

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

APRIL 2011

Temperature (°C / °F)			Anomaly		Rank in the past 130 years		
Mean maximum	19.5	67.1	+5.5		* Highest *		
Mean minimum	6.3	43.3	+1.9		2 nd highest		
Daily mean	12.9	55.2	+3.7		* Highest *		
Highest maximum	26.6	79.9	on 23 rd	Lowest maximum	13.4	56.1	on 13 th
Highest minimum	11.7	53.1	on 2 nd	Lowest minimum	1.9	35.4	on 13 th
Mean grass minimum	2.3	36.1	+1.6	Lowest grass minimum	-3.7	25.3	on 13 th
Mean earth @30 cm	11.9	53.4	+2.0	Earth @100 cm	10.7	51.3	
Frost duration (hrs)	0.0			Rain duration (hrs)	3.5		
Rainfall total (mm / in)	1.4	0.06	3 %		3 rd lowest		
Highest daily fall	1.3	0.05	on 4 th				
Number of: Dry days (<0.2mm)	29	Wet days (>0.9mm)	1	days ≥5mm	0		
Sunshine total (hrs)	231.8	Daily mean	7.73	144 %	Sunniest day	13.5	on 22 nd
N ^o days with: Air frost	0	Ground frost	8	Snow falling	0	Snow lying	0
Thunder	1	Hail ≥5mm	0	Small hail/ice	0	Fog @09	0
							Nil sun 2
Pressure MSL : Mean @09 GMT, mbar	1020.3	+5.3	Highest	1031.7	on 12 th	Lowest	1006.1 on 22 nd
Relative humidity : Mean (%)	68.4	Lowest	19	on 6 th	Water vapour (g/kg), mean at 09 and 15 GMT		6.2 5.9
Overall mean wind speed (mph)	5.9	Windiest day	10.7	on 5 th	Max gust	31	on 4 th
Wind direction (days)	N 6	NE 7	E 2	SE 0	S 3	SW 9	W 2
							NW 1
Least windy day (mph)	2.6	on 8 th	Calm; less than 0.5 mph (minutes)		1008		

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

Notes:

Record Warmth.

Very Dry.

Very Sunny.

This has been an April to remember, and one for the record books. **Temperature:** Both the mean max and daily mean are new records for Wokingham. The mean max is amazingly 2.0° above the climatological average for May, and is 0.9° above the previous April record held jointly by 2007 and 1893. The mean temperature is 1.0° above the previous highest in 2007. The mean min did not quite set a new record, being 0.1° below the highest in 1961. The highest max is equal highest with 1949 in the past 108 years and is 5.9° above the median, while the lowest max is a new record, 1.7° above the previous highest in 1942, and 5.8° above the median. The lowest min is 2nd highest in 108 years after 1961, and is 3.8° above the median, while the highest min is 1.3° below the record but 1.8° above the median. The mean grass min is highest since 1993, but the lowest grass min is highest since before 1980. Earth temperatures are well above average, and highest since before 1980. The number of ground frosts is lowest since 1993, and air frost was absent for only the 3rd April in the past 36 years. **Rainfall:** A remarkably dry month, the 3rd driest April in 130 years, with only 3 % of the average rainfall, nearly all of which fell on just one day. This follows a dry March, the two months together producing only 12.8 mm of rain, with only 1938 and 1912 having less rain in these two months. The number of dry days is highest in 107 years, and a 26 day dry spell continues into May. Thunder was heard on the 23rd, but the associated downpours missed us. Estimated soil moisture deficit, at the end of April, for shallow rooted plants is equal highest with 2007 in the past 36 years. **Sunshine:** Although this has been one of the sunniest Aprils in the past century, 2007 was sunnier by 11 hours. The period 6th to the 12th was outstanding, when we clocked up 81.3 hours of sun, a mean of 11.6 hours per day. Also, the 9 day period 19th to the 27th contained 6 days having over 75 % of the maximum. Overall there were 6 days with <3 hours, 19 with =>6 hours, 16 with =>9 hours and 7 with =>12 hours. **Humidity:** The lowest relative humidity of 19 % on the 6th is the lowest for any day since the 10th August 2003, when 18 % was recorded. **Commentary: From the 1st to the 15th:** Maxima were generally above normal, but were near normal from the 12th to 14th. Daily anomalies ranged from +9.8° on the 6th to -0.1° on the 14th. Minima were more variable, with several nights with near normal temperatures. Daily anomalies ranged from +7.4° on the 2nd to -1.5° on the 13th. The 4th was the only day with rain, and with 1.3 mm was the wettest day of the month. Sunshine was poor until the 5th, then became outstandingly sunny until the 12th, then poor again to the 15th. Moderate SW'y winds increased to fresh on the 4th, veering light NW'y on the 7th, becoming moderate E'y on the 9th, backing W'y on the 11th and becoming light SW'y on the 13th. **From the 16th to the 30th:** Daily maxima were above normal throughout, with a very warm spell from the 19th to the 23rd. Daily anomalies ranged from +11.5° on the 23rd to +1.4° on the 26th. Minima were generally closer to normal, with daily anomalies between +4.6° on the 16th and -2.1° on the 28th. Apart for a few spots of rain on several days, there was no measurable rain in this period. Sunshine was generally above normal. Winds were light, SW'y on the 16th then mainly NE'y, temporarily S'y on the 22nd and 23rd, becoming moderate on the 25th.

