

WOKINGHAM METEOROLOGICAL DATA

Wokingham Climatological Station, Emmbrook, Berkshire.

Lat/Long 51°25'N 00°51'W NGR (SU)798701 Altitude 46m ASL. Grass min corrected due to sensor error

Monthly Means and Totals

FEBRUARY 2020

Temperature (°C)		Anomaly		Rank in the past 139 years					
Mean maximum	10.4	+2.2		9 th highest					
Mean minimum	3.8	+2.3		12 th highest					
Daily mean	7.1	+2.2		8 th highest					
Highest maximum	14.0	on 23 rd	Lowest maximum	6.2	on 6 th				
Highest minimum	9.6	on 16 th	Lowest minimum	-2.6	on 7 th				
Mean grass minimum	1.3	+3.1	Lowest grass minimum	-6.4	on 7 th				
Mean earth @30 cm	6.9	+1.6	Earth @100 cm	7.6					
Frost duration (hrs)	24.6		Rain duration (hrs)	83.4					
Rainfall total (mm)	99.3	231%		6 th highest					
Highest daily fall	17.7	on 15 th	Highest rate mm/hr	182	on 9 th				
Number of: Dry days (<0.2mm)	8	Wet days (>0.9mm)	15	days ≥5mm	7				
Sunshine total (hrs)	86.4	Daily mean	2.98	101%	Sunniest day	7.7	on 11 th		
N° days with: Air frost	4	Ground frost	13	Snow falling	1	Snow lying	0		
Thunder	0	Hail ≥5mm	0	Small hail/ice	4	Fog @09	3	Nil sun	4
Pressure MSL : Mean @09 GMT, mbar	1010.4	-7.0	Highest	1038.5	on 5 th	Lowest	981.7	on 29 th	
Relative humidity : Mean (%)	80.5	Lowest	41	on 11 th	Water vapour (g/kg), mean at 09 and 15 GMT	5.3,	5.2		
Overall mean wind speed (mph)	11.7	Windiest day	21.3	on 9 th	Max gust	54	on 9 th		
Wind direction (days)	N 0	NE 1	E 0	SE 1	S 3	SW 21	W 2	NW 1	
Least windy day (mph)	2.1	on 6 th	Calm; less than 0.5 mph (minutes)	270					

Anomaly = departure from 1981 to 2010 average (degrees C, percent and mbar).

