

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 2010

Temperature (°C / °F)			Anomaly	Rank in the past 129 years			
Mean maximum	17.4	63.3	+0.4	57 th highest			
Mean minimum	5.6	42.1	-1.4	16 th lowest			
Daily mean	11.5	52.7	-0.5	47 th lowest			
Highest maximum	27.6	81.7	on 23 rd	Lowest maximum	9.8	49.6	on 2 nd
Highest minimum	12.3	54.1	on 30 th	Lowest minimum	-2.0	28.4	on 12 th
Mean grass minimum	2.3	36.1	-1.9	Lowest grass minimum	-6.0	21.2	on 12 th
Mean earth @30 cm	12.8	55.0	-0.3	Earth @100 cm	11.6	52.9	
Frost duration (hrs)	12.3			Rain duration (hrs)	17.9		
Rainfall total (mm / in)	20.0	0.79	40 %	16 th lowest			
Highest daily fall	5.7	0.22	on 1 st				
Number of: Dry days (<0.2mm)	24	Wet days (>0.9mm)	5	days ≥5mm	1		
Sunshine total (hrs) 192.8	Daily mean 6.22	109 %		Sunniest day 15.4	on 22 nd		
N° days with: Air frost 3	Ground frost 11	Snow falling 0	Snow lying 0				
Thunder 0	Hail ≥5mm 0	Small hail/ice 0	Fog @09 0	Nil sun 0			
Air pressure MSL : Mean @09 GMT (mbar/in)	1017.8	+1.9	30.06				
Absolute highest	1033.0		30.50	on 20 th			
Absolute lowest	1005.4		29.69	on 29 th			

Anomaly = departure from 1971 to 2000 average (degrees C, percent and mbar).

Notes: **Dry with Sunshine and Daytime Temperature Near Normal but Often Cold at Night.**

