

WOKINGHAM METEOROLOGICAL DATA

Wokingham Climatological Station, Emmbrook, Berkshire.

Lat/Long 51°25'N 00°51'W NGR (SU)798701 Altitude 46m ASL.

Monthly Means and Totals

MAY 2019

Temperature (°C)		Anomaly	Rank in the past 138	years
Mean maximum	18.2	+0.7	36 th	highest
Mean minimum	6.6	-0.9	54 th	lowest
Daily mean	12.4	-0.1	51 st	highest
Highest maximum	23.7	on 30 th	Lowest maximum	11.9 on 5 th
Highest minimum	13.0	on 25&31	Lowest minimum	0.7 on 5 th
Mean grass minimum	2.9	-1.4	Lowest grass minimum	-5.0 on 5 th
Mean earth @30 cm	13.5	0.0	Earth @100 cm	12.1
Frost duration (hrs)	0.0		Rain duration (hrs)	23.2
Rainfall total (mm)	34.5	68 %	42 nd	lowest
Highest daily fall	6.4	on 9 th	Highest rate mm/hr	51 on 8 th
Number of: Dry days (<0.2mm)	19	Wet days (>0.9mm)	10	days ≥5mm
Sunshine total (hrs)	192.1	Daily mean	6.20	103 %
N° days with: Air frost	0	Ground frost	9	Snow falling
Thunder	0	Hail ≥5mm	1	Small hail/ice
Pressure MSL : Mean @09 GMT, mbar	1017.7	+1.8	Highest	1040.9 on 13 th
Relative humidity : Mean (%)	73.2	Lowest	30 on 23 rd	Water vapour (g/kg), mean at 09 and 15 GMT
Overall mean wind speed (mph)	5.3	Windiest day	9.2 on 30 th	Max gust
Wind direction (days)	N 6	NE 4	E 1	SE 0
Least windy day (mph)	2.3	on 18 th	Calm; less than 0.5 mph (minutes)	904