Notes: **Very Mild, Very Wet, Very Windy, Sunshine Near Average.**

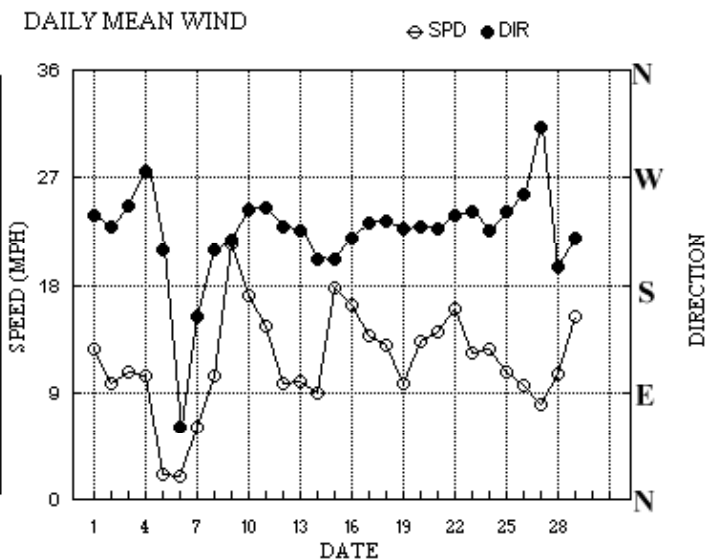
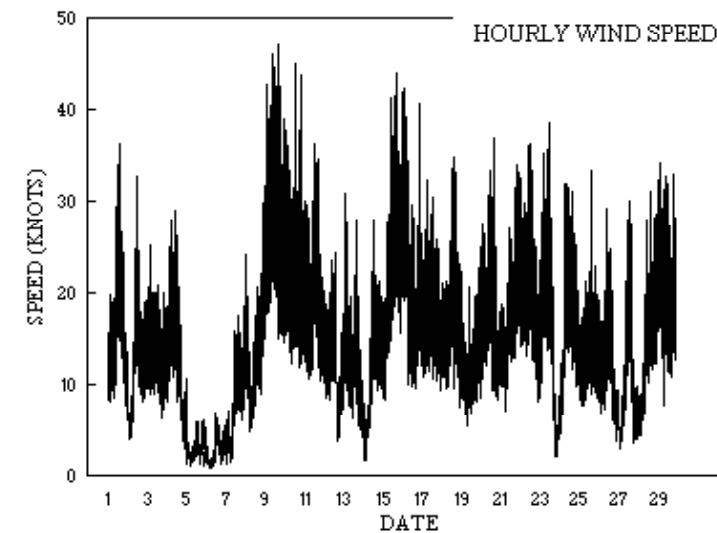
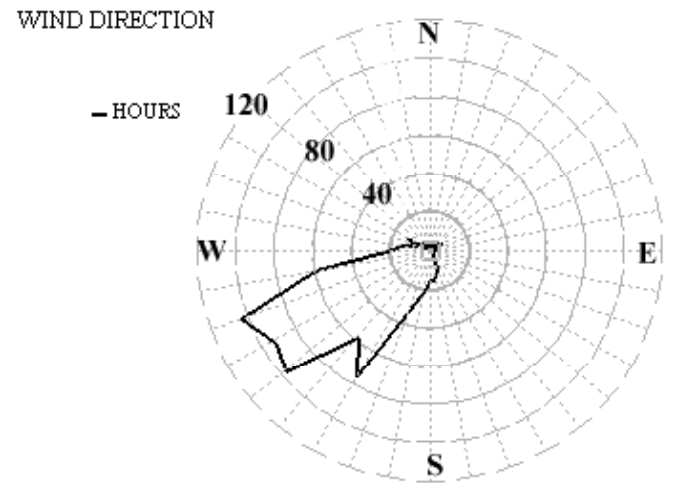
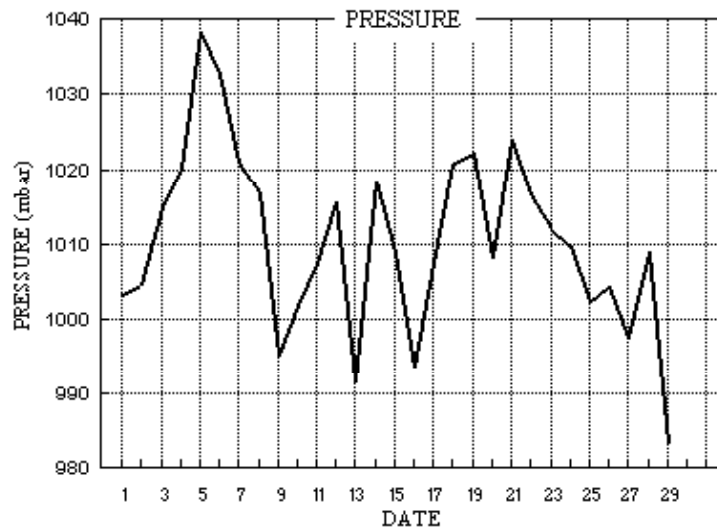
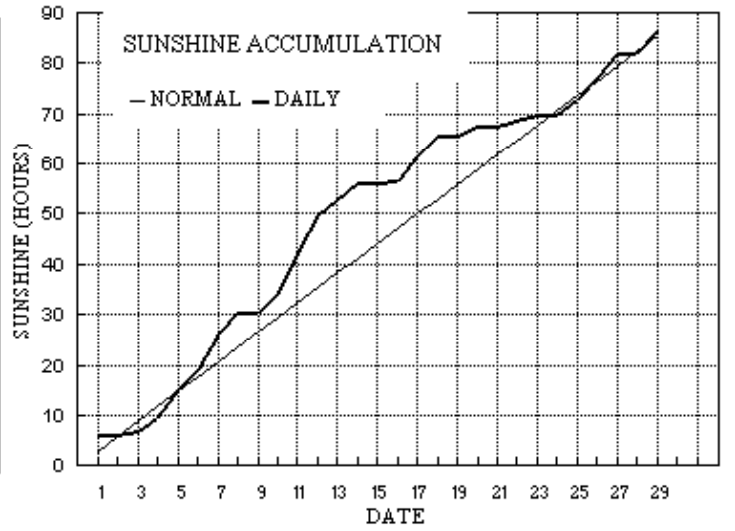
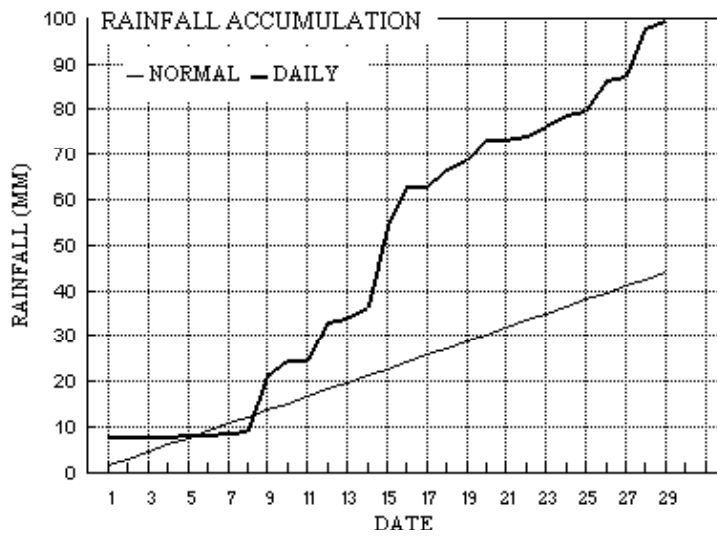
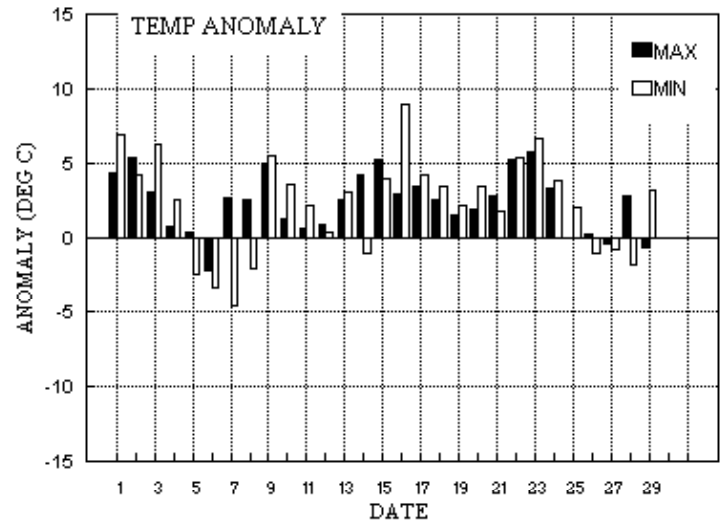
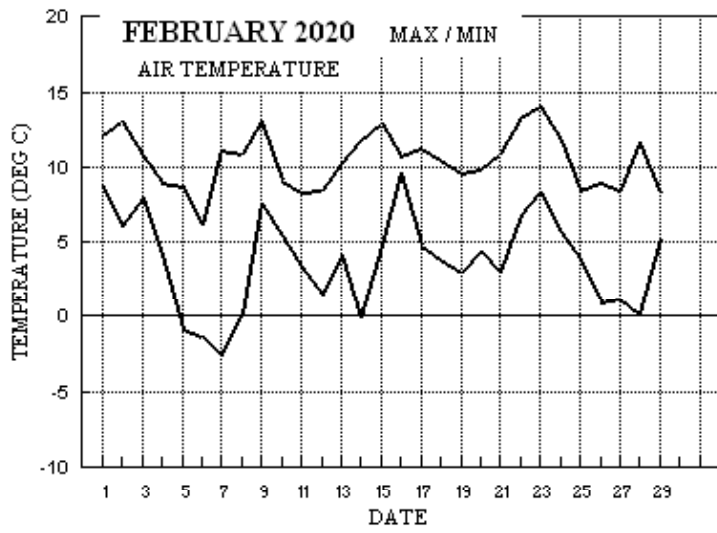
Temperature: The mean is equal highest with 2014 since 2002, and is well into the very mild category, although the mean maximum is 1.4° lower than in last February, which holds the record. However, the mean minimum is highest since 2014, and is 2.2° higher than in last February. The highest max is 1.0° above the median but the lowest max is 3.9° above its median and is 7th highest in 108 years. The highest min is 1.6° above the median while the lowest min is 2.4° above its median and ranks 9th highest in 117 years. The mean grass min is highest since 1990, and the lowest grass min is 4.2° above average and is highest since 2014. Earth temperature at 30 cm depth is well above average, but is closer to average at 1m depth. The number of both air and ground frosts is 6 below average and the duration of air frost is 62 hours below average. Anomalies for daily max were +ve except for the 6th, 27th and 29th, and were over +5° on the 2nd, 9th, 15th, 22nd and 23rd, with extreme values of +5.8° on the 23rd and -2.2° on the 6th. Anomalies for daily min were +ve on all but 7 days, and were over +5° on the 1st, 3rd, 9th, 16th, 22nd and 23rd, with extreme values of +8.9° on the 16th and -4.7° on the 7th. **Rainfall:** This has been a very wet February, one of the wettest in the past 139 years, ranking 6th highest in that period. It is wettest since 2014 and before that 1951. Dry days were rare after the 6th when a 5 day dry spell ended, and the total of 8 for the month is equal lowest with 2014 since 2010. Also, the