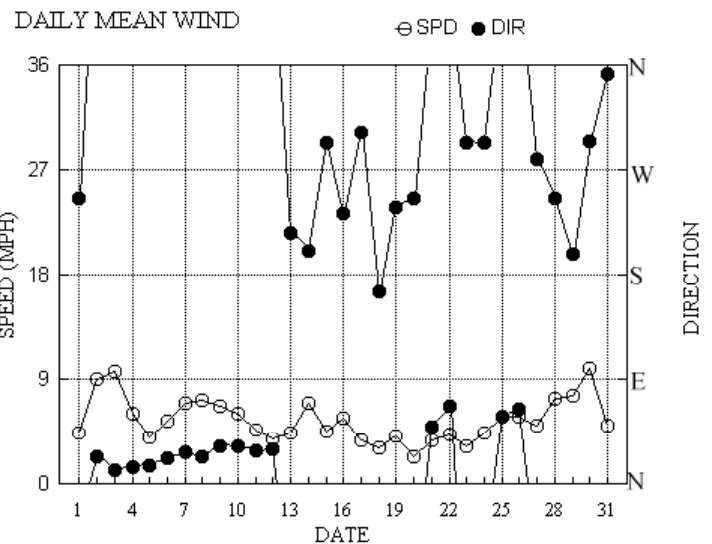
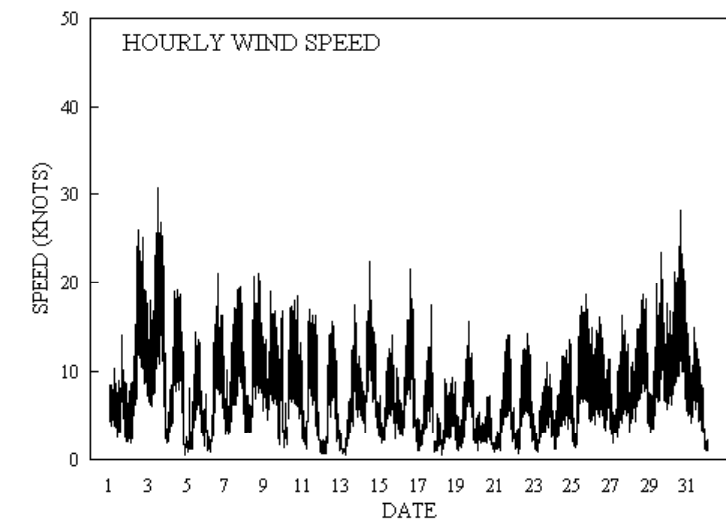
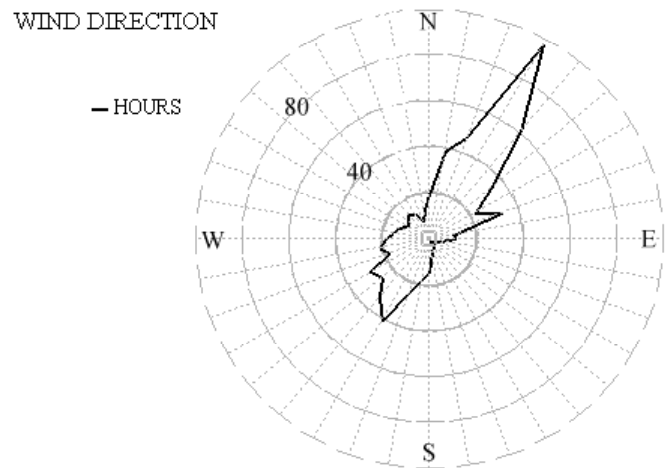
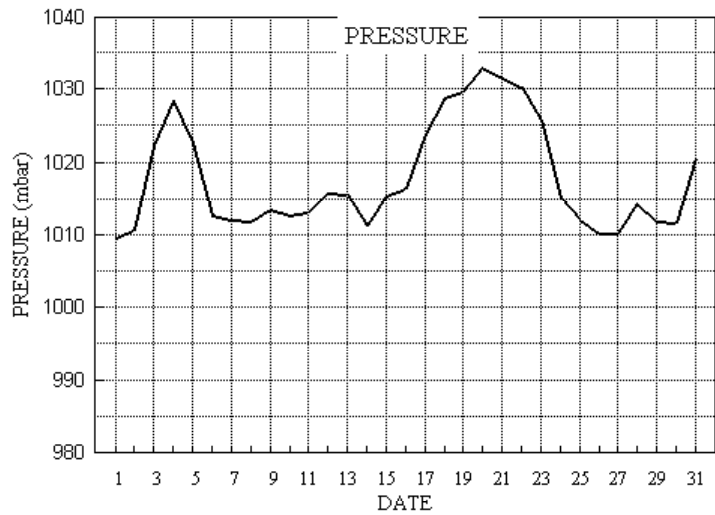
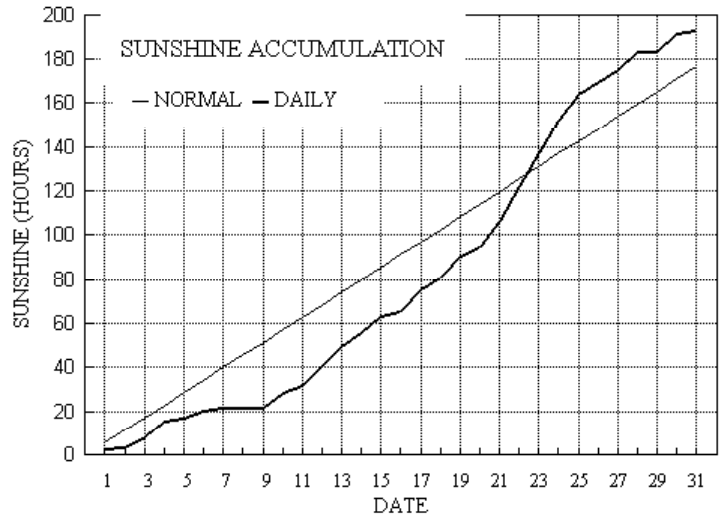
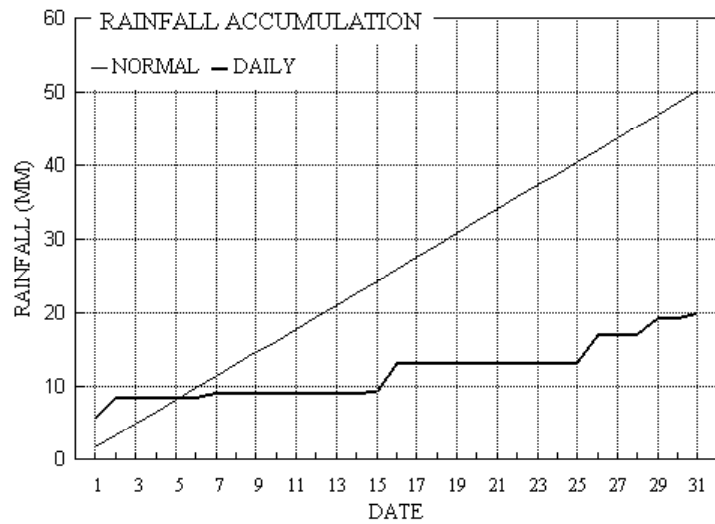
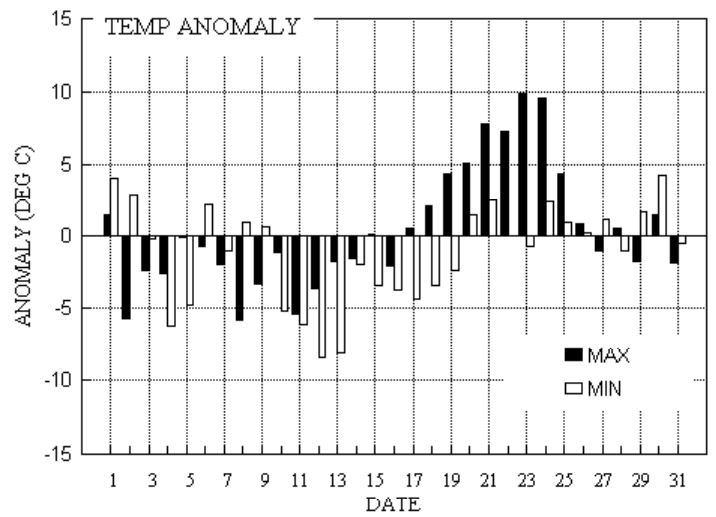
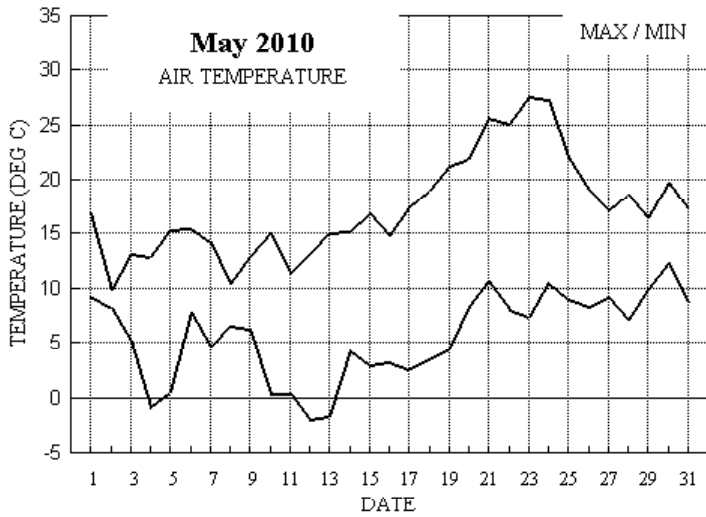
Temperature: It was generally cool during the first half of the month, but there was a welcome hot spell in the second. Overall this is the coldest May since 1996, and is also the first May since that year to have a mean temperature below the climatological average. The mean maximum is equal lowest with 2005 since 2002, while the mean min is lowest since 1996, and is 1.0° below the long-term median. The highest max is 2.2° above the median, while the lowest max is 1.2° below the median and is lowest since 1996. The highest min is close to the median while the lowest min is 2.5° below the median and is lowest since 1980, and 8th lowest in 107 years. The mean daily temperature range is highest since 1992. The mean grass min is lowest since 1996, and both the number of air and ground frosts is highest also since 1996. The duration of air frost is most since before 1980. Earth temperatures are a little below average. **Rainfall:** This has been a dry May with the least rainfall since 1998. There were 6 more dry days than average and most since 1991. Despite this, the duration of rain is only lowest since 2005. The month's highest fall is 8th lowest in 107 years. Thunder and hail were completely absent. The highest rainfall rate was 10 mm/hr on the 2nd. An 8 day dry spell ended on the 15th and another of 9 days on the 25th. **Sunshine:** Sunshine this May was a little above average overall, for the third year in a row. The month's sunniest day, the 22nd, had 97 % of the maximum, and the 5 day period 21st to the 25th was outstanding, giving a total of 70.0 hours, an average of 14.0 