

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

JANUARY 2021

Temperature (°C)	Anomaly		Rank in the past 140 years					
Mean maximum	6.9	-1.2	58 th lowest					
Mean minimum	1.1	-0.9	62 nd lowest					
Daily mean	4.0	-1.1	59 th lowest					
Highest maximum	12.8	on 28 th	Lowest maximum	0.6	on 7 th			
Highest minimum	9.3	on 20 th	Lowest minimum	-3.7	on 25 th			
Mean grass minimum	-0.5	+0.6	Lowest grass minimum	-8.0	on 25 th			
Mean earth @30 cm	5.8	+0.1	Earth @100 cm	7.2	-0.5			
Frost duration (hrs)	125.1		Rain duration (hrs)	81.4				
Rainfall total (mm)	86.8	132 %	20 th highest					
Highest daily fall	21.0	on 27 th	Highest rate mm/hr	31	on 20 th			
Number of: Dry days (<0.2mm)	12	Wet days (>0.9mm)	17	days ≥5mm	6			
Sunshine total (hrs)	42.3	Daily mean	1.36	58 %	Sunniest day	7.3 on 25 th		
N° days with: Air frost	16	Ground frost	18	Snow falling	3	Snow lying	3	
Thunder	0	Hail ≥5mm	0	Small hail/ice	2	Fog @09	1	
Nil sun	12							
Pressure MSL: Mean @09 GMT, mbar	1011.6	-4.7	Highest	1032.4	on 15 th	Lowest	973.4 on 20 th	
Relative humidity: Mean (%)	89.4	Lowest	62	on 25 th	Water vapour (g/kg), mean at 09 and 15 GMT			
Overall mean wind speed (mph)	7.0	Windiest day	15.7	on 20 th	Max gust	41	on 20 th	
Wind direction (days)	N 5	NE 4	E 0	SE 0	S 2	SW 11	W 6	
NW	3							
Least windy day (mph)	3.0	on 15 th	Calm; less than 0.5 mph (minutes)					223

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

Notes:

Wet and Dull with Below Average Temperature.

Temperature: This has been a cool January overall, though with mild interludes mid-month and in the final week. The mean temperature is 1.1° below the new current 30 year climatological average (1991 to 2020), but there have been 5 colder Januaries since 1999. The mean maximum is lowest since 2013, but the mean minimum is equal lowest with 2019 since 2017. The highest max is 0.3° above the long-term median while the lowest max is 0.1° below its median. The highest min is 0.8° above the median while the lowest min is 2.2° above its median. The mean grass min is 0.6° above average and the lowest value is 2.7° above average. Earth temperature at 30 cm depth is close to average but is below average at 1 m depth. Anomalies for daily max exceeded -5° on the 7th to 9th and 24th, and were over +4° on the 18th, 19th, 28th and 29th, with extreme values of -7.2° on 7th and +5.7° on 28th. For daily min, anomalies were over -4° on the 7th and 23rd to 25th, and exceeded +5° on the 14th, 20th, 28th and 29th, with extreme values of -5.1° on 25th and +7.8° on 20th. **Rainfall:** This has been a wet January, ranking 20th wettest in the past 140 years, and 3rd wettest this millennium after 2016 and 2014, the latter when 153.9 mm fell being the wettest on record. Although the month started dry, with a 9 day dry spell ending on the 10th, subsequently there were frequent bouts of rain and only 3 further dry days. The 21.0 mm that fell on the 27th, the month's wettest day, is 7.7 mm above average, and the wettest January day since the 26th in 2001. Sleet fell on the 1st and 16th and snow on the 24th which produced a maximum depth of 5 cm mid-morning. Snow was lying at 09 GMT on 24th, 2cm, 25th, 2cm and 26th 1cm. Rainfall accumulation compared with normal was 20 mm in deficit on the 10th, decreasing to 6 mm on the 15th, increasing to 13 mm by the 26th, becoming a surplus of 9 mm on the 27th, increasing to 21 mm by the 31st. **Sunshine:** January is, on average, the 2nd dullest month after December, and it has certainly lived up to its name this year, producing only 42.3 hours of sunshine, 58 % of average, the lowest since 2013 and before that 1996. Up to the 16th only 2 days had >30 % of the maximum, and 11 had <10 %, but from the 17th to 31st 4 days had over 50 %, 1 over 80 %, and 7 had <10 %. Daily accumulation compared with normal had a deficit of 25 hours by the 14th increasing to 30 hours by the 20th, this deficit being maintained up to the 31st. Overall there were 25 days with <3 hours and 1 with =>6 hours. **Wind:** The mean speed this January is 0.9 mph below average, and the month's highest gust is 10 mph below average. However, the duration of calm is lowest since 2008. Daily mean directions were mostly between S and W, but were between W and N on 1st, 2nd, 7th, 9th, 14th and 24th, and between N and E on 3rd to 6th, 8th, 15th, 30th and 31st. Speeds were light or moderate to the 10th then mainly moderate except fresh on 11th, 21st and 28th and strong on 19th and 20th, but light on 15th, 23rd, 24th and 27th. **Humidity:** The mean relative humidity is 4.1 % above average, and the month's lowest value is highest for January since before 1999. **Pressure:** The month's lowest pressure is 11 mbar below average and is lowest for January since 2009, and before that 1990. **Note:** A table of the 1991 to 2020 climatological averages for Wokingham can be found at :

www.woksat.info/www/avg9120.pdf

and a chart of 30 year average daily max/min temperature can be found at : www.woksat.info/www/graav9120.gif

