trace, <.05mm).
Grass min = Lowest overnight temperature at grass tip level.
Sun = hours of bright sunshine, measured electronically. Frost = Number of hours with air temp below 0 deg C.
pp09 = Air pressure corrected to mean sea level at 0900 GMT, millibars.
Af = Air frost. Gf = Ground frost. Sf = Snow falling. Sl = Snow lying at 09 GMT.
Th = Thunder. Ha = Hail =>5mm. Ic = Hail <5mm or ice. Fg = Fog at 09 GMT.
Vec mean = 24 hour mean wind vector, ddd = direction in degrees from true north, ff = speed in knots.
Sp = 24 hour mean wind speed in knots.　　Note: Instrument failure, some winds estimated.
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 MAY 2023

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	Cl	NChshs	NChshs	NChshs	Date	Remarks
1	62	7	28	05	11	13.0	9.8	81	7.5	1017.5	1	004	80	8	2	6	5	4	8	/		86613	87357		1	Ac cas
2	65	8	05	04	11	10.9	9.0	88	7.0	1026.7	3	013	02	2	2	8	5	3	/	/		87709	88615		2	
3	70	6	05	08	16	12.5	6.3	66	5.8	1026.9	8	009	03	2	2	1	1	5	0	1		81822	86081		3	COTRA Cu hum Ci fib
4	58	6	06	09	20	14.1	8.7	70	7.0	1014.8	7	017	05	2	2	5	0	9	3	2		85366	84072		4	Wind est. COTRA
5	59	7	20	05	10	13.4	12.0	91	8.7	1014.7	2	010	61	6	2	7	5	4	7	/		85710	84620	87360	5	Wind est
6	50	8	12	05	09	12.8	12.0	95	8.7	1013.9	0	001	63	6	2	7	7	3	2	/		87706	88540		6	Wind est
7	65	8	26	03	06	13.5	11.4	87	8.3	1017.0	2	014.	01	2	2	8	5	3	/	/		86709	88615		7	Wind est
8	56	8	19	06	13	12.5	10.9	90	8.0	1019.9	7	004	60	6	2	4	5	3	2	/		82708	83615	88556	8	Wind est
9	70	7	26	04	09	13.9	11.9	88	8.7	1011.5	7	005	03	2	2	7	8	4	7	/		84812	86620		9	/Ac58 Cu med
10	65	5	25	07	12	13.5	10.3	81	7.8	1013.6	1	007	03	2	2	5	1	4	0	1		85815			10	1Ci75 Cu fra/hum
11	70	6	27	03	06	13.9	8.7	71	7.0	1016.1	1	004	03	2	2	5	8	5	0	1		82825	83656		11	3Ci78 COTRA Cu med
12	75	7	01	10	18	12.3	8.8	79	6.9	1023.1	3	007	01	2	2	5	5	4	3	1		85615	84365		12	/Ci75
13	63	8	02	08	16	10.2	7.8	85	6.5	1027.5	1	006	02	2	2	8	6	3	/	/		88708			13	
14	56	6	03	03	07	11.1	8.0	81	6.6	1021.9	7	008	05	2	2	4	6	3	0	1		84709	85080		14	COTRA
15	84	6	35	10	20	11.7	4.7	62	5.2	1020.5	1	008	02	2	2	1	1	6	0	8		81830	84272		15	2Ci75 COTRA Halo 22°
16	86	1	33	09	21	13.1	6.0	62	5.7	1025.7	0	003	03	0	0	1	2	5	0	1		81828			16	1Ci78 Cu med
17	78	7	33	03	08	14.6	8.3	66	6.7	1029.5	0	003	03	1	1	1	5	0	8			81825	83270		17	4Ci80 COTRA Cu hum U/a cont Wind est
18	72	6	04	02	07	15.9	9.3	65	7.2	1028.7	4	000	03	2	2	1	2	5	0	1		81825	86078		18	1Cc70 COTRA Cu med Wind est
19	64	7	36	03	06	14.4	8.1	66	6.6	1027.4	0	002	02	2	2	7	0	9	7	/		84361	87363		19	Wind est
20	63	1	01	08	15	14.7	8.9	68	7.0	1026.4	8	010	02	0	0	1	8	5	0	0		81822			20	1Sc45 Cu hum
21	82	2	02	09	16	16.4	8.1	58	6.6	1022.5	7	004	03	0	0	1	1	6	0	1		81833			21	1Ci78 1Ci81 COTRA Cu hum Wind est
22	78	7	33	07	13	14.7	7.3	61	6.3	1021.7	1	011	03	2	2	7	5	6	/	/		85630	87656		22	Wind est
23	82	7	04	06	12	13.8	7.3	65	6.3	1027.1	4	000	03	2	2	7	0	9	1	1		87466			23	/Ci72 Cld edge N Wind est
24	72	5	34	06	12	16.1	9.1	63	7.0	1026.4	8	003	03	1	1	3	5	5	3	1		83625	83081		24	1Ac60 COTRA Wind est.
25	81	2	02	05	14	17.3	9.7	61	7.3	1029.4	0	004	03	1	1	2	1	5	0	0		82827			25	Cu hum Wind est
26	65	0	06	08	16	14.6	7.4	62	6.3	1032.4	0	001	02	1	1	0	0	9	0	0					26	Wind est.
27	70	2	05	06	15	14.8	8.1	64	6.6	1027.7	7	015	01	1	1	2	5	5	0	0		82620			27	Absent vv cld wind est
28	81	0	06	06	14	17.8	8.4	54	6.7	1023.3	0	000	02	0	0	0	0	9	0	0					28	Absent vv cld wind est
29	84	5	05	10	22	15.6	6.6	55	6.0	1027.8	1	002	02	1	1	3	5	6	0	1		83633	83080		29	COTRA Wind est
30	80	5	05	09	18	14.9	8.2	64	6.6	1030.1	8	001	01	2	2	5	5	5	0	1		85622			30	1Ci81 COTRA Wind est
31	86	8	04	09	17	12.6	9.1	79	7.0	1027.6	7	005	02	2	2	8	5	4	/	/		86615	88620		31	Wind est

