

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

SEPTEMBER 2015

Temperature (°C / °F)				Anomaly	Rank in the past 134 years			
Mean maximum	18.2	64.8	-1.2	45 th lowest				
Mean minimum	7.8	46.0	-2.2	15 th lowest				
Daily mean	13.0	55.4	-1.7	23 rd lowest				
Highest maximum	21.9	71.4	on 10 th	Lowest maximum	14.4	57.9	on 22 nd	
Highest minimum	14.2	57.6	on 12 th	Lowest minimum	2.9	37.2	on 27 th	
Mean grass minimum	3.9	39.0	-2.8	Lowest grass minimum	-1.5	29.3	on 6 th	
Mean earth @30 cm	15.8	60.4	-0.6	Earth @100 cm	16.1	61.0		
Frost duration (hrs)	0.0			Rain duration (hrs)	24.6			
Rainfall total (mm / in)	46.3	1.82	86 %	66 th lowest				
Highest daily fall	17.6	0.69	on 16 th					
Number of: Dry days (<0.2mm)	21	Wet days (>0.9mm)	7	days ≥5mm	3			
Sunshine total (hrs)	157.3	Daily mean	5.24	110 %	Sunniest day	11.9	on 10 th	
N ^o days with: Air frost	0	Ground frost	3	Snow falling	0	Snow lying	0	
Thunder	0	Hail ≥5mm	0	Small hail/ice	0	Fog @09	0	Nil sun 0
Pressure MSL : Mean @09 GMT, mbar	1017.4	+0.7	Highest	1037.5	on 28 th	Lowest	984.8	on 16 th
Relative humidity : Mean (%)	80.2	Lowest	35	on 30 th	Water vapour (g/kg), mean at 09 and 15 GMT	7.9,	7.0	
Overall mean wind speed (mph)	5.1	Windiest day	8.8	on 24 th	Max gust	32	on 14 th	
Wind direction (days)	N 2	NE 9	E 2	SE 0	S 1	SW 7	W 5	NW 4
Least windy day (mph)	2.2	on 26 th	Calm; less than 0.5 mph (minutes)	1233				

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

Notes:

Cool with Rainfall Below Average and Sunshine Above Average

Temperature: This has been a cool September, with twice as many days with a maximum below normal as above. Anomalies for daily maximum were negative every day until to 10th, with individual days >4° below normal on the 3rd, 4th and 5th. From the 10th onwards, most days were near normal, excepted the 19th, 21st and 22nd, all over 4° below normal. Only 7 days has a minimum above normal, the highest anomaly being +4° on the 12th, but cold nights produced anomalies exceeding -6° on the 6th, 7th, 26th and 27th. The mean maximum is lowest since 2001, but the mean minimum is lowest since 1986, and before that 1972. The resulting daily mean is lowest since 1993. The highest maximum is 2.6° below the median, but is lowest only since 2008. The lowest maximum is 0.5° above the median while the highest minimum is 1.0° below the median and is equal lowest with 2013 since 1992. The lowest min is close to its median. The mean grass min is lowest since 1986, but the lowest grass min is only equal lowest with 2014 since 2012. There were 3 ground frosts, compared with an average of 1.7. Earth temperatures at 30cm and 1 m depth are well below average, and at 30 cm the mean is equal lowest with 1996 since 1994, and at 1 m depth is equal lowest with 2009 since before 1989. **Rainfall:** The total this month is a little below average, but is highest since 2012. Interestingly, all Septembers back to 2008 have had below average rain, and for this millennium only 4 Septembers have had above average rainfall. The month was dry until the 10th, with a 10 day dry spell ending on that date, and most of the month's rain fell between the 13th and 16th, and the 21st to 23rd, the former period producing 33.6 mm, with both the 13th and 16th having over 10 mm. A second dry spell commenced on the 24th, and was unbroken at the end of the month. The highest daily fall of 17.6 mm is the 4th highest since 2003 but is 0.7 mm below average. The number of dry days is 2 more than average. The duration of measurable rain is 71% of average. There was no thunder or hail this September, and the highest rain rate was 41 mm/hr on the 15th. **Sunshine:** The sunshine this September has been quite reasonable, although the month started dull with low daily amounts up to the 5th. Sunny days on the 6th, 7th, 10th and 11th brought the accumulation to just over normal, but there then followed a prolonged dullish period up to the 24th with only one good sunny day, the 19th, which had 70% of the maximum, otherwise there were 7 days with <10%. It became sunny on the 25th, and each of the final 6 days of the month had over 70%, the 28th and 30th having over 90% of the maximum, resulting in a surplus by the 28th. Overall there were 14 days with <3 hours, 11 with =>6 hours and 6 with =>9 hours. **Wind:** The mean wind speed this month is 0.7 mph below average, and the month's highest gust is 5 mph below average. Winds were light until the 9th, and NW'ly becoming NE'ly on the 7th, then moderate, veering SW'ly on the 14th, increasing moderate or fresh, veering N on the 16th, then mainly light W'ly from the 17th temporarily increasing fresh on the 24th, then light or moderate NE'ly until the end of the month. **Humidity:** The mean water vapour content at 1500 GMT is equal lowest with 2012 in the past 19 Septembers.

