

# 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 2012

Temperature (°C / °F)			Anomaly	Rank in the past 131 years				
Mean maximum	17.8	64.0	+0.3	43 <sup>rd</sup> highest				
Mean minimum	8.3	46.9	+0.8	10 <sup>th</sup> highest				
Daily mean	13.1	55.6	+0.6	21 <sup>st</sup> highest				
Highest maximum	27.9	82.2	on 27 <sup>th</sup>	Lowest maximum	9.7	49.5	on 4 <sup>th</sup>	
Highest minimum	14.4	57.9	on 25 <sup>th</sup>	Lowest minimum	0.1	32.2	on 7 <sup>th</sup>	
Mean grass minimum	5.6	42.1	+1.3	Lowest grass minimum	-3.9	25.0	on 7 <sup>th</sup>	
Mean earth @30 cm	13.4	56.1	-0.1	Earth @100 cm	11.6	52.9		
Frost duration (hrs)	0.0			Rain duration (hrs)	33.6			
Rainfall total (mm / in)	24.8	0.98	49 %	22 <sup>nd</sup> lowest				
Highest daily fall	6.1	0.24	on 9 <sup>th</sup>					
Number of: Dry days (<0.2mm)	20	Wet days (>0.9mm)	7	days ≥5mm	1			
Sunshine total (hrs)	184.7	Daily mean	5.96	97 %	Sunniest day	15.2	on 26 <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	0	Fog @09	0	
Pressure MSL : Mean @09 GMT, mbar	1016.9	+1.0	Highest	1038.8	on 12 <sup>th</sup>	Lowest	1002.5	on 18 <sup>th</sup>
Relative humidity : Mean (%)	74.7	Lowest	27	on 26 <sup>th</sup>	Water vapour (g/kg), mean at 09 and 15 GMT	7.0,	6.9	
Overall mean wind speed (mph)	6.4	Windiest day	12.0	on 10 <sup>th</sup>	Max gust	35	on 25 <sup>th</sup>	
Wind direction (days)	N 9	NE 5	E 3	SE 1	S 2	SW 5	W 4	NW 2
Least windy day (mph)	4.0	on 23 <sup>rd</sup>	Calm; less than 0.5 mph (minutes)		475			

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

Notes:

### Mild and Dry with Below Normal Sunshine

The first 21 days saw mainly dull and often cool weather, with occasional rain up to the 15<sup>th</sup>, followed by a complete change to very sunny, warm and dry conditions for the final 10 days. **Temperature:** The mean is 0.6° above the current climatological average, but is 1.3° above the long-term median. The mean min ranks 10<sup>th</sup> highest since 1882, but has been exceeded 6 times since 1998. The highest max is highest since 2005 and is 2.5° above the median. The lowest max is 1.3° below its median. The highest min is 1.9° above the median and is 7<sup>th</sup> highest in 100 years. The lowest min is 0.4° below the median. The highest daily mean, 20.4° on the 24<sup>th</sup>, is highest since 1989. The lowest grass min is close to normal, as is the number of days with ground frost. This has been a May free of air frost for the first time since 2009. **Rainfall:** After the near record rainfall in April, May turned out much drier with only about half the average, in fact the average has not been exceeded in May since 2008. Most of this month's rain fell between the 7<sup>th</sup> and 15<sup>th</sup>, and the latter half of the month was virtually dry throughout, with a dry spell unbroken on the 31<sup>st</sup> after 13 days. The rain that fell was generally quite light, with heavy rain on the 1<sup>st</sup> and 10<sup>th</sup> only, and the highest rainfall rate was 19 mm/hr on the 1<sup>st</sup>. As a result rainfall duration was only 4 hours below normal. 6 mm diameter hail fell on the 15<sup>th</sup>, but thunderstorms evaded the town despite occurring over southern England on several days.

**Sunshine:** A rather variable showing this month, the dullest since 2007, with accumulated sunshine having a deficit of nearly 50 hours by the 10<sup>th</sup>, increasing to 60 hours by the 20<sup>th</sup>, all this being compensated in an outstanding 9 days to the 30<sup>th</sup> which averaged 13.0 hours per day, and 4 of which had over 90% of the maximum. Overall there were 14 days with <3 hours, 13 with =>6 hours, 12 with =>9 hours, 7 with =>12 hours, and 1 with =>15 hours. **Commentary: From the 1<sup>st</sup> to the 21<sup>st</sup>:** Temperatures were generally below normal by day, with exceptions only on the 1<sup>st</sup>, 8<sup>th</sup> and 10<sup>th</sup>. Anomalies for daily max ranged from -6.2° on the 4<sup>th</sup> and 6<sup>th</sup> to +1.6° on the 8<sup>th</sup>. Daily min were more variable, with anomalies between -6.2° on the 7<sup>th</sup> and +4.7° on the 10<sup>th</sup>. All the month's rain fell in this period, with only 5 dry days up to the 15<sup>th</sup>, but 5 more to the 21<sup>st</sup>. Sunshine was very poor to the 10<sup>th</sup> and again from the 17<sup>th</sup> to the 20<sup>th</sup>, with the two best days having <27% of the max, and 11 having <10%. Outside those, the 12<sup>th</sup> and 13<sup>th</sup> were the best days with around 75% of the max. Light or moderate winds temporarily increased fresh on the 10<sup>th</sup>, and were E'ly on 1<sup>st</sup>, backing N'ly on 2<sup>nd</sup>, becoming S'ly on 7<sup>th</sup> and generally W'ly after the 11<sup>th</sup>, backing SE'ly on 17<sup>th</sup> and becoming N'ly on 19<sup>th</sup>. **From the 22<sup>nd</sup> to the 31<sup>st</sup>:** Most of this period was dominated by a heat wave, with anomalies for daily max between +3.8° on the 29<sup>th</sup> and +9.9 on the 27<sup>th</sup>, though down to -0.6° on the 31<sup>st</sup>. For daily min, anomalies ranged from +0.9° on the 28<sup>th</sup> to +5.5° on the 25<sup>th</sup>. Only a trace of rain was recorded, on each of the final 3 days. Sunshine was outstanding except for the 31<sup>st</sup>, with a total of 117.2 hours over 9 days. Light or moderate winds were N'ly on 22<sup>nd</sup>, veering E'ly on 25<sup>th</sup>, becoming mainly W'ly from the 28<sup>th</sup>.