number of days with =>5 mm is most since 2007, and before that 1990. The duration of measurable rain is 32.1 hours above average and is most of the month since 1995. The 15th with 17.7 mm was the wettest February day since 2014. Daily rainfall accumulation compared with normal was 5mm in deficit on the 8th, but this became a surplus of 38 mm on the 16th, increasing to 56 mm by the 29th. There was local flooding mid-month when the Emm and Loddon over-topped their banks. Sleet fell on the 27th and ice pellets on the 10th, 18th, 20th and 29th. Rainfall rate exceeded the violent category on the 9th, 16th and 20th. Thunder was not heard this month. Fog occurred at times on the 5th, 6th and 7th. **Sunshine:** The total this month is close to the average for February and similarly in this millennium 10 Februaries have been less sunny than this year's. There were more sunny days before mid-month than after, there being 5 with >50% of the maximum up to the 12th and just one after. Daily accumulation was close to normal until the 6th, then a surplus built up, reaching 13 hours by the 13th, but this had fallen back to 10 hours by the 17th, and fell further to zero by the 24th where it remained. Overall there were 14 days with less than 3 hours and 4 with =>6 hours. **Wind:** This has been the windiest February since 1990, with mean speed 3.7 mph above average. The mean speed on the windiest day, 21.3 mph, is also highest for a February day since 1990, but the month's highest gust of 54 mph is highest only since 2017. Despite the windy nature of the month, there was a calm episode when a transient anticyclone on the 5th brought 2 days with little wind. Daily mean directions were mostly SW'ly, but W'ly on the 4th, NW'ly on the 27th, and light and variable from 5th to 7th. Speeds were mainly fresh or strong, but were very light on 5th and 6th, and increased to very strong on 9th, 15th and 16th.

