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 **MARCH 2021**

Temperature (°C)		Anomaly	Rank in the past **140** years		
Mean maximum	12.0	+0.4	35th highest		
Mean minimum	3.1	-0.1	38th highest		
Daily mean	7.5	+0.1	36th highest		
Highest maximum	23.6	on 30th	Lowest maximum	5.3	on 4th
Highest minimum	9.4	on 29th	Lowest minimum	-2.3	on 6th
Mean grass minimum	0.0	+0.2	Lowest grass minimum	-6.0	on 6th
Mean earth @30 cm	7.5	+0.2	Earth @100 cm	7.7	
Frost duration (hrs)	20.9		Rain duration (hrs)	22.5	
Rainfall total (mm)	29.4	71 %	47th lowest		
Highest daily fall	8.2	on 10th	Highest rate mm/hr	37	on 11th

Number of: Dry days (<0.2mm) 22 Wet days (>0.9mm) 7 days ≥5mm 2

Sunshine total (hrs) 109.8 Daily mean 3.54 87 % Sunniest day 11.9 on 30th

Nº days with: Air frost 4 Ground frost 17 Snow falling 0 Snow lying 0

Thunder 0 Hail ≥5mm 0 Small hail/ice 1 Fog @09 1 Nil sun 5

Pressure MSL : Mean @09 GMT, mbar 1022.8 +7.2 Highest 1035.7 on 6th Lowest 989.9 on 13th

Relative humidity : Mean (%) 77.2 Lowest 21 on 30th Water vapour (g/kg), mean at 09 and 15 GMT 5.0, 4.9

Overall mean wind speed (mph) 7.5 Windiest day 17.2 on 11th Max gust 55 on 11th

Wind direction (days) N 5 NE 4 E 0 SE 0 S 2 SW 13 W 2 NW 5

Least windy day (mph) 2.7 on 31st Calm; less than 0.5 mph (minutes) 736

Anomaly = departure from 1991 to 2020 average (degrees C, percent and mbar).

Notes: **Rainfall and Sunshine Below Average. Temperature Near Average but With a Notable Warm Spell.**

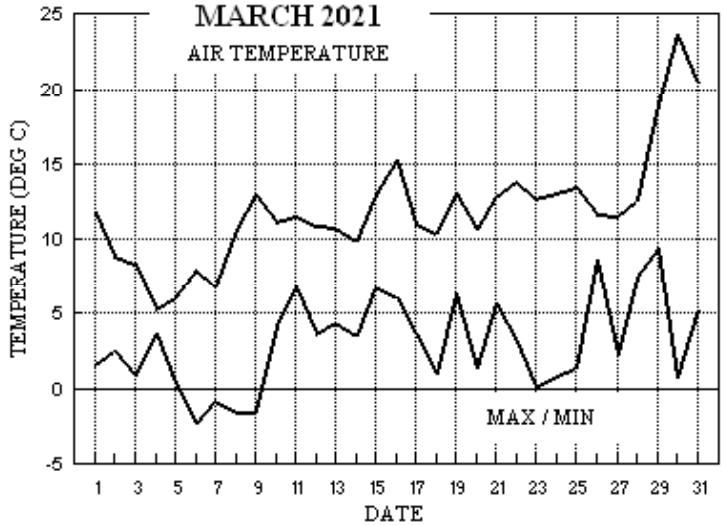
Temperature: The mean this March of 7.5° is close to average and can be compared with the extreme values in the last 46 years, namely 9.8° in 2017 and 3.6° in 2013, interestingly both values occurred in the past 10 years. The highest maximum of 23.6° on the 30th is 6.9° above the long-term median and is a new March record for Wokingham, the previous highest being 22.6° in 1965. The lowest max is 0.6° above the median and the highest min is also 0.6°above its median, while the lowest min is 1.8° above the median. The mean grass min is close to average but the lowest value is 3.0° above average. Earth temperature at both 30 cm and 1 m depth are close to average. The temperature range on the 30th , 22.9°, is a new March record for the past 46 years. It is also 3rd highest for any month after 24.7° in July 2020 and 23.3° in August 2020. There were 3 fewer days with air frost than average, and the duration was 46 % of average. Anomalies for daily max were above +4° on the 16th and 29th to 31st, and exceeded -4° on the 4th, with extreme values of +11.4° on the 30th and -4.5° on the 4th. Anomalies for daily min exceeded -4° on the 6th, 8th and 9th, and were above +4° on the 26th, 28th and 29th, with extreme values of -5.0° on the 6th and 9th, and +6.0° on the 29th. **Rainfall:** This has been quite a dry March, only failing to get into the dry category by 4.4 mm. Compared to recent years, it is driest since 2015 and the 6th driest March this millennium . The month's highest daily fall is 1.2 mm below the long-term median. Rainfall rate did not exceed the violent category (50 mm/hr) this month, but there were heavy rain showers on the 11th and 26th, and ice pellets also fell on the 11th. However, there was no thunder or snow this March. The number of dry days is 5 above average, and there were 4 dry spells at least part of which were within the month, namely 8 days ending on the 2nd, 5 days on the 8th, 6 days on the 24th and 5 days unbroken on the 31st. Daily accumulation compared with normal fluctuated between +/- 3 mm of normal at first but became a surplus of 7 mm on the 12th, then 12 largely dry days turned this into a deficit of 7 mm on the 24th, which increased to 12 mm by the 31st. **Sunshine:** The total this month is below average by 13%, but the daily mean of 3.54 hours is lowest only since 2018, and in this millennium there have been 8 duller Marches. In this respect 2001 stands out, being one of the dullest with a daily mean of just 1.90 hours, as well as being the wettest in the past 46 years. The majority of days this March had below 50% of the maximum, in fact, 13 had less than 20% with just 6 having over 50%, and only 2 days, the 22nd and 30th had over 80%. Daily accumulation compared with normal was already in deficit by 8 hours on the 5th and remained in deficit until the 31st, by amounts between 5 hours on the 9th to 22 hours on the 21st. Overall there were 13 days with <3 hours, 5 with =>6 hours and 3 with =>9 hours. **Wind:** The mean speed this March is 0.2 mph below average, but is lowest since 2016. The speed on the windiest day is 2.0 mph above average, and the month's highest gust is 9 mph above average, and is highest since 2015, conversely the duration of calms is highest since 2016. Daily mean speeds were light or moderate until the 9th and from the 15th to 24th, also on the 30th and 31st, but were fresh on the 12th, 14th, 20th and 25th to 27th, and strong on the 10th, 13th and 28th, increasing to very strong on the 11th. Daily mean directions were between N and E until the 7th and on the 19th and 21st, between E and S on the 31st, and between S and W from 8th to 14th and 22nd to 30th, and between W and N on the 15th to 18th and 20th.