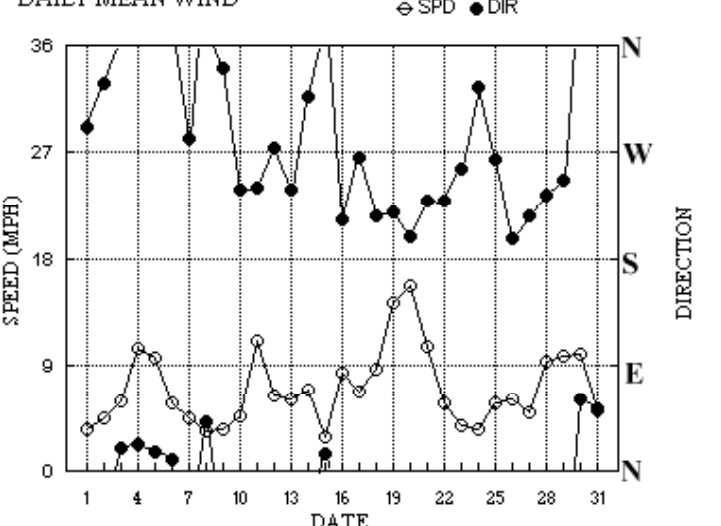
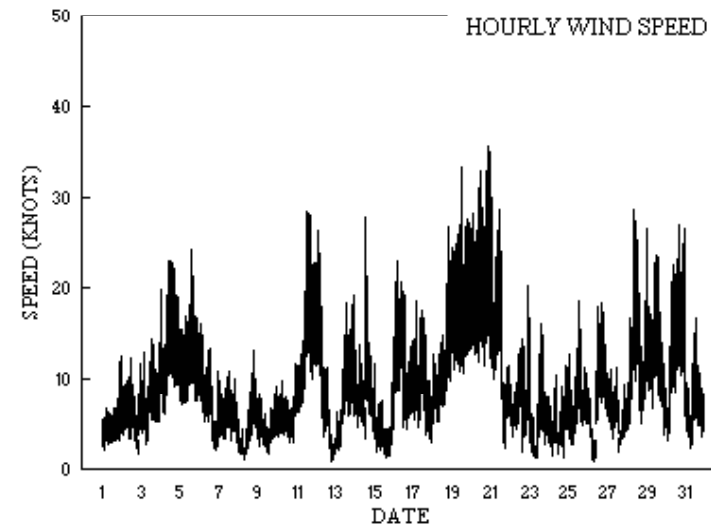
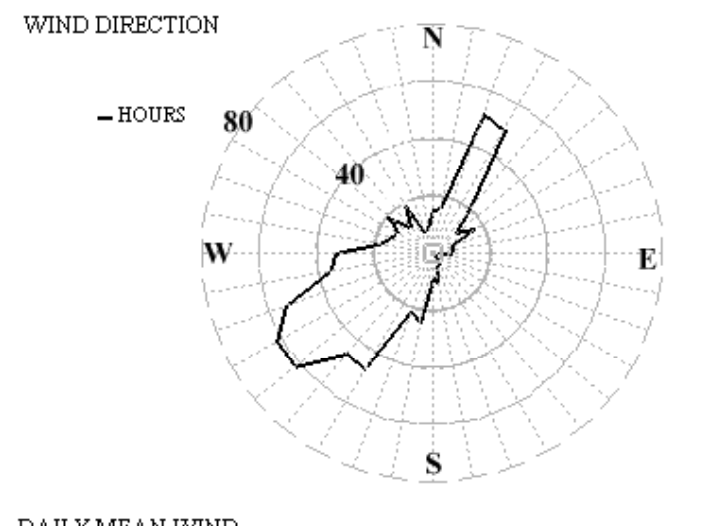
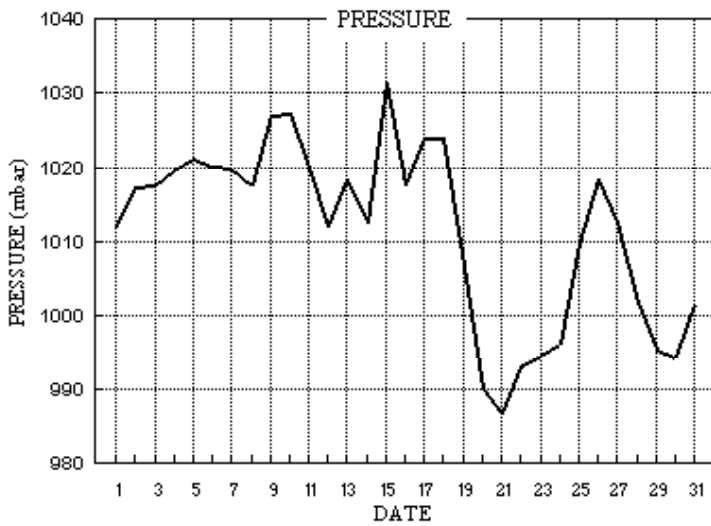
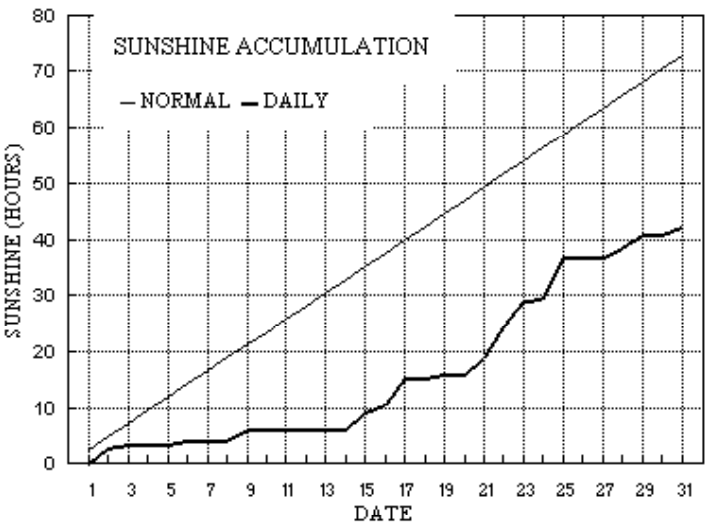
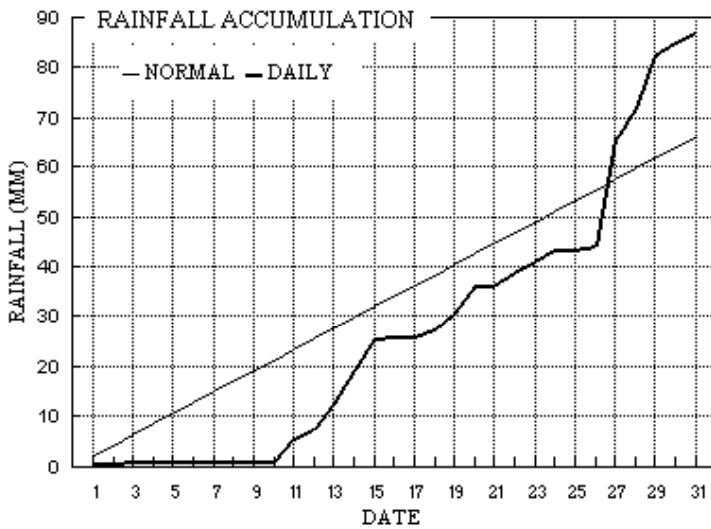