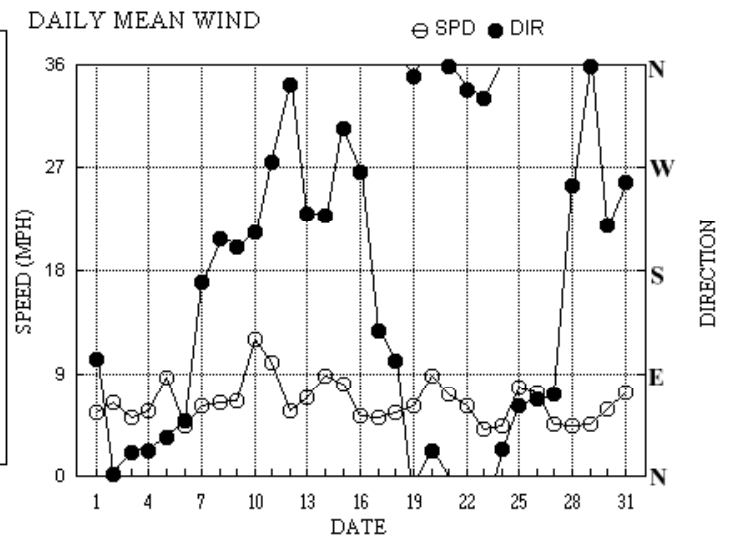
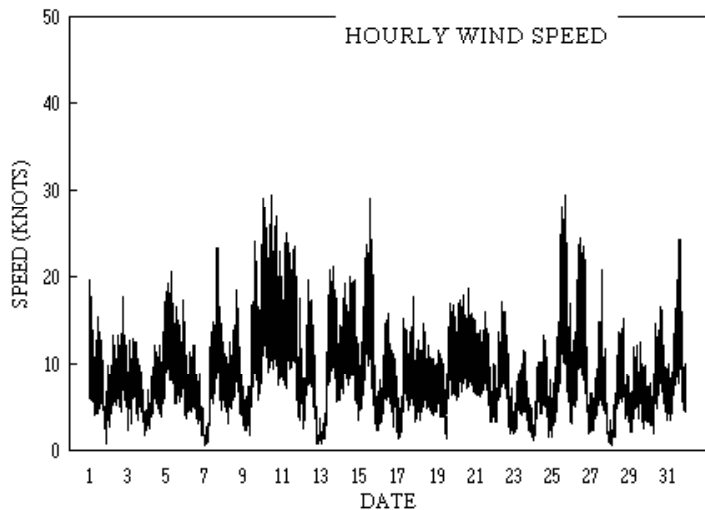
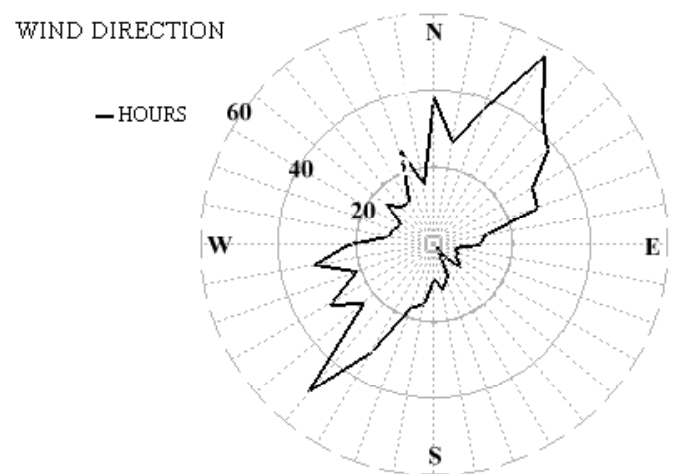
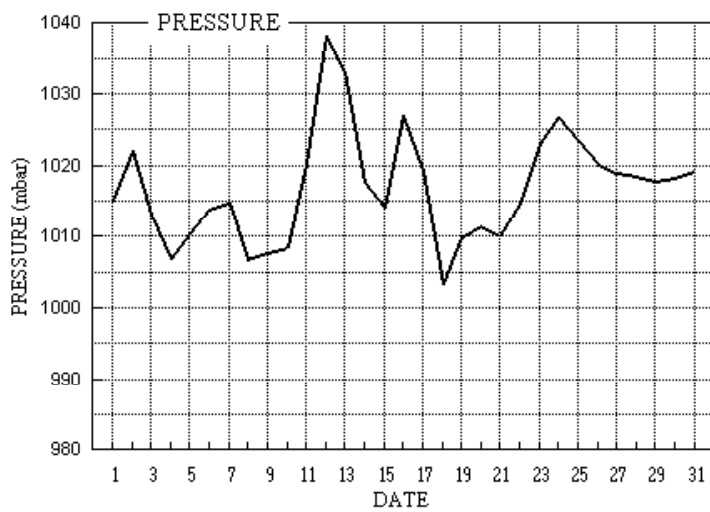
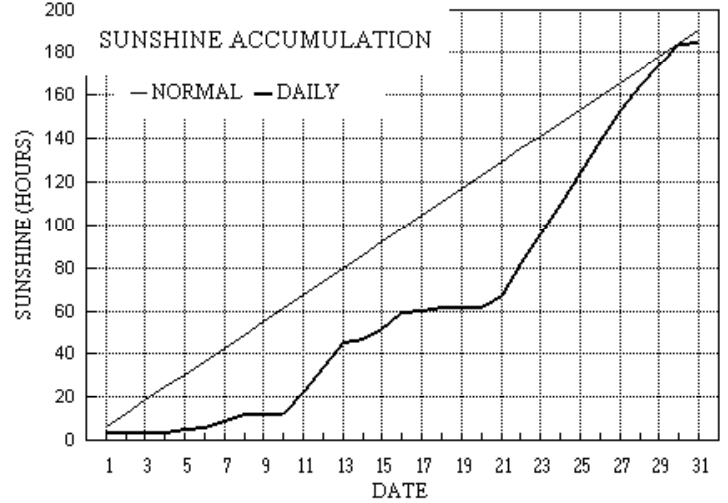
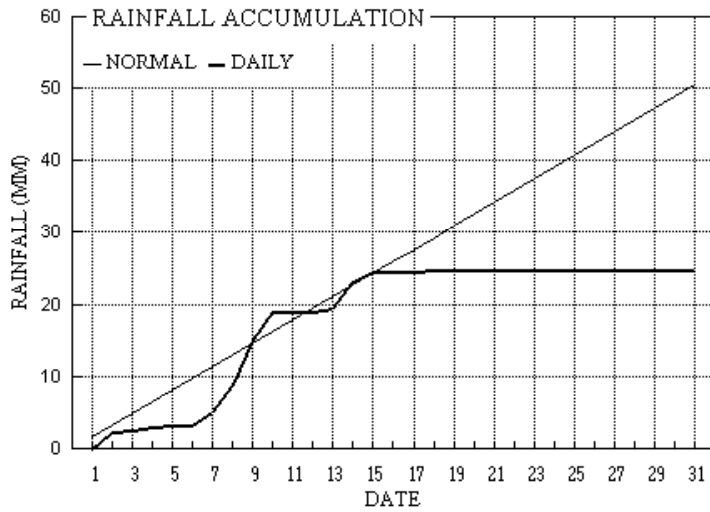
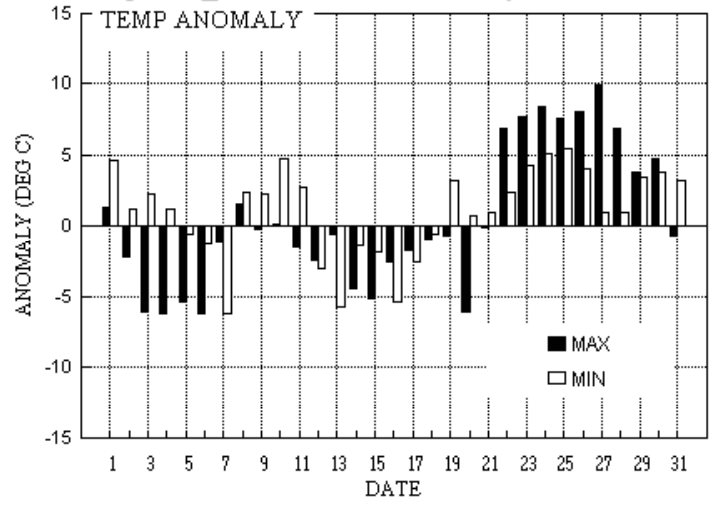
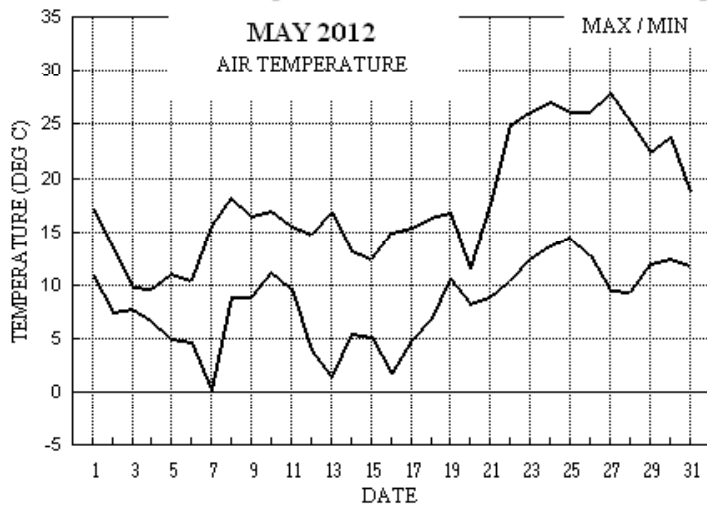
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