Mean vis = 24.2 km

Mean cloud = 5.4 68%

Mean wind speed = 6.3 kn

Mean gust = 13 kn

Mean TT = 13.9 °C

Mean TdTd = 8.7 °C

Mean RH = 71.9 %

Mean r = 7.0 g/kg

Mean PPP = 1023.2 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Weather observations. Emmbrook, Wokingham, Berkshire.
Observations at 1500 GMT for MAY 2023

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cm	Ch	NChshs	NChshs	NChshs	Date	Remarks
1	88	7	32	07	16	15.7	8.7	63	6.9	1018.5	1	007	01	8	2	3	8	6	6	/	81830	83650	86357	1	Cu med
2	72	5	08	05	10	15.0	9.1	68	7.1	1027.0	7	006	01	2	2	5	8	5	0	1	83827	83650		2	/Ci75 Cu med
3	70	7	03	08	19	17.1	6.6	50	6.0	1023.2	7	021	02	1	1	0	0	9	0	1	81075	87081		3	COTRA Ci fib Ci unc
4	68	7	14	09	19	18.8	9.8	56	7.5	1011.6	6	007	03	6	2	3	5	6	8	/	81635	83656	87359	4	Ac cas Wind est
5	70	6	20	11	18	18.9	10.2	57	7.7	1012.9	7	008	15	8	2	3	2	5	6	2	83828	85072		5	1Ac57 1Ac62 Cu con jpNW Wind est
6	58	8	16	05	12	13.4	12.6	95	9.1	1012.4	8	007	51	6	5	8	5	2	/	/	85704	87706	88620	6	Wind est
7	82	5	27	05	09	19.9	10.6	55	7.9	1018.3	4	000	02	1	1	2	8	6	0	1	82832	84075		7	1Sc40 COTRA Cu med Wind est
8	82	8	19	07	16	13.5	11.4	87	8.3	1018.0	7	014	20	5	2	8	5	3	/	/	85708	88612		8	Absent. vv&cld est Wind est
9	60	7	20	08	15	16.0	12.9	82	9.3	1009.4	6	009	95	9	2	7	9	4	/	/	81709	87915		9	
10	62	7	26	04	17	16.1	10.2	68	7.7	1012.6	8	006	25	9	5	9	6	6	3	8	82925	82835	83656	10	2Ac62 2Ci75 jp all quads VV60k ex p Cb cap Cu con
11	75	3	26	03	08	18.2	5.1	42	5.4	1015.0	8	008	15	1	1	2	9	6	6	1	81935	82845		11	1Ac58 2Ci75 Cu con jpSE vv60k ex p
12	81	8	01	11	20	12.9	9.3	79	7.2	1023.2	3	002	02	6	2	8	5	4	/	/	88619			12	
13	62	7	02	04	11	14.3	9.7	74	7.4	1025.9	7	013	01	2	2	7	5	4	/	/	87615			13	
14	75	7	22	06	11	20.6	10.7	53	7.9	1018.2	7	021	03	2	2	3	2	6	3	8	83832	87272		14	2Ac68 Cu med
15	86	5	36	07	20	15.5	3.0	43	4.7	1021.0	1	003	02	1	1	2	2	7	6	0	82850	84357		15	Cu med
16	80	7	34	11	22	15.8	6.5	54	5.9	1025.1	5	003	03	1	1	7	8	6	/	/	83840	86650		16	Cu hum
17	82	6	34	06	12	17.7	7.2	50	6.2	1028.2	7	005	01	2	2	3	8	6	0	1	82840	86080		17	2Sc56 COTRA Cu med Ci fib Wind est
18	83	7	36	03	10	18.4	7.5	49	6.3	1027.0	7	012	02	2	2	5	8	6	7	1	83845	83656		18	4Ac62 /Ci75 COTRA Cu med Wind est
19	80	7	34	03	14	15.3	10.1	71	7.5	1026.4	8	002	21	6	2	6	8	6	7	/	81835	86650	87358	19	Cu hum Wind est
20	80	3	01	08	20	18.4	7.5	49	6.4	1023.4	7	014	02	1	1	3	8	7	0	1	82850			20	1Sc56 1Ci80 Cu med
21	82	5	02	09	18	19.1	8.1	49	6.7	1020.7	7	009	01	2	2	3	5	7	0	1	83650	85081		21	COTRA Wind est
22	82	6	01	08	16	18.7	8.7	52	6.9	1021.2	8	003	01	2	2	6	5	6	/	/	81645	86656		22	Wind est. El hz lyr.
23	81	7	02	05	12	18.3	7.4	49	6.3	1026.6	7	006	02	2	2	2	2	6	3	1	82838	87080		23	1Ac63 COTRA Cu med Wind est
24	78	1	36	07	17	21.3	8.9	45	7.0	1024.9	7	009	02	0	0	1	1	6	0	2	81845			24	1Ci75 Cu hum Ci unc/cas Wind est
25	78	3	04	07	15	20.2	10.3	53	7.6	1029.3	7	002	02	1	1	3	5	6	0	1	83640			25	1Ci75 Wind est
26	80	0	07	07	18	21.0	7.6	42	6.4	1030.0	8	011	02	0	0	0	0	9	0	0				26	Absent vv cld wind est
27	82	0	04	05	15	21.5	7.7	41	6.4	1023.6	7	017	02	0	0	0	0	9	0	0				27	Absent vv cld wind est
28	84	3	04	09	20	22.9	9.0	41	7.0	1022.3	6	004	02	0	0	3	5	7	0	0	83656			28	Absent vv cld wind est
29	83	7	04	10	22	18.6	8.0	50	6.5	1027.2	7	002	02	2	2	1	4	6	0	1	81640	87080		29	COTRA Ci fib Wind est
30	78	5	04	10	22	18.6	10.2	58	7.6	1028.4	8	004	03	1	1	5	5	6	0	0	85631			30	Wind est
31	81	4	04	09	19	19.0	11.8	63	8.5	1025.5	6	011	02	1	1	4	5	5	0	1	84627			31	1Ci80 Wind est