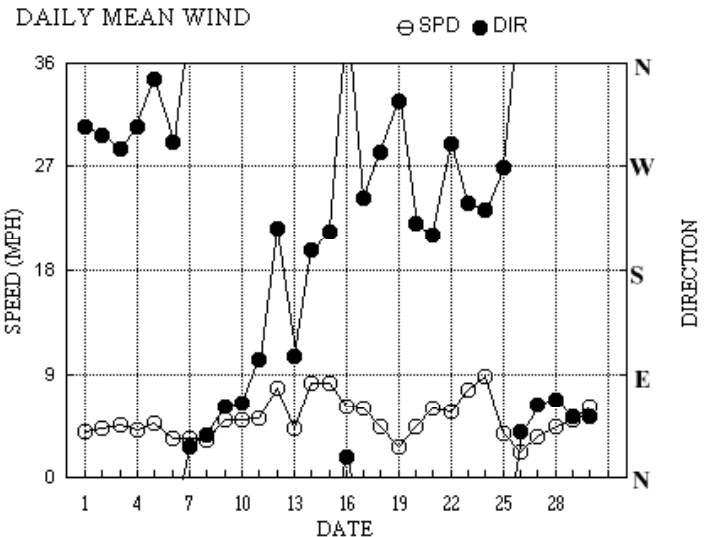
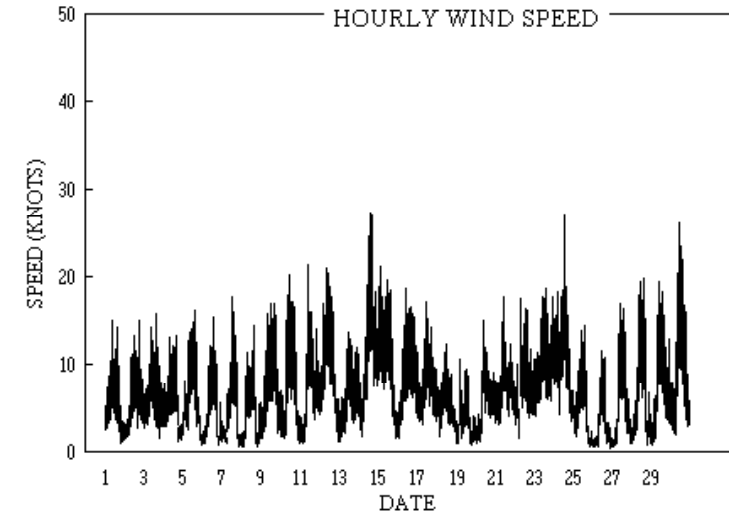
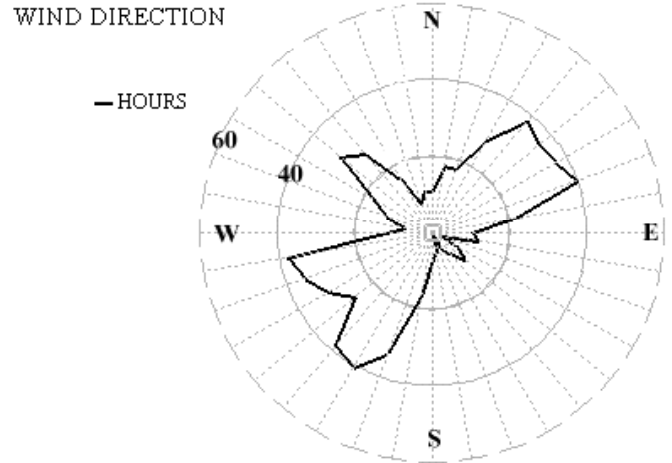
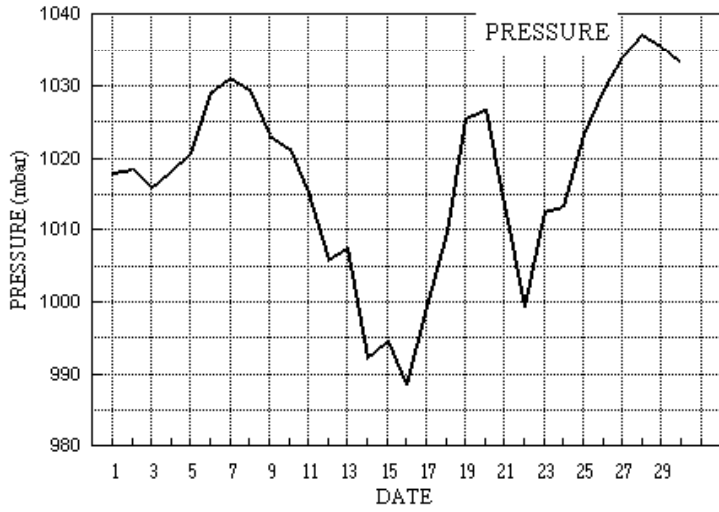
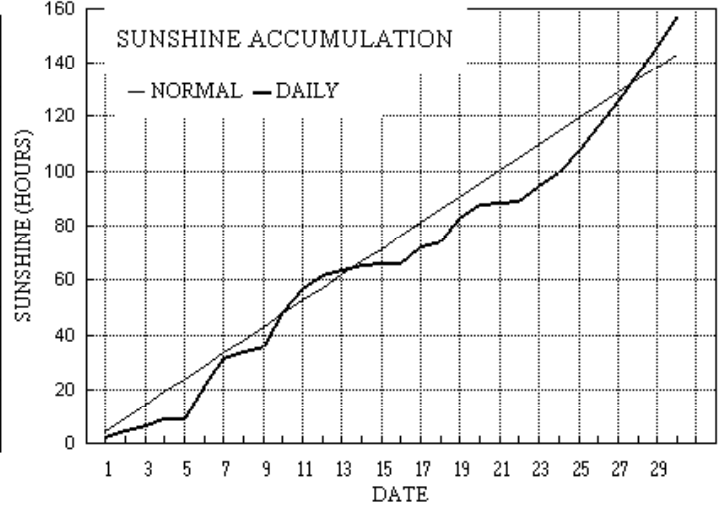
