

MICROCLIMATE STUDY

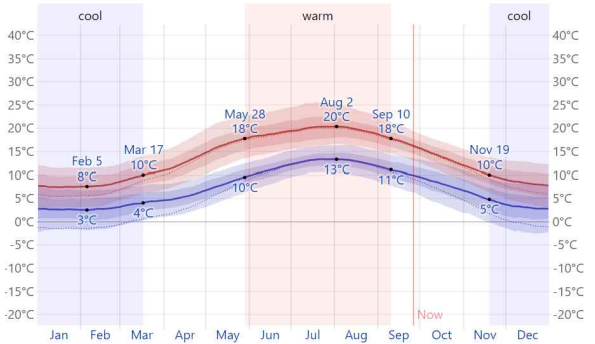
Average Weather in Manchester, United Kingdom

In Manchester, the summers are comfortable and partly cloudy and the winters are long, very cold, windy, and mostly cloudy. Over the course of the year, the temperature typically varies from 3°C to 20°C and is rarely below -3°C or above 26°C.

Temperature

The warm season lasts for 3.4 months, from May 28 to September 10, with an average daily high temperature above 18°C. The cool season lasts for 4.0 months, from November 19 to March 17, with an average daily high temperature below 10°C.

Average High and Low Temperature

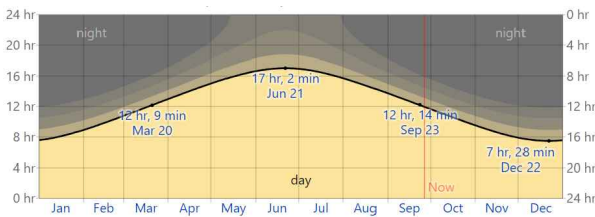


The daily average high (red line) and low (blue line) temperature, with 25th to 75th and 10th to 90th percentile bands. The thin dotted lines are the corresponding average perceived temperatures.

Sun

The length of the day in Manchester varies extremely over the course of the year. In 2023, the shortest day is December 22, with 7 hours, 28 minutes of daylight; the longest day is June 21, with 17 hours, 2 minutes of daylight.

Hours of Daylight and Twilight

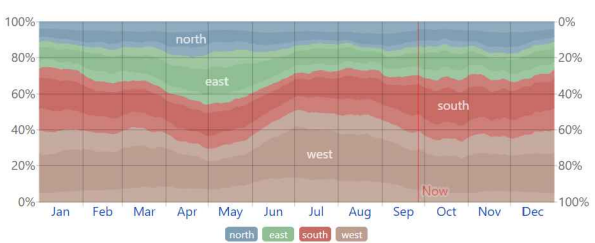


The number of hours during which the Sun is visible (black line). From bottom (most yellow) to top (most gray), the color bands indicate: full daylight, twilight (civil, nautical, and astronomical), and full night.

Wind Direction

The predominant average hourly wind direction is from the west throughout the year.

Wind Direction



The percentage of hours in which the mean wind direction is from each of the four cardinal wind directions, excluding hours in which the mean wind speed is less than 0.4 m/s. The lightly tinted areas at the boundaries are the percentage of hours spent in the implied intermediate directions (northeast, southeast, southwest, and northwest).



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PROJECT
LW SWAN HOUSE
INSTALLER
SCOTSCAPE

DRAWING
MICROCLIMATE STUDY
CODE
INT23095
DATE: 21-02-2024
VERSION
V1
FORMAT A3 / NO SCALE

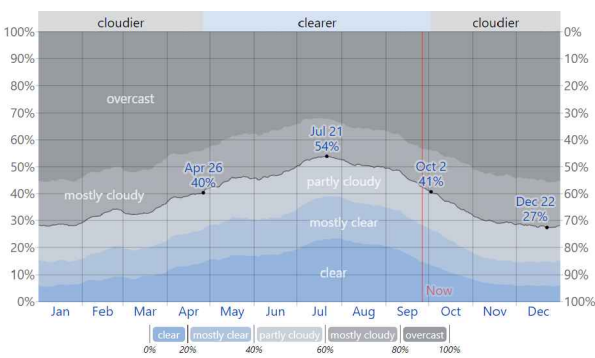
LIVING WALL SYSTEM
fyto textile

10.01

Clouds

In Manchester, the average percentage of the sky covered by clouds experiences significant seasonal variation over the course of the year. The clearer part of the year in Manchester begins around April 26 and lasts for 5.3 months, ending around October 2. The cloudier part of the year begins around October 2 and lasts for 6.8 months, ending around April 26.

Cloud Cover Categories

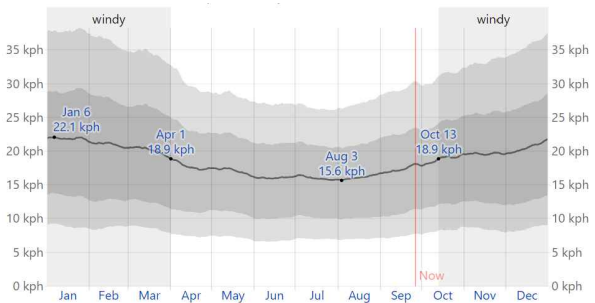


The percentage of time spent in each cloud cover band, categorized by the percentage of the sky covered by clouds.