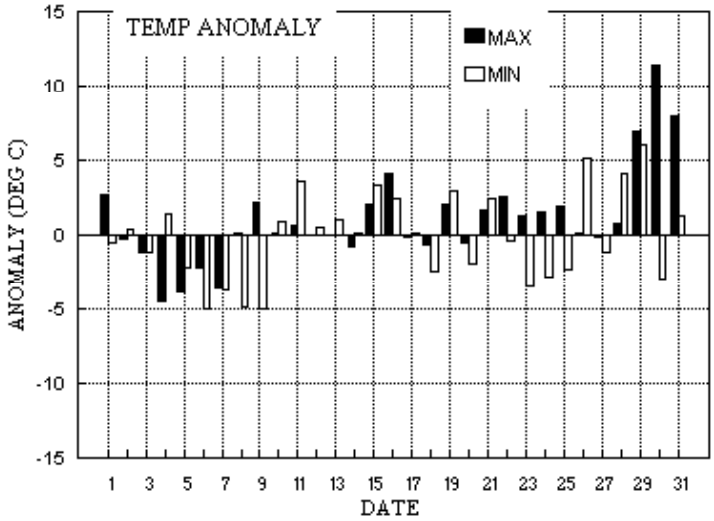
Table 1. Mean anomalies (max, min, rain, sun) for specified periods.

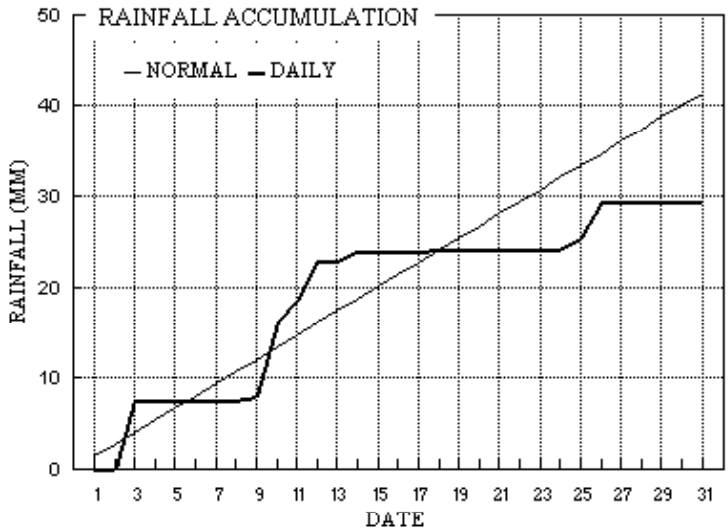
From the 1st to the 10th				From the 11th to the 20th				From the 21st to the 31st			
-1.0°	-2.0°	121%	79%	+0.7°	+1.0°	60%	76%	+3.3°	+0.5°	35%	105%

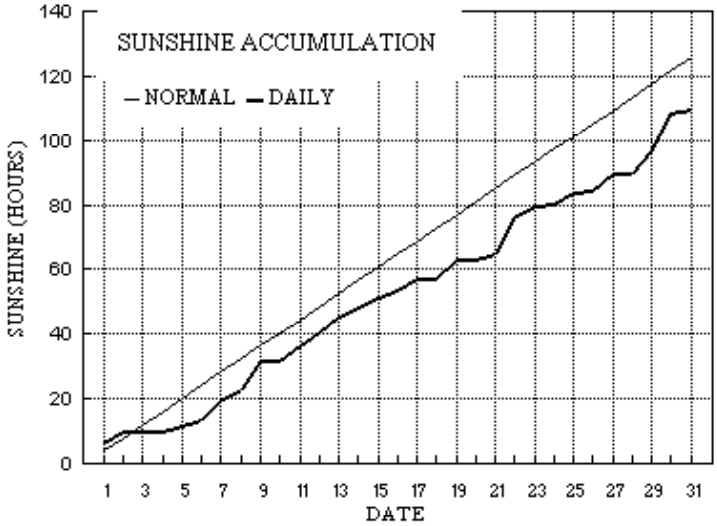
B J Burton FRMetS. Hon. Met. Officer to Wokingham Town Council.

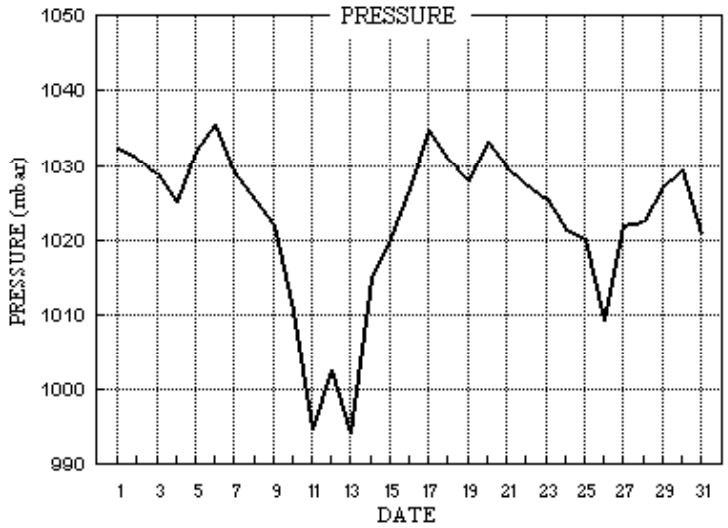
Wokingham climatological graphs for March 2021

