

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

FEBRUARY 2021

Temperature (°C)	Anomaly		Rank in the past 140 years						
Mean maximum	9.2	+0.4	37 th highest						
Mean minimum	2.0	+0.1	46 th highest						
Daily mean	5.6	+0.2	47 th highest						
Highest maximum	16.0	on 24 th	Lowest maximum	-0.1 on 8 th					
Highest minimum	9.4	on 21 st	Lowest minimum	-5.1 on 11 th					
Mean grass minimum	-0.2	+1.1	Lowest grass minimum	-10.5 on 11 th					
Mean earth @30 cm	5.9	+0.3	Earth @100 cm	6.7 -0.4					
Frost duration (hrs)	133.7		Rain duration (hrs)	49.0					
Rainfall total (mm)	31.5	67%	56 th lowest						
Highest daily fall	5.6	on 4 th	Highest rate mm/hr	62 on 5 th					
Number of: Dry days (<0.2mm)	15	Wet days (>0.9mm)	10	days ≥5mm	1				
Sunshine total (hrs)	84.5	Daily mean	3.02	100%	Sunniest day	10.3	on 26 th &27 th		
N° days with: Air frost	14	Ground frost	14	Snow falling	6	Snow lying	1		
Thunder	0	Hail ≥5mm	0	Small hail/ice	2	Fog @09	4	Nil sun	6
Pressure MSL: Mean @09 GMT, mbar	1014.9	-1.8	Highest	1042.5	on 27 th	Lowest	990.9	on 1 st	
Relative humidity : Mean (%)	80.8	Lowest	39	on 26 th	Water vapour (g/kg), mean at 09 and 15 GMT			4.8, 4.8	
Overall mean wind speed (mph)	7.9	Windiest day	13.6	on 7 th	Max gust	39	on 23 rd		
Wind direction (days)	N 2	NE 6	E 3	SE 2	S 9	SW 5	W 1	NW 0	
Least windy day (mph)	2.3	on 27 th	Calm; less than 0.5 mph (minutes)			565			

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

Notes:

Temperature and Sunshine Near, and Rainfall Below, Average.

