

NEW AARCH – THE CLIMATE IN AARHUS

This appendix describes the climatic conditions in Aarhus focusing on temperature, precipitation, wind conditions and sunlight, as the weather has a large impact on design, indoor climate and energy.

Aarhus has the same temperate climate as the rest of Denmark characterised by relatively large seasonal temperature variations. In one year the average temperature varies from about 1 degrees Celsius (in winter) to about 17 degrees (in summer) as shown by figure 2. [Source: DMI Teknisk Rapport 12-24]

A relatively large amount of rainfall is distributed evenly over the year while the number of sunshine hours increases sharply in the period from May to September. [Source: DMI Teknisk Rapport 12-24]

Due to the northern location of the site, the sun varies throughout the year. In winter the sun only shines seven hours a day; at this time the sun is low in the sky and casts long shadows. In the design of New Aarch and the planning of the competition site it is especially important to be aware of the long shadows in the winter time.

In contrast to winter, in the summer you experience long light nights, as shown by figure 2, during which the sun passes almost every "corner" of the Earth. [Source: www.sunearthtools.com]

In relation to the specific design of New Aarch and in regard to inflow of light, it is important to consider the change in the amount of daylight over a year and also whether the inflow should be direct, diffuse or a mixture of these.

The diagram of the wind rose on figure 3 indicates average measurements of wind directions and intensities in Aarhus. This illustrates that wind conditions are often characterized by a strong westerly wind. Due to the school's high level of outdoor activities all year, the dominant south-westerly wind direction has to be taken into consideration when planning and organising outdoor areas and the building's entrances and exits. [Source: DMI Teknisk Rapport 12-24]

SUNPATH, PRECIPITATION AND TEMPERATURE

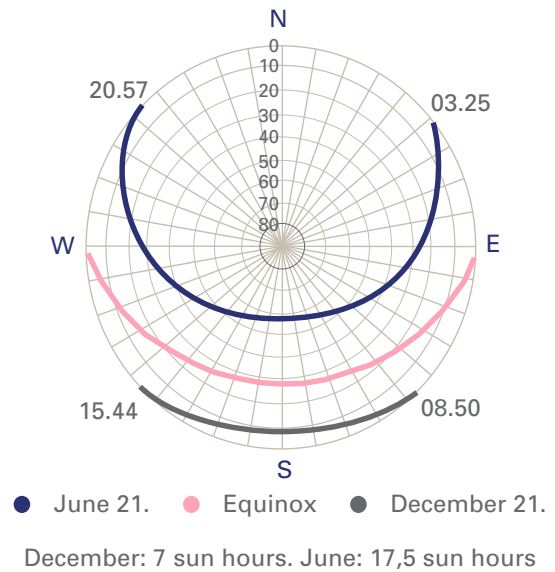


Figure 1 – Sunpath

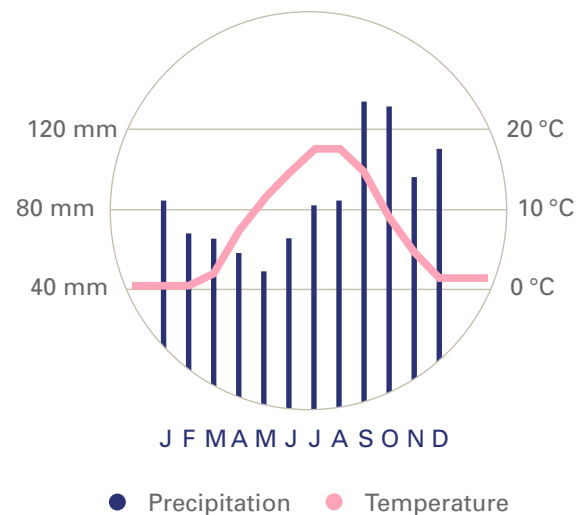


Figure 2 – Precipitation and temperature

WIND

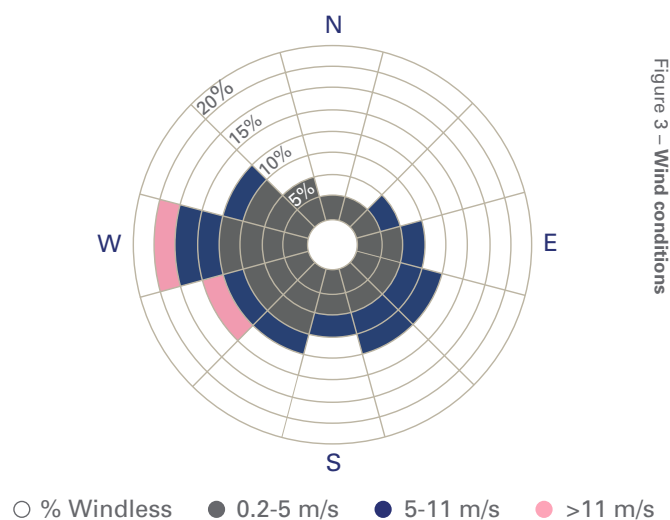


Figure 3 – Wind conditions