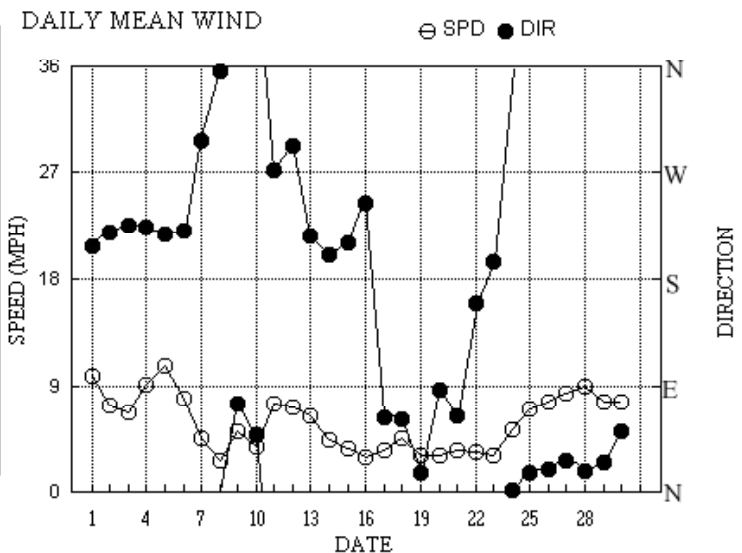
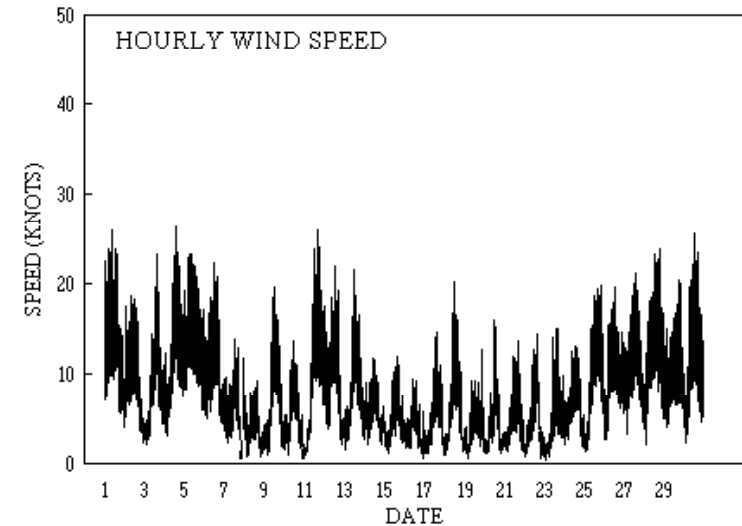
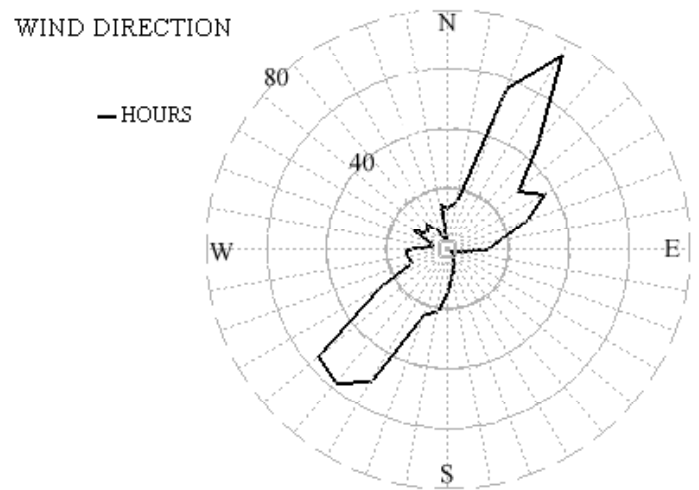
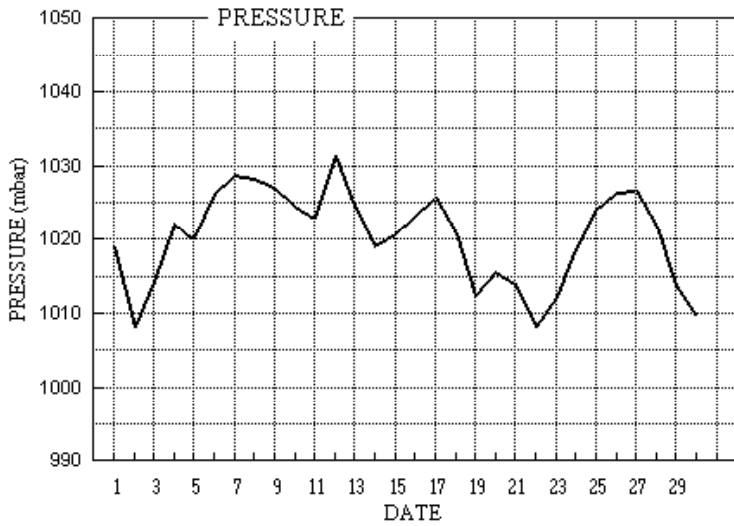
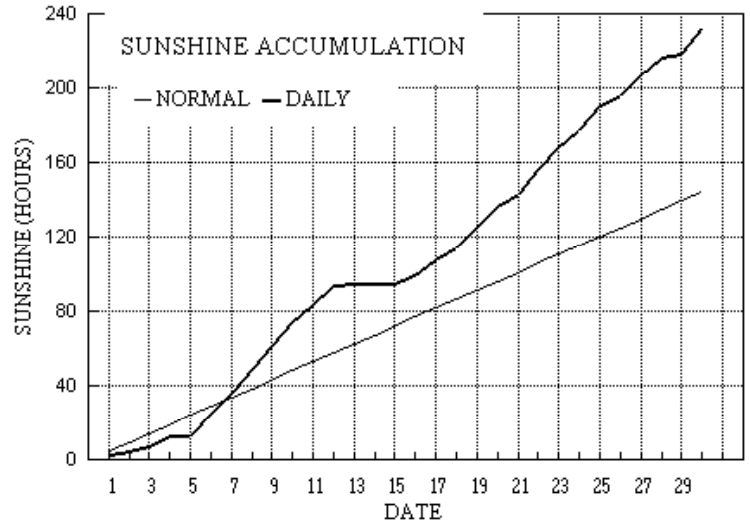
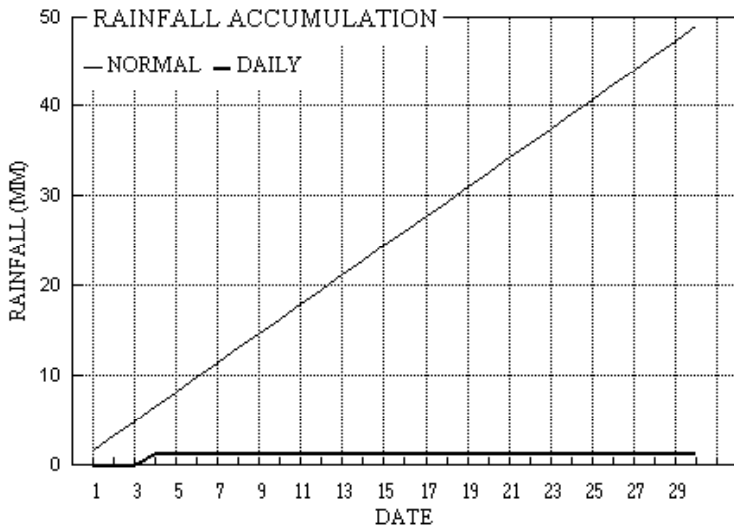
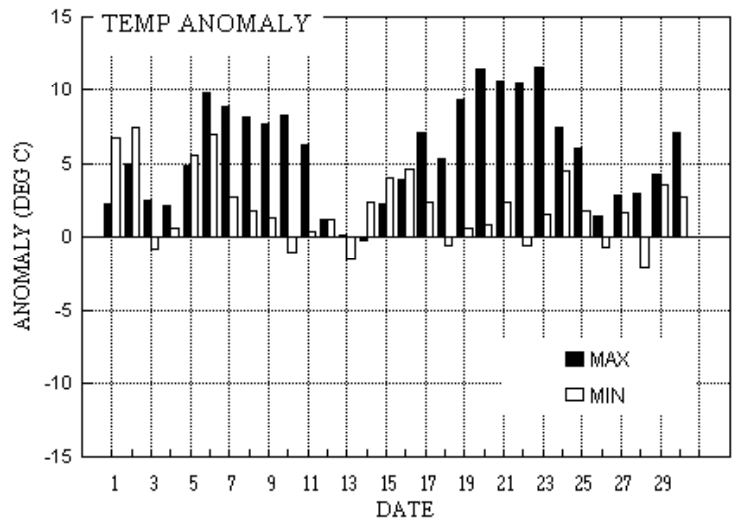
