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 2021**

Temperature (°C)		Anomaly	Rank in the past **140** years			
Mean maximum	16.2	-1.9	41st lowest			
Mean minimum	6.2	-1.5	33rd lowest			
Daily mean	11.2	-1.7	29th lowest			
Highest maximum	24.9	on 31st	Lowest maximum	12.4	on	6th
Highest minimum	12.1	on 9th	Lowest minimum	0.0	on	1st
Mean grass minimum	2.8	-1.7	Lowest grass minimum	-4.2	on	1 & 6
Mean earth @30 cm	12.0	-1.8	Earth @100 cm	11.1		
Frost duration (hrs)	0.0		Rain duration (hrs)	62.7		
Rainfall total (mm)	77.4	174 %	21st highest			
Highest daily fall	14.4	on 16th	Highest rate mm/hr	53	on	19th

Number of: Dry days (<0.2mm) 12 Wet days (>0.9mm) 16 days ≥5mm 7

Sunshine total (hrs) 142.5 Daily mean 4.60 74 % Sunniest day 10.0 on 30th

Nº days with: Air frost 0 Ground frost 10 Snow falling 0 Snow lying 0

Thunder 3 Hail ≥5mm 0 Small hail/ice 5 Fog @09 0 Nil sun 1

Pressure MSL : Mean @09 GMT, mbar 1010.8 -5.7 Highest 1029.6 on 30th Lowest 994.3 on 4th

Relative humidity : Mean (%) 75.7 Lowest 30 on 6th Water vapour (g/kg), mean at 09 and 15 GMT 6.3, 6.2

Overall mean wind speed (mph) 7.4 Windiest day 16.8 on 21st Max gust 51 on 3rd

Wind direction (days) N 1 NE 4 E 1 SE 1 S 9 SW 8 W 5 NW 2

Least windy day (mph) 3.1 on 27th Calm; less than 0.5 mph (minutes) 544

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

Notes: **Mostly Cool, Wet and Very Dull.**

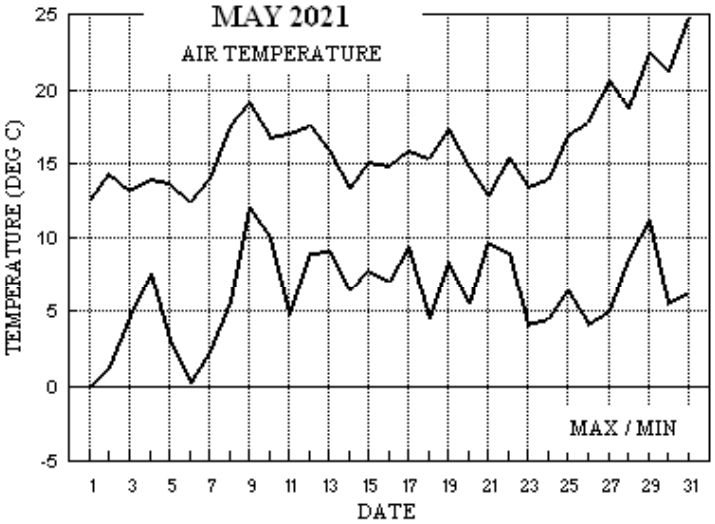
Temperature: The mean this May is lowest since 2013, and before that, 1996. The highest max is 0.3° below the median and the lowest max is 1.4° above its median. The highest min is 0.4° below the median as also is the lowest min. The mean grass min is lowest since 2013 but the lowest grass min is close to normal. Earth temperature at 30 cm depth is lowest since 1996 but at 1 m depth is lowest only since 2013. The lowest air min was within 0.1° of giving us a frost and between 1 and 3 days with air frost is not unusual for May, and in 1996 there were 5, but in the past 46 years 32 have had a frost-free May. The number of ground frosts this May is 5 above average and most since 2010. Daily anomalies for max were generally below normal until the 29th, and exceeded -4° on the 14th, 21st and 24th, and was only above +4° on the 31st, with extreme values of -4.8° on the 21st and +5.7° on the 31st. Anomalies for daily min exceeded -4° on the 1st, 2nd, 6th, 23rd and 26th, and were above +4° only on the 9th, with extreme values of -6.0° on the 1st and +5.8° on the 9th. **Rainfall:** This May's total puts it firmly in the wet category, the total being highest since 2007. This follows an April which had only one third of its average rainfall, and only 12 months since the record dry May in 2020 when only 3.4 mm of rain fell. However, this May there were no especially high daily falls, only 14.4 mm on the wettest day, which is close to average. It is not, then, surprising to see that there were 7 fewer dry days than average, and the 7 days with 5mm or more is equal highest with May 1981 in the past 46 years, yet the number of days with 10 mm or more was average. Rainfall duration is 25.4 hours above average and most for May since 2007. There was thunder on the 5th, 17th and 18th, and ice pellets fell on the 5th, 9th, 18th, 19th and 24th, also there was a violent rain shower on the 19th. Daily rainfall accumulation compared with normal was 12 mm in surplus on the 7th, decreasing to 10 mm by the 15th, after which it increased to 42 mm by the 24th, after which it turned drier, the surplus decreasing to 33 mm by the 31st. **Sunshine:** A pretty dismal showing this May, the daily mean of 4.60 hours being lowest since 2006, and is 2.90 hours per day less than in the April just past. It is worth noting that May 2020 was the sunniest on record with 200.7 hours more sunshine than this May's 142.5 hours. This May's sunniest day with 10.0 hours is 4.0 hours below average and is lowest since before 1979. Daily accumulation compared with normal was close to normal until the 7th, there then followed a steadily increasing deficit, reaching 27 hours by the 17th and 51 hours by the 27th. Overall there were 13 days with <3 hours, 13 with =>6 hours and 2 with =>9 hours. **Wind:** The mean speed this May is 0.8 mph above average and is highest since 2015. The month's windiest day, mean 16.8 mph on the 21st, is a new May record for the past 34 years, 4.6 mph above average. Also the highest gust, 51 mph on the 3rd, is also a new May record, but is only 1 mph above the previous highest in 2015. Daily mean speed was strong on the 3rd, 4th 20th and 21st, fresh on the 8th to 10th, and 23rd, otherwise mainly moderate, but light on the 1st, 2nd and 27th onwards. Daily mean direction was between N and E on 13th, 14th and 29th to 31st, between E and S on 28th, between W and N on 1st, 6th, 19th and 26th, and between S and W on the remaining 21 days.

