

# 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 2015

Temperature (°C / °F)			Anomaly	Rank in the past 134 years				
Mean maximum	17.0	62.6	-0.5	63 <sup>rd</sup> lowest				
Mean minimum	7.4	45.3	-0.1	40 <sup>th</sup> highest				
Daily mean	12.2	54.0	-0.3	57 <sup>th</sup> highest				
Highest maximum	20.8	69.4	on 11 <sup>th</sup>	Lowest maximum	10.8	51.4	on 14 <sup>th</sup>	
Highest minimum	12.2	54.0	on 23 <sup>rd</sup>	Lowest minimum	2.3	36.1	on 21 <sup>st</sup>	
Mean grass minimum	4.0	39.2	-0.3	Lowest grass minimum	-2.7	27.1	on 2 <sup>nd</sup>	
Mean earth @30 cm	14.0	57.2	+0.5	Earth @100 cm	12.4	54.3		
Frost duration (hrs)	0			Rain duration (hrs)	35.8			
Rainfall total (mm / in)	39.1	1.54	78 %	56 <sup>th</sup> lowest				
Highest daily fall	10.5	0.41	on 14 <sup>th</sup>					
Number of: Dry days (<0.2mm)	19	Wet days (>0.9mm)	9	days ≥5mm	3			
Sunshine total (hrs)	166.1	Daily mean	5.36	87 %	Sunniest day	14.8	on 13 <sup>th</sup>	
N <sup>o</sup> days with: Air frost	0	Ground frost	5	Snow falling	0	Snow lying	0	
Thunder	0	Hail ≥5mm	1	Small hail/ice	1	Fog @09	0	
						Nil sun	1	
Pressure MSL : Mean @09 GMT, mbar	1014.8	-1.1	Highest	1028.6	on 16 <sup>th</sup>	Lowest	987.0	on 5 <sup>th</sup>
Relative humidity : Mean (%)	70.4	Lowest	24	on 13 <sup>th</sup>	Water vapour (g/kg), mean at 09 and 15 GMT			6.2, 5.8
Overall mean wind speed (mph)	8.1	Windiest day	15.4	on 5 <sup>th</sup>	Max gust	50	on 6 <sup>th</sup>	
Wind direction (days)	N 0	NE 4	E 1	SE 0	S 3	SW 14	W 7	NW 2
Least windy day (mph)	4.3	on 13 <sup>th</sup>	Calm; less than 0.5 mph (minutes)				168	

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

Notes:

### Temperature, Rainfall and Sunshine Below Average, Quite Windy

One of the features of this May has been a lack of really warm days, although some of the near normal ones were quite pleasant, especially when combined with good sunshine, as on the 13<sup>th</sup> and 21<sup>st</sup>. **Temperature:** Although temperatures were below average, it was only 2 years ago that the mean May temperature was 1.2° lower than this month's, and this May ranks 3<sup>rd</sup> coldest since 1996, and 2<sup>nd</sup> coldest in terms of the mean maximum. The best days were the 3<sup>rd</sup> and 11<sup>th</sup>, anomalies near +4°, and the nights of the 4<sup>th</sup>, 5<sup>th</sup> and 23<sup>rd</sup> were mild with anomalies over +4°. Only one day was cold, the 14<sup>th</sup>, anomaly for the mean max -6.9°, but anomalies for daily min on the 13<sup>th</sup>, 20<sup>th</sup> and 21<sup>st</sup> were greater than -4°. The month's highest max is 4.6° below the long-term median and is lowest since 1994, and 7<sup>th</sup> lowest in 113 years. The lowest max and highest min are close to their respective medians, but the lowest min is 1.8° above its median. The lowest grass min is highest since 2009, but the number of ground frosts is about average. There were no air frosts, along with 27 of the past 40 Mays.

**Rainfall:** The total this May is 22 % below average, so a relatively dry month with two dry spells. The first week was the wettest part of the month, with the rainfall accumulation in surplus by 10 mm on the 6<sup>th</sup>. A dry period to the 13<sup>th</sup> reduced this to zero, but the 14<sup>th</sup> was the wettest day of the month with over 10mm, and it took until the 21<sup>st</sup> before the accumulation crossed into deficit, and this had increased to 11 mm by the 31<sup>st</sup>. The first dry spell was of 5 days ending on the 13<sup>th</sup> and the second of 9 days ending on the 28<sup>th</sup>. The duration of measurable rain was 93 % of normal, and the number of dry days is close to average. There was no thunder this month but small hail fell during a violent shower on the 6<sup>th</sup>, maximum rain rate 69 mm/hr at 1234 GMT, and there were several hail showers on the afternoon of the 19<sup>th</sup>, with stones up to 8 mm diameter in one of those. **Sunshine:** This has been a disappointing month for sunshine overall, with the fewest sunshine hours since 2006, and 48 fewer hours than in April this year. The month got off to a poor start, and no day had over 50 % of the maximum until the 12<sup>th</sup>. In the subsequent 10 days 4 had over 50 %, including the 13<sup>th</sup> with 95 % and the 21<sup>st</sup> with 87 %. The final 10 days had just 2 with over 50 %, but 57 % on the 27<sup>th</sup> was the best. Overall there were 9 days with <3 hours, 12 with =>6 hours, 5 with =>9 hours and 2 with =>12 hours. **Wind:** The mean wind speed this month is 1.4 mph above average making it the second windiest May after 1993 since before 1988. The 15.4 mph on the month's windiest day is highest in the same period, as is the month's highest gust of 50 mph. Similarly, the 4.3 mph on this May's least windy day is also highest in that period.

