

02.07 Thermal Comfort

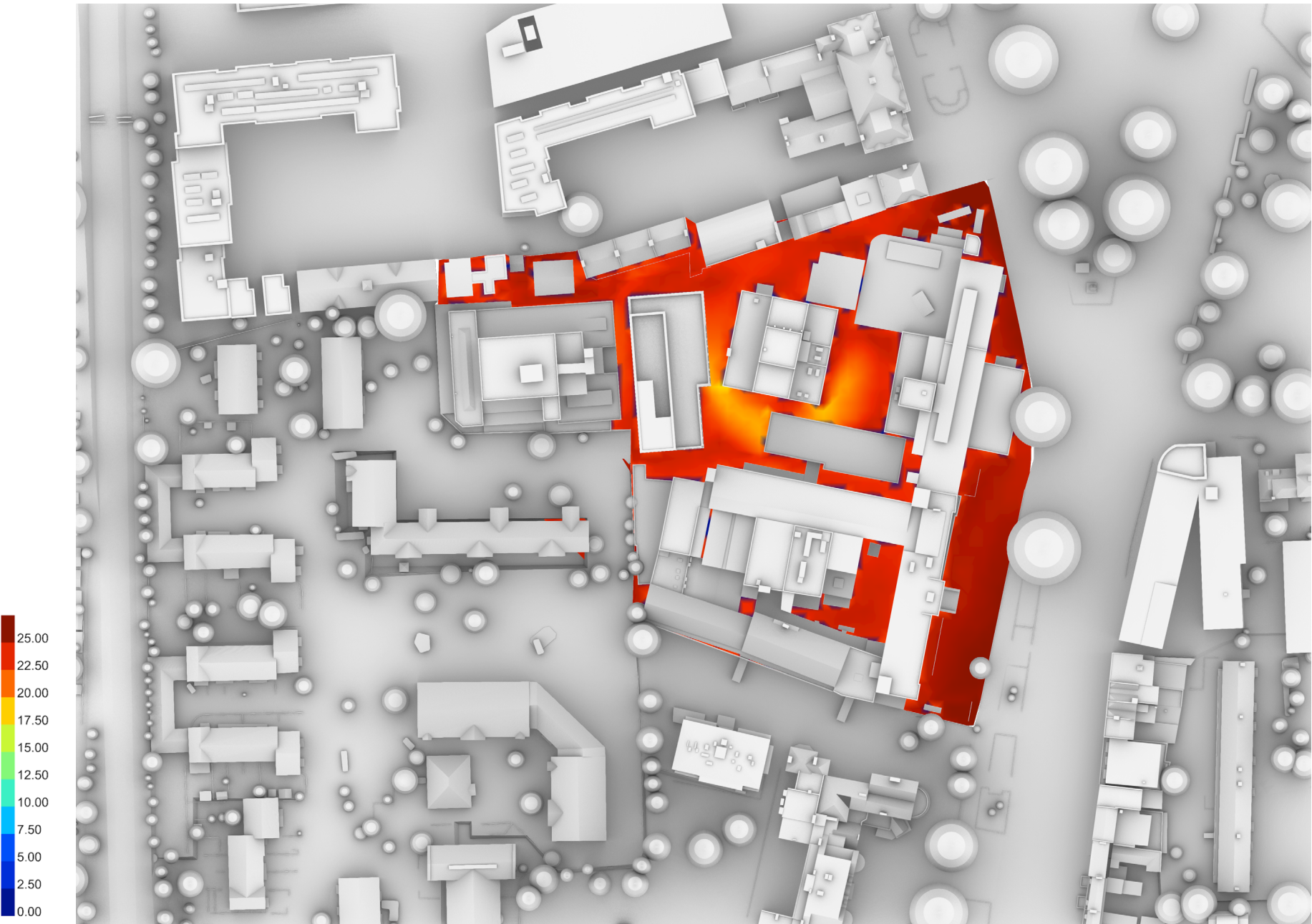
U.T.C.I.

Summer period, the month of June

The month of June shows an average UTCI temperature of 22 °C across the site and a slightly lower temperature on the east side of the proposed construction centre. The categorization of this temperature, according to UTCI, is no thermal stress. This is due to the temperate climate and the shading caused by the surrounding buildings, which protect it from direct solar radiation.



U.T.C.I categorisation March 8am to 4pm



U.T.C.I temperature for the month of March 8am to 4pm

02.08 Thermal Comfort

U.T.C.I.

Winter period, the month of December

The month of December shows an average UTCI temperature of 10 °C across the site and a particularly low temperature on the east side of the proposed construction centre due to a downdraft effect caused by the difference in height compared to the surrounding buildings. The categorization of this temperature according to UTCI places a large part of the site in slight cold stress, and moderate cold stress can be seen on the west side of the building.



U.T.C.I categorisation March 8am to 4pm



U.T.C.I temperature for the month of March 8am to 4pm

Cumilative Solar radiation in the month of June





03

Overall Findings &
Recommendations

03.01 Overall Findings & Recommendations

Most of the wider site is suitable for frequent and occasional sitting.

The downwashing effect caused by the exsiting tall building on the east side of the proposed construction centre is likely to be due to the height difference compared to the surrounding area and the prevailing wind coming from the SW direction and is understood to be a pre-exisiting condition.

The areas surrounding the building receive between 1 - 4 hours of direct sunlight in March, an average of 5 hours in June, and from 0 to 1 hour in December.

As for thermal comfort, the spring period shows mostly no thermal stress, but a limited area has slight cold stress. In the summer, there is no thermal stress throughout the site. Finally, in winter, the wider site shows no thermal stress; however, slight cold stress is seen surrounding the building in addition to moderate cold stress on the southeast side of the building.

The moderate cold stress experienced in winter on the southeast side of the building is most likely due to the higher wind speeds observed in this area. To mitigate this and allow for outdoor activities, implementation of obstructions is recommended, such as trees to decrease wind speeds without compromising on solar access. This would improve the conditions experienced on site, including activities such as outdoor dining.