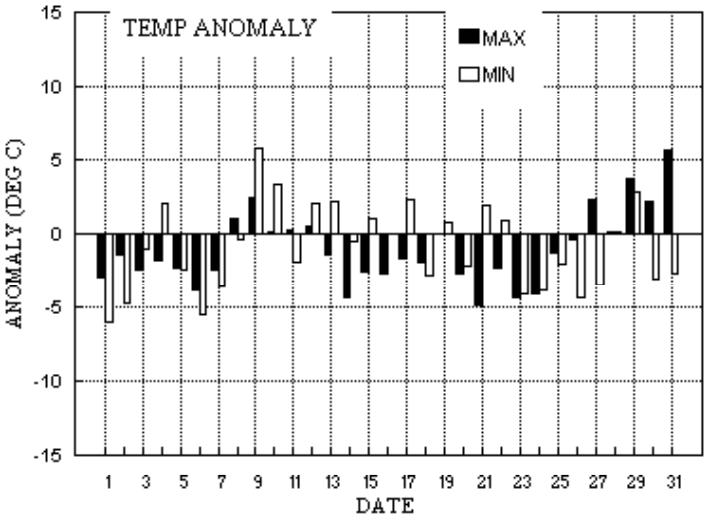
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

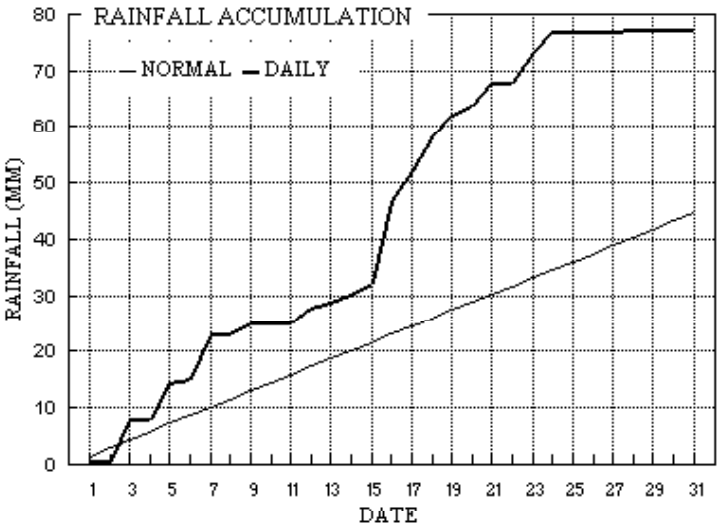
From the 1st to the 10th				From the 11th to the 20th				From the 21st to the 31st			
-1.4°	-1.2°	177%	91%	-1.7°	+0.1°	273%	52%	-0.9°	-1.5°	96%	70%

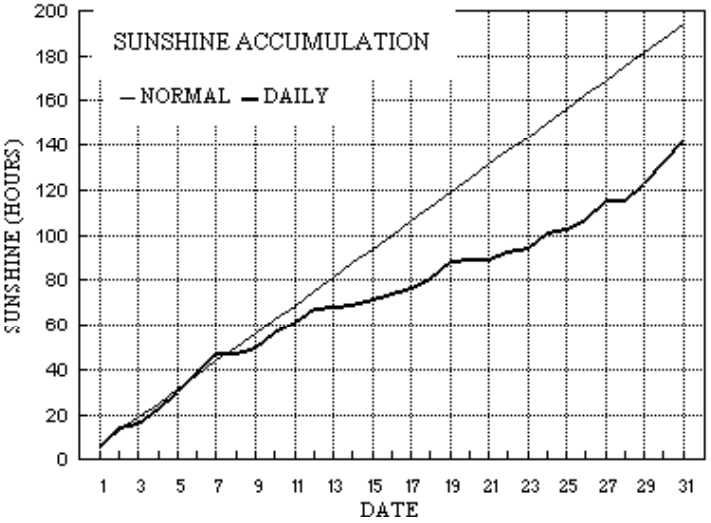
B J Burton FRMetS. Hon. Met. Officer to Wokingham Town Council.

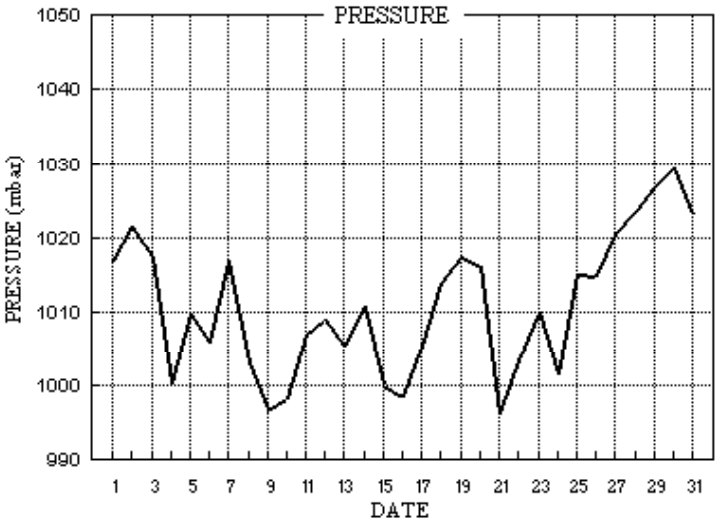
Wokingham climatological graphs for May 2021