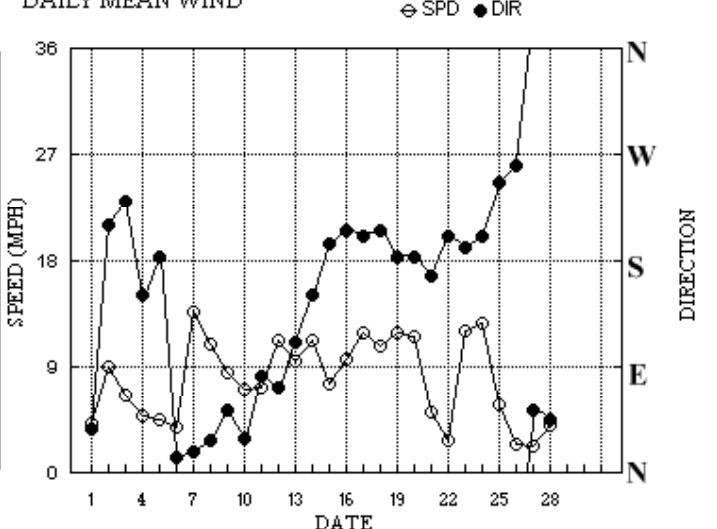
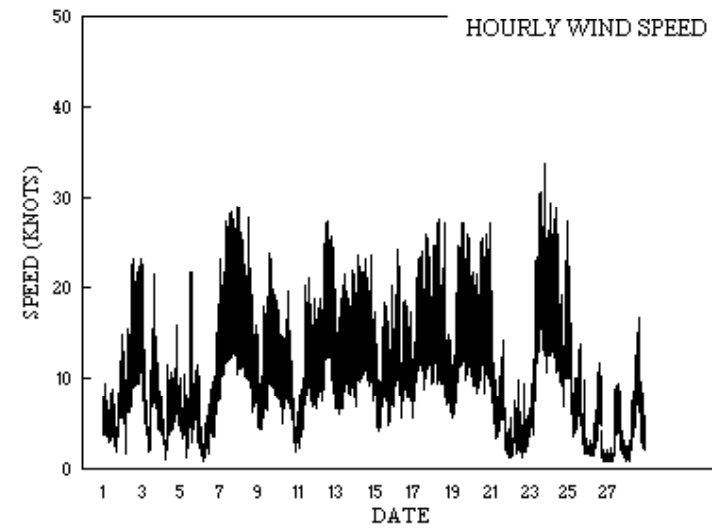
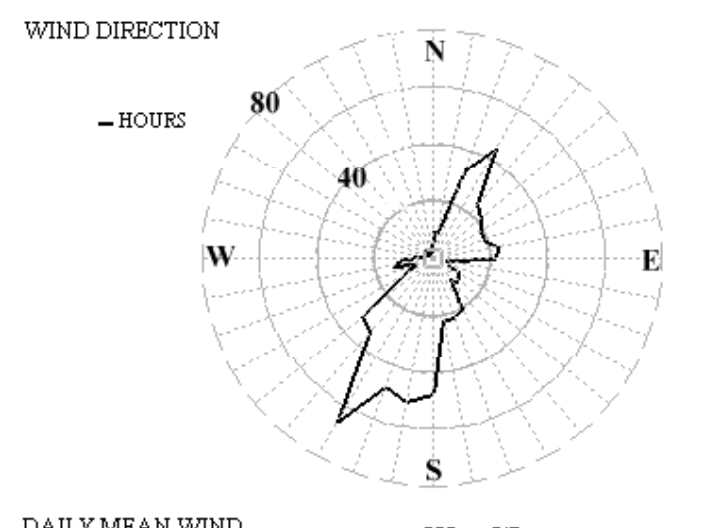
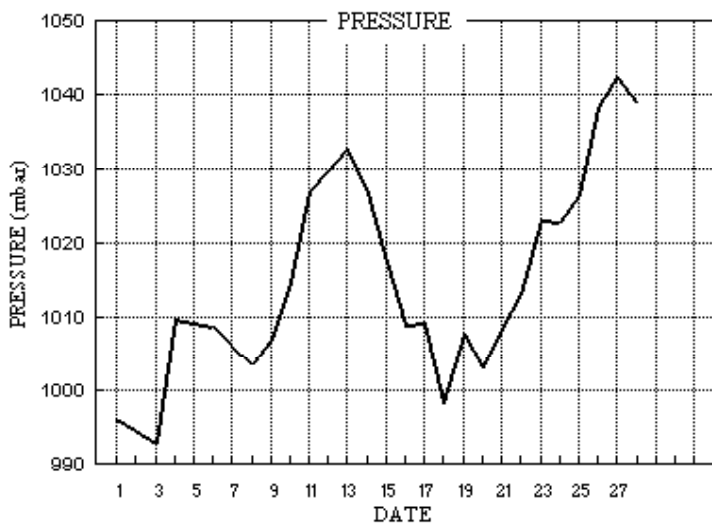
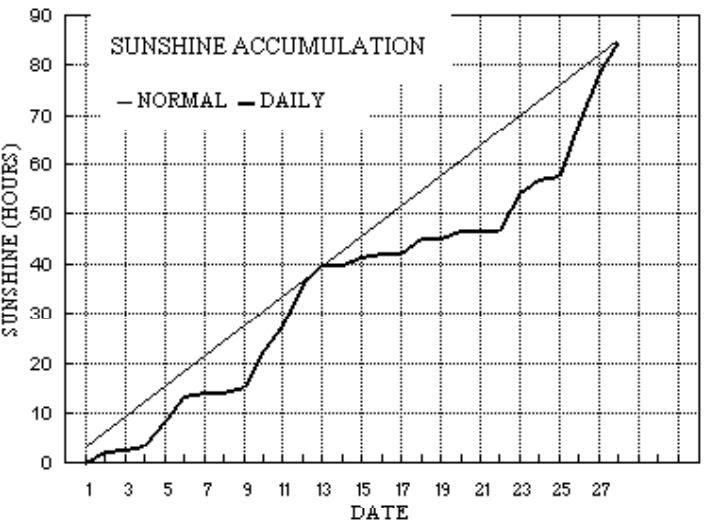
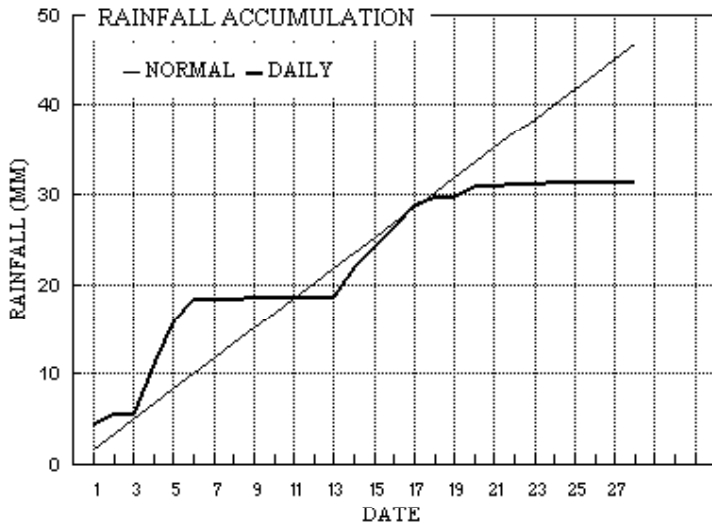
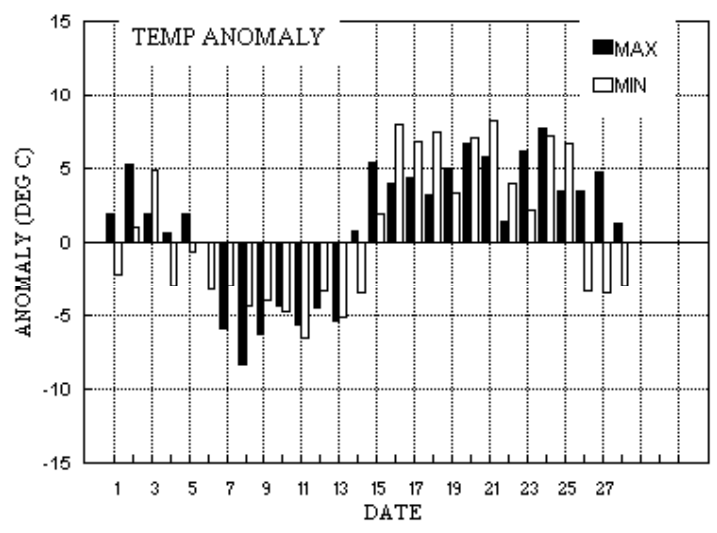
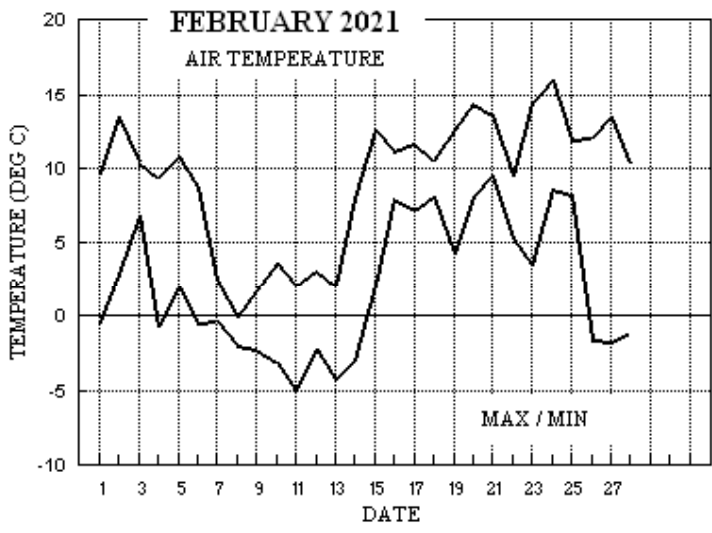
Temperature: This has been a February with strong swings in temperature, with a marked change from wintry to spring-like conditions near mid-month, the mean temperature ending up close to the current climatological average, and 0.8° above the long-term median. In this millennium, 10 Februaries have been colder, and 1 the same. The highest max is 3.0° above the median, but in recent years it has been exceeded in both 2019 and 2017. The lowest max is 2.4° below its median. The highest min is 1.4° above the median and the lowest min equals its median. The 8th was an ice day (when the maximum fails to reach zero), the first such in February since 2006. However, the record lowest max in this month is -4.1° in 1956, and a more recent -3.9° in 1991. The duration of air frost is 152% of average, and there were 4 more days with air frost than average, however there were 3 fewer days with ground frost than average, although the lowest grass min is exactly average. Anomalies for daily max exceeded -4° from the 7th to 13th and were above +5° on the 2nd, 15th, 19th to 21st and 23rd and 24th, with extreme values of -8.3° on the 8th and +7.7° on the 24th. Anomalies for daily min exceeded -5° on the 11th and 13th, and +5° from the 16th to 18th, 20th, 21st and 24th and 25th, with extreme values of -6.6° on 11th and +8.2° on 21st. **Rainfall:** This has been quite a dry February overall with only 67% of average rainfall and an absence of any large daily totals, the highest being 4.9 mm below the long-term median and equal lowest with 2008 since 2005. The