

Table 2.14(h) Air and corresponding sol-air temperatures: Manchester (Hulme Library) (January 2002–December 2011)

January 21

Time*	Air temp.	Sol-air temperature (°C) for stated orientation and surface colour																	
		Horizontal		North		North-east		East		South-east		South		South-west		West		North-west	
		Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light
0030	3.9	3.4	3.4	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
0130	4.0	3.5	3.5	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
0230	3.7	3.2	3.2	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
0330	2.6	0.0	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
0430	1.2	-2.1	-2.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0530	1.6	-1.7	-1.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
0630	1.3	-2.0	-2.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0730	1.1	-2.2	-2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0830	1.5	-0.9	-1.3	1.0	0.7	1.0	0.7	1.0	0.7	1.0	0.7	1.0	0.7	1.0	0.7	1.0	0.7	1.0	0.7
0930	2.6	3.2	1.4	3.2	2.4	3.2	2.4	19.5	11.5	28.5	16.5	22.7	13.3	5.4	3.7	3.2	2.4	3.2	2.4
1030	5.0	8.7	5.6	6.6	5.4	6.6	5.4	20.8	13.3	36.9	22.2	35.2	21.2	16.6	11.0	6.6	5.4	6.6	5.4
1130	5.1	10.8	6.8	7.5	5.9	7.5	5.9	14.5	9.8	35.7	21.6	40.3	24.1	25.5	15.9	7.5	5.9	7.5	5.9
1230	5.3	11.7	7.4	7.9	6.3	7.9	6.3	7.9	6.3	31.2	19.2	42.4	25.4	33.2	20.3	9.1	6.9	7.9	6.3
1330	5.8	11.3	7.4	8.1	6.6	8.1	6.6	8.1	6.6	24.3	15.6	41.2	25.0	38.7	23.5	18.0	12.1	8.1	6.6
1430	6.0	9.3	6.3	7.4	6.3	7.4	6.3	7.4	6.3	15.7	10.9	36.9	22.6	40.8	24.8	25.0	16.1	7.4	6.3
1530	4.5	4.6	3.1	5.4	4.5	5.6	4.6	5.4	4.5	5.2	4.4	5.4	4.5	5.6	4.6	5.4	4.5	5.2	4.4
1630	2.8	0.0	-0.2	2.0	1.9	2.0	1.9	2.0	1.9	2.0	1.8	2.0	1.9	2.0	1.9	2.0	1.9	2.0	1.8
1730	2.5	-0.8	-0.8	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
1830	1.1	-2.2	-2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1930	0.9	-2.4	-2.4	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
2030	-0.5	-3.8	-3.8	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6
2130	-1.4	-4.7	-4.7	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5
2230	-1.2	-4.5	-4.5	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3
2330	3.7	3.2	3.2	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Mean	2.6	1.9	0.9	2.5	2.1	2.5	2.1	4.1	3.0	8.0	5.2	9.9	6.3	7.5	4.9	3.7	2.8	2.5	2.1

* Greenwich Mean Time

February 21

Time*	Air temp.	Sol-air temperature (°C) for stated orientation and surface colour																	
		Horizontal		North		North-east		East		South-east		South		South-west		West		North-west	
		Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light
0030	-1.4	-4.7	-4.7	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5
0130	-1.2	-4.5	-4.5	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3
0230	-1.0	-4.3	-4.3	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1
0330	-1.2	-4.5	-4.5	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3
0430	-1.1	-4.4	-4.4	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2
0530	-1.2	-4.5	-4.5	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3	-2.3
0630	-1.6	-4.9	-4.9	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7
0730	-2.0	-5.0	-5.2	-2.9	-3.0	-2.9	-3.0	-2.9	-3.0	-2.9	-3.0	-2.9	-3.0	-2.9	-3.0	-2.9	-3.0	-2.9	-3.0
0830	0.5	0.9	-0.8	1.3	0.4	4.9	2.4	14.3	7.7	16.3	8.8	9.6	5.1	1.3	0.4	1.3	0.4	1.3	0.4
0930	2.9	8.4	4.5	5.2	3.7	5.2	3.7	27.9	16.3	37.6	21.7	28.3	16.5	5.4	3.8	5.2	3.7	5.2	3.7
1030	3.7	13.7	7.8	8.1	5.6	8.1	5.6	25.1	15.1	41.3	24.1	37.8	22.2	16.7	10.4	8.1	5.6	8.1	5.6
1130	4.6	17.4	10.2	10.8	7.6	10.8	7.6	18.5	11.8	38.1	22.7	41.6	24.6	26.9	16.5	10.8	7.6	10.8	7.6
1230	5.3	18.8	11.3	11.9	8.5	11.9	8.5	11.9	8.5	33.1	20.2	43.1	25.8	34.6	21.1	12.8	8.9	11.9	8.5
1330	5.2	17.3	10.4	10.7	7.8	10.7	7.8	10.7	7.8	25.4	15.9	42.2	25.2	40.2	24.2	20.8	13.4	10.7	7.8
1430	5.2	14.0	8.6	8.9	6.7	8.9	6.7	8.9	6.7	15.4	10.3	37.4	22.6	42.5	25.4	27.7	17.2	8.9	6.7
1530	4.4	8.7	5.3	6.3	5.0	6.3	5.0	6.3	5.0	6.3	5.0	26.2	16.0	36.0	21.4	28.3	17.2	7.7	5.7
1630	2.7	2.2	0.9	3.1	2.4	3.1	2.4	3.1	2.4	3.1	2.4	8.7	5.5	13.9	8.4	13.0	7.9	6.4	4.2
1730	1.2	-2.1	-2.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
1830	-1.1	-4.4	-4.4	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2
1930	-2.1	-5.4	-5.4	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2
2030	-2.9	-6.2	-6.2	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0
2130	-3.6	-6.9	-6.9	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7	-4.7
2230	-4.2	-7.5	-7.5	-5.3	-5.3	-5.3	-5.3	-5.3	-5.3	-5.3	-5.3	-5.3	-5.3	-5.3	-5.3	-5.3	-5.3	-5.3	-5.3
2330	-0.7	-4.0	-4.0	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8	-1.8
Mean	0.4	1.1	-0.7	1.1	0.3	1.2	0.4	3.6	1.7	7.3	3.8	9.8	5.1	7.4	3.8	3.6	1.7	1.3	0.4