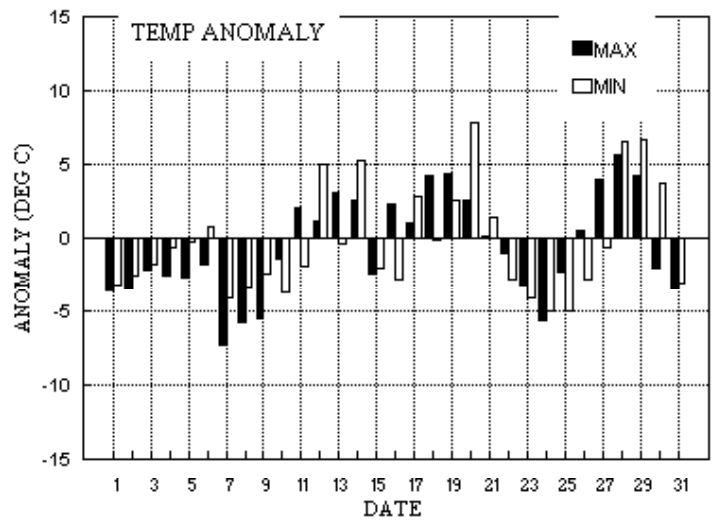
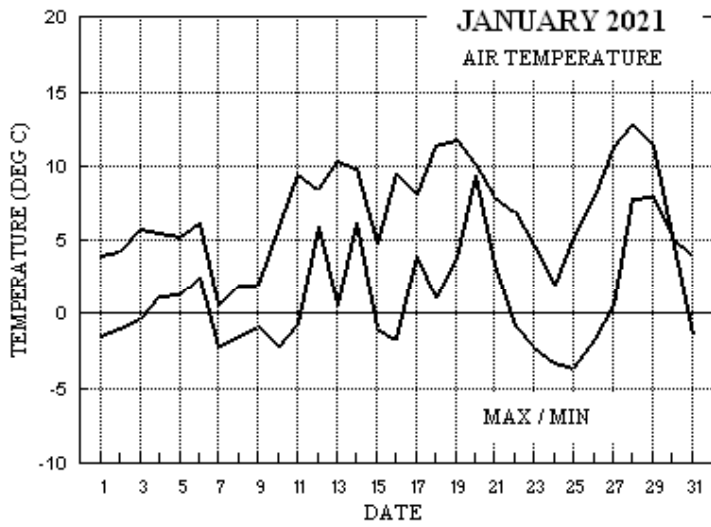
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the			
-3.6°	-2.1°	5%	25%	+2.1°	+1.6°	164%	43%	-0.3°	-0.5°	216%	102%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for January 2021