number of dry days is average, and there was only 0.3mm between the 7th and 13th, and 0.5 mm after the 20th, with a dry spell of 6 days unbroken on the 28th. Daily accumulation compared with average was 9 mm in surplus by the 6th, becoming a deficit of 3 mm on the 13th, decreasing to zero by the 17th but increasing to 15 mm deficit by the 28th. Snow fell every day from the 6th to 11th inclusive, but although persistent, amounts were generally small, with >50% snow cover at 0900 GMT only on the 9th, depth <1 cm. A violent rain shower with ice pellets occurred on the 5th and there was a significant shower of snow pellets on the 9th. There was no thunder this month. **Sunshine:** While the daily mean of 3.03 hours is equal to the February average, there were periods during the month with very little sunshine, these counterbalanced by a handful of sunny days. Up to and including the 9th only 2 days had >50% of the maximum and 6 had <10 %, also from the 13th to 22nd, no days had >40 % and 6 had <10 %. However, the 12th, 26th and 27th had >90%, and the 10.3 hours of sunshine on both the latter days is equal highest for February with 2019 since before 1999. Daily accumulation compared with average was 13 hours in deficit on 9th, becoming zero on 12th but increasing to 20 hours by the 22nd, decreasing to zero by the 28th. Overall there were 17 days with <3 hours, 6 with =>6 hours and 3 with =>9 hours. **Wind:** The mean speed of 7.9 mph is about average, but the speed on the windiest day is 2.3 mph below average, and the month's highest gust is 9 mph below average and equal lowest for February since 1998. Daily speeds were light or moderate to the 6th, mainly moderate or fresh to the 25th then light. Directions were between N and E on 1st, 6th to 12th and 27th and 28th, between E and S on 4th, 13th, 14th and 21st, and between S and W on the remaining 14 days.