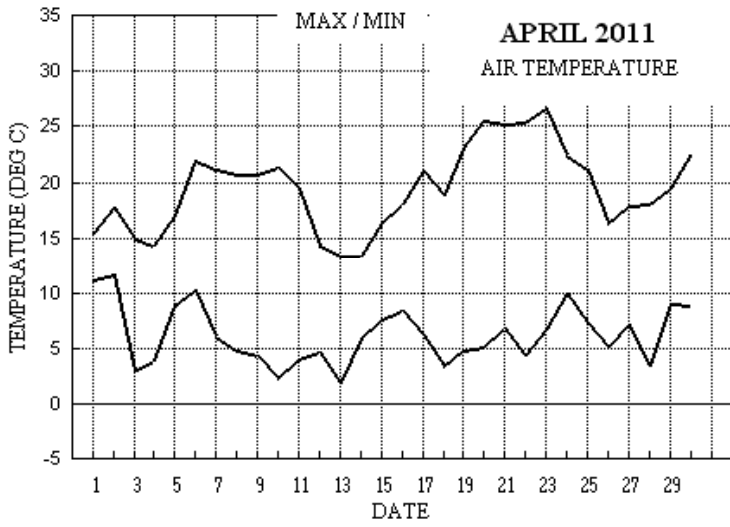
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 30 th			
+6.0°	+3.2°	8 %	138%	+4.7°	+1.4°	<1 %	116%	+6.5°	+1.5°	0 %	179%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham Climatological Graphs for April 2011