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 29 th			
+2.3°	+1.6°	163%	117%	+2.6°	+3.1°	319%	112%	+2.1°	+2.1°	190%	72%

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

Wokingham climatological graphs for February 2020



Daily meteorological data.

Emmbrook, WOKINGHAM, Berkshire.

Month: FEBRUARY 2020

Corrected grass min 6th to 15th.

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf Sl	Th Ha	Ic Fg	Vec ddd	ff	sp	Max gust ddd	gg	HHhh	High hr ddd	ff	HH	Rain hrs
1	12.1	8.7	8.1	4.8	7.3	7.3	6.0	0.0	1003.4	0	0	0	0	238	10.7	11.0	269	37	1522	253	17	13	4.8
2	13.0	6.0	tr	2.1	7.2	7.5	0.1	0.0	1004.5	0	0	0	0	228	7.3	8.5	262	33	1219	247	13	11	0.0
3	10.8	7.9	tr	3.3	7.5	7.6	0.9	0.0	1014.8	0	0	0	0	247	9.0	9.3	234	25	0400	229	11	00	0.0
4	8.9	4.1	0.0	-0.2	7.3	7.7	2.6	0.0	1020.1	0	1	0	0	275	8.4	9.0	274	29	1033	290	14	11	0.0
5	8.7	-0.8	0.1	-3.8	7.0	7.7	5.6	2.8	1038.3	1	1	0	0	209	1.4	1.8	176	6	2002	244	3	13	0.0
6	6.2	-1.4	0.0	-5.7	6.5	7.7	4.0	12.8	1032.7	1	1	0	0	61	1.0	1.8	28	7	1210	18	4	12	0.0
7	11.1	-2.6	0.4	-6.4	6.0	7.6	6.9	8.9	1021.0	1	1	0	0	154	3.8	5.3	190	19	2242	192	9	23	0.5
8	10.9	0.1	0.7	2.2	6.2	7.4	4.3	0.0	1016.8	0	0	0	0	209	8.7	9.1	199	30	2226	200	15	23	1.4
9	13.0	7.5	11.9	5.9	6.6	7.4	0.0	0.0	995.1	0	0	0	0	217	17.8	18.5	235	47	1530	209	22	11	5.4
10	9.1	5.4	3.6	2.2	7.1	7.4	4.0	0.0	1001.7	0	0	0	0	243	14.6	14.9	243	45	1316	243	18	14	2.1
11	8.3	3.4	0.0	-0.5	6.8	7.5	7.7	0.0	1007.3	0	1	0	0	245	12.5	12.6	262	36	1346	259	19	13	0.0
12	8.5	1.5	8.3	-2.3	6.3	7.5	7.5	0.0	1015.5	0	1	0	0	229	7.7	8.5	249	25	1442	247	12	12	4.7
13	10.2	4.1	0.9	-0.2	6.1	7.4	3.0	0.0	991.6	0	1	0	0	226	6.3	8.7	162	31	0353	164	14	03	0.4
14	11.8	-0.1	2.5	-3.9	6.3	7.3	3.5	0.1	1018.5	1	1	0	0	201	7.7	7.9	206	28	1304	215	14	12	7.7
15	12.9	4.7	17.7	9.0	6.7	7.3	0.0	0.0	1009.0	0	0	0	0	202	15.4	15.4	217	44	1649	202	20	17	12.4
16	10.7	9.6	8.6	9.1	7.5	7.3	0.4	0.0	993.5	0	0	0	0	219	13.9	14.2	202	43	0351	202	21	00	5.9
17	11.2	4.7	tr	1.5	7.6	7.5	5.1	0.0	1007.5	0	0	0	0	232	11.8	12.0	224	32	0703	231	14	10	0.1
18	10.5	3.9	3.8	0.6	7.2	7.6	4.1	0.0	1020.7	0	0	0	0	233	11.2	11.3	264	35	1408	229	16	13	1.1
19	9.6	3.0	2.1	-0.7	7.0	7.6	0.1	0.0	1022.2	0	1	0	0	227	8.0	8.5	210	25	2303	217	11	22	3.0
20	9.9	4.4	4.6	7.2	7.0	7.6	1.6	0.0	1008.1	0	0	0	0	228	10.8	11.5	256	37	1543	207	16	11	1.7
21	10.9	3.0	tr	-0.8	6.9	7.6	0.2	0.0	1023.9	0	1	0	0	227	12.2	12.2	216	34	2142	227	17	23	0.0
22	13.3	6.8	0.8	7.0	7.0	7.6	1.0	0.0	1016.6	0	0	0	0	238	13.6	13.9	247	36	1304	254	18	13	2.7
23	14.0	8.3	2.4	6.7	7.5	7.6	1.4	0.0	1011.9	0	0	0	0	242	9.4	10.8	261	39	1105	255	18	11	3.9
24	11.7	5.6	2.4	4.7	7.8	7.7	0.0	0.0	1009.6	0	0	0	0	225	9.8	11.0	223	32	0833	226	17	08	3.3
25	8.4	3.9	0.7	1.0	7.8	7.8	2.7	0.0	1002.4	0	0	0	0	242	9.3	9.4	264	34	1549	254	11	12	0.4
26	8.9	0.9	6.9	-2.2	7.3	7.9	4.3	0.0	1004.4	0	1	0	0	255	7.6	8.3	274	29	1150	272	12	11	6.7
27	8.4	1.2	0.7	-1.3	6.8	7.9	4.8	0.0	997.4	0	1	1	0	311	3.9	7.0	314	30	1522	310	14	14	2.0
28	11.6	0.1	10.7	-5.2	6.4	7.7	0.0	0.0	1009.0	0	1	0	0	195	8.6	9.2	219	31	1520	223	14	15	12.6
29	8.2	5.2	1.4	5.0	6.7	7.6	4.6	0.0	983.2	0	0	0	0	219	12.6	13.4	190	34	0427	202	17	02	0.6
Total			99.3				86.4	24.6															83.4
Mean	10.4	3.8		1.3	6.9	7.6	2.98	0.8	1010.4					229	8.8	10							
Anom	+2.2	+2.3	231%	+3.1	+1.6	+0.8	101%																-7.0

Daily mean 7.1 Pressure, abs highest = 1038.5 on 5
 Anom +2.2 Pressure, abs lowest = 981.7 on 29

Number of days with:
 Air frost = 4 Ground frost = 13 Nil sun = 4
 Snow falling = 1 Snow lying = 0 Thunder = 0
 Hail=>5mm = 0 Hail<5mm or ice = 4 Fog at 09GMT = 3

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 1981-2010 climatological average.
 All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for FEBRUARY 2020

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NChs	hshs	NChshs	Date	Remarks
1	65	5	24	08	17	9.3	5.8	79	5.8	1003.4	3	018	02	2	2	1	5	5	0	8	81628	85075				1	1Cs72
2	84	7	25	12	21	11.8	10.0	89	7.7	1004.5	3	017	20	5	6	7	5	4	3	8	87615	83365	87272			2	
3	62	2	23	09	19	8.2	5.5	83	5.6	1014.8	2	015	03	0	0	1	5	6	7	1	81645					3	1Ac62 2Ci75 COTRA
4	82	3	26	11	21	6.0	0.1	66	3.8	1020.1	3	026	03	0	0	3	5	6	0	0	81640	83645				4	
5	08	7	21	01	03	1.7	1.6	99	4.1	1038.3	3	011	41	4	2	0	0	9	0	1	87075					5	Hoar slt. VV1.2k N U/a cont
6	01	9	15	01	02	-0.4	-0.4	100	3.6	1032.7	6	005	49	4	4	9	/	/	/	/						6	VV150m Rime slt
7	01	0	25	01	07	0.1	0.1	100	3.8	1021.0	7	018	44	4	4	0	0	9	0	0						7	VV100m Rime slt melting.
8	72	7	22	06	10	7.6	4.6	81	5.2	1016.8	2	028	02	2	2	1	1	5	7	8	81822	85363	87465			8	/Cs72 Cu hum
9	56	8	20	22	43	10.9	9.3	90	7.4	995.1	7	053	58	6	5	8	5	4	/	/	87710	88620				9	
10	63	3	23	14	26	6.6	2.1	73	4.5	1001.7	1	028	03	0	0	1	1	6	6	3	81832	83068				10	1Ac65 Cu fra
11	80	1	24	11	22	4.2	-0.4	72	3.7	1007.3	2	012	02	0	0	1	2	5	0	3	81825					11	1Ci68 Cb top SW
12	82	1	24	09	20	4.1	0.3	76	3.8	1015.5	2	011	02	0	0	0	0	9	0	1	81Ci75					12	Hoar slt.
13	58	6	19	08	18	6.9	5.2	89	5.6	991.6	7	022	25	8	1	2	8	4	7	1	81815	83358	85075			13	2Sc45 COTRA jpNW
14	70	7	18	04	10	4.5	3.3	92	4.8	1018.5	1	011	02	2	2	1	5	5	3	1	81620	83072	87080			14	1Ac65 COTRA
15	59	8	20	13	27	11.8	9.5	86	7.4	1009.0	7	017	20	5	2	8	5	4	/	/	85613	87618	88625			15	
16	82	8	22	11	22	10.5	8.6	88	7.1	993.5	1	027	21	6	2	1	7	4	2	/	81715	88558				16	
17	75	3	21	12	23	6.8	2.5	74	4.6	1007.5	2	016	02	8	1	1	5	6	6	1	81635					17	2Ac65 1Ci68
18	75	7	23	11	20	5.8	2.4	79	4.5	1020.7	0	006	03	1	1	1	0	9	4	4	81360	87072				18	1Ac63 COTRA Parhelion
19	68	8	23	07	13	4.4	1.4	81	4.2	1022.2	1	010	03	2	2	8	0	9	2	/	88462					19	
20	59	8	21	14	28	9.5	7.6	88	6.5	1008.1	6	014	50	6	5	8	5	3	/	/	82709	86612	88645			20	
21	75	8	22	10	20	6.8	3.1	77	4.7	1023.9	0	003	03	2	2	3	5	6	4	7	83640	85365	88270			21	COTRA
22	35	8	23	14	28	10.4	9.0	91	7.1	1016.6	3	011	50	5	2	8	5	3	/	/	83709	87712	88620			22	
23	40	8	23	17	30	11.9	10.8	93	8.0	1011.9	2	008	51	5	6	8	5	3	/	/	86708	88615				23	
24	70	8	22	18	32	11.0	8.2	83	6.8	1009.6	6	037	15	6	2	8	5	4	/	/	86613	88625				24	jpNW vv50k ex p
25	84	4	24	11	19	6.2	3.0	80	4.7	1002.4	7	014	03	8	1	2	8	4	6	0	82815					25	1Sc56 2ac62 Cu fra/hum
26	86	6	26	09	20	4.4	-0.0	73	3.8	1004.4	2	028	03	1	1	6	8	5	0	0	81820	85628				26	3Sc40 Cu fra
27	30	8	35	06	12	1.5	1.1	97	4.2	997.4	3	015	68	7	6	8	7	2	/	/	87704	88706				27	
28	62	8	17	07	13	5.1	3.6	90	4.9	1009.0	8	036	61	6	2	4	5	4	2	/	81713	85618	88540			28	
29	80	8	24	10	18	5.7	4.3	91	5.3	983.2	1	004	21	6	2	3	5	3	2	/	81708	83615	88550			29	vv60k NW