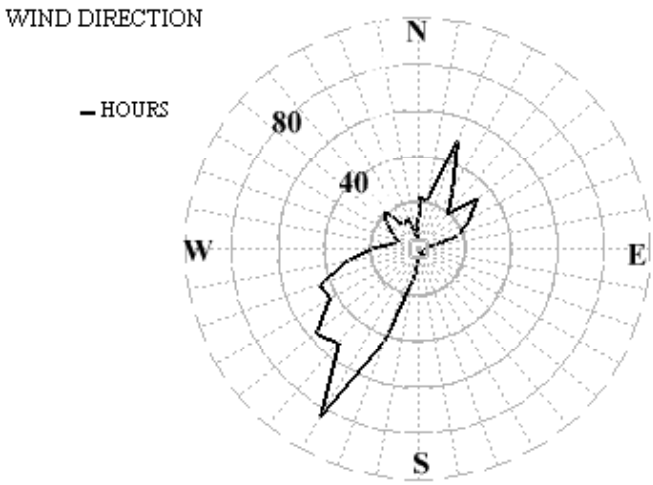


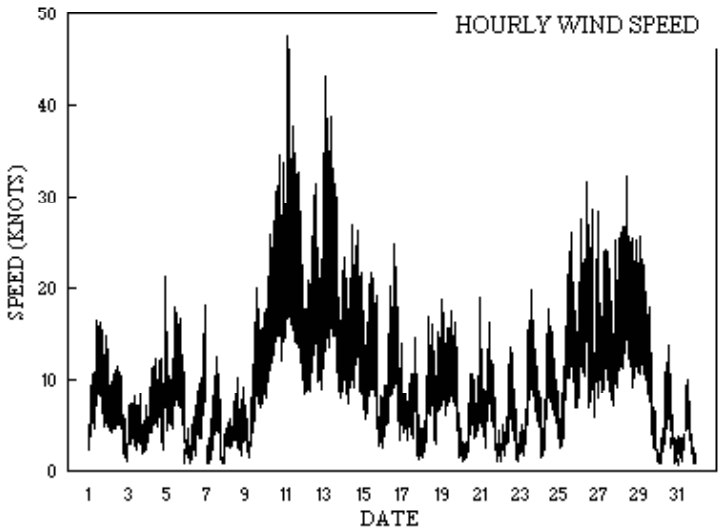


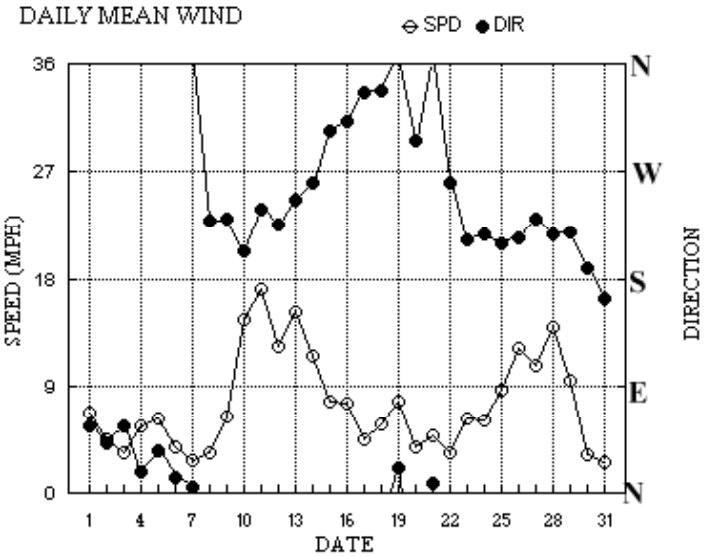












Daily meteorological data. Emmbrook, WOKINGHAM, Berkshire.