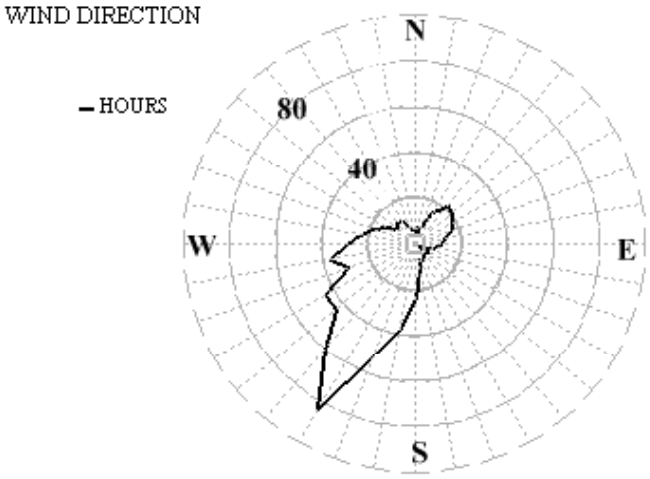


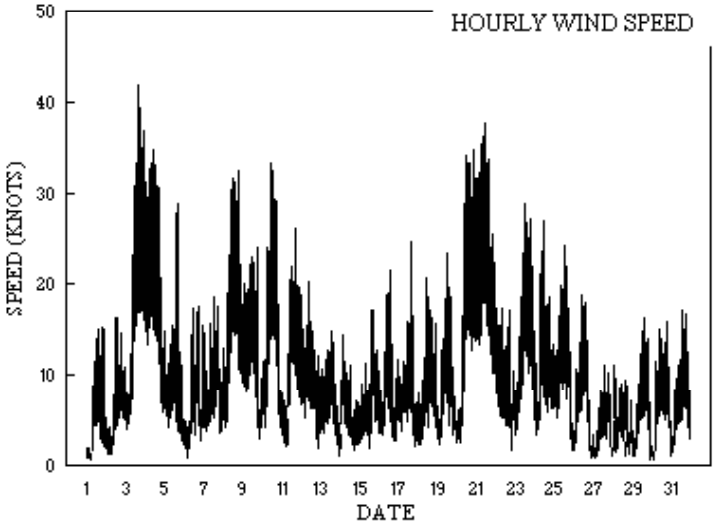


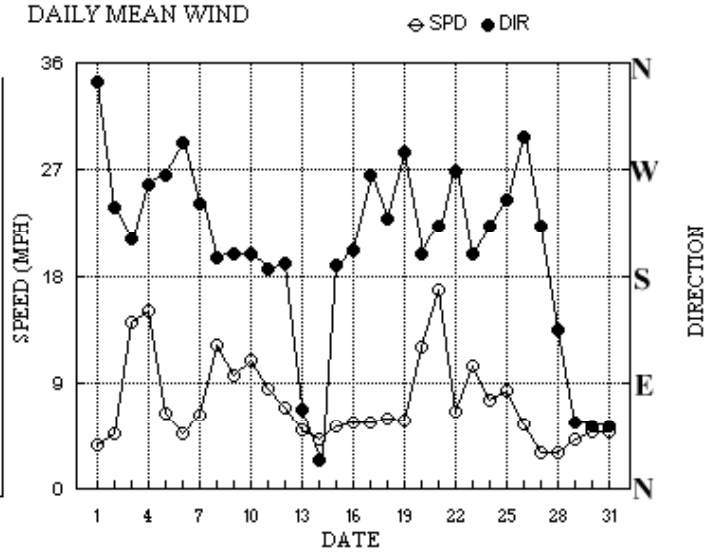












Daily meteorological data. Emmbrook, WOKINGHAM, Berkshire.

Month: MAY 2021

Date	Max	Min	Rain	Grass	30cm	100cm	Sun	Frost	pp09	Af	Sf	Th	Ic	Vec mean			Max gust			High hr			Rain
	C	C	mm	Min	C	C	hrs	hrs	mbar	Gf	Sl	Ha	Fg	ddd	ff	sp	ddd	gg	HHhh	ddd	ff	HH	hrs
1	12.5	0.0	0.6	-4.2	10.6	10.1	6.3	0.0	1016.9	0 1 0 0		0 0 0 0		344	2.1	3.2	69	15	1822	307	6	12	0.7
2	14.3	1.2	tr	-2.6	10.4	10.2	8.3	0.0	1021.5	0 1 0 0		0 0 0 0		238	3.3	4.0	262	17	1254	231	8	19	0.2
3	13.2	4.7	7.4	-0.5	10.5	10.2	1.4	0.0	1017.4	0 1 0 0		0 0 0 0		211	12.2	12.3	209	44	1650	207	18	15	5.8
4	14.0	7.6	tr	5.3	10.4	10.2	7.2	0.0	1000.4	0 0 0 0		0 0 0 0		257	12.8	13.1	263	35	1121	256	17	07	0.1
5	13.7	3.1	6.5	-1.1	10.5	10.2	7.5	0.0	1009.8	0 1 0 0		1 0 1 0		265	4.9	5.7	264	29	1732	306	10	14	1.8
6	12.4	0.2	0.5	-4.2	10.3	10.2	8.3	0.0	1006.0	0 1 0 0		0 0 0 0		293	3.2	4.1	296	18	1724	303	8	17	0.3
7	13.9	2.2	8.2	-3.4	10.2	10.2	8.7	0.0	1016.9	0 1 0 0		0 0 0 0		241	4.5	5.5	263	19	1225	216	9	17	6.5
8	17.5	5.7	tr	3.8	10.5	10.2	0.0	0.0	1003.0	0 0 0 0		0 0 0 0		195	8.9	10.6	205	33	1805	213	16	15	0.0
9	19.0	12.1	1.9	11.5	10.8	10.2	2.1	0.0	996.8	0 0 0 0		0 0 1 0		199	8.2	8.4	265	24	1807	203	12	12	1.1
10	16.7	10.0	tr	8.8	11.6	10.3	6.9	0.0	998.2	0 0 0 0		0 0 0 0		199	9.4	9.5	180	34	1001	202	15	13	0.0
11	17.0	4.8	tr	0.1	11.6	10.5	5.3	0.0	1006.9	0 0 0 0		0 0 0 0		186	6.9	7.4	176	26	1745	174	12	17	0.3
12	17.5	9.0	2.8	6.6	11.8	10.6	5.6	0.0	1009.1	0 0 0 0		0 0 0 0		191	4.9	6.0	227	20	0906	207	8	07	2.3
13	15.9	9.1	1.1	8.0	12.2	10.8	0.6	0.0	1005.4	0 0 0 0		0 0 0 0		68	4.1	4.4	62	15	1342	65	7	13	3.1
14	13.3	6.5	1.3	1.2	12.2	10.9	0.9	0.0	1010.8	0 0 0 0		0 0 0 0		25	2.4	3.6	22	14	0347	20	7	03	3.1
15	15.1	7.9	1.8	3.9	12.1	11.1	2.7	0.0	1000.1	0 0 0 0		0 0 0 0		189	2.5	4.7	199	17	1519	234	9	17	2.5
16	14.8	7.1	14.4	2.8	12.4	11.2	2.2	0.0	998.6	0 0 0 0		0 0 0 0		201	4.3	4.9	199	22	1306	213	9	09	6.4
17	15.9	9.4	5.6	7.9	12.5	11.3	3.2	0.0	1005.3	0 0 0 0		1 0 0 0		266	3.7	4.9	304	25	1526	281	10	15	2.5
18	15.4	4.5	6.3	-0.3	12.6	11.4	4.2	0.0	1013.7	0 1 0 0		1 0 1 0		228	5.0	5.2	239	21	1138	238	9	15	7.7
19	17.2	8.3	3.6	7.8	12.9	11.5	7.2	0.0	1017.4	0 0 0 0		0 0 1 0		285	4.2	5.1	263	23	1342	312	8	10	0.6
20	14.7	5.5	1.8	0.5	13.2	11.7	0.6	0.0	1016.1	0 0 0 0		0 0 0 0		199	10.2	10.5	216	35	2137	207	16	17	2.3
21	12.8	9.7	3.9	8.0	12.8	11.8	0.5	0.0	996.1	0 0 0 0		0 0 0 0		223	14.6	14.6	225	38	1054	225	19	10	6.3
22	15.4	9.0	0.1	8.7	12.6	11.8	2.8	0.0	1003.4	0 0 0 0		0 0 0 0		269	5.0	5.8	270	18	0908	230	9	00	0.2
23	13.5	4.2	5.4	-1.2	12.5	11.9	2.4	0.0	1010.1	0 1 0 0		0 0 0 0		199	8.8	9.1	228	29	1128	202	14	13	5.5
24	14.0	4.5	3.7	-1.0	12.3	11.8	6.6	0.0	1001.7	0 1 0 0		0 0 1 0		223	5.4	6.6	191	27	1120	194	10	09	1.9
25	16.9	6.4	0.1	2.1	12.4	11.8	1.6	0.0	1015.0	0 0 0 0		0 0 0 0		245	7.0	7.2	273	24	1304	269	10	12	0.4
26	17.8	4.2	0.0	-1.5	12.3	11.8	4.2	0.0	1014.8	0 1 0 0		0 0 0 0		297	3.7	4.7	319	19	1013	317	8	14	0.0
27	20.6	5.0	0.0	1.4	12.7	11.9	8.2	0.0	1020.4	0 0 0 0		0 0 0 0		223	1.6	2.7	247	11	1457	212	5	19	0.0
28	18.7	8.6	0.4	4.9	13.3	11.9	0.4	0.0	1023.5	0 0 0 0		0 0 0 0		135	1.3	2.7	165	11	0248	170	5	02	1.1
29	22.5	11.2	tr	10.5	13.7	12.1	6.9	0.0	1026.8	0 0 0 0		0 0 0 0		57	3.4	3.7	62	16	1634	66	7	17	0.0
30	21.2	5.6	0.0	1.4	14.5	12.3	10.0	0.0	1029.5	0 0 0 0		0 0 0 0		54	3.9	4.2	96	16	2022	56	6	12	0.0
31	24.9	6.3	0.0	2.3	15.0	12.6	9.7	0.0	1022.9	0 0 0 0		0 0 0 0		54	3.9	4.3	57	17	1528	78	7	19	0.0
Total			77.4				142.5	0.0															62.7
Mean	16.2	6.2		2.8	12.0	11.1	4.60	0.0	1010.8					222	3.7	6.4							
Anom	-1.9	-1.5	174%	-1.7	-1.8	-1.0	74%		-5.7														