hours per day. Overall there were 9 days with <3 hours, 15 with =>6 hours, 7 with =>9 hours, 4 with =>12 hours and 3 with =>15 hours. **Wind:** The overall mean wind speed was 5.5 mph, 1.1 mph below average. The windiest day was the 30th, mean 9.9 mph, but the month's highest gust of 36 mph was on the 3rd. The 20th was the least windy day, mean 2.3 mph, and there were 1124 minutes, (18.7 hours) with a mean speed of 0.5 mph or less. Daily mean direction/number of days ; N,5 NE,11 E,0 SE,0 S,3 SW,6 W,1 NW,5. **Humidity:** The mean relative humidity was 69.7 % and the lowest value was 23 % on the 24th. The mean water vapour content per kg of air was 6.2 g at 0900 GMT and 5.5 g at 1500 GMT. **Pressure:** The month's highest pressure is highest since 1993, and the lowest value is highest since 1991. **Commentary: From the 1st to the 15th :** Temperatures were generally below normal, with anomalies for daily max down to -5.8° on the 8th, and for daily min -8.4° on the 12th. Rain fell on the 1st and 2nd only, giving a total of 8.5 mm. Sunshine was poor until the 9th, then near normal. Winds were generally NE'ly until the 13th, then SW'ly, fresh on the 2nd and 3rd, otherwise light or moderate. **From the 16th to the 25th :** Temperatures were near normal at first, then a hot spell from the 19th, with anomalies for daily max up to 9.8° on the 23rd. It remained cold by night at first, with an anomaly of -4.4° on the 17th, and even during the hottest days the nights were near normal. 4.0 mm of rain fell on the 16th, otherwise dry. Near normal sunshine at first, becoming very sunny after the 20th. Winds were generally light and variable. **From the 26th to the 31st :** Temperatures returned to normal by both day and night. There was some rain on the 26th, 29th and 31st, 6.7 mm in total. Sunshine was near or below normal. Winds were light or moderate, NE'ly on the 26th backing S'ly by the 29th then veering N'ly.