* Greenwich Mean Time

Table 2.14(h) Air and corresponding sol-air temperatures: Manchester (Hulme Library) (January 2002–December 2011) — *continued*

March 21

Time*	Air temp.	Sol-air temperature ($^{\circ}$ C) for stated orientation and surface colour																	
		Horizontal		North		North-east		East		South-east		South		South-west		West		North-west	
		Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light
0030	-3.5	-6.8	-6.8	-4.6	-4.6	-4.6	-4.6	-4.6	-4.6	-4.6	-4.6	-4.6	-4.6	-4.6	-4.6	-4.6	-4.6	-4.6	-4.6
0130	-4.3	-7.6	-7.6	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4
0230	-6.2	-9.5	-9.5	-7.3	-7.3	-7.3	-7.3	-7.3	-7.3	-7.3	-7.3	-7.3	-7.3	-7.3	-7.3	-7.3	-7.3	-7.3	-7.3
0330	-6.7	-10.0	-10.0	-7.8	-7.8	-7.8	-7.8	-7.8	-7.8	-7.8	-7.8	-7.8	-7.8	-7.8	-7.8	-7.8	-7.8	-7.8	-7.8
0430	-7.2	-10.5	-10.5	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3
0530	-7.5	-10.8	-10.8	-8.6	-8.6	-8.6	-8.6	-8.6	-8.6	-8.6	-8.6	-8.6	-8.6	-8.6	-8.6	-8.6	-8.6	-8.6	-8.6
0630	-7.3	-10.5	-10.6	-8.3	-8.4	-8.3	-8.4	-8.3	-8.4	-8.3	-8.4	-8.3	-8.4	-8.3	-8.4	-8.3	-8.4	-8.3	-8.4
0730	-4.6	-4.1	-5.8	-3.5	-4.5	0.8	-2.1	4.4	-0.1	3.6	-0.6	-1.1	-3.2	-3.5	-4.5	-3.5	-4.5	-3.5	-4.5
0830	-0.9	5.8	1.3	2.0	0.2	10.5	5.0	27.8	14.5	29.9	15.7	15.5	7.7	2.0	0.2	2.0	0.2	2.0	0.2
0930	2.6	15.2	8.1	7.1	4.6	8.3	5.3	34.3	19.7	44.0	25.1	31.5	18.2	7.1	4.6	7.1	4.6	7.1	4.6
1030	3.7	20.8	11.7	9.8	6.6	9.8	6.6	29.2	17.3	46.3	26.9	41.4	24.2	17.3	10.8	9.8	6.6	9.8	6.6
1130	5.5	25.3	15.0	12.7	9.0	12.7	9.0	20.8	13.5	44.1	26.4	48.2	28.7	30.7	19.0	12.7	9.0	12.7	9.0
1230	7.1	27.5	16.9	14.5	10.7	14.5	10.7	14.5	10.7	37.8	23.6	50.8	30.9	41.7	25.8	15.9	11.5	14.5	10.7
1330	7.9	26.9	16.9	14.7	11.2	14.7	11.2	14.7	11.2	28.1	18.6	49.0	30.2	49.0	30.2	28.3	18.7	14.7	11.2
1430	8.9	23.6	15.6	14.1	11.3	14.1	11.3	14.1	11.3	16.7	12.7	41.7	26.6	50.0	31.2	36.8	23.9	14.1	11.3
1530	8.7	19.2	13.5	12.7	10.6	12.7	10.6	12.7	10.6	12.7	10.6	30.9	20.7	43.9	27.9	38.5	24.9	17.8	13.4
1630	6.8	9.7	7.1	9.0	7.6	9.0	7.6	9.0	7.6	9.0	7.6	13.5	10.1	19.4	13.4	19.5	13.4	13.8	10.3
1730	5.2	3.3	2.6	5.1	4.6	5.1	4.6	5.1	4.6	5.1	4.6	5.2	4.7	5.5	4.9	5.6	4.9	5.4	4.8
1830	2.1	-1.2	-1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
1930	1.8	0.9	0.9	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
2030	3.0	2.5	2.5	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
2130	1.2	-1.8	-1.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
2230	-1.5	-4.8	-4.8	-2.6	-2.6	-2.6	-2.6	-2.6	-2.6	-2.6	-2.6	-2.6	-2.6	-2.6	-2.6	-2.6	-2.6	-2.6	-2.6
2330	-3.2	-6.5	-6.5	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3
Mean	0.5	4.0	1.1	1.9	0.8	2.5	1.1	5.6	2.9	9.4	5.0	11.4	6.1	8.8	4.6	5.0	2.5	2.3	1.1