Month: MARCH 2021

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	11.8	1.6	0.0	-3.7	6.5	7.4	6.6	0.0	1032.5	0	1	0	0	0	0	57	5.8	5.9	58	17	0956	62	9	12	0.0
2	8.9	2.5	tr	-1.9	6.7	7.4	3.5	0.0	1031.2	0	1	0	0	0	0	42	3.9	3.9	69	12	0024	46	6	14	0.0
3	8.3	0.8	7.6	-2.7	6.6	7.3	0.0	0.0	1029.0	0	1	0	0	0	1	57	2.8	3.0	54	8	1545	68	4	08	5.0
4	5.3	3.6	tr	4.0	7.0	7.4	0.1	0.0	1025.1	0	0	0	0	0	0	19	4.9	5.0	23	21	2236	25	8	22	0.1
5	6.0	0.3	0.0	-3.5	6.8	7.4	1.8	0.6	1031.9	0	1	0	0	0	0	36	5.4	5.5	51	18	1044	46	8	11	0.0
6	8.0	-2.3	0.0	-6.0	6.5	7.4	1.9	7.5	1035.6	1	1	0	0	0	0	13	2.3	3.4	26	18	2225	27	8	22	0.0
7	6.8	-0.8	0.0	-4.8	6.3	7.3	5.7	5.4	1029.1	1	1	0	0	0	0	5	1.6	2.4	44	13	1326	30	5	11	0.0
8	10.7	-1.6	0.0	-5.5	6.1	7.2	3.4	4.3	1025.3	1	1	0	0	0	0	228	2.4	3.0	319	10	1555	244	4	21	0.0
9	12.9	-1.6	0.4	-5.6	6.2	7.2	9.1	3.1	1021.9	1	1	0	0	0	0	231	5.1	5.6	259	20	1347	254	9	13	0.3
10	11.1	4.2	8.2	4.2	6.5	7.1	0.0	0.0	1010.6	0	0	0	0	0	0	203	12.7	12.7	195	35	1719	206	16	18	5.2
11	11.5	6.8	2.3	5.7	6.9	7.2	4.7	0.0	994.8	0	0	0	0	0	1	239	14.7	14.9	244	48	0339	229	20	06	1.5
12	10.9	3.7	4.3	0.9	7.1	7.2	3.8	0.0	1002.5	0	0	0	0	0	0	226	10.4	10.8	258	32	1401	251	14	13	4.3
13	10.8	4.4	tr	2.1	7.2	7.3	4.7	0.0	994.1	0	0	0	0	0	0	246	13.0	13.2	231	43	0105	257	17	09	0.1
14	9.9	3.5	1.1	0.4	7.1	7.4	3.0	0.0	1014.8	0	0	0	0	0	0	260	9.9	10.0	267	27	1013	251	14	17	0.8
15	12.9	6.8	tr	4.2	7.2	7.4	3.4	0.0	1020.3	0	0	0	0	0	0	303	6.6	6.7	326	22	1105	314	10	11	0.2
16	15.2	6.0	tr	0.3	7.4	7.5	2.1	0.0	1026.9	0	0	0	0	0	0	311	4.9	6.5	359	25	1510	328	11	14	0.1
17	11.0	3.6	0.1	-1.7	7.8	7.5	3.7	0.0	1034.8	0	1	0	0	0	0	336	3.5	3.9	343	15	1628	10	7	15	0.4
18	10.4	1.0	0.2	-2.8	7.5	7.6	0.0	0.0	1030.8	0	1	0	0	0	0	337	4.4	5.0	346	17	0919	354	8	13	1.5
19	13.1	6.3	0.0	4.2	7.7	7.7	5.5	0.0	1027.9	0	0	0	0	0	0	22	6.5	6.6	20	19	0158	18	9	01	0.0
20	10.6	1.3	0.0	-2.6	8.0	7.8	0.0	0.0	1033.2	0	1	0	0	0	0	295	2.7	3.4	321	19	2322	335	9	23	0.0
21	12.8	5.7	0.0	2.2	8.2	7.9	2.1	0.0	1029.9	0	0	0	0	0	0	8	3.6	4.3	346	17	0000	17	8	10	0.0
22	13.8	3.1	0.0	-0.3	8.4	8.0	10.9	0.0	1027.7	0	1	0	0	0	0	260	2.1	2.9	262	14	1224	242	6	11	0.0
23	12.7	0.1	0.0	-3.0	8.5	8.1	3.7	0.0	1025.5	0	1	0	0	0	0	213	5.4	5.4	205	20	1426	223	9	14	0.0
24	13.1	0.8	tr	-2.6	8.3	8.2	0.9	0.0	1021.5	0	1	0	0	0	0	217	5.1	5.4	235	18	1225	232	9	12	0.1
25	13.5	1.3	1.2	-3.5	8.2	8.3	3.1	0.0	1020.2	0	1	0	0	0	0	209	7.6	7.6	200	26	1550	205	13	15	0.7
26	11.7	8.6	4.0	6.8	8.5	8.3	0.5	0.0	1009.2	0	0	0	0	0	0	214	10.2	10.6	203	32	1150	203	16	11	2.2
27	11.5	2.2	tr	-0.2	8.3	8.3	5.3	0.0	1021.9	0	1	0	0	0	0	230	9.0	9.4	218	25	2202	249	12	09	0.0
28	12.5	7.4	0.0	6.7	8.4	8.4	0.0	0.0	1022.5	0	0	0	0	0	0	218	12.1	12.1	229	33	1241	221	15	12	0.0
29	18.9	9.4	0.0	9.0	8.8	8.4	7.5	0.0	1027.1	0	0	0	0	0	0	219	8.0	8.2	230	26	0444	227	12	02	0.0
30	23.6	0.7	0.0	-2.7	9.3	8.5	11.9	0.0	1029.4	0	1	0	0	0	0	189	1.8	2.8	217	14	1414	206	7	14	0.0
31	20.3	5.3	0.0	1.9	9.8	8.6	0.9	0.0	1020.6	0	0	0	0	0	0	164	0.9	2.3	188	10	1500	199	5	14	0.0
Total			29.4				109.8	20.9																	22.5
Mean	12.0	3.1		-0.0	7.5	7.7	3.54	0.7	1022.8							244	3.1	6.5							
Anom	+0.4	-0.1	71%	+0.2	+0.2	0.0	87%		+7.2																

Daily mean 7.5 Pressure, abs highest = 1035.7 on 6

Anom +0.1 Pressure, abs lowest = 989.9 on13

Number of days with:

Air frost = 4 Ground frost = 17 Nil sun = 5

Snow falling = 0 Snow lying = 0 Thunder = 0

Hail=>5mm = 0 Hail<5mm or ice = 1 Fog at 09GMT = 1

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.

Maximum daily rain rate in mm/hr

All temperatures in degrees Celsius.

Anomaly - Departure from the 1991 to 2020 climatological average

Weather observations. Emmbrook, Wokingham, Berkshire.