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

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 28 th			
-1.3°	-1.9°	112%	74%	+1.4°	+1.6°	74%	80%	+4.3°	+2.3°	4%	156%

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

Wokingham climatological graphs for February 2021



Month: FEBRUARY 2021

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 ddc ff	Rain HH hrs
1	9.6	-0.5	4.5	2.0	6.0	7.0	0.0	0.0	996.3	1 0 0 0	0 0 0 0	0 0 0 0	37 1.6 3.7	124 15 2336	113 6	23 5.1	
2	13.4	2.8	1.1	2.8	5.9	7.0	2.4	0.0	994.6	0 0 0 0	0 0 0 0	0 0 0 0	209 6.8 7.9	225 23 1308	225 11	12 0.4	
3	10.4	6.8	tr	5.0	6.6	6.9	0.5	0.0	992.8	0 0 0 0	0 0 0 0	0 0 0 0	231 5.2 5.7	212 23 0029	223 10	01 0.1	
4	9.3	-0.7	5.6	-5.0	6.5	7.0	0.5	3.2	1009.7	1 1 0 0	0 0 0 1	0 0 0 1	150 3.7 4.2	128 16 2007	141 6	20 5.1	
5	10.7	2.0	4.7	-2.4	6.4	7.1	5.1	0.0	1009.3	0 1 0 0	0 0 1 1	0 0 1 1	182 3.3 3.9	247 22 1206	181 6	11 2.0	
6	8.7	-0.5	2.5	-3.9	6.3	7.1	5.0	3.7	1008.6	1 1 1 0	0 0 0 1	0 0 0 1	13 2.3 3.4	26 18 2225	27 8	22 3.3	
7	2.5	-0.4	tr	1.1	6.2	7.1	0.8	0.4	1006.1	1 0 1 0	0 0 0 0	0 0 0 0	19 11.8 11.8	23 29 2328	17 14	13 0.6	
8	-0.1	-2.0	tr	-4.5	5.8	7.1	0.0	24.0	1003.7	1 1 1 0	0 0 0 0	0 0 0 0	28 9.5 9.5	33 29 0021	24 12	03 5.1	
9	1.7	-2.2	0.3	-5.6	5.2	6.9	0.9	22.4	1006.9	1 1 1 1	0 0 1 0	0 0 1 0	54 7.1 7.4	69 24 1438	65 12	16 5.8	
10	3.6	-3.1	tr	-7.3	4.9	6.8	7.3	15.2	1014.6	1 1 1 0	0 0 0 0	0 0 0 0	30 6.1 6.2	40 20 1201	29 9	12 0.3	
11	2.1	-5.1	0.0	-10.5	4.4	6.6	4.7	19.5	1026.8	1 1 1 0	0 0 0 0	0 0 0 0	82 6.0 6.3	71 21 1544	106 10	11 0.0	
12	3.1	-2.2	0.0	-5.5	3.8	6.3	9.0	17.9	1029.7	1 1 0 0	0 0 0 0	0 0 0 0	73 9.7 9.8	69 28 1421	68 13	14 0.0	
13	2.1	-4.3	0.0	-8.0	3.5	6.1	3.7	11.4	1032.7	1 1 0 0	0 0 0 0	0 0 0 0	110 7.7 8.2	133 22 2019	138 10	22 0.0	
14	8.0	-3.0	3.4	-0.6	3.3	5.9	0.0	0.0	1026.6	1 1 0 0	0 0 0 0	0 0 0 0	151 9.7 9.8	141 24 0453	151 12	13 8.5	
15	12.5	2.1	2.3	2.2	3.8	5.7	1.6	0.0	1017.4	0 0 0 0	0 0 0 0	0 0 0 0	194 6.1 6.6	199 20 2206	200 9	15 2.1	
16	11.1	8.0	2.0	5.1	4.9	5.6	0.5	0.0	1008.9	0 0 0 0	0 0 0 0	0 0 0 0	205 8.2 8.4	197 24 0526	201 11	05 1.4	
17	11.6	7.2	2.6	3.5	5.5	5.8	0.0	0.0	1009.3	0 0 0 0	0 0 0 0	0 0 0 0	200 10.3 10.4	205 26 1656	193 12	21 3.0	
18	10.5	8.1	0.8	6.1	6.1	6.0	3.3	0.0	998.2	0 0 0 0	0 0 0 0	0 0 0 0	205 8.0 9.3	208 28 0939	177 12	04 1.2	
19	12.5	4.3	tr	0.0	6.0	6.2	0.0	0.0	1007.8	0 0 0 0	0 0 0 0	0 0 0 0	183 10.2 10.3	181 27 1255	189 13	13 0.1	
20	14.3	8.1	1.2	8.3	6.4	6.4	1.4	0.0	1003.0	0 0 0 0	0 0 0 0	0 0 0 0	183 9.9 10.1	196 27 2256	191 13	20 2.6	
21	13.6	9.4	tr	8.6	7.0	6.5	0.2	0.0	1008.5	0 0 0 0	0 0 0 0	0 0 0 0	166 3.7 4.5	209 22 0006	207 9	00 0.0	
22	9.5	5.3	0.3	2.3	7.3	6.8	0.0	0.0	1013.0	0 0 0 0	0 0 0 0	0 0 0 0	200 1.2 2.4	255 10 1114	254 4	11 0.9	
23	14.3	3.5	0.0	-1.6	7.1	7.0	7.5	0.0	1023.1	0 1 0 0	0 0 0 0	0 0 0 0	191 10.3 10.5	186 34 2039	201 16	14 0.0	
24	16.0	8.6	0.1	10.3	7.4	7.1	2.6	0.0	1022.7	0 0 0 0	0 0 0 0	0 0 0 0	200 10.8 11.0	198 30 0250	205 13	04 0.7	
25	11.9	8.2	0.1	7.0	8.0	7.2	0.9	0.0	1026.3	0 0 0 0	0 0 0 0	0 0 0 0	246 4.5 5.1	218 23 0158	208 11	01 0.7	
26	12.0	-1.6	0.0	-5.1	7.8	7.5	10.3	5.0	1038.2	1 1 0 0	0 0 0 0	0 0 0 0	261 1.3 2.1	307 12 1553	335 5	15 0.0	
27	13.4	-1.8	0.0	-4.8	7.1	7.6	10.3	7.1	1042.4	1 1 0 0	0 0 0 0	0 0 0 0	54 1.3 2.0	59 10 1324	50 4	13 0.0	
28	10.2	-1.1	0.0	-4.5	6.7	7.5	6.0	3.9	1038.8	1 1 0 0	0 0 0 1	0 0 0 1	46 3.3 3.5	70 17 1505	57 8	15 0.0	
Total			31.5				84.5	133.7									49.0
Mean	9.2	2.0		-0.2	5.9	6.7	3.02	4.8	1014.9					163 2.4 6.9			
Anom	+0.4	+0.1	67%	+1.1	+0.3	-0.4	100%			-1.8							
Daily mean		5.6															
Anom		+0.2															

Number of days with:

Air frost = 14 Ground frost = 14 Nil sun = 6
 Snow falling = 6 Snow lying = 1 Thunder = 0
 Hail=>5mm = 0 Hail<5mm or ice = 2 Fog at 09GMT = 4

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.

Anom = Departure from 1991-2020 climatological average.