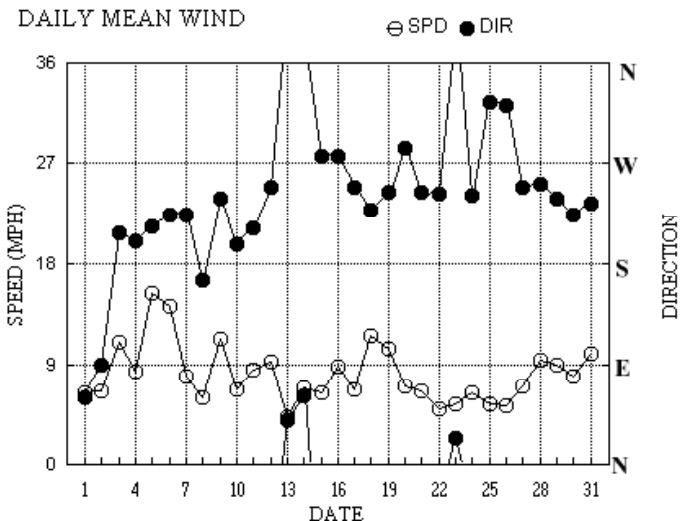
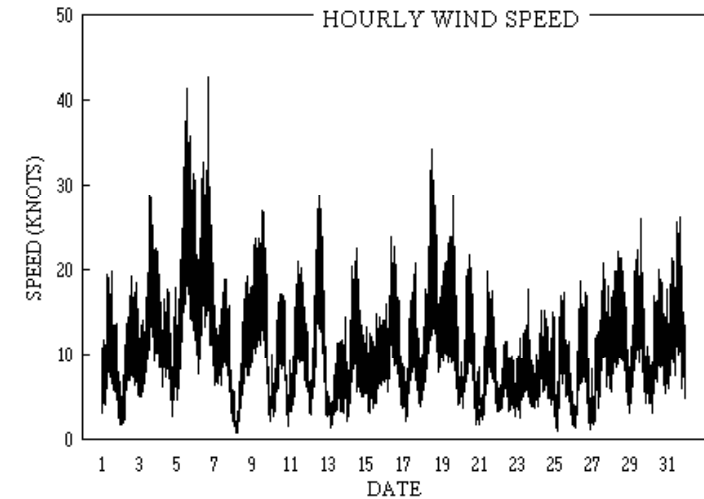
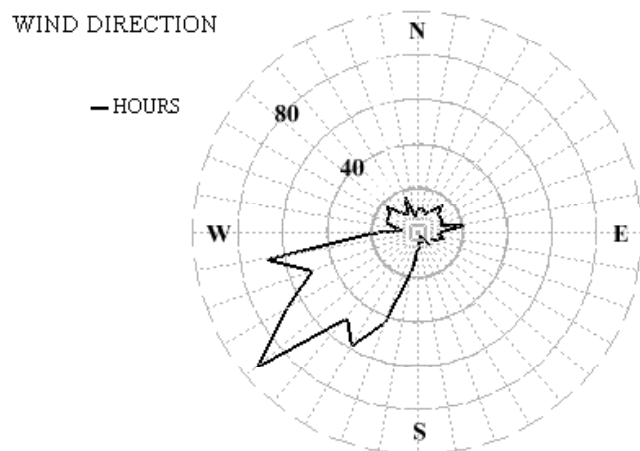
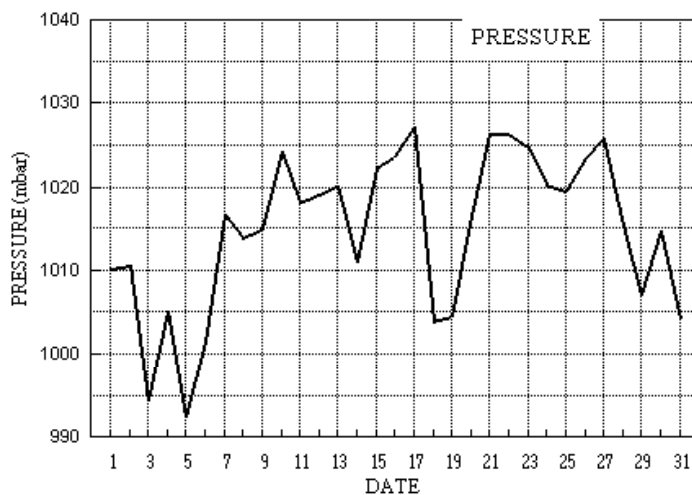
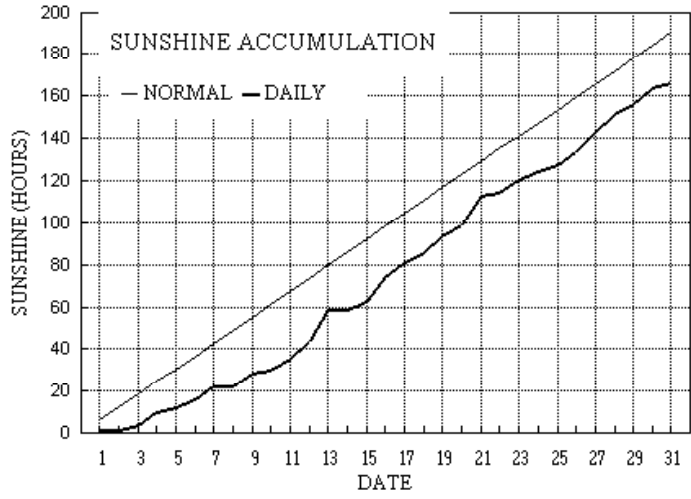
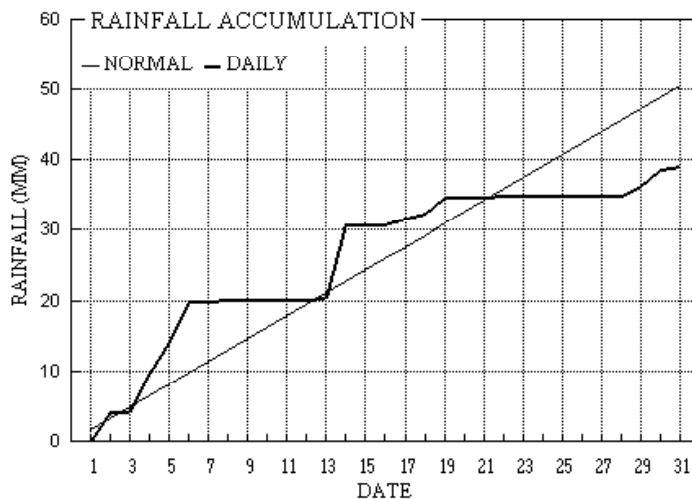
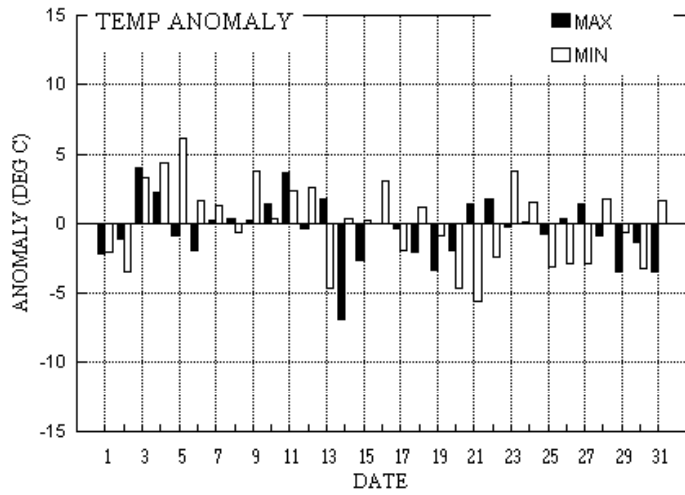
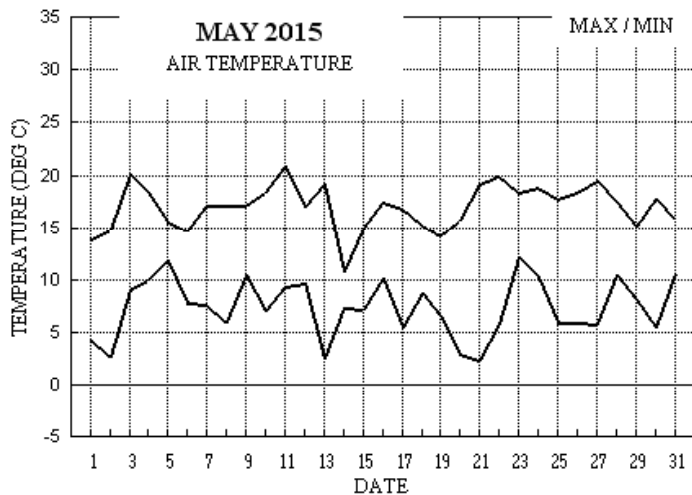
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 <sup>st</sup> to the 10 <sup>th</sup>				From the 11 <sup>th</sup> to the 20 <sup>th</sup>				From the 21 <sup>st</sup> to the 31 <sup>st</sup>			
+0.3°	+1.5°	123%	49%	-1.2°	-0.2°	92%	112%	-0.4	-1.1°	25%	99%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