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

Notes: **Mean Temperature and Sunshine Near Normal and Quite Dry**

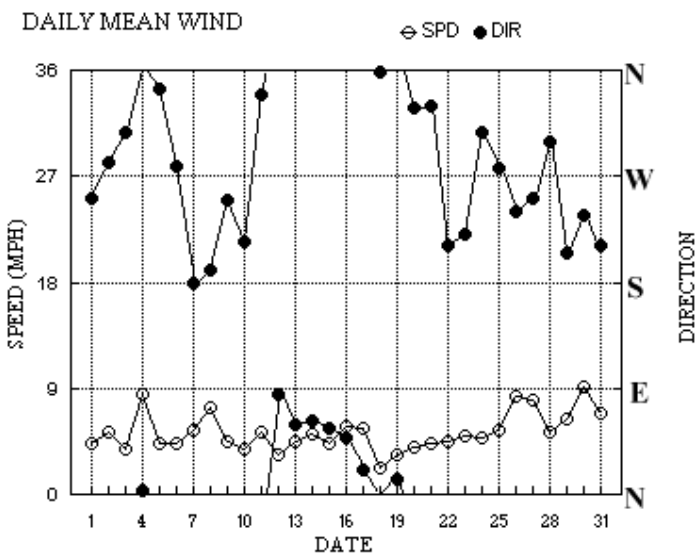
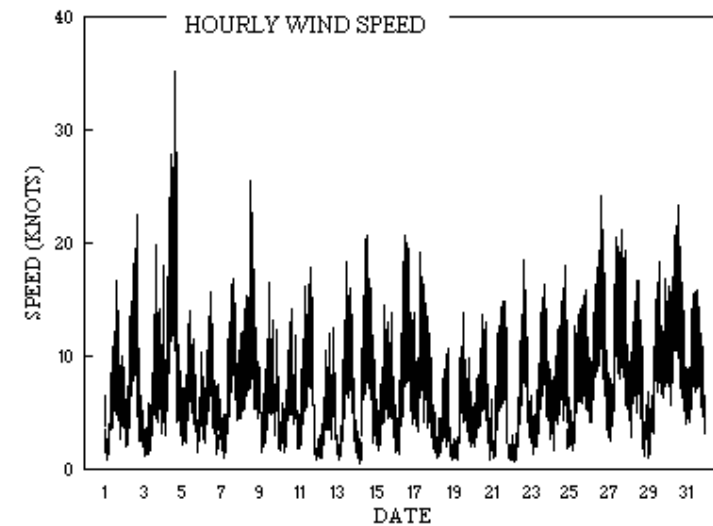
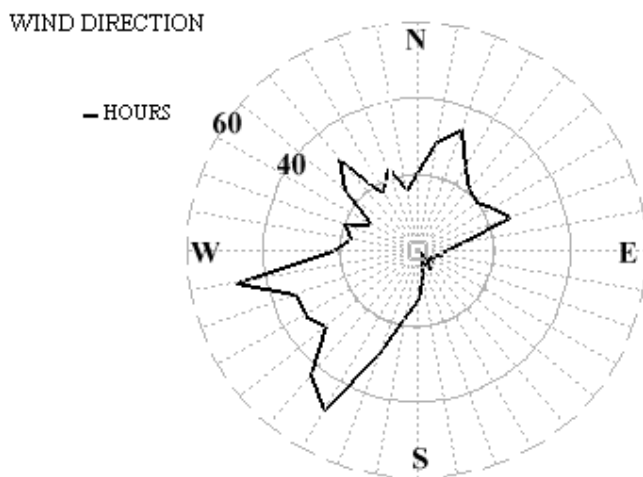
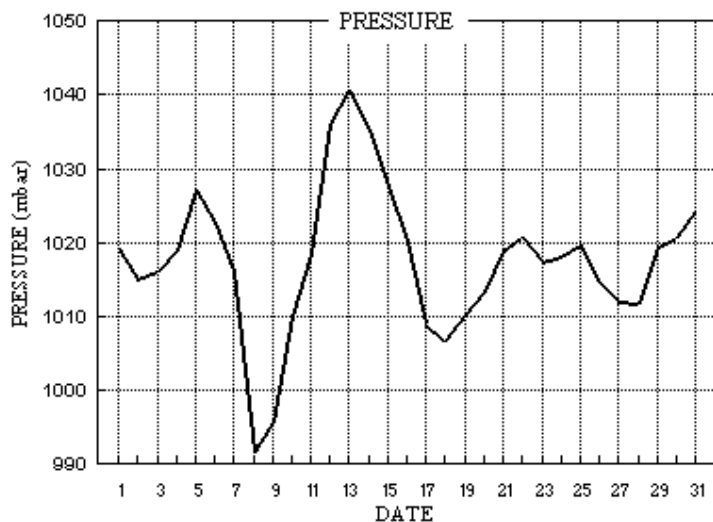
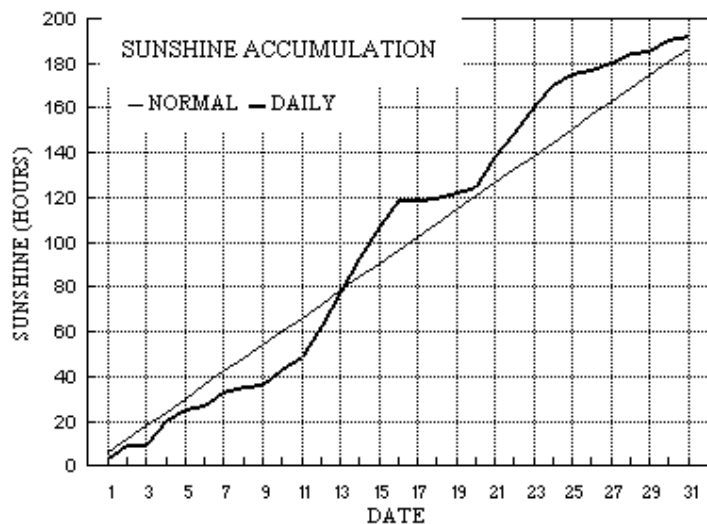
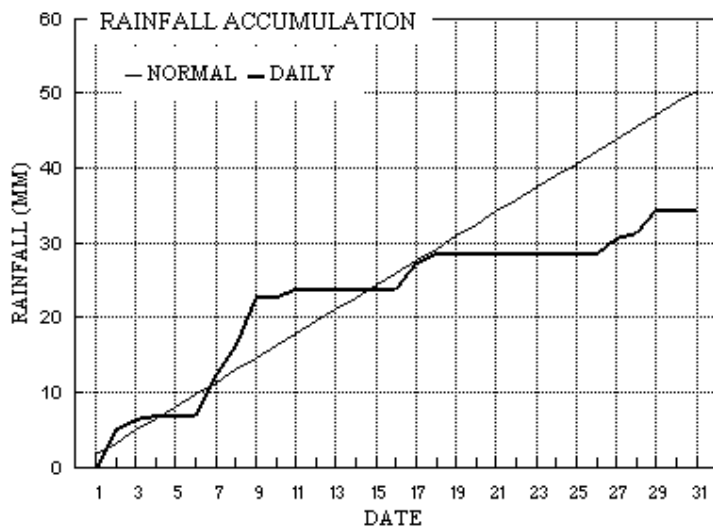
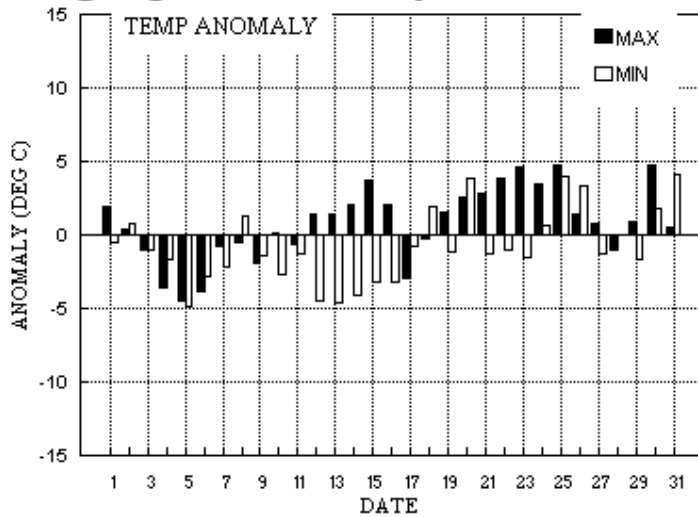
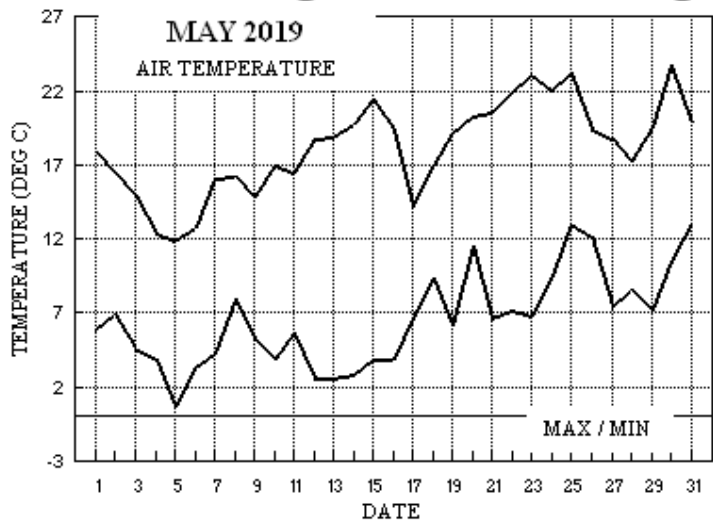
Temperature: This has been a fairly normal May with the mean temperature anomaly only -0.1°. However, as in April, there is quite a disparity between the anomalies for the mean maximum and mean minimum, giving a mean daily temperature range 1.6° above average, although in April this value was 2.5°. The long-term rankings also highlight this disparity, 36th highest for the mean max and 54th lowest for the mean min. The highest max is 1.7° below the median and the lowest max is 0.9° above its median. The highest min is 0.5° above the median and the lowest min is 0.2° above its median. The mean grass min is lowest since 2013. Earth temperature at 30 cm and 1 m depth are exactly average. Anomalies for daily max were close to normal except for below normal from 4th to 7th, anomaly -4.5° on 5th, and above normal on 15th, 20th to 25th and 30th, anomaly +4.8 on 25th. Anomalies for daily min were close to normal except below normal on the 5th and 12th to 16th, anomalies -4.9° on 5th and -4.6° on 13th, and above normal on the 20th, 25th and 31st, anomaly +4.1° on 31st. Ground frost was quite frequent up to mid month but there was none after the 16th. There were 3 more days with ground frost than average, the most for May since 2013. **Rainfall:** This has been quite a dry May with just over two-thirds of the average rainfall. It is driest since 2012, and in this millennium only 5 Mays have been drier. Nevertheless the number of dry days is only 1 above average. Rainfall duration is 62% of average. There was no thunder, but ice pellets fell on the 4th and 11th, and hail up to 6 mm dia. on the 8th. Rainfall rate reached 51 mm/hr on the 8th, the highest in the month. There were 3 dry spells ending in May, 5 days on 1st, 5 days on 16th and 8 days on the 26th. Daily accumulation compared with normal was in deficit of 2 mm by the 6th, becoming a surplus of 8 mm by the 9th, decreasing to zero by the 17th and ending up in deficit of 16 mm by the 31st. **Sunshine:** The total this May is slightly above average, but is 73 hours less than in May last year. Since 2000, 8 Mays have been sunnier and 11 less sunny. The periods 12th to 16th and 21st to 24th were outstandingly sunny, with averages of 13.9 and 11.3 hours per day respectively. Compared with normal, daily accumulation was in deficit of 18 hours by the 9th, decreasing to zero by the 13th and becoming a surplus of 21 hours by the 16th, decreasing to 3 hours by the 20th, increasing to 25 hours by the 24th and decreasing to 6 hours by the 31st. Overall there were 10 days with <3 hours, 13 with =>6 hours, 10 with =>9 hours, 7 with =>12 hours and 2 with =>15 hours. **Wind:** The mean speed this May is 1.3 mph lower than average and is equal lowest with 2018 since 2004, but the month's highest gust is close to average. Daily mean speed was light or moderate throughout, except for the 4th and 8th when it increased to fresh. Directions were W'ly on 1st veering N'ly by 4th, backing S'ly by 7th, veering N'ly by 11th then E'ly by 12th, backing N'ly by 19th and SW'ly by 22nd, remaining W'ly or SW'ly until the 31st. **Pressure:** The MSL air pressure reached 1040.9 mbar on the 13th, the highest May value since before 1976.