* Greenwich Mean Time

April 21

Time*	Air temp.	Sol-air temperature ($^{\circ}$ C) for stated orientation and surface colour																	
		Horizontal		North		North-east		East		South-east		South		South-west		West		North-west	
		Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light
0030	6.9	6.0	6.0	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
0130	6.4	5.5	5.5	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
0230	6.1	5.2	5.2	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
0330	5.7	4.8	4.8	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
0430	5.7	4.8	4.8	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
0530	5.2	4.1	3.9	5.1	4.9	5.1	4.9	5.1	4.9	5.1	4.9	5.1	4.9	5.1	4.9	5.1	4.9	5.1	4.9
0630	5.5	7.0	5.3	7.8	6.4	10.8	8.1	11.9	8.7	10.5	7.9	7.0	6.0	7.0	6.0	7.0	6.0	7.0	6.0
0730	7.1	15.6	10.7	10.6	8.6	27.5	18.0	39.4	24.7	34.3	21.8	15.2	11.2	10.6	8.6	10.6	8.6	10.6	8.6
0830	8.6	22.5	15.0	13.6	10.9	25.7	17.6	43.9	27.7	44.0	27.8	25.9	17.8	13.6	10.9	13.6	10.9	13.6	10.9
0930	9.2	29.3	19.2	16.2	12.7	19.4	14.5	42.7	27.4	49.8	31.4	36.5	24.0	16.2	12.7	16.2	12.7	16.2	12.7
1030	9.8	32.4	21.0	17.7	13.8	17.7	13.8	34.4	23.0	47.6	30.4	42.6	27.6	22.2	16.3	17.7	13.8	17.7	13.8
1130	9.8	35.5	22.7	19.1	14.5	19.1	14.5	24.9	17.7	44.0	28.3	47.6	30.3	33.5	22.5	19.1	14.5	19.1	14.5
1230	11.4	37.2	24.4	20.7	16.1	20.7	16.1	20.7	16.1	37.4	25.4	49.4	32.1	43.6	28.8	23.4	17.6	20.7	16.1
1330	12.3	36.7	24.5	21.1	16.7	21.1	16.7	21.1	16.7	28.3	20.7	47.7	31.5	50.6	33.2	35.3	24.6	21.1	16.7
1430	12.1	33.6	22.7	19.8	15.9	19.8	15.9	19.8	15.9	19.8	15.9	42.1	28.3	53.6	34.7	44.5	29.7	20.2	16.1
1530	12.1	29.0	20.1	18.0	14.9	18.0	14.9	18.0	14.9	18.0	14.9	33.7	23.7	52.6	34.2	50.7	33.1	29.0	21.0
1630	11.3	22.4	16.1	15.2	13.0	15.2	13.0	15.2	13.0	15.2	13.0	22.8	17.2	46.1	30.2	50.9	32.8	34.5	23.7
1730	10.8	15.5	12.1	12.9	11.5	12.9	11.5	12.9	11.5	12.9	11.5	13.0	11.5	33.0	22.7	41.2	27.2	32.8	22.6
1830	9.8	8.8	7.9	10.4	9.7	10.4	9.7	10.5	9.7	10.4	9.7	10.4	9.7	10.4	9.7	10.5	9.7	10.4	9.7
1930	8.8	5.8	5.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
2030	7.9	4.9	4.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
2130	6.2	3.2	3.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
2230	4.8	1.5	1.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
2330	7.2	6.3	6.3	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Mean	8.4	15.7	11.4	11.2	9.6	12.6	10.4	15.8	12.1	18.2	13.5	19.1	14.0	19.1	14.0	16.9	12.7	13.2	10.7

* Greenwich Mean Time

Table 2.14(h) Air and corresponding sol-air temperatures: Manchester (Hulme Library) (January 2002–December 2011) — continued