# Wokingham climatological graphs for May 2015



Month: MAY 2015

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf Sl	Th Ha	Ic Fg	Vec mean ddd ff sp	Max gust ddd gg HHhh	High hr ddd ff	Rain HH hrs							
1	13.8	4.3	0.0	-1.7	11.8	11.1	1.7	0.0	1010.1	0	1	0	0	60	5.3	5.6	60	8	08	0.0				
2	14.8	2.7	4.1	-2.7	12.0	11.1	0.1	0.0	1010.6	0	1	0	0	89	5.4	5.7	104	19	1411	109	8	12	4.5	
3	20.1	9.0	0.1	9.0	12.2	11.2	2.6	0.0	994.4	0	0	0	0	207	7.5	9.5	236	29	1404	231	15	15	0.2	
4	18.3	9.9	5.6	6.2	12.9	11.2	6.0	0.0	1005.1	0	0	0	0	200	4.5	7.2	232	22	0022	227	11	00	4.8	
5	15.6	11.8	4.4	11.6	13.5	11.3	2.2	0.0	992.4	0	0	0	0	214	12.6	13.4	210	42	1334	224	19	13	1.8	
6	14.7	7.8	5.7	5.4	13.4	11.5	4.1	0.0	1001.4	0	0	0	1	224	12.0	12.3	244	43	1644	221	16	10	0.7	
7	17.1	7.7	tr	3.2	13.2	11.6	5.5	0.0	1016.6	0	0	0	0	224	6.7	6.9	223	19	1233	231	9	13	0.0	
8	17.1	5.9	0.3	0.6	13.4	11.7	0.1	0.0	1013.8	0	0	0	0	165	3.6	5.2	190	20	1843	157	10	15	0.8	
9	17.1	10.4	tr	8.5	13.4	11.8	6.3	0.0	1014.8	0	0	0	0	239	9.3	9.8	261	27	1255	256	14	13	0.0	
10	18.4	7.0	0.0	3.3	13.4	11.9	1.7	0.0	1024.3	0	0	0	0	198	5.7	5.9	199	17	1419	193	10	16	0.0	
11	20.8	9.3	tr	5.8	13.6	12.0	5.3	0.0	1018.1	0	0	0	0	212	7.1	7.3	224	21	1011	226	10	10	0.2	
12	17.0	9.7	0.0	7.4	14.1	12.1	8.4	0.0	1019.1	0	0	0	0	249	7.8	8.1	255	29	1358	253	14	11	0.0	
13	19.2	2.5	0.1	-2.1	13.9	12.2	14.8	0.0	1020.2	0	1	0	0	39	2.0	3.7	80	15	2221	74	6	22	0.2	
14	10.8	7.3	10.5	2.8	14.5	12.3	0.0	0.0	1011.0	0	0	0	0	62	5.4	5.9	63	23	1201	74	9	10	11.5	
15	15.0	7.2	0.0	6.5	13.6	12.4	3.7	0.0	1022.3	0	0	0	0	276	1.8	5.5	238	15	1358	208	7	20	0.0	
16	17.5	10.2	0.0	10.4	14.1	12.5	11.5	0.0	1023.7	0	0	0	0	277	6.7	7.6	300	24	0906	293	11	09	0.0	
17	16.9	5.5	1.0	0.2	14.5	12.5	7.0	0.0	1027.2	0	0	0	0	248	5.6	5.8	285	21	1550	238	10	12	1.5	
18	15.2	8.7	0.7	6.5	14.6	12.6	4.9	0.0	1004.0	0	0	0	0	229	9.2	10.0	246	34	1217	249	16	12	1.3	
19	14.2	6.5	2.3	3.8	14.1	12.7	7.5	0.0	1004.5	0	0	0	1	245	8.5	9.0	285	29	1528	243	11	11	0.9	
20	15.8	3.0	0.0	-1.6	13.8	12.8	5.5	0.0	1016.4	0	1	0	0	284	5.1	6.1	261	22	1253	285	10	12	0.0	
21	19.2	2.3	tr	-2.3	13.5	12.8	13.8	0.0	1026.3	0	1	0	0	245	5.5	5.7	257	20	1126	243	9	11	0.0	
22	19.9	5.7	0.1	0.5	14.2	12.8	1.6	0.0	1026.4	0	0	0	0	243	3.6	4.4	263	12	1036	246	6	12	0.1	
23	18.3	12.2	tr	8.4	14.7	12.8	6.6	0.0	1024.8	0	0	0	0	24	3.3	4.8	54	18	1412	57	7	14	0.0	
24	18.8	10.3	tr	8.1	15.2	12.9	3.7	0.0	1020.4	0	0	0	0	242	3.9	5.6	254	15	0822	237	7	08	0.0	
25	17.7	5.9	0.0	2.1	15.3	13.0	3.2	0.0	1019.6	0	0	0	0	325	4.3	4.7	327	17	1223	302	8	13	0.0	
26	18.4	5.9	0.0	1.4	15.0	13.1	5.9	0.0	1023.5	0	0	0	0	322	4.1	4.6	339	19	1042	330	8	16	0.0	
27	19.4	5.8	tr	1.2	15.0	13.3	9.2	0.0	1025.7	0	0	0	0	248	4.9	6.1	236	21	1433	238	10	15	0.0	
28	17.4	10.4	tr	6.2	15.5	13.4	9.0	0.0	1015.2	0	0	0	0	251	7.9	8.1	261	22	1056	266	10	10	0.1	
29	15.1	8.1	1.4	5.6	15.4	13.5	4.1	0.0	1007.1	0	0	0	0	239	6.5	7.7	242	26	1433	219	12	10	1.8	
30	17.7	5.5	2.4	0.3	14.6	13.6	8.0	0.0	1014.6	0	0	0	0	224	6.3	6.9	198	20	1357	214	10	16	4.5	
31	15.8	10.6	0.4	10.0	15.1	13.6	2.1	0.0	1004.1	0	0	0	0	234	7.2	8.7	270	26	1717	255	12	13	0.9	
Total			39.1				166.1	0.0																35.8
Mean	17.0	7.4		4.0	14.0	12.4	5.36	0.0	1014.8					235	4.1	7.0								
Anom	-0.5	-0.1	78%	-0.3	+0.5	+0.6	87%																	
Daily mean		12.2																						
Anom		-0.3																						