Month: APRIL 2011

Date	Max C	Min C	Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf SI	Th Ha	Ic Fg	Vec mean ddd ff sp	Max gust ddd gg HHhh	High hr ddd ff HH	Rain hrs							
1	15.4	11.2	0.0	9.3	10.1	9.1	3.2	0.0	1018.8	0	0	0	0	207	8.2	8.6	206	26	0821	207	11	13	0.0	
2	17.8	11.7	0.0	8.3	10.3	9.2	1.6	0.0	1008.0	0	0	0	0	220	4.9	6.4	211	19	0751	263	9	14	0.0	
3	15.0	2.9	tr	-2.0	10.3	9.4	3.1	0.0	1014.3	0	1	0	0	225	5.6	5.8	265	24	1651	236	10	16	0.0	
4	14.3	3.9	1.3	-1.5	10.1	9.5	5.0	0.0	1022.1	0	1	0	0	224	7.8	7.9	246	27	1432	235	13	14	3.0	
5	17.0	8.9	tr	7.6	10.1	9.6	0.0	0.0	1020.1	0	0	0	0	218	9.3	9.3	220	24	0924	225	11	10	0.0	
6	21.9	10.3	0.0	9.7	10.3	9.7	12.6	0.0	1026.2	0	0	0	0	221	6.7	6.8	226	23	1214	225	10	12	0.0	
7	21.1	6.1	0.0	1.3	10.8	9.7	11.0	0.0	1028.7	0	0	0	0	297	2.2	3.9	314	14	1316	328	7	12	0.0	
8	20.7	4.8	0.0	0.3	11.2	9.9	12.9	0.0	1028.3	0	0	0	0	356	1.5	2.3	26	10	1506	29	4	15	0.0	
9	20.7	4.4	0.0	0.0	11.5	10.0	12.4	0.0	1027.0	0	0	0	0	74	4.3	4.4	68	20	1314	82	8	13	0.0	
10	21.4	2.4	0.0	-2.1	11.5	10.2	12.5	0.0	1024.6	0	1	0	0	49	3.1	3.3	63	14	1156	54	6	11	0.0	
11	19.5	4.0	tr	0.1	11.6	10.4	9.0	0.0	1022.8	0	0	0	0	272	5.9	6.5	298	26	1746	300	11	17	0.0	
12	14.3	4.7	0.0	0.0	11.5	10.5	10.9	0.0	1031.4	0	0	0	0	292	5.7	6.3	327	22	1211	312	10	13	0.0	
13	13.4	1.9	0.1	-3.7	11.0	10.6	0.3	0.0	1024.4	0	1	0	0	216	5.3	5.5	270	22	1115	237	9	13	0.3	
14	13.4	5.9	tr	2.1	10.9	10.6	0.0	0.0	1019.1	0	0	0	0	200	3.7	3.8	179	12	1155	196	6	11	0.0	
15	16.3	7.7	0.0	6.5	11.1	10.6	0.6	0.0	1020.7	0	0	0	0	210	3.0	3.2	204	12	1608	224	6	16	0.0	
16	18.0	8.4	0.0	4.5	11.5	10.7	4.7	0.0	1023.0	0	0	0	0	244	1.4	2.5	211	10	1136	309	5	12	0.0	
17	21.0	6.2	0.0	2.0	11.6	10.7	8.0	0.0	1025.7	0	0	0	0	63	2.2	3.1	68	15	1537	57	6	15	0.0	
18	18.9	3.5	0.0	-0.8	12.0	10.8	6.1	0.0	1020.7	0	1	0	0	62	3.7	3.9	78	20	1245	76	8	12	0.0	
19	23.0	4.8	0.0	0.3	11.8	10.9	11.3	0.0	1012.4	0	0	0	0	16	2.2	2.6	27	13	2134	33	5	21	0.0	
20	25.6	5.2	0.0	0.8	12.4	11.0	11.0	0.0	1015.5	0	0	0	0	86	0.4	2.7	107	16	1323	175	6	14	0.0	
21	25.2	6.9	tr	2.3	12.8	11.2	6.5	0.0	1013.9	0	0	0	0	64	2.8	3.0	83	14	1708	79	5	17	0.0	
22	25.4	4.4	0.0	-0.5	12.9	11.3	13.5	0.0	1008.1	0	1	0	0	159	1.5	2.9	225	15	1638	207	7	16	0.0	
23	26.6	6.7	tr	2.1	13.3	11.5	11.5	0.0	1012.2	0	0	0	1	195	0.3	2.7	76	15	1848	168	6	16	0.0	
24	22.5	10.0	0.0	5.9	13.9	11.7	9.7	0.0	1018.7	0	0	0	0	2	4.2	4.5	23	13	1343	24	7	18	0.0	
25	21.2	7.3	0.0	2.7	14.0	11.9	13.3	0.0	1024.1	0	0	0	0	16	5.9	6.1	22	20	2004	23	10	17	0.0	
26	16.4	5.1	tr	-0.1	13.8	12.1	5.2	0.0	1026.4	0	1	0	0	19	6.6	6.7	9	20	1324	17	10	13	0.2	
27	17.9	7.2	0.0	5.4	13.6	12.2	11.0	0.0	1026.6	0	0	0	0	26	7.2	7.2	26	21	1402	22	10	15	0.0	
28	18.0	3.4	tr	-1.8	13.4	12.3	9.1	0.0	1021.6	0	1	0	0	17	7.6	7.7	27	24	2016	19	11	14	0.0	
29	19.5	9.1	0.0	7.9	13.5	12.4	2.4	0.0	1013.8	0	0	0	0	25	6.6	6.6	37	21	1933	27	9	17	0.0	
30	22.6	8.9	tr	3.4	13.6	12.4	13.4	0.0	1009.4	0	0	0	0	51	6.5	6.6	56	26	1302	64	10	15	0.0	
Total			1.4				231.8	0.0																3.5
Mean	19.5	6.3		2.3	11.9	10.7	7.73	0.0	1020.3					301	0.5	5.1								
Anom	+5.5	+1.9	3%		+2.0	+1.5	144%			+5.3														
Daily mean		12.9																						
Anom		+3.7																						

Number of days with:

Air frost = 0 Ground frost = 8 Nil sun = 2
 Snow falling = 0 Snow lying = 0 Thunder = 1
 Hail=>5mm = 0 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, <.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. SI = 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 APRIL 2011