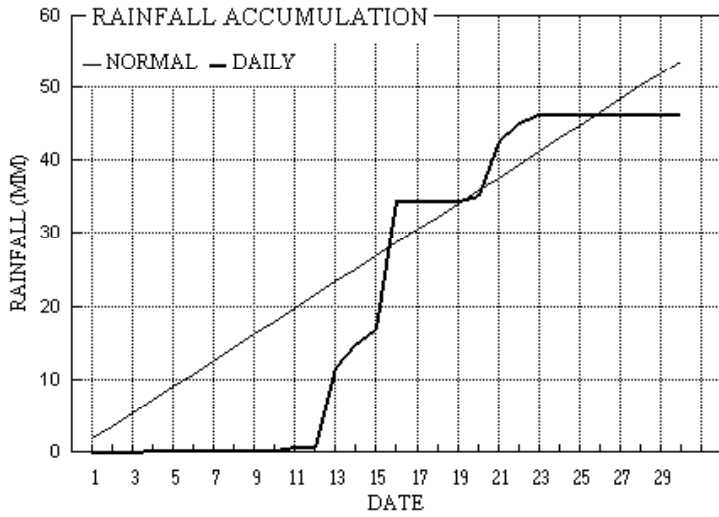
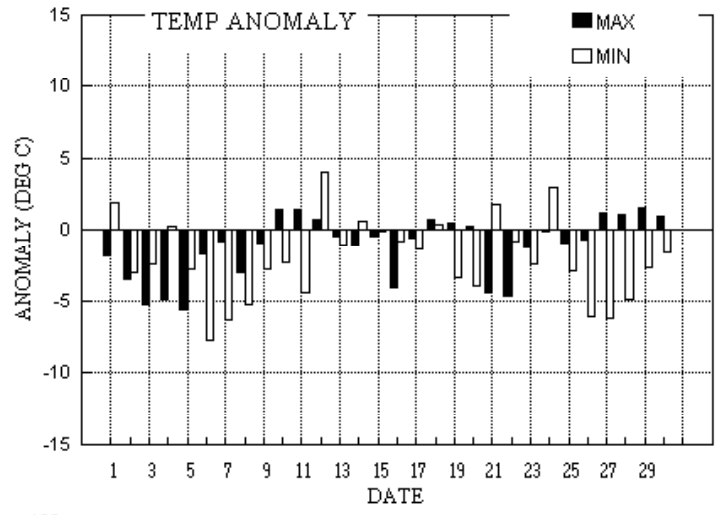
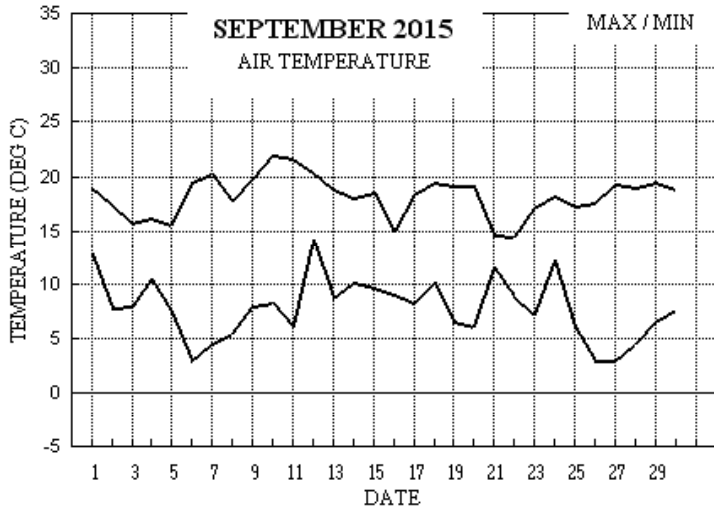
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