Observations at 0900 GMT for MARCH 2021

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cm	Ch	NChshs	NChshs	NChshs	Date	Remarks
1	40	7	06	04	11	5.8	4.1	89	5.0	1032.5	4	000	05	2	2	7	6	3	/	/		85708	87710		1	
2	27	8	04	04	11	3.5	1.7	88	4.2	1031.2	3	011	05	2	2	8	6	3	/	/		88706			2	
3	03	9	06	04	08	4.3	4.2	99	5.0	1029.0	1	006	43	4	4	9	/	/	/	/					3	
4	57	8	01	06	12	4.1	3.1	93	4.7	1025.1	2	014	05	6	2	8	5	3	/	/		87708	88618		4	
5	82	6	04	07	13	3.8	0.1	77	3.8	1031.9	2	016	03	1	1	6	8	5	0	0		81820	86640		5	Cu hum
6	86	7	04	04	07	3.3	0.0	79	3.7	1035.6	1	003	02	2	2	7	5	6	/	/		81635	87640		6	
7	82	8	36	04	08	3.1	-3.9	60	2.8	1029.1	4	000	02	2	2	8	5	6	/	/		88638			7	
8	58	7	19	03	05	3.0	-0.6	77	3.6	1025.3	1	004	05	2	2	7	5	7	/	/		87656			8	
9	62	2	25	05	09	4.0	0.9	80	4.0	1021.9	1	002	01	1	1	2	0	9	3	1		82359			9	1Ci78
10	50	8	20	13	25	6.9	5.2	89	5.5	1010.6	6	020	61	6	2	7	7	3	2	/		83709	87712	88540	10	
11	70	6	24	17	34	9.7	5.1	73	5.5	994.8	3	045	80	8	2	6	8	5	0	2		85820	83640		11	2Ci70 Rainbow
12	70	7	23	09	21	5.8	4.0	88	5.1	1002.5	6	013	21	6	1	2	5	3	7	/		81706	85359	87463	12	2Sc30 vv50k exE
13	84	6	26	16	33	7.2	1.5	67	4.3	994.1	3	032	03	8	2	6	8	5	0	0		85828			13	2Sc40 Cu hum
14	83	7	27	09	20	8.4	3.1	69	4.7	1014.8	2	026	03	1	1	1	1	5	0	4		81822	84070	86075	14	Cu fra
15	75	7	32	09	18	9.6	4.6	71	5.2	1020.3	1	021	02	2	2	3	8	5	0	1		82822	86078		15	2Sc50 COTRA Cu med
16	70	7	28	08	15	11.1	8.1	82	6.6	1026.9	2	005	01	6	2	5	5	4	0	1		81712	84640	86075	16	2Sc30 COTRA
17	58	8	30	05	10	5.7	4.0	89	4.9	1034.8	3	005	05	1	1	5	6	2	1	/		85705	88468		17	
18	60	7	32	09	14	7.7	3.9	77	4.9	1030.8	7	008	05	2	2	7	5	5	7	/		81628	83635	87645	18	/Ac58
19	84	7	04	06	16	7.2	4.3	82	5.1	1027.9	2	018	01	6	2	7	5	4	/	/		82710	87613		19	
20	65	8	27	02	05	6.7	3.7	81	4.8	1033.2	2	003	02	2	2	8	5	4	/	/		86613	88620		20	
21	83	7	02	05	11	8.8	4.6	75	5.2	1029.9	1	010	02	2	2	7	8	4	/	/		81813	87650		21	2Sc40 Cu hum
22	60	1	32	03	06	7.6	3.1	73	4.7	1027.7	2	005	05	1	1	1	5	6	0	0		81635			22	
23	61	8	21	04	07	7.4	4.0	79	5.0	1025.5	0	003	02	2	2	8	5	6	/	/		88630			23	
24	50	7	22	08	13	8.9	6.7	86	6.0	1021.5	2	002	05	2	2	2	5	6	7	8		82640	86364	87270	24	
25	65	7	20	08	14	8.7	6.2	84	5.8	1020.2	1	003	21	6	2	7	5	3	/	/		84709	83625	87650	25	2Sc018
26	65	7	19	12	23	10.1	7.3	83	6.4	1009.2	7	012	80	8	6	7	8	4	/	/		86815	87645		26	Cu med
27	80	3	25	11	24	7.3	1.2	65	4.1	1021.9	2	031	03	0	0	1	1	5	0	1		81820	83078		27	COTRA Cu hum
28	67	8	22	12	25	10.6	6.0	73	5.7	1022.5	2	009	02	5	2	8	5	5	/	/		87620	87625		28	
29	68	8	22	11	19	10.7	7.6	81	6.4	1027.1	1	015	02	2	2	8	5	4	/	/		87710	88615		29	
30	63	3	01	02	05	10.3	6.8	79	6.0	1029.4	4	000	03	0	0	0	0	9	0	2		83080			30	
31	59	8	33	02	04	14.6	7.9	64	6.5	1020.6	7	005	05	2	2	3	0	9	7	7		81361	83365	88273	31	Sky turbid

Mean vis = 20.3 km
Mean cloud = 6.6 83%
Mean wind speed = 7.2 kn
Mean gust = 14 kn
Mean TT = 7.3 °C
Mean TdTd = 3.8 °C
Mean RH = 79.1 %
Mean r = 5.0 g/kg
Mean PPP = 1022.8 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 MARCH 2021