Mean vis = 32.0 km
Mean cloud = 5.4 68%
Mean wind speed = 7.0 kn
Mean gust = 16 kn
Mean TT = 17.8 °C
Mean TdTd = 8.9 °C
Mean RH = 57.7 %
Mean r = 7.1 g/kg
Mean PPP = 1021.8 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

2023

Hour	01-May	02-May	03-May	04-May	05-May	06-May	07-May	08-May	09-May	10-May	11-May	12-May	13-May	14-May	15-May	16-May
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	0.33	0.00	0.00	0.00	0.00	0.25	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.49
5	0.00	0.00	1.00	0.19	0.00	0.00	0.00	0.05	0.00	0.87	0.25	0.00	0.00	0.00	0.26	1.00
6	0.04	0.00	1.00	0.65	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.93	1.00
7	0.01	0.00	1.00	0.78	0.11	0.00	0.00	0.00	0.00	0.24	0.29	0.02	0.00	0.00	0.97	1.00
8	0.00	0.00	1.00	0.86	0.00	0.00	0.00	0.00	0.00	0.65	0.65	0.05	0.00	0.26	0.99	1.00
9	0.08	0.00	1.00	0.59	0.35	0.00	0.00	0.00	0.00	0.88	0.08	0.09	0.00	1.00	1.00	0.90
10	0.37	0.00	0.92	1.00	0.65	0.00	0.00	0.00	0.00	0.41	0.47	0.14	0.00	1.00	1.00	0.84
11	0.00	0.00	0.92	0.06	0.52	0.00	0.09	0.00	0.00	0.43	0.08	0.00	0.00	1.00	0.77	0.82
12	0.25	0.02	1.00	0.09	0.42	0.00	0.13	0.00	0.01	0.00	0.33	0.00	0.02	1.00	0.59	0.86
13	0.02	0.32	1.00	0.07	0.40	0.00	0.38	0.00	0.00	0.14	0.31	0.00	0.03	0.32	0.46	0.46
14	0.00	0.36	1.00	0.08	0.67	0.00	0.76	0.00	0.00	0.12	0.90	0.00	0.11	0.07	0.38	0.19
15	0.30	0.73	1.00	0.00	0.64	0.00	0.70	0.00	0.00	0.15	0.77	0.00	0.19	0.72	0.26	0.00
16	0.95	1.00	1.00	0.59	0.53	0.00	0.96	0.00	0.15	0.40	0.01	0.00	0.07	0.60	0.44	0.16
17	0.97	1.00	1.00	0.23	0.67	0.00	1.00	0.00	0.00	0.74	0.43	0.00	0.00	0.09	0.59	0.36
18	0.70	0.30	0.73	0.02	0.82	0.00	0.95	0.00	0.00	0.72	0.11	0.00	0.00	0.00	0.47	0.98
19	0.00	0.00	0.00	0.00	0.21	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.39
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	**3.70**	**3.73**	**13.89**	**5.20**	**5.99**	**0.00**	**5.09**	**0.31**	**0.17**	**6.11**	**4.69**	**0.29**	**0.41**	**6.05**	**9.78**	**10.45**