May 21

Time*	Air temp.	Sol-air temperature (°C) for stated orientation and surface colour																	
		Horizontal		North		North-east		East		South-east		South		South-west		West		North-west	
		Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light
0030	8.5	5.2	5.2	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
0130	8.0	4.7	4.7	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
0230	7.8	4.5	4.5	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
0330	8.0	4.7	4.7	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
0430	7.8	4.5	4.5	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
0530	8.6	7.4	6.4	9.2	8.4	9.4	8.5	9.4	8.6	9.2	8.4	9.1	8.4	9.1	8.4	9.1	8.4	9.1	8.4
0630	10.1	14.5	11.1	15.4	12.5	23.2	16.9	25.5	18.1	21.0	15.6	13.2	11.3	13.2	11.3	13.2	11.3	13.2	11.3
0730	12.4	23.4	17.0	17.2	14.5	34.2	24.0	43.3	29.0	37.0	25.5	18.9	15.5	17.2	14.5	17.2	14.5	17.2	14.5
0830	14.0	31.9	22.5	19.6	16.6	34.9	25.1	52.2	34.7	49.8	33.4	29.1	21.9	19.6	16.6	19.6	16.6	19.6	16.6
0930	15.2	39.1	27.0	21.2	18.0	27.6	21.6	50.9	34.5	56.0	37.4	39.8	28.4	21.2	18.0	21.2	18.0	21.2	18.0
1030	16.3	44.3	30.4	22.7	19.4	22.7	19.4	42.6	30.4	55.6	37.6	48.4	33.6	25.2	20.7	22.7	19.4	22.7	19.4
1130	17.1	47.2	32.3	23.8	20.3	23.8	20.3	30.5	24.1	50.0	34.9	53.2	36.6	38.1	28.3	23.8	20.3	23.8	20.3
1230	17.9	48.4	33.3	24.6	21.1	24.6	21.1	24.6	21.1	41.2	30.3	54.5	37.7	49.4	34.9	28.7	23.4	24.6	21.1
1330	17.9	46.9	32.5	24.3	20.9	24.3	20.9	24.3	20.9	29.2	23.7	51.5	36.0	56.9	39.0	42.2	30.9	24.3	20.9
1430	17.7	43.2	30.4	23.6	20.5	23.6	20.5	23.6	20.5	23.6	20.5	44.6	32.2	59.9	40.6	53.0	36.8	28.0	22.9
1530	17.3	37.4	27.0	22.7	19.8	22.7	19.8	22.7	19.8	22.7	19.8	34.9	26.6	56.9	38.8	58.2	39.5	37.9	28.2
1630	16.1	29.5	22.1	20.8	18.2	20.8	18.2	20.8	18.2	20.8	18.2	24.0	20.0	46.9	32.7	54.0	36.7	41.3	29.6
1730	15.0	22.2	17.5	20.8	17.7	18.4	16.4	18.4	16.4	18.4	16.4	18.4	16.4	34.6	25.4	43.7	30.5	38.0	27.3
1830	13.8	14.9	12.9	18.1	15.7	15.3	14.1	15.3	14.1	15.3	14.1	15.3	14.1	19.4	16.4	23.1	18.5	22.6	18.2
1930	11.9	9.3	9.0	11.4	11.1	11.4	11.1	11.4	11.1	11.4	11.1	11.4	11.1	11.4	11.1	11.4	11.1	11.4	11.1
2030	10.5	7.2	7.2	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
2130	9.8	6.5	6.5	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
2230	9.0	5.7	5.7	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
2330	8.7	5.7	5.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
Mean	12.5	21.2	15.8	15.1	13.5	16.9	14.4	20.1	16.2	22.0	17.3	22.3	17.4	22.8	17.7	21.2	16.8	17.6	14.8

* Greenwich Mean Time

June 21

Time*	Air temp.	Sol-air temperature (°C) for stated orientation and surface colour																	
		Horizontal		North		North-east		East		South-east		South		South-west		West		North-west	
		Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light
0030	3.9	0.6	0.6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
0130	4.1	0.8	0.8	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
0230	3.4	0.2	0.1	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
0330	2.2	-1.0	-1.1	1.2	1.1	1.2	1.1	1.2	1.1	1.2	1.1	1.2	1.1	1.2	1.1	1.2	1.1	1.2	1.1
0430	2.7	0.7	0.1	2.7	2.2	2.7	2.2	2.7	2.2	2.7	2.2	2.7	2.2	2.7	2.2	2.7	2.2	2.7	2.2
0530	5.4	6.9	4.8	11.4	8.2	16.9	11.3	17.0	11.3	11.5	8.3	7.0	5.8	7.0	5.8	7.0	5.8	7.0	5.8
0630	8.5	15.4	10.9	16.5	12.4	31.6	20.8	35.3	22.9	25.3	17.3	11.9	9.9	11.9	9.9	11.9	9.9	11.9	9.9
0730	10.0	23.4	16.1	14.9	12.2	36.8	24.5	46.7	29.9	37.5	24.8	14.7	12.1	14.9	12.2	14.9	12.2	14.9	12.2
0830	11.8	31.1	21.2	17.6	14.6	34.9	24.2	50.8	33.0	46.6	30.7	24.8	18.5	17.6	14.6	17.6	14.6	17.6	14.6
0930	13.6	37.7	25.6	20.2	16.8	28.1	21.2	48.0	32.2	50.7	33.8	34.8	24.9	20.2	16.8	20.2	16.8	20.2	16.8
1030	14.3	41.4	27.9	21.4	17.8	21.4	17.8	39.7	27.9	49.4	33.3	41.7	29.0	21.1	17.6	21.4	17.8	21.4	17.8
1130	15.6	44.7	30.3	23.1	19.2	23.1	19.2	29.8	23.0	45.3	31.6	46.7	32.4	33.2	24.9	23.1	19.2	23.1	19.2
1230	16.1	45.5	30.9	23.6	19.8	23.6	19.8	23.6	19.8	37.3	27.4	47.7	33.2	43.0	30.5	25.8	21.0	23.6	19.8
1330	17.3	42.2	29.6	25.6	21.4	25.6	21.4	25.6	21.4	28.5	23.0	43.1	31.1	46.7	33.1	37.1	27.8	25.6	21.4
1430	17.7	42.3	29.9	24.6	21.1	24.6	21.1	24.6	21.1	24.6	21.1	40.8	30.1	53.5	37.1	48.4	34.2	28.4	23.2
1530	18.3	39.3	28.5	24.2	21.1	24.2	21.1	24.2	21.1	24.2	21.1	34.4	26.7	54.8	38.1	56.6	39.1	38.6	29.1
1630	18.5	34.4	25.8	23.4	20.7	23.4	20.7	23.4	20.7	23.4	20.7	25.8	22.1	50.8	36.0	59.2	40.6	46.0	33.3
1730	17.7	27.3	21.5	24.8	21.1	21.6	19.3	21.6	19.3	21.6	19.3	21.6	19.3	40.1	29.6	51.5	36.0	45.2	32.4
1830	16.5	20.2	17.1	24.8	20.6	18.8	17.3	18.8	17.3	18.8	17.3	18.8	17.3	27.5	22.1	36.7	27.2	35.6	26.6
1930	14.9	14.8	13.3	22.9	18.8	15.4	14.7	15.4	14.7	15.4	14.7	15.4	14.7	19.6	17.0	28.5	21.9	29.8	22.7
2030	11.4	8.3	8.2	10.5	10.4	10.5	10.4	10.5	10.4	10.5	10.4	10.5	10.4	10.5	10.4	10.5	10.4	10.5	10.4
2130	9.7	6.4	6.4	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
2230	10.0	6.7	6.7	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
2330	6.5	3.2	3.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Mean	11.3	20.5	14.9	15.2	12.9	17.3	14.1	20.4	15.8	21.1	16.2	19.8	15.5	21.1	16.2	21.0	16.2	18.1	14.6