Date	VV	N	dd	ff	gg	TT	TdTd	RH	r	PPP	a	ppp	ww	W1	W2	Nh	Cl	h	Cr	Cm	Ch	NChshs	NChshs	NChshs	Date	Remarks
1	57	0	06	09	15	11.0	3.8	61	4.9	1030.3	6	016	05	0	0	0	0	9	0	0					1	
2	50	1	05	06	11	8.8	4.0	72	5.0	1029.1	7	017	05	1	1	1	6	4	0	0		81712			2	
3	09	8	02	04	07	6.9	6.5	96	5.8	1026.7	7	015	61	6	4	4	7	2	2	/		83703	88550		3	2St12
4	80	8	03	06	12	5.0	1.8	80	4.3	1025.3	6	003	02	5	2	8	5	5	/	/		87620	88628		4	
5	83	7	05	07	14	5.6	-3.0	54	3.0	1032.8	7	004	02	2	2	7	5	6	/	/		87640			5	
6	86	5	07	06	11	6.7	-3.0	50	3.0	1032.7	7	023	01	1	1	5	5	6	0	0		81637	85642		6	
7	62	2	03	03	11	6.3	-4.2	47	2.7	1026.0	7	024	01	1	1	2	5	6	0	0		82640			7	
8	81	6	32	03	07	10.6	0.1	48	3.8	1022.8	6	020	01	2	2	1	1	6	4	1		81835	86073		8	1Ac65 Cu hum CZ arc
9	84	6	27	07	16	12.0	1.3	48	4.1	1019.3	6	013	03	1	1	1	1	6	0	5		81842	86078		9	2Cs75 Cu hum
10	58	8	20	15	31	8.2	7.0	92	6.3	1003.8	7	038	61	6	2	8	5	3	/	/		87707	88615		10	
11	75	3	25	14	33	8.9	3.3	68	4.9	998.6	2	013	27	8	1	1	9	5	6	3		81920	83068		11	1Cu25 1Sc50 1Ac63 jpS vv50k exS
12	84	5	25	15	32	10.3	0.1	49	3.8	1001.9	7	009	15	8	1	3	8	6	4	1		83840	83072		12	1Sc50 1Ac65 Cu med jpS
13	86	6	25	12	32	10.4	0.2	49	3.9	997.9	1	012	16	1	1	4	3	6	6	3		81935	83842		13	1Sc56 1Ac65 3Ci68 Cu con jpNE
14	84	8	25	09	19	9.4	3.6	67	4.9	1016.4	8	003	21	6	2	3	8	6	7	/		82832	88460		14	2Sc50 1Ac58 Cu med
15	72	6	30	10	18	12.1	3.3	55	4.8	1022.9	2	009	25	8	2	6	8	6	0	1		82835	85656		15	2Ci78 Cu med
16	86	7	34	11	22	14.4	9.0	70	7.0	1027.0	3	005	03	2	2	7	8	5	/	/		85825	87632		16	Cu hum
17	68	3	02	05	11	9.9	3.6	65	4.8	1033.0	6	015	01	6	1	3	1	5	7	0		83825			17	1Ac62 Cu hum
18	65	8	01	05	13	9.5	5.9	78	5.7	1028.0	8	019	60	6	2	8	5	4	/	/		87619	88635		18	pptn v slt
19	84	5	01	08	15	11.2	3.0	57	4.6	1029.1	7	001	02	1	1	5	8	5	0	1		82828	84635		19	2Ci75 Cu hum
20	68	8	30	04	10	10.0	5.6	74	5.5	1030.7	7	016	01	2	2	8	8	5	/	/		83820	88630		20	Cu hum
21	84	7	02	05	11	11.6	2.1	52	4.3	1028.6	7	013	02	2	2	7	8	6	/	1		81835	87640		21	/Ci78 COTRA Cu hum
22	67	3	25	07	13	13.8	4.1	52	5.0	1025.2	7	019	02	0	0	1	4	6	0	1		81836	83080		22	1Sc40 COTRA Cu hum
23	70	3	23	09	20	12.7	3.6	54	4.9	1023.2	7	016	01	1	1	3	5	6	0	0		83635			23	
24	70	7	23	08	13	12.1	6.8	70	6.1	1020.1	6	008	15	2	2	7	5	5	/	/		86620	87640		24	jpS vv30k NW
25	80	5	20	13	24	12.6	7.1	69	6.2	1017.2	7	018	25	8	2	5	8	4	0	0		83818	83645		25	Cu med
26	81	7	24	08	25	8.1	3.4	72	4.8	1008.9	1	003	25	8	6	2	8	5	7	/		81820	87462		26	2Sc40 2Ac58 Cu con Cld edge NW vv70k ex E
27	84	7	25	10	17	10.8	1.6	53	4.2	1023.5	0	003	02	2	2	7	8	6	/	1		83840	87650		27	/Ci75
28	68	7	22	12	26	12.1	7.6	74	6.4	1023.4	0	001	02	2	2	7	5	4	/	/		87618	87625		28	
29	78	0	21	10	18	18.4	6.3	45	5.8	1027.3	6	002	02	0	0	0	0	9	0	0					29	
30	81	2	21	06	14	22.9	2.9	27	4.6	1025.7	8	016	02	0	0	0	0	9	0	2		82080			30	El hz
31	70	8	19	05	10	20.3	8.0	45	6.6	1018.4	7	011	02	2	2	5	0	9	7	7		85362	88270		31	thick el hz

Mean vis = 30.4 km
Mean cloud = 5.4 67%
Mean wind speed = 8.1 kn
Mean gust = 17 kn
Mean TT = 11.1 °C
Mean TdTd = 3.4 °C
Mean RH = 61.1 %
Mean r = 4.9 g/kg
Mean PPP = 1021.8 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

Wokingham Sunshine Hourly analysis

2021

Hour	01-Mar	02-Mar	03-Mar	04-Mar	05-Mar	06-Mar	07-Mar	08-Mar	09-Mar	10-Mar	11-Mar	12-Mar	13-Mar	14-Mar	15-Mar	16-Mar
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	0.00
6	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.14	0.00	0.00	0.24	0.00	0.43	0.00	0.00
7	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.24	0.00	0.05	0.36	0.45	1.00	0.00	0.00
8	0.00	0.00	0.00	0.08	0.39	0.01	0.00	0.00	1.00	0.00	0.21	0.00	0.25	0.73	0.58	0.00
9	0.00	0.00	0.00	0.00	0.31	0.01	0.00	0.00	1.00	0.00	0.39	0.01	0.07	0.65	0.12	0.26
10	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.44	0.31	0.56	0.23	0.05	0.00
11	0.94	0.00	0.00	0.00	0.00	0.03	0.03	0.30	1.00	0.00	0.89	0.62	0.18	0.00	0.00	0.00
12	1.00	0.00	0.00	0.00	0.00	0.06	1.00	0.04	1.00	0.00	0.49	0.16	0.83	0.00	0.37	0.03
13	1.00	0.51	0.00	0.00	0.00	0.02	1.00	0.00	1.00	0.00	0.48	0.36	0.70	0.00	0.15	0.07
14	1.00	1.00	0.00	0.00	0.00	0.29	1.00	0.59	1.00	0.00	0.34	0.49	0.73	0.00	0.33	0.07
15	1.00	1.00	0.00	0.00	0.00	0.85	1.00	0.93	1.00	0.00	0.94	0.69	0.28	0.00	0.42	0.07
16	1.00	0.96	0.00	0.00	0.00	0.15	1.00	1.00	0.75	0.00	0.21	0.44	0.00	0.00	0.62	0.73
17	0.47	0.00	0.00	0.00	0.00	0.50	0.64	0.54	0.00	0.00	0.23	0.07	0.63	0.00	0.80	0.87
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	0.00	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
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	**6.57**	**3.48**	**0.00**	**0.08**	**1.81**	**1.90**	**5.67**	**3.40**	**9.13**	**0.00**	**4.67**	**3.75**	**4.68**	**3.03**	**3.44**	**2.12**