Number of days with:

Air frost = 0      Ground frost = 5      Nil sun = 1  
 Snow falling = 0      Snow lying = 0      Thunder = 0  
 Hail=>5mm = 1      Hail<5mm or ice = 1      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 2015

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	80	7	05	07	19	9.5	2.2	60	4.5	1010.1	4	000	03	2	2	2	1	5	3	/	82828	87362					1	Cu hum	
2	68	8	08	06	13	9.2	4.3	71	5.1	1010.6	8	008	01	2	2	3	8	4	7	7	81818	83650	88272				2	4Ac58 Cu hum 22° halo	
3	40	8	21	08	16	14.2	13.5	96	9.8	994.4	7	014	58	6	6	7	7	3	2	/	87708	88540					3		
4	82	7	23	07	16	13.8	4.4	53	5.2	1005.1	0	006	03	1	1	2	1	6	3	4	82835	86072					4	1Ac68 COTRA Cu hum Halo 22° part	
5	86	7	24	15	32	12.3	7.6	73	6.6	992.4	3	052	21	6	2	7	5	4	/	/	86615	87625					5		
6	60	7	21	15	31	11.3	6.3	71	6.0	1001.4	6	003	80	8	1	7	8	5	/	/	85825	84645					6	Cu med	
7	78	7	23	07	16	12.2	7.1	71	6.2	1016.6	1	010	03	2	2	7	8	4	/	/	85818	84650					7	Cu med	
8	70	8	08	03	07	11.4	7.1	75	6.2	1013.8	8	012	02	2	2	8	5	6	/	/	83640	88656					8		
9	80	7	24	12	24	12.5	6.5	67	6.0	1014.8	2	015	02	2	2	7	8	5	/	/	86825	87635					9	Cu hum	
10	75	8	22	08	14	12.8	8.1	73	6.6	1024.3	0	002	02	2	2	7	5	4	/	8	87618						10	/Cs75	
11	70	6	20	08	15	16.2	11.5	73	8.3	1018.1	1	005	03	2	2	2	8	4	3	1	82815	83368	86075				11	1Sc30 COTRA Cu fra/hum	
12	84	7	25	09	18	12.0	6.6	69	6.0	1019.1	1	016	21	6	2	7	8	4	/	/	81818	85635	87645				12	Clearance NW	
13	82	1	04	04	08	13.6	6.0	60	5.8	1020.2	8	013	03	0	0	1	1	5	3	2	81828						13	1Ac66 1Ci72 Cu hum	
14	62	8	08	08	18	9.3	6.9	85	6.1	1011.0	7	019	61	6	2	7	5	6	2	/	87640	88550					14		
15	78	5	01	04	11	10.5	4.4	66	5.1	1022.3	2	017	03	1	1	5	5	0	0		85625						15		
16	82	1	28	12	23	15.0	5.1	52	5.4	1023.7	2	022	01	1	1	1	8	6	3	1	81835						16	1Sc40 1Ac68 1Ci72 Cu hum	
17	84	7	27	08	14	13.2	3.8	53	4.9	1027.2	8	009	03	2	2	1	1	6	0	1	81833	87080					17	COTRA Cu hum Halo 22° part	
18	58	8	21	11	21	12.0	10.8	92	8.1	1004.0	7	050	63	6	6	7	7	3	2	/	83706	87710	88520				18		
19	82	7	23	11	21	11.0	4.2	63	5.1	1004.5	1	009	03	1	1	6	8	5	3	1	85825						19	2Sc45 2Ac65 1Ci75 Cu med	
20	82	7	30	09	16	10.6	3.7	62	4.9	1016.4	2	019	03	1	1	7	8	5	/	/	83825	87650					20	Cu med	
21	68	3	23	06	11	14.2	8.3	68	6.5	1026.3	0	003	03	1	1	1	8	5	0	1	81822						21	1Sc56 2Ci80 COTRA Cu med	
22	61	8	23	06	11	13.5	10.0	79	7.7	1026.4	6	003	21	6	1	7	5	3	/	/	85708	86630	88656				22		
23	65	5	35	06	12	15.4	10.1	70	7.7	1024.8	0	002	03	1	1	2	1	4	0	1	82818	84075					23	COTRA Cu hum	
24	75	6	24	07	15	15.7	8.9	64	7.0	1020.4	6	006	03	1	1	1	1	5	5	1	81825	85360					24	2Ac58 /Ci75	
25	82	6	30	08	16	14.0	5.3	56	5.5	1019.6	8	007	03	1	1	4	8	6	3	0	83830	83359					25	2Sc40 Cu hum	
26	82	5	29	07	16	13.6	7.0	64	6.3	1023.5	1	008	01	2	2	3	8	5	3	1	83825						26	1Sc40 2Ac60 1Ci80 COTRA Cu hum	
27	81	3	30	04	13	12.9	4.6	57	5.4	1025.7	8	009	03	0	0	1	1	5	4	1	81828						27	2Ac65 2Ci75 COTRA Cu hum	
28	84	2	26	09	20	14.9	3.3	46	4.7	1015.2	0	005	03	0	0	2	2	6	0	1	82840						28	1Ci75 COTRA Cu med Ci edge S	
29	59	8	21	11	21	10.8	6.6	75	6.1	1007.1	7	027	60	6	2	7	5	5	7	/	82625	85630	87640				29	/Ac58	
30	88	7	27	09	17	12.8	3.2	52	4.7	1014.6	2	010	03	2	2	3	2	6	0	8	83833	87275					30	COTRA Cu med U/a cont+parhelia	
31	68	8	22	09	19	14.2	12.8	91	9.3	1004.1	5	005	21	6	2	8	5	3	/	/	85708	87710	88615				31		