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 31 st			
-1.4°	-1.5°	163%	71%	+1.9°	+2.6°	42%	137%	+2.4°	+0.6°	38%	101%

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

Wokingham climatological graphs for May 2019



Daily meteorological data.

Emmbrook, WOKINGHAM, Berkshire.

Month: MAY 2019

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	17.9	5.9	tr	1.6	12.4	11.1	3.5	0.0	1019.1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	251	3.2	3.8	254	17 1519	287	8 15		0.0	
2	16.4	6.9	5.3	0.9	12.5	11.1	5.8	0.0	1015.0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	281	4.3	4.7	300	23 1534	271	8 13		1.3	
3	15.0	4.6	1.3	-1.2	12.2	11.2	0.6	0.0	1016.1	0 1 0 0	0 0 0 0	0 0 0 0	0 0 0 0	306	1.6	3.4	322	20 1641	303	7 16		1.6	
4	12.4	3.9	0.5	2.1	12.1	11.3	10.2	0.0	1018.9	0 0 0 0	0 0 0 0	0 0 1 0		4	7.3	7.3	9	35 1527	357	12 11		0.2	
5	11.9	0.7	0.0	-5.0	11.5	11.3	5.1	0.0	1027.1	0 1 0 0	0 0 0 0	0 0 0 0		343	2.6	3.9	23	14 0925	9	7 10		0.0	
6	12.8	3.3	0.0	-1.5	11.6	11.3	1.9	0.0	1022.7	0 1 0 0	0 0 0 0	0 0 0 0		278	3.0	3.8	302	16 1157	289	7 12		0.0	
7	16.1	4.2	5.5	1.5	11.5	11.3	6.3	0.0	1016.1	0 0 0 0	0 0 0 0	0 0 0 0		179	4.2	4.8	191	17 1628	199	9 16		6.5	
8	16.2	7.9	3.8	6.8	11.8	11.3	1.9	0.0	991.7	0 0 0 0	0 1 0 0	0 0 0 0		190	4.0	6.4	203	26 1247	220	13 12		1.1	
9	14.8	5.2	6.4	0.7	12.0	11.3	1.5	0.0	995.7	0 0 0 0	0 0 0 0	0 0 0 0		249	3.2	4.0	262	17 1144	265	7 11		3.5	
10	17.0	3.9	tr	-0.6	11.9	11.3	6.1	0.0	1009.9	0 1 0 0	0 0 0 0	0 0 0 0		214	2.9	3.4	231	14 1508	230	6 13		0.0	
11	16.5	5.7	1.2	0.9	12.5	11.4	6.4	0.0	1018.5	0 0 0 0	0 0 0 0	0 0 1 0		338	4.2	4.6	319	18 1542	334	9 15		0.3	
12	18.7	2.6	0.0	-1.8	12.5	11.5	13.1	0.0	1036.0	0 1 0 0	0 0 0 0	0 0 0 0		86	1.3	2.9	188	13 1855	180	6 19		0.0	
13	18.9	2.6	0.0	-1.2	12.8	11.5	15.2	0.0	1040.5	0 1 0 0	0 0 0 0	0 0 0 0		59	3.9	4.0	44	19 1130	68	7 15		0.0	
14	19.8	2.8	0.0	-1.0	13.1	11.6	15.1	0.0	1035.3	0 1 0 0	0 0 0 0	0 0 0 0		63	4.4	4.5	66	21 1326	67	9 13		0.0	
15	21.4	3.8	0.0	-0.7	13.4	11.8	14.1	0.0	1027.6	0 1 0 0	0 0 0 0	0 0 0 0		56	3.6	3.8	61	15 1141	91	6 19		0.0	
16	19.4	3.9	tr	-1.2	13.7	11.9	12.1	0.0	1020.2	0 1 0 0	0 0 0 0	0 0 0 0		49	4.8	5.0	48	21 1254	63	8 13		0.0	
17	14.2	6.7	3.3	2.3	13.8	12.1	0.1	0.0	1009.1	0 0 0 0	0 0 0 0	0 0 0 0		21	4.8	4.9	26	19 0742	18	8 07		3.2	
18	17.0	9.3	1.4	8.6	13.4	12.2	0.6	0.0	1006.6	0 0 0 0	0 0 0 0	0 0 0 0		357	0.8	2.0	17	11 1721	9	5 17		0.9	
19	19.1	6.2	0.0	2.1	13.6	12.3	2.6	0.0	1010.2	0 0 0 0	0 0 0 0	0 0 0 0		14	2.6	3.0	23	14 1108	32	5 11		0.0	
20	20.3	11.5	0.0	10.0	14.2	12.4	3.0	0.0	1013.2	0 0 0 0	0 0 0 0	0 0 0 0		327	3.4	3.6	325	14 1225	327	6 12		0.0	
21	20.6	6.6	0.0	1.4	14.2	12.5	13.0	0.0	1018.9	0 0 0 0	0 0 0 0	0 0 0 0		329	3.3	3.8	305	15 1200	338	6 17		0.0	
22	21.9	7.1	0.0	2.8	14.3	12.6	10.4	0.0	1020.8	0 0 0 0	0 0 0 0	0 0 0 0		211	3.1	3.9	154	19 1406	209	8 17		0.0	
23	23.1	6.8	0.0	1.7	14.4	12.7	12.6	0.0	1017.5	0 0 0 0	0 0 0 0	0 0 0 0		220	4.1	4.4	208	16 1657	210	8 17		0.0	
24	22.1	9.4	tr	4.6	14.7	12.9	9.0	0.0	1018.2	0 0 0 0	0 0 0 0	0 0 0 0		306	3.9	4.3	293	18 1832	280	8 18		0.0	
25	23.2	13.0	0.0	10.3	15.1	13.0	5.5	0.0	1019.7	0 0 0 0	0 0 0 0	0 0 0 0		277	4.4	4.8	272	16 1926	264	8 18		0.0	
26	19.4	12.1	0.1	11.2	15.7	13.2	1.0	0.0	1014.7	0 0 0 0	0 0 0 0	0 0 0 0		240	7.0	7.3	260	24 1432	253	11 14		0.2	
27	18.7	7.4	1.9	2.3	15.8	13.3	3.9	0.0	1012.1	0 0 0 0	0 0 0 0	0 0 0 0		251	6.7	6.9	246	21 1639	248	10 10		1.1	
28	17.2	8.6	0.8	6.9	15.4	13.5	3.7	0.0	1011.7	0 0 0 0	0 0 0 0	0 0 0 0		299	3.2	4.6	331	17 1225	307	7 12		0.2	
29	19.5	7.1	3.0	3.7	15.0	13.6	0.8	0.0	1019.4	0 0 0 0	0 0 0 0	0 0 0 0		205	5.1	5.6	190	18 1508	232	9 23		3.1	
30	23.7	10.5	0.0	12.5	14.8	13.6	5.1	0.0	1020.7	0 0 0 0	0 0 0 0	0 0 0 0		237	7.8	8.0	266	23 1416	252	11 13		0.0	
31	19.8	13.0	0.0	7.7	15.7	13.6	1.9	0.0	1024.3	0 0 0 0	0 0 0 0	0 0 0 0		211	5.9	6.0	209	16 1448	217	9 10		0.0	
Total			34.5				192.1	0.0															23.2
Mean	18.2	6.6		2.9	13.5	12.1	6.20	0.0	1017.7					276	1.4	4.6							
Anom	+0.7	-0.9	68%	-1.4	-0.0	+0.3	103%																+1.8
Daily mean		12.4																					
Anom		-0.1																					