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>			
-2.4°	+1.1°	116%	21%	-2.6°	-1.4°	37%	80%	+5.7°	+3.1°	0%	182%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

# Wokingham climatological graphs for May 2012



Month: MAY 2012

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 HH	Rain hrs
1	17.2	10.9	0.1	8.0	11.0	10.1	3.8	0.0	1014.9	0 0 0 0	0 0 0 0	0 0 0 0	102	0.9	4.8	57 20 0039	48 8 00 0.1
2	13.6	7.4	2.2	3.0	11.5	10.2	0.0	0.0	1021.9	0 0 0 0	0 0 0 0	0 0 0 0	2	5.4	5.6	17 18 1834	9 8 18 2.6
3	9.8	7.8	0.2	8.1	11.5	10.4	0.0	0.0	1013.1	0 0 0 0	0 0 0 0	0 0 0 0	21	4.4	4.4	27 13 0629	21 7 09 0.4
4	9.7	6.7	0.6	6.8	11.2	10.5	0.1	0.0	1006.7	0 0 0 0	0 0 0 0	0 0 0 0	22	4.8	4.9	24 17 2344	25 9 23 2.2
5	11.0	5.0	0.1	3.7	11.0	10.6	1.4	0.0	1010.4	0 0 0 0	0 0 0 0	0 0 0 0	34	7.3	7.4	27 21 0738	26 11 00 0.1
6	10.4	4.7	tr	4.1	11.1	10.5	1.4	0.0	1013.7	0 0 0 0	0 0 0 0	0 0 0 0	48	3.5	3.9	34 12 0931	50 6 09 0.0
7	15.6	0.1	1.8	-3.9	10.8	10.5	3.0	0.0	1014.8	0 1 0 0	0 0 0 0	0 0 0 0	170	4.5	5.4	205 24 1703	204 11 16 2.8
8	18.2	8.9	3.9	8.4	11.0	10.5	2.9	0.0	1006.9	0 0 0 0	0 0 0 0	0 0 0 0	207	5.5	5.6	205 19 1542	205 9 15 6.1
9	16.5	8.8	6.1	9.1	11.8	10.5	0.0	0.0	1007.8	0 0 0 0	0 0 0 0	0 0 0 0	200	4.1	5.7	204 24 1517	192 11 23 7.8
10	17.0	11.2	3.9	13.2	12.2	10.6	0.1	0.0	1008.3	0 0 0 0	0 0 0 0	0 0 0 0	213	10.3	10.4	208 30 1101	209 13 01 1.7
11	15.5	9.6	0.0	6.6	12.6	10.8	9.6	0.0	1020.1	0 0 0 0	0 0 0 0	0 0 0 0	275	7.0	8.6	238 25 0651	295 11 15 0.0
12	14.8	3.9	0.0	-1.6	12.5	11.0	11.7	0.0	1038.2	0 1 0 0	0 0 0 0	0 0 0 0	343	4.3	4.9	8 20 0859	0 9 08 0.0
13	16.9	1.4	0.5	-2.5	12.5	11.1	11.5	0.0	1033.0	0 1 0 0	0 0 0 0	0 0 0 0	230	5.8	6.0	229 22 1610	233 10 15 1.8
14	13.3	5.5	3.8	2.6	12.7	11.2	2.2	0.0	1017.6	0 0 0 0	0 0 0 0	0 0 0 0	228	7.4	7.6	198 20 1221	214 10 17 5.5
15	12.5	5.1	1.3	-0.1	12.3	11.3	4.3	0.0	1014.1	0 1 0 0	0 1 0 0	0 1 0 0	304	6.1	7.0	330 29 1338	300 12 08 1.0
16	14.9	1.7	0.0	-2.7	11.9	11.4	7.9	0.0	1026.9	0 1 0 0	0 0 0 0	0 0 0 0	266	3.8	4.5	258 16 1346	269 7 13 0.0
17	15.4	4.9	tr	0.7	12.1	11.4	0.7	0.0	1019.3	0 0 0 0	0 0 0 0	0 0 0 0	128	3.6	4.4	105 18 2021	151 7 09 0.0
18	16.3	6.8	0.3	3.8	12.4	11.4	1.1	0.0	1003.2	0 0 0 0	0 0 0 0	0 0 0 0	101	2.4	4.8	39 15 0848	63 6 10 1.5
19	16.9	10.6	0.0	10.0	12.6	11.4	0.4	0.0	1009.8	0 0 0 0	0 0 0 0	0 0 0 0	349	1.2	5.3	24 17 1851	19 9 18 0.0
20	11.6	8.3	0.0	8.3	13.1	11.5	0.0	0.0	1011.4	0 0 0 0	0 0 0 0	0 0 0 0	22	7.6	7.7	26 19 1629	23 10 16 0.0
21	17.6	8.8	0.0	8.8	12.8	11.6	5.2	0.0	1010.0	0 0 0 0	0 0 0 0	0 0 0 0	358	6.0	6.3	356 16 1351	357 8 13 0.0
22	24.9	10.4	0.0	5.7	13.3	11.7	14.6	0.0	1014.4	0 0 0 0	0 0 0 0	0 0 0 0	338	5.1	5.3	325 17 1053	336 8 12 0.0
23	26.2	12.5	0.0	7.7	14.5	11.8	14.5	0.0	1023.0	0 0 0 0	0 0 0 0	0 0 0 0	330	3.1	3.5	286 12 1350	357 5 08 0.0
24	27.1	13.7	0.0	10.0	15.7	12.1	13.4	0.0	1026.7	0 0 0 0	0 0 0 0	0 0 0 0	23	3.3	3.8	83 14 1449	30 6 17 0.0
25	26.1	14.4	0.0	10.1	16.6	12.4	14.6	0.0	1023.5	0 0 0 0	0 0 0 0	0 0 0 0	61	6.5	6.7	65 30 1754	68 11 12 0.0
26	26.1	12.7	0.0	8.0	17.0	12.8	15.2	0.0	1020.2	0 0 0 0	0 0 0 0	0 0 0 0	67	6.2	6.4	65 25 1221	68 11 10 0.0
27	27.9	9.5	0.0	4.9	17.1	13.2	13.6	0.0	1018.9	0 0 0 0	0 0 0 0	0 0 0 0	72	3.1	3.9	68 21 1449	86 7 14 0.0
28	25.2	9.4	0.0	5.6	17.3	13.5	12.0	0.0	1018.5	0 0 0 0	0 0 0 0	0 0 0 0	255	3.2	3.9	237 15 1737	238 8 17 0.0
29	22.5	12.0	tr	8.1	17.4	13.8	9.1	0.0	1017.9	0 0 0 0	0 0 0 0	0 0 0 0	358	2.1	3.9	326 13 1545	359 6 07 0.0
30	23.9	12.4	tr	10.5	17.7	14.1	10.2	0.0	1018.2	0 0 0 0	0 0 0 0	0 0 0 0	219	4.8	5.0	216 17 1557	211 9 16 0.0
31	18.7	11.9	tr	10.1	17.8	14.3	0.2	0.0	1019.1	0 0 0 0	0 0 0 0	0 0 0 0	257	6.2	6.3	261 25 1637	272 11 16 0.0
Total			24.8				184.7	0.0									33.6
Mean	17.8	8.3		5.6	13.4	11.6	5.96	0.0	1016.9					325	1.0	5.6	
Anom	+0.3	+0.8	49%	+1.3	-0.1	-0.2	97%			+1.0							
Daily mean		13.1															
Anom		+0.6															