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

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 31 st			
-2.2°	-0.7°	55 %	51 %	-0.2°	-4.1°	25 %	116 %	+3.3°	+1.0°	37 %	156 %

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

Wokingham climatological graphs for May 2010



Month: MAY 2010

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	16.9	9.3	5.7	8.0	12.1	10.7	2.9	0.0	1009.5	0 0 0 0	0 0 0 0	0 0 0 0	246	2.7 3.8	206 14 1422	217 7 14	2.2	
2	9.8	8.2	2.8	7.9	12.5	10.8	0.3	0.0	1010.5	0 0 0 0	0 0 0 0	0 0 0 0	23	7.7 7.9	27 26 1122	22 13 11	3.1	
3	13.1	5.1	tr	3.9	11.8	11.0	5.3	0.0	1022.2	0 0 0 0	0 0 0 0	0 0 0 0	12	8.4 8.5	20 31 1137	22 14 15	0.1	
4	12.9	-0.9	0.0	-5.7	11.3	11.0	7.1	2.1	1028.3	1 1 0 0	0 0 0 0	0 0 0 0	14	5.0 5.3	32 19 1132	24 9 14	0.0	
5	15.4	0.5	0.0	-3.6	11.0	11.0	1.7	0.0	1022.7	0 1 0 0	0 0 0 0	0 0 0 0	16	2.5 3.5	22 15 1052	16 7 14	0.0	
6	15.5	7.8	0.0	7.2	11.6	10.9	3.0	0.0	1012.7	0 0 0 0	0 0 0 0	0 0 0 0	22	4.6 4.8	27 21 1308	27 9 13	0.0	
7	14.2	4.6	0.6	-1.6	11.7	10.9	1.2	0.0	1012.1	0 1 0 0	0 0 0 0	0 0 0 0	27	6.0 6.1	25 20 1701	28 10 16	1.7	
8	10.4	6.5	0.1	6.1	11.8	11.0	0.1	0.0	1011.8	0 0 0 0	0 0 0 0	0 0 0 0	23	6.3 6.3	26 21 1637	29 10 18	0.2	
9	12.9	6.2	tr	5.1	11.4	11.0	0.1	0.0	1013.5	0 0 0 0	0 0 0 0	0 0 0 0	33	5.8 5.8	27 19 0751	29 8 08	0.1	
10	15.1	0.4	0.0	-4.8	11.3	11.0	6.8	0.0	1012.7	0 1 0 0	0 0 0 0	0 0 0 0	33	5.2 5.3	39 19 1712	38 8 13	0.0	
11	11.4	0.3	0.0	-3.8	11.5	11.0	3.8	0.2	1013.0	0 1 0 0	0 0 0 0	0 0 0 0	29	3.8 4.0	358 17 0852	25 8 08	0.0	
12	13.2	-2.0	tr	-6.0	11.0	11.0	8.3	5.9	1015.7	1 1 0 0	0 0 0 0	0 0 0 0	30	3.0 3.4	29 16 1249	28 7 14	0.0	
13	15.0	-1.7	0.0	-5.5	11.1	11.0	8.9	4.1	1015.5	1 1 0 0	0 0 0 0	0 0 0 0	216	2.5 3.8	216 18 1645	239 8 17	0.0	
14	15.2	4.4	0.0	2.3	11.4	11.0	6.5	0.0	1011.2	0 0 0 0	0 0 0 0	0 0 0 0	200	5.8 6.0	198 23 1015	192 10 10	0.0	
15	16.9	3.0	0.1	-1.9	11.4	11.0	7.3	0.0	1015.3	0 1 0 0	0 0 0 0	0 0 0 0	293	2.9 3.9	327 14 1423	311 6 14	0.5	
16	14.8	3.2	4.0	-1.5	11.6	11.0	2.2	0.0	1016.5	0 1 0 0	0 0 0 0	0 0 0 0	233	4.7 4.9	239 22 1321	229 9 15	1.9	
17	17.4	2.5	0.0	-1.4	11.7	11.1	10.1	0.0	1023.8	0 1 0 0	0 0 0 0	0 0 0 0	302	2.0 3.2	337 18 1622	311 6 12	0.0	
18	19.0	3.5	0.0	-1.2	12.0	11.2	5.8	0.0	1028.8	0 1 0 0	0 0 0 0	0 0 0 0	165	1.8 2.7	147 10 1713	173 5 16	0.0	
19	21.2	4.5	0.0	0.2	12.2	11.2	9.6	0.0	1029.6	0 0 0 0	0 0 0 0	0 0 0 0	238	3.0 3.6	261 16 1400	254 7 13	0.0	
20	22.0	8.3	0.0	4.0	13.0	11.3	3.5	0.0	1032.9	0 0 0 0	0 0 0 0	0 0 0 0	246	1.4 2.0	4 7 1631	278 3 13	0.0	
21	25.6	10.6	0.0	6.5	13.4	11.5	11.9	0.0	1031.5	0 0 0 0	0 0 0 0	0 0 0 0	49	2.6 3.3	38 14 1541	28 6 17	0.0	
22	25.1	8.1	0.0	3.4	14.1	11.7	15.4	0.0	1030.3	0 0 0 0	0 0 0 0	0 0 0 0	67	3.4 3.7	82 14 1511	43 6 12	0.0	
23	27.6	7.4	0.0	2.6	14.6	12.0	15.2	0.0	1025.7	0 0 0 0	0 0 0 0	0 0 0 0	293	0.4 2.8	234 11 1509	222 5 19	0.0	
24	27.3	10.5	0.0	5.2	15.2	12.2	15.1	0.0	1015.1	0 0 0 0	0 0 0 0	0 0 0 0	293	1.3 3.8	67 14 2018	64 5 20	0.0	
25	22.1	9.0	0.0	3.9	15.6	12.5	12.4	0.0	1012.0	0 0 0 0	0 0 0 0	0 0 0 0	58	5.0 5.1	57 19 1517	59 7 13	0.0	
26	19.0	8.3	3.9	5.5	15.7	12.8	5.2	0.0	1010.1	0 0 0 0	0 0 0 0	0 0 0 0	65	2.7 5.0	69 16 0937	66 7 09	4.5	
27	17.2	9.2	0.0	9.1	15.6	13.1	5.8	0.0	1010.2	0 0 0 0	0 0 0 0	0 0 0 0	279	2.9 4.4	301 16 1332	278 7 17	0.0	
28	18.7	7.1	tr	0.7	15.2	13.2	8.2	0.0	1014.3	0 0 0 0	0 0 0 0	0 0 0 0	246	5.7 6.4	251 19 1518	214 9 18	0.0	
29	16.4	9.8	2.2	8.0	15.2	13.4	0.1	0.0	1011.8	0 0 0 0	0 0 0 0	0 0 0 0	197	5.9 6.7	225 24 1416	209 11 14	2.8	
30	19.7	12.3	0.0	11.1	14.9	13.4	7.7	0.0	1011.6	0 0 0 0	0 0 0 0	0 0 0 0	294	8.0 8.6	277 28 1441	283 12 14	0.0	
31	17.3	8.6	0.6	6.7	14.7	13.5	1.3	0.0	1020.6	0 0 0 0	0 0 0 0	0 0 0 0	352	3.7 4.4	351 15 0741	353 7 07	0.8	
Total			20.0				192.8	12.3										17.9
Mean	17.4	5.6		2.3	12.8	11.6	6.22	0.4	1017.8					358	1.5 4.8			
Anom	+0.4	-1.4	40%		-0.3	-0.2	109%		+1.9									
Daily mean		11.5																
Anom		-0.5																

Number of days with:

Air frost = 3 Ground frost = 11 Nil sun = 0
 Snow falling = 0 Snow lying = 0 Thunder = 0
 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. Sl = Snow lying at 09 GMT.
 Th = Thunder. Ha = Hail =>5mm. Ic = Hail <5mm or ice. Fg = Fog at 09 GMT.
 Vec mean = 24 hour mean wind vector, ddd = direction in degrees from true north, ff = speed in knots.
 Sp = 24 hour mean wind speed in knots.
 Max gust = Highest gust in 24 hours, gg = speed in knots, HHhh = Time, hours and minutes, GMT.
 High hr = Highest hourly mean wind, HH = hour commencing. Rain Hrs = Duration of rain, 24 hours to 09 GMT. Excludes snow/hail.
 30cm and 100 cm are earth temperatures at those depths, read at 09 GMT.
 Anom = Departure from 1971-2000 climatological average.
 All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for May 2010