Hour	17-May	18-May	19-May	20-May	21-May	22-May	23-May	24-May	25-May	26-May	27-May	28-May	29-May	30-May	31-May	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	0.49	0.35	0.00	0.20	0.54	0.00	0.46	0.50	0.00	0.34	0.28	0.47	0.17	0.00	0.00	0.16
5	1.00	1.00	0.00	0.78	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.94	0.00	0.02	0.43
6	1.00	0.86	0.00	1.00	1.00	0.51	0.98	1.00	0.20	0.84	1.00	1.00	0.88	0.00	0.04	0.46
7	1.00	1.00	0.79	1.00	1.00	0.19	0.87	1.00	1.00	0.98	0.79	1.00	0.72	0.00	0.10	0.51
8	1.00	1.00	0.13	1.00	1.00	0.00	0.28	0.99	0.90	1.00	1.00	1.00	0.85	0.93	0.00	0.53
9	0.85	0.92	0.00	1.00	0.98	0.00	0.65	1.00	0.95	1.00	1.00	1.00	0.86	1.00	0.00	0.55
10	0.48	0.00	0.05	0.97	0.68	0.00	0.31	0.96	0.99	1.00	1.00	1.00	0.99	1.00	0.12	0.53
11	0.68	0.11	0.16	0.61	0.00	0.00	0.42	0.99	0.91	1.00	1.00	1.00	1.00	1.00	0.14	0.44
12	0.11	1.00	0.07	0.63	0.16	0.00	0.35	1.00	0.99	1.00	1.00	1.00	1.00	0.96	0.39	0.46
13	0.05	0.78	0.01	0.47	0.13	0.00	0.00	1.00	0.79	1.00	1.00	1.00	1.00	0.87	0.66	0.41
14	0.21	0.09	0.00	0.56	0.08	0.00	0.18	1.00	0.71	1.00	1.00	0.90	1.00	0.84	0.81	0.42
15	1.00	0.06	0.00	0.69	0.87	0.80	0.51	1.00	0.70	1.00	1.00	0.51	1.00	0.48	0.68	0.51
16	1.00	0.16	0.06	0.61	1.00	1.00	0.62	0.96	0.64	1.00	1.00	0.78	1.00	0.00	0.87	0.57
17	1.00	0.00	0.25	0.89	1.00	1.00	1.00	1.00	0.89	1.00	1.00	1.00	1.00	0.00	0.87	0.61
18	0.71	0.00	0.03	0.48	0.39	1.00	1.00	1.00	1.00	1.00	1.00	0.86	1.00	0.00	0.99	0.52
19	0.00	0.00	0.33	0.51	0.71	0.54	0.68	0.70	0.43	0.83	0.87	0.50	0.81	0.00	0.11	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	**10.56**	**7.34**	**1.89**	**11.39**	**10.52**	**5.05**	**9.30**	**15.12**	**11.09**	**14.98**	**14.95**	**14.01**	**14.23**	**7.10**	**5.79**	**229.23**