* Greenwich Mean Time

Table 2.14(h) Air and corresponding sol-air temperatures: Manchester (Hulme Library) (January 2002–December 2011) — *continued*

July 21

Time*	Air temp.	Sol-air temperature (°C) for stated orientation and surface colour																	
		Horizontal		North		North-east		East		South-east		South		South-west		West		North-west	
		Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light
0030	12.4	9.1	9.1	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3
0130	12.3	9.0	9.0	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
0230	12.1	11.2	11.2	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
0330	11.9	11.1	11.1	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
0430	11.8	9.2	9.0	11.1	11.0	11.1	11.0	11.1	11.0	11.1	11.0	11.1	11.0	11.1	11.0	11.1	11.0	11.1	11.0
0530	13.0	14.5	12.6	19.9	16.4	28.0	20.9	28.3	21.1	20.5	16.7	14.2	13.3	14.2	13.3	14.2	13.3	14.2	13.3
0630	17.7	24.3	20.0	25.4	21.5	44.9	32.3	49.9	35.1	37.6	28.3	20.5	18.8	20.5	18.8	20.5	18.8	20.5	18.8
0730	21.5	33.3	26.6	25.7	23.3	48.6	36.1	59.6	42.2	50.4	37.0	26.3	23.6	25.7	23.3	25.7	23.3	25.7	23.3
0830	23.8	40.8	31.7	29.2	26.3	45.7	35.4	61.8	44.4	58.3	42.5	37.2	30.7	29.2	26.3	29.2	26.3	29.2	26.3
0930	25.6	47.3	36.2	31.9	28.6	39.4	32.7	59.6	44.0	62.9	45.8	47.3	37.1	31.9	28.6	31.9	28.6	31.9	28.6
1030	26.5	51.8	39.2	33.7	30.1	33.7	30.1	52.2	40.3	62.1	45.8	54.5	41.6	33.9	30.1	33.7	30.1	33.7	30.1
1130	27.5	54.8	41.2	34.9	31.1	34.9	31.1	42.5	35.3	58.4	44.2	59.6	44.9	45.4	36.9	34.9	31.1	34.9	31.1
1230	28.1	55.8	42.0	35.6	31.8	35.6	31.8	35.6	31.8	51.0	40.3	61.1	45.9	55.2	42.7	36.8	32.5	35.6	31.8
1330	28.9	55.2	42.0	36.2	32.5	36.2	32.5	36.2	32.5	41.7	35.5	59.3	45.3	62.4	47.0	49.3	39.7	36.2	32.5
1430	29.3	52.6	40.8	36.1	32.6	36.1	32.6	36.1	32.6	36.1	32.6	54.3	42.7	65.7	49.0	59.0	45.3	38.1	33.7
1530	29.6	48.9	38.8	35.6	32.4	35.6	32.4	35.6	32.4	35.6	32.4	47.3	38.9	65.6	49.1	65.6	49.1	47.4	39.0
1630	29.5	44.0	36.0	34.3	31.7	34.3	31.7	34.3	31.7	34.3	31.7	38.7	34.1	61.6	46.8	68.0	50.4	54.3	42.8
1730	28.8	37.6	32.2	34.0	31.2	32.3	30.3	32.3	30.3	32.3	30.3	32.3	30.3	52.4	41.4	62.9	47.2	55.2	43.0
1830	27.0	30.6	27.5	35.6	31.3	28.9	27.6	28.9	27.6	28.9	27.6	28.9	27.6	41.4	34.5	53.3	41.1	50.8	39.7
1930	25.0	23.9	22.9	25.5	24.8	25.5	24.8	25.6	24.8	25.6	24.9	25.5	24.8	25.5	24.8	25.6	24.8	25.6	24.9
2030	20.9	17.7	17.6	19.9	19.8	19.9	19.8	19.9	19.8	19.9	19.8	19.9	19.8	19.9	19.8	19.9	19.8	19.9	19.8
2130	18.4	15.1	15.1	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3
2230	18.5	15.2	15.2	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
2330	13.3	10.0	10.0	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
Mean	21.4	30.1	24.9	24.9	22.9	27.6	24.4	30.9	26.2	31.6	26.6	30.4	26.0	31.4	26.5	30.6	26.0	27.4	24.3