Mean vis = 20.4 km

Mean cloud = 6.0 75%

Mean wind speed = 9.9 kn

Mean gust = 19 kn

Mean TT = 6.7 °C

Mean Td = 4.2 °C

Mean RH = 84.8 %

Mean r = 5.3 g/kg

Mean PPP = 1010.4 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

Td = 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 2020

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	NChshs	NChshs	NChshs	Date	Remarks
1	75	2	25	16	33	10.9	2.2	55	4.5	1006.1	2	018	02	1	1	2	8	6	0	0	82838			1	1Sc45 Cu hum
2	67	8	24	10	20	12.3	7.2	71	6.3	1008.9	1	014	02	2	2	4	5	5	2	/	84627	88465		2	
3	75	8	26	10	18	10.1	4.9	70	5.4	1012.5	7	018	02	8	2	1	8	5	2	/	81825	88460		3	1Sc35 Cu hum
4	82	8	29	09	21	8.9	3.3	68	4.7	1026.3	3	036	02	2	2	8	5	6	/	/	86632	88640		4	
5	72	7	19	02	06	8.6	3.8	72	4.9	1037.0	8	012	03	2	2	6	8	5	/	1	82825	86630	86075	5	COTRA Cu hum
6	20	1	06	04	06	5.5	4.6	94	5.2	1030.3	6	019	28	4	0	1	6	1	0	0	81702			6	VV5k SW
7	68	6	16	09	16	8.3	3.4	71	4.8	1015.3	6	022	02	1	1	2	0	9	3	1	82366	86071		7	COTRA U/a cont
8	80	2	21	09	19	10.5	1.6	54	4.2	1015.9	6	012	03	0	0	2	8	6	0	0	82835			8	1Sc40 Cu hum
9	58	8	22	20	44	12.6	11.0	90	8.4	986.0	7	046	61	6	6	8	5	4	/	/	86710	88615		9	
10	65	7	24	18	43	7.5	2.2	69	4.5	996.6	6	035	80	8	1	3	8	6	7	/	81830	83656	87358	10	
11	84	2	26	15	34	6.8	-2.9	50	3.1	1010.1	1	016	02	0	0	2	8	7	0	0	82850			11	1Sc56 Cu hum
12	86	7	23	10	25	8.0	0.9	61	4.0	1015.8	6	009	03	1	1	1	8	6	5	6	81833	83367	87075	12	1Sc50 2Cs70 COTRA Cu med
13	82	3	27	12	22	9.9	4.3	68	5.2	995.1	3	044	15	1	1	3	9	5	6	0	81920	82825		13	1Sc40 1Ac60 jpN,E,SE
14	58	8	20	10	20	10.7	6.8	77	6.1	1016.5	8	006	50	5	2	8	5	4	/	/	87618	88625		14	
15	50	8	20	19	42	11.6	10.0	90	7.7	1001.5	8	044	63	6	6	7	5	4	2	/	82712	87618	88530	15	
16	80	8	22	10	21	6.7	5.3	91	5.6	995.5	1	017	61	6	6	2	7	4	2	/	82715	88540		16	vv50k NW
17	80	6	25	12	31	10.4	3.4	62	4.9	1010.3	3	018	25	8	2	3	9	5	6	1	81920	83830	85070	17	1Ac65 JPSW&W
18	70	8	23	11	35	6.9	5.1	88	5.4	1017.4	8	027	27	8	2	1	9	4	7	/	81915	84360	88465	18	1Cu25 1Sc35 jpE&SE vv60k ex p
19	58	8	21	09	16	8.3	6.8	90	6.1	1018.7	7	034	60	6	2	6	5	3	2	/	83709	86612	88460	19	
20	84	7	25	08	31	6.3	3.5	82	4.9	1010.4	1	056	21	8	6	1	3	4	7	/	81815	86360		20	1Sc40 Cu fra Cb cal W&NW
21	78	7	22	13	26	10.1	4.7	69	5.2	1021.8	6	016	02	2	2	7	5	5	/	1	87628			21	/Ci75
22	80	8	25	17	34	11.5	4.5	62	5.2	1020.0	3	012	03	2	2	3	8	6	7	/	81830	83645	88465	22	2Ac60 Cu hum
23	86	6	31	13	28	11.5	4.0	60	5.0	1018.8	3	045	02	8	2	2	2	6	7	1	82830	85365		23	2Ac62 3Ci75 Cu med
24	68	8	22	13	27	11.2	9.5	89	7.4	1005.1	7	027	02	6	2	8	5	3	/	/	85709	88615		24	
25	82	8	24	09	19	7.0	2.1	71	4.5	997.8	8	030	03	8	2	4	8	5	7	/	83822	85359	88461	25	2Sc35 Cu hum
26	65	3	26	13	24	8.0	0.0	57	3.8	1007.3	2	009	15	8	1	2	8	6	6	1	82835			26	1Sc50 1Ac58 2Ci77 Cu med jpNE&N vv60k ex p
27	86	2	31	15	30	7.2	-2.8	49	3.1	1005.8	2	042	01	1	1	2	2	6	0	0	82845			27	Cu med
28	50	8	21	11	22	10.7	9.9	95	7.7	999.0	6	049	51	6	5	8	5	3	/	/	82706	87708	88612	28	
29	56	6	24	09	22	6.3	1.4	71	4.3	986.4	2	006	87	8	1	6	9	4	/	/	86915			29	