All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for February 2021

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks					
1	30	8	36	03	07	2.8	1.9	94	4.4	996.3	2	032	10	5	2	8	6	2	/ /	86705	88708	1			
2	59	7	23	07	15	9.5	8.6	94	7.0	994.6	3	015	21	6	2	7	5	4	/ /	84615	87625	2			
3	58	7	20	03	04	7.4	6.5	94	6.1	992.8	3	003	15	2	2	7	5	4	2	/	81712	86656	87459	3	1Sc25 2Sc45 jPs Cld edge NNW
4	08	7	16	06	12	5.6	5.3	98	5.5	1009.7	2	010	42	4	1	7	6	2	3	/	87703			4	/Ac66 Ac vir vv >1k 0905
5	03	2	00	00	03	3.9	3.6	98	4.9	1009.3	3	012	41	4	0	2	6	0	0	0	82701			5	1Sc30
6	01	9	31	02	05	-0.4	-0.4	100	3.7	1008.6	1	004	49	4	4	9	/	/	/	/				6	vis 120m Rime st.
7	62	7	01	13	25	2.1	-2.2	73	3.2	1006.1	1	007	20	5	2	7	5	4	/ /	85618	87625		7	/Sc40	
8	63	8	03	11	21	-1.3	-5.0	76	2.6	1003.7	2	003	71	7	2	8	5	5	/ /	85622	88656		8	Gnd frzn. Light dusting snow lying	
9	62	7	04	07	16	-1.0	-3.5	83	2.9	1006.9	3	003	71	7	7	7	5	4	/ /				9	sn ly <0.5cm 80%	
10	80	1	02	06	13	-1.0	-3.8	81	2.8	1014.6	3	033	02	0	0	1	5	7	0	0	81650			10	Hoar slt. Sn ly <1cm 10%
11	58	6	10	04	10	-1.4	-2.8	90	3.0	1026.8	1	007	05	1	1	3	5	5	3	1	81625	83640		11	3Ac68 4Ci75 Hoar mod. Tr sn ly Gnd frzn
12	75	6	07	09	15	-0.8	-6.7	64	2.2	1029.7	2	019	01	2	2	2	0	9	3	1	82363	83070	85075	12	COTRA U/a cont Gnd frzn
13	65	7	08	08	16	-3.0	-7.9	69	2.1	1032.7	0	007	03	2	2	6	0	9	7	8	85465	87272		13	2Ac68 COTRA Hoar slt Gnd frzn
14	68	8	14	10	22	2.1	-4.6	61	2.7	1026.6	0	000	02	2	2	2	5	6	7	/	82640	86364	88468	14	Gnd frzn
15	25	8	20	06	10	8.0	7.6	97	6.4	1017.4	3	005	51	6	5	8	7	2	/ /	85703	88705		15		
16	56	8	22	07	18	9.1	8.2	94	6.8	1008.9	5	008	61	6	2	7	5	3	2	/	86706	87615	88545	16	
17	58	8	20	09	21	9.8	8.2	90	6.8	1009.3	3	002	50	6	5	7	5	3	/ /	85708	87612	88635	17		
18	56	8	19	11	21	9.6	7.0	84	6.3	998.2	6	019	62	6	1	7	5	4	2	/	83615	87625	88558	18	
19	82	8	19	13	25	8.1	5.0	81	5.4	1007.8	8	003	21	6	2	6	5	4	7	/	82615	85635	88360	19	
20	65	7	17	10	19	11.4	6.9	74	6.2	1003.0	5	002	03	2	2	1	5	7	2	/	81656	83359	87363	20	/Ci71
21	61	7	15	05	08	10.0	9.2	95	7.3	1008.5	2	012	21	6	2	6	5	3	7	2	81708	85645	85357	21	2Sc25 /Ac63 /Ci75 COTRA
22	59	8	19	02	06	8.7	6.8	88	6.1	1013.0	1	021	60	6	2	8	5	6	/ /	85633	88650		22		
23	82	6	19	12	23	8.7	4.9	77	5.3	1023.1	3	004	02	2	2	1	1	4	3	2	81812	83365		23	4Ci75 COTRA Cu fra
24	81	6	20	10	21	13.9	6.5	61	5.9	1022.7	2	003	02	2	2	1	8	6	3	1	81830	84358		24	1Sc45 3Ci80 COTRA Cu hum
25	68	8	26	05	10	8.8	6.9	88	6.1	1026.3	2	027	60	6	2	4	5	4	7	/	81710	84656	88358	25	1Sc30
26	65	0	27	03	05	3.6	2.1	90	4.3	1038.2	2	016	02	0	0	0	0	9	0	0				26	Hoar mod in shade Gnd frzn
27	75	0	22	01	02	3.2	1.4	88	4.1	1042.4	2	010	02	0	0	0	0	9	0	0				27	Hoar mod in shade. Gnd sfc frzn
28	02	9	02	03	08	2.9	2.6	98	4.5	1038.8	4	000	43	4	4	9	/	/	/	/				28	

Mean vis = 13.7 km

Mean cloud = 6.4 80%

Mean wind speed = 6.6 kn

Mean gust = 14 kn

Mean TT = 5.0 °C

Mean TdTd = 2.6 °C

Mean RH = 85.0 %

Mean r = 4.8 g/kg

Mean PPP = 1014.9 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 February 2021

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	58	8	30	03	07	3.4	1.6	88	4.3	1000.5	1	018	05	2	2	8	6	3	/	/	86708	88709				1		
2	59	4	21	07	19	12.1	9.1	82	7.3	994.2	7	008	25	8	1	4	8	4	0	0	83818					2	2Sc50 Cu med jpE&NW	
3	80	7	26	07	16	9.7	4.7	71	5.4	997.3	3	028	15	2	2	6	8	5	3	8	82825	85650				3	3Ac66 4Cs72 Cu med jp W&SE vv50k ex p	
4	59	7	15	05	08	9.1	8.3	95	6.8	1007.3	7	018	21	6	2	7	8	3	/	/	82705	83810	87625			4	Cu med jpNW vv30k ex p	
5	50	7	20	04	06	6.6	5.6	93	5.6	1008.2	6	010	65	6	2	7	8	4	/	/	81815	85622	87633			5	Cld edge W.	
6	80	6	35	04	09	8.2	2.9	69	4.7	1005.7	6	021	02	1	1	5	8	4	3	/	82818	84630				6	3Ac62 Cu med	
7	68	8	02	14	28	1.6	-3.5	69	3.0	1004.6	6	012	22	7	2	8	5	5	/	/	85625	88632				7	No sn ly	
8	65	7	03	09	22	-0.5	-4.3	74	2.8	1003.8	5	000	71	7	7	7	8	5	/	/	84820	87656				8	2Sc35 No sn ly	
9	62	7	07	11	24	-0.0	-4.3	73	2.8	1006.6	8	009	85	8	2	7	8	5	/	/	83822	86635	87650			9	Cu med Sn ly <1cm 10%	
10	86	5	02	08	15	1.4	-5.3	61	2.5	1018.6	1	018	26	8	1	5	8	6	0	0	82830	84650				10	Cu med jpW sn ly tr	
11	65	6	08	09	20	0.7	-6.6	58	2.3	1026.8	8	013	02	2	2	1	1	6	7	2	81832	83363	85070			11	Cu fra sn ly tr	
12	80	3	06	13	28	1.0	-7.5	53	2.1	1030.4	8	004	01	0	0	1	5	6	3	1	81635					12	2Ac64 1Ci75	
13	80	8	14	08	20	0.9	-9.7	45	1.8	1031.3	5	004	03	2	2	7	0	8	2	7	82457	87459	88270			13		
14	65	8	16	10	21	4.0	-2.2	64	3.2	1022.8	7	025	21	6	2	8	5	5	/	/	84625	87635	88650			14		
15	82	7	22	08	15	11.7	7.2	74	6.3	1018.6	0	000	03	2	2	7	8	5	/	1	82822	87633				15	/Ci80	
16	75	8	21	08	17	10.5	7.9	84	6.6	1007.6	7	008	02	2	2	7	8	4	2	/	83815	86625	88557			16		
17	35	8	20	09	18	10.1	9.0	93	7.1	1009.3	8	008	63	6	6	7	7	3	2	/	86706	87710	88520			17		
18	70	5	24	11	24	9.8	1.4	56	4.2	1003.3	3	018	16	1	1	5	3	5	6	0	81925	84835				18	1Sc50 1Ac60 jpW&NW vv60k ex p	
19	58	8	19	12	27	9.7	7.5	86	6.5	1006.5	7	009	60	6	2	7	5	4	2	/	82710	86618	88550			19		
20	72	7	18	10	24	13.5	5.9	60	5.8	1000.3	7	015	21	6	2	3	0	9	7	8	81357	83360	87275			20		
21	65	8	15	06	12	12.7	8.4	75	6.9	1008.6	5	000	02	2	2	8	5	4	/	/	86618	88623				21		
22	84	7	29	02	05	9.2	7.6	90	6.5	1016.5	2	014	01	6	2	7	8	4	/	/	81810	83620	87650			22	Cu hum Cld edge NW	
23	82	7	20	17	31	13.7	4.3	53	5.1	1022.2	3	002	02	2	2	1	8	6	4	1	81840	87078				23	1Sc50 2Ac65 Cu hum	
24	82	7	19	10	18	14.4	8.4	67	6.8	1021.6	7	008	02	6	2	1	5	6	7	1	81650	86359	87080			24	COTRA	
25	84	6	25	06	13	11.4	2.9	56	4.6	1028.4	2	009	01	6	2	1	2	6	7	/	81830	86363				25	/Ac66 Cu med	
26	84	1	35	04	10	11.9	-0.3	43	3.6	1037.8	6	008	03	0	0	1	8	6	0	1	81845					26	1Sc50 1Ci80 Cu hum	
27	83	1	06	04	08	12.9	2.5	49	4.4	1040.3	6	018	02	0	0	1	4	6	0	0	81837					27	1Sc40 Cu hum	
28	58	0	06	07	15	10.1	3.8	65	4.9	1035.6	7	024	05	0	0	0	0	9	0	0						28		