Number of days with:

Air frost = 0      Ground frost = 5      Nil sun = 4  
Snow falling = 0      Snow lying = 0      Thunder = 0  
Hail=>5mm = 1      Hail<5mm or ice = 0      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, &lt;.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 =&gt;5mm. Ic = Hail &lt;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 2012

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cl	NChshs	NChshs	NChshs	Date	Remarks
1	50	8	06	04	10	11.7	11.2	97	8.3	1014.9	3	015	58	6	5	8	7	2	/	/	83704	87706	88708	1	
2	59	8	01	06	12	9.8	7.6	86	6.4	1021.9	5	000	05	2	2	8	6	3	/	/	88708			2	
3	35	8	02	08	12	7.9	7.0	94	6.2	1013.1	7	005	51	6	5	8	7	2	/	/	83704	87706	88708	3	
4	67	8	01	06	10	7.9	5.5	84	5.6	1006.7	8	004	02	5	2	8	8	4	/	/	85812	86618	88630	4	Cu hum
5	80	7	03	09	17	6.3	1.2	70	4.2	1010.4	2	010	15	6	2	6	8	4	2	/	81818	85656	87458	5	2Sc45 Cu fra/hum jpS
6	84	8	06	04	11	7.8	2.3	68	4.4	1013.7	3	008	02	2	2	8	8	5	/	/	81820	83650	88656	6	Cu fra
7	62	8	13	06	12	9.0	5.6	79	5.6	1014.8	7	011	60	6	2	7	8	4	2	/	81815	83635	86645	7	8As58 Cu fra
8	72	8	23	07	14	13.1	9.6	79	7.6	1006.9	5	003	03	2	2	8	8	4	/	/	83815	85635	88650	8	Cu med
9	35	8	11	01	05	11.2	10.7	96	8.0	1007.8	2	008	20	5	2	8	7	2	/	/	84704	88705		9	
10	82	7	21	11	20	16.3	13.8	85	9.8	1008.3	1	015	01	5	2	7	5	4	/	1	82710	87613		10	
11	86	6	27	11	24	12.4	5.8	64	5.7	1020.1	2	025	02	1	1	6	8	5	0	0	85825	83640		11	Cu hum/med
12	86	1	01	10	20	10.8	0.9	51	3.9	1038.2	2	009	03	0	0	1	1	6	0	0	81835			12	Cu fra/hum
13	82	3	24	05	12	14.0	3.6	49	4.8	1033.0	7	017	03	0	0	1	1	6	0	1	81835	83080		13	1Ci75 COTRA Cu hum Absent cld&vis est
14	61	8	23	09	17	8.5	6.4	87	5.9	1017.6	8	010	61	6	2	5	5	4	2	/	81715	85635	88550	14	
15	86	7	29	09	22	7.8	2.7	70	4.6	1014.1	2	012	03	6	2	7	8	5	3	/	84820	85630		15	/Ac65 Cu med
16	83	2	31	05	12	10.6	2.2	56	4.4	1026.9	0	006	03	0	0	2	2	6	0	1	82830			16	1Ci75 Cu med
17	81	8	14	07	15	11.7	2.7	54	4.6	1019.3	7	011	01	2	2	1	1	6	7	/	81835	83362	88465	17	1Ac58 Cu fra
18	60	8	04	05	15	13.2	8.2	72	6.8	1003.2	7	004	05	1	1	1	1	5	7	/	81820	86358	88465	18	Cu fra
19	58	7	22	04	11	13.3	9.6	78	7.4	1009.8	1	012	05	2	2	7	8	4	/	/	81712	83815	87645	19	Cu fra/hum Absent 19th to 24th vv&cld est
20	65	8	03	08	14	9.8	7.0	83	6.2	1011.4	8	002	02	2	2	8	6	4	/	/	88710			20	
21	62	8	36	08	13	10.4	7.8	84	6.6	1010.0	1	010	02	2	2	8	6	4	/	/	88710			21	
22	60	1	34	06	13	17.5	11.1	66	8.2	1014.4	1	011	05	0	0	0	0	9	0	1	81075			22	
23	60	0	36	04	09	19.0	13.2	69	9.3	1023.0	0	005	05	0	0	0	0	9	0	0				23	
24	58	1	03	05	10	19.9	15.0	73	10.4	1026.7	0	002	05	0	0	1	1	5	0	0	81820			24	Cu fra
25	61	1	04	07	15	21.4	12.8	58	9.0	1023.5	8	005	02	0	0	0	0	9	0	2	81075			25	
26	68	0	07	08	20	22.2	12.2	53	9.0	1020.2	8	009	02	0	0	0	0	9	0	0				26	
27	64	1	05	05	09	20.9	13.1	61	9.5	1018.9	8	005	02	0	0	0	0	9	0	1	81075			27	COTRA
28	60	6	27	03	07	19.1	12.1	64	8.9	1018.5	2	001	05	2	2	1	5	7	8	/	81656	85358		28	2Ac60 Ac cas
29	65	5	36	04	11	18.2	12.2	67	8.9	1017.9	6	003	01	1	1	5	8	5	0	0	81825	85645		29	Cu hum
30	68	3	25	04	09	20.2	11.4	57	8.4	1018.2	0	002	03	1	1	1	1	6	8	1	81835	83080		30	1Ac63 COTRA Cu hum Ac cas
31	65	7	26	06	13	16.3	11.8	74	8.5	1019.1	7	003	01	6	2	1	1	4	7	/	81818	83359	86362	31	2Ac57 7As65 Cu hum