Mean vis = 26.4 km

Mean cloud = 6.1 77%

Mean wind speed = 11.6 kn

Mean gust = 25 kn

Mean TT = 9.1 °C

Mean TdTd = 4.2 °C

Mean RH = 72.3 %

Mean r = 5.2 g/kg

Mean PPP = 1009.9 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

Wokingham	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
Sunshine	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
Hourly analysis	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
2020	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	0.09	0.03	0.00	0.00	0.00	0.00	0.22	0.29	0.32	0.00	0.26	0.00
	8	0.50	0.00	0.27	0.62	0.62	0.00	0.04	0.00	0.00	0.86	1.00	1.00	0.35	0.96	0.00
	9	0.91	0.00	0.10	0.88	0.44	0.00	1.00	0.00	0.00	0.99	1.00	1.00	0.03	0.79	0.00
	10	0.69	0.00	0.10	0.96	1.00	0.16	1.00	0.00	0.00	0.66	1.00	1.00	0.12	0.25	0.00
	11	0.63	0.00	0.46	0.05	1.00	1.00	0.96	0.00	0.00	0.24	0.87	0.89	0.00	0.37	0.00
	12	0.41	0.08	0.00	0.00	1.00	0.30	1.00	0.88	0.00	0.03	0.86	0.65	0.33	0.84	0.00
	13	0.50	0.00	0.00	0.00	1.00	0.01	0.72	1.00	0.00	0.48	0.71	0.99	0.64	0.02	0.00
	14	0.88	0.00	0.00	0.00	0.54	0.69	0.89	1.00	0.00	0.03	0.60	1.00	0.30	0.00	0.00
	15	0.93	0.00	0.00	0.00	0.00	1.00	0.96	0.93	0.00	0.04	0.83	0.57	0.56	0.00	0.00
	16	0.58	0.00	0.00	0.00	0.00	0.84	0.29	0.46	0.00	0.44	0.56	0.10	0.68	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	0.00	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		6.04	0.08	0.94	2.60	5.64	3.99	6.86	4.27	0.00	3.95	7.71	7.53	3.00	3.48	0.00

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	29-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	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	0.03	0.56	0.08	0.13	0.00	0.00	0.00	0.00	0.34	0.52	0.00	0.00	0.00	0.10
8	0.00	0.90	1.00	0.00	0.06	0.01	0.00	0.00	0.00	0.88	0.43	0.00	0.00	0.00	0.33
9	0.00	1.00	0.42	0.00	0.00	0.00	0.01	0.00	0.00	0.42	0.37	0.00	0.00	0.00	0.32
10	0.00	0.51	1.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.66	0.13	0.00	0.24	0.34
11	0.00	0.35	0.49	0.00	0.00	0.00	0.17	0.03	0.00	0.02	0.12	0.25	0.00	0.73	0.30
12	0.00	0.16	0.39	0.00	0.00	0.01	0.34	0.04	0.00	0.36	0.14	0.53	0.00	0.54	0.31
13	0.00	0.32	0.22	0.00	0.00	0.19	0.04	0.18	0.00	0.22	0.16	0.58	0.00	0.27	0.28
14	0.00	0.76	0.00	0.00	0.01	0.00	0.00	0.91	0.00	0.05	0.62	0.80	0.00	0.65	0.33
15	0.07	0.73	0.00	0.00	0.38	0.01	0.00	0.20	0.00	0.00	0.85	0.97	0.00	0.70	0.34
16	0.19	0.33	0.01	0.00	1.00	0.02	0.00	0.00	0.00	0.41	0.39	1.00	0.00	1.00	0.29
17	0.15	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.07	0.51	0.00	0.44	0.04
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	0.41	5.09	4.08	0.08	1.64	0.23	1.03	1.35	0.00	2.69	4.32	4.78	0.00	4.58	86.41