Mean vis = 25.1 km

Mean cloud = 6.1 76%

Mean wind speed = 8.1 kn

Mean gust = 17 kn

Mean TT = 7.9 °C

Mean TdTd = 2.3 °C

Mean RH = 69.5 %

Mean r = 4.8 g/kg

Mean PPP = 1014.8 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 2021	Hour	01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb	07-Feb	08-Feb	09-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb
	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.24	0.19	0.00	0.26	0.00	0.00
	8	0.00	0.00	0.00	0.03	1.00	0.04	0.00	0.00	0.00	1.00	0.78	0.93	0.33	0.00	0.00
	9	0.00	0.52	0.00	0.48	1.00	0.26	0.55	0.00	0.00	1.00	0.98	1.00	0.26	0.00	0.00
	10	0.00	0.12	0.00	0.00	0.09	0.34	0.21	0.00	0.00	1.00	0.09	1.00	0.82	0.00	0.04
	11	0.00	0.09	0.00	0.00	0.73	1.00	0.00	0.00	0.00	0.69	0.33	1.00	0.57	0.00	0.26
	12	0.00	0.82	0.08	0.00	0.88	1.00	0.00	0.00	0.00	0.58	0.48	1.00	1.00	0.00	0.91
	13	0.00	0.45	0.06	0.00	0.03	0.95	0.01	0.00	0.21	0.41	0.62	1.00	0.11	0.00	0.36
	14	0.00	0.22	0.00	0.00	0.00	0.85	0.00	0.00	0.00	0.76	0.24	1.00	0.35	0.00	0.05
	15	0.00	0.16	0.00	0.00	0.68	0.58	0.00	0.00	0.46	0.69	0.88	1.00	0.00	0.00	0.00
	16	0.00	0.00	0.38	0.00	0.55	0.01	0.00	0.00	0.21	0.95	0.09	1.00	0.00	0.00	0.00
	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	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
	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot		0.00	2.37	0.52	0.50	5.05	5.03	0.77	0.00	0.89	7.33	4.67	8.97	3.70	0.00	1.62

	Hour	16-Feb	17-Feb	18-Feb	19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	28-Feb	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
	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
	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
	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
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	0.00	0.00	0.10	0.00	0.15	0.00	0.00	0.17	0.48	0.00	0.84	0.80	0.00	0.12
	8	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.65	0.97	0.00	1.00	1.00	0.00	0.28
	9	0.00	0.00	0.00	0.00	0.03	0.08	0.00	1.00	0.66	0.00	1.00	1.00	0.00	0.35
	10	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.98	0.03	0.00	1.00	1.00	0.00	0.26
	11	0.00	0.00	0.00	0.00	0.42	0.02	0.00	1.00	0.18	0.00	1.00	1.00	0.51	0.31
	12	0.00	0.00	0.42	0.00	0.00	0.03	0.00	1.00	0.03	0.09	1.00	1.00	1.00	0.40
	13	0.00	0.00	0.62	0.00	0.00	0.03	0.00	0.84	0.04	0.00	1.00	1.00	1.00	0.31
	14	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.25	0.02	0.24	1.00	1.00	1.00	0.28
	15	0.39	0.00	0.20	0.00	0.12	0.00	0.00	0.91	0.17	0.00	1.00	1.00	1.00	0.33
	16	0.12	0.00	1.00	0.00	0.04	0.00	0.00	0.67	0.00	0.18	1.00	1.00	1.00	0.29
	17	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.49	0.48	0.53	0.07
	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	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
	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
	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
	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
Tot		0.51	0.00	3.32	0.00	1.39	0.16	0.00	7.45	2.59	0.89	10.32	10.28	6.04	84.39