Date	VV	N	dd	ff	gg	TT	Td	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cl	NCh	shs	NCh	shs	NCh	shs	Date	Remarks
1	68	8	23	10	26	12.1	9.2	82	7.1	1018.8	2	002	02	2	2	8	5	4	/	/	86613	88618					1		
2	80	7	21	09	16	14.8	10.2	74	7.8	1008.0	5	009	03	2	2	3	5	5	8	8	83620	87270					2	1Ac60 2Ac63 COTRA Ac cas	
3	60	7	22	08	14	9.8	7.3	85	6.3	1014.3	0	004	05	2	2	6	6	3	3	1	86708	87070					3	2Ac68 COTRA	
4	82	7	23	07	13	9.4	4.7	72	5.3	1022.1	2	015	03	1	1	1	1	5	3	5	81820	87078					4	1Ac68 2Cs72 COTRA Halo 22° part	
5	75	8	22	12	21	10.3	8.2	87	6.8	1020.1	1	009	00	6	2	8	5	4	/	/	87612	88620					5		
6	84	7	24	08	14	16.5	4.5	45	5.2	1026.2	0	009	02	2	2	1	0	9	8	1	81363	87075					6	COTRA Ac flo	
7	63	3	28	04	07	13.9	7.8	67	6.3	1028.7	2	020	02	0	0	0	0	9	0	1	83072						7	COTRA U/a cont	
8	70	0	33	04	08	13.6	7.3	66	6.4	1028.3	6	003	02	0	0	0	0	9	0	0							8		
9	81	1	03	05	09	14.8	6.6	58	6.1	1027.0	2	004	02	0	0	0	0	9	0	1	81075						9		
10	60	2	04	05	11	11.3	6.4	71	5.9	1024.6	1	001	05	1	1	0	0	9	0	1	82078						10	COTRA	
11	59	7	25	05	10	13.6	8.5	71	6.8	1022.8	0	001	05	2	2	1	0	9	4	8	81368	87272					11	COTRA U/a cont Parheliion	
12	82	2	31	08	17	9.5	1.4	57	4.2	1031.4	1	009	03	0	0	1	1	6	0	1	81830						12	2Ci78 COTRA Cu hum/fra	
13	68	8	21	04	09	8.5	3.9	73	4.9	1024.4	7	012	02	2	2	8	0	9	7	/	82358	88460					13		
14	65	8	20	04	09	9.9	5.6	75	5.6	1019.1	1	010	02	2	2	8	5	6	/	/	81635	88650					14	2Sc45	
15	62	7	23	02	06	11.3	4.1	61	5.0	1020.7	2	008	02	2	2	2	8	7	7	/	81850	87357					15	2Sc060 Cu hum	
16	60	7	32	03	05	12.0	7.3	73	6.3	1023.0	2	009	05	2	2	1	5	7	7	/	81656	87357					16	Cld edgr N	
17	59	3	04	03	06	13.8	7.8	67	6.5	1025.7	2	006	05	1	1	1	5	7	0	1	81656	83078					17	COTRA Sky turbid	
18	25	5	05	05	09	12.2	8.5	78	6.9	1020.7	8	011	05	4	1	5	0	9	3	0	85357						18		
19	45	2	03	02	05	14.2	7.2	63	6.3	1012.4	2	006	05	1	1	0	0	9	0	1	82080						19	COTRA	
20	40	2	34	03	06	12.9	7.9	71	6.5	1015.5	1	001	05	0	0	2	0	9	8	1	82357						20	1Ci78 COTRA Ac cas	
21	32	3	04	04	08	16.3	8.7	61	6.9	1013.9	7	002	05	1	1	3	0	9	3	0	83359						21		
22	25	1	06	02	05	16.9	8.9	59	7.1	1008.1	8	005	05	0	0	1	0	9	3	1	81362						22	1Ci80 COTRA	
23	56	1	05	01	04	19.1	10.9	59	7.9	1012.2	1	009	05	0	0	0	0	9	0	1	81075						23		
24	30	7	36	05	09	14.2	10.8	80	8.0	1018.7	2	010	05	2	2	4	6	4	0	1	84710	87080					24	COTRA Sky turbid	
25	86	1	36	06	11	15.2	2.9	44	4.7	1024.1	0	000	02	0	0	0	0	9	0	1	81075						25		
26	62	7	02	08	16	11.3	6.0	70	5.7	1026.4	1	002	01	2	2	6	5	4	3	1	86615						26	2Ac58 /Ci75 COTRA sky turbid	
27	75	5	02	08	16	11.7	4.1	60	5.1	1026.6	0	000	14	6	1	1	1	5	7	0	81828	83358					27	2Sc56 4Ac62 Cu fra jpNW	
28	66	7	02	10	17	9.3	3.9	69	5.0	1021.6	8	009	02	2	2	7	5	4	/	/	87618						28		
29	58	7	02	09	13	12.4	8.4	76	6.8	1013.8	8	004	05	2	2	7	6	4	/	/	87714						29		
30	62	0	06	07	20	16.4	8.8	61	6.8	1009.4	7	002	02	1	1	0	0	9	0	0							30		

Mean vis = 17.4 km

Mean cloud = 4.7 58%

Mean wind speed = 5.7 kn

Mean gust = 11 kn

Mean TT = 12.9 °C

Mean Td = 6.9 °C

Mean RH = 67.8 %

Mean r = 6.2 g/kg

Mean PPP = 1020.3 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 APRIL 2011