Month: JANUARY 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 ddd	mean ff	sp	Max gust ddd	gg	HHhh	High hr ddd	ff	HH	Rain hrs				
1	4.0	-1.5	0.8	-0.9	5.6	8.1	0.0	11.2	1011.9	1	1	1	0	0	0	0	291	2.7	3.1	329	12	2240	323	4	22	2.6	
2	4.3	-1.0	tr	1.3	5.7	7.9	2.7	1.0	1017.3	1	0	0	0	0	0	0	327	3.7	3.9	329	13	0048	7	5	22	0.0	
3	5.8	-0.3	0.1	-3.1	5.7	7.8	0.8	0.0	1017.6	1	1	0	0	0	0	0	20	5.1	5.1	17	15	1334	24	8	23	0.2	
4	5.5	1.2	tr	-2.7	5.8	7.7	0.0	0.0	1019.6	0	1	0	0	0	0	0	23	9.0	9.1	28	23	1333	29	11	13	0.1	
5	5.2	1.3	0.1	-1.4	5.7	7.6	0.1	0.0	1021.3	0	1	0	0	0	0	0	16	8.3	8.3	19	24	1325	22	10	13	1.4	
6	6.1	2.4	tr	0.8	5.7	7.5	0.4	6.1	1020.2	0	0	0	0	0	0	0	10	4.9	5.0	353	16	0141	12	9	00	0.0	
7	0.6	-2.3	0.0	-6.7	5.4	7.4	0.1	17.8	1019.8	1	1	0	0	0	0	0	281	3.4	4.0	293	11	1300	277	5	12	0.0	
8	2.0	-1.5	tr	-2.7	5.2	7.3	0.0	13.6	1017.6	1	1	0	0	0	0	0	43	1.8	3.0	56	13	2020	47	6	20	0.0	
9	1.9	-0.9	0.0	-0.3	5.2	7.2	1.9	11.9	1027.0	1	1	0	0	0	0	0	341	1.0	3.1	30	9	0210	26	4	02	0.0	
10	5.9	-2.2	0.0	-1.5	5.3	7.1	0.0	10.4	1027.3	1	1	0	0	0	0	0	238	3.8	4.0	232	12	2346	223	6	23	0.0	
11	9.4	-0.7	4.5	2.4	5.2	7.0	0.1	0.0	1019.9	1	0	0	0	0	0	0	240	9.5	9.6	261	29	1328	253	14	13	4.9	
12	8.5	5.9	2.0	7.2	5.9	7.0	0.0	0.0	1012.0	0	0	0	0	0	0	0	274	4.0	5.7	251	26	0255	251	13	02	5.4	
13	10.3	0.5	4.9	-1.7	6.0	7.0	0.0	0.0	1018.4	0	1	0	0	0	0	0	239	5.1	5.3	251	19	2221	248	8	21	7.1	
14	9.8	6.2	7.0	8.6	6.5	7.1	0.0	0.0	1012.4	0	0	0	0	0	0	0	317	2.5	6.0	329	28	1427	318	12	14	4.7	
15	4.8	-1.0	6.1	-5.4	6.5	7.2	3.1	9.9	1031.3	1	1	0	0	0	0	0	15	0.8	2.6	15	12	0033	156	5	22	3.7	
16	9.4	-1.8	0.6	-5.4	5.7	7.3	1.2	0.0	1017.7	1	1	1	0	0	0	0	213	5.2	7.3	186	23	0433	193	12	09	0.4	
17	8.1	3.9	tr	0.5	5.8	7.2	5.0	0.0	1024.1	0	0	0	0	0	0	0	265	5.3	5.9	260	19	0507	291	8	11	0.1	
18	11.4	1.1	1.4	-3.5	5.5	7.1	0.0	0.0	1023.9	0	1	0	0	0	0	0	216	7.4	7.6	182	27	2036	200	12	20	1.7	
19	11.8	3.7	3.2	5.7	5.8	7.0	0.4	0.0	1006.7	0	0	0	0	0	0	0	219	12.1	12.4	231	33	1134	227	15	11	3.1	
20	10.1	9.3	5.7	8.8	6.7	7.1	0.0	0.0	990.0	0	0	0	0	0	1	0	199	13.3	13.6	185	36	2014	184	17	20	4.7	
21	7.9	3.4	0.0	1.3	7.1	7.2	3.2	0.0	986.7	0	0	0	0	0	0	0	229	9.0	9.2	241	32	0034	244	16	00	0.0	
22	6.9	-0.8	2.4	-6.3	6.5	7.4	5.4	0.7	993.2	1	1	0	0	0	1	0	228	4.8	5.0	263	20	2310	270	9	23	0.6	
23	4.6	-2.2	2.2	-5.8	5.9	7.3	4.8	12.0	994.7	1	1	0	0	0	0	0	256	2.7	3.4	275	17	0017	282	7	15	0.7	
24	2.0	-3.3	2.3	-7.5	5.1	7.2	0.2	9.3	996.2	1	1	1	1	0	0	0	324	0.6	3.1	322	12	2022	4	5	23	2.9	
25	5.2	-3.7	0.0	-8.0	4.7	7.0	7.3	9.0	1009.7	1	1	0	1	0	0	0	263	4.3	5.0	267	19	1429	277	8	14	0.0	
26	8.0	-1.8	1.0	-5.8	4.4	6.8	0.0	6.4	1018.4	1	1	0	1	0	0	0	196	4.9	5.3	172	18	1602	178	9	14	2.9	
27	11.3	0.5	21.0	4.4	4.6	6.5	0.0	0.0	1012.5	0	0	0	0	0	0	0	216	3.6	4.3	218	12	1126	215	6	11	12.9	
28	12.8	7.8	6.5	7.7	5.6	6.4	1.8	0.0	1001.8	0	0	0	0	0	0	0	233	7.5	8.1	246	29	0914	246	13	11	3.9	
29	11.4	8.0	10.7	5.8	6.5	6.5	2.5	0.0	995.4	0	0	0	0	0	0	0	246	8.0	8.4	258	27	0140	250	12	01	7.5	
30	5.3	5.2	2.6	5.2	6.9	6.7	0.0	0.0	994.5	0	0	0	0	0	0	0	61	7.8	8.6	47	27	1723	52	12	16	6.5	
31	4.0	-1.5	1.7	-5.4	6.5	7.0	1.3	5.8	1001.6	1	1	0	0	0	0	0	52	4.3	4.6	63	24	0011	47	8	00	3.4	
Total			86.8				42.3	125.1																			81.4
Mean	6.9	1.1		-0.5	5.8	7.2	1.36		1011.6								250	2.4	6.1								
Anom	-1.2	-0.9	132%	+0.6	+0.1	-0.5	58%																				
Daily mean		4.0																									
Anom		-1.1																									