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NChs	hshs	NChshs	Date	Remarks
1	84	7	34	04	08	11.5	7.6	77	6.5	1009.5	2	005	03	2	2	7	8	4	/	/	81818	84822	85635	1	Cu med	
2	30	8	02	07	15	8.2	7.5	95	6.4	1010.5	2	020	65	6	2	7	7	3	2	/	83707	87710	88520	2		
3	81	5	01	11	23	7.7	1.1	63	4.1	1022.2	1	015	01	8	2	4	2	5	3	0	84825			3	2Ac57 Cu med	
4	83	3	01	08	18	7.8	0.5	60	3.9	1028.3	1	003	03	0	0	3	2	5	0	0	83828			4	Cu med	
5	58	7	01	05	10	11.2	6.6	73	6.0	1022.7	8	006	05	2	2	7	8	4	/	/	81818	87656		5	Cu fra	
6	58	8	02	03	06	10.5	7.1	80	6.3	1012.7	6	004	05	2	2	8	8	5	/	/	83820	86635	88650	6	Cu med	
7	78	7	04	08	15	9.8	3.2	63	4.9	1012.1	4	000	03	2	2	3	8	5	7	/	82825	87360		7	2Sc45 Cu med	
8	75	8	03	05	11	8.1	6.3	88	5.9	1011.8	4	000	60	6	2	7	8	4	2	/	84812	87620	88530	8	Cu med	
9	70	8	03	09	17	7.7	5.1	83	5.4	1013.5	2	002	60	6	2	8	8	4	/	/	82710	85815	88620	9	Cu hum	
10	83	4	04	07	17	10.4	1.8	55	4.4	1012.7	0	002	03	1	1	2	1	6	0	1	82835	83078		10	Cu hum COTRA	
11	84	5	02	07	18	9.7	0.4	52	3.9	1013.0	8	005	03	1	1	3	2	6	3	1	83835	83078		11	1Ac57 COTRA Cu med	
12	84	5	04	06	14	8.3	1.7	63	4.4	1015.7	0	004	03	1	1	5	8	5	3	0	82828	84640		12	2Ac58 Cu med	
13	83	1	09	02	07	10.3	0.3	50	3.5	1015.5	8	004	03	0	0	1	2	6	0	1	81835			13	1Ci75 Cu med	
14	75	6	19	07	16	11.8	2.2	52	4.6	1011.2	7	001	03	1	1	3	2	6	3	1	83835	83361		14	2Ci72 Cu med	
15	68	2	27	04	10	12.8	5.7	62	5.7	1015.3	8	001	03	0	0	2	8	5	0	0	82825			15	1Sc50 Cu med	
16	59	8	24	06	13	10.7	7.8	82	6.7	1016.5	3	002	60	6	2	6	5	4	1	/	81712	86645	88457	16		
17	84	3	31	04	09	12.2	6.6	68	6.1	1023.8	1	010	03	1	1	1	8	5	3	0	81822	83358		17	1Sc56 Cu med	
18	65	2	25	02	07	15.5	7.3	58	6.4	1028.8	0	002	02	0	0	1	2	6	7	1	81830			18	1Ac59 2Ac66 1Ci78 Cu med	
19	63	2	23	03	07	16.1	9.5	65	7.0	1029.6	7	001	01	1	1	1	5	7	8	0	81656			19	1Ac58 1Ac66 Ac cas vir	
20	59	8	27	02	04	15.2	12.7	85	8.9	1032.9	1	005	05	2	2	8	5	6	/	/	88635			20		
21	61	3	04	04	07	20.9	14.3	66	9.9	1031.5	7	002	03	0	0	1	2	5	0	1	81825	83075		21	COTRA Cu med	
22	66	5	06	04	11	18.8	12.5	67	9.0	1030.3	8	002	03	1	1	1	1	5	0	1	81825	85080		22	COTRA Cu hum	
23	75	1	03	04	06	20.2	12.7	62	8.6	1025.7	8	008	02	0	0	0	0	9	0	1	81080			23	COTRA	
24	86	1	26	04	09	22.4	8.3	40	6.9	1015.1	7	015	02	0	0	0	0	9	0	1	81081			24	COTRA	
25	60	5	06	06	16	17.5	11.1	66	8.4	1012.0	8	004	05	1	1	1	1	5	0	1	81822	85080		25	Cu fra COTRA	
26	75	7	07	05	13	12.7	6.5	66	6.0	1010.1	1	005	02	2	2	7	5	6	/	/	82645	87656		26		
27	62	6	34	06	10	11.0	7.5	79	6.5	1010.2	1	006	01	2	2	3	2	4	7	1	83813	84362		27	/Ci75 COTRA Cu med	
28	85	3	29	07	15	14.1	3.8	50	5.1	1014.3	1	009	03	0	0	3	2	6	0	0	83838			28	Cu med	
29	65	8	19	07	15	13.9	8.5	70	6.9	1011.8	6	019	60	6	2	1	8	5	7	/	81820	86358	88462	29	1Sc56 Cu fra	
30	84	6	30	07	21	14.6	7.3	62	6.4	1011.6	1	014	03	1	1	3	8	5	0	9	82825	85172		30	2Sc50 Cu med	
31	75	8	36	06	13	12.7	7.8	72	6.5	1020.6	2	013	02	1	1	8	5	5	/	/	87620	88625		31		