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NCh	shs	NCh	shs	Date	Remarks
1	70	7	21	11	22	14.7	9.4	70	7.2	1017.2	8	016	01	2	2	6	5	5	0	1	86620	83078			1	2Ci72 COTRA
2	80	7	26	08	17	16.4	8.3	58	6.7	1009.7	3	011	02	2	2	1	2	6	8	8	81832	83465	87270	2	1Ac62 2Ac67 COTRA Cu med Ac cas	
3	80	7	22	09	20	14.5	6.9	60	6.2	1013.2	8	008	15	2	2	2	2	6	3	1	82830	87072		3	1Ac68 COTRA Cu med jpNW Parheliion	
4	81	5	23	12	27	14.0	2.3	45	4.5	1020.6	6	012	01	2	2	2	8	6	8	2	81845			4	2Sc50 1Ac58 2Ci72 Cu hum Ac flo	
5	63	8	23	11	21	12.5	10.1	85	7.6	1021.6	1	004	02	6	2	8	5	4	/	/	87710	88615		5		
6	86	6	22	10	19	21.7	2.4	28	4.1	1024.7	8	017	02	2	2	0	0	9	0	1	81072	86078		6	COTRA Halo 22° part	
7	82	7	33	04	12	21.0	11.3	54	8.0	1027.6	8	010	03	1	1	4	8	6	0	1	83840	86080		7	1Sc45 Cu hum	
8	82	1	06	03	09	19.9	4.9	37	5.2	1025.6	7	018	02	0	0	0	0	9	0	1	81075			8	COTRA	
9	81	6	09	09	16	19.9	8.4	47	6.5	1023.8	7	019	03	1	1	0	0	9	0	1	86078			9	COTRA	
10	67	4	06	04	11	20.6	4.9	36	5.7	1023.2	7	010	02	1	1	0	0	9	0	1	84078			10	COTRA	
11	70	7	25	08	21	16.9	9.4	61	7.4	1021.2	7	005	03	1	1	6	8	6	7	/	83830	85656	87359	11	Cu med	
12	83	3	29	09	18	13.3	-3.1	32	3.0	1029.9	8	011	02	0	0	2	1	7	0	1	82856			12	2Ci78 Cu hum	
13	75	8	22	09	19	10.3	2.4	58	4.6	1020.8	6	016	21	6	2	6	8	6	7	/	81832	85650	88458	13	1Sc40 2Ac57 Cu fra	
14	63	8	21	04	10	13.1	5.8	61	5.6	1018.1	7	008	02	2	2	8	8	6	/	/	83830	88650		14	Cu hum	
15	70	7	19	04	12	15.4	4.4	48	5.1	1019.7	6	011	02	2	2	3	8	6	7	/	81845	83656	87358	15	Cu med	
16	80	7	02	05	09	15.4	6.0	54	5.6	1022.4	0	002	02	2	2	5	8	7	7	/	81838	85656	87357	16	Cu med	
17	65	6	06	05	13	19.1	4.9	39	5.4	1023.0	7	012	03	1	1	6	8	7	/	/	83850	84656		17	Cu hum/med	
18	68	5	06	06	17	18.1	3.8	39	5.2	1014.9	7	028	02	2	2	5	8	7	0	0	81850	85656		18	Cu hum Absent vv&cld est	
19	61	6	34	04	09	22.6	8.5	40	6.7	1011.8	7	005	02	1	1	1	2	7	0	1	81850	86077		19	COTRA Cu hum/med U/a cont	
20	68	3	20	06	15	24.8	4.3	26	5.4	1012.5	7	015	02	1	1	2	2	8	6	0	82857			20	1Ac60 Cu med	
21	68	4	06	03	10	22.9	6.8	35	5.7	1010.7	8	019	02	1	1	4	2	7	6	0	84856			21	1Ac60 Cu con	
22	75	1	19	05	12	24.8	3.8	26	5.3	1006.4	7	009	02	0	0	1	1	9	3	0	81858			22	1Ac65 Cu hum	
23	75	2	25	05	10	26.1	6.6	29	5.9	1010.7	8	005	15	0	0	1	2	8	6	0	81857			23	1Ac65 Cu con jpE	
24	58	7	01	06	12	21.7	12.0	54	8.7	1018.6	0	000	05	2	2	0	0	9	0	1	87078			24	COTRA Sky turbid	
25	72	1	36	07	16	21.0	6.6	39	5.8	1022.5	6	010	02	0	0	0	0	9	0	1	81075			25	COTRA	
26	60	7	01	07	15	13.7	7.7	67	6.3	1024.9	7	009	05	2	2	4	5	5	7	1	84625	83358	87075	26	1Ac63	
27	84	1	03	10	21	17.0	0.5	33	4.0	1024.3	7	012	02	0	0	1	1	7	4	0	81856			27	1Ac58 Cu hum	
28	67	1	03	12	23	17.6	6.7	49	6.1	1017.0	7	023	02	0	0	1	1	6	0	0	81840			28	Cu hum	
29	56	7	02	07	17	19.0	10.9	59	8.1	1010.5	8	022	05	2	2	2	2	6	0	7	82835	88275		29	COTRA Cu med Sky v turbid	
30	66	1	07	09	22	21.8	6.0	36	5.8	1007.3	7	012	02	0	0	1	1	7	4	0	81856			30	1Ac60 Cu hum	

Mean vis = 24.4 km

Mean cloud = 5.0 63%

Mean wind speed = 7.1 kn

Mean gust = 16 kn

Mean TT = 18.3 °C

Mean TdTd = 6.1 °C

Mean RH = 46.8 %

Mean r = 5.9 g/kg

Mean PPP = 1018.5 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

W1, W2 = Past weather code (Code FM12-4561)-

covers past 3 hours.

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs = Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation

trails present.