Number of days with:

Air frost = 16 Ground frost = 18 Nil sun = 12
Snow falling = 3 Snow lying = 3 Thunder = 0
Hail=>5mm = 0 Hail<5mm or ice = 2 Fog at 09GMT = 1

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 JANUARY 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	25	03	06	-1.0	-1.3	98	3.5	1011.9	2	011	10	2	2	8	6	2	/ /	88705	1				
2	84	7	30	03	10	2.1	0.3	88	3.9	1017.3	2	010	01	5	2	7	5	5	/ /	86622	2	/Sc45			
3	61	7	35	04	09	2.9	1.7	92	4.3	1017.6	2	007	20	5	2	7	6	3	/ /	85706	87708	3			
4	75	8	02	10	18	3.7	1.4	85	4.2	1019.6	3	004	21	6	2	7	5	4	7	/	87613	4	/Ac57		
5	84	7	01	08	16	2.4	-0.4	82	3.7	1021.3	3	008	14	2	2	7	5	4	/ /	81715	87650	5	1Sc35 Sc vir		
6	62	8	01	06	10	3.2	1.9	91	4.3	1020.2	3	008	00	2	5	8	6	3	/ /	87708	88711	6			
7	35	7	27	04	09	-0.4	-1.1	95	3.5	1019.8	3	005	10	2	2	7	6	2	/ 1	87704	7	/Ci70 COTRA Hoar slt			
8	45	8	01	01	02	0.2	-0.9	92	3.5	1017.6	3	012	05	2	2	8	6	2	/ /	88705	8				
9	58	7	06	03	06	0.1	-0.5	96	3.6	1027.0	2	015	10	2	2	7	6	1	/ /	87702	9				
10	11	8	25	03	07	-0.7	-0.8	99	3.5	1027.3	3	003	10	2	2	8	6	1	/ /	88702	10	Rime slt			
11	84	7	24	08	14	5.9	3.6	85	4.9	1019.9	5	003	02	2	2	7	5	4	/ /	87618	11				
12	58	8	31	07	13	8.1	6.7	91	6.1	1012.0	3	026	60	6	5	7	5	3	2	/	83708	87612	88550	12	
13	20	8	24	06	09	6.2	5.8	97	5.7	1018.4	6	006	58	6	5	8	7	1	/ /	86702	88703	13			
14	57	8	23	05	10	9.5	8.9	96	7.1	1012.4	6	014	63	6	6	7	7	2	2	/	83705	87707	88515	14	
15	56	7	36	04	07	0.1	-0.5	96	3.6	1031.3	2	020	10	1	1	7	6	2	/ /	87705	15	/Sc45 Hoar slt			
16	50	8	19	10	19	4.8	4.1	95	5.0	1017.7	7	040	51	6	5	8	5	3	/ /	85706	87708	88615	16		
17	84	6	28	06	12	5.2	1.5	77	4.2	1024.1	2	028	02	1	1	6	5	6	0	0	86630	17			
18	80	7	22	06	10	3.7	2.7	93	4.5	1023.9	8	001	02	6	2	7	5	5	/ 8	81625	87640	18	2Sc30 /Cs75		
19	82	7	24	12	24	11.1	8.7	85	7.0	1006.7	1	005	01	5	2	7	5	4	/ /	85614	87618	19			
20	30	8	20	13	25	9.6	8.5	93	7.0	990.0	7	016	59	6	5	7	7	3	2	/	83706	87708	88518	20	
21	80	3	22	14	26	5.7	1.8	76	4.4	986.7	2	010	02	0	0	2	5	6	6	3	81630	21	2Sc50 1Ac64 2Ci70 Cb tops dist S&N		
22	58	1	21	04	10	0.6	-0.1	95	3.8	993.2	2	019	10	0	0	0	0	9	0	1	81075	22	Hoar mod		
23	40	7	18	01	03	-1.9	-2.2	98	3.3	994.7	1	004	10	2	2	2	0	9	3	8	82365	87072	23	2Cs68 COTRA Hoar mod+glaze. icy patches	
24	06	9	12	06	10	-0.4	-1.1	95	3.6	996.2	6	019	72	7	2	9	/	/	/ /		24	Sn ly 2cm 100%			
25	68	0	25	05	09	-1.8	-3.5	88	2.9	1009.7	2	028	02	0	0	0	0	9	0	0		25	Sn ly 2cm 90%		
26	80	8	26	02	03	0.5	-0.4	94	3.7	1018.4	3	003	03	2	2	1	5	6	2	/	81635	88550	26	Sn ly 1cm 60%	
27	22	8	24	06	09	7.8	7.4	97	6.4	1012.5	3	014	59	6	5	8	5	2	/ /	86703	88625	27			
28	80	7	25	14	24	11.3	8.9	85	7.1	1001.8	3	013	21	6	2	7	5	4	/ /	82710	83618	87630	28	Emm flood	
29	50	8	21	07	17	8.0	6.8	92	6.2	995.4	8	011	62	6	2	7	5	4	2	/	82710	86615	88530	29	
30	58	8	07	10	21	5.2	4.5	95	5.3	994.5	7	012	58	6	5	7	5	3	2	/	85708	86615	88535	30	
31	82	7	02	03	06	-0.5	-2.2	88	3.2	1001.6	8	016	03	1	1	0	0	9	0	2	83072	86078	31	COTRA Hoar slt	