Daily mean 11.2 Pressure, abs highest = 1029.6 on 30

Anom -1.7 Pressure, abs lowest = 994.3 on 4

Number of days with:

Air frost = 0 Ground frost = 10 Nil sun = 1

Snow falling = 0 Snow lying = 0 Thunder = 3

Hail=>5mm = 0 Hail<5mm or ice = 5 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 MAY 2021

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cm	Ch	NChshs	NChshs	NChshs	Date	Remarks
1	72	3	03	04	09	9.7	3.9	67	5.0	1016.9	0	003	03	0	0	2	2	5	3	0		82822			1	2Ac57 Cu med
2	67	2	05	03	05	9.9	3.2	63	4.7	1021.5	0	004	03	0	0	2	2	5	3	0		82825			2	1Ac58 Cu med
3	81	8	21	12	23	11.3	5.4	67	5.5	1017.4	8	020	03	2	2	5	2	5	0	7		85825	88275		3	COTRA Cu med U/a cont
4	84	6	26	17	32	10.8	3.4	60	4.9	1000.4	1	027	03	1	1	6	5	6	0	0		86630			4	
5	84	5	27	06	14	8.4	2.4	66	4.5	1009.8	1	013	03	1	1	5	2	5	0	0		85825			5	Cu med
6	65	7	27	04	08	8.0	3.7	74	4.9	1006.0	8	005	03	2	2	3	8	4	3	1		82815	87072		6	2Sc50 1Ac65 Cu med
7	86	1	28	04	14	11.0	0.7	49	4.0	1016.9	1	013	03	0	0	1	8	6	0	0		81840			7	1Sc45 Cu hum
8	30	8	19	11	23	12.1	11.3	95	8.4	1003.0	6	028	51	6	5	8	5	3	/	/		87706	88615		8	
9	84	7	20	11	22	16.7	11.4	71	8.5	996.8	8	005	02	2	2	6	5	4	8	8		86616	84277		9	2Ac65 COTRA Ac cas
10	65	6	20	10	21	12.7	8.2	74	6.8	998.2	2	011	25	8	2	6	8	4	/	/		85818	83640		10	Cu med
11	62	7	18	08	13	14.1	7.6	65	6.5	1006.9	8	003	15	8	2	6	8	4	3	/		81815	83825	85359	11	3Sc56 Cu med jpNW
12	70	5	18	08	14	14.4	4.7	52	5.3	1009.1	0	003	15	1	1	5	8	5	0	0		84825			12	2Sc45 Cu med jpS
13	62	8	12	05	10	9.5	8.1	91	6.7	1005.4	3	005	61	6	2	7	5	3	2	/		81708	87618	88535	13	
14	61	8	01	05	08	8.9	7.0	88	6.2	1010.8	1	013	20	5	2	8	8	3	/	/		82809	88620		14	Cu hum
15	60	8	11	06	11	10.9	8.1	83	6.8	1000.1	6	013	60	6	2	8	8	4	/	/		84812	88625		15	Cu hum
16	84	7	21	07	13	13.6	8.0	69	6.8	998.6	7	002	60	8	6	3	8	5	7	/		81820	83645	85358	16	1Ac62 Cu med
17	65	7	27	05	11	12.8	8.7	76	7.0	1005.3	2	024	03	2	2	6	8	4	3	/		84816	83625		17	3Ac57 Cu med
18	81	7	23	06	12	12.1	9.1	82	7.2	1013.7	2	002	03	2	2	7	8	4	/	4		83812	85656		18	3Ci72 Cu med
19	86	2	31	08	14	13.1	7.1	67	6.2	1017.4	1	015	03	6	1	1	2	5	3	1		81826			19	1Ac62 1Ci70 Cu med
20	75	8	19	09	16	11.3	7.8	79	6.5	1016.1	7	029	60	6	2	2	6	4	2	/		82713	88459		20	
21	70	8	22	18	34	12.0	6.7	70	6.2	996.1	6	008	60	6	2	8	5	5	/	/		86620	88630		21	
22	82	7	28	07	13	11.2	6.5	73	6.1	1003.4	2	026	25	8	2	7	8	5	/	/		82820	85625	87635	22	Cu med
23	70	8	20	06	19	11.5	5.8	68	5.7	1010.1	7	006	80	8	2	6	8	5	2	/		83828	84650	88462	23	Cu med vv40k ex p
24	84	7	19	11	22	10.8	6.2	73	5.9	1001.7	8	004	15	8	1	2	8	4	6	3		82818	86070		24	1Sc50 1Ac60 1Ac68 jpSW&NE
25	84	7	26	09	20	13.1	6.2	63	5.9	1015.0	2	014	03	2	2	7	8	5	/	/		83828	83640	87656	25	
26	82	7	30	06	14	11.8	6.9	72	6.2	1014.8	4	000	03	2	2	7	8	5	/	/		85820	83635		26	Cu med
27	84	4	33	03	06	16.4	8.4	59	6.8	1020.4	3	006	03	0	0	1	1	6	0	1		81830	84081		27	COTRA Cu hum
28	62	7	15	04	08	15.8	9.2	65	7.2	1023.5	8	002	02	2	2	1	5	7	7	1		81650	83363	87365	28	/Ci75 Sc cas
29	70	7	04	04	08	14.6	10.0	74	7.5	1026.8	1	012	21	6	2	7	0	8	7	/		82357	87360		29	/Ac63
30	58	8	03	05	11	10.5	8.3	86	6.7	1029.5	4	000	05	2	2	8	6	3	/	/		85708	88710		30	
31	50	7	02	05	09	12.9	10.1	83	7.6	1022.9	8	005	05	2	2	7	6	3	/	/		87708			31	