MAY 2023		T mn	Tx	Time	Tn	Time	RHmn	RH x	Time	RH n	Time	Tdmn	r mn	r x	Time	r n	Time	p mn	p x	Time	p n	Time	R tot
	1	12.55	18.1	1705	7.3	2357	78.4	95.7	2343	52.3	1708	8.6	6.9	8.7	1239	6.0	2357	1018.58	1023.2	2359	1016.5	427	1.6
	2	10.54	17.0	1508	5.4	245	83.0	98.4	332	59.9	1506	7.6	6.4	7.7	1332	5.1	2350	1026.33	1028.6	2322	1022.9	15	0
	3	10.04	17.4	1447	2.8	433	74.2	97.8	526	45.7	1623	5.2	5.4	6.9	1133	4.4	1748	1025.07	1028.7	40	1020.8	2359	0
	4	13.22	20.3	1416	5.9	122	76.5	96.4	406	51.2	1420	8.9	7.1	8.5	1623	5.2	53	1014.49	1020.8	0	1010.7	1252	0
	5	14.55	19.6	1440	11.7	2231	78.8	96.4	642	55.8	1455	10.7	8.0	9.2	1226	7.2	1813	1013.75	1014.8	931	1012.7	1457	3.4
	6	12.30	13.9	1620	9.7	246	94.9	97.7	509	91.1	11	11.5	8.4	9.4	1531	7.1	246	1013.34	1014.5	1	1012.0	1747	6.9
	7	14.47	20.7	1547	9.8	2357	81.4	96.6	2359	50.7	1642	11.0	8.1	9.8	1153	7.1	1642	1017.48	1020.8	2313	1013.8	133	0
	8	12.05	14.6	1324	8.3	407	92.2	98.6	414	78.0	1328	10.8	8.0	8.9	2027	6.6	326	1018.34	1020.6	19	1013.3	2357	8
	9	12.93	17.5	1224	10.1	2103	90.7	98.7	525	68.7	1222	11.4	8.4	9.4	1526	7.4	2103	1010.92	1013.4	1	1008.4	1635	11.7
	10	12.57	18.3	1622	7.4	442	79.8	98.8	555	53.9	1755	8.9	7.1	9.2	1311	6.0	1848	1013.10	1014.9	2356	1010.7	33	0.6
	11	12.51	19.8	1555	8.4	414	78.1	97.4	2359	36.7	1523	8.3	6.8	8.3	1031	4.9	1523	1016.21	1019.6	2358	1014.7	112	0
	12	10.98	14.3	1026	6.7	247	86.5	99.3	259	68.5	1027	8.7	6.9	7.6	1244	5.9	247	1023.18	1026.6	2359	1019.5	0	0.2
	13	10.89	15.0	1503	8.6	509	85.0	91.6	546	70.2	1504	8.4	6.8	7.7	1404	6.2	705	1026.23	1027.7	747	1024.3	2354	0
	14	14.01	21.6	1527	8.0	546	71.7	95.1	629	41.8	1602	8.5	6.8	8.9	1524	5.5	2003	1020.34	1024.4	0	1017.3	1729	0
	15	12.24	16.5	1357	9.3	535	67.4	95.0	242	37.6	1450	5.8	5.7	8.1	235	4.2	1450	1020.78	1024.5	2312	1017.4	31	3.9
	16	11.55	17.3	1642	5.7	441	68.7	93.6	2352	46.1	1244	5.6	5.6	6.3	1639	4.8	1010	1025.62	1027.9	2314	1024.3	0	0