From the 1 st to the 10 th				From the 11 th to the 20 th				From the 21 st to the 30 th			
-2.6°	-3.1°	1%	101%	-0.3°	-1.0°	195%	84%	-0.7°	-2.3°	64%	147%

B J Burton FRMetS.

Hon. Met. Officer to Wokingham Town Council.

Wokingham climatological graphs for September 2015



Month: SEPTEMBER 2015

Date	Max		Rain mm	Grass Min	30cm C	100cm C	Sun hrs	Frost hrs	pp09 mbar	Af Gf	Sf Sl	Th Ha	Ic Fg	Vec mean			Max gust			High hr		Rain		
	C	C												ddd	ff	sp	ddd	gg	HHhh	ddd	ff	HH	hrs	
1	19.0	12.8	0.1	10.4	17.7	17.0	2.5	0.0	1018.0	0	0	0	0	304	3.1	3.4	312	15	1017	301	7	10	0.1	
2	17.4	7.8	tr	3.1	17.5	17.0	2.3	0.0	1018.5	0	0	0	0	297	3.3	3.6	311	15	1814	314	5	13	0.1	
3	15.8	8.0	tr	2.8	17.3	16.9	2.2	0.0	1015.9	0	0	0	0	286	3.4	4.0	321	16	1552	308	7	11	0.1	
4	16.2	10.5	0.1	6.6	17.0	16.9	2.4	0.0	1018.3	0	0	0	0	304	2.6	3.6	14	13	1616	2	6	16	0.1	
5	15.5	7.4	tr	1.5	16.6	16.8	0.3	0.0	1020.5	0	0	0	0	345	2.5	4.1	21	16	1513	15	7	11	0.0	
6	19.4	2.9	0.0	-1.5	16.1	16.7	11.9	0.0	1029.1	0	1	0	0	291	2.3	2.9	278	16	1302	326	6	14	0.0	
7	20.2	4.5	0.0	0.7	15.6	16.6	10.3	0.0	1031.1	0	0	0	0	26	2.0	3.0	21	18	1323	21	7	13	0.0	
8	17.7	5.5	0.0	1.5	16.0	16.5	2.0	0.0	1029.4	0	0	0	0	36	2.5	2.8	22	15	1514	35	6	15	0.0	
9	19.7	7.9	0.0	3.2	16.0	16.4	2.3	0.0	1023.1	0	0	0	0	61	4.2	4.3	62	17	1240	69	7	17	0.0	
10	21.9	8.3	0.0	3.5	16.1	16.3	11.9	0.0	1021.2	0	0	0	0	64	4.2	4.3	77	21	1100	86	8	11	0.0	
11	21.7	6.1	0.6	1.5	16.2	16.2	8.7	0.0	1015.3	0	0	0	0	103	4.0	4.4	97	22	1136	123	8	13	0.6	
12	20.4	14.2	tr	12.7	16.4	16.2	5.2	0.0	1005.9	0	0	0	0	216	5.0	6.8	233	21	0921	216	11	09	0.0	
13	18.8	8.7	10.8	4.4	16.5	16.2	1.6	0.0	1007.6	0	0	0	0	106	3.2	3.7	107	14	1258	113	6	12	3.4	
14	18.0	10.2	3.2	6.7	16.4	16.2	1.9	0.0	992.2	0	0	0	0	197	5.2	7.2	222	28	1500	229	13	16	1.2	
15	18.6	9.7	2.0	7.8	16.0	16.2	0.8	0.0	994.7	0	0	0	0	214	6.4	7.1	218	21	0447	234	11	12	1.0	
16	14.9	9.0	17.6	5.5	15.9	16.1	0.1	0.0	988.5	0	0	0	0	17	5.1	5.4	19	19	1120	20	8	14	8.0	
17	18.4	8.2	tr	3.6	15.6	16.1	5.8	0.0	999.3	0	0	0	0	243	4.4	5.2	273	17	1223	265	8	12	0.0	
18	19.5	10.2	tr	6.9	15.7	16.0	2.2	0.0	1009.5	0	0	0	0	282	1.5	3.8	346	13	1231	321	6	12	0.1	
19	19.2	6.6	0.0	2.6	15.7	15.9	8.7	0.0	1025.5	0	0	0	0	326	1.4	2.3	11	11	0445	10	4	04	0.0	
20	19.2	6.0	0.8	2.8	15.6	15.9	4.7	0.0	1026.6	0	0	0	0	221	3.6	3.8	248	15	1130	246	7	11	0.9	
21	14.6	11.6	7.4	9.7	15.7	15.8	0.7	0.0	1013.5	0	0	0	0	211	5.0	5.2	202	18	1212	206	8	12	5.2	
22	14.4	8.9	2.4	5.6	15.2	15.8	1.0	0.0	999.2	0	0	0	0	289	3.0	5.0	264	18	0757	320	7	15	2.3	
23	17.2	7.2	1.3	2.7	15.0	15.7	5.5	0.0	1012.6	0	0	0	0	239	6.4	6.7	226	19	1459	253	9	11	1.5	
24	18.2	12.2	tr	11.5	15.3	15.7	4.5	0.0	1013.3	0	0	0	0	233	7.3	7.6	243	27	1339	241	13	13	0.0	
25	17.3	6.0	0.0	1.4	15.4	15.6	8.5	0.0	1023.1	0	0	0	0	269	2.4	3.3	290	15	1436	296	6	09	0.0	
26	17.6	2.9	tr	-1.0	14.8	15.6	8.5	0.0	1029.4	0	1	0	0	40	1.2	1.9	64	12	1220	45	5	12	0.0	
27	19.3	2.9	0.0	-1.3	14.5	15.5	8.9	0.0	1034.0	0	1	0	0	63	2.7	3.1	60	17	1154	71	7	15	0.0	
28	19.0	4.5	0.0	0.1	14.3	15.4	11.0	0.0	1037.3	0	0	0	0	67	3.7	3.9	66	20	1649	93	8	11	0.0	
29	19.4	6.6	0.0	1.2	14.3	15.3	9.8	0.0	1035.6	0	0	0	0	52	4.3	4.4	66	20	1131	69	8	12	0.0	
30	18.8	7.7	0.0	1.6	14.3	15.2	11.1	0.0	1033.2	0	0	0	0	53	5.1	5.3	80	26	1147	69	10	14	0.0	
Total			46.3				157.3	0.0																24.6
Mean	18.2	7.8		3.9	15.8	16.1	5.24	0.0	1017.4					272	0.6	4.4								
Anom	-1.2	-2.2	86%	-2.8	-0.6	-0.7	110%																	+0.7
Daily mean		13.0																						
Anom		-1.7																						

Number of days with:

Air frost = 0 Ground frost = 3 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 1981-2010 climatological average.

All temperatures in degrees Celsius.