* Greenwich Mean Time

August 21

Time*	Air temp.	Sol-air temperature (°C) for stated orientation and surface colour																	
		Horizontal		North		North-east		East		South-east		South		South-west		West		North-west	
		Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light
0030	12.3	9.7	9.7	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
0130	10.9	7.9	7.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
0230	11.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
0330	10.2	7.2	7.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
0430	10.3	8.7	8.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
0530	10.3	9.6	9.4	10.3	10.1	10.3	10.1	10.3	10.1	10.3	10.1	10.3	10.1	10.3	10.1	10.3	10.1	10.3	10.1
0630	11.8	11.6	10.3	12.9	11.9	13.3	12.2	13.4	12.3	13.2	12.1	12.8	11.9	12.8	11.9	12.8	11.9	12.8	11.9
0730	13.4	19.7	15.9	17.2	15.2	25.4	19.7	30.4	22.5	28.1	21.2	19.7	16.5	17.2	15.2	17.2	15.2	17.2	15.2
0830	15.2	28.0	21.0	20.2	17.5	31.7	23.9	47.6	32.7	47.2	32.5	30.7	23.4	20.2	17.5	20.2	17.5	20.2	17.5
0930	16.8	35.0	25.6	22.7	19.6	26.7	21.8	49.0	34.2	55.3	37.7	41.9	30.3	22.7	19.6	22.7	19.6	22.7	19.6
1030	18.9	40.9	29.8	25.4	22.1	25.4	22.1	43.8	32.3	57.3	39.8	51.4	36.5	29.4	24.3	25.4	22.1	25.4	22.1
1130	19.2	42.4	30.8	26.4	22.7	26.4	22.7	33.1	26.5	51.3	36.6	54.2	38.2	39.9	30.3	26.4	22.7	26.4	22.7
1230	20.5	45.4	33.0	27.3	23.8	27.3	23.8	27.3	23.8	46.4	34.4	58.8	41.3	51.8	37.4	29.6	25.1	27.3	23.8
1330	21.2	45.3	33.3	27.6	24.3	27.6	24.3	27.6	24.3	36.6	29.3	57.8	41.1	60.4	42.5	42.8	32.8	27.6	24.3
1430	20.8	41.7	31.1	26.6	23.6	26.6	23.6	26.6	23.6	26.6	23.6	51.0	37.1	62.7	43.6	52.5	38.0	26.4	23.5
1530	20.0	36.1	27.6	25.1	22.4	25.1	22.4	25.1	22.4	25.1	22.4	41.1	31.3	59.3	41.4	56.9	40.0	35.3	28.0
1630	19.4	29.2	23.5	23.5	21.2	23.5	21.2	23.5	21.2	23.5	21.2	30.1	24.9	47.7	34.7	51.1	36.6	38.2	29.4
1730	18.4	22.7	19.6	21.0	19.4	21.0	19.4	21.0	19.4	21.0	19.4	21.7	19.8	33.3	26.3	37.9	28.8	32.8	26.0
1830	17.2	17.5	16.5	18.3	17.5	18.4	17.5	18.4	17.6	18.4	17.6	18.3	17.5	18.4	17.5	18.4	17.6	18.4	17.6
1930	16.1	14.3	14.2	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
2030	15.2	13.6	13.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
2130	14.4	13.2	13.2	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
2230	13.0	11.4	11.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
2330	12.6	10.0	10.0	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
Mean	15.4	22.0	18.0	17.6	16.2	18.6	16.8	21.5	18.4	24.1	19.9	25.8	20.8	25.2	20.4	22.6	19.0	19.1	17.1

* Greenwich Mean Time

Table 2.14(h) Air and corresponding sol-air temperatures: Manchester (Hulme Library) (January 2002–December 2011) — *continued*

September 21

Time*	Air temp.	Sol-air temperature (°C) for stated orientation and surface colour																	
		Horizontal		North		North-east		East		South-east		South		South-west		West		North-west	
		Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light
0030	12.1	9.5	9.5	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
0130	13.1	11.9	11.9	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
0230	12.4	10.8	10.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
0330	12.6	11.4	11.4	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
0430	12.7	11.8	11.8	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
0530	13.4	12.6	12.6	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
0630	13.9	14.3	13.6	14.7	14.2	14.7	14.2	14.8	14.2	14.8	14.2	14.7	14.2	14.7	14.2	14.8	14.2	14.8	14.2
0730	15.0	19.9	17.2	17.4	16.1	27.2	21.6	37.5	27.3	36.1	26.5	23.8	19.7	17.4	16.1	17.4	16.1	17.4	16.1
0830	16.9	25.7	21.3	20.9	18.9	26.6	22.1	40.3	29.7	42.7	31.0	32.4	25.3	20.9	18.9	20.9	18.9	20.9	18.9
0930	18.0	33.3	25.6	23.3	20.7	23.3	20.7	49.0	34.9	60.1	41.1	49.2	35.0	22.7	20.3	23.3	20.7	23.3	20.7
1030	19.4	37.1	28.2	25.6	22.5	25.6	22.5	41.3	31.2	58.4	40.7	55.7	39.2	34.8	27.6	25.6	22.5	25.6	22.5
1130	20.6	40.2	30.3	27.5	24.0	27.5	24.0	32.6	26.9	55.5	39.6	61.4	42.9	46.7	34.7	27.5	24.0	27.5	24.0
1230	21.4	40.6	30.7	28.1	24.7	28.1	24.7	28.1	24.7	47.9	35.7	61.9	43.5	55.5	39.9	32.3	27.0	28.1	24.7
1330	21.9	39.4	30.3	28.0	24.9	28.0	24.9	28.0	24.9	38.3	30.5	59.3	42.2	61.4	43.4	43.4	33.4	28.0	24.9
1430	22.7	37.9	30.0	28.0	25.3	28.0	25.3	28.0	25.3	28.1	25.3	55.0	40.3	65.6	46.1	53.6	39.4	28.0	25.3
1530	22.7	33.3	27.4	26.4	24.4	26.4	24.4	26.4	24.4	26.4	24.4	46.1	35.3	63.3	44.9	58.6	42.2	34.7	28.9
1630	22.3	28.1	24.3	24.4	23.0	24.4	23.0	24.4	23.0	24.4	23.0	36.5	29.8	59.4	42.5	61.6	43.7	41.7	32.7
1730	20.5	21.3	20.0	21.2	20.6	21.5	20.7	21.7	20.8	21.4	20.6	21.2	20.6	21.5	20.7	21.7	20.8	21.4	20.6
1830	18.4	16.7	16.6	17.8	17.7	17.8	17.7	17.8	17.7	17.8	17.7	17.8	17.7	17.8	17.7	17.8	17.7	17.8	17.7
1930	17.2	15.3	15.3	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
2030	17.4	15.1	15.1	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
2130	16.8	15.2	15.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
2230	16.0	13.7	13.7	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
2330	12.9	10.3	10.3	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Mean	17.1	21.9	18.9	18.9	17.8	19.5	18.1	22.5	19.8	25.9	21.7	28.5	23.1	27.1	22.4	23.7	20.4	20.0	18.4