FEBRUARY 2020	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	9.47	12.1	1247	6.4	2128	75.8	93.3	25	52.5	1503	5.2	5.6	7.5	0	4.1	1510	1005.37	1010.9	2210	1001.4	510	0
2	10.09	13.0	1257	6.0	229	85.0	99.5	721	66.3	1327	7.6	6.5	8.1	733	4.9	42	1007.70	1010.8	2359	1002.3	624	7.5
3	8.59	10.8	1125	4.5	2334	76.9	89.4	416	62.7	1943	4.7	5.4	6.4	414	3.9	2120	1013.23	1015.5	1023	1010.8	0	0
4	6.63	8.9	1439	4.1	215	73.7	86.6	2359	55.3	1049	2.2	4.4	5.1	2329	3.7	1028	1023.76	1035.1	2359	1014.8	5	0
5	3.87	8.7	1556	-0.8	716	88.8	99.1	757	68.5	1346	2.1	4.3	5.2	1049	3.4	716	1036.77	1038.5	1124	1035.0	0	0.1
6	1.13	6.2	1603	-1.4	2303	97.9	100.0	918	87.5	1557	0.8	4.0	5.3	1456	3.3	319	1031.48	1035.4	0	1027.4	2353	0
7	4.39	10.7	2356	-2.6	308	88.9	100.1	938	63.6	1335	2.6	4.6	6.8	2351	3.1	308	1018.72	1027.4	0	1012.3	2343	0
8	8.89	11.1	53	7.3	827	75.8	92.8	312	54.2	1459	4.7	5.3	7.1	250	4.3	1314	1014.47	1017.4	1048	1009.4	2358	0.3
9	10.21	13.0	1516	8.1	107	84.3	93.1	1320	68.4	2358	7.6	6.7	8.4	1452	5.1	2358	993.90	1009.7	3	985.4	1445	10.5
10	6.36	9.6	15	3.4	1843	72.7	87.9	1809	59.5	2356	1.8	4.4	5.4	104	3.2	2340	998.37	1003.0	2359	989.6	3	5.5
11	4.90	8.4	1238	2.0	2306	62.9	86.2	2310	40.9	1243	-1.8	3.4	4.1	1103	2.6	1250	1008.77	1013.6	2345	1002.8	2	0
12	4.78	8.5	1443	1.5	649	77.5	90.4	650	54.0	1347	1.0	4.1	5.2	2359	3.6	1347	1014.25	1016.9	1124	1007.3	2359	0.1
13	7.20	10.2	1528	5.1	659	82.4	93.3	459	65.3	1530	4.3	5.2	5.9	1230	4.6	2336	998.92	1013.1	2359	990.6	1157	9.8
14	6.96	11.4	1242	-0.1	532	87.7	98.4	556	68.4	1228	5.0	5.5	7.4	2358	3.6	532	1016.49	1018.7	948	1012.9	0	0.8
15	11.56	12.9	1012	10.2	0	90.5	96.0	231	78.3	1058	10.0	7.7	8.3	2224	7.2	1059	1005.21	1015.0	0	994.9	2355	5.8
16	9.00	12.6	700	4.7	2322	87.2	94.3	655	71.2	2142	7.0	6.5	8.7	658	4.1	2359	996.17	1006.1	2359	990.1	500	20.7
17	7.15	11.2	1436	4.5	2322	72.2	85.7	636	59.2	1438	2.4	4.5	5.6	1335	4.0	822	1010.23	1018.9	2356	1005.6	445	1
18	6.22	10.5	1256	3.9	712	78.9	89.6	1418	63.1	1257	2.8	4.6	5.6	1707	4.1	206	1018.35	1021.0	755	1014.7	1940	3.7
19	6.27	9.2	2341	3.0	456	83.9	93.7	1930	74.5	119	3.7	5.0	6.4	1913	3.7	456	1018.87	1022.6	1111	1013.5	2323	2.1
20	7.23	9.9	1140	3.2	2321	82.6	93.1	641	63.5	1832	4.4	5.3	7.0	1230	3.5	1834	1012.43	1023.0	2359	1004.6	1216	4.6
21	7.34	10.9	1350	3.0	53	75.8	84.9	638	63.1	1353	3.3	4.8	5.5	1619	3.7	27	1022.46	1024.6	956	1017.8	2359	0
22	10.40	13.3	1040	8.3	2017	74.0	90.6	900	56.4	1303	5.8	5.7	7.3	949	5.0	1848	1018.72	1022.5	2024	1015.1	359	0
23	10.38	14.0	1147	6.5	2146	77.3	95.1	302	54.6	2350	6.4	6.1	8.3	957	3.5	2350	1017.42	1024.5	2111	1010.8	557	1.1
24	9.08	11.7	1721	5.6	319	86.1	97.7	622	57.6	0	6.8	6.2	7.5	1600	3.7	0	1010.11	1023.3	17	1004.1	1715	4.7
25	5.19	8.4	1235	2.4	2248	79.5	91.3	1626	59.9	1236	1.9	4.4	5.1	7	3.7	2246	1000.60	1005.7	31	996.4	1937	0.7
26	4.25	8.9	1443	0.9	435	70.6	82.9	438	47.8	1557	-0.8	3.6	4.0	1213	3.1	1557	1004.72	1009.1	1921	998.0	7	0
27	3.90	8.4	1437	0.9	2300	76.8	97.4	548	45.0	1523	-0.2	3.8	4.6	426	2.9	1704	1004.46	1015.5	2250	995.2	643	7.1
28	6.48	11.6	1540	0.1	115	88.6	96.0	1437	75.0	6	4.7	5.6	7.8	1513	3.2	18	1004.62	1015.7	125	992.0	2358	3.3
29	6.74	10.7	157	3.4	1345	79.5	93.9	836	57.0	1202	3.4	5.1	7.5	1	3.7	1759	986.13	992.2	0	981.7	633	9.2

Total																						98.6
Mean	7.06	10.58		3.58		80.5	92.84		61.83		3.78	5.11	6.45		3.88		1010.78	1017.44		1004.71		
Max	11.56	14.04		10.20		97.9	100.10		87.50		10.03	7.68	8.70		7.18		1036.77	1038.54		1035.01		
Min	1.13	6.16		-2.64		62.9	82.90		40.88		-1.75	3.36	3.98		2.64		986.13	992.18		981.74		

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 2019/2020

Temperature (°C)

Rank in the past 138 years

Mean maximum	9.8	(+1.7)	6 th highest
Mean minimum	3.6	(+1.8)	6 th highest
Daily mean	6.7	(+1.7)	5 th highest
Rainfall total (mm)	256.9	(153%)	7 th highest
Sunshine total (hours)	245.1	(109%)	
N° of: Dry days	34 (-11)	Wet days	38 (+7)
Days with: Air frost	17 (-14)	Ground frost	42 (-9)
		Snow falling	1 (-9)
		Snow lying	0 (-5)
Thunder	2 (+1)	Hail ≥5mm	1 (0)
		Small hail/ice	5 (+2)
		Fog @09 GMT	5 (-1)
		Nil sun	20 (-9)
Air pressure MSL : Mean @09 GMT (mbar)	1013.7		(-2.9)

Departure from 1981 to 2010 average shown in brackets. In the notes below, the year is as for the January of the December to February winter season.