Mean vis = 28.5 km
Mean cloud = 6.4 79%
Mean wind speed = 7.3 kn
Mean gust = 15 kn
Mean TT = 12.0 °C
Mean TdTd = 6.9 °C
Mean RH = 71.7 %
Mean r = 6.3 g/kg
Mean PPP = 1010.8 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

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for MAY 21

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cm	Ch	NChshs	NChshs	NChshs	Date	Remarks
1	80	7	28	04	14	9.4	2.0	60	4.4	1016.3	4	000	25	8	2	2	2	6	6	/		82830	87360		1	2Ac57 Cu med jp all quads
2	80	5	25	07	16	12.9	0.3	42	3.8	1020.5	8	004	15	8	2	1	2	7	6	0		81850	84359		2	2Ac57 Cu med jp all quads
3	82	8	20	17	34	11.2	4.2	62	5.1	1008.7	8	052	03	2	2	6	8	5	7	/		84828	83640	88460	3	4Ac58 Cu hum
4	84	5	25	13	31	12.4	0.5	44	4.0	1003.3	2	009	15	1	1	5	2	7	6	0		85850			4	1Ac58 Cu med/con jp all quads
5	58	7	33	09	28	4.9	2.9	87	4.7	1011.5	3	014	92	9	8	7	9	4	/	/		81715	87925		5	t 1447
6	84	4	32	06	11	10.4	0.7	51	4.0	1006.1	4	000	15	8	1	3	8	6	6	0		83838			6	1Sc50 1Ac58 Cu med jpW N&SE
7	86	7	25	05	14	13.6	1.3	43	4.1	1016.7	8	003	02	2	2	3	2	7	6	4		83850	86358	86075	7	Cu med
8	63	8	22	15	27	14.3	11.5	83	8.5	1002.7	8	001	20	5	2	8	5	4	/	/		87711	88618		8	
9	84	7	20	09	22	17.8	11.1	65	8.3	996.2	2	002	03	2	2	6	8	5	1	/		86825	87469		9	1Sc40 Cu med
10	82	5	20	16	32	15.4	5.0	50	5.5	1002.0	2	015	02	8	2	5	2	6	0	0		85838			10	Cu med
11	84	3	20	12	20	16.0	3.1	42	4.8	1006.8	2	001	02	1	1	2	2	6	3	1		82840			11	1Ac60 2Ci72 Cu med
12	80	6	19	04	13	15.6	2.4	41	4.5	1007.7	8	006	15	1	1	5	8	6	6	4		83845	83650		12	1Ac58 3Ci72 Cu med jpNE
13	70	7	03	06	14	13.3	9.2	76	7.2	1005.2	8	005	03	8	2	7	8	4	3	2		83815	85640		13	/Ac65 /Ci72 Cu med
14	75	8	33	02	06	12.0	6.5	69	6.0	1010.2	8	008	02	2	2	8	8	5	/	/		82822	88635		14	Cu hum
15	70	6	29	04	10	13.9	10.1	78	7.8	998.8	7	008	25	8	2	4	9	4	6	3		82915	83362		15	1Cu20 2Sc56 2Ci72 jp all quads vv60k ex p
16	40	8	12	04	12	12.0	10.2	89	7.9	996.3	8	011	81	8	6	7	8	3	7	/		83708	83815	87650	16	/Ac58
17	65	6	24	07	13	15.8	10.1	69	7.7	1007.4	1	010	25	9	8	2	9	5	6	3		81925	82830	85070	17	2Ac62 jpNW&S vv50k ex p
18	84	4	23	07	17	14.2	8.4	68	6.8	1013.7	8	001	25	8	1	2	9	5	6	3		81920	81825	83359	18	1Sc50 1Ci70 Cu med Cb E
19	80	5	11	02	20	14.4	7.2	62	6.3	1019.7	0	015	25	8	1	3	9	5	6	3		81925	82835	83358	19	1Sc56 1Ac65 1Ci70 jpE&NW vv70k ex E
20	63	7	20	15	33	11.8	9.7	87	7.5	1007.5	7	045	61	6	2	7	5	4	/	/		83711	86618	87650	20	
21	62	8	23	16	32	11.8	7.5	75	6.5	995.9	2	003	61	6	6	8	5	4	/	/		86618	88628		21	
22	60	7	34	04	12	11.6	7.3	75	6.4	1006.0	3	008	81	8	2	7	8	5	6	/		83825	86650		22	2Sc35 /Ac60 Cu med vv60kex p
23	82	8	20	14	27	12.8	5.7	62	5.7	1007.3	8	015	60	8	6	5	8	5	2	/		83828	83650	88558	23	Cu hum
24	70	7	23	30	18	10.4	6.9	79	6.2	1002.3	3	006	80	8	2	7	9	5	6	/		83922	82830	83650	24	/Ac60 vv60k ex p
25	68	7	26	09	17	14.3	5.1	54	5.4	1014.7	7	005	15	2	2	7	8	5	/	/		82822	85640	87650	25	Cu med jpW vv60k ex p
26	84	6	32	08	18	17.6	2.8	37	4.6	1015.2	3	003	02	2	2	6	8	6	0	0		82847	85657		26	Cu med
27	84	5	25	06	11	20.5	6.4	40	5.9	1020.4	4	000	02	0	1	4	8	7	0	1		82850	83656		27	2Ci80 Cu hum
28	67	8	28	02	08	15.8	12.0	78	8.6	1023.0	4	000	61	6	2	7	8	5	2	/		81825	87650	88462	28	Cu med
29	82	2	06	07	12	22.3	8.8	42	6.9	1026.7	6	003	03	0	0	2	8	6	3	0		82848			29	1Sc50 1Ac60 Cu med
30	81	5	02	06	12	21.1	9.7	48	7.3	1025.8	7	021	03	1	1	1	1	6	0	4		81840	85077		30	COTRA Cu hum
31	75	5	05	05	11	23.5	11.5	47	8.4	1018.8	8	025	02	1	1	5	4	7	0	0		82850	84656		31	Cu hum