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for September 2015

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cf	NChshs	NChshs	NChshs	Date	Remarks
1	70	6	29	05	12	14.3	11.0	81	8.1	1018.0	2	013	15	2	2	6	8	4	6	/	82812	85630	1	1Ac58 Cu med jpE	
2	82	4	31	04	11	13.1	8.8	75	7.0	1018.5	4	000	02	1	1	3	8	4	3	0	81815		2	1Sc25 2Sc56 1Ac57 Cu med	
3	82	7	25	06	13	13.8	8.0	68	6.6	1015.9	8	002	03	2	2	3	8	5	3	1	81820	83656 85075	3	1Sc40 1Ac68 COTRA Cu hum Irisation	
4	84	7	28	05	10	12.4	8.7	78	7.0	1018.3	0	011	03	6	2	7	5	4	/	/	85613	86635	4		
5	78	8	36	06	14	12.9	9.8	81	7.4	1020.5	2	013	03	2	2	8	5	4	/	/	87615	88625	5		
6	82	1	27	04	10	12.6	7.5	71	6.3	1029.1	1	005	02	0	0	1	0	9	3	1	81358		6	1Ci80 COTRA	
7	73	2	01	03	07	13.7	9.4	75	7.2	1031.1	1	008	03	0	0	1	1	4	0	1	81815		7	2Ci75 Cu fra	
8	82	8	03	04	10	11.9	9.2	84	7.1	1029.4	5	001	02	2	2	8	5	4	/	/	85612	88615	8		
9	84	7	06	05	11	13.9	11.3	84	8.2	1023.1	0	000	03	2	2	7	8	4	/	/	81812	87645	9	1Sc35 Cu hum	
10	58	1	06	07	15	16.2	13.9	86	9.7	1021.2	0	000	05	0	0	1	6	4	0	1	81712		10	1Ci78	
11	60	5	09	05	10	16.4	12.3	76	8.8	1015.3	8	006	05	1	1	0	0	9	0	1	85075		11	COTRA	
12	65	6	21	11	20	16.1	12.6	80	9.1	1005.9	3	007	80	6	5	6	8	4	/	/	84815	83630	12	Cu fra/med vv30k ex p	
13	70	7	03	03	07	12.8	10.5	86	7.9	1007.6	7	008	02	2	2	1	8	5	7	8	81825	83467 87270	13	1Sc56 1Ac65 Cu med	
14	62	7	15	08	13	14.7	13.5	93	9.8	992.2	7	015	80	8	2	3	8	3	6	3	81708	86362	14	2Cu12 1Sc30 1Sc50 /Ci70 Cu con	
15	65	7	25	08	16	13.4	11.0	85	8.2	994.7	3	025	01	5	2	7	5	3	/	/	82708	85612 86620	15	/Sc50	
16	82	7	20	08	14	12.9	11.7	92	8.6	988.5	7	017	01	2	2	6	8	4	7	/	84813	85656 86358	16	1Sc30 Cu fra/hum	
17	86	2	24	05	10	12.8	8.7	76	7.0	999.3	2	035	02	0	0	1	5	6	8	1	81645		17	1Ac66 2Ac68 1Ci70 Ac cas Ac len	
18	65	7	23	05	08	12.8	11.0	89	8.2	1009.5	2	019	50	5	2	7	5	3	/	/	86708	87615	18		
19	62	5	32	04	07	11.7	9.5	87	7.3	1025.5	2	021	01	1	1	5	5	4	0	1	85612		19	1Ci75	
20	15	8	22	02	09	11.6	11.3	98	8.3	1026.6	3	001	28	4	1	8	6	1	/	/	88702		20	Vis 600m at 0835	
21	62	8	20	05	15	13.1	11.7	91	8.5	1013.5	7	017	58	6	2	3	5	3	2	/	81707	83630 88550	21		
22	60	7	30	07	15	12.0	10.7	92	8.0	999.2	3	005	60	6	2	7	8	3	/	/	82706	85810 86640	22	/Sc50 Cu med	
23	82	4	26	07	11	13.2	9.1	76	7.2	1012.6	1	014	03	0	0	1	1	4	5	6	81815	84078	23	1Ac65 1Cs75	
24	80	3	23	08	14	14.9	11.5	80	8.4	1013.3	3	013	01	6	1	2	8	4	0	1	82815		24	1Sc56 1Ci75 Cu fra/hum	
25	80	1	26	05	09	13.7	8.5	71	6.9	1023.1	2	017	02	0	0	1	5	7	0	1	81656		25	1Ci75 COTRA	
26	78	4	05	02	05	10.7	7.8	82	6.6	1029.4	1	011	02	0	0	4	5	6	0	0	84645		26		
27	84	1	04	03	10	12.2	10.1	87	7.7	1034.0	1	014	01	8	1	1	8	5	0	0	81825		27	1Sc45 Cu hum	
28	65	4	07	05	10	13.5	12.1	91	8.7	1037.3	1	006	03	0	0	1	1	3	0	1	81808	84080	28	COTRA Cu fra	
29	62	7	05	05	14	13.6	10.9	84	8.1	1035.6	1	003	02	2	2	0	0	9	0	1	87080		29	COTRA Parhelion	
30	66	1	05	05	13	13.7	10.7	82	8.0	1033.2	0	04	03	0	0	1	1	4	0	0	81815		30	Cu fra/hum	

Mean vis = 26.1 km
 Mean cloud = 5.1 63%
 Mean wind speed = 5.3 kn
 Mean gust = 11 kn
 Mean TT = 13.4 °C
 Mean TdTd = 10.4 °C
 Mean RH = 82.7%
 Mean r = 7.9 g/kg
 Mean PPP = 1017.4 mbar

See appendix 2 below for full code details

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

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 1500 GMT for SEPTEMBER 2015