FEBRUARY 2021	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	3.02	3.6	1403	2.6	402	92.7	97.6	0	86.4	1426	2.0	4.4	4.7	2359	4.2	1556	997.31	1002.1	1740	990.9	7	0.7
2	9.22	13.4	1317	3.4	2	88.9	99.0	628	73.2	1315	7.4	6.5	7.6	1109	4.7	9	994.27	998.2	0	992.6	1922	4
3	7.67	10.4	1342	3.4	2323	83.2	94.9	847	67.4	1531	4.9	5.5	6.4	1226	4.4	2320	997.14	1006.8	2358	992.2	711	0
4	5.47	9.3	1512	-0.7	609	95.8	99.0	806	90.2	5	4.8	5.5	6.9	1500	3.5	609	1007.94	1009.8	852	1006.4	2040	4.5
5	6.31	10.7	1258	2.0	802	93.6	98.8	838	73.7	1259	5.3	5.6	6.3	1128	4.3	747	1008.08	1009.6	1023	1006.6	130	4.6
6	3.75	8.7	1331	-0.5	753	92.9	99.7	908	69.4	1459	2.6	4.6	5.9	1229	3.6	752	1006.96	1008.7	808	1004.6	2000	2.3
7	1.75	3.1	125	-0.3	2358	78.3	96.1	104	64.8	1314	-1.7	3.4	4.6	125	2.7	2336	1005.03	1006.5	954	1003.6	2057	0
8	-1.12	-0.1	1404	-2.0	358	77.6	88.8	1745	69.7	217	-4.5	2.7	3.0	1719	2.4	217	1004.20	1006.6	2343	1003.0	358	0
9	-0.84	1.7	1320	-2.2	57	81.9	88.3	422	68.5	1318	-3.6	2.9	3.2	1117	2.7	1456	1006.97	1008.3	2357	1005.9	1620	0.3
10	-0.67	3.6	1232	-4.2	2314	74.3	92.8	2316	52.5	1210	-4.8	2.6	2.9	1236	2.2	1627	1016.35	1024.7	2352	1008.2	7	0
11	-1.79	2.1	1302	-5.1	305	76.3	95.8	732	50.8	1302	-5.6	2.5	3.0	859	2.1	1807	1026.66	1028.5	1210	1024.6	1	0.1
12	-0.89	3.1	1148	-3.4	2351	64.0	77.1	238	45.6	1226	-7.0	2.2	2.5	255	2.0	1217	1029.96	1032.7	2211	1027.2	51	0
13	-1.10	1.8	1407	-4.3	702	60.4	78.6	346	41.5	1412	-8.1	2.0	2.2	1119	1.7	1412	1031.75	1033.3	102	1029.6	2239	0
14	2.88	4.8	2359	1.2	239	68.9	91.7	2202	54.0	9	-2.4	3.2	4.8	2359	2.2	7	1024.57	1030.4	11	1019.3	2357	1.3
15	8.76	12.5	1227	4.8	1	89.5	97.2	807	70.1	1402	7.1	6.2	7.5	1148	4.8	1	1017.74	1019.5	0	1014.6	2249	2.2
16	9.26	11.1	1532	7.2	2356	87.2	94.4	948	79.2	409	7.2	6.3	7.0	1024	5.7	2356	1009.64	1015.2	1	1007.0	1539	2.8
17	9.67	11.6	1324	7.3	7	87.6	94.1	1528	77.6	2141	7.7	6.5	7.2	1551	5.6	2354	1009.23	1011.2	6	1006.5	2359	3
18	7.82	10.5	1453	4.3	2310	76.9	91.1	1028	54.0	1444	3.9	5.1	6.5	936	4.0	1521	1003.67	1009.7	2223	997.9	835	1.4
19	8.64	12.2	2151	4.3	20	81.8	88.9	257	72.7	2151	5.7	5.7	6.6	2051	4.5	15	1007.17	1009.8	140	1004.2	2339	0
20	12.76	14.3	1943	11.0	753	66.6	78.4	622	55.0	1733	6.6	6.1	6.9	2310	5.5	1733	1002.52	1004.6	108	1000.0	1654	0
21	10.26	13.6	1310	5.9	2352	86.6	95.8	823	72.3	1543	8.1	6.7	7.7	1307	5.5	2352	1008.13	1009.9	2352	1004.1	1	1.2
22	7.79	9.5	1830	4.8	2359	91.4	96.7	702	80.5	1857	6.5	6.0	6.6	1342	5.0	2358	1015.21	1022.2	2359	1009.5	33	0.3
23	9.78	14.3	1305	3.5	203	74.2	97.2	646	49.2	1305	5.0	5.4	6.1	1909	4.6	203	1022.49	1023.4	918	1021.3	1253	0
24	13.44	16.0	1155	12.1	2359	67.4	77.7	2359	56.8	927	7.5	6.4	7.2	1155	5.8	2304	1021.89	1023.0	1023	1020.4	1655	0
25	9.06	12.1	0	2.1	2340	77.8	93.6	2344	51.0	1324	5.2	5.5	7.1	343	4.0	1324	1027.40	1034.7	2357	1021.3	236	0.3
26	4.43	12.0	1455	-1.6	700	78.2	98.1	757	39.1	1434	0.4	3.8	4.9	1042	3.2	1406	1037.76	1040.8	2352	1034.5	1	0
27	4.88	13.4	1507	-1.8	652	79.6	97.3	723	47.6	1508	1.2	4.0	5.2	1056	3.1	652	1041.07	1042.5	931	1039.7	1537	0
28	4.00	10.2	1513	-1.1	522	88.4	98.4	946	63.6	1527	2.1	4.3	5.3	1232	3.3	523	1037.02	1040.3	4	1033.9	2026	0

Total																						29.0
Mean	5.51	8.91		1.88		80.8	92.75		63.44		2.27	4.71	5.56		3.84		1014.93	1018.32			1011.78	
Max	13.44	16.03		12.08		95.8	99.70		90.20		8.06	6.73	7.65		5.78		1041.07	1042.50			1039.73	
Min	-1.79	-0.15		-5.06		60.4	77.10		39.07		-8.08	2.02	2.25		1.71		994.27	998.21			990.92	

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

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

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

Temperature and humidity are from an aspirated Vaisala HMP45 unit
 Pressure is from a Setra CS100 sensor
 Data is logged on a Campbell Scientific CR10X measurement and control system

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

WINTER 2020/21

				Rank in the past 139 years	
Temperature (°C)					
Mean maximum	8.1	(-0.3)		49 th highest	
Mean minimum	2.0	(-0.1)		52 nd highest	
Daily mean	5.0	(-0.3)		52 nd highest	
Rainfall total (mm)	195.6	(110 %)		38 th highest	
Sunshine total (hours)	194.4	(86 %)			
N° of:					
Dry days	38	(-6)	Wet days	44	(+11)
Days with: Air frost	40	(+10)	Ground frost	50	(0)
			Snow falling	10	(+1)
			Snow lying	4	(0)
Thunder	0	(-1)	Hail ≥5mm	0	(0)
			Small hail/ice	4	(0)
			Fog @09 GMT	8	(+3)
			Nil sun	26	(-1)
Air pressure MSL : Mean @09 GMT (mbar)	1009.8	(-6.6)			

Departure from 1991 to 2020 average shown in brackets.