Number of days with:
 Air frost = 0 Ground frost = 9 Nil sun = 0
 Snow falling = 0 Snow lying = 0 Thunder = 0
 Hail=>5mm = 1 Hail<5mm or ice = 2 Fog at 09GMT = 0

Abbreviations.
 Max/min = highest and lowest air temperature at 1.2m in 24 hour period ending at 09 GMT
 Rain = total rainfall and melted snowfall in 24 hour period ending at 09 GMT, millimetres. (Tr = trace, <.05mm).
 Grass min = Lowest overnight temperature at grass tip level.
 Sun = hours of bright sunshine, measured electronically. Frost = Number of hours with air temp below 0 deg C.
 pp09 = Air pressure corrected to mean sea level at 0900 GMT, millibars.
 Af = Air frost. Gf = Ground frost. Sf = Snow falling. Sl = Snow lying at 09 GMT.
 Th = Thunder. Ha = Hail =>5mm. Ic = Hail <5mm or ice. Fg = Fog at 09 GMT.
 Vec mean = 24 hour mean wind vector, ddd = direction in degrees from true north, ff = speed in knots.
 Sp = 24 hour mean wind speed in knots.
 Max gust = Highest gust in 24 hours, gg = speed in knots, HHhh = Time, hours and minutes, GMT.
 High hr = Highest hourly mean wind, HH = hour commencing. Rain Hrs = Duration of rain, 24 hours to 09 GMT. Excludes snow/hail.
 30cm and 100 cm are earth temperatures at those depths, read at 09 GMT.
 Anom = Departure from 1981-2010 climatological average.
 All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for MAY 2019

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	Nh	Ch	Nh	Ch	shs	Nh	Ch	shs	Date	Remarks			
1	58	7	25	05	10	13.6	8.4	71	6.8	1019.1	8	004	05	2	2	2	0	9	3	1	82369	87075									1	COTRA	
2	83	5	30	07	13	13.7	6.3	61	5.9	1015.0	8	005	03	1	1	1	8	5	0	1	81825	84075									2	1Sc56 Cu med Parhelion	
3	62	7	35	03	05	9.5	7.8	89	6.5	1016.1	0	001	01	2	2	7	8	4	1	/	84812	87630									3	/Sc50 /As65 Cu hum	
4	80	3	02	13	27	9.8	3.1	63	4.7	1018.9	1	015	03	0	0	3	2	6	0	0	83830									4	Cu med		
5	70	7	35	07	13	9.3	0.2	53	3.8	1027.1	8	001	03	1	1	7	8	6	/	/	81830	87656									5	Cu hum	
6	86	7	29	05	11	9.8	0.7	53	3.9	1022.7	8	005	03	2	2	7	8	6	0	1	83845	86650	85075						6	COTRA Cu hum			
7	75	7	20	05	11	12.7	2.3	49	4.4	1016.1	8	016	03	2	2	1	2	6	7	1	81840	85363									7	1Ac60 /Ci70 COTRA Cu med	
8	50	8	19	08	15	10.6	9.8	95	7.7	991.7	6	023	63	6	6	5	7	3	2	/	85708	88540									8		
9	59	8	23	04	10	11.3	9.6	89	7.5	995.7	1	014	05	1	1	8	8	3	/	/	83708	84810	88650									9	Cu med
10	58	5	22	02	05	9.3	8.2	93	6.8	1009.9	2	010	05	4	2	5	1	3	3	0	85808									10	1Ac65 Cu hum		
11	61	7	34	07	16	10.5	7.6	82	6.4	1018.5	2	032	20	5	2	7	6	4	/	/	87712	84625									11		
12	65	1	05	03	07	13.0	7.2	68	6.2	1036.0	1	009	03	0	0	1	2	5	0	0	81825									12	Cu med		
13	84	3	07	04	11	13.1	6.2	63	5.7	1040.5	8	001	03	0	0	1	1	5	0	1	81825	83080									13	COTRA Cu hum	
14	84	6	07	06	13	14.7	4.7	51	5.2	1035.3	8	009	02	2	2	0	0	9	0	1	86080									14	COTRA		
15	63	5	05	05	09	15.2	6.7	57	6.0	1027.6	7	011	03	1	1	0	0	9	0	1	85080									15	COTRA		
16	65	5	07	04	12	15.8	7.6	58	6.4	1020.2	8	008	02	1	1	0	0	9	0	1	81075	85080									16		
17	58	7	02	07	17	12.4	9.2	81	7.2	1009.1	7	015	05	2	2	7	5	4	3	/	86612	87635									17	/Ac62	
18	62	7	15	01	04	13.0	9.3	78	7.3	1006.6	1	003	03	2	2	7	8	5	/	/	83820	87635									18	Absent vv&cld est	
19	62	7	02	06	10	14.4	12.3	87	8.9	1010.2	2	007	02	2	2	5	0	9	7	2	81359	85362	87072						19	Absent vv&cld est			
20	65	6	35	04	09	14.9	9.9	72	7.6	1013.2	1	010	02	2	2	1	8	5	7	/	81820	86364									20	1Sc50 Absent vv&cld est	
21	82	2	34	05	11	15.7	7.7	59	6.5	1018.9	0	008	03	0	0	1	1	5	0	1	81828									21	2Ci75 COTRA Cu hum		
22	86	7	05	03	06	15.5	6.8	56	6.1	1020.8	4	000	02	2	2	3	0	9	3	2	83368	87070									22	COTRA Halo 22° part	
23	82	5	22	02	07	16.9	7.5	54	6.4	1017.5	7	006	01	2	2	1	5	7	0	2	81650	85070									23	COTRA Sc cas	
24	75	2	33	05	09	17.7	9.8	60	7.5	1018.2	2	005	01	0	0	1	8	6	3	0	81830									24	1Sc56 2Ac57 Cu hum		
25	80	5	32	05	12	16.8	11.3	70	8.2	1019.7	0	007	03	2	2	2	8	5	3	1	81822	83358									25	2Sc50 1Ci75 Cu med	
26	75	8	24	08	16	16.3	12.7	79	9.0	1014.7	6	007	02	2	2	8	5	4	/	/	88612									26			
27	82	5	25	07	16	15.9	9.3	65	7.3	1012.1	0	001	03	2	2	2	8	5	4	8	82825									27	1Sc40 2Ac63 2Cs70 COTRA Cu med		
28	88	7	30	08	15	13.2	8.3	72	6.8	1011.7	2	016	03	2	2	7	8	5	/	/	85820	87656									28	2Sc35 Cu med	
29	75	8	22	04	09	12.0	7.1	72	6.2	1019.4	0	003	21	6	2	1	5	7	/	/	81650	85358	88462						29				
30	81	3	24	10	17	19.5	14.3	72	10.0	1020.7	0	010	01	1	1	2	5	5	4	1	82622									30	1Sc45 1Ac62 2Ci80 COTRA		
31	86	7	21	07	14	18.1	11.0	63	8.0	1024.3	7	001	02	2	2	7	8	5	/	/	83822	87635									31	Cu hum	