Mean vis = 27.6 km

Mean cloud = 5.2 65%

Mean wind speed = 5.5 kn

Mean gust = 12 kn

Mean TT = 12.7 °C

Mean TdTd = 6.5 °C

Mean RH = 66.9 %

Mean r = 6.2 g/kg

Mean PPP = 1017.8 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

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 2010

Date	VV	N	dd	ff	gg	TT	Td	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	shs	NChs	hshs	NChs	hshs	Date	Remarks
1	84	7	22	09	15	14.0	6.8	62	6.2	1008.9	7	003	15	2	2	4	8	6	7	/	82830	83645	87358	1	Cu med	jpW	
2	82	8	03	13	22	8.7	3.9	71	5.0	1013.3	2	009	02	6	2	8	8	5	/	/	83825	88640		2			
3	80	2	02	13	26	11.7	-1.7	39	3.4	1023.4	2	005	15	8	1	2	2	6	6	0	82845			3	1Ac58	Cu med jpNW vv50k exNW	
4	83	6	03	07	18	11.7	0.4	46	3.8	1025.9	7	012	02	2	2	6	4	6	0	0	81845	86648		4	Cu hum		
5	75	7	34	08	13	14.5	4.4	51	5.2	1018.5	6	022	02	2	2	7	8	6	/	/	82842	87656		5	2Sc50	Cu hum	
6	82	7	01	06	17	12.9	3.4	52	4.7	1011.3	7	008	02	2	2	6	8	6	0	1	82840	85648		6	3Ci75	Cu hum	
7	83	7	04	07	17	12.8	0.7	43	3.9	1010.9	7	005	02	2	2	7	8	7	/	/	82850	87656		7	Cu hum		
8	82	8	03	09	16	9.3	5.4	76	5.5	1012.5	1	002	60	6	2	7	8	4	2	/	84815	87620	88530	8	Cu hum		
9	84	8	04	05	14	11.0	3.8	61	4.9	1011.6	7	010	02	2	2	8	8	6	/	/	82832	87640	88650	9			
10	82	7	04	07	15	12.1	1.5	48	4.2	1012.2	4	000	02	2	2	7	8	6	/	/	81845	87656		10	2Sc50	Cu hum	
11	86	7	02	05	15	8.9	-1.0	50	3.5	1012.3	8	001	02	2	2	3	8	6	6	1	82840	86357		11	2Sc50	/Ci75 Cu med	
12	82	7	03	06	15	11.4	1.1	49	4.4	1015.3	1	001	15	2	2	1	8	6	6	/	81840	87359		12	1Sc50	Cu med jp all quads	
13	80	7	23	05	10	12.3	-1.4	39	3.3	1013.6	6	010	15	1	1	3	8	7	6	/	82850	87358		13	2Sc56	Cu med jpNW&SW	
14	80	7	22	08	15	13.2	0.7	42	4.0	1011.5	1	006	15	2	2	6	8	6	7	/	82848	85656	87358	14	Cu med	jpN	
15	82	6	32	07	14	16.1	2.3	39	4.5	1015.6	6	003	02	2	2	3	8	7	6	1	82850	83358		15	2Sc57	2Ci78 Cu med	
16	58	7	23	09	18	14.0	10.3	79	7.6	1016.4	7	004	60	6	2	7	8	4	7	/	81715	83820	86635	16	7Ac58	Cu med	
17	82	3	35	05	12	16.1	3.0	41	4.5	1024.6	1	005	02	1	1	3	8	7	0	0	81850	83656		17	Cu med		
18	82	7	03	02	05	16.9	6.0	49	5.7	1028.3	0	000	02	2	2	3	8	6	7	/	82848	87359		18	2Sc56	Cu med	
19	72	7	23	06	15	19.5	8.5	49	6.8	1029.1	8	001	03	1	1	7	8	6	/	/	82845	86650		19	/Sc56	Cu hum	
20	84	7	29	02	07	19.9	11.4	58	8.3	1032.0	7	007	02	2	2	7	8	6	/	/	81832	87650		20	2Sc40	Cu hum	
21	82	7	06	05	13	25.1	12.1	44	9.0	1029.9	7	010	02	2	2	2	8	7	0	1	82850	87078		21	1SC56	COTRA Cu med	
22	84	5	07	05	13	24.5	8.9	37	7.0	1027.5	7	015	02	1	1	0	0	9	0	1	85080			22	COTRA		
23	83	1	23	04	09	26.8	9.3	33	7.0	1021.3	7	028	02	0	0	1	1	7	0	1	81856			23	1Ci80	Absent vv&cld est	
24	84	1	33	06	12	27.2	7.0	28	5.9	1011.8	7	018	02	0	0	1	1	7	0	0	81856			24	Cu hum		
25	62	4	06	08	18	21.1	9.6	48	7.4	1010.7	7	005	02	1	1	1	8	6	0	1	81845	83080		25	1Sc50	1Ci75 COTRA Cu hum	
26	70	7	06	05	13	17.6	7.0	50	6.1	1008.9	8	007	03	2	2	2	8	6	3	1	82842	86075		26	1Sc56	2Ac65 Cu med	
27	84	4	33	03	14	16.7	1.0	35	4.0	1009.5	7	003	02	1	1	3	8	7	0	1	82850			27	2Sc56	1Ci80 COTRA Cu med	
28	85	5	26	09	18	18.7	2.9	35	4.5	1015.0	0	000	02	1	1	2	4	7	0	1	82856	84078		28	1Sc56	COTRA Cu hum	
29	68	7	21	09	24	15.3	12.0	81	8.7	1007.0	6	020	02	6	5	7	8	4	/	/	81714	83818	86635	29	7Sc50		
30	84	4	29	11	29	18.8	3.0	35	4.8	1011.9	1	002	02	1	1	2	2	7	3	1	82856	83075		30	1Ac68	1Cc72 COTRA Cu med	
31	78	8	36	04	10	15.2	8.8	66	6.8	1021.5	3	003	02	2	2	8	8	5	/	/	82826	88640		31	Cu med		

Mean vis = 38.2 km

Mean cloud = 6.0 75%

Mean wind speed = 6.7 kn

Mean gust = 15 kn

Mean TT = 15.9 °C

Mean Td = 4.9 °C

Mean RH = 49.5 %

Mean r = 5.5 g/kg

Mean PPP = 1016.8 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

Td = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

covers past 3 hours.

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs = Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation

trails present.