	17	12.32	18.3	1526	4.6	432	73.1	97.5	527	44.8	1751	7.1	6.2	7.4	1049	5.0	432	1028.50	1029.8	759	1027.4	1700	0
	18	14.50	20.5	1343	8.5	433	71.6	97.6	505	44.7	1340	8.9	7.0	8.2	1229	5.4	1034	1027.81	1029.1	809	1026.1	1752	0
	19	13.22	19.1	1250	8.1	2354	77.6	95.8	2358	52.6	1323	9.1	7.1	8.2	1116	6.1	1629	1027.11	1028.2	2358	1025.8	1659	0
	20	12.74	21.1	1451	4.7	414	71.4	97.9	524	43.3	1324	7.1	6.2	7.7	1320	5.0	414	1025.14	1028.3	38	1022.3	1657	0
	21	13.22	20.1	1429	5.0	415	68.6	96.9	533	42.6	1553	7.0	6.2	7.5	1424	5.1	412	1021.85	1023.4	4	1020.2	1705	0
	22	14.32	20.7	1522	8.1	2352	63.0	79.2	2349	45.4	1522	7.2	6.3	8.2	1642	4.9	2130	1021.86	1026.2	2344	1019.9	323	0
	23	12.73	19.3	1451	6.0	422	71.3	96.0	523	46.0	1221	7.2	6.2	7.5	1442	5.1	9	1026.78	1027.5	1010	1025.8	24	0
	24	14.52	21.9	1611	6.7	355	69.9	96.9	452	40.3	1727	8.4	6.8	8.1	1357	5.8	1727	1025.91	1027.4	2359	1024.1	1716	0
	25	14.41	21.1	1247	8.6	231	72.5	96.2	311	47.8	1251	9.1	7.0	8.7	1415	6.3	1004	1029.37	1031.3	2356	1027.2	1	0
	26	13.69	21.4	1526	6.2	340	65.6	95.7	419	34.7	1607	6.5	5.9	6.9	1411	4.9	1757	1030.99	1032.6	644	1029.2	1649	0
	27	13.93	22.1	1555	4.8	407	70.3	97.7	458	36.8	1436	7.8	6.5	7.9	1247	5.1	407	1026.00	1030.4	19	1022.5	1807	0
	28	15.25	23.4	1334	6.4	436	66.5	98.2	524	32.3	1118	8.1	6.6	8.2	1328	5.0	1024	1023.36	1026.9	2347	1021.9	1331	0
	29	13.13	19.5	1419	6.6	416	65.1	90.7	427	45.8	1317	6.3	5.9	7.6	1308	5.3	1836	1027.60	1029.3	2352	1026.7	0	0
	30	13.03	20.4	1354	7.2	340	72.3	89.1	344	50.8	1204	7.9	6.5	8.3	1357	5.4	153	1029.21	1030.7	643	1028.1	1513	0
	31	13.93	20.0	1518	10.0	449	74.7	85.8	508	58.5	1421	9.4	7.2	9.0	1219	6.3	323	1026.77	1028.5	0	1024.8	1711	0
Total																							36.3
Mean		12.98	19.05		7.30		75.5	95.43		50.78		8.29	6.77	8.18		5.63		1022.65	1025.18		1020.37		
Max		15.25	23.42		11.69		94.9	99.30		91.10		11.50	8.42	9.77		7.41		1030.99	1032.57		1029.24		
Min		10.04	13.86		2.80		63.0	79.20		32.31		5.15	5.43	6.27		4.24		1010.92	1013.40		1008.41		