Mean vis = 28.2 km

Mean cloud = 5.7 71%

Mean wind speed = 5.5 kn

Mean gust = 12 kn

Mean TT = 13.7 °C

Mean TdTd = 7.8 °C

Mean RH = 68.9 %

Mean r = 6.7 g/kg

Mean PPP = 1017.7 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for MAY 2019

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NCh	shs	NCh	shs	Date	Remarks
1	75	8	25	05	13	16.7	7.6	55	6.5	1016.5	8	015	15	2	2	2	2	6	7	82840	84357	88460		1	Cu med jpW	
2	62	7	26	08	17	14.1	6.5	60	6.0	1013.1	7	010	15	2	2	7	3	6	6	81930	82835	86650		2	/Ac58 jp NW&N vv50k ex p	
3	65	7	24	04	18	12.4	8.7	78	7.0	1013.5	7	016	25	8	2	1	2	6	6	81830	87357			3	/Ci75 Cu med jpS	
4	80	2	36	11	26	10.7	0.1	48	3.8	1021.4	2	011	25	8	1	2	9	6	6	81935	81840			4	1Ac60 jp N&S vv60k ex p	
5	80	7	35	05	12	11.3	-0.2	45	3.7	1025.9	8	008	02	2	2	7	8	6	/	82845	87656			5	Cu med	
6	84	8	31	04	09	11.0	1.8	53	4.3	1021.8	8	006	02	2	2	7	8	6	/	81845	87650			6	/Cs70 Cu hum	
7	81	7	20	09	15	15.1	4.2	48	5.1	1011.5	7	024	15	2	2	2	2	6	6	82840	85362			7	2Ac57 /Ci75 COTRA jpNE	
8	65	7	21	11	23	14.6	8.3	66	6.9	990.8	0	002	15	8	2	3	9	6	6	82930	82835	85068		8	1Ac60 jpNW-N,SE	
9	60	8	28	03	12	11.9	9.8	87	7.6	999.8	2	025	80	8	2	8	8	4	/	81710	83815	88650		9	4Sc30 Cu med	
10	84	7	20	07	11	15.6	3.1	43	4.7	1008.8	6	001	15	2	2	3	2	6	6	83845	83357	85360		10	/Ci75 Cu con jpSE	
11	82	3	35	08	15	15.7	1.4	38	4.2	1023.3	2	027	15	8	1	2	2	7	6	0	82850			11	2Ac57 Cu med jpNW	
12	81	2	36	04	12	16.4	3.1	41	4.6	1036.6	4	000	02	0	0	2	1	7	0	1	82856			12	1Ci80 COTRA Cu hum	
13	82	6	06	07	15	18.6	4.4	39	5.0	1038.0	7	015	02	1	1	0	0	9	0	1	86080			13	COTRA	
14	82	3	06	08	19	19.7	5.4	39	5.4	1031.4	8	022	01	1	1	0	0	9	0	1	83080			14	COTRA	
15	67	6	03	05	13	20.9	4.0	33	5.0	1023.9	7	018	02	2	2	0	0	9	0	1	82075	85080		15	COTRA Parhelia	
16	80	4	05	07	20	18.5	4.7	40	5.3	1016.5	7	021	01	1	1	2	4	7	0	1	82650	83075		16		
17	65	8	02	08	16	12.9	10.1	83	7.7	1008.0	7	004	60	6	2	7	5	4	/	82715	83625	88635		17	Absent vv&cld est	
18	70	7	17	03	10	13.3	11.7	90	8.6	1006.6	3	003	80	1	2	4	2	4	6	/	81715	84825	87357		18	Absent vv&cld est
19	75	7	05	04	10	18.0	8.0	52	6.7	1009.6	6	005	02	2	2	2	2	6	7	/	82845	87358		19	Absent vv&cld est	
20	82	4	30	05	13	18.6	6.8	46	6.1	1013.2	2	001	01	1	1	3	2	6	3	1	83840			20	2Ac58 1Ci75 Absent vv&cld est	
21	86	2	30	05	13	18.3	5.8	44	5.7	1018.6	8	001	02	0	0	2	2	7	0	0	82850			21	Cu med	
22	85	6	21	08	19	19.9	6.6	42	6.0	1018.8	7	008	03	1	1	2	2	7	3	1	82850	85364		22	1Ci75 COTRA Cu med	
23	83	4	24	06	15	22.8	8.5	40	6.9	1014.5	7	011	02	1	1	1	1	7	4	1	81856	83365		23	2Ci75 COTRA Cu hum	
24	82	7	31	06	15	19.3	8.3	49	6.8	1017.5	4	000	15	2	2	3	8	6	7	/	81845	83650	87358		24	Cu med jpW vv70k ex p
25	88	7	30	06	13	22.3	9.5	44	7.3	1017.5	8	009	03	1	1	1	8	7	3	6	81850	87275		25	1Sc56 1Ac65 Cu med U/a cont+parhelia	
26	84	8	25	12	24	18.3	13.8	75	9.8	1012.1	6	011	02	6	2	8	5	4	/	86618	87625		26	/Sc35		
27	84	7	27	08	17	16.6	7.0	53	6.2	1010.0	7	004	25	8	2	4	8	6	7	1	82840	83650	87357		27	/Ci75 Cu med
28	65	6	31	06	16	15.3	7.1	58	6.2	1014.9	2	016	15	8	2	4	8	6	6	0	81835	83650	85359		28	Cu med. jp S&E vv40k ex p
29	35	8	19	10	16	12.0	10.9	93	8.0	1018.2	7	015	58	6	5	8	5	2	/	82705	86708	88615		29		
30	81	7	26	11	23	21.6	12.2	55	8.7	1022.0	1	006	02	2	2	6	8	6	4	1	83838	85645	85080		30	1Ac62 Cu hum
31	86	7	20	07	16	18.5	12.0	66	8.6	1023.4	7	010	02	2	2	7	8	5	/	83828	87632			31	Cu hum	

