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As can be seen from Fig.7, with the increasing height of the building, the wind speed increases and in urban development areas this occurs more intensively.

4 Conclusions

From the findings of the study, the following conclusions can be drawn:

1. Modern urban areas with high-rise buildings have an impact both the local aerodynamics and the temperature conditions of the territory. As a result, environmentally unfavorable zones with stagnant air develop in public open spaces.
2. High-rise buildings in urban areas, being an effective system of solar heating of the vertical surfaces of buildings and horizontal surfaces of roofs, sidewalks and roads, accumulate heat and result in the formation of urban heat islands.
3. When designing high-rise buildings, it is necessary to take into account the specifics of the built-up areas, the spatial plasticity and the density of construction, which affect the aerodynamics of the terrain and the pollution of the atmospheric air.
4. The calculations and studies made it possible to evaluate the impact of high-rise buildings on the microclimate and the environmental conditions. The variation in wind speed with respect to the height of the building, the formation of ascending convective flows at the outer surface of a high-rise building are the factors that can improve the environmental situation and the microclimate of the living environment.

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