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Ch	NCh	shs	NCh	shs	Date	Remarks
1	70	4	30	03	12	18.9	9.9	56	7.5	1018.0	8	009	15	1	1	3	8	4	6	0	81715	83830		1	1Sc56 2Ac58 Cu con jpNW vv50k ex p	
2	86	7	31	06	12	16.8	8.0	56	6.7	1016.9	7	008	03	2	2	1	8	6	3	/	81835	87358		2	1Sc56 Cu con	
3	80	7	27	03	11	15.1	7.6	61	6.4	1015.3	8	001	25	8	2	3	8	6	7	/	81835	83656	87357	3	Cu med Sc mam jpN vv60k ex p	
4	86	7	30	04	12	15.3	8.2	62	6.7	1017.5	8	005	25	8	2	7	8	6	/	1	81830	84650	87656	4	/Ci75 Cu med Sc mam	
5	80	7	36	05	11	14.8	7.3	61	6.3	1023.2	0	008	01	5	2	7	8	6	/	1	82830	86640	86078	5	COTRA	
6	84	1	33	05	13	19.2	6.8	44	6.0	1028.2	8	005	01	0	0	1	1	6	0	0	81845			6	Cu hum	
7	81	3	02	06	16	19.5	9.3	52	7.1	1030.0	8	005	02	0	0	3	4	6	0	0	81835	83638		7	Cu hum	
8	81	7	02	06	12	16.1	9.9	66	7.4	1026.4	7	017	02	2	2	7	5	5	/	/	87625			8		
9	75	5	08	06	13	18.7	8.7	52	6.9	1020.9	7	008	02	2	2	5	8	6	0	0	81835	85640		9	Cu hum	
10	84	1	07	07	15	20.1	9.9	52	7.5	1018.8	8	011	02	0	0	1	1	6	0	1	81845			10	1Ci78 Cu hum	
11	84	7	11	07	16	21.0	8.2	44	6.8	1012.2	7	013	03	2	2	1	1	7	7	1	81850	86372		11	1Ac69 /Ci75 Cu hum	
12	86	4	25	08	17	19.0	10.0	56	7.7	1007.0	1	004	02	1	1	4	8	6	0	0	84835			12	1Sc56 Cu med	
13	75	7	10	05	13	16.7	7.7	55	6.6	1003.0	7	020	15	2	2	5	8	6	7	/	81835	85650	87360	13	Cu med jpSW vv50k ex p	
14	62	7	22	14	28	12.5	10.1	85	7.8	993.4	3	018	61	6	8	7	8	3	/	/	81708	85640	87656	14	2Cu12 Cu med	
15	75	7	22	08	18	16.9	10.5	66	8.0	996.9	5	001	25	8	2	4	8	5	6	/	82827	83645	86357	15	Cu con jpE&W vv 60k ex p	
16	25	8	02	08	17	12.8	12.2	96	8.8	985.7	6	015	65	6	6	7	2	2	/	/	83705	87707	88515	16		
17	84	6	25	07	15	16.6	7.4	54	6.4	1003.1	1	017	02	2	2	3	8	6	3	0	81840	83656	85368	17	Cu med Ac str tr vir	
18	84	5	32	05	10	18.6	8.8	53	7.0	1011.9	2	009	02	8	2	2	8	6	6	2	82835			18	1Sc56 2Ac58 1Ac62 1Ci72 Cu con	
19	84	2	31	04	09	18.9	7.1	46	6.1	1025.7	6	003	03	0	1	1	8	6	0	1	81840			19	1Sc56 2Ci80 COTRA Cu med	
20	86	7	22	07	11	18.4	9.7	57	7.4	1023.1	7	022	03	1	1	7	8	6	/	/	82835	86650		20	Cu med	
21	58	8	19	07	13	13.9	13.0	95	9.3	1008.4	7	025	63	6	6	7	7	3	2	/	85706	87708	88515	21		
22	80	7	33	06	15	13.7	11.0	84	8.2	1002.4	2	016	61	6	6	3	8	4	7	1	82815	85365		22	2Sc50 1Ac58 /Ci68 Cu con U/a cont Raindow	
23	81	6	24	10	19	16.9	8.9	59	7.1	1012.3	7	003	01	2	2	2	8	6	4	1	82833	85367		23	1Sc40 2Ci78 Cu hum	
24	80	7	25	08	26	15.9	8.2	60	6.7	1015.0	3	010	15	8	2	3	8	6	0	1	81830	83650	86078	24	COTRA Cu med jp NE vv50k ex NE	
25	82	2	30	05	15	17.0	5.0	45	5.4	1023.4	1	001	01	0	0	2	4	6	0	0	81845			25	2Sc50 Cu hum	
26	80	2	07	02	11	16.3	6.4	52	6.0	1028.2	7	005	01	1	1	2	4	6	0	0	82645			26		
27	82	1	06	07	17	18.4	9.2	55	7.2	1033.2	6	006	01	1	1	1	4	6	0	1	81640			27	1Ci75	
28	84	3	06	07	18	18.5	9.0	54	7.1	1035.3	7	011	02	0	0	0	0	9	0	1	83080			28	COTRA Parhelion	
29	84	7	05	06	18	18.5	9.0	54	7.1	1033.4	7	015	02	2	2	0	0	9	0	1	87080			29	COTRA Cu hum Parhelia Cz arc	
30	82	1	07	10	23	18.3	4.8	41	5.4	1031.1	7	009	02	0	0	0	0	9	0	1	81075			30		

Mean vis = 37.8 km

Mean cloud = 5.1 64%

Mean wind speed = 6.4 kn

Mean gust = 15 kn

Mean TT = 17.1 °C

Mean TdTd = 8.7 °C

Mean RH = 59.1 %

Mean r = 7.0 g/kg

Mean PPP = 1016.7 mbar

See appendix 2 below for full code details

VV = Visibility code (Code FM12-4377)

N = Total cloud amount, oktas

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

ff = 10 minute mean wind speed, knots

gg = Highest gust in past hour, knots

TT = Air temperature at 1.2 m, deg Celsius

TdTd = Dew point temperature at 1.2 m, deg Celsius

RH = Relative humidity at 1.2 m

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

PPP = Air pressure reduced to sea level, mbar

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

ppp = 3 hr pressure tendency, tenths of mbar

ww = Present weather code (Code FM12-4677)

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

Nh = Amount of low cloud present, oktas

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

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

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

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

8 groups. 8 = indicator for cloud detail

N = Amount of cloud, oktas

C = Type of cloud (FM12-0500)

hshs= Height of cloud (FM12-1677)

Remarks : COTRA = persistent condensation trails present.

Wokingham Sunshine Hourly analysis 2015	Hour	01-Sep	02-Sep	03-Sep	04-Sep	05-Sep	06-Sep	07-Sep	08-Sep	09-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.33	0.24	0.00	0.00	0.36	0.29	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.49	0.00	0.00	1.00	1.00	0.00	0.00	0.95	1.00	0.00	0.12	0.05	0.00	0.00	0.00
7	0.08	0.00	0.10	0.00	0.12	1.00	1.00	0.00	0.00	1.00	1.00	0.14	0.06	0.39	0.00	0.00	0.00
8	0.16	0.50	0.73	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.23	0.00	0.07	0.00	0.00	0.00
9	0.34	0.86	0.09	0.29	0.00	1.00	1.00	0.00	0.01	1.00	0.93	0.71	0.00	0.13	0.00	0.01	0.01
10	0.00	0.30	0.19	0.25	0.00	0.82	0.97	0.00	0.29	1.00	1.00	0.59	0.69	0.10	0.01	0.00	0.00
11	0.00	0.26	0.26	0.07	0.04	0.86	0.36	0.00	0.61	0.98	0.79	0.49	0.28	0.13	0.03	0.00	0.00
12	0.00	0.04	0.02	0.00	0.00	0.51	0.59	0.00	0.02	0.86	1.00	0.71	0.07	0.58	0.24	0.00	0.00
13	0.66	0.02	0.00	0.00	0.00	1.00	0.62	0.53	0.00	1.00	0.71	0.58	0.12	0.32	0.42	0.00	0.00
14	0.64	0.01	0.00	0.00	0.01	1.00	0.67	0.36	0.53	1.00	0.28	0.58	0.00	0.00	0.07	0.00	0.00
15	0.13	0.00	0.01	0.03	0.15	1.00	0.51	0.01	0.10	0.91	0.82	0.46	0.00	0.00	0.02	0.00	0.00
16	0.43	0.00	0.08	0.55	0.00	1.00	0.95	0.00	0.01	1.00	0.05	0.13	0.00	0.00	0.05	0.00	0.00
17	0.00	0.00	0.00	0.78	0.00	1.00	1.00	0.75	0.59	1.00	0.00	0.30	0.24	0.10	0.00	0.00	0.00
18	0.05	0.00	0.00	0.44	0.00	0.37	0.30	0.33	0.13	0.23	0.00	0.26	0.00	0.00	0.00	0.00	0.00
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	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	2.50	2.32	2.20	2.41	0.32	11.92	10.25	1.98	2.29	11.93	8.70	5.21	1.59	1.87	0.83	0.01	