Mean vis = 34.1 km

Mean cloud = 6.0 75%

Mean wind speed = 6.8 kn

Mean gust = 16 kn

Mean TT = 16.5 °C

Mean TdTd = 6.8 °C

Mean RH = 54.9 %

Mean r = 6.3 g/kg

Mean PPP = 1016.7 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 2019	Hour	01-May	02-May	03-May	04-May	05-May	06-May	07-May	08-May	09-May	10-May	11-May	12-May	13-May	14-May	15-May	16-May
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	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	0.00
4	0.00	0.00	0.00	0.14	0.15	0.11	0.00	0.00	0.16	0.00	0.00	0.44	0.56	0.56	0.52	0.52	0.51
5	0.00	0.77	0.00	0.81	1.00	0.68	0.42	0.00	0.24	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
6	0.26	1.00	0.00	0.97	1.00	0.48	0.70	0.00	0.71	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
7	0.47	1.00	0.00	1.00	0.98	0.01	0.95	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
8	1.00	1.00	0.00	0.39	0.95	0.55	1.00	0.00	0.00	0.18	0.01	1.00	1.00	1.00	1.00	1.00	1.00
9	1.00	0.86	0.00	0.94	0.58	0.03	0.34	0.00	0.00	1.00	0.71	0.91	1.00	1.00	1.00	1.00	1.00
10	0.62	0.16	0.00	0.76	0.00	0.00	0.55	0.15	0.29	0.82	0.25	0.88	1.00	1.00	1.00	1.00	0.80
11	0.00	0.37	0.04	0.54	0.00	0.06	0.55	0.15	0.00	0.66	0.38	0.81	1.00	1.00	1.00	1.00	0.89
12	0.03	0.19	0.04	0.76	0.00	0.00	0.60	0.63	0.11	0.22	0.51	0.52	1.00	1.00	1.00	1.00	0.69
13	0.00	0.00	0.17	0.46	0.00	0.00	0.26	0.20	0.00	1.00	0.69	0.77	1.00	1.00	1.00	1.00	0.11
14	0.14	0.00	0.00	0.48	0.00	0.00	0.19	0.74	0.00	0.34	0.80	1.00	1.00	1.00	1.00	1.00	0.50
15	0.00	0.01	0.30	0.57	0.37	0.00	0.39	0.06	0.00	0.56	0.37	1.00	1.00	1.00	1.00	1.00	0.90
16	0.00	0.00	0.00	1.00	0.03	0.00	0.35	0.00	0.00	0.78	0.94	0.46	1.00	1.00	1.00	1.00	0.99
17	0.00	0.00	0.00	0.48	0.00	0.00	0.01	0.00	0.00	0.41	0.98	0.77	1.00	1.00	0.86	0.60	0.60
18	0.00	0.37	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.13	0.80	1.00	1.00	1.00	0.71	0.79	0.79
19	0.00	0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.62	0.53	0.00	0.32	0.32
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	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	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	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	0.00
Tot		3.53	5.76	0.55	10.23	5.05	1.92	6.30	1.94	1.51	6.08	6.43	13.06	15.19	15.09	14.08	12.09

	Hour	17-May	18-May	19-May	20-May	21-May	22-May	23-May	24-May	25-May	26-May	27-May	28-May	29-May	30-May	31-May	Mean
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	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	0.00
4	0.00	0.00	0.00	0.00	0.54	0.00	0.32	0.38	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.16
5	0.00	0.00	0.00	0.00	1.00	0.39	0.53	0.64	0.31	0.00	0.00	0.00	0.34	0.56	0.00	0.41	0.41
6	0.00	0.00	0.18	0.01	1.00	0.93	0.85	1.00	0.07	0.05	0.30	0.00	0.00	1.00	0.01	0.50	0.50
7	0.00	0.00	0.08	0.00	1.00	0.90	0.98	1.00	0.00	0.00	0.00	0.16	0.03	0.46	0.05	0.45	0.45
8	0.00	0.00	0.28	0.00	1.00	0.96	0.96	1.00	0.46	0.00	0.82	0.04	0.00	0.79	0.16	0.53	0.53
9	0.01	0.00	0.46	0.48	1.00	1.00	1.00	1.00	0.92	0.01	0.69	0.05	0.00	0.95	0.00	0.58	0.58
10	0.00	0.00	0.34	0.90	0.99	0.72	1.00	0.79	0.74	0.12	0.55	0.38	0.00	0.47	0.00	0.49	0.49
11	0.00	0.00	0.03	0.41	0.84	0.00	1.00	0.77	0.34	0.00	0.54	0.23	0.00	0.11	0.00	0.38	0.38
12	0.00	0.40	0.32	0.01	0.90	0.34	0.73	0.52	0.73	0.00	0.01	0.36	0.00	0.30	0.01	0.39	0.39
13	0.00	0.00	0.34	0.08	0.67	0.82	0.87	0.13	0.59	0.00	0.02	0.24	0.00	0.09	0.00	0.34	0.34
14	0.00	0.00	0.00	0.38	0.50	0.30	0.84	0.00	0.61	0.00	0.01	0.25	0.00	0.18	0.00	0.33	0.33
15	0.00	0.00	0.00	0.00	0.31	0.64	0.89	0.00	0.75	0.00	0.00	0.19	0.00	0.11	0.00	0.34	0.34
16	0.00	0.00	0.02	0.00	0.63	0.86	0.56	0.00	0.00	0.00	0.24	0.18	0.00	0.05	0.00	0.33	0.33
17	0.00	0.22	0.54	0.15	0.84	0.96	1.00	0.69	0.00	0.14	0.65	0.54	0.00	0.03	0.21	0.39	0.39
18	0.00	0.00	0.00	0.20	1.00	0.93	0.79	0.93	0.00	0.30	0.00	0.99	0.00	0.02	0.75	0.41	0.41
19	0.00	0.00	0.00	0.38	0.71	0.62	0.26	0.13	0.03	0.40	0.00	0.05	0.00	0.00	0.75	0.17	0.17
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	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	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	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	0.00
Tot		0.01	0.63	2.59	3.02	12.95	10.38	12.59	8.99	5.54	1.02	3.85	3.66	0.80	5.13	1.94	191.86