* Greenwich Mean Time

October 21

Time*	Air temp.	Sol-air temperature (°C) for stated orientation and surface colour																	
		Horizontal		North		North-east		East		South-east		South		South-west		West		North-west	
		Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light
0030	10.1	9.2	9.2	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
0130	10.3	9.4	9.4	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
0230	9.9	9.0	9.0	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
0330	9.7	8.5	8.5	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
0430	9.8	8.6	8.6	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
0530	10.0	9.1	9.1	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
0630	10.2	9.4	9.4	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
0730	10.9	12.1	10.9	11.9	11.2	11.9	11.2	12.1	11.3	12.1	11.3	11.9	11.2	11.9	11.2	12.1	11.3	12.1	11.3
0830	11.2	16.1	13.6	13.6	12.4	16.1	13.8	29.8	21.4	34.1	23.7	26.5	19.5	13.6	12.4	13.6	12.4	13.6	12.4
0930	12.9	19.7	16.0	16.3	14.6	16.3	14.6	28.1	21.1	35.2	25.0	31.5	23.0	19.0	16.1	16.3	14.6	16.3	14.6
1030	14.6	27.1	20.7	19.0	16.7	19.0	16.7	33.5	24.8	54.9	36.7	54.9	36.7	33.4	24.8	19.0	16.7	19.0	16.7
1130	15.6	29.5	22.3	20.4	17.9	20.4	17.9	24.2	20.0	51.1	35.0	59.6	39.7	44.7	31.4	20.4	17.9	20.4	17.9
1230	16.1	29.3	22.4	20.7	18.3	20.7	18.3	20.7	18.3	42.3	30.3	58.2	39.1	51.7	35.5	26.6	21.6	20.7	18.3
1330	15.3	26.5	20.6	19.4	17.3	19.4	17.3	19.4	17.3	30.7	23.5	51.1	34.9	52.7	35.8	34.4	25.6	19.4	17.3
1430	15.7	24.1	19.6	18.9	17.2	18.9	17.2	18.9	17.2	21.2	18.5	44.5	31.4	52.6	35.9	40.7	29.4	18.9	17.2
1530	14.1	21.5	17.5	18.0	16.0	18.0	16.0	18.0	16.0	18.0	16.0	40.3	28.4	55.8	37.0	49.0	33.3	23.9	19.3
1630	13.1	13.3	12.4	13.5	13.0	13.7	13.1	13.7	13.1	13.5	13.0	13.5	13.0	13.7	13.1	13.7	13.1	13.5	13.0
1730	11.4	9.2	9.1	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6
1830	10.4	8.1	8.1	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
1930	9.7	7.4	7.4	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
2030	9.1	6.5	6.5	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
2130	8.8	6.5	6.5	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
2230	8.1	5.8	5.8	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
2330	10.2	9.3	9.3	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
Mean	11.6	14.0	12.2	12.6	11.9	12.7	11.9	14.5	12.9	18.5	15.1	21.7	17.0	20.0	16.0	15.7	13.6	12.8	12.0

* Greenwich Mean Time

Table 2.14(h) Air and corresponding sol-air temperatures: Manchester (Hulme Library) (January 2002–December 2011) — *continued*