May 2010	T mn	Tx	Time	Tn	Time	RHmn	RH x	Time	RH n	Time	Tdmn	r mn	r x	Time	r n	Time	p mn	p x	Time	p n	Time	R tot
1	11.48	16.6	1217	8.5	2134	79.1	95.9	2355	43.4	1232	7.65	6.54	7.5	836	4.9	1232	1009.01	1009.8	936	1008.4	407	2.5
2	8.01	9.8	1640	5.7	2310	82.5	97.2	355	51.7	1714	5.02	5.53	6.9	359	3.6	1714	1012.27	1018.3	2355	1007.4	414	5.3
3	7.17	13.1	1426	0.7	2349	64.7	91.8	2357	32.2	1552	0.50	3.91	5.1	1134	2.6	1600	1022.92	1028.4	2358	1018.1	13	0.1
4	6.44	12.8	1643	-0.4	200	69.9	96.0	205	42.2	1246	0.83	3.97	5.0	1348	3.4	137	1027.08	1028.5	745	1025.4	1805	0.0
5	9.69	15.2	1129	0.8	223	71.9	96.7	255	42.2	1433	4.40	5.20	6.4	2153	3.8	223	1020.35	1025.5	2	1015.3	2355	0.0
6	10.26	15.3	1318	4.9	2257	70.3	89.5	450	43.2	1712	4.78	5.37	6.7	1118	4.0	1822	1012.64	1015.4	0	1011.0	1519	0.0
7	8.67	14.2	1418	5.5	4	66.5	82.3	9	38.1	1347	2.49	4.54	5.4	1225	3.6	1437	1012.00	1013.1	4	1010.8	1453	0.0
8	7.86	10.2	1048	6.5	154	81.7	93.8	759	73.0	1829	4.90	5.38	6.3	834	4.8	2232	1012.65	1014.5	2217	1011.4	359	0.7
9	8.54	12.6	1344	4.9	2352	75.2	88.8	2353	55.1	1514	4.28	5.15	6.2	1027	4.4	1630	1012.59	1014.1	21	1011.1	1731	0.1
10	8.03	15.1	1345	0.7	245	68.5	97.2	251	39.3	1318	2.09	4.42	5.6	1209	3.8	1534	1012.54	1014.3	906	1011.7	1353	0.0
11	5.94	11.1	1343	0.1	2351	68.7	94.4	2358	42.8	1538	0.18	3.84	5.0	911	3.1	1134	1013.13	1014.0	23	1012.0	1524	0.0
12	5.85	13.1	1404	-1.8	351	69.7	97.5	539	37.0	1547	0.09	3.82	5.3	1354	3.1	1545	1015.27	1016.3	2241	1013.8	30	0.0
13	7.42	14.9	1303	-1.3	406	64.8	96.9	517	30.1	1226	0.34	3.91	5.0	751	2.7	1059	1014.49	1016.3	20	1012.6	1908	0.0
14	9.84	15.1	1132	4.4	330	61.7	88.6	432	34.0	1133	2.12	4.44	5.8	804	3.4	1741	1012.05	1014.9	2359	1010.6	1048	0.0
15	11.23	17.1	1443	3.0	448	63.6	94.8	511	33.2	1431	3.99	5.04	6.6	854	3.8	1431	1015.57	1016.4	2331	1014.7	16	0.0
16	9.84	14.9	1338	3.1	438	83.3	97.9	2351	66.6	3	7.09	6.34	8.9	1423	4.2	435	1016.99	1020.1	2356	1016.1	659	3.9
17	10.60	17.5	1531	2.7	430	71.9	98.7	541	32.3	1559	4.82	5.31	7.1	951	3.8	1612	1024.17	1028.1	2358	1020.0	1	0.0
18	11.80	18.8	1338	3.6	228	68.7	97.5	509	32.8	1110	5.45	5.51	7.2	818	4.2	1110	1028.48	1029.2	715	1027.8	1620	0.0
19	13.61	21.3	1423	4.6	231	72.6	96.7	424	41.7	1315	8.17	6.67	8.0	1122	4.9	231	1029.64	1031.4	2339	1028.8	1548	0.0
20	15.20	21.8	1636	8.3	214	79.8	97.0	312	50.1	1647	11.36	8.21	9.9	1347	6.4	214	1031.88	1033.0	924	1030.6	1808	0.0
21	18.29	25.4	1457	10.6	36	70.6	97.2	411	39.6	1721	12.09	8.60	11.2	1134	7.2	1721	1030.76	1031.9	9	1029.1	1750	0.0
22	17.01	25.1	1533	8.3	435	67.3	97.9	526	32.7	1648	9.87	7.46	9.9	912	6.1	1648	1028.86	1030.7	124	1026.5	1828	0.0
23	18.52	27.4	1438	7.7	419	63.9	97.8	522	29.7	1518	10.26	7.70	10.2	1138	6.2	420	1023.37	1027.5	12	1018.6	2359	0.0
24	19.62	27.5	1440	10.6	407	54.5	91.4	248	22.9	1437	8.69	7.00	9.4	1938	5.0	1317	1014.15	1018.8	3	1010.7	1746	0.0
25	15.26	21.7	1344	9.3	357	67.1	96.7	427	42.0	1602	8.63	7.05	9.9	1209	4.7	2207	1011.66	1013.2	2	1010.2	1531	0.0
26	13.09	18.7	1247	8.3	408	63.0	91.1	2358	40.6	1448	5.85	5.78	7.6	1246	4.8	32	1009.54	1011.4	0	1007.9	1706	2.3
27	12.33	17.5	1529	8.2	2353	64.9	93.9	641	29.2	1426	5.00	5.52	7.4	909	3.5	1427	1010.09	1012.1	2359	1009.2	1720	1.3
28	13.18	18.9	1553	7.0	439	62.4	88.6	445	31.1	1609	5.41	5.60	6.9	2306	4.0	1558	1014.50	1016.7	2205	1011.8	25	0.1
29	12.96	16.5	1528	9.8	139	83.0	94.4	1333	65.6	750	10.10	7.75	9.6	1336	6.1	532	1009.97	1016.2	8	1005.4	1757	2.2
30	14.65	19.9	1415	10.0	2357	58.0	88.8	119	30.5	1411	5.75	5.86	8.4	200	3.9	1904	1011.88	1017.1	2357	1006.5	13	0.0
31	12.60	17.4	1714	8.5	238	72.5	93.7	2303	57.0	1714	7.70	6.51	8.3	1058	4.8	0	1019.96	1021.6	1453	1016.9	12	0.0
Total																						18.5
Mean	11.45	17.30		5.25		69.7	94.22		41.35		5.48	5.74	7.37		4.34		1017.43	1019.96		1015.17		
Max	19.62	27.50		10.62		83.3	98.70		73.00		12.09	8.60	11.19		7.22		1031.88	1033.03		1030.65		
Min	5.85	9.84		-1.78		54.5	82.30		22.91		0.09	3.82	4.96		2.58		1009.01	1009.79		1005.40		

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 2010

Temperature (°C)				Rank in the past 129 years					
Mean maximum	14.8	(+1.2)		21 st highest					
Mean minimum	3.8	(-0.9)		44 th lowest					
Daily mean	9.3	(+0.2)		42 nd highest					
Rainfall total (mm)	84.0	(57 %)		14 th lowest					
Sunshine total (hours)	533.7	(126 %)							
N ^o of:	Dry days	65 (+14)	Wet days	23 (-5)					
Days with: Air frost	15 (+4)	Ground frost	49 (+11)	Snow falling	0 (-4)	Snow lying	0 (0)		
Thunder	1 (-4)	Hail ≥5mm	0	Small hail/ice	4	Fog @09 GMT	0 (-2)	Nil sun	3
Air pressure MSL : Mean @09 GMT (mbar)	1018.4						(+2.8)		

Departure from 1971 to 2000 average shown in brackets.