Mean vis = 17.6 km

Mean cloud = 6.9 86%

Mean wind speed = 6.3 kn

Mean gust = 12 kn

Mean TT = 3.6 °C

Mean TdTd = 2.3 °C

Mean RH = 91.3 %

Mean r = 4.6 g/kg

Mean PPP = 1011.6 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 JANUARY 2021

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks					
1	25	8	29	03	06	2.3	1.6	95	4.2	1012.1	3	001	20	5	2	8	6	2	/ /	88705	1				
2	82	7	29	05	09	3.3	0.4	81	3.9	1015.9	6	007	15	1	1	2	8	4	7	/	81818	85359	87362	2	2Sc40 Cu hum Ac du vir jpW
3	82	6	02	06	12	4.9	2.1	82	4.4	1017.6	5	002	02	2	2	4	8	4	0	1	82818	83640	85075	3	COTRA Cu med
4	81	7	03	13	23	4.8	1.1	77	4.1	1019.1	5	001	80	8	2	7	5	4	/ /	87618			4	/Sc50	
5	75	8	02	10	19	4.3	1.0	79	4.0	1020.0	5	008	60	6	2	8	5	4	/ /	87619	88640		5		
6	82	3	02	06	13	4.4	0.5	76	3.9	1019.5	5	004	01	8	1	3	8	4	0	0	81818	83650		6	Cu hum
7	30	5	29	05	08	-0.2	-1.3	92	3.4	1018.3	6	008	05	2	2	5	6	2	0	0	85704			7	
8	30	8	03	03	06	1.9	1.0	94	4.1	1018.7	3	006	51	5	2	8	6	2	/ /	86703	88705		8		
9	57	1	18	02	03	1.9	0.0	87	3.7	1027.1	5	000	05	1	1	1	6	2	0	1	81705			9	1Ci75
10	50	7	24	03	07	2.0	1.0	93	4.0	1025.9	6	008	05	2	2	7	5	2	/ /	84704	87617		10		
11	84	7	25	12	28	8.3	5.2	81	5.5	1016.5	6	020	02	6	2	7	5	4	/ /	86612	87618		11	/Ac65	
12	80	7	36	05	10	6.4	3.6	82	4.9	1016.3	3	021	02	2	2	7	5	4	/ /	85615	87625		12		
13	62	8	25	08	16	10.0	8.8	92	7.0	1017.4	5	004	20	5	2	8	5	3	/ /	86708	88615		13		
14	58	8	32	12	28	6.2	4.4	88	5.2	1015.6	3	016	60	6	2	8	5	4	/ /	86612	88618		14		
15	60	6	08	03	05	2.0	0.1	87	3.7	1031.3	6	008	05	1	1	1	8	4	0	5	81810	86078		15	1Sc45 1Cs74 COTRA
16	82	5	29	06	18	8.9	5.3	78	5.5	1015.9	3	001	02	5	1	3	8	5	0	2	82822	83072		16	2Sc35 Cu hum
17	84	7	27	08	16	7.6	1.5	65	4.2	1025.9	3	003	03	1	1	2	8	5	7	8	81828	87275		17	2Sc33 2Ac65 COTRA Cu hum
18	82	8	21	07	13	7.3	3.4	76	4.8	1020.0	6	028	02	6	2	1	5	6	7	7	81635	87360	88270	18	Parhelion
19	58	8	20	11	20	9.7	8.0	89	6.7	1002.7	7	030	51	5	2	8	5	3	/ /	83706	86709	88612	19		
20	56	8	20	14	27	9.7	8.1	90	6.9	984.7	6	029	63	6	6	7	7	3	2	/	81709	87712	88520	20	
21	84	7	22	07	18	7.3	2.4	71	4.6	985.3	7	017	03	2	2	1	1	5	4	/	81825	87460		21	Cu hum Cld edge NNW
22	82	7	28	03	08	6.1	2.6	78	4.6	993.9	5	004	25	8	1	7	8	5	/ 2	82820	83635	86640	22	/Ci75 Cu med jp N&E	
23	82	5	30	04	10	4.1	0.1	74	3.8	996.0	2	003	03	1	1	5	8	5	0	0	85822			23	1Sc25 Cu med
24	75	7	26	04	06	1.9	0.6	91	4.0	994.6	5	005	02	7	2	7	5	3	/ /	83709	87613		24	Sn ly 3cm 90%	
25	84	3	28	08	19	4.6	-1.4	65	3.4	1012.5	2	013	02	0	0	0	0	9	0	1	83075			25	Sn ly 1cm 60%
26	70	8	18	10	16	5.3	3.2	86	4.7	1014.4	6	023	03	6	2	7	5	4	2	/	87612	88556		26	Sn ly 1cm 20% Thaw.
27	15	8	21	03	08	9.3	8.5	95	6.9	1011.7	7	009	50	5	2	8	7	2	/ /	87703	88705		27		
28	82	7	26	10	23	12.8	9.3	79	7.3	1002.6	8	003	03	2	2	7	5	4	/ 1	86615	87630		28	/Ci72	
29	86	6	26	12	24	10.7	5.9	72	5.8	1000.5	1	015	03	1	1	6	8	5	0	0	83820	85640		29	
30	30	8	05	10	23	3.6	3.0	96	4.8	995.5	3	003	51	5	5	8	7	2	/ /	87705	88708		30		
31	58	8	06	07	17	3.2	0.8	84	4.1	994.5	7	046	60	6	2	7	5	4	2	/	87613	88520		31	