Mean vis = 21.8 km  
 Mean cloud = 5.5 68%  
 Mean wind speed = 6.3 kn  
 Mean gust = 13 kn  
 Mean TT = 13.5 °C  
 Mean TdTd = 8.3 °C  
 Mean RH = 71.9 %  
 Mean r = 7.0 g/kg  
 Mean PPP = 1016.9 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)  
 N = Total cloud amount, oktas  
 dd = Direction from which wind is blowing, tens of degrees true  
 ff = 10 minute mean wind speed, knots  
 gg = Highest gust in past hour, knots  
 TT = Air temperature at 1.2 m, deg Celsius  
 TdTd = Dew point temperature at 1.2 m, deg Celsius  
 RH = Relative humidity at 1.2 m  
 r = Humidity mixing ratio at 1.2 m, g/kg  
 PPP = Air pressure reduced to sea level, mbar  
 a = Characteristic of pressure tendency (Code FM12-0200)  
 ppp = 3 hr pressure tendency, tenths of mbar  
 ww = Present weather code (Code FM12-4677)  
 W1, W2 = Past weather code (Code FM12-4561)-  
 covers past 3 hours.  
 Nh = Amount of low cloud present, oktas  
 Cl = Type of low cloud (Code Fm12-0513)  
 h = Height of low cloud (Code FM12-1600)  
 Cm = Type of medium cloud (Code FM12-0515)  
 Ch = Type of high cloud (Code FM12-0509)  
 8 groups. 8 = indicator for cloud detail  
 N = Amount of cloud, oktas  
 C = Type of cloud (FM12-0500)  
 hshs= Height of cloud (FM12-1677)  
 Remarks : COTRA = persistent condensation  
 trails present.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for MAY 2012

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	pppww	W1W2	NhCl	hCrCl	NChshs	NChshs	NChshs	Date	Remarks					
1	82	7	24	05	09	15.4	9.9	70	7.5	1017.4	2	012	02	2	2	7	8	5	/ /	83820	86645	1	Cu med		
2	59	8	36	06	12	12.1	8.0	76	6.6	1018.9	8	015	05	2	2	8	5	4	/ /	85615	88618	2			
3	65	8	03	05	08	8.8	6.7	87	6.1	1011.0	7	013	50	6	5	8	8	3	/ /	81708	88620	3	2Cu12 Cu hum		
4	67	8	06	05	11	9.2	5.7	79	5.7	1006.2	7	005	02	6	2	8	8	4	/ /	82818	86625	88640	4	Cu hum	
5	84	7	04	06	15	10.1	1.8	56	4.4	1010.2	8	004	01	6	2	2	8	6	7	/	82835	83460	87362	5	2Sc56 Cu hum
6	84	7	05	04	09	9.0	0.5	55	3.9	1014.9	1	006	21	6	2	6	8	6	7	/	81835	86650		6	/Ac58 Cu hum
7	75	6	19	09	17	14.5	9.3	71	7.3	1011.4	7	018	03	6	2	6	8	4	/ /	81715	84820		7	3Sc40 Cu med Absent vv&cld est	
8	75	6	23	08	15	16.6	8.8	60	7.0	1005.8	8	006	01	2	2	5	8	6	0	1	83830			8	2Sc56 2Ci75 Cu med
9	30	8	21	09	20	14.4	13.4	94	9.5	1009.0	1	008	58	6	5	8	7	3	/ /	83706	87708	88712	9		
10	75	8	21	10	23	15.1	13.9	92	9.8	1009.6	8	004	61	6	2	7	5	4	2	/	81710	87613	88556	10	R in past hr
11	86	2	30	10	21	15.2	2.8	43	4.5	1025.4	2	023	02	1	1	2	2	6	3	1	82848			11	1Ac68 1Ci75 COTRA Cu hum/med
12	86	4	35	07	15	13.3	1.0	43	4.0	1038.3	8	003	02	1	1	4	1	7	0	0	84850			12	Cu hum Absent vv&cld est
13	83	6	25	10	20	15.3	3.0	44	4.8	1027.6	7	027	03	1	1	5	4	7	0	2	81850	85650		13	2Ci75 Cu hum
14	82	8	23	09	19	11.7	7.9	77	6.6	1014.3	7	019	02	6	2	6	8	4	2	/	83818	84635	88462	14	Cu hum/med
15	62	6	34	08	28	7.8	3.4	73	4.8	1018.6	3	029	80	8	2	6	9	5	6	3	82925	81835	84550	15	/Ac62 /Ci70 Past hail vv60k ex pptn
16	81	6	28	06	12	13.8	1.4	43	4.4	1025.4	8	013	02	1	1	5	4	7	0	1	81850	85656		16	3Ci78 COTRA Cu med
17	75	7	12	04	11	14.9	2.6	43	4.4	1013.9	7	031	01	2	2	1	8	7	7	2	81850	83358	86362	17	1Sc56 Cu hum
18	70	8	11	05	11	14.7	9.2	69	7.3	1003.3	2	004	02	2	2	8	5	5	/ /	84620	85635	88645	18	Absent 18th to 24th vv&cld est	
19	70	6	01	04	09	15.8	7.9	59	6.6	1010.0	8	001	01	2	2	6	8	6	/ /	82832	86650		19	Cu hum	
20	70	8	01	07	16	10.8	7.3	79	6.4	1010.8	5	003	02	2	2	8	5	4	/ /	88615			20		
21	65	5	01	09	15	16.2	10.3	68	7.8	1009.9	1	005	01	2	2	2	5	5	0	2	82622	85075		21	
22	72	0	35	08	15	24.5	12.3	47	8.9	1015.7	2	007	02	0	0	0	0	9	0	0				22	
23	68	1	31	04	12	25.9	15.4	52	10.7	1022.5	5	002	02	0	0	1	1	6	0	0	81840			23	Cu hum
24	65	1	06	06	14	26.4	15.7	52	10.9	1024.8	7	010	02	0	0	1	1	6	0	0	81840			24	Cu hum
25	80	1	08	11	27	25.2	9.3	37	7.1	1021.7	6	006	02	0	0	0	0	9	0	1	81080			25	COTRA
26	80	0	07	08	19	25.2	6.3	30	6.1	1018.4	7	007	02	0	0	0	0	9	0	0				26	
27	77	2	10	07	22	27.2	9.7	33	7.4	1016.8	6	008	02	0	0	1	1	7	0	1	81856			27	2Ci80 COTRA Cu hum
28	82	3	28	06	14	24.6	9.0	37	7.0	1017.3	7	008	03	0	0	1	1	7	4	3	81856	83080		28	1Ac60 1Ci72 COTRA Cb top E
29	62	3	36	05	11	21.6	12.8	57	9.4	1016.6	6	009	02	1	1	3	8	6	0	1	82835			29	2Sc50 1Ci80 COTRA Cu med
30	80	6	23	07	14	22.7	11.7	50	8.4	1017.6	6	005	02	2	2	2	2	6	8	/	82840	84358		30	2Ac65 Cu con
31	72	8	26	07	16	17.6	10.7	64	8.0	1018.6	7	002	02	2	2	7	8	6	7	/	81830	86650	88360	31	2Sc40 Cu hum