Hour	17-Mar	18-Mar	19-Mar	20-Mar	21-Mar	22-Mar	23-Mar	24-Mar	25-Mar	26-Mar	27-Mar	28-Mar	29-Mar	30-Mar	31-Mar	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	0.04	0.00	0.00
6	0.27	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.63	0.00	0.91	0.00	0.00	1.00	0.43	0.14
7	0.66	0.00	0.00	0.00	0.00	0.79	0.00	0.16	0.12	0.03	1.00	0.00	0.00	1.00	0.32	0.23
8	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.07	0.07	1.00	0.00	0.00	1.00	0.12	0.21
9	0.00	0.00	0.23	0.00	0.20	1.00	0.00	0.16	0.00	0.07	1.00	0.00	0.00	1.00	0.00	0.21
10	0.00	0.00	0.86	0.00	0.88	1.00	0.00	0.00	0.14	0.00	0.56	0.00	0.18	1.00	0.00	0.24
11	0.00	0.00	1.00	0.00	0.53	1.00	0.00	0.00	0.25	0.00	0.42	0.00	0.89	1.00	0.00	0.29
12	0.00	0.00	1.00	0.00	0.00	0.99	0.01	0.01	0.00	0.00	0.05	0.00	1.00	1.00	0.00	0.29
13	0.04	0.00	0.88	0.00	0.00	0.94	0.04	0.00	0.15	0.00	0.09	0.00	1.00	1.00	0.00	0.30
14	0.79	0.00	0.48	0.00	0.16	1.00	0.61	0.00	0.24	0.00	0.05	0.00	1.00	1.00	0.00	0.39
15	0.80	0.00	0.40	0.00	0.36	1.00	1.00	0.02	0.71	0.00	0.17	0.00	1.00	1.00	0.00	0.47
16	0.66	0.00	0.25	0.00	0.00	1.00	1.00	0.09	0.37	0.09	0.00	0.00	1.00	1.00	0.00	0.40
17	0.51	0.00	0.36	0.00	0.00	1.00	0.93	0.39	0.36	0.10	0.00	0.00	1.00	0.84	0.00	0.33
18	0.00	0.00	0.00	0.00	0.00	0.08	0.07	0.02	0.05	0.15	0.00	0.00	0.42	0.00	0.00	0.03
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot	**3.73**	**0.00**	**5.48**	**0.00**	**2.13**	**10.86**	**3.65**	**0.86**	**3.10**	**0.51**	**5.26**	**0.00**	**7.49**	**11.87**	**0.86**	**109.56**