Wokingham		Hour	01-Apr	02-Apr	03-Apr	04-Apr	05-Apr	06-Apr	07-Apr	08-Apr	09-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	16-Apr
Sunshine		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hourly analysis		1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
2011		4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		5	0.00	0.00	0.00	0.10	0.00	0.10	0.02	0.35	0.39	0.10	0.00	0.44	0.00	0.00	0.00	0.00
		6	0.00	0.42	0.22	1.00	0.00	0.90	1.00	1.00	1.00	0.99	0.89	1.00	0.00	0.00	0.00	0.00
		7	0.00	0.20	0.91	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	0.00	0.00	0.00	0.00
		8	0.00	0.00	0.24	0.98	0.00	1.00	1.00	1.00	1.00	1.00	0.94	1.00	0.00	0.00	0.00	0.00
		9	0.00	0.00	0.35	0.37	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.00	0.00	0.59
		10	0.00	0.20	0.03	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.04	0.00	0.00	1.00
		11	0.01	0.12	0.22	0.07	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.71	0.21	0.00	0.00	0.99
		12	0.00	0.00	0.05	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.99	0.77	0.05	0.00	0.00	0.20
		13	0.01	0.35	0.23	0.33	0.00	1.00	0.89	1.00	1.00	1.00	0.32	0.71	0.00	0.00	0.00	0.00
		14	0.22	0.06	0.28	0.80	0.00	1.00	0.74	1.00	1.00	1.00	0.13	0.84	0.00	0.00	0.00	0.00
		15	0.84	0.01	0.51	0.36	0.00	1.00	0.31	1.00	1.00	1.00	0.00	0.83	0.00	0.00	0.00	0.00
		16	1.00	0.00	0.08	0.00	0.00	1.00	0.76	1.00	1.00	1.00	0.19	0.68	0.00	0.00	0.38	0.70
		17	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.86	0.68	0.00	0.00	0.21	0.75
		18	0.10	0.25	0.00	0.00	0.00	0.58	0.30	0.54	0.05	0.38	0.71	0.37	0.00	0.00	0.00	0.49
		19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot			3.15	1.60	3.11	5.01	0.00	12.58	11.03	12.89	12.44	12.47	9.03	10.88	0.29	0.00	0.60	4.72

Hour	17-Apr	18-Apr	19-Apr	20-Apr	21-Apr	22-Apr	23-Apr	24-Apr	25-Apr	26-Apr	27-Apr	28-Apr	29-Apr	30-Apr	Mean
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.41	0.20	0.38	0.62	0.71	0.00	0.42	0.07	0.00	0.00	0.00	0.60	0.16
6	0.20	0.01	0.99	0.96	0.96	1.00	1.00	0.00	1.00	0.01	0.18	0.20	0.00	1.00	0.53
7	1.00	0.03	1.00	0.86	0.11	1.00	1.00	0.00	1.00	0.16	0.26	0.46	0.00	1.00	0.57
8	1.00	0.56	1.00	0.94	0.57	1.00	1.00	0.22	1.00	0.73	0.47	0.00	0.00	1.00	0.59
9	1.00	1.00	1.00	0.69	0.95	1.00	1.00	0.97	1.00	0.20	1.00	0.50	0.11	1.00	0.66
10	1.00	0.79	1.00	1.00	0.86	1.00	1.00	1.00	1.00	0.35	1.00	0.64	0.08	1.00	0.66
11	0.95	0.22	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.01	1.00	0.68
12	0.90	0.26	1.00	1.00	0.66	1.00	0.96	1.00	1.00	0.76	1.00	1.00	0.00	1.00	0.62
13	0.57	0.20	1.00	0.85	0.13	1.00	1.00	1.00	1.00	0.35	1.00	0.94	0.00	1.00	0.56
14	0.37	0.33	1.00	0.89	0.25	1.00	1.00	1.00	1.00	0.10	1.00	0.99	0.13	1.00	0.57
15	0.49	0.21	0.99	0.83	0.51	0.99	0.89	1.00	1.00	0.89	1.00	0.99	0.30	1.00	0.60
16	0.38	0.89	0.65	0.81	0.01	1.00	0.92	1.00	1.00	0.69	1.00	0.84	0.72	1.00	0.62
17	0.09	1.00	0.25	0.93	0.06	1.00	0.00	1.00	1.00	0.06	1.00	0.99	1.00	1.00	0.60
18	0.00	0.59	0.00	0.00	0.09	0.86	0.00	0.49	0.88	0.00	1.00	0.60	0.09	0.83	0.31
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	7.96	6.08	11.29	10.96	6.52	13.46	11.48	9.69	13.30	5.24	11.00	9.14	2.44	13.43	231.82