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

Temperature: The mean this winter is 0.3° below the current climatological average, but is 0.3° above the long-term median. In this millennium 14 winters have been milder and 6 colder. In terms of the mean maximum, it is lowest since 2013, but the mean minimum is lowest only since 2018. The mean grass min of -0.2° is 0.9° above the 42 year average and the season's lowest was -10.5° on 11th February. The mean earth temperature at 30 cm depth was 6.5°, anomaly +0.5°, and at 1m depth 7.8°, anomaly -0.3°. The season's highest air temp. was 16.0° on 24th February, 2.1° above the median, and the lowest max was -0.1° on 8th February, 0.1° above its median. The highest min was 9.6° on 22nd December, 0.3° below the median, and the lowest min was -5.1° on 11th February, 2.4° above its median. Air frost duration was 314.4 hours, anomaly 115%, and the number of days with air frost is 10 more than average and most since 2011. January was the coldest month, mean 4.0°, anomaly -1.1°, and February the mildest with 5.6°, anomaly +0.2°, but December's mean was very similar at 5.5°, anomaly +0.5°. **Rainfall:** This has been a wet winter season with 10% more rain than average, the total of 195.6 mm putting it in the top 30% of ranked values since 1882. There have been 7 wetter winters this millennium, including the current record holder 2014, when 378.5 mm fell, nearly twice as much as in this winter. January was the wettest month with 86.8 mm, anomaly 132%, then December with 77.3 mm, 123%, then a relatively dry February with 31.5 mm, 67%. January 27th was the wettest day with 21.0 mm, which is about 5 mm above the median value. The next highest daily fall was 14.6 mm on the 26th December, an isolated wet day in a relatively dry period running from 24th December to 10th January. Apart from that one wet day only 1.8 mm fell over 17 days culminating in a 9 day dry spell to the 10th January. February also contained a good deal of dry weather with no days having over 10 mm, and only 0.3 mm in 7 days to the 13th, and 0.5 mm in the 8 days to the 28th. Rainfall duration was 200.5 hours, 120% of average. The number of dry days is 6 fewer than average and the number of wet days (1mm or more) is 11 more than average and most since 2014. Snowfall was recorded in each of the months, although only 1 day in December, then 3 in January and 6 in February. Snow lying (>50% at 09 GMT) occurred on 3 days in January and 1 in February, maximum depth 2 cm on the 24th and 25th January. Rainfall rate reached the violent category (at least 50 mm/hr) on 19th December, 102 mm/hr at 0840 GMT, and 5th February, 62 mm/hr at 1339 GMT. Ice pellets fell on the 20th and 22nd January and 5th February, and snow pellets on the 9th February. There was no thunder this season. **Sunshine:** The daily mean of 2.16 hours is below the winter average of 2.50 hr/day, and makes this the dullest winter since 2013. February was the sunniest month, daily mean 3.02 hr, December next with 2.18 hr, then a very poor January with 1.36 hr/day, just 58% of average. The sunniest days were the 26th and 27th February, both 10.3 hours, equal highest with 2019 for the season since before 1999. The 20 day period ending 14th January was especially dull, with 13 days having zero to 0.1 hours, and only 3 having >1 hour of sunshine. **Wind:** The overall mean speed of 7.3 mph is 0.5 mph below average. The windiest day was the 20th January, mean 15.7 mph, and the season's highest gust of 50 mph was on the 27th December. February was the windiest month, mean 7.9 mph, and December the least windy, mean 6.8 mph. The 27th February was the least windy day, mean 2.3 mph, and there were 1036 calm minutes. Daily mean direction/number of days: N,10 NE,10 E,4 SE,3 S,22 SW,25 W,8 NW,8. Compared with average S winds were 7.9% more frequent and SW winds 8.1% less frequent. N and NW winds combined were 5.4% more frequent at the expense of NE, E, SE and W. The overall mean direction vector was 210°, (SSW). **Pressure:** The season's highest MSL pressure was 1042.5 mbar on 27th February and the lowest was 970.7 mbar on the 28th December, a span of 71.8 mbar, 7.7 mbar above average. **Humidity:** The overall mean relative humidity was 86.7% and the lowest value was 39% on the 26th February. The mean water vapour content per kg of air was 4.8g at 0900 GMT and 5.0g at 1500 GMT, both exactly average. **December:** Wet with above average temperature and average sunshine. Mean max lowest since 2010. Number of wet days 2nd highest since 1999. Lowest air pressure equal lowest since 1989. **January:** Wet and dull with below average temperature. 3rd wettest this millennium. 27th was wettest January day since 2001. Snow on 24th gave a maximum depth of 5 cm mid-morning. 2nd dullest since 1996. Lowest pressure 2nd lowest since 1990. **February:** Temperature and sunshine near, and rainfall below, average. 8th, first February ice day since 2006. 10.3 hours of sunshine on both 26th and 27th equal highest since before 1999.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom	Sun hrs	Anom	Mean Wind mph	Max gust	Mean pressure	Anom
Dec	8.2°	+0.2°	2.9°	+0.8°	77.3	123%	67.6	100%	6.8	50	1003.4	-12.3
Jan	6.9°	-1.2°	1.1°	-0.9°	86.8	132%	42.3	58%	7.0	41	1011.6	-4.7
Feb	9.2°	+0.4°	2.0°	+0.1°	31.5	67%	84.5	100%	7.9	39	1014.9	-1.8

Appendix 1.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix 2.

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

VV : Visibility.

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

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

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

Code figure 89 = visibility above 70 km.

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

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

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

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

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

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

RH : Relative humidity at 1.2m, %.

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

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

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

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

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

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

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

4 = Steady, pressure the same as 3 hours ago

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

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

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

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hail includes large hail, small hail and snow pellets.

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

Code figures:

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

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

Cl : Type of low cloud

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

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

Cm : Type of medium cloud.

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

Ch : Type of high cloud

0 = No high cloud

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

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

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

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

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

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

7 = Veil of Cirrostratus covering the celestial dome.

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

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

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

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

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

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

00 to 50 = Height in hundreds of feet

51 to 55 Not used

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

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