Notes: **Very Wet, Very Mild, Sunny, An Excess of Strong SW Winds,**

Temperature: This winter has been the mildest since the record breaking 2016, and in this millennium there was only one other milder winter, that of 2007. In the longer-term, this is the 5th mildest winter in 138 years, the other 2 milder winters being 1990 and 1975. The highest max was 14.0° on the 23rd February, 0.1° above the long-term median. The lowest max was 4.7° on the 4th December, 4.9° above its median and 2nd highest in 107 years. The highest min was 9.6° on 16th February, 0.3° below the median and the lowest min of -3.7° was on the 19th January, 3.6° above its median and 4th highest in 116 years. The mean grass min, 0.9°, is 2.0° above average, but is highest only since 2016. The lowest grass min was -7.8° on the 2nd December, 5.1° above average and highest since before 1980. The mean earth temperature at 30cm depth was 6.8°, 1.0° above average, and at 1m depth the mean of 8.0° is close to average. Both air and ground frosts were less frequent than average, and the duration of air frost, 125.2 hours, is 152 hours less than average. In terms of the mean temperature, December was the coldest month, 6.2°, next was January, 6.8° then February with 7.1°. Each of the winter months has a positive anomaly, from +1.2° in December to +2.2° in February. **Rainfall:** This has been a very wet winter season, ranking 7th wettest in 139 years, though 126 mm less than the record in 2014. The wettest day this winter was the 15th February when 17.7 mm was recorded. December with 153% and February with 231 % of average are mainly responsible for this season's high total, the rainfall in January being close to average. There were 11 fewer dry days than average, though 4 other winters this millennium have had fewer still. However, dry spells did occur, one of 6 days ended on 4th December, 5 days on the 21st January and 5 days on the 6th February. The duration of measurable rain was 221.7 hours, 134 % of average. Snow was almost completely absent, just one day with sleet, the 27th February prevented a snow-less winter. Hail >5 mm dia. fell on the 15th December, and ice pellets on the 19th December and 10th, 18th, 20th and 29th February. Thunder was heard on the 15th and 19th December. Rainfall rate exceeded the violent category (50 mm/hr) on the 10th, 15th and 19th December, also the 9th, 16th and 20th February, the maximum rate being 182 mm/hr on the 9th February. The Emm and Loddon over-topped their banks in mid-February leading to local flooding. **Sunshine:** The daily mean sunshine this winter, 2.69 hours, is 9% above average. However, it is less than in the two previous winters. February had the highest daily mean of 2.98 hours, and January the lowest, 2.27 hours, with December having 2.85 hours, but compared with average December came out on top with 131 %, then February 101% and January 97%. The sunniest day was the 19th January, 8.0 hours, the lowest value for this parameter since 2010, and the first time since 2005 that the season's sunniest day has not been in February. Overall there were 49 days with <3 hours and 14 with =>6 hours. There were no particularly sunny periods, just odd sunny days, sometimes 2 together. The period 22nd to 27th January was notably dull, just 0.9 hours of sun, all on one day. **Wind:** The mean speed of 8.9 mph is 1.2 mph above average, but is highest only since 2016. The 9th February was the windiest day, mean 21.3 mph, and the season's highest gust of 54 mph was also on that day. December 4th was this winter's least windy day, mean 1.7 mph, and there were 1363 calm minutes. Daily mean direction/number of days: N,1 NE,2 E,1 SE,3 S,15 SW,54 W,13 NW,2. Compared with average, SW'ly winds were 23 % more frequent, at the expense of winds from all directions between NW and E combined, 25% less frequent, with NE alone being 9.8% down. February was a particularly windy month with 13 days having strong or very strong winds, compared with 3 each for December and January. **Humidity:** The mean relative humidity was 85.7% and the lowest was 41 % on the 11th February. Mean water vapour content per kg of air was 5.3 g at 0900 GMT and 5.5 g at 1500 GMT. **Pressure:** The season's mean reduced to MSL was 1013.7 mbar, and the highest was 1050.0 mbar on the 19th January, and all time highest since before 1976. The lowest was 970.7 mbar on 21st December, a span of 79.3 mbar, 15.6 mbar above average. **December:** Mild, wet and sunny. Lowest max ranks 7th highest in 107 years. 4th consecutive wet month. Equal 3rd sunniest this millennium. The lowest pressure lowest for the month since 1989. **January:** Very mild with near average rainfall and sunshine. Mildest since 2008. Mean grass min highest since 2008. First month since August not to exceed average rainfall, but only by 1%. Pressure reached 1050.0 mbar on 19th, the highest here for any time since before 1976. **February:** Very mild, very wet, very windy with sunshine near average. Mean temperature 8th highest in 139 years. Lowest max 7th highest in 108 years. Lowest min 9th highest in 117 years. Mean grass min highest since before 1980. Rainfall 6th highest in 139 years. Highest rainfall duration since 1995. Windiest since 1990.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom	Sun hrs	Anom	Mean Wind mph	Max gust	Mean pressure	Anom
December	9.5°	+1.5°	3.0°	+0.9°	96.0	153%	88.4	131%	7.5	50	1010.0	-5.7
January	9.4°	+1.6°	4.1°	+2.3°	61.6	99%	70.3	97%	7.7	46	1020.4	+3.7
February	10.4°	+2.2°	3.8°	+2.3°	99.3	231%	86.4	101%	11.7	54	1010.4	-7.0

Appendix 1.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix 2.

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

VV : Visibility.

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

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

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

Code figure 89 = visibility above 70 km.

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

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

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

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

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

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

RH : Relative humidity at 1.2m, %.

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

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

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

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

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

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

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

4 = Steady, pressure the same as 3 hours ago

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

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

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

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hail includes large hail, small hail and snow pellets.

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

Code figures:

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

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

Cl : Type of low cloud

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

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

Cm : Type of medium cloud.

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

Ch : Type of high cloud

0 = No high cloud

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

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

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

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

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

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

7 = Veil of Cirrostratus covering the celestial dome.

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

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

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

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

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

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

00 to 50 = Height in hundreds of feet

51 to 55 Not used

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

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