Mean vis = 27.6 km

Mean cloud = 5.3 66%

Mean wind speed = 6.9 kn

Mean gust = 15 kn

Mean TT = 16.6 °C

Mean TdTd = 8.0 °C

Mean RH = 59.4 %

Mean r = 6.9 g/kg

Mean PPP = 1016.2 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	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
2012	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.41	0.31	0.00	0.24	0.51
	5	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.99	1.00	1.00	0.20	0.00	1.00
	6	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.18	0.00	0.00	0.88	1.00	1.00	0.00	0.00	1.00
	7	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.03	1.00
	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.28	1.00	1.00	0.00	0.21	0.95
	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	1.00	0.82	0.00	0.00	0.62
	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	1.00	0.54	0.00	0.08	0.18
	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.97	0.60	0.00	0.22	0.43
	12	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.25	0.61	0.41	0.00	0.56	0.33
	13	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.60	0.38	0.60	0.00	0.22	0.22
	14	0.00	0.00	0.00	0.01	0.00	0.00	0.11	0.10	0.00	0.00	0.68	0.53	0.50	0.00	0.28	0.28
	15	0.54	0.00	0.00	0.00	0.15	0.00	0.47	0.57	0.00	0.00	0.87	0.25	0.54	0.00	0.78	0.56
	16	0.86	0.00	0.00	0.00	0.85	0.07	0.43	1.00	0.00	0.00	0.46	0.47	0.96	0.11	0.27	0.22
	17	1.00	0.00	0.00	0.00	0.38	0.35	0.18	0.89	0.00	0.00	0.85	0.80	0.96	0.85	0.07	0.42
	18	0.88	0.00	0.00	0.00	0.06	0.85	0.00	0.05	0.00	0.00	1.00	1.00	0.98	1.00	0.81	0.19
	19	0.20	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.57	0.29	0.31	0.02	0.48	0.00
	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot		<b>3.81</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>1.44</b>	<b>1.40</b>	<b>3.01</b>	<b>2.93</b>	<b>0.00</b>	<b>0.01</b>	<b>9.60</b>	<b>11.72</b>	<b>11.53</b>	<b>2.19</b>	<b>4.27</b>	<b>7.92</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
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.13	0.00	0.00	0.00	0.24	0.28	0.00	0.00	0.51	0.52	0.50	0.49	0.00	0.00	0.15
5	0.00	0.77	0.00	0.00	0.00	1.00	1.00	0.29	0.91	1.00	1.00	0.72	0.94	0.01	0.00	0.40
6	0.00	0.23	0.00	0.00	0.00	1.00	1.00	0.99	1.00	1.00	1.00	0.00	0.22	0.86	0.00	0.40
7	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.98	1.00	1.00	1.00	0.06	0.98	1.00	0.00	0.40
8	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.99	0.75	0.42	1.00	0.05	0.38
9	0.00	0.00	0.06	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.99	0.63	0.85	1.00	0.00	0.37
10	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.99	1.00	0.99	0.64	0.89	0.93	0.00	0.33
11	0.00	0.00	0.00	0.00	0.09	1.00	1.00	1.00	0.99	1.00	0.98	0.99	0.88	0.58	0.00	0.35
12	0.00	0.00	0.00	0.00	0.22	1.00	0.99	0.99	1.00	0.99	0.72	0.87	0.95	0.15	0.00	0.33
13	0.00	0.00	0.00	0.00	0.37	1.00	0.99	0.99	1.00	0.99	0.90	0.94	0.53	0.11	0.00	0.32
14	0.09	0.00	0.02	0.00	0.94	1.00	0.99	0.99	0.99	0.99	0.92	0.98	0.82	0.36	0.00	0.37
15	0.61	0.00	0.29	0.00	1.00	1.00	0.98	0.99	0.99	0.99	0.44	0.99	0.67	0.79	0.00	0.47
16	0.00	0.00	0.00	0.00	1.00	1.00	0.99	0.99	1.00	0.99	0.68	0.99	0.39	1.00	0.00	0.48
17	0.00	0.00	0.00	0.00	0.99	1.00	0.89	0.99	1.00	1.00	0.85	1.00	0.00	1.00	0.10	0.50
18	0.00	0.00	0.00	0.00	0.60	1.00	0.99	0.99	1.00	1.00	0.99	1.00	0.04	0.99	0.00	0.50
19	0.00	0.00	0.00	0.00	0.00	0.45	0.36	0.19	0.71	0.71	0.60	0.84	0.00	0.38	0.05	0.20
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	<b>0.69</b>	<b>1.12</b>	<b>0.36</b>	<b>0.00</b>	<b>5.20</b>	<b>14.65</b>	<b>14.45</b>	<b>13.39</b>	<b>14.57</b>	<b>15.15</b>	<b>13.59</b>	<b>11.91</b>	<b>9.06</b>	<b>10.17</b>	<b>0.21</b>	<b>184.35</b>

May 2012	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	12.57	17.1	1536	7.4	2251	84.4	97.2	921	48.7	1735	9.76	7.52	9.9	1207	5.6	1741	1016.33	1021.8	2258	1011.9	29	15.4
2	10.67	13.7	1731	8.5	2347	84.2	94.7	50	59.1	1838	8.05	6.64	7.7	6	5.4	1838	1019.53	1022.0	501	1015.6	2354	0.5
3	8.23	9.6	1331	7.2	2351	91.3	95.1	232	86.3	1509	6.90	6.18	6.7	1058	5.7	2323	1011.88	1015.8	0	1008.3	2356	1.6
4	7.76	9.5	1357	6.7	2359	85.8	93.5	325	75.5	1442	5.51	5.64	6.1	1250	5.3	2138	1006.96	1008.4	0	1006.1	1438	0.4
5	7.14	10.9	1559	4.9	435	73.3	93.7	150	50.4	1658	2.47	4.55	5.6	1	3.8	1607	1010.08	1012.2	2359	1007.7	15	0.3
6	6.48	10.1	1735	1.1	2345	71.9	94.9	2358	50.1	1227	1.53	4.23	4.8	910	3.5	1227	1014.33	1017.2	2354	1011.9	103	0.0
7	8.66	15.9	1545	0.4	58	84.2	97.2	615	57.0	1558	5.97	5.90	7.7	1439	3.7	58	1013.22	1017.2	4	1009.0	2358	1.4
8	13.47	18.5	1622	10.2	439	76.2	94.0	542	50.0	1623	9.08	7.21	8.4	1136	6.3	1555	1006.82	1009.2	0	1005.3	1600	1.5
9	12.40	15.0	1159	8.7	407	93.8	97.2	821	89.3	1751	11.44	8.48	10.0	1159	6.7	255	1008.05	1009.7	1734	1006.5	2354	5.4
10	14.90	17.1	1148	12.6	2359	89.8	94.7	21	81.8	1154	13.25	9.48	10.2	1515	7.6	2359	1009.15	1014.0	2345	1005.6	235	5.3
11	11.93	15.8	1510	5.6	2321	62.1	86.3	305	38.4	1550	4.58	5.30	7.7	0	3.7	1855	1023.21	1034.3	2358	1013.8	1	0.0
12	9.48	15.1	1419	3.8	2358	60.6	93.4	2357	35.5	1441	1.60	4.17	5.0	2056	3.5	1139	1037.35	1038.8	1134	1034.1	3	0.0
13	10.27	17.0	1449	1.7	430	64.0	96.9	526	33.1	1038	2.78	4.57	6.2	719	3.5	1039	1029.88	1037.3	4	1022.1	2355	0.0
14	8.90	13.3	1714	5.5	305	79.0	91.4	1314	47.7	1847	5.38	5.61	7.4	1403	4.1	1848	1016.14	1022.2	3	1011.8	1815	3.2
15	7.27	12.8	1313	4.1	2352	78.6	90.2	2355	49.2	1314	3.66	4.91	5.5	1057	4.2	1334	1017.01	1024.6	2357	1012.1	415	2.3
16	9.01	15.1	1546	1.9	137	64.9	94.5	158	35.5	1550	2.00	4.35	5.4	2231	3.5	1601	1025.36	1027.0	832	1023.6	2356	0.2
17	10.40	15.4	1455	5.1	9	66.0	95.1	513	38.2	1512	3.66	4.94	6.2	629	3.6	1816	1016.00	1023.6	0	1007.1	2358	0.0
18	11.97	16.1	1039	7.1	437	78.1	94.6	2359	60.0	1044	8.17	6.85	8.4	1853	5.1	437	1004.08	1007.3	0	1002.5	1106	0.3
19	12.61	17.2	1512	8.9	2358	79.4	95.2	57	55.3	1350	8.97	7.14	8.2	51	6.0	2358	1009.75	1012.6	2203	1006.1	0	0.0
20	9.89	11.8	1427	8.3	206	82.9	87.4	656	76.2	1429	7.12	6.28	6.9	1427	5.8	129	1010.96	1012.2	215	1009.3	1644	0.0
21	12.66	17.9	1736	8.8	517	79.0	90.7	2140	63.2	1544	9.00	7.18	8.5	1900	6.0	210	1009.89	1012.0	2352	1008.6	413	0.0
22	17.85	25.2	1534	10.5	319	69.4	91.8	228	42.2	1713	11.61	8.48	10.3	2126	7.0	318	1015.37	1020.3	0	1011.8	14	0.0
23	19.48	26.3	1517	12.5	123	72.5	94.1	130	47.1	1439	14.01	9.87	12.1	2154	8.1	404	1022.81	1025.5	2359	1020.1	2	0.0
24	20.34	26.9	1449	13.9	226	76.0	93.9	2348	50.4	1500	15.67	10.93	12.9	1350	9.0	157	1025.56	1027.0	741	1024.1	1717	0.0
25	19.89	26.1	1237	14.5	444	64.1	96.6	351	27.4	1650	11.75	8.61	11.6	2	4.9	1650	1022.66	1025.0	6	1020.4	1757	0.0
26	19.11	26.1	1408	12.9	424	58.6	92.5	457	26.7	1338	9.56	7.42	10.0	817	5.3	1645	1019.55	1021.7	24	1017.7	1709	0.0
27	18.90	27.8	1437	10.0	404	60.8	91.4	427	26.9	1635	10.11	7.68	11.2	1128	5.4	1635	1018.08	1019.5	731	1016.5	1641	0.0
28	18.13	25.5	1524	9.6	423	66.2	95.3	515	33.9	1431	10.96	8.10	10.4	1151	6.4	1433	1017.87	1018.6	835	1016.8	1553	0.0
29	17.94	22.9	1539	12.0	334	71.8	91.5	343	52.2	1445	12.57	9.00	10.9	1218	7.8	334	1017.28	1018.3	635	1015.8	1746	0.0
30	18.07	24.0	1520	12.3	445	70.3	97.4	519	39.9	1624	11.94	8.62	10.5	1413	6.9	1639	1017.86	1019.5	2333	1016.7	1710	0.0
31	15.42	18.7	1133	12.0	419	76.9	89.6	422	58.7	1533	11.27	8.24	9.1	955	7.3	1533	1019.10	1019.8	2126	1017.6	1804	0.0
Total																						37.8
Mean	12.96	17.88		8.01		74.7	93.61		51.15		8.07	6.91	8.44		5.50		1016.52	1019.83		1013.43		
Max	20.34	27.82		14.46		93.8	97.40		89.30		15.67	10.93	12.92		8.99		1037.35	1038.84		1034.15		
Min	6.48	9.53		0.41		58.6	86.30		26.69		1.53	4.17	4.78		3.46		1004.08	1007.34		1002.55		