Mean vis = 29.8 km

Mean cloud = 6.2 77%

Mean wind speed = 8.2 kn

Mean gust = 17 kn

Mean TT = 12.7 °C

Mean Td = 6.8 °C

Mean RH = 68.0 %

Mean r = 6.2 g/kg

Mean PPP = 1014.8 mbar

**See appendix 2 below for full code details**

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

Td = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs = Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation

trails present.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for MAY 2015

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks				
1	82	8	06	06	14	12.5	1.6	47	4.3	1008.8	7	002	03	2	2	2	1	6	7	82845	87460	1	/Ac62 Cu hum	
2	68	8	12	08	19	13.7	4.7	54	5.3	1006.6	6	024	02	2	2	8	5	6	87635	88650	2			
3	82	5	23	15	29	18.5	9.8	57	7.6	997.1	3	011	15	1	1	5	9	5	81925	84830	3	1Sc56 jpN		
4	88	7	21	06	15	16.2	6.7	53	6.1	1002.2	8	018	03	2	2	1	8	6	81835	87362	4	1Sc56 1Ac59 Cu hum		
5	75	5	21	16	34	14.4	5.4	55	5.6	999.1	2	018	02	1	1	6	8	6	85835		5	1Sc50 Cu med		
6	80	7	24	18	32	14.4	5.9	56	5.8	1004.4	1	023	25	8	1	3	8	5	83825	85075	6	1Sc45 1Ac62 jp NW&S		
7	86	7	23	09	17	16.4	4.0	43	5.0	1015.8	8	003	03	1	1	5	8	6	82848	84656	86075	7	Cu med. U/a cont	
8	75	7	13	10	17	16.9	6.8	51	6.1	1010.7	8	013	60	6	2	7	5	6	81640	85656	86359	8	/Ac65 Sc cas	
9	84	2	26	12	27	17.1	3.9	41	5.0	1018.0	2	021	01	1	1	2	2	7	0	82850		9	1Ci75 Cu hum/med N	
10	80	7	19	10	17	16.9	9.0	59	7.1	1021.9	7	013	02	2	2	5	1	5	0	85828	87078	10	COTRA Cu hum	
11	84	7	21	10	21	20.4	11.2	55	8.2	1017.1	8	009	01	2	2	2	1	6	0	82832	87075	11	COTRA Cu hum. Halo 22° part	
12	84	2	27	12	27	16.9	2.7	38	4.6	1020.0	2	009	02	1	1	2	1	6	0	82848		12	Cu hum	
13	83	1	35	05	12	18.6	0.4	29	3.9	1016.4	6	014	02	0	0	1	1	7	3	81850		13	1Ac65 Cu hum	
14	56	8	05	06	19	9.1	8.3	95	6.8	1009.6	0	009	63	6	6	5	7	2	82705	85708	88545	14		
15	80	7	22	06	14	13.6	5.6	58	5.6	1022.7	6	003	03	2	2	5	5	6	0	85630	84270	87075	15	COTRA
16	84	1	31	10	21	17.3	2.6	37	4.5	1025.6	2	008	02	0	0	1	1	7	0	81850		16	1Ci80 COTRA Cu hum	
17	82	7	26	08	16	15.0	3.9	47	4.8	1023.4	7	018	01	2	2	4	8	6	0	82840	83645	86072	17	COTRA Cu hum Halo 22° part
18	75	6	25	16	31	13.7	3.6	51	4.8	1004.1	1	023	80	8	2	6	8	6	0	83835	85650	18	Cu med	
19	70	3	25	11	24	14.1	3.8	50	4.8	1005.2	1	005	25	8	1	2	9	6	6	81935	82845	19	1Ac62 2Ci70 jp NW N&E vv 60k ex p	
20	84	7	21	07	21	13.8	2.3	46	4.4	1019.0	2	012	02	2	2	7	8	6	82840	83650	87656	20	Cu med	
21	82	1	37	09	18	18.8	0.5	29	4.1	1025.8	6	002	02	0	0	1	1	7	4	81850		21	1Ac65 1Ci75	
22	84	7	22	04	10	16.8	12.1	74	8.6	1023.9	8	014	20	5	2	7	8	4	84817	86656	22	Cu med		
23	82	7	07	06	18	15.5	11.6	77	8.4	1024.2	5	005	02	2	2	7	8	4	81815	84635	87657	23	Cu hum	
24	65	8	27	07	15	16.4	11.3	72	8.2	1019.0	5	001	15	5	2	8	8	4	81818	86620	88630	24	Cu hum. jp E&SW	
25	78	8	35	04	12	14.8	6.8	59	6.1	1019.2	5	001	02	2	2	8	8	6	84833	85640	88650	25	Cu hum	
26	80	5	34	06	16	17.7	6.0	46	5.8	1024.1	2	001	02	1	1	5	4	6	82840	84645	26	Cu hum		
27	81	7	24	09	21	18.6	7.1	47	6.1	1020.2	7	026	03	1	1	1	1	6	7	81845	83468	87272	27	2Ac63 COTRA Cu hum Halo 22° part
28	84	7	26	09	22	17.4	2.5	37	4.2	1014.6	7	004	02	2	2	2	2	7	0	82856	86075	28	COTRA Cu med	
29	80	3	25	11	26	14.3	6.4	59	6.1	1006.1	2	002	25	8	1	2	9	5	81920	82828	29	1Sc56 1Cs70 jpNE&E. Cs edge S vv60k ex p		
30	86	7	24	08	18	16.6	2.1	38	4.7	1014.3	7	005	02	1	1	2	1	7	4	82850	87078	30	1Ac68 COTRA Cu hum Iridescence	
31	82	7	26	12	22	13.6	5.7	59	5.7	1007.1	1	021	02	2	2	7	8	5	83828	87645	31	/Ac60		