Mean vis = 25.5 km

Mean cloud = 6.6 83%

Mean wind speed = 7.1 kn

Mean gust = 15 kn

Mean TT = 5.6 °C

Mean TdTd = 2.9 °C

Mean RH = 83.1 %

Mean r = 4.8 g/kg

Mean PPP = 1011.0 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Wokingham Sunshine Hourly analysis 2021	Hour	01-Jan	02-Jan	03-Jan	04-Jan	05-Jan	06-Jan	07-Jan	08-Jan	09-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	15-Jan	16-Jan
	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	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	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	0.00
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	9	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	0.00	0.22	0.10	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12	0.00	0.96	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.40	0.25
	13	0.00	0.50	0.00	0.00	0.01	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.73	0.39
	14	0.00	0.00	0.10	0.00	0.00	0.05	0.01	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	0.28
	15	0.00	0.00	0.33	0.00	0.00	0.36	0.00	0.00	0.59	0.00	0.00	0.00	0.00	0.00	1.00	0.27
	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	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	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	0.00
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot		0.00	2.67	0.81	0.00	0.08	0.43	0.01	0.00	1.85	0.00	0.02	0.00	0.00	0.00	3.13	1.20

Hour	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	29-Jan	30-Jan	31-Jan	Mean
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	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	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
8	0.00	0.00	0.00	0.00	0.69	0.67	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.50	0.08
9	0.78	0.00	0.26	0.00	1.00	1.00	0.71	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.53	0.17
10	0.95	0.00	0.00	0.00	0.96	1.00	1.00	0.00	1.00	0.00	0.00	0.59	0.26	0.00	0.14	0.20
11	1.00	0.00	0.16	0.00	0.51	1.00	1.00	0.00	1.00	0.00	0.00	0.09	0.16	0.00	0.03	0.19
12	1.00	0.00	0.00	0.00	0.00	1.00	0.59	0.00	1.00	0.00	0.00	0.09	0.72	0.00	0.00	0.20
13	0.85	0.00	0.00	0.00	0.00	0.44	0.22	0.15	1.00	0.00	0.00	0.50	0.63	0.00	0.00	0.18
14	0.46	0.00	0.00	0.00	0.00	0.00	0.45	0.07	1.00	0.00	0.00	0.52	0.58	0.00	0.00	0.18
15	0.00	0.00	0.00	0.00	0.00	0.33	0.69	0.00	0.55	0.00	0.00	0.02	0.13	0.00	0.00	0.14
16	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	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	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	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	5.04	0.00	0.42	0.00	3.15	5.43	4.77	0.23	7.29	0.00	0.00	1.82	2.50	0.00	1.25	42.10