Month	May 2019	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	11.69	17.9	1421	5.9	249	75.4	98.1	523	42.7	1411	7.1	6.2	7.2	1024	5.2	1412	1018.21	1021.5	5	1015.9	2348	0
	2	10.48	16.4	1249	6.9	317	82.2	98.2	2329	51.1	1251	7.2	6.3	7.4	1733	5.5	1215	1014.69	1016.0	15	1012.8	1517	5.4
	3	8.71	15.0	1339	4.6	258	88.5	99.6	434	61.0	1341	6.8	6.1	7.3	1529	5.1	2345	1015.02	1016.7	754	1012.9	1630	1
	4	7.09	12.4	1524	3.4	2253	70.0	91.1	253	41.0	1124	1.6	4.2	5.3	1558	3.1	1124	1020.40	1026.4	2357	1015.2	4	1.1
	5	7.56	11.9	1538	0.7	407	66.0	96.9	523	41.4	1633	1.1	4.1	4.7	2353	3.3	1153	1025.96	1027.6	755	1023.4	2257	0
	6	8.59	11.8	1304	3.3	435	62.3	85.0	2359	41.0	1152	1.5	4.2	5.2	2034	3.1	918	1022.12	1024.0	237	1019.6	2345	0
	7	10.61	16.1	1252	4.2	436	62.5	94.1	454	39.8	1139	3.1	4.7	5.5	1023	4.0	959	1013.39	1019.8	34	1004.1	2359	0
	8	10.51	16.2	1235	7.8	2346	87.3	98.7	731	58.9	1236	8.4	7.0	8.7	1101	5.3	0	993.60	1004.3	0	990.4	1214	9.4
	9	9.31	14.8	1059	5.2	338	93.1	100.0	610	72.3	1100	8.2	6.9	8.9	1230	5.5	402	998.32	1006.4	2359	992.2	0	6.4
	10	10.41	17.0	1408	3.9	340	76.8	99.7	811	41.6	1355	5.8	5.8	7.2	839	4.8	1355	1008.90	1011.0	2349	1006.3	2	0
	11	10.45	16.5	1512	5.1	2358	76.4	99.0	449	37.0	1501	5.9	5.7	7.1	1005	4.1	1459	1020.83	1031.4	2359	1010.8	3	1.3
	12	10.72	18.7	1539	2.6	427	68.0	98.9	519	30.6	1427	4.0	5.0	6.7	923	3.6	1225	1036.14	1040.2	2358	1031.2	0	0
	13	10.84	18.9	1525	2.6	429	65.1	98.7	503	33.9	1430	3.5	4.8	6.3	1226	3.8	1154	1039.16	1040.9	752	1037.2	1658	0
	14	11.84	19.8	1455	2.8	409	62.2	96.1	502	35.1	1609	4.0	5.0	6.6	1059	3.8	50	1033.40	1037.7	22	1029.5	2359	0
	15	12.79	21.4	1528	3.8	347	63.5	94.1	514	31.5	1514	5.3	5.5	7.1	1338	4.2	308	1026.05	1029.6	0	1022.8	1811	0
	16	11.84	19.4	1129	3.9	419	65.0	96.5	524	32.0	1535	4.6	5.3	7.3	823	4.2	1542	1018.44	1023.3	12	1013.6	2356	0
	17	10.90	14.2	1233	6.7	117	85.7	98.6	2358	72.7	1209	8.6	7.0	7.9	1830	5.0	56	1009.11	1013.8	0	1007.0	2334	3.2
	18	11.87	17.0	1309	7.7	2351	88.4	99.3	2359	58.5	1258	9.9	7.6	8.9	1449	6.5	1332	1006.98	1008.9	2235	1005.9	408	1.5
	19	13.24	19.1	1314	6.2	256	77.6	100.0	627	48.0	1708	8.9	7.1	9.2	855	5.8	1708	1009.86	1011.6	2245	1008.6	15	0
	20	14.71	20.3	1434	9.7	2359	70.9	91.7	318	42.3	1437	9.1	7.2	8.5	1042	6.0	1649	1013.17	1016.4	2326	1011.0	238	0
	21	13.74	20.6	1313	6.6	323	67.0	97.1	421	38.3	1625	6.9	6.1	6.9	1312	5.4	1440	1018.58	1020.5	2252	1016.2	5	0
	22	14.32	21.9	1523	7.1	441	60.5	95.2	446	34.3	1309	5.8	5.7	7.4	1537	4.3	2033	1019.63	1021.1	646	1017.9	1854	0
	23	15.59	23.1	1454	6.8	351	59.6	91.5	408	30.2	1732	6.8	6.1	7.6	1055	4.8	1741	1016.29	1018.6	2	1013.9	1715	0
	24	15.95	22.1	1249	9.4	448	66.4	88.8	449	40.4	1307	9.3	7.3	8.4	937	6.3	1307	1017.57	1019.0	2343	1015.9	16	0
	25	17.78	23.2	1528	13.0	406	64.0	88.4	513	36.8	1530	10.5	7.8	9.0	942	6.3	1530	1018.34	1020.0	810	1017.0	1644	0
	26	15.78	19.4	1059	10.6	2358	78.1	92.7	437	61.5	1957	11.9	8.7	11.0	1246	6.2	2350	1013.67	1017.2	0	1010.8	1831	0.1
	27	13.10	18.7	1141	7.4	219	71.3	94.1	241	46.3	1332	7.6	6.5	7.6	1120	5.6	1324	1010.67	1012.6	21	1008.6	1804	1.9
	28	12.09	17.2	1549	8.6	22	76.1	94.4	217	49.6	1550	7.7	6.5	8.1	1142	5.6	1531	1013.27	1018.5	2359	1008.6	42	1
	29	11.47	14.9	2243	7.1	247	89.5	97.0	419	62.0	1046	9.7	7.6	9.8	2120	5.5	1046	1018.65	1020.1	1113	1017.0	1709	3.2
	30	17.80	23.7	1408	13.2	2336	73.8	93.5	216	51.0	1409	12.8	9.1	10.7	1154	7.6	2335	1021.31	1024.4	2336	1018.3	26	0
	31	16.11	19.7	1227	11.8	2359	75.2	90.8	2351	60.0	1232	11.6	8.4	9.3	1225	7.7	2347	1023.51	1024.7	638	1021.8	1953	0
Total																							35.5
Mean		12.19	18.03		6.40		73.2	95.41		45.89		6.95	6.30	7.70		5.07		1017.27	1020.78		1014.09		
Max		17.80	23.69		13.18		93.1	100.00		72.70		12.78	9.09	11.03		7.65		1039.16	1040.91		1037.18		
Min		7.09	11.76		0.73		59.6	85.00		30.15		1.09	4.05	4.71		3.08		993.60	1004.26		990.43		