Mean vis = 37.8 km

Mean cloud = 5.8 72%

Mean wind speed = 9.2 kn

Mean gust = 20 kn

Mean TT = 15.8 °C

Mean TdTd = 5.6 °C

Mean RH = 52.2 %

Mean r = 5.8 g/kg

Mean PPP = 1014.4 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

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  2015	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	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00
5	0.02	0.00	0.00	0.36	0.00	0.49	1.00	0.00	0.40	0.00	0.05	0.00	1.00	0.00	0.27	0.00	0.00
6	0.19	0.00	0.00	0.85	0.00	0.82	0.56	0.00	0.07	0.01	0.11	0.00	1.00	0.00	0.97	0.06	0.00
7	0.61	0.00	0.00	0.87	0.00	0.50	0.00	0.00	0.31	0.59	0.00	0.00	1.00	0.00	0.92	0.15	0.00
8	0.39	0.00	0.00	0.80	0.00	0.35	0.16	0.00	0.02	0.02	0.61	0.15	1.00	0.00	0.84	0.84	0.00
9	0.02	0.00	0.00	0.89	0.00	0.56	0.16	0.00	0.00	0.00	0.68	0.88	1.00	0.00	0.25	1.00	0.00
10	0.33	0.00	0.01	0.09	0.58	0.13	0.60	0.00	0.00	0.02	0.14	0.60	1.00	0.00	0.00	0.98	0.00
11	0.03	0.00	0.09	0.85	0.58	0.01	0.85	0.00	0.17	0.21	0.03	0.52	1.00	0.00	0.00	1.00	0.00
12	0.01	0.00	0.70	0.91	0.05	0.00	0.30	0.00	0.67	0.28	0.00	0.49	1.00	0.00	0.00	1.00	0.00
13	0.13	0.00	0.35	0.36	0.38	0.30	0.51	0.00	0.50	0.04	0.78	0.50	1.00	0.00	0.10	1.00	0.00
14	0.00	0.00	0.52	0.05	0.26	0.23	0.22	0.00	0.92	0.16	0.66	0.89	1.00	0.00	0.28	1.00	0.00
15	0.00	0.00	0.53	0.00	0.31	0.28	0.55	0.00	0.97	0.08	0.36	0.98	1.00	0.00	0.05	0.99	0.00
16	0.00	0.00	0.43	0.00	0.07	0.41	0.42	0.00	0.99	0.19	0.96	1.00	1.00	0.00	0.00	1.00	0.00
17	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.38	0.12	0.74	1.00	1.00	0.00	0.00	1.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.87	0.00	0.13	1.00	1.00	0.00	0.00	1.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.40	0.37	0.00	0.00	0.44	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	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
<b>Tot</b>	<b>1.72</b>	<b>0.01</b>	<b>2.64</b>	<b>6.02</b>	<b>2.24</b>	<b>4.10</b>	<b>5.47</b>	<b>0.04</b>	<b>6.27</b>	<b>1.72</b>	<b>5.34</b>	<b>8.42</b>	<b>14.82</b>	<b>0.00</b>	<b>3.69</b>	<b>11.46</b>	

	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	0.50	0.00	0.54	0.57	0.54	0.00	0.38	0.00	0.17	0.00	0.53	0.00	0.00	0.44	0.00	0.14	0.00
5	0.89	0.00	1.00	1.00	1.00	0.15	1.00	0.83	0.21	0.00	0.99	0.28	0.00	1.00	0.00	0.39	0.00
6	0.67	0.00	1.00	1.00	0.96	0.72	1.00	1.00	0.11	0.00	1.00	1.00	0.21	1.00	0.00	0.46	0.00
7	1.00	0.00	0.74	0.95	0.44	0.00	1.00	1.00	1.00	0.01	1.00	1.00	0.00	0.99	0.00	0.45	0.00
8	1.00	0.00	0.28	0.15	1.00	0.00	0.97	0.43	0.73	0.43	1.00	0.94	0.00	0.60	0.00	0.41	0.00
9	0.72	0.00	0.44	0.04	0.97	0.00	0.32	0.00	0.23	0.50	0.99	0.57	0.00	0.06	0.00	0.33	0.00
10	0.49	0.00	0.55	0.06	0.49	0.00	0.30	0.11	0.26	0.86	1.00	0.38	0.00	0.16	0.00	0.29	0.00
11	0.37	0.03	0.62	0.22	0.97	0.00	0.09	0.03	0.00	0.81	1.00	0.56	0.00	0.30	0.00	0.33	0.00
12	0.55	0.25	0.23	0.63	0.94	0.01	0.01	0.04	0.46	0.28	0.96	0.55	0.00	0.54	0.00	0.35	0.00
13	0.04	0.25	0.31	0.19	1.00	0.00	0.00	0.00	0.06	0.40	0.74	0.21	0.32	0.81	0.00	0.33	0.00
14	0.00	0.58	0.60	0.17	1.00	0.12	0.00	0.00	0.00	0.54	0.00	0.78	0.28	0.76	0.01	0.36	0.00
15	0.64	0.75	0.28	0.25	1.00	0.18	0.18	0.00	0.00	0.07	0.00	0.47	0.46	0.88	0.00	0.36	0.00
16	0.06	0.90	0.40	0.11	1.00	0.38	0.94	0.03	0.00	0.08	0.00	0.56	0.51	0.45	0.10	0.39	0.00
17	0.04	0.89	0.00	0.11	1.00	0.00	0.36	0.12	0.00	0.21	0.00	0.79	0.87	0.00	0.60	0.30	0.00
18	0.00	0.95	0.48	0.07	1.00	0.01	0.00	0.06	0.00	1.00	0.00	0.84	0.62	0.00	0.70	0.32	0.00
19	0.00	0.28	0.00	0.00	0.47	0.00	0.00	0.00	0.00	0.75	0.00	0.03	0.83	0.00	0.67	0.14	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	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
<b>Tot</b>	<b>6.97</b>	<b>4.88</b>	<b>7.46</b>	<b>5.51</b>	<b>13.77</b>	<b>1.58</b>	<b>6.55</b>	<b>3.67</b>	<b>3.24</b>	<b>5.94</b>	<b>9.20</b>	<b>8.95</b>	<b>4.10</b>	<b>8.01</b>	<b>2.09</b>	<b>165.91</b>	