JANUARY 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	0.88	4.0	2150	-1.5	512	96.4	99.7	415	91.3	2143	0.4	3.9	4.6	2111	3.4	748	1012.19	1015.3	2357	1009.7	0	0.4
2	2.42	4.3	1236	-0.3	2123	87.8	96.4	2128	72.1	1150	0.6	3.9	4.5	3	3.5	2020	1016.45	1017.8	1018	1015.2	0	0.3
3	3.15	5.8	1239	0.4	7	89.0	94.4	617	79.2	1450	1.5	4.2	4.8	1239	3.6	5	1017.93	1020.1	2218	1016.6	510	0.1
4	3.43	5.5	1318	1.2	341	82.7	92.1	257	75.3	1320	0.7	4.0	4.4	1149	3.6	2110	1019.81	1021.0	2157	1018.5	1334	0
5	3.10	5.2	1256	1.3	639	81.6	88.2	529	72.3	1257	0.3	3.8	4.1	1343	3.6	935	1020.55	1021.4	901	1019.6	1310	0
6	2.06	6.1	1302	-2.3	2216	89.0	98.2	2239	73.8	1439	0.4	3.9	4.6	1302	3.1	2216	1019.91	1020.6	2052	1019.2	548	0.1
7	-0.42	0.6	1328	-1.5	2110	94.4	97.5	2135	90.5	1332	-1.2	3.4	3.7	18	3.2	2331	1018.95	1020.1	0	1017.3	2359	0
8	0.09	2.0	1434	-1.5	43	94.2	96.5	2358	91.4	1230	-0.7	3.6	4.1	1451	3.2	40	1018.82	1023.5	2343	1016.3	558	0
9	-0.11	1.9	1458	-1.8	2351	96.9	99.5	2327	87.1	1518	-0.5	3.6	3.8	1153	3.3	2358	1026.69	1029.0	2235	1023.4	8	0
10	0.66	3.7	2354	-2.2	152	95.7	99.4	0	87.7	1922	0.0	3.8	4.4	2354	3.1	152	1026.28	1028.2	0	1023.3	2357	0
11	6.74	8.8	1422	3.6	57	84.8	93.0	427	75.7	1325	4.3	5.1	6.2	2357	4.4	2	1017.97	1023.5	0	1012.0	2356	0
12	6.32	9.4	716	0.8	2354	91.4	98.1	2356	80.7	1537	5.0	5.5	6.8	730	3.9	2341	1014.78	1021.7	2306	1009.2	454	4.3
13	6.92	10.3	1256	0.5	13	94.9	98.7	101	88.9	2159	6.2	5.9	7.1	1256	3.8	13	1018.54	1021.3	17	1017.0	1432	2.9
14	6.49	9.8	201	2.3	2305	93.7	97.1	1216	84.3	1406	5.5	5.7	7.2	950	4.0	2352	1017.01	1025.7	2359	1012.2	904	8.8
15	0.29	2.5	0	-1.8	1926	94.1	98.7	2059	83.7	1435	-0.6	3.6	4.0	4	3.2	1857	1030.01	1032.4	1033	1025.6	0	0
16	5.47	9.4	1520	0.7	515	83.7	96.2	1238	66.5	2334	2.8	4.7	6.2	1325	3.3	358	1019.71	1028.6	0	1015.2	1351	5.6
17	5.21	8.1	1332	1.1	2302	78.5	96.6	2306	63.5	1326	1.7	4.2	4.6	505	3.8	2247	1024.25	1027.2	1838	1019.3	155	0.4
18	5.40	9.5	2359	1.8	537	89.6	95.6	605	75.1	1453	3.8	5.0	6.9	2357	4.0	537	1020.87	1026.6	3	1010.4	2351	0.1
19	10.20	11.8	952	9.3	1834	89.8	94.3	317	76.6	1155	8.6	7.0	7.5	501	6.2	1218	1003.67	1010.6	0	995.2	2358	1.8
20	9.56	10.3	400	5.6	2359	90.9	94.0	1713	82.8	2101	8.1	6.9	7.3	400	5.0	2352	986.37	995.4	5	973.4	2230	7.2
21	5.30	7.9	1121	2.8	2310	78.3	87.3	2311	64.5	1041	1.8	4.4	5.1	0	4.0	248	985.32	988.2	2353	977.2	0	0
22	2.99	6.9	1244	-0.8	427	88.2	96.3	434	70.5	1214	1.2	4.2	4.8	1838	3.5	419	992.59	995.2	2355	988.2	0	2.4
23	0.60	4.6	1515	-2.2	732	88.5	98.6	602	67.8	1601	-1.2	3.5	4.2	1159	3.1	2359	996.09	999.6	2358	994.0	543	0
24	-0.27	2.0	1501	-3.3	205	93.7	97.9	1105	85.7	1518	-1.2	3.5	4.1	1410	2.9	205	997.13	1001.2	2359	994.4	1424	4
25	0.80	5.2	1309	-3.7	717	80.8	94.3	724	62.0	1309	-2.2	3.2	3.8	5	2.7	720	1010.69	1017.6	2352	1001.2	0	0
26	3.05	7.8	2342	-0.7	513	91.5	96.8	2259	85.5	1257	1.8	4.4	6.3	2345	3.2	1	1015.43	1018.6	926	1010.3	2355	0.4
27	8.42	9.7	1316	6.9	723	96.6	97.9	2141	92.9	1332	7.9	6.6	7.1	1734	6.0	723	1011.06	1013.0	1002	1006.4	2340	6
28	10.68	12.8	1453	8.5	115	90.6	97.7	129	73.5	1258	9.2	7.3	7.8	807	6.6	1249	1001.39	1006.6	0	995.8	2348	14.3
29	9.13	11.4	1443	7.9	2336	84.7	94.6	1021	70.7	1351	6.7	6.2	7.1	29	5.6	2355	998.87	1002.8	2021	994.8	959	2.1
30	4.69	7.9	0	2.8	1804	91.9	96.4	518	78.8	2316	3.5	5.0	5.8	518	3.8	2336	997.43	1002.6	2352	994.4	904	9.6
31	1.60	4.0	1258	-1.5	803	88.1	97.6	2350	72.4	1141	-0.2	3.8	4.7	2343	3.1	739	997.56	1003.7	350	990.4	2244	1.4
Total																						72.2
Mean	4.03	6.74		1.05		89.4	96.12		78.15		2.39	4.64	5.40		3.86		1011.43	1015.45		1006.96		
Max	10.68	12.83		9.30		96.9	99.70		92.90		9.15	7.27	7.84		6.56		1030.01	1032.37		1025.62		
Min	-0.42	0.57		-3.66		78.3	87.30		62.03		-2.23	3.23	3.73		2.70		985.32	988.20		973.38		

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

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.