Mean vis = 30.5 km
Mean cloud = 6.2 77%
Mean wind speed = 8.7 kn
Mean gust = 18 kn
Mean TT = 14.3 °C
Mean TdTd = 6.5 °C
Mean RH = 61.5 %
Mean r = 6.2 g/kg
Mean PPP = 1010.1 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)
N = Total cloud amount, oktas
dd = Direction from which wind is blowing, tens of degrees true
ff = 10 minute mean wind speed, knots
gg = Highest gust in past hour, knots
TT = Air temperature at 1.2 m, deg Celsius
TdTd = Dew point temperature at 1.2 m, deg Celsius
RH = Relative humidity at 1.2 m
r = Humidity mixing ratio at 1.2 m, g/kg
PPP = Air pressure reduced to sea level, mbar
a = Characteristic of pressure tendency (Code FM12-0200)
ppp = 3 hr pressure tendency, tenths of mbar
ww = Present weather code (Code FM12-4677)
W1, W2 = Past weather code (Code FM12-4561)-
covers past 3 hours.
Nh = Amount of low cloud present, oktas
Cl = Type of low cloud (Code Fm12-0513)
h = Height of low cloud (Code FM12-1600)
Cm = Type of medium cloud (Code FM12-0515)
Ch = Type of high cloud (Code FM12-0509)
8 groups. 8 = indicator for cloud detail
N = Amount of cloud, oktas
C = Type of cloud (FM12-0500)
hshs= Height of cloud (FM12-1677)
Remarks : COTRA = persistent condensation trails present

Wokingham Sunshine Hourly analysis

2021

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	0.00	0.00	0.25	0.25	0.41	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.92	0.65	0.43	0.18	1.00	0.23	1.00	0.00	0.21	0.26	0.00	0.88	0.01	0.00	0.00	0.39
6	1.00	1.00	0.22	0.60	1.00	0.38	1.00	0.00	0.17	0.29	0.00	1.00	0.00	0.00	0.00	0.34
7	1.00	1.00	0.11	0.32	0.94	0.97	1.00	0.00	0.44	0.45	0.34	0.86	0.00	0.00	0.00	0.13
8	0.99	0.96	0.35	0.33	0.62	0.92	0.99	0.00	0.09	0.11	0.30	0.62	0.00	0.00	0.00	0.18
9	0.62	0.53	0.21	0.20	0.54	0.48	0.82	0.00	0.22	0.21	0.10	0.18	0.00	0.00	0.00	0.23
10	0.11	0.81	0.08	0.17	0.60	0.14	0.42	0.00	0.16	0.63	0.56	0.63	0.00	0.00	0.05	0.25
11	0.79	0.36	0.00	0.41	0.28	0.19	0.42	0.00	0.19	0.05	0.77	0.52	0.00	0.03	0.00	0.65
12	0.19	0.09	0.00	0.79	0.55	0.11	0.13	0.00	0.05	0.53	0.82	0.37	0.00	0.00	0.18	0.00
13	0.00	0.39	0.00	0.67	0.28	0.33	0.03	0.00	0.09	0.20	0.46	0.17	0.17	0.00	0.08	0.00
14	0.00	0.12	0.00	0.66	0.02	0.35	0.11	0.00	0.04	0.63	0.72	0.20	0.33	0.00	0.14	0.00
15	0.00	0.62	0.00	0.62	0.18	0.65	0.20	0.00	0.01	0.61	0.96	0.22	0.00	0.00	0.57	0.00
16	0.31	0.65	0.00	0.93	1.00	0.88	0.31	0.00	0.14	0.74	0.08	0.00	0.04	0.00	0.59	0.00
17	0.14	0.74	0.00	0.72	0.07	1.00	0.76	0.00	0.00	0.76	0.00	0.00	0.03	0.18	0.41	0.00
18	0.21	0.44	0.00	0.49	0.21	0.98	1.00	0.00	0.00	1.00	0.17	0.00	0.00	0.50	0.58	0.00
19	0.00	0.00	0.00	0.06	0.00	0.46	0.09	0.00	0.00	0.44	0.00	0.00	0.00	0.17	0.04	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
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	**6.29**	**8.34**	**1.40**	**7.17**	**7.54**	**8.33**	**8.71**	**0.00**	**2.13**	**6.90**	**5.28**	**5.64**	**0.60**	**0.88**	**2.65**	**2.16**

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	0.00	0.02	0.00	0.22	0.00	0.00	0.35	0.51	0.00	0.00	0.49	0.00	0.00	0.00	0.00	0.09
5	0.27	0.00	0.00	0.00	0.30	0.00	0.71	1.00	0.09	0.09	1.00	0.00	0.00	0.00	0.00	0.31
6	0.15	0.45	0.00	0.00	0.17	0.00	0.90	1.00	0.00	0.37	1.00	0.27	0.00	0.00	0.00	0.37
7	0.23	0.47	0.63	0.00	0.00	0.00	0.00	0.65	0.46	0.09	1.00	0.00	0.00	0.01	0.00	0.36
8	0.13	0.04	0.94	0.00	0.00	0.05	0.00	0.09	0.10	0.09	1.00	0.00	0.00	0.00	0.04	0.29
9	0.15	0.12	0.61	0.00	0.00	0.00	0.26	0.54	0.00	0.18	0.96	0.16	0.00	0.26	1.00	0.28
10	0.27	0.51	0.75	0.00	0.00	0.00	0.18	0.58	0.07	0.17	0.79	0.00	0.21	0.99	1.00	0.33
11	0.04	0.01	0.59	0.00	0.00	0.01	0.00	0.30	0.09	0.22	0.11	0.00	0.01	1.00	1.00	0.26
12	0.15	0.75	0.62	0.00	0.00	0.12	0.00	0.80	0.38	0.53	0.20	0.00	0.97	1.00	1.00	0.33
13	0.22	0.15	0.15	0.00	0.00	0.14	0.00	0.03	0.12	0.61	0.11	0.00	1.00	1.00	0.55	0.22
14	0.56	0.39	0.35	0.00	0.00	0.02	0.00	0.18	0.01	0.57	0.34	0.00	0.68	1.00	0.59	0.26
15	0.77	0.45	0.56	0.11	0.00	0.12	0.00	0.09	0.00	0.43	0.00	0.00	1.00	1.00	0.81	0.32
16	0.18	0.04	0.89	0.18	0.00	0.84	0.00	0.02	0.00	0.47	0.00	0.00	0.52	1.00	0.97	0.35
17	0.00	0.77	0.71	0.09	0.00	0.71	0.00	0.38	0.00	0.24	0.58	0.00	1.00	1.00	1.00	0.36
18	0.00	0.03	0.41	0.00	0.00	0.60	0.00	0.41	0.05	0.00	0.27	0.00	1.00	1.00	1.00	0.33
19	0.09	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.23	0.14	0.33	0.00	0.48	0.71	0.75	0.13
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	**3.19**	**4.18**	**7.20**	**0.61**	**0.47**	**2.78**	**2.39**	**6.58**	**1.61**	**4.18**	**8.18**	**0.43**	**6.86**	**9.97**	**9.71**	**142.40**