April 2011	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	13.00	15.7	1520	11.1	655	81.7	91.3	151	66.8	1521	9.90	7.53	8.0	232	7.0	1455	1017.11	1019.1	654	1013.1	2351	0.0
2	13.26	17.8	1330	6.0	2358	72.7	89.5	146	49.2	1625	8.25	6.87	8.7	1016	4.9	2358	1010.27	1013.7	2317	1006.7	720	0.0
3	8.97	15.1	1359	3.1	350	79.5	95.3	649	54.5	1255	5.40	5.58	6.8	1103	4.4	350	1014.50	1018.2	2358	1012.9	1526	0.0
4	9.06	14.4	1501	3.8	503	74.3	95.7	546	41.1	1436	4.36	5.14	5.9	2338	4.0	1436	1020.95	1022.5	1947	1017.9	102	0.0
5	11.00	12.8	1544	8.9	247	86.2	90.2	2041	80.3	604	8.79	6.99	7.8	2225	5.8	21	1021.42	1024.8	2359	1018.9	603	1.2
6	15.58	22.1	1545	10.3	2259	58.0	90.4	129	18.8	1523	6.14	5.89	8.1	502	3.0	1523	1025.13	1026.6	823	1023.8	1624	0.0
7	13.74	21.3	1506	5.8	552	69.5	93.4	2138	44.5	1146	7.98	6.64	8.8	1309	4.8	543	1027.63	1029.6	2350	1025.1	314	0.0
8	13.07	20.8	1519	5.0	524	67.2	96.5	635	33.3	1439	6.24	5.84	6.9	1732	4.0	1125	1027.18	1029.5	0	1024.8	1739	0.0
9	11.93	20.6	1409	4.6	510	68.3	96.4	516	42.6	1450	5.67	5.65	8.3	1305	4.2	2208	1025.23	1027.2	858	1022.9	1742	0.0
10	11.46	21.5	1515	2.7	547	67.4	96.6	636	31.0	1538	4.70	5.27	7.9	1305	4.3	547	1023.86	1024.9	951	1022.3	1717	0.0
11	11.39	19.6	1237	4.2	313	68.0	91.6	322	37.1	1824	5.29	5.60	8.3	1143	3.6	1824	1022.98	1027.1	2359	1020.8	1311	0.0
12	9.05	14.5	1441	3.6	2325	56.7	87.8	2336	28.4	1603	0.12	3.79	4.6	915	2.7	1606	1029.81	1031.7	803	1027.0	38	0.0
13	7.52	13.2	1202	2.1	145	72.8	94.3	154	41.5	1231	2.57	4.53	6.6	904	3.6	1328	1022.96	1028.7	5	1018.9	2351	0.1
14	10.13	13.2	1453	6.3	0	74.0	90.5	10	57.9	1352	5.60	5.61	6.1	1457	5.2	1352	1018.61	1019.5	2354	1017.7	341	0.0
15	11.61	16.1	1401	7.7	537	64.4	86.6	330	42.1	1423	4.80	5.30	6.0	1321	4.4	925	1020.35	1021.7	2257	1019.3	245	0.0
16	11.81	17.7	1209	6.9	2340	69.2	93.2	2343	44.6	1543	6.07	5.77	7.1	1018	4.9	1543	1022.53	1024.3	2325	1021.3	221	0.0
17	12.86	20.8	1430	6.4	513	67.2	96.3	601	32.1	1433	6.10	5.80	7.6	1139	4.6	1447	1024.12	1025.8	851	1022.4	1640	0.0
18	10.99	19.0	1308	3.9	453	67.4	97.7	629	30.7	1150	4.15	5.11	7.4	917	3.8	1150	1017.72	1023.8	1	1012.6	2359	0.0
19	14.14	23.0	1547	5.0	423	65.4	92.0	551	34.0	1626	7.01	6.28	8.4	1226	4.6	103	1012.54	1015.4	2359	1011.2	313	0.0
20	14.99	25.6	1438	5.4	523	63.8	97.2	608	22.8	1435	6.54	6.05	9.2	1233	4.6	1803	1014.31	1015.8	624	1012.3	1559	0.0
21	15.41	25.0	1410	7.2	336	61.4	94.8	342	24.1	1303	6.94	6.22	9.9	1112	4.2	1303	1012.25	1014.7	21	1009.7	1810	0.0
22	15.54	25.3	1523	5.0	503	61.7	95.7	617	21.9	1359	6.47	6.07	8.7	954	4.3	1359	1008.21	1010.2	3	1006.1	1551	0.0
23	17.38	26.7	1520	6.8	519	60.3	97.2	534	24.7	1315	8.05	6.71	9.4	1031	5.2	1315	1011.77	1014.7	2114	1009.9	47	0.0
24	15.48	22.4	1414	9.7	2351	74.7	92.2	159	49.6	1416	10.68	7.94	9.7	1413	6.7	2350	1018.70	1022.8	2334	1014.4	0	0.0
25	14.02	21.4	1531	7.6	404	62.3	97.4	413	30.7	1124	5.68	5.66	7.0	13	3.6	944	1023.69	1025.9	2340	1022.3	1532	0.0
26	10.94	16.3	1252	5.3	503	74.3	95.1	517	54.2	1253	6.39	5.89	6.9	1342	5.1	503	1025.60	1026.7	729	1024.1	1607	0.0
27	11.26	17.8	1253	5.3	2357	57.5	88.4	610	28.7	1611	2.30	4.47	5.8	656	3.2	1622	1025.36	1026.7	825	1023.6	1725	0.0
28	10.67	18.3	1612	3.3	248	70.3	93.7	300	45.4	1450	5.12	5.45	6.8	1612	4.3	220	1019.41	1024.5	0	1015.8	1808	0.0
29	13.60	19.7	1545	9.3	352	72.9	86.5	2356	52.3	1757	8.65	6.98	8.7	1629	6.0	47	1012.21	1016.1	0	1008.8	1725	0.0
30	15.25	22.5	1341	9.2	343	62.7	91.6	345	34.4	1500	7.50	6.47	8.1	949	5.6	1500	1008.65	1010.1	55	1006.8	1633	0.0
Total																						1.3
Mean	12.50	19.33		6.06		68.4	93.17		39.98		6.11	5.90	7.65		4.55		1019.50	1022.07		1017.11		
Max	17.38	26.71		11.14		86.2	97.70		80.30		10.68	7.94	9.89		7.02		1029.81	1031.69		1027.05		
Min	7.52	12.78		2.05		56.7	86.50		18.81		0.12	3.79	4.62		2.72		1008.21	1010.06		1006.12		

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

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 1971 to 2000. 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 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 1971 to 2000 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/www1.html>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix 2.

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

VV : Visibility.

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

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

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

Code figure 89 = visibility above 70 km.

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

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

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

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

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

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

RH : Relative humidity at 1.2m, %.

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

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

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

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

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

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

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

4 = Steady, pressure the same as 3 hours ago

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

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

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

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hail includes large hail, small hail and snow pellets.

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

Code figures:

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

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

Cl : Type of low cloud

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

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

Cm : Type of medium cloud.

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

Ch : Type of high cloud

0 = No high cloud

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

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

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

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

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

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

7 = Veil of Cirrostratus covering the celestial dome.

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

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

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

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

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

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

00 to 50 = Height in hundreds of feet

51 to 55 Not used

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

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