Notes: **Dry and Sunny with Mean Temperature Near Normal.**

Temperature: Although the mean maximum is well above the climatological average it is lowest since 2006. The mean min is well below the average, and is lowest since 1996. The resulting mean temperature is close to average, but the mean daily temperature range of 11.0° is 1.8° above average and highest since 1990. The season's highest max, 27.6° on the 23rd May, is 2.2° above the long-term median. The lowest max, 6.3° on the 7th March, is 1.8° above the median. The highest min was 12.3° on the 30th May, 0.2° below the median, while the lowest min, -6.3° on the 7th March, is 2.0° below the median. The mean grass min of 0.3° is 1.3° below average and lowest since 1996. The lowest grass min was -11.1° on the 7th March. Earth temperatures are about half a degree below average. Air frost duration was 75.0 hours, 20.6 hours above average. The number of days with air frost is most since 1996, and with ground frost is most since 1984. **Rainfall:** This is the driest spring since 1997, with a 43 % shortfall compared with average. The number of dry days is 14 more than average, but as recently as 2003 there were even 2 more than this. The duration of measurable rain is 74.5 hours, 49.1 hours below normal. March was the wettest month with 38.8 mm, but this was only 83 % of average. May was the driest with 20.0 mm, 40 % of average. The season's wettest day was the 2nd April with 10.5 mm. There were several dry spells, the first of 11 days ended on the 11th March, then one of 5 days to the 17th March, then 15 days to the 18th April, then 8 days to the 15th May and finally 9 days to the 25th May. The highest rainfall rate was 64 mm/hr on the 25th March, and this occurred during the only thunderstorm of the season. Small hail or snow/ice pellets occurred on the 12th, 25th and 31st March and the 1st April. **Sunshine:** Sunshine was above average, but 3 other springs since 1999 have had more. April was the sunniest month, mean 7.22 hours per day, and March the least sunny, mean 4.01 hours. Two periods were particularly sunny, the 21st to 24th April, mean 12.7 hours per day, and the 21st to 25th May, mean 14.0 hours per day. There were only 3 sunless days, the fewest since 1990. Overall there were 32 days with <3 hours, 42 with =>6 hours, 24 with =>9 hours, 8 with =>12 hours and 3 with =>15 hours. **Wind:** The overall mean wind speed was 6.3 mph, 0.8 mph below average and lowest since 2004. The 31st March was the windiest day, mean 12.7 mph, but the season's highest gust of 43 mph was on the 25th March. The least windy day was the 20th May, mean 2.3 mph, and there were 2735 minutes (45.6 hours) with a mean speed of 0.5 mph or less. Daily mean direction/number of days : N,7 NE,28 E,1 SE,1 S,15 SW,21 W,7 NW,12. Winds were more frequent than average from the NE, S and NW, but principally from the NE with a frequency of 30.4 %, 11.5 % above normal and highest in the past 23 years. Winds from all other directions were less frequent, especially E and SE combined, 8.2 % lower, and SW and W combined, 6.3 % lower. **Humidity:** The overall mean relative humidity was 71.4 %. The season's lowest value of 23 % occurred on the 24th May. The mean water vapour content per kg of air was 5.4 g at 0900 GMT and 5.0 g at 1500 GMT, this last the lowest since before 1998. **Pressure:** The season's highest pressure was 1034.8 mbar on the 7th March, and the lowest was 981.6 mbar on the 31st March.

March: A near normal month. The mean min was lowest since 1996.

April: Dry. Mild by day and very sunny. Mean daily temperature range second highest since 1946. The mean max ranks 10th highest in 129 years, but the mean min was lowest since 1990. Most ground frosts since 1990. Second sunniest since 1990. The windiest day and max gust are both lowest in 23 years.

May: Dry with sunshine and daytime temperature near normal, but often cold by night. Coldest May since 1996. Lowest max is lowest since 1996. Lowest min is lowest since 1980 and 8th lowest in 107 years. Mean daily temperature range is highest since 1992. Duration of air frost is most since before 1980. Driest since 1998 and most dry days since 1991. The month's highest daily rainfall is 8th lowest in 107 years.

Month	Mean Max	Anom	Mean Min	Anom	Rain mm	Anom %	Sun hrs	Anom %	Wind Mn mph	Max gust	Mean pressure	Anom
March	11.3°	+0.7°	2.3°	-0.6°	38.8	83 %	124.3	118 %	7.1	43	1017.3	+1.7
April	15.7°	+2.6°	3.4°	-0.7°	25.2	52 %	216.6	139 %	6.2	32	1020.2	+4.9
May	17.4°	+0.4°	5.6°	-1.4°	20.0	40 %	192.8	109 %	5.5	36	1017.8	+1.9

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

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/wwwp1.html>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix 2.

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

VV : Visibility.

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

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

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

Code figure 89 = visibility above 70 km.

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

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

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

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

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

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

RH : Relative humidity at 1.2m, %.

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

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

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

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

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

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

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

4 = Steady, pressure the same as 3 hours ago

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

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

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

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hail includes large hail, small hail and snow pellets.

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

Code figures:

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

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

Cl : Type of low cloud

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

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

Cm : Type of medium cloud.

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

Ch : Type of high cloud

0 = No high cloud

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

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

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

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

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

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

7 = Veil of Cirrostratus covering the celestial dome.

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

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

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

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

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

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

00 to 50 = Height in hundreds of feet

51 to 55 Not used

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

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