Month	MAY 202	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	6.48	12.5	1156	-0.0	451	75.1	97.4	534	40.4	1201	1.9	4.3	5.3	832	3.5	1201	1016.89	1019.5	2356	1015.7	402	0.7
	2	8.16	14.3	1531	1.2	512	67.6	97.9	549	31.6	1435	1.7	4.3	5.2	756	2.7	1435	1020.64	1021.7	809	1019.1	47	0.2
	3	9.04	13.2	1024	4.7	333	74.6	92.9	2106	44.1	1214	4.5	5.3	7.1	2211	4.0	1214	1011.20	1021.2	34	995.1	2353	7
	4	9.74	14.0	1340	5.1	2350	60.7	83.7	414	31.9	1537	2.0	4.5	5.9	52	3.0	1612	1001.16	1006.5	2359	994.3	127	0.2
	5	6.30	13.7	1231	1.8	2326	75.0	96.9	2348	39.5	1233	1.8	4.3	5.6	1555	3.5	1211	1009.35	1011.6	1458	1006.3	101	6.4
	6	6.52	12.4	1610	0.2	418	70.1	98.9	504	29.7	1713	0.7	4.0	5.6	1358	2.6	1713	1007.64	1012.0	2353	1005.7	1334	0.6
	7	9.03	13.9	1549	2.2	436	53.8	85.8	439	34.5	1259	-0.3	3.7	4.6	1153	2.9	2016	1015.65	1017.4	1237	1011.9	1	0
	8	11.87	15.4	1702	5.7	304	81.8	97.1	552	51.8	109	8.7	7.2	8.7	1006	3.5	109	1004.32	1013.8	2	999.3	2349	8
	9	14.96	19.0	1000	10.7	2359	76.5	94.4	2052	61.7	1304	10.7	8.1	9.3	1201	7.2	7	996.66	999.5	0	995.0	1719	1.8
	10	12.31	16.7	1252	7.6	2359	72.0	92.4	509	45.8	1647	7.1	6.3	7.4	826	5.0	1651	1000.57	1006.7	2308	995.9	129	0.1
	11	11.29	17.0	1131	4.8	413	72.0	97.4	511	37.8	1558	5.8	5.8	7.2	1127	4.3	1544	1006.90	1008.4	2359	1005.7	1653	0
	12	12.29	17.5	1511	9.0	519	65.9	95.1	2358	39.2	1455	5.6	5.7	7.1	2332	4.3	1455	1008.24	1009.6	925	1006.6	2357	1.7
	13	10.49	15.9	1356	6.5	2357	87.5	97.1	2341	62.6	1618	8.4	6.9	8.1	1358	5.8	1738	1005.88	1008.0	2338	1004.6	658	2
	14	9.68	13.3	1753	6.5	7	83.2	97.7	100	60.3	1754	6.8	6.1	6.8	259	5.4	1717	1009.15	1011.0	1215	1006.0	2359	0.6
	15	10.76	15.1	1610	8.0	103	84.4	96.8	610	61.2	1800	8.1	6.8	8.3	1245	6.1	2005	1000.60	1006.1	0	998.5	1702	3.2
	16	10.59	14.8	1150	7.1	225	88.2	96.8	2117	62.8	1146	8.6	7.1	8.3	1524	6.0	841	997.70	1000.0	0	994.9	1813	14.1
	17	11.19	15.9	1456	6.8	2359	84.1	97.0	2331	54.5	1616	8.4	6.9	8.2	1322	5.5	1546	1005.97	1011.7	2353	998.4	0	5.7
	18	10.49	15.4	1045	4.5	409	84.8	98.7	711	59.7	1300	7.9	6.6	7.6	1239	5.1	409	1013.63	1015.2	2316	1011.5	0	4
	19	11.62	17.2	1325	7.0	2358	73.8	95.8	349	41.0	1254	6.6	6.0	7.1	818	4.8	1254	1018.26	1021.9	2134	1014.6	201	5.9
	20	10.46	14.7	1627	5.5	232	81.4	95.2	236	61.4	1220	7.3	6.4	7.8	1535	5.2	232	1011.60	1021.6	10	1000.3	2358	1.8
	21	10.90	12.8	1012	9.1	2353	79.4	92.7	2359	64.7	1008	7.4	6.5	7.1	1657	6.0	1005	996.66	1000.7	1	994.8	1211	2.4
	22	10.40	15.4	1325	6.2	2355	78.1	95.2	221	52.3	1728	6.6	6.1	7.1	1324	4.8	2343	1003.98	1010.2	2359	996.5	9	2.2
	23	9.38	13.5	1116	4.2	136	79.3	93.3	2209	59.2	1130	5.8	5.8	7.2	2110	4.5	132	1007.42	1011.0	548	1001.1	2056	5.3
	24	9.26	14.0	1057	4.5	420	82.9	97.7	514	57.8	1012	6.4	6.0	7.2	1224	5.1	420	1003.68	1011.3	2359	1001.1	1108	3.7
	25	10.24	16.9	1256	6.1	2359	77.3	96.1	2349	41.4	1258	6.1	5.8	6.9	730	4.6	1333	1014.06	1015.6	1132	1011.1	0	0.2
	26	11.16	17.8	1516	4.2	237	73.2	97.4	253	36.9	1459	6.0	5.8	6.8	2248	4.5	1507	1015.32	1018.2	2343	1013.7	5	0
	27	13.38	20.6	1444	5.0	424	68.5	97.3	454	39.7	1446	7.0	6.2	7.5	1228	5.2	424	1020.38	1022.7	2358	1018.0	0	0
	28	13.81	18.7	1151	8.6	141	78.6	92.6	2224	47.7	1157	9.9	7.5	9.4	1616	6.0	245	1023.29	1024.3	2336	1022.5	2	0.4
	29	15.35	22.5	1521	8.3	2359	67.3	91.1	424	36.9	1513	8.8	7.0	8.4	1328	5.7	1513	1026.64	1029.2	2339	1024.0	22	0
	30	12.88	21.2	1504	5.6	412	76.6	96.9	453	43.5	1532	8.3	6.7	8.4	1342	5.3	355	1027.14	1029.6	753	1023.7	1818	0
	31	15.09	24.9	1529	6.3	306	72.2	97.1	331	37.7	1603	9.4	7.3	10.5	1334	5.6	306	1020.83	1025.1	6	1017.0	1758	0
	Total																						78.2
	Mean	10.81	16.14		5.57		75.7	95.24		47.40		6.26	6.04	7.34		4.76		1010.37	1014.24		1006.56		
	Max	15.35	24.94		10.72		88.2	98.90		64.73		10.72	8.12	10.49		7.17		1027.14	1029.57		1024.00		
	Min	6.30	12.44		-0.02		53.8	83.70		29.69		-0.34	3.69	4.63		2.64		996.66	999.54		994.33		

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

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

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

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

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 2021

Temperature (°C)			Rank in the past **140** years
Mean maximum	13.9	(-0.9)	57th highest
Mean minimum	3.5	(-1.7)	24th lowest
Daily mean	8.7	(-1.3)	54th lowest
Rainfall total (mm)	122.6	(91%)	53rd lowest
Sunshine total (hours)	477.2	(97%)	

Nº of: Dry days 61 (+6) Wet days 25 (-1)

Days with: Air frost 17 (+7) Ground frost 49 (+14) Snow falling 4 (+1) Snow lying 1 (+1)

Thunder 3 (-1) Hail ≥5mm O (-1) Small hail/ice 8 (+3) Fog @09 GMT 1 (0) Nil sun 7 (-2)

Air pressure MSL : Mean @09 GMT (mbar) 1019.1 (+3.1)

Departure from 1991 to 2020 average shown in brackets.