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  
 Rtot = 00-24 GMT rainfall total from AWS tipping bucket raingauge, mm  
 Time = hours and minutes in GMT of extreme values

# 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 2012

Temperature (°C)

Rank in the past 131 years

Mean maximum	15.1	(+0.8)	13 <sup>th</sup> highest
Mean minimum	4.7	(-0.3)	33 <sup>rd</sup> highest
Daily mean	9.9	(+0.3)	21 <sup>st</sup> highest
Rainfall total (mm)	161.1	(111 %)	40 <sup>th</sup> highest
Sunshine total (hours)	500.3	(108 %)	
N° of:			
Dry days	54 (+2)	Wet days	28 (0)
Days with: Air frost	11 (0)	Ground frost	44 (+9)
		Snow falling	1 (-3)
		Snow lying	0 (0)
Thunder	3 (-2)	Hail ≥5mm	2 (0)
		Small hail/ice	5 (0)
		Fog @09 GMT	5 (+4)
		Nil sun	10 (0)
Air pressure MSL : Mean @09 GMT (mbar)	1016.6	(+1.0)	

Departure from 1981 to 2010 average shown in brackets.

Notes: **Milder than Average by Day, but Not by Night. Rainfall and Sunshine Above Normal.**

This has been a season of strong contrasts, starting with a drought in March followed by the 2<sup>nd</sup> wettest April on record and ending with a May initially cold and dull but finishing with a heatwave. **Temperature:** Despite being cooler than last spring, the mean max is 0.8° above the current 30 year average, although it is 1.7° above the long-term median. Similarly the mean min is 0.3° below the current average, but is 0.7° above the long-term median. The overall mean temperature is 1.2° below spring 2011 though it is 0.6° above that of 2010, and is 1.0° above its median. Notably, the spring long-term median is 8.9°, the 30 year average is 9.6°, and the average for the last 10 years is 10.1°. Also, in the past 25 years, only one spring, that of 1996, had a mean lower than the long-term median. This spring, April was the coldest month, mean 8.1°, 0.4° lower than March, and May the mildest, mean 13.1°. Springs with April colder than March are not that rare, there having been 9 since 1882, the last in 1990, with the most extreme example in 1938 when the difference was 2.0°. This spring the highest max was 27.9° on the 27<sup>th</sup> May, 2.5° above the median. The lowest max was 8.9° on the 13<sup>th</sup> March, 4.4° above the median and 3<sup>rd</sup> highest in 100 years. The highest min was 14.4° on the 25<sup>th</sup> May, 1.9° above the median and 7<sup>th</sup> highest in 100 years, while the lowest min of -4.1° was on the 6<sup>th</sup> April and is 0.2° above its median. The mean grass min was 1.2°, 0.4° below average, and the lowest grass min was -9.8° on the 16<sup>th</sup> April. The mean earth temperature at 30 cm depth was 10.4°, 0.2° above average, and at 1 m depth was 9.8°. After the May heatwave the 30 cm temperature reached 17.8°, the highest spring value since before 1980. **Rainfall:** A very wet April sandwiched between a dry March and May was enough to produce a spring total 11 % above average. Compared with the long-term, the total is only 0.3 mm less than would put it into the wet category. The wettest day was the 21<sup>st</sup> April with 19.4 mm. Overall rainfall duration was 20.8 hours above normal. However, the combined total for March and May, 48.2 hours, is just over half the 91.3 hours for April alone. The highest rainfall rate this spring was 70 mm/hr on the 22<sup>nd</sup> April. A 9 day dry spell ended on the 2<sup>nd</sup> March, and one of 8 days on the 15<sup>th</sup> March, then one of 16 days to the 2<sup>nd</sup> April, and one of 13 days was unbroken at the end of the season. **Sunshine:** The total is lowest since 2008 but is still well above average. The 26<sup>th</sup> May was the sunniest day with 15.2 hours. Interestingly, the daily mean sunshine for March and May were identical, with April a very poor 3<sup>rd</sup>. There were two outstandingly sunny periods, 7 days to the 30<sup>th</sup> March with a mean of 11.0 hours per day, and 9 days to the 30<sup>th</sup> May, mean 13.0 hours per day. At the other extreme, the 9 day period to the 10<sup>th</sup> May had a mean of only 1.0 hours per day. Overall there were 22 days with <3 hours, 38 with =>6 hours, 22 with =>9 hours, 11 with =>12 hours and 1 with =>15 hours. **Wind:** The mean speed of 6.3 mph is 0.8 mph below average. The windiest day was the 26<sup>th</sup> April, mean 12.9 mph, and the highest gust of 39 mph was also on that day. The 28<sup>th</sup> March was the least windy day, mean 2.3 mph, and there were 2453 minutes, 40.87 hours, with a mean speed of 0.5 mph or less (calm). Daily mean direction/number of days: N,15 NE,18 E,6 SE,2 S,5 SW,20 W,15 NW,11. Compared with average, winds from W, NW and N combined were 12.6% more frequent at the expense of those from SE, S and SW, 13.5 % less frequent. **Humidity:** The overall mean relative humidity was 75.8 %. The lowest value was 20 % on the 28<sup>th</sup> March. The mean water vapour content per kg of air was 5.9 g at 0900 GMT and 5.7 g at 1500 GMT. **Pressure:** The season's highest pressure was 1038.8 mbar on the 12<sup>th</sup> May, and the lowest was 975.5 mbar on the 18<sup>th</sup> April.