November 21

Time*	Air temp.	Sol-air temperature (°C) for stated orientation and surface colour																	
		Horizontal		North		North-east		East		South-east		South		South-west		West		North-west	
		Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light
0030	6.0	5.1	5.1	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
0130	6.6	5.7	5.7	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
0230	6.1	4.2	4.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
0330	5.2	3.3	3.3	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
0430	3.8	0.5	0.5	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
0530	1.7	-1.6	-1.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
0630	0.5	-2.8	-2.8	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
0730	-0.5	-3.7	-3.8	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6
0830	1.8	0.7	-0.3	2.1	1.4	1.9	1.4	2.1	1.4	2.2	1.5	2.1	1.4	1.9	1.4	2.1	1.4	2.2	1.5
0930	4.5	6.6	4.2	5.5	4.6	5.5	4.6	23.1	14.3	36.2	21.6	31.2	18.9	11.2	7.7	5.5	4.6	5.5	4.6
1030	6.7	11.4	7.8	8.7	7.3	8.7	7.3	20.2	13.7	38.8	24.0	39.6	24.5	22.2	14.8	8.7	7.3	8.7	7.3
1130	7.8	13.7	9.6	10.3	8.7	10.3	8.7	13.6	10.5	36.2	23.1	43.5	27.1	31.2	20.3	10.3	8.7	10.3	8.7
1230	9.0	14.8	10.7	11.4	9.8	11.4	9.8	11.4	9.8	31.2	20.8	44.5	28.2	38.3	24.8	16.2	12.5	11.4	9.8
1330	8.9	13.1	9.8	10.7	9.4	10.7	9.4	10.7	9.4	22.8	16.1	40.5	25.9	40.6	26.0	23.2	16.4	10.7	9.4
1430	8.6	10.2	8.0	9.4	8.6	9.4	8.6	9.4	8.6	13.8	11.0	33.7	22.0	39.3	25.1	27.4	18.5	9.4	8.6
1530	7.5	5.8	5.1	7.4	6.9	7.5	7.0	7.4	6.9	7.3	6.9	7.4	6.9	7.5	7.0	7.4	6.9	7.3	6.9
1630	5.6	2.3	2.3	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
1730	2.2	-1.1	-1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
1830	1.0	-2.3	-2.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
1930	0.3	-3.0	-3.0	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8
2030	0.0	-3.3	-3.3	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1
2130	-0.2	-3.2	-3.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2
2230	1.2	-2.1	-2.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2330	6.1	5.6	5.6	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Mean	4.2	3.3	2.4	4.0	3.7	4.0	3.7	5.4	4.4	9.1	6.5	11.4	7.8	9.3	6.6	5.5	4.5	4.0	3.7

* Greenwich Mean Time

December 21

Time*	Air temp.	Sol-air temperature (°C) for stated orientation and surface colour																	
		Horizontal		North		North-east		East		South-east		South		South-west		West		North-west	
		Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light	Dark	Light
0030	-0.6	-3.2	-3.2	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5
0130	-0.8	-4.1	-4.1	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9
0230	-0.9	-4.2	-4.2	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
0330	-1.6	-4.9	-4.9	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7
0430	-1.3	-4.6	-4.6	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4	-2.4
0530	-1.0	-4.3	-4.3	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1
0630	-1.1	-4.4	-4.4	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2
0730	-1.3	-3.2	-3.2	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
0830	-0.8	-3.3	-3.5	-1.5	-1.6	-1.5	-1.7	-1.5	-1.6	-1.5	-1.6	-1.5	-1.6	-1.5	-1.7	-1.5	-1.6	-1.5	-1.6
0930	-0.1	0.4	-0.8	1.0	0.2	0.8	0.1	0.9	0.1	1.1	0.2	1.0	0.2	0.8	0.1	0.9	0.1	1.1	0.2
1030	0.5	3.6	0.7	1.9	0.8	1.9	0.8	16.0	8.6	36.1	19.8	36.1	19.8	15.9	8.6	1.9	0.8	1.9	0.8
1130	1.2	5.8	2.3	3.3	1.9	3.3	1.9	8.7	4.9	32.9	18.3	39.6	22.0	24.9	13.9	3.3	1.9	3.3	1.9
1230	1.6	4.6	1.8	3.2	2.0	3.2	2.0	3.2	2.0	19.5	11.1	28.7	16.1	22.9	12.9	5.6	3.3	3.2	2.0
1330	1.8	4.0	1.5	3.0	2.0	3.0	2.0	3.0	2.0	14.4	8.3	27.8	15.8	26.7	15.1	11.7	6.8	3.0	2.0
1430	1.5	1.2	-0.2	1.9	1.2	1.9	1.2	1.9	1.2	5.5	3.2	15.3	8.7	17.5	9.9	10.6	6.0	1.9	1.2
1530	0.5	-1.9	-2.3	0.0	-0.3	0.0	-0.3	0.0	-0.3	-0.1	-0.3	0.0	-0.3	0.0	-0.3	0.0	-0.3	-0.1	-0.3
1630	-0.1	-3.4	-3.4	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2
1730	-1.6	-4.9	-4.9	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7
1830	-2.1	-5.4	-5.4	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2
1930	-3.2	-6.5	-6.5	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3	-4.3
2030	-6.0	-9.3	-9.3	-7.1	-7.1	-7.1	-7.1	-7.1	-7.1	-7.1	-7.1	-7.1	-7.1	-7.1	-7.1	-7.1	-7.1	-7.1	-7.1
2130	-7.2	-10.5	-10.5	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3
2230	-5.0	-8.3	-8.3	-6.1	-6.1	-6.1	-6.1	-6.1	-6.1	-6.1	-6.1	-6.1	-6.1	-6.1	-6.1	-6.1	-6.1	-6.1	-6.1
2330	-1.4	-4.7	-4.7	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5
Mean	-1.2	-3.0	-3.6	-1.7	-1.9	-1.7	-1.9	-0.9	-1.5	2.3	0.3	3.9	1.2	2.3	0.2	-0.8	-1.5	-1.7	-1.9

* Greenwich Mean Time