May 2015	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	
1	8.34	13.9	1321	3.0	2352	66.4	86.8	436	40.1	1541	2.04	4.41	5.3	1239	3.6	1541	1010.28	1012.8	2359	1008.4	1622	
2	9.37	14.9	1340	2.9	107	74.2	95.5	2359	50.2	1341	4.78	5.39	7.1	2357	4.0	11	1008.27	1012.8	1	1001.9	2357	
3	13.80	20.2	1350	9.2	5	82.9	97.4	553	53.6	1638	10.67	8.12	10.2	1138	6.5	1727	997.70	1002.0	1	994.2	859	
4	13.31	18.4	1256	9.5	510	72.0	97.2	2358	40.0	1239	7.91	6.75	8.8	2358	4.9	1039	1000.98	1005.8	718	990.1	2352	
5	13.05	15.7	1347	9.9	2359	74.0	97.6	125	46.0	1127	8.23	7.03	9.9	256	4.8	1142	995.01	1002.1	2346	987.0	555	
6	11.10	14.8	1511	7.5	506	73.9	91.9	345	54.8	1030	6.48	6.05	7.8	1324	5.3	1823	1004.44	1012.6	2359	1000.2	401	
7	11.51	17.2	1353	7.4	434	68.3	91.3	505	34.1	1508	5.38	5.56	6.9	950	3.9	1508	1015.70	1016.9	2025	1012.5	2	
8	11.60	17.2	1502	5.6	233	77.6	95.7	457	47.2	1452	7.45	6.46	8.4	2104	5.2	225	1012.58	1016.4	22	1009.4	1823	
9	12.67	17.3	1257	6.9	2332	65.0	89.6	2354	36.9	1443	5.77	5.75	7.7	8	4.1	1722	1016.53	1024.0	2335	1009.7	29	
10	12.97	18.5	1413	7.4	1	75.0	94.8	2318	51.1	1201	8.37	6.76	7.8	1435	5.4	108	1022.55	1024.6	837	1019.2	2352	
11	14.64	20.9	1457	9.9	310	74.3	91.5	140	51.9	1430	9.92	7.57	9.7	1303	5.9	2235	1017.70	1019.4	2	1016.8	1717	
12	12.26	17.2	1524	5.5	2359	61.1	84.9	420	28.9	1752	4.31	5.20	6.6	550	3.0	1752	1019.48	1023.1	2234	1016.2	327	
13	11.96	19.4	1613	2.5	405	60.3	94.7	528	23.8	1532	3.20	4.79	6.5	847	3.1	1529	1018.69	1023.0	6	1015.2	1829	
14	8.60	10.0	3	7.4	206	90.4	97.1	2321	78.9	1101	7.10	6.26	6.9	1457	5.7	703	1012.36	1016.3	33	1008.5	1204	
15	10.60	15.0	1442	6.9	532	76.8	96.9	1	53.3	1443	6.45	5.95	6.9	2357	4.9	907	1021.38	1023.1	1106	1016.0	2	
16	13.70	17.6	1457	7.8	2353	60.5	88.3	445	34.9	1453	5.51	5.67	8.4	713	4.1	2038	1024.42	1028.6	2303	1020.7	359	
17	11.30	17.0	1215	5.4	421	65.9	93.3	443	39.9	1220	4.68	5.24	6.5	723	4.4	1023	1024.45	1028.5	4	1017.1	2358	
18	10.70	15.3	1432	6.4	2338	72.0	94.1	950	40.3	1550	5.56	5.77	8.6	1005	3.9	1751	1006.42	1017.2	0	1001.5	1158	
19	9.00	14.3	1457	4.6	2357	73.0	90.4	2359	47.8	1500	4.19	5.15	6.7	1313	4.5	1527	1005.67	1011.5	2357	1002.8	347	
20	9.70	15.9	1410	3.0	411	67.5	93.1	427	38.6	1554	3.42	4.82	5.8	1409	4.0	1554	1017.69	1024.6	2359	1011.3	0	
21	12.20	19.3	1556	2.4	416	61.9	95.8	512	26.5	1508	3.97	5.02	7.4	917	3.5	1435	1026.07	1028.0	2253	1024.4	8	
22	13.20	20.0	1603	5.6	328	79.7	94.1	433	58.3	1606	9.63	7.45	9.7	1442	5.1	328	1025.27	1027.8	6	1022.8	1635	
23	14.60	18.5	1217	11.9	401	71.0	87.9	439	56.2	1955	9.31	7.24	9.3	1322	5.4	1955	1024.17	1025.1	756	1022.8	2352	
24	14.80	18.9	1211	10.1	433	71.6	85.4	517	55.9	1007	9.69	7.46	9.1	1753	5.6	2358	1019.83	1023.0	1	1017.7	1801	
25	12.40	17.8	1257	5.8	431	66.1	92.4	459	43.9	1230	6.01	5.77	6.8	1247	4.9	1105	1019.99	1022.0	2358	1018.7	1420	
26	12.30	18.5	1227	5.8	411	70.3	96.3	506	42.6	1438	6.48	5.93	7.0	529	5.1	1108	1024.06	1027.4	2337	1021.8	11	
27	13.10	19.5	1337	5.6	225	64.4	91.3	249	39.5	1415	6.16	5.84	7.6	1956	4.9	841	1022.32	1027.3	102	1015.5	2351	
28	13.00	17.6	1459	8.7	2349	56.1	82.3	438	32.0	1501	3.97	5.08	7.0	426	3.7	1448	1014.61	1015.7	8	1013.4	2356	
29	10.50	15.3	1548	7.0	2355	70.1	88.3	1048	43.8	1550	5.10	5.52	7.4	1355	4.1	1926	1008.97	1013.4	0	1005.3	1125	
30	11.70	17.8	1424	5.4	421	64.3	92.8	452	33.0	1302	4.49	5.25	6.8	2359	3.8	1308	1013.46	1015.0	1152	1010.6	2358	
31	12.30	15.9	1206	6.7	2335	76.7	94.5	656	39.7	1833	7.98	6.91	10.1	1155	3.7	1844	1007.79	1014.3	2336	1003.7	849	
Total																						
Mean	11.94	17.09		6.57		70.4	92.36		43.99		6.26	6.01	7.76		4.55		1014.80	1018.85		1010.82		
Max	14.80	20.86		11.90		90.4	97.60		78.90		10.67	8.12	10.17		6.52		1026.07	1028.65		1024.42		
Min	8.34	10.00		2.40		56.1	82.30		23.81		2.04	4.41	5.35		2.99		995.01	1001.98		987.04		

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 2015

Temperature (°C)				Rank in the past 134 years							
Mean maximum	14.9	(+0.6)		21 <sup>st</sup>	highest						
Mean minimum	4.7	(-0.3)		37 <sup>th</sup>	highest						
Daily mean	9.8	(+0.2)		30 <sup>th</sup>	highest						
Rainfall total (mm)	77.7	(54 %)		13 <sup>th</sup>	lowest						
Sunshine total (hours)	521.8	(113 %)									
N° of: Dry days	62 (+10)		Wet days	23 (-5)							
Days with: Air frost	8 (-3)		Ground frost	45 (+10)		Snow falling	0 (-4)	Snow lying	0 (0)		
Thunder	0 (-5)		Hail ≥5mm	2 (0)		Small hail/ice	4 (-1)	Fog @09 GMT	0 (-1)	Nil sun	5 (-4)
Air pressure MSL : Mean @09 GMT (mbar)	1019.4			(+3.8)							

Departure from 1981 to 2010 average shown in brackets.