	Hour	17-Sep	18-Sep	19-Sep	20-Sep	21-Sep	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	30-Sep	Mean
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
6	0.62	0.00	0.44	0.66	0.00	0.00	0.68	0.00	0.58	0.65	0.00	0.65	0.64	0.61	0.34	0.34
7	0.87	0.16	0.72	1.00	0.00	0.00	1.00	0.05	1.00	0.93	0.48	1.00	1.00	1.00	0.47	0.47
8	1.00	0.00	0.04	0.21	0.00	0.05	1.00	0.73	1.00	1.00	0.78	1.00	1.00	1.00	0.48	0.48
9	0.98	0.00	0.67	0.13	0.00	0.00	1.00	0.30	1.00	1.00	1.00	1.00	1.00	0.99	0.51	0.51
10	0.42	0.58	1.00	0.48	0.00	0.06	0.90	0.65	0.79	1.00	0.88	0.97	1.00	0.91	0.53	0.53
11	0.91	0.19	1.00	0.79	0.00	0.00	0.27	0.48	0.73	0.75	0.56	0.82	1.00	0.98	0.45	0.45
12	0.68	0.07	1.00	0.78	0.00	0.10	0.14	0.37	0.48	0.44	0.63	0.93	1.00	1.00	0.41	0.41
13	0.01	0.36	0.96	0.15	0.00	0.00	0.00	0.34	0.39	0.67	0.99	1.00	1.00	1.00	0.43	0.43
14	0.01	0.51	0.89	0.29	0.00	0.11	0.31	0.26	0.90	0.60	0.99	1.00	1.00	1.00	0.43	0.43
15	0.19	0.33	0.64	0.02	0.00	0.36	0.22	0.96	0.98	0.58	1.00	1.00	0.85	1.00	0.41	0.41
16	0.07	0.00	0.97	0.15	0.00	0.34	0.00	0.27	0.17	0.29	1.00	1.00	0.32	1.00	0.33	0.33
17	0.00	0.00	0.40	0.01	0.71	0.00	0.00	0.12	0.44	0.55	0.59	0.67	0.00	0.61	0.33	0.33
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07
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	5.75	2.18	8.74	4.68	0.71	1.03	5.52	4.51	8.47	8.46	8.92	11.04	9.81	11.10	157.26	