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   Temperature and humidity are from an aspirated Vaisala HMP45 unit
rmn = 00-24 GMT mean humidity mixing ratio, g/kg   Pressure is from a Setra CS100 sensor
pmn = 00-24 GMT mean air pressure reduced to mean sea level, mbar   Data is logged on a Campbell Scientific CR10X measurement and control system
Time = hours and minutes in GMT of extreme values   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   **SPRING 2023**

Temperature (°C)   Rank in the past **142** years

Mean maximum	15.1	(+0.3)	19th highest
Mean minimum	5.5	(+0.3)	14th highest
Daily mean	10.3	(+0.3)	19th highest
Rainfall total (mm)	226.4	(169 %)	6th highest
Sunshine total (hours)	450.7	(92 %)	

Nº of: Dry days 46 (-9)   Wet days 38 (+12)

Days with: Air frost 7 (-3)   Ground frost 21 (-14)   Snow falling 2 (-1)   Snow lying 1 (0)

Thunder 3 (-1)   Hail ≥5mm 0 (-1)   Small hail/ice 3 (-2)   Fog @09 GMT 0 (-1)   Nil sun 8 (-2)

Air pressure MSL : Mean @09 GMT (mbar)   1016.2   (+0.2)

Departure from 1991 to 2020 average shown in brackets.