**March:** Very mild, very sunny, dry. Mean max 2<sup>nd</sup> highest in 131 years. Mean temperature 8<sup>th</sup> highest. Mean diurnal temperature range 3<sup>rd</sup> highest in 131 years. Highest max equal highest with 1990 since 1968. One of the sunniest Marches since before 1908. Mean wind speed lowest since before 1988. Most days with fog since 1969.

**April:** Very wet, dull, temperature well below normal. Mean temperature lowest since 1989. Mean max 1.8° below that for March this year. Lowest min is lowest since 1996. 2<sup>nd</sup> wettest April in 131 years. Only the 3<sup>rd</sup> April in that period to exceed 100 mm.

**May:** Mild, dry, below normal sunshine. Mean min 10<sup>th</sup> highest since 1882. The highest min 7<sup>th</sup> highest in 100 years. The highest daily mean is highest since 1989.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom	Sun hrs	Anom	Wind Mn mph	Max gust	Mean pressure	Anom
March	14.6°	+3.4°	2.5°	-0.7°	16.8	37%	184.8	166%	5.3	37	1028.4	+12.5
April	12.8°	-1.2°	3.4°	-1.0°	119.5	246%	130.8	81%	7.4	39	1004.2	-10.8
May	17.8°	+0.3°	8.3°	+0.8°	24.8	49%	184.7	97%	6.4	35	1016.9	+1.0

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 2010. 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 instrument used to detect sunshine amount in July 1999, and the data produced by the new instrument is not strictly comparable with that obtained prior to July 1999, 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 of instrument, due to a combination of faster reaction and higher sensitivity than the old type. Thus the average used in this case is for a theoretical equivalent average for the 1981 to 2010 climatological period for this new instrument, based on comparisons with Met Office published tables of departure from the 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 the 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 "half (max+min)". A true daily 24 hour (00 to 24 GMT) mean temperature is available from the AWS, and is currently published on page 7 of the Wokingham Monthly Weather Report on the Wokingham Weather Web Site, page1. <http://www.woksat.info/wwp1.html>

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

a): The departure of a mean from the current climatological average.

b): The departure of a value from the a long-term average for a particular day.

When the word anomaly is used in respect to temperature, any values given are in degrees C. In respect to rainfall, percent. In respect of sunshine, percent. In respect to wind, mph. In respect to 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 mild/cold are used in the winter half year, and warm/cool in the summer half.

The term normal is defined as being 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 for sunshine follow the same rules as for temperature.

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

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

The term wet is used for values lying between 10% and 30% below the highest value in the ranked series.

the term very wet is used for values lying within 10% of the highest value in the ranked series.

The term dry is used for values lying between 10% and 30% of the lowest value in the ranked series.

The term very dry is used for values lying 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 the records of various station in the Wokingham area in the years prior to the establishment of a weather station at Emmbrook in 1976.

In the case of monthly max, min and mean temperature and of rainfall total the 'long-term' goes from the present back to 1882. For extremes of temperature, highest max and lowest min are back to 1904, and for 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 values of the entire series. The central value in the ranked series is known as the median. This value may be different from the 'average' if the population of values is skewed. Also, as the median considers all values in the series, and the average refers to a 30 year climatological period, during periods of climatic change, the median will also be expected to differ from the average.

**Month:** Calendar month.

**Season:** Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

The year number given when discussing 'winter' is usually the year in which the majority of the period lies, i.e. January/February

**Annual or Year :** The calendar year, 1<sup>st</sup> January to 31<sup>st</sup> December.

**The climatological day :** runs from 09 to 09 GMT. The max temperature and rainfall read at 0900 are attributed to the previous day, as is the duration of measurable rain calculated up to 0900 GMT. The min temperature and grass min read at 0900 are attributed to the day of reading. Pressure is read at 0900 GMT, and the monthly mean pressure is the mean of the 0900 readings. Sunshine data, wind data, rainfall rates and 24 hour data from the AWS use the normal 00 to 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 % cover of snow at the 0900 GMT observation.

**Hail :** A day of hail is recorded if hailstones of 5 mm diameter or more are observed or recorded on the hail pad on 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. Note, various types of other ice meteors such as ice pellets, snow grains, and some types of snow pellets are included in this category.

**Fog:** A day of 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.

**Rainfall :** Rainfall is given in mm and tenths. "tr" ( trace) is entered when: a) precipitation has occurred but there is no water in the gauge. b) There is water in the gauge but it is less than 0.05 mm.

**Dry Spell :** A dry spell, for the purposes of the Wokingham climatological data and reports, is defined as a period of 5 or more consecutive dry days. A dry day is defined as one where the 24 hour precipitation measured at 09 GMT is not greater than 0.1 mm.

**Wind:** The following abbreviations may be used to denote wind directions :

Degrees are from true north

N = North =  $360^{\circ}$  and  $22.5^{\circ}$  either side.

NE = NorthEast =  $045^{\circ}$  and  $22.5^{\circ}$  either side.

E = East =  $090^{\circ}$  and  $22.5^{\circ}$  either side.

SE = SouthEast =  $135^{\circ}$  and  $22.5^{\circ}$  either side.

S = South =  $180^{\circ}$  and  $22.5^{\circ}$  either side.

SW = SouthWest =  $225^{\circ}$  and  $22.5^{\circ}$  either side.

W = West =  $270^{\circ}$  and  $22.5^{\circ}$  either side.

NW = NorthWest =  $315^{\circ}$  and  $22.5^{\circ}$  either side.

**Wind – terms for speed used in monthly reports:** When the following terms are used in the monthly reports, they will be based on the following unofficial criteria, (the day runs from 00 to 24 GMT) :

Term	Daily mean speed, knots		Highest hourly mean speed, knots		24 hour maximum gust, knots
Very light	3 or less	and	4 or less	and	8 or less
Light	3 to 6	or	4 to 8	or	8 to 16
Moderate	6 to 9	or	8 to 12	or	16 to 24
Fresh	9 to 12	or	12 to 16	or	24 to 32
Strong	12 to 15	or	16 to 20	or	32 to 40
Very strong	15 to 18	or	20 to 24	or	40 to 48
Near gale	18 to 21	or	24 to 28	or	48 to 56
Gale	21 to 24	or	28 to 32	or	56 to 64
Severe gale	24 to 27	or	32 to 36	or	64 to 72

B.J.Burton. 3 August 2009  
 Updated 8 Sept 2009,  
 4 Nov 2011

## 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.