SEPTEMBER 2015	T mn	Tx	Time	Tn	Time	RHmn	RH x	Time	RH n	Time	Tdmn	r mn	r x	Time	r n	Time	p mn	p x	Time	p n	Time
1	13.37	19.1	1503	8.2	2352	83.0	97.3	2358	50.8	1449	10.36	7.77	8.7	1340	6.4	2352	1017.99	1019.5	2245	1016.1	113
2	12.53	17.5	1131	7.1	228	76.9	97.6	249	49.3	1529	8.24	6.74	7.9	1000	5.9	1501	1017.79	1019.3	0	1016.3	1748
3	11.86	16.0	1113	7.2	453	75.4	95.3	504	55.9	1405	7.47	6.40	7.3	844	5.8	1708	1016.20	1017.4	2359	1015.1	1534
4	12.26	16.3	1605	7.4	2359	73.8	92.6	2343	51.3	1625	7.57	6.43	8.0	1015	5.7	1721	1017.91	1019.5	2246	1016.6	354
5	10.85	15.6	1527	4.6	2356	82.2	96.3	2357	55.2	1603	7.75	6.51	7.9	1141	5.0	2356	1022.15	1027.2	2358	1018.2	435
6	10.94	19.5	1505	2.6	532	75.3	98.3	637	39.5	1500	5.95	5.73	7.3	959	4.4	532	1028.63	1030.3	2354	1027.0	4
7	11.62	20.3	1524	4.4	548	81.6	98.5	705	49.0	1458	8.19	6.68	9.2	1127	5.0	548	1030.52	1031.5	1955	1029.4	324
8	11.51	17.9	1317	5.3	234	84.2	98.0	259	57.7	1416	8.76	6.92	8.7	1317	5.3	203	1027.72	1031.0	2	1024.4	2357
9	13.35	19.8	1415	7.7	250	80.2	97.7	331	48.9	1506	9.73	7.42	9.4	1124	6.3	250	1022.30	1024.7	1	1020.4	1739
10	14.18	22.0	1416	8.2	607	76.7	98.6	626	40.4	1342	9.44	7.33	9.9	859	5.2	1734	1019.95	1021.7	14	1017.7	2356
11	14.50	21.9	1524	6.0	500	70.2	98.4	656	36.1	1536	8.25	6.80	9.5	822	5.6	1536	1013.68	1017.9	0	1008.5	2358
12	15.65	20.5	1137	9.0	2359	70.4	92.9	738	51.0	1824	10.09	7.79	9.9	739	5.7	2103	1007.39	1010.5	2208	1004.9	625
13	12.67	18.9	1147	8.1	454	77.9	96.0	518	45.9	1347	8.62	7.00	8.7	1041	6.0	1347	1004.98	1009.9	8	997.9	2359
14	12.36	18.1	1244	9.5	542	85.2	98.2	610	64.2	1325	9.86	7.77	10.5	959	5.9	2150	994.09	998.0	0	991.3	1135
15	12.47	18.7	1401	8.9	2353	83.5	97.1	2359	59.6	1401	9.67	7.62	9.5	1216	5.9	138	995.47	998.0	1642	992.0	515
16	11.20	14.2	1007	8.6	54	94.6	97.8	226	82.2	1048	10.36	8.00	9.1	929	6.9	54	988.51	994.7	0	984.8	1605
17	12.65	18.5	1249	7.5	600	77.9	96.0	615	44.5	1250	8.54	7.00	7.9	0	5.5	1309	1000.29	1007.0	2321	989.7	0
18	13.16	19.6	1506	8.8	2318	81.9	97.6	523	49.6	1506	9.89	7.58	9.3	1135	6.5	2318	1011.51	1020.0	2357	1006.6	336
19	11.97	19.3	1439	5.9	328	81.3	98.0	417	45.2	1457	8.39	6.77	8.3	1237	5.5	328	1024.96	1027.7	2319	1019.9	2
20	11.80	19.3	1413	5.5	409	85.2	98.5	742	55.3	1445	9.14	7.17	9.3	1014	5.4	410	1024.43	1027.5	17	1019.4	2353
21	11.99	14.1	1140	8.7	2356	90.9	95.0	1637	82.2	1151	10.56	7.94	9.3	1637	6.5	2352	1011.34	1019.6	0	1004.2	2354
22	10.34	14.1	1557	7.6	2327	90.1	97.1	701	69.7	1639	8.75	7.09	8.1	1421	6.0	2327	1002.53	1008.7	2357	998.3	547
23	12.36	17.2	1455	7.5	515	77.6	93.3	550	55.4	1110	8.32	6.86	8.7	1700	5.6	1700	1011.93	1014.9	1701	1008.7	1
24	13.78	18.6	1311	9.1	2338	76.8	94.1	338	48.8	1334	9.50	7.42	9.5	345	5.8	1515	1014.46	1019.4	2350	1010.4	445
25	10.90	17.6	1532	4.9	0	76.3	97.7	701	39.4	1429	6.22	5.85	7.5	808	4.7	1550	1023.11	1027.3	2351	1019.1	13
26	9.10	18.0	1301	2.3	608	82.1	97.7	727	44.8	1423	5.73	5.65	7.2	1018	4.3	609	1028.89	1031.4	2358	1027.1	1
27	10.20	19.6	1325	2.4	543	81.6	97.7	715	46.1	1410	6.71	6.05	8.3	948	4.3	543	1033.70	1036.2	2223	1031.2	0
28	11.09	19.2	1355	4.3	501	82.0	98.3	749	52.2	1441	7.78	6.47	8.8	918	4.9	444	1036.16	1037.5	924	1034.9	1530
29	12.30	19.7	1246	6.0	307	78.0	97.5	649	45.7	1255	8.14	6.61	9.3	1036	5.4	307	1034.50	1035.9	756	1032.6	1636
30	12.24	19.2	1303	7.0	631	73.4	96.1	715	34.7	1430	6.92	6.10	8.1	924	4.5	1430	1032.50	1033.8	1	1030.7	1523
Total																					
Mean	12.17	18.34		6.68		80.2	96.84		51.68		8.50	6.91	8.70		5.52		1017.19	1020.59		1013.78	
Max	15.65	22.04		9.53		94.6	98.60		82.20		10.56	8.00	10.52		6.87		1036.16	1037.46		1034.87	
Min	9.10	14.09		2.31		70.2	92.60		34.69		5.73	5.65	7.15		4.27		988.51	994.68		984.84	

Wokingham Automatic Weather Station
 AWS samples taken every 0.5 seconds
 x and n refer to maximum and minimum respectively

Note: Equipment faults on the 23rd and 29th caused the loss of a small amount of data.

**Readings taken at Wokingham Climatological Station, Emmbrook, Berkshire
 Lat 51.425 N, Long 0.853 W, NGR (SU) 798701
 Altitude 45 m ASL.**

Tmn = 00 to 24 GMT mean air temperature at 1.2 m, deg C
 RHmn = 00-24 GMT mean relative humidity at 1.2 m, percent
 TDmn = 00-24 GMT mean dew point at 1.2 m, deg C
 rmn = 00-24 GMT mean humidity mixing ratio, g/kg
 pmn = 00-24 GMT mean air pressure reduced to mean sea level, mbar
 Time = hours and minutes in GMT of extreme values

Temperature and humidity are from an aspirated Vaisala HMP45 unit
 Pressure is from a Setra CS100 sensor
 Data is logged on a Campbell Scientific CR10X measurement and control system

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Month: Calendar month.

Season: Spring, March to May.

Summer, June to August

Autumn, September to November

Winter, December to February.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix 2.

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

VV : Visibility.

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

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

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

Code figure 89 = visibility above 70 km.

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

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

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

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

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

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

RH : Relative humidity at 1.2m, %.

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

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

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

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

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

1 = Increasing then steady or increasing more slowly

2 = Increasing steadily or unsteadily

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

4 = Steady, pressure the same as 3 hours ago

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

6 = Decreasing then steady or decreasing more slowly

7 = Decreasing steadily or unsteadily

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

ppp : 3 hour pressure tendency in tenths of a millibar

ww : Present weather code figures, 00 to 99.

Present weather decode:

00 = Cloud development not observed or not observable

01 = Clouds generally dissolving or becoming less developed

02 = State of sky on the whole unchanged

03 = Clouds generally increasing or becoming more developed

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hail includes large hail, small hail and snow pellets.

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

Code figures:

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

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

Cl : Type of low cloud

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

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

Cm : Type of medium cloud.

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

Ch : Type of high cloud

0 = No high cloud

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

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

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

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

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

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

7 = Veil of Cirrostratus covering the celestial dome.

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

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

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

8 Groups

N = Amount of cloud reported by C, okta.

C = Type of cloud

0 = Cirrus (Ci)

1 = Cirrocumulus (Cc)

2 = Cirrostratus (Cs)

3 = Altocumulus (Ac)

4 = Altostratus (As)

5 = Nimbostratus (Ns)

6 = Stratocumulus (Sc)

7 = Stratus (St)

8 = Cumulus (Cu)

9 = Cumulonimbus (Cb)

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

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

00 to 50 = Height in hundreds of feet

51 to 55 Not used

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

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