Notes: **Very Wet with Near Average Temperature and Below Average Sunshine**

Temperature: The mean this spring is 0.3° above the current climatological average. It is 0.5° lower then the spring of 2022, but 1.6° milder than that of 2021. In this millennium 10 springs have been milder, including the mildest on record in 2017, mean 11.7°, 0.9° higher than the value for spring 2023. Temperatures followed the normal progression through the season, but compared with average, March with +0.5° had the largest positive anomaly, while April with -0.1° had the largest negative one, though essentially all the spring months had near average temperature. The highest max, 23.4° on the 28th May was 2.0° below the long-term median, and the lowest max was 3.0° on the 8th March, 1.5° below its median. The highest min, 11.7° on 5th May is 0.9°below the median and lowest for the season since 1984, while the lowest min, -3.0° on 11th March, is 1.2° above its median. The mean grass min was 2.9°, anomaly +1.1°, and the lowest was -7.3° on 11th March. Mean earth temperature at 30cm and 1m depth were 10.9° and 10.2° respectively, anomaly +0.5° for both. The duration of air frost, 35.3 hours, is 20.0 hours below average. Assuming there is no more frost before the autumn, the dates of the both the last spring air frost, 25th April, and ground frost, 20th May, are within a few days of average. **Rainfall:** This has been a very wet spring season, especially during March which had 3 times the average, April was quite wet too, 29 % above average, but a dry regime set in after the 9th May, and that month had 9% less rain than average. Putting this spring in the longer-term context, it ranks 6th wettest in 142 years, and is wettest since 1983. The season's highest 24 hour total was 34.1 mm on 31st March, the 5th highest daily fall in 120 springs, and highest since 1964. There were 9 fewer dry days than average, and 8 more days with at least 5 mm of rain. Rainfall duration was 179.3 hours, 150% of average, and 2nd highest after 2018 in this millennium. A 9 day dry spell ended on 5th March, and another was unbroken on 31st May after 17 days. The highest rainfall rate was 131 mm/hr on 31st March at 1515 GMT, but rates in the violent category (50 mm/hr) were recorded on the 23rd and 24th March, 10th, 12th, and 24th April, 1st and 9th May. Thunder was heard on 24th April and 9th and 10th May. Small hail (ice pellets) fell on 24th March, 24th April and 1st May. Snow fell on 8th and 10th March, and lay 3cm deep at 09 GMT on 8th March. Due to the wet nature of the season, any stress for unirrigated shallow rooted plants due to soil moisture deficit was confined to the last few days of the season. **Sunshine:** This has been the dullest spring season since 2013, although there have been 6 other duller springs in this millennium. Daily mean sunshine increased from 2.10 hours per day in March (anomaly 52%), to 5.20 hours in April (92%) to 7.40 hours in May (118%). The period 3rd to 10th March was especially dire, seeing the sun for a total of only 1.6 hours, mean 0.2 hours per day. At the other extreme, the period 20th to 29th May saw 8 days with over 10 hours, and 3 with over 15 hours. Overall there were 39 days with <3 hours, 30 with =>6 hours and 7 with =>12 hours. **Wind:** The mean speed this spring of 6.6 mph is 0.4 mph below average. The 13th March was the windiest day, mean 16.8 mph, but the highest gust of 48 mph was on the 12th April. The 8th April was the least windy day, mean 2.5 mph. Daily mean direction/number of days: N,13 NE,23 E,5 SE,3 S,12 SW,21 W,9 NW,6. Compared with average, winds from N and NE combined were 6.8% more frequent, while those from SW, W and NW combined were 6.1% less frequent. **Pressure:** The seasons highest pressure was 1033.1 mbar on 1st March, 3.7 mbar below average an lowest since 2006. The season's lowest was 980.9 mbar on 10th March, span 52.2 mbar, average 52.8 mbar. **Humidity:** The overall mean relative humidity was 78.6 % and the lowest was 31 % on the 4th April. The mean water vapour content per kg of air was 6.1g at 09 GMT and 6.0 g at 15 GMT. **March:** Near record high rainfall and very dull with above average mean temperature. Daily mean temperature range equal lowest since 2001. Mean grass min highest since 1981. 2nd wettest after 1947 in 142 years. 2nd highest 24 hours rainfall after 1964 in 120 years. Fewest dry days since 1979. One of the dullest March months in over 100 years. **April:** Mean temperature near average, rainfall above average, sunshine below average. **May:** Rainfall below average, both mean temperature and sunshine above average. 20 of the last 21 days were dry. Quite sunny, 3rd sunniest May this millennium. Mean and absolute lowest pressure are highest since 1991.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom	Sun hrs	Anom	Mean Wind mph	Max gust	Mean pressure	Anom
March	11.4°	-0.2°	4.5°	+1.3°	123.6	299%	65.2	52%	7.9	43	1008.7	-6.9
April	14.9°	+0.1°	4.3°	-0.4°	62.0	129%	156.1	92%	5.8	48	1016.8	+1.8
May	19.1°	+1.0°	7.6°	-0.1°	40.8	91%	229.4	118%	6.0	30	1023.2	+6.7

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

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.

B J Burton. 3 August 2009. Updated 4 May 2014.

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 of 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.