March 2021	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	5.86	11.8	1336	1.7	113	83.5	96.4	601	57.6	1411	3.1	4.6	5.3	1149	4.0	111	1031.73	1034.3	20	1029.9	1646	0
2	4.35	8.9	1431	0.9	2355	87.0	97.2	2359	70.5	1353	2.3	4.4	5.1	1348	3.8	2355	1030.06	1031.2	900	1028.5	1645	0
3	5.44	8.3	1345	0.8	9	96.7	98.9	939	85.4	1338	5.0	5.3	6.0	1849	3.8	7	1027.44	1029.7	0	1024.5	2352	6.8
4	4.68	6.5	5	3.4	2126	89.0	98.5	36	68.4	2243	3.0	4.7	5.8	5	3.3	2340	1025.48	1028.7	2340	1023.6	349	0.5
5	3.36	6.0	1303	-0.9	2359	69.9	92.7	639	52.2	1138	-1.8	3.3	3.9	918	2.7	1130	1032.29	1035.4	2255	1028.5	3	0
6	2.39	8.0	1509	-2.3	123	73.8	93.3	333	45.0	1533	-2.2	3.2	3.8	1045	2.8	1407	1033.86	1035.7	914	1031.2	2359	0
7	2.07	6.8	1450	-1.6	2155	70.2	90.9	2157	44.2	1450	-3.2	3.0	3.4	408	2.4	1146	1027.77	1031.3	0	1025.2	1635	0
8	4.62	10.7	1456	-0.8	410	70.9	87.7	602	45.9	1533	-0.5	3.6	4.4	1147	3.0	403	1023.96	1026.0	1	1022.1	1637	0
9	6.10	12.9	1305	-1.6	615	71.1	96.9	659	42.0	1357	0.7	4.0	4.7	2348	3.2	615	1020.20	1022.3	35	1016.5	2353	0
10	8.06	11.1	2353	6.1	0	86.3	95.3	2121	71.0	550	5.9	5.8	7.5	2129	4.3	550	1006.47	1016.6	0	993.4	2359	2.8
11	8.37	11.5	1208	4.1	2328	74.1	93.9	59	56.6	1349	4.0	5.2	7.4	105	4.0	2031	997.19	1006.7	2359	990.0	536	6.1
12	6.93	10.9	1442	3.7	59	76.7	91.7	2357	47.7	1505	2.9	4.7	5.7	2359	3.7	1505	1001.97	1006.9	21	991.7	2359	3.7
13	6.41	10.8	1328	3.5	2145	69.5	91.7	1	43.6	1604	1.0	4.2	5.8	33	3.1	1604	996.76	1005.7	2358	989.9	300	2.3
14	7.80	9.9	1248	4.9	543	72.8	84.8	2237	55.2	1335	3.1	4.8	6.0	2239	4.1	1335	1013.89	1017.2	1253	1005.5	0	0.1
15	9.17	12.9	1522	6.0	2009	70.7	91.0	214	51.7	1709	3.9	5.0	6.0	212	4.4	1709	1021.49	1027.2	2359	1015.4	0	1.1
16	10.12	15.2	1430	6.6	241	76.1	90.0	721	64.5	1625	6.0	5.8	7.1	1429	4.5	2343	1028.25	1033.7	2354	1026.0	1357	0
17	6.25	11.0	1559	1.4	2359	80.2	94.8	2344	55.5	1613	3.0	4.6	5.2	1334	3.9	2359	1033.80	1035.1	818	1032.5	1617	0.1
18	7.28	10.4	1316	1.0	31	82.6	96.9	246	67.4	1317	4.4	5.2	6.4	2357	3.8	29	1029.09	1033.8	2	1024.0	2346	0
19	7.90	13.1	1307	2.0	2346	76.9	95.2	20	41.4	1319	3.7	4.9	6.4	13	3.8	1312	1028.61	1033.1	2346	1024.0	0	0.3
20	7.17	10.6	1557	1.3	103	82.5	95.7	152	70.8	1553	4.3	5.1	5.8	1916	3.9	33	1031.46	1033.5	129	1028.6	2233	0
21	8.50	12.8	1523	3.1	2357	72.0	91.5	2358	48.3	1526	3.5	4.8	5.4	804	4.2	1509	1028.96	1030.5	1037	1027.8	1548	0
22	7.82	13.8	1459	2.6	2357	74.5	93.8	2359	48.2	1535	3.2	4.7	5.4	1224	4.2	2356	1026.64	1028.5	9	1024.6	1652	0
23	6.59	12.7	1435	0.1	538	79.2	97.7	547	53.9	1452	2.9	4.6	5.3	1327	3.7	538	1024.23	1026.2	31	1022.1	1630	0
24	7.57	13.1	1255	0.8	521	85.5	98.0	723	62.3	1302	5.2	5.5	6.6	1530	3.8	521	1020.94	1022.5	0	1019.8	1611	0
25	7.99	13.5	1306	1.3	610	83.8	97.6	644	64.8	1320	5.3	5.5	6.5	1050	4.0	610	1018.29	1020.5	37	1014.4	2354	0
26	8.16	11.7	1105	3.5	2359	81.7	92.2	722	69.0	1706	5.2	5.5	6.7	817	3.9	2111	1010.71	1014.5	1	1007.5	1142	5.2
27	7.11	11.5	1538	2.2	344	71.8	91.8	27	45.8	1208	2.1	4.4	5.5	2358	3.4	1123	1021.13	1023.9	1329	1014.0	1	0
28	10.45	12.5	1522	8.6	9	75.5	81.0	15	70.2	757	6.3	5.9	6.5	1418	5.4	754	1023.01	1024.9	2355	1021.1	521	0
29	11.70	18.9	1408	4.2	2355	72.5	93.5	2357	42.3	1442	6.5	5.9	7.3	1223	4.7	2346	1027.08	1030.0	2344	1024.4	250	0
30	11.40	23.6	1348	0.7	541	66.0	98.0	600	21.4	1443	3.4	4.8	7.1	1036	3.7	1443	1027.20	1030.0	103	1023.6	2352	0
31	13.00	20.3	1454	5.3	209	70.1	90.7	227	44.1	1501	7.2	6.3	7.9	1104	4.9	122	1020.22	1023.7	0	1018.0	1647	0
Total																						29.0
Mean	7.25	11.99		2.34		77.2	93.53		55.05		3.21	4.81	5.88		3.82		1022.26	1025.78		1018.33		
Max	13.00	23.61		8.58		96.7	98.90		85.40		7.17	6.28	7.94		5.37		1033.86	1035.72		1032.53		
Min	2.07	5.96		-2.26		66.0	81.00		21.38		-3.16	2.96	3.36		2.44		996.76	1005.72		989.94		

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

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

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

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

Appendix 1.

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

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

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

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

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

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

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

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

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

Temperature: The terms cold/mild are used in the winter half year, and cool/warm in the summer half.
The term 'normal' is used when the individual mean (monthly, seasonal or annual) value is within 20 % of the median of all ranked values for that month/season/year.
Mild/warm: The value lies between 10 % and 30 % below the highest value in the ranked series.
Very mild/very warm: The value lies within 10 % of the highest value in the ranked series.
Cold/cool: The value lies between 10 % and 30 % above the lowest value in the ranked series.
Very cold/very cool: The value lies within 10 % of the lowest value in the ranked series.

Sunshine: The terms for sunshine are very sunny, sunny, normal, dull and very dull.
The definition of these terms follow the same rules as for temperature.

Rainfall: The terms for rainfall are very dry, dry, normal, wet and very wet.
The definition of the term 'normal' follows the same rule as for temperature and sunshine.
Wet: The value lies between 10 % and 30% of the highest value in the ranked series.
Very wet: The value lies within 10 % of the highest value in the ranked series.
Dry: The value lies between 10 % and 30 % above the lowest value in the ranked series.
Very dry: The value lies within 10 % of the lowest value in the ranked series.

Long-term: Mention may be made in the reports to the 'long-term'. The long-term record comprises a temperature/rainfall/sunshine data series compiled from records of various weather stations in the Wokingham area in the years prior to the establishment of the weather station at Emmbrook in 1976 together with data from this station.
In the case of monthly max, min and mean temperature and of rainfall total the series starts in 1882. For temperature extremes, the highest max and lowest min go back to 1904, and lowest max and highest min to 1913.

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

Month: Calendar month.
Season: Spring, March to May.
Summer, June to August
Autumn, September to November
Winter, December to February.
When discussing 'winter', if a single year is given this refers to the year in which the January/February fall.
Annual or Year: The calendar year, 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.

B J Burton. 3 August 2009. Updated 4 May 2014.

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 of 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.