Notes: **Temperature , Rainfall and Sunshine Below Average.**

Temperature: This has been the coolest spring season since 2013, and before that, 1996. Similarly, the mean maximum is lowest since 2013, but it was also lower in 2006. The mean minimum, also lowest since 2013, but in this case we have to look back to 1984 to find the next spring colder than this year's. Both April and May had a mean temperature well below average, but March was close to normal. As a result the mean temperature for April was 0.2° lower than that in March. The warmest day was the 31st May, 24.9°, 0.5° below the median, and the coldest was the 4th March, 5.3°, 0.8° above its median. The warmest night was the 9th May, 12.1°, 0.5° below the median, and the coldest night was -2.6° on the 7th April, 1.6°above its median. The mean grass min, 0.1°, is 1.7°below average and lowest since 2013, but the lowest grass min, -7.6° on the 7th April, is nearly 2° above average. The mean earth temperature at 30 cm depth, 9.7°, is 0.7° below average, and lowest since 2013, while the mean at 1 m depth, 9.3° is 0.4° below average. It has been quite a frosty season, anomaly for number of air and ground frosts +7 and +14 respectively, and the duration of air frost, 76.4 hours, is 21.3 hours above average. Probably the last air frost of the winter half-year was on the 27th April, about 5 days later than average. **Rainfall:** The total this spring is below average, but only by 9%. There was a good deal of dry weather during March and April, in fact for the 46 day period to the 27th April there were only 4 wet days giving a total of 10.6 mm, and dry spells of 6, 14 and 16 days ended on the 24th March, 9th April and 27th April respectively. May by contrast was quite wet, the total being 174% of average, though it did turn drier after the 24th. May was the wettest month with 77.4mm, and April the driest with 15.8mm, 33% of average, while March has 29.4 mm, 71% of average. There were no outstanding daily totals, 144 mm on 16th May being the wettest day, 2.6 mm below the median. Rainfall duration was just 84% of average, and the longest duration in a rainfall day was 10.5 hours on the 28th April. Notably this spring, we recorded 1 day with snow lying at 0900 GMT, during a wintry outbreak in early April, with snowfall recorded on the 5th, 6th, 11th and 12th, sufficient on the latter day to give 2 cm cover, though which didn't see the day out. Although there have been 11 springs in the past 45 with at least 1 day with snow lying, only 3 have been in April. The season's 3 thunder days were all in May, and of the 8 days with ice pellets, 5 were in May, 2 in April and 1 in March. Maximum monthly rainfall rates were 37 mm/hr on the 11th March, 6 mm/hr on the 28th April and 53 mm/hr on the 19th May. Soil moisture deficit peaked in the latter half of April then decreased into May. An index of stress for unirregated shallow rooted plants was 47 this spring, well below the average of 67, and can be compared with severe stress values of 254 in 2020 and 299 in 2011. **Sunshine:** This spring's total of 477 hours is just a little below average but compared favourably with other springs this millennium, where 12 have had less sun than this. Both March and May had a deficit of sunshine, only 74% in May, while April had and outstanding 132%, making it the sunniest month. In terms of the daily mean March had the least, May the next then April the sunniest. The 10 days up to the 26th April were exceptionally sunny, giving a total of 123.3 hours, which is only 19.2 hours less than in the whole of May and 13.5 hours more than in the whole of March. There were no unusually long dull periods, but the 4 days to the 6th March had a total of only 3.8 hours of sun, and the 14 day period to 26th May averaged only 18% of the maximum, with only 2 days having over 30%, and none over 50 %. Overall there were 31 days with <3 hours, 38 with =>6 hours, 15 with =>9 hours and 7 with =>12 hours. **Wind:** The mean speed this spring was 6.8 mph, 0.2 mph below average. Interestingly, the mean speed for each of the past 6 springs has been within 0.1 mph. 1994 had the windiest spring in the past 34 years, mean speed 9.6 mph. The windiest month this spring was March, mean 7.5 mph, next May with 7.4 mph then April with 5.5 mph. The season's windiest day was the 11th March, men 17.2 mph, and the season's highest gust was 55 mph also on that day. There were 2485 calm minutes, 116% of average. Daily mean direction-number of days; N,9 NE,24 E,3 SE,1 S,11 SW,23 W,11 NW,10. Compared with average, NE winds were 5.3% more frequent and NW 2.1% more frequent, and the expense of all other directions, especially E and SE combined, 5% less frequent. **Humidity:** The mean relative humidity was 73.5% and the lowest value was 20% on 30th March and 5th April. The mean water vapour content per kg of air was 5.2g at 0900 GMT and 5.0 g at 1500 GMT. **Pressure:** The extremes of pressure this spring were 1035.7 mbar on the 6th March and 989.9 mbar on the 13th March, a span of 45.8 mbar, average 52.8 mbar. **March:** Rainfall and sunshine below average. Temperature near average but with a notable warm spell. Highest max 23.6° is a new March record. Temperature range of 22.9° on 30th is also a new March record. **April:** Cold but mainly dry and very sunny. Daily mean temperature lowest since 1989. Mean min lowest since 1917. Mean grass min lowest in past 42 years. Most air frosts since before 1956, and ground frosts since 1954. Dry with significant rain on just 2 days. Snow fell on 4 days and 2cm lying snow at 09 GMT only the 3rd occasion in April in 46 years. Sunshine 30% above average but only the 3rd sunniest April this millennium. Mean relative humidity lowest for April in past 24 years. Mean air pressure highest for April in past 46 years. **May:** Mostly cool, wet and very dull. Mean temperature lowest since 2013 and before that 1996. Mean earth temperature at 30cm depth lowest since 1996. Most ground frosts since 2010. Wettest since 2007 and number of days with 5 mm or more rain is equal highest in 46 years. Daily mean sun lowest since 2006, and 2.9 hours per day less than in April. Total of 10.0 hours on the month's sunniest day lowest since before 1979. The month's windiest day a new May record.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom	Sun hrs	Anom	Mean Wind mph	Max gust	Mean pressure	Anom
March	12.0°	+0.4°	3.1°	-0.1°	29.4	71%	109.8	87%	7.5	55	1022.8	+7.2
April	13.5°	-1.3°	1.2°	-3.5°	15.8	33%	225.1	132%	5.5	35	1023.9	+8.9
May	16.2°	-1.9°	6.2°	-1.5°	77.4	174%	142.5	74%	7.4	51	1010.8	-5.7

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.