Wind

The average hourly wind speed in Manchester experiences significant seasonal variation over the course of the year. The windier part of the year lasts for 5.6 months, from October 13 to April 1, with average wind speeds of more than 18.9 kilometers per hour. The windiest month of the year in Manchester is January, with an average hourly wind speed of 21.9 kilometers per hour. The calmer time of year lasts for 6.4 months, from April 1 to October 13.

Average Wind Speed

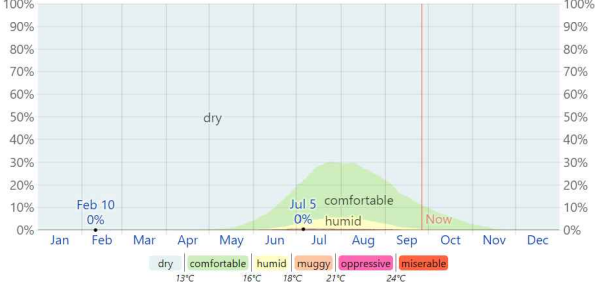


The average of mean hourly wind speeds (dark gray line), with 25th to 75th and 10th to 90th percentile bands.

Humidity

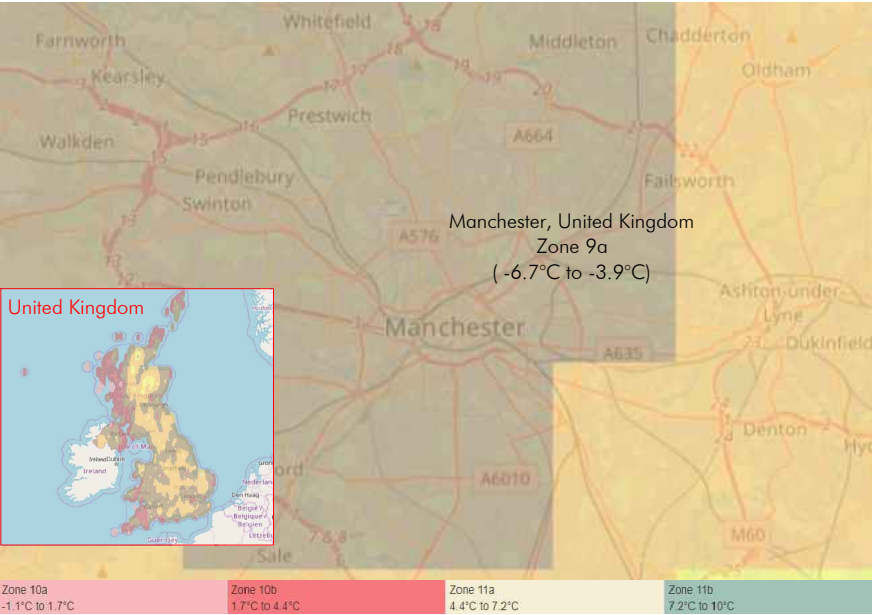
The perceived humidity level, as measured by the percentage of time in which the humidity comfort level is muggy, oppressive, or miserable, does not vary significantly over the course of the year, remaining a virtually constant 0% throughout.

Humidity Comfort Levels



The percentage of time spent at various humidity comfort levels, categorized by dew point.

PLANT HARDINESS ZONE MAP



Hardiness Zone of Manchester, United Kingdom

A "Hardiness Zone" is a geographically defined area in which a specific category of plant life is capable of growing, as defined by climatic conditions, including its ability to withstand the minimum temperatures of the zone (table down). For example, a plant that is described as "hardy to zone 9a" means that the plant can withstand a minimum temperature between -6.7 °C and -3.9 °C.

Hardiness Zones

Hardiness Zone	Desde	Hasta
0 a	< -53.9 °C	
0 b	-53.9 °C	-51.1 °C
1 a	-51.1 °C	-48.3 °C
1 b	-48.3 °C	-45.6 °C
2 a	-45.6 °C	-42.8 °C
2 b	-42.8 °C	-40 °C
3 a	-40 °C	-37.2 °C
3 b	-37.2 °C	-34.4 °C
4 a	-34.4 °C	-31.7 °C
4 b	-31.7 °C	-28.9 °C
5 a	-28.9 °C	-26.1 °C
5 b	-26.1 °C	-23.3 °C
6 a	-23.3 °C	-20.6 °C
6 b	-20.6 °C	-17.8 °C
7 a	-17.8 °C	-15 °C
7 b	-15 °C	-12.2 °C
8 a	-12.2 °C	-9.4 °C
8 b	-9.4 °C	-6.7 °C
9 a	-6.7 °C	-3.9 °C
9 b	-3.9 °C	-1.1 °C
10 a	-1.1 °C	+1.7 °C
10 b	+1.7 °C	+4.4 °C
11 a	+4.4 °C	+7.2 °C
11 b	+7.2 °C	+10 °C
12 a	+10 °C	+12.8 °C
12 b	> +12.8 °C	