Notes:

### Mild, Sunny and Very Dry but Windy at Times.

**Temperature:** The mean this spring is slightly above the current 30 year climatological average. In recent years, 2014 was milder, 2013 colder and 2012 about the same as this spring. In the longer term this spring is 0.9° above the median. The mean maximum is 0.6° above average and 1.4° above the median, while the mean minimum is 0.3° below average but 0.5° above the median. The highest maximum was 23.6° on the 15<sup>th</sup> April, 1.8° below the median, and a rather low value for spring as 26° has been exceeded in 39 of the past 112 years, and 30° in 4 of them. Only 2013 this millennium has had a lower value. The lowest maximum was 7.1° on the 15<sup>th</sup> March, 1.6° above the median. The highest minimum was 12.2° on the 23<sup>rd</sup> May, 0.3° below the median, and the lowest minimum was -2.7° on the 5<sup>th</sup> March, 1.5° above its median. Compared with average, April was the best month, mean temperature 0.8° above average, and May the poorest, mean 0.3° below average. The mean grass minimum was 1.0°, 0.6° below average and the lowest was -8.0° on the 5<sup>th</sup> March. The number of ground frosts is 10 above average, but air frost is 3 below average. The mean earth temperature at 30 cm depth is 0.5° above average, but at 1 m depth is close to normal. **Rainfall:** This has been a very dry spring season with just over half the average rainfall, and ranking 13<sup>th</sup> driest since 1882. Recent similarly dry springs were 2011 and 1997. Historically, there have been 25 springs with less than 100 mm rainfall since 1882. April was the driest month with just 15.6 mm of rain, 32 % of average, while even the wettest month, May, had only 78 % of average and 39.1 mm. The wettest day was the 14<sup>th</sup> May with 10.5 mm. Rainfall rates over 50 mm/hr occurred on the 1<sup>st</sup> March, max 104 mm/hr, and 6<sup>th</sup> May, max 69 mm/hr. Each of the months contained dry spells, and these were (length in days, date ending); 13, 14<sup>th</sup> March; 6, 22<sup>nd</sup> March; 6, 9<sup>th</sup> April; 11, 23<sup>rd</sup> April; 5, 12<sup>th</sup> May; 9, 28<sup>th</sup> May. The number of dry days is 10 above average. An index of stress for unirrigated plants stands at 79, slightly above the average of 61 in this season, but note that the index can be well over 200 in very dry springs, and was as high as 320 in 1997. This has been a spring with no thunder heard, only the 2<sup>nd</sup> example in 40 years. Snow was also absent, 4 out of 5 springs having a least 1 day on average. **Sunshine:** This has been a fairly sunny spring. though the best of the sunshine was in the first two months. There was a surplus of about 13% overall, though there have been several sunnier springs recently, including 2011, 2010, 2009 and 2007. April was the sunniest month, daily mean 7.15 hours, then May with 5.36 hours and March with 4.55 hours. Both March and April were well above the average, countering the poor showing in May. May 13<sup>th</sup> was the sunniest day with 14.8 hours. The number of days each month with more than 2/3 of the maximum were 5 in March, 10 in April and just 3 in May. Overall there were 26 days with <3 hours, 43 with =>6 hours, 20 with =>9 hours and 8 with =>12 hours. **Wind:** The mean wind speed this spring is 7.5 mph, 0.5 mph above average. March 31<sup>st</sup> was the windiest day, mean 17.5 mph, and the season's highest gust of 60 mph was on the same day. This is the highest gust in a spring season since 1995. The 7<sup>th</sup> April was the least windy day, mean 2.4 mph, and there were 1478 minutes of calm (=<0.5 mph). Daily mean direction/number of days: N,8 NE,19 E,1 SE,2 S,7 SW,34 W,15 NW,6. Compared with average SW and W combined were 14% more frequent, at the expense of all other directions except NE, especially S, SE and E combined, 11% less frequent. **Humidity:** The overall mean relative humidity was 71.4 %. The lowest value was 24% on both the 12<sup>th</sup> March and 13<sup>th</sup> May. The mean water vapour content per kg of air was 5.5 g at 0900 GMT and 5.1 g at 1500 GMT. **Pressure:** The extremes of pressure this season were 1040.8 mbar on the 5<sup>th</sup> March and 987.0 mbar on the 5<sup>th</sup> May, a span of 53.8 mbar, 0.9 mbar above average.

**March:** Dry and sunny with average temperatures. Lowest min 2<sup>nd</sup> highest since 2000. 5.5 mm on the wettest day lowest since 1999. 60 mph gust highest for March since 1995.

**April:** Mild, sunny and very dry. Mean max 7<sup>th</sup> highest in 134 years. Mean daily temperature range 3<sup>rd</sup> highest in 40 years. Month's highest pressure highest since 1995.

**May:** Temperature, rainfall and sunshine below average and quite windy. 3<sup>rd</sup> coldest May since 1996. Highest max lowest since 1994 and 7<sup>th</sup> lowest in 113 years. 2<sup>nd</sup> windiest May after 1993 since before 1988. Both the month's windiest day and highest gust are highest for any May since before 1988.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom	Sun hrs	Anom	Wind Mn mph	Max gust	Mean pressure	Anom
March	11.4°	+0.2°	3.0°	-0.2°	23.0	50%	141.2	127%	8.2	60	1021.3	+5.4
April	16.2°	+2.2°	3.8°	-0.6°	15.6	32%	214.5	134%	6.2	35	1022.2	+7.2
May	17.0°	-0.5°	7.4°	-0.1°	39.1	78%	166.1	87%	8.1	50	1014.8	-1.1



## 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, 1<sup>st</sup> January to 31<sup>st</sup> 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  $-0.1^{\circ}\text{C}$  or below. A ground frost day is recorded when the grass minimum temperature read at 0900 GMT on that day is  $-0.1^{\circ}\text{C}$  or lower.

Duration of air frost is defined as the number of minutes that the AWS one minute average temperature is below  $0.0^{\circ}\text{C}$ , 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.