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

SPRING 2019

Temperature (°C)					Rank in the past 138 years				
Mean maximum	15.6	(+1.3)			12 th highest				
Mean minimum	5.2	(+0.2)			27 th highest				
Daily mean	10.4	(+0.8)			11 th highest				
Rainfall total (mm)	108.3	(75%)			35 th lowest				
Sunshine total (hours)	505.3	(106%)							
N° of:	Dry days	55 (+3)	Wet days	28 (0)					
Days with:	Air frost	6 (-5)	Ground frost	41 (+6)	Snow falling	0 (-4)	Snow lying	0 (0)	
Thunder	1 (-4)	Hail ≥5mm	1 (-1)	Small hail/ice	7 (+2)	Fog @09 GMT	0 (-1)	Nil sun	4 (-5)
Air pressure MSL : Mean @09 GMT (mbar)	1016.4	(+0.8)							

Departure from 1981 to 2010 average shown in brackets.

Notes: **Very Mild and Dry with Sunshine Above Average.**

Temperature: This has been a very mild spring season, with the mean temperature 11th highest since 1882. In more recent years, since 2000 12 springs have been cooler, 5 milder and 2 the same as this year's. The mean minimum ranks lower than the mean maximum, indicating a larger than usual mean daily temperature range, as is the case at 1.1° above average. March was the coolest month, mean 9.0° and May the mildest, mean 12.4°, however there were more cold nights in April than in March, and there were 22.3 hours of air frost in April against only 3.1 hours in March, and the mean min in April was 1.4° below that for March. The season's highest max was 25.7° on the 22nd April, 0.3° above the median, and the lowest max was 9.3° on the 4th April, 4.8° above its median and 3rd highest in 107 years, and highest since 1997. The highest min was 13.0° on the 31st May, 0.4° above the median, and the lowest min was -2.6° on the 14th April, 1.6° above its median. The mean grass min was 1.4°, anomaly -0.2°. The mean earth temperature at 30 cm depth was 10.8°, anomaly +0.6°, and at 1 m depth, 10.1° anomaly +0.4°. There were 25.4 hours with air frost, 30.7 hours below average. **Rainfall:** This has been a dry spring season overall, with 25% less rainfall than average. Compared with the past 138 springs, this season's fall is 29.5 mm below the median. However, since 2000 there have been 6 drier springs, 5 of which had less than 100 mm. The wettest day was the 9th March when 9.5 mm fell, the 8th lowest daily fall in the past 117 springs. The last spring when there were no falls of 10 mm or more was in 2003. Despite the general dry nature of this spring there were an average number of wet days, though the duration of rainfall was only 77 % of average. March with 48.0 mm was the wettest month, and at 105 % was the only one to receive more than the average. April was driest with 25.8 mm and 53 %, with May slightly wetter with 34.5 mm and 68 %. The highest rainfall rate was 51 mm/hr on the 8th May. There were 5 dry spells, 13 days ending on the 31st March, 14 days on the 23rd April, 5 days to the 1st and 16th May, and 8 days to the 26th May. The 10th March was the only day to have thunder, and ice pellets fell on the 4th, 10th and 18th March and 4th and 11th May, and snow pellets on the 2nd and 3rd of April. Hail with 6 mm dia. stones fell on 8th May. Estimated soil moisture deficit reached levels where unirrigated shallow rooted plants would suffer stress in the final 10 days of May, and an index of stress for this spring season gives a value of 107, average 67, and ranks 11th highest since 1976. **Sunshine:** This has been quite a sunny spring, with a daily mean of 5.49 hours, 6 % above average and highest since 2015. Each of the season's months had above average sunshine, with March best at 111 %, then April 107 % and May 103 %. The sunniest day was the 13th May when 15.2 hours was recorded, but the 5 days to the 16th May were outstanding producing 69.6 hours, a mean of 13.9 hrs/day. There were two notably dull episodes, 4 days to 22nd March, with only 0.3 hours in total, and 6 days to the 9th April with a mean of just 0.3 hrs/day. Overall there were 33 days with <3 hours, 34 with =>6 hours, 25 with =>9 hours, 12 with =>12 hours and 2 with =>15 hours. **Wind:** The mean speed for this spring is 6.7 mph, 0.3 mph below average. The windiest day was 16th March, mean 17.3 mph, but the highest gust of 54 mph was on the 10th March. Daily mean direction/number of days; N,9 NE,21 E,5 SE,2 S,6 SW,25 W,15 NW,9. Compared with average, winds from NE were 3.3% more frequent and from W 4.1% more frequent, while S were 6.3% less frequent. **Pressure:** The highest pressure was 1040.9 mbar on the 13th May and the lowest 985.2 mbar on 6th March, a span of 55.7 mbar, compared with an average of 52.7 mbar. **Humidity:** The overall mean RH was 75.2% and the lowest was 24% on the 22nd April. The mean water vapour content per kg of air was 6.0 g at 0900 GMT and 5.7 g at 1500 GMT. **March:** Very mild and quite sunny with above average rainfall. Very windy until mid-month. Mean temperature 5th highest in 138 years. Lowest max 3rd highest in 107 years. Lowest min 5th highest in 116 years. Mean grass min 2nd highest since 1998. Completely dry after the 19th. Month's highest gust equal highest since 1995. **April:** Mild overall, dry and sunny. Mean max 10th highest in 138 years. Highest max 6th highest in 116 years. Number of ground frosts equal highest since 1984. **May:** Mean temperature and sunshine near normal and quite dry. Mean wind speed equal lowest since 2004. New May record highest pressure.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom	Sun hrs	Anom	Mean Wind mph	Max gust	Mean pressure	Anom
March	12.8°	+1.6°	5.2°	+2.0°	48.0	105%	136.3	111%	9.0	54	1017.0	+1.1
April	15.9°	+1.9°	3.8°	-0.6°	25.8	53%	176.9	107%	5.8	53	1014.5	-0.5
May	18.2°	+0.7°	6.6	-0.9°	34.5	68%	192.1	103%	5.3	40	1017.7	+